User's Manual

Model 707746
Control Toolkit for LabVIEW

YOKOGAWA
Yokogawa Meters & Instruments Corporation

IM 707746-61E
4th Edition

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Foreword

Thank you for purchasing the Control Toolkit for LabVIEW (Model 707746).
This user's manual describes the installation procedure, the program model, and the functions of the Control Toolkit for LabVIEW. To ensure correct use, please read this manual thoroughly before beginning operation.
After reading the manual, keep it in a convenient location for quick reference whenever a question arises during operation.

Notes

- The contents of this manual describe the Control Toolkit for LabVIEW Ver. 1.05. If you are using another version of the Control Toolkit for LabVIEW, the information given in this manual may differ from the version that you are using.
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Contents

Foreword **1**
Terms and Conditions of the Software License **2**
1. Overview **1-1**
2. Installation **2-1**
3. Functions Palettes and VI Structure of Control Toolkit for LabVIEW **3-1**
4. Initialization VIs **4-1**
YKWE Easy Config.vi **4-2**
YKWE Easy Clear.vi **4-5**
5. Measurement Module VIs **5-1**
5.1 Digitizer VIs **5-1**
YKWE DGTZR Acquire Waveform.vi **5-2**
Waveform 5-2
Scale array 5-10
YKWE DGTZR Acquire Waveforms.vi **5-18**
Waveform 5-18
Scale array 5-26
YKWE DGTZR Sample Channel.vi **5-34**
Scale array 5-34
Waveform 5-42
YKWE DGTZR Sample Channels.vi **5-50**
Scale array 5-50
Waveform 5-58
YKWE DGTZR Config.vi **5-66**
YKWE DGTZR Start.vi **5-72**
YKWE DGTZR Read Waveform.vi **5-76**
Waveform (Multiple Channels) 5-76
Scale Array (Multiple Channels) 5-79
Waveform (1 Channel) 5-82
Scale Array (1 Channel) 5-85
YKWE DGTZR Single Scan.vi **5-88**
Scale Array (Multiple Channels) 5-88
Waveform (Multiple Channels) 5-91
Scale Array (1 Channel) 5-94
Waveform (1 Channel) 5-97
YKWE DGTZR Clear.vi **5-100**
YKWE DGTZR Config Acquisition.vi **5-102**
YKWE DGTZR Config Sampling Interval.vi **5-106**
YKWE DGTZR Config Channel.vi **5-108**
YKWE DGTZR Config Trigger.vi **5-115**
YKWE DGTZR Config Trigger WE7311.vi **5-119**
YKWE DGTZR Config Trigger WE7116.vi **5-124**
YKWE DGTZR Control.vi **5-128**
YKWE DGTZR Read Block Data.vi **5-131**
Waveform (Multiple Channels) 5-131
Scale Array (Multiple Channels) 5-134
Waveform (1 Channel) 5-137
Scale Array (1 Channel) 5-140
YKWE DGTZR Read Current Data.vi **5-143**
Waveform (Multiple Channels) 5-143
Scale Array (Multiple Channels) 5-146
Waveform (1 Channel) 5-149
Scale Array (1 Channel) 5-152

5.2 Oscilloscope VI 5-154
YKWE OSC Acquire Waveform.vi 5-155
Waveform 5-155
Scale array 5-162
YKWE OSC Acquire Waveforms.vi 5-169
Waveform 5-169
Scale array 5-176
YKWE OSC Config.vi 5-183
YKWE OSC Start.vi 5-189
YKWE OSC Read Waveform.vi 5-194
Waveform (multiple channels) 5-194
Scale array (multiple channels) 5-197
Waveform (1 channel) 5-200
Scale array (1 channel) 5-203
YKWE OSC Clear.vi 5-206
YKWE OSC Config Acquisition.vi 5-208
YKWE OSC Config Time Base.vi 5-212
YKWE OSC Config Channel.vi 5-215
YKWE OSC Config Trigger.vi 5-219
YKWE OSC Config Clock.vi 5-223
YKWE OSC Config Calibration.vi 5-226
YKWE OSC Control.vi 5-228
YKWE OSC Read Block Data.vi 5-231
Waveform (multiple channels) 5-231
Scale array (multiple channels) 5-234
Waveform (1 channel) 5-237
Scale array (1 channel) 5-240
5.3 Thermometer VI 5-242
YKWE THERMO Acquire Waveform.vi 5-243
Waveform 5-243
Scale Array 5-249
YKWE THERMO Acquire Waveforms.vi 5-255
Waveform 5-255
Scale Array 5-262
YKWE THERMO Sample Channel.vi 5-269
Scale Array 5-269
Waveform 5-275
YKWE THERMO Sample Channels.vi 5-281
Scale Array 5-281
Waveform 5-287
YKWE THERMO Config.vi 5-293
YKWE THERMO Start.vi 5-298
YKWE THERMO Read Waveform.vi 5-300
Waveform (Multiple Channels) 5-300
Scale Array (Multiple Channels) 5-303
Waveform (1 Channel) 5-306
Scale Array (1 Channel) 5-309
YKWE THERMO Single Scan.vi 5-312
Scale Array (Multiple Channels) 5-312
Waveform (multiple channels) 5-315
Scale Array (1 Channel) 5-318
Waveform (1 Channel) 5-320
YKWE THERMO Clear.vi 5-323
YKWE THERMO Config Acquisition.vi 5-325
YKWE THERMO Config Sampling Interval.vi 5-329
YKWE THERMO Config Channel.vi 5-331

YKWE THERMO Config Channel Alarm.vi 5-336
YKWE THERMO Config Alarm Combination.vi 5-339
YKWE THERMO Check.vi 5-342
YKWE THERMO Query Status.vi 5-344
YKWE THERMO Control.vi 5-347
YKWE THERMO Read Block Data.vi 5-350
Waveform (Multiple Channels) 5-350
Scale Array (Multiple Channels) 5-353
Waveform (1 Channel) 5-356
Scale Array (1 Channel) 5-359
YKWE THERMO Read Current Data.vi 5-362
Waveform (Multiple Channels) 5-362
Scale Array (Multiple Channels) 5-365
Waveform (1 Channel) 5-367
Scale Array (1 Channel) 5-369
5.4 Accelerometer VI 5-372
YKWE ACC Acquire Waveform.vi 5-373
Waveform 5-373
Scale array 5-380
YKWE ACC Acquire Waveforms.vi 5-387
Waveform 5-387
Scale array 5-395
YKWE ACC Sample Channel.vi 5-403
Scale array 5-403
Waveform 5-410
YKWE ACC Sample Channels.vi 5-417
Scale array 5-417
Waveform 5-425
YKWE ACC Config.vi 5-433
YKWE ACC Start.vi 5-439
YKWE ACC Read Waveform.vi 5-443
Waveform (multiple channels) 5-443
Scale array (multiple channels) 5-446
Waveform (1 channel) 5-449
Scale array (1 channel) 5-452
YKWE ACC Single Scan.vi 5-455
Scale array (multiple channels) 5-455
Waveform (multiple channels) 5-458
Scale array (1 channel) 5-461
Waveform (1 channel) 5-464
YKWE ACC Clear.vi 5-467
YKWE ACC Config Acquisition.vi 5-469
YKWE ACC Config Sampling Interval.vi 5-473
YKWE ACC Config Channel.vi 5-475
YKWE ACC Config Channel Option.vi 5-479
YKWE ACC Config Trigger.vi 5-482
YKWE ACC Control.vi 5-486
YKWE ACC Read Block Data.vi 5-489
Waveform (multiple channels) 5-489
Scale array (multiple channels) 5-492
Waveform (1 channel) 5-495
Scale array (1 channel) 5-498
YKWE ACC Read Current Data.vi 5-501
Waveform (multiple channels) 5-501
Scale array (multiple channels) 5-504
Waveform (1 channel) 5-506

Scale array (1 channel) 5-508
YKWE ACC Config Connection Test.vi 5-510
YKWE ACC Config Connection Test Channel.vi 5-512
YKWE ACC Read Connection Test.vi 5-514
5.5 Strain VI 5-516
YKWE STRAIN Acquire Waveform.vi 5-517
Waveform 5-517
Scale array 5-524
YKWE STRAIN Acquire Waveforms.vi 5-531
Waveform 5-531
Scale array 5-538
YKWE STRAIN Sample Channel.vi 5-545
Scale array 5-545
Waveform 5-551
YKWE STRAIN Sample Channels.vi 5-558
Scale array 5-558
Waveform 5-565
YKWE STRAIN Config.vi 5-572
YKWE STRAIN Start.vi 5-577
YKWE STRAIN Read Waveform.vi 5-581
Waveform (multiple channels) 5-581
Scale array (multiple channels) 5-584
Waveform (1 channel) 5-587
Scale array (1 channel) 5-590
YKWE STRAIN Single Scan.vi 5-593
Scale array (multiple channels) 5-593
Waveform (multiple channels) 5-596
Scale array (1 channel) 5-599
Waveform (1 channel) 5-601
YKWE STRAIN Clear.vi 5-604
YKWE STRAIN Config Acquisition.vi 5-606
YKWE STRAIN Config Sampling Interval.vi 5-610
YKWE STRAIN Config Channel.vi 5-612
YKWE STRAIN Config Trigger.vi 5-616
YKWE STRAIN Control.vi 5-619
YKWE STRAIN Read Block Data.vi 5-622
Waveform (multiple channels) 5-622
Scale array (multiple channels) 5-625
Waveform (1 channel) 5-628
Scale array (1 channel) 5-631
YKWE STRAIN Read Current Data.vi 5-634
Waveform (multiple channels) 5-634
Scale array (multiple channels) 5-636
Waveform (1 channel) 5-638
Scale array (1 channel) 5-640
YKWE STRAIN Read Balance.vi 5-642
YKWE STRAIN Config Linear Scaling.vi 5-644
YKWE STRAIN Config Linear Scaling Channel.vi 5-646
5.6 Analog Output VI 5-649
YKWE AO Generate Waveform.vi 5-650
Waveform 5-650
Scale Array 5-657
YKWE AO Generate Waveforms.vi 5-664
Waveform 5-664
Scale Array 5-671
YKWE AO Config.vi 5-678

YKWE AO Write.vi **5-685**
Waveform 5-685
Scale Array 5-687
YKWE AO Start.vi **5-689**
YKWE AO Clear.vi **5-691**
YKWE AO Config Channel.vi **5-693**
YKWE AO Config Channel Sweep.vi **5-698**
YKWE AO Config Trigger.vi **5-702**
YKWE AO Config Sweep.vi **5-704**
YKWE AO Config Link.vi **5-706**
YKWE AO Config DC.vi **5-709**
YKWE AO Control.vi **5-712**
YKWE AO Write Data.vi **5-714**
Waveform 5-714
Scale Array 5-716
YKWE AO Write Data AG.vi **5-718**
YKWE AO WVF Read.vi **5-720**
W7281 5-720
W32 5-722
S16 5-724
YKWE AO Config AG.vi **5-726**
YKWE AO Config Channel AG.vi **5-729**
5.7 Digital I/O VI **5-732**
YKWE DIO Read from Port.vi **5-733**
YKWE DIO Write to Port.vi **5-735**
YKWE DIO Read Block from Port.vi **5-737**
YKWE DIO Read Counter from Port.vi **5-739**
YKWE DIO Config.vi **5-741**
YKWE DIO Read.vi **5-744**
YKWE DIO Write.vi **5-746**
YKWE DIO Start.vi **5-748**
YKWE DIO Read Block.vi **5-751**
YKWE DIO Clear.vi **5-753**
YKWE DIO Config IO.vi **5-755**
YKWE DIO Config Sampling Interval.vi **5-758**
YKWE DIO Write IO.vi **5-760**
YKWE DIO Config Counter.vi **5-762**
YKWE DIO Config Comparator.vi **5-764**
YKWE DIO Control.vi **5-767**
YKWE DIO Read Block Data.vi **5-770**
YKWE DIO Read IO.vi **5-772**
YKWE DIO Read Counter.vi **5-774**
YKWE DIO Read Comparator.vi **5-776**
5.8 Pattern I/O VI **5-778**
YKWE PIO Read Write One Ch.vi **5-779**
YKWE PIO Read Write Multi Ch.vi **5-784**
YKWE PIO Config.vi **5-789**
YKWE PIO Read.vi **5-794**
YKWE PIO Write.vi **5-796**
YKWE PIO Start.vi **5-798**
YKWE PIO Wait.vi **5-800**
YKWE PIO Clear.vi **5-802**
YKWE PIO Config Acquisition.vi **5-804**
YKWE PIO Config Time Base.vi **5-809**
YKWE PIO Config Trigger.vi **5-812**
YKWE PIO Read Trigger Point.vi **5-815**

YKWE PIO Control.vi 5-817
YKWE PIO Config IO.vi 5-819
YKWE PIO Write IO.vi 5-821
YKWE PIO Read IO.vi 5-823
YKWE PIO Load Pattern Data.vi 5-825
5.9 Counter VI 5-827
YKWE COUNT Sample Channel.vi 5-828
Scale array 5-828
Waveform 5-838
YKWE COUNT Acquire Waveform.vi 5-848
Scale array 5-848
Waveform 5-858
YKWE COUNT Config.vi 5-868
YKWE COUNT Start.vi 5-876
YKWE COUNT Read Waveform.vi 5-878
Scale array 5-878
Waveform 5-881
YKWE COUNT Single Scan.vi 5-884
Scale array 5-884
Waveform 5-886
YKWE COUNT Clear.vi 5-889
YKWE COUNT Config Acquisition.vi 5-891
YKWE COUNT Config Channel.vi 5-897
YKWE COUNT Config Misc.vi 5-901
YKWE COUNT Control.vi 5-904
YKWE COUNT Read Block Data.vi 5-907
Scale array 5-907
Waveform 5-910
YKWE COUNT Read Current Data.vi 5-913
Scale array 5-913
Waveform 5-915
5.10 Timing Measurement VI 5-917
YKWE TIM Acquire Waveform.vi 5-918
Waveform 5-918
Scale Array 5-928
YKWE TIM Acquire Waveforms.vi 5-938
Waveform 5-938
Scale Array 5-948
YKWE TIM Sample Channel.vi 5-958
Scale Array 5-958
Waveform 5-965
YKWE TIM Sample Channels.vi 5-973
Scale Array 5-973
Waveform 5-981
YKWE TIM Acquire Time Stamp.vi 5-989
YKWE TIM Config Counter.vi 5-993
YKWE TIM Config Time Stamp.vi 5-1000
YKWE TIM Start.vi 5-1003
YKWE TIM Read Waveform.vi 5-1007
Waveform (multiple channels) 5-1007
Scale Array (multiple channels) 5-1010
Waveform (1 channel) 5-1013
Scale Array (1 channel) 5-1016
YKWE TIM Single Scan.vi 5-1019
Scale Array (multiple channels) 5-1019
Waveform (multiple channels) 5-1022

Scale Array (1 channel) 5-1025
Waveform (1 channel) 5-1027
YKWE TIM Read Time Stamp.vi 5-1030
YKWE TIM Clear.vi 5-1033
YKWE TIM Config Acquisition Counter.vi 5-1035
YKWE TIM Config Acquisition TS.vi 5-1039
YKWE TIM Config Input.vi 5-1041
YKWE TIM Config Channel.vi 5-1044
YKWE TIM Config Time Base.vi 5-1048
YKWE TIM Config Trigger.vi 5-1051
YKWE TIM Config TS.vi 5-1055
YKWE TIM Control.vi 5-1058
YKWE TIM Read Block Data.vi 5-1061
Waveform (multiple channels) 5-1061
Scale Array (multiple channels) 5-1064
Waveform (1 channel) 5-1067
Scale Array (1 channel) 5-1070
YKWE TIM Read Current Data.vi 5-1073
Scale Array (multiple channels) 5-1073
Waveform (multiple channels) 5-1075
Scale Array (1 channel) 5-1078
Waveform (1 channel) 5-1080
YKWE TIM Read Block Time Stamp.vi 5-1082
6. Utility VIs 6-1
YKWE Module Window.vi 6-2
YKWE Initialize.vi 6-5
YKWE Open Station.vi 6-7
YKWE Power.vi 6-9
Character Input (Station Name) 6-9
Numeric Input (Station Handle) 6-11
YKWE Open Module.vi 6-13
Character Input (Station Name), 1 Module 6-13
Character Input (Station Name), Multiple Modules 6-15
Numeric Input (Station Handle), 1 Module 6-17
Numeric Input (Station Handle), Multiple Modules 6-19
YKWE Close Module.vi 6-21
1 module 6-21
Multiple Modules (Array) 6-23
YKWE Close Station.vi 6-24
Character Input (Station Name) 6-24
Numeric Input (Station Handle) 6-26
YKWE Exit.vi 6-28
YKWE Config Bus Ex.vi 6-29
Character Input (Station Name) 6-29
Numeric Input (Station Handle) 6-33
YKWE Config Packet.vi 6-36
Character Input (Station Name) 6-36
Numeric Input (Station Handle) 6-38
YKWE Config Module Bus Ex.vi 6-40
YKWE Get Station Handle.vi 6-43
YKWE Show or Close Module Window.vi 6-44
YKWE Show or Close Trigger Window.vi 6-46
Character input (station name) 6-46
Numeric input (Station Handle) 6-48
YKWE Module List.vi 6-50
YKWE Manual Trig.vi 6-52

Character Input (Station Name) 6-52
Numeric Input (Station Handle) 6-54
YKWE Manual Arming.vi 6-56
Character Input (Station Name) 6-56
Numeric Input (Station Handle) 6-58
YKWE Manual Trig Packet.vi 6-60
Character Input (Station Name) 6-60
Numeric Input (Station Handle) 6-62
YKWE Manual Clock Packet.vi 6-64
Character Input (Station Name) 6-64
Numeric Input (Station Handle) 6-66
YKWE STATUS LED.vi 6-68
Character Input (Station Name) 6-68
Numeric Input (Station Handle) 6-71
YKWE DIO.vi 6-73
Character Input (Station Name) 6-73
Numeric Input (Station Handle) 6-76
Index Index-1

1. Overview

The Control Toolkit for LabVIEW is a toolkit based on the interface functions (WE Control API) for controlling the WE7000. This toolkit facilitates the creation of LabVIEW software applications of National Instruments.

VI Groups That Are Installed

The Control Toolkit for LabVIEW consists of the following VI groups.

- **Initialization**
  Initialization VI allows you to select the communication method or set communication parameters according to the communication module that you are using. The VI performs initialization of the measuring station, controls the standby power of the measuring station, and performs initialization of modules. The VI is necessary before handling each module.
- **Digitizer**
  Digitizer VI allows you to configure digitizer modules and perform data acquisition.
- **Oscilloscope**
  Oscilloscope VI allows you to configure oscilloscope modules and perform data acquisition.
- **Thermometer**
  Thermometer VI allows you to configure thermometer modules and perform data acquisition.
- **Accelerometer**
  Accelerometer VI allows you to configure accelerometer modules and perform data acquisition.
- **Strain**
  Strain VI allows you to configure strain modules and perfomr data acquisition.
- **Analog output**
  Analog output VI allows you to configure analog output modules and perform signal output.
- **DIO**
  DIO VI allows you to configure digital I/O modules and perform data input and output.
- **PIO**
  PIO VI allows you to configure pattern I/O modules and perform data input and output.
- **Counter**
  Counter VI allows you to configure counter modules and perform data acquisition.
- **Timing**
  Timing VI allows you to configure timimg modules and perform data acquisition.
- **Utility**
  Utility VI allows you to select the communication method or set communication parameters according to the communication module that you are using. The VI includes tools for initializing the measuring station, tools for turning ON/OFF the standby power of the measuring station, and tools that deal with the setting and control of the entire measuring station.

Supported OSs

Microsoft Windows 95/98/Me, Windows NT 4.0, Windows 2000 Pro or Windows XP Professional/Home Edition

Development Environments Supported

National Instruments LabVIEW 6i (6.0) or later

Files That Are Installed

When you install the Control Toolkit or LabVIEW, the "\addons\YKWETool\" directory is created under the "\vi.lib\ directory under the directory in which LabVIEW is installed (C:\Program Files\National Instruments\LabVIEW6 by default for LabVIEW6i), and the toolkit files are copied to the directory.
In addition, the WE measurement instrument driver is copied to the "\instr.lib" directory under the "\vi.lib\ directory under the directory in which LabVIEW is installed (C:\Program Files\National Instruments\LabVIEW6 by default for LabVIEW6i).

[YKWETool]	
IM707746-61E.pdf	User's manual
dir.mnu	
Station Setup.vi	
YKWE.ini	
WEexample.llb	Sample program for the toolkit
[AI]	
dir.mnu	
[DIGITIZE]	
dir.mnu	
AIDGTZR.llb	Digitizer VI
AIDtzExa.llb	Sample program
[OSC]	
dir.mnu	
AIOSC.llb	Oscilloscope VI
AIOSCExa.llb	Sample program
[OTHER]	
dir.mnu	
[ACCEL}	
dir.mnu	
AIACC.llb	Accelerometer VI
AIACCExa.llb	Sample program
[STRAIN]	
dir.mnu	
AISTRAIN.llb	Strain VI
AISTRExa.llb	Sample program
[THERMO]	
dir.mnu	
AITHERMO.llb	Thermometer VI
AITrmExa.llb	Sample program
[AO]	
dir.mnu	
AO.llb	Analog output VI
AOExampl.llb	Sample program
[COUNTER]	
dir.mnu	
[COUNTER]	
dir.mnu	
COUNT.llb	Counter VI
COUNTExa.llb	Sample program
[TIMING]	
dir.mnu	
TIM.llb	Timing VI
TIMExa.llb	Sample program

```
[DIO]
    dir.mnu
    [DIO]
        dir.mnu
        DIO.llb             Digital I/O VI
        DIOExa.llb          Sample program
    [PIO]
        dir.mnu
        PIO.llb             Pattern I/O VI
        PIOExa.llb          Sample program
[INITIAL]
    dir.mnu
    Initial.llb             Initialize VI
[OTHER]
    dir.mnu
[UTILTY]
    dir.mnu
    Utility.llb             Utility VI
```

*.txt Supplementary explanation

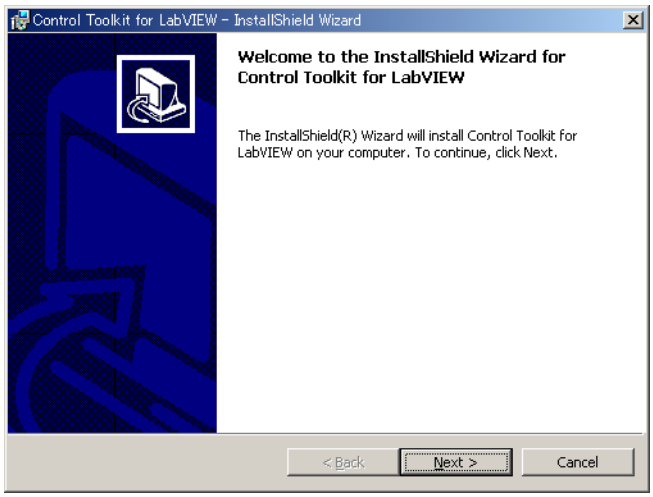
Note

If LabVIEW is installed to a directory other than the default directory, change the directory in which the toolkit is installed accordingly.

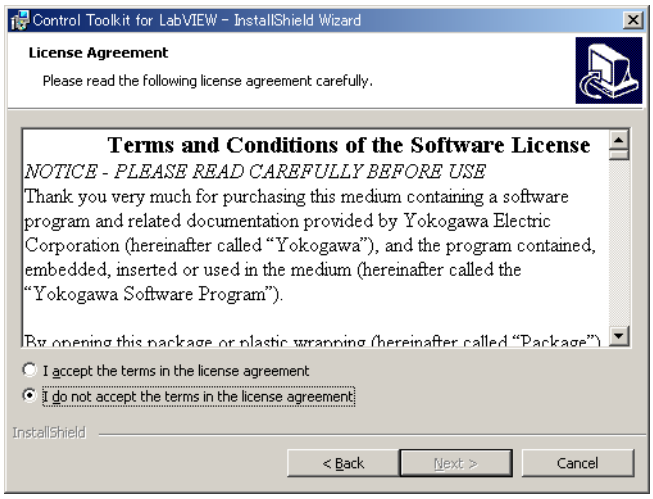
2. Installation

This chapter explains the procedure for installing the Control Toolkit for LabVIEW.
WE Control API must be installed before you install the Control Toolkit for LabVIEW.

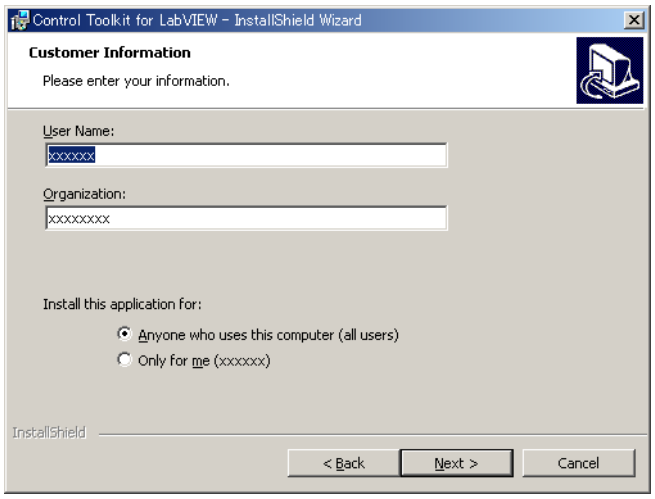
1. Start Windows.
2. Insert the “Control toolkit for LabVIEW” setup disk into the CD-ROM drive. An installer automatically starts and the following dialog box opens. If the program does not start automatically, choose Start > Run, then type setup.exe in the Name box and click **OK**. The following dialog box appears. Click **Next**.



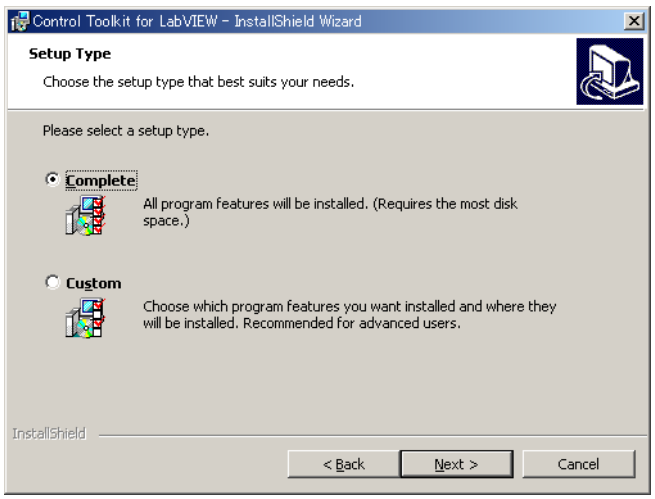
3. The following dialog box appears containing license agreement information. Confirm the license agreement, click the I accept the terms in the license agreement option button, and click **Next**.



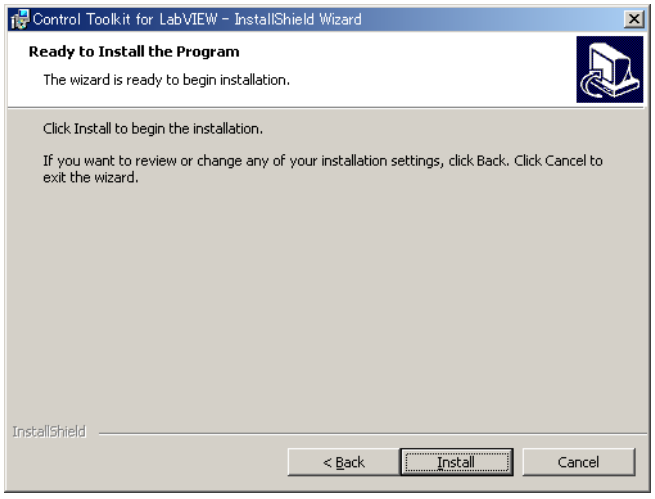
4. The following dialog box appears for registering the name and the organization of the user. After entering the appropriate information into each box, click **Next**.



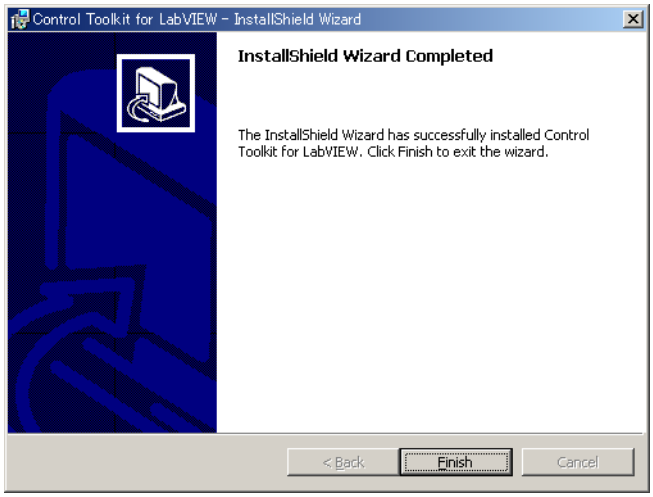
5. A dialog box appears for you to confirm the start of the installation. To proceed with the default installation (Complete), click **Next**. To select which components to install, or to change the installation destination, choose the Custom option then click **Next**. A dialog box appears confirming that you wish to begin installation.



6. Click **Install**. The installation starts and a dialog box appears indicating the progress of the installation.



7. A dialog box appears notifying you that the installation has been completed. Click **Finish**.



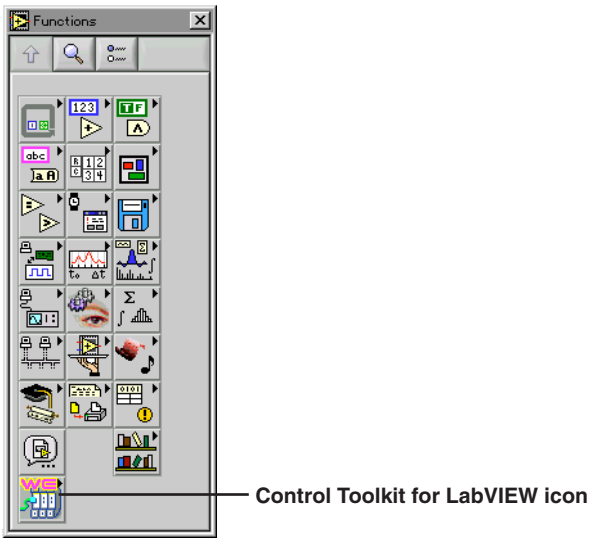
Note

If you installed LabVIEW to a directory other than the default directory, change the installation directory of the Control Toolkit for LabVIEW.

3. Functions Palettes and VI Structure of Control Toolkit for LabVIEW

When you display the functions palette on the block diagram, the WE Control Toolkit for LabVIEW icon is included. If the Format in the Function Browser Options is set to Standard or All Icon, the following icons appear in the Functions Palette. If the Format is set to All Text, icons do not appear and "YOKOGAWA WE Toolkit" appears in text.

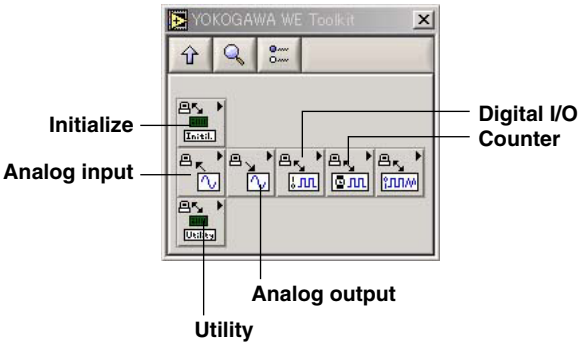
Functions Palette



*** The position where the icons appear varies depending on the system that you are using.**

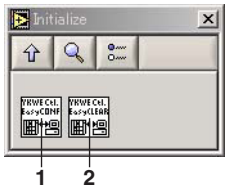
VI Structure

Click to display the Control Toolkit palette.



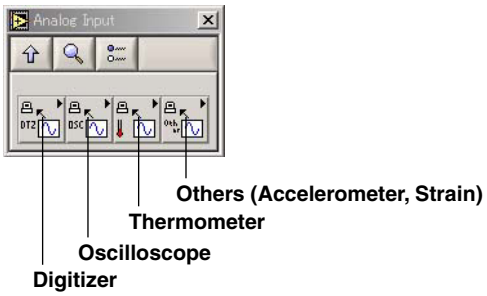
- **Initialization**

  Initialization contains the following VIs.

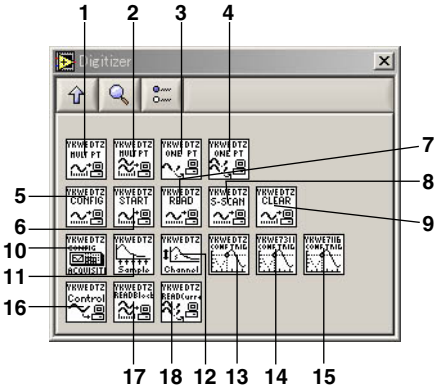


1. **YKWE Easy Config.vi**
   Performs initialization and readies the modules.
2. **YKWE Easy Clear.vi**
   Performs termination process (includes termination process for modules and stations).

- **Analog Input (Digitizer, Oscilloscope, Thermometer, Others (Accelerometer, Strain))**
  Analog Input contains the following VIs.



Digitizer contains the following VIs.



Simple Level VIs

1. **YKWE DGTZR Acquire Waveform.vi**
   Acquires the specified number of samples as the specified sample rate from a single input channel, then returns the acquired data.
2. **YKWE DGTZR Acquire Waveforms.vi**
   Acquires the specified number of samples as the specified sample rate from all input channels, then returns the acquired data.
3. **YKWE DGTZR Sample Channel.vi**
   Measures the signal that is connected to the specified channel, then returns the measured voltage.
4. **YKWE DGTZR Sample Channels.vi**
   Measures the signal that is connected to all channels, then returns the measured voltage.

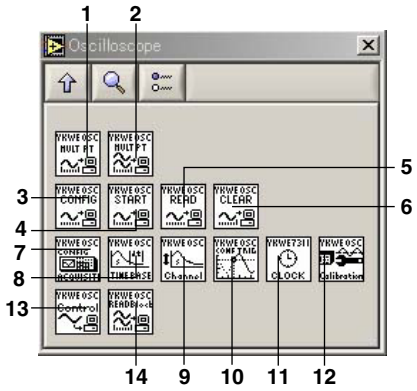
Intermediate Level VIs

5. **YKWE DGTZR Config.vi**
   Configures the analog input for the specified channel.
6. **YKWE DGTZR Start.vi**
   Starts the analog input operation. This VI sets the sampling rate, block length, and trigger conditions. Then, the VI starts the measurement module operation.
7. **YKWE DGTZR Read Waveform.vi**
   Reads the acquired data.
8. **YKWE DGTZR Single Scan.vi**
   Reads the instantaneous value of the analog input.
9. **YKWE DGTZR Clear.vi**
   Stops the measurement module operation.

Advanced Level VIs

10. **YKWE DGTZR Config Acquisition.vi**
    Sets parameters related to acquisition (Acquisition Mode, Record Length, No. of Acquisition, Memory Partition, Trigger Mode)
11. **YKWE DGTZR Config Sampling Interval.vi**
    Sets the sampling interval.
12. **YKWE DGTZR Config Channel.vi**
    Sets parameters related to the trace (Channel, State, Range, Filter, Trigger (Trig Type, Trig High (Trig Level), Trig Low), Channel WE7311 (Offset, Coupling, Probe)).
13. **YKWE DGTZR Config Trigger.vi**
    Sets parameters related to the trigger (Trig Combination, Trig Source, Pretrigger, Overlapped Acquisition, Hold Off, Time Base, Channel Mode).
14. **YKWE DGTZR Config Trigger WE7311.vi**
    Sets parameters related to the WE7311 trigger (Trig Source, Trig Coupling, Slope, Trig Level, Position (Pretrigger, Delay), Clock (Sampling Source, Reference Source, External Threshold Level)).
15. **YKWE DGTZR Config Trigger WE7116.vi**
    Sets parameter related to the WE7116 trigger (Trig Type, Trig Source, Pretrigger, Trig Hysteresis, Trig Level (Upper), Trig Lower, Hold Off, Time Base)
16. **YKWE DGTZR Control.vi**
    Acquisition start, stop, latch, etc.
17. **YKWE DGTZR Read Block Data.vi**
    Waveform data for a single channel, data array for a single channel, waveform data for multiple channels, and data array for multiple channels.
18. **YKWE DGTZR Read Current Data.vi**
    Waveform data format for a single channel, data for a single channel, waveform data format for multiple channels, and data array for multiple channels.

- **Oscilloscope**
  Oscilloscope contains the following VIs.



Simple Level VIs

1. **YKWE OSC Acquire Waveform.vi**
   Acquires the specified number of samples as the specified sample rate from a single input channel, then returns the acquired data.
2. **YKWE OSC Acquire Waveforms.vi**
   Acquires the specified number of samples as the specified sample rate from all input channels, then returns the acquired data.

Intermediate Level VIs

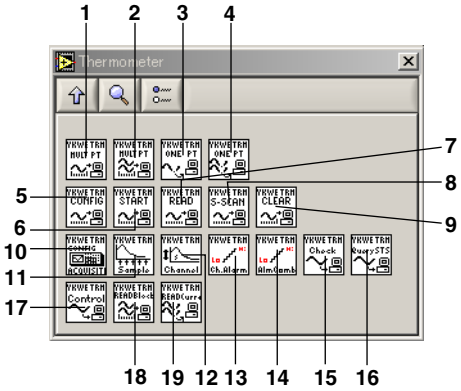
3. **YKWE OSC Config.vi**
   Configures the analog input for the specified channel.
4. **YKWE OSC Start.vi**
   Starts the analog input operation. This VI sets the sampling speed, block length and trigger condition. Then, the VI starts the measurement module operation.

5. **YKWE OSC Read Waveform.vi**
   Reads the acquired data.
6. **YKWE OSC Clear.vi**
   Stops the measurement module operation.

Advanced Level VIs

7. **YKWE OSC Config Acquisition.vi**
   Sets parameters related to acquisition. (Acquisition Mode, Record Length, No. of Acquisition, Memory Partition, Average Count, Trigger Mode, Filter)
8. **YKWE OSC Config Time Base.vi**
   Sets parameters related to time base. (Time/div, Time Base)
9. **YKWE OSC Config Channel.vi**
   Sets parameters related to trace. (Channel, V/div, Coupling, Offset, Probe, Measure)
10. **YKWE OSC Config Trigger.vi**
    Sets parameters related to trigger. (Trig Source, Trig Level, Trig Coupling, Slope, Trig Delay, Trig Position, Hold Off, HF Rejection)
11. **YKWE OSC Config Clock.vi**
    Sets parameters related to clock. (Sampling Source, Reference Source, External Threshold Level)
12. **YKWE OSC Config Calibration.vi**
    Sets the Auto Calibration.
13. **YKWE OSC Control.vi**
    Acquisition start, stop, etc.
14. **YKWE OSC Read Block Data.vi**
    Read the block data. Waveform data for a single channel, data array for a single channel, waveform data for multiple channels, and data array for multiple channels.

Thermometer contains the following VIs.



Simple Level VIs

1. **YKWE THERMO Acquire Waveform.vi**
   Acquires the specified number of samples as the specified sample rate from a single input channel, then returns the acquired data.
2. **YKWE THERMO Acquire Waveforms.vi**
   Acquires the specified number of samples as the specified sample rate from all input channels, then returns the acquired data.
3. **YKWE THERMO Sample Channel.vi**
   Measures the signal that is connected to the specified channel, then returns the measured value.
4. **YKWE THERMO Sample Channels.vi**
   Measures the signal that is connected to all channels, then returns the measured value.

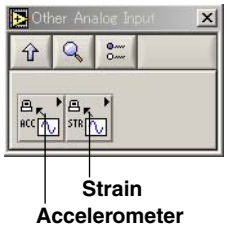
Intermediate Level VIs

5. **YKWE THERMO Config.vi**
   Configures the analog input for the specified channel.
6. **YKWE THERMO Start.vi**
   Starts the analog input operation. This VI sets the sampling speed and block length. Then, the VI starts the measurement module operation.
7. **YKWE THERMO Read Waveform.vi**
   Reads the acquired data.
8. **YKWE THERMO Single Scan.vi**
   Reads the instantaneous value of the analog input.
9. **YKWE THERMO Clear.vi**
   Stops the measurement module operation.

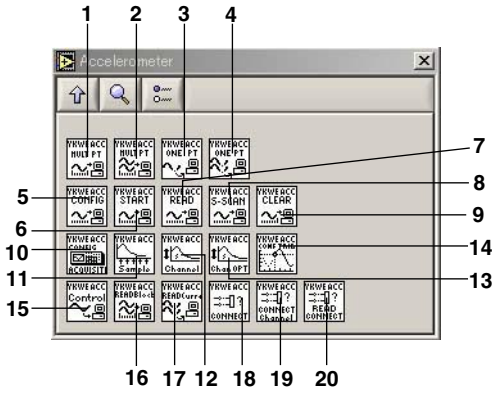
Advanced Level VIs

10. **YKWE THERMO Config Acquisition.vi**
    Configures acquisition settings.(Reference Channel, Unit, Fast Scan Mode, Time Base Mode, RJC Source, RJC Value, Integ Time, and Burn Out Auto)
11. **YKWE THERMO Config Sampling Interval.vi**
    Sets the sampling interval.
12. **YKWE THERMO Config Channel.vi**
    Configures sweep settings.(Range, NULL, Delta, and Averaging Count)
13. **YKWE THERMO Config Channel Alarm.vi**
    Configures alarm settings.(Alarm Type, Alarm High, Alarm Low, and Alarm Group)
14. **YKWE THERMO Config Alarm Combination.vi**
    Configures alarm combination settings.
15. **YKWE THERMO Check.vi**
    Executes null computation and executes burnout.
16. **YKWE THERMO Query Status.vi**
    Reads various statuses.(Alarm, Alarm Hold, and Burn Out)
17. **YKWE THERMO Control.vi**
    Performs acquisition start/stop and latch operation.
18. **YKWE THERMO Read Block Data.vi**
    Reads block data. Waveform data for a single channel, data array for a single channel, waveform data for multiple channels, and data array for multiple channels.
19. **YKWE THERMO Read Current Data.vi**
    Reads the instantaneous value. Waveform data format for a single channel, data for a single channel, waveform data format for multiple channels, and data array for multiple channels.

- **Others (Accelerometer, Strain)**
  Others contains the following palette.



Accelerometer contains the following VIs.



Simple Level VIs

1. **YKWE ACC Acquire Waveform.vi**
   Acquires the specified number of samples as the specified sample rate from a specified input channel, then returns the measurement block data.
2. **YKWE ACC Acquire Waveforms.vi**
   Acquires the specified number of samples as the specified sample rate from a specified plural input channels, then returns the measurement block data.
3. **YKWE ACC Sample Channel.vi**
   Acquires the specified sample rate from a specified input channel, then returns the instantaneous data.
4. **YKWE ACC Sample Channels.vi**
   Acquires the specified sample rate from a specified plural input channels, then returns the instantaneous data.

Intermediate Level VIs

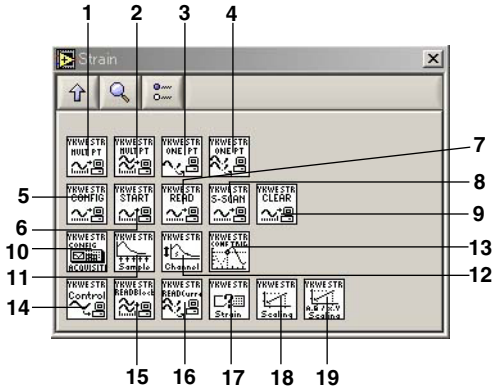
5. **YKWE ACC Config.vi**
   Configures settings of the accelerometer module.
6. **YKWE ACC Start.vi**
   Starts the accelerometer module operation
7. **YKWE ACC Read Waveform.vi**
   Reads the block data from the accelerometer module.
8. **YKWE ACC Single Scan.vi**
   Reads the current data from the input channel of the accelerometer module.
9. **YKWE ACC Clear.vi**
   Stops the accelerometer module operation.

Advanced Level VIs

10. **YKWE ACC Config Acquisition.vi**
    Configures the input operation settings of the accelerometer module. (Acquisition Mode, Record Length, Memory partition, No.of Acquisitions)
11. **YKWE ACC Config Sampling Interval.vi**
    Configures the sampling interval settings of the accelerometer module. (Sampling Interval)

12. **YKWE ACC Config Channel.vi**
    Configures the specified channel settings of the accelerometer module. (Channel, State, Coupling, Range, Sensitivity, Bias)
13. **YKWE ACC Config Channel Option.vi**
    Configures the specified channel (option) settings of the accelerometer module. (Channel, Trig Type, Trig Level, Filter)
14. **YKWE ACC Config Trigger.vi**
    Configures the trigger settings of the accelerometer module. (Trig Combination, Trig Source, Pretrigger, Overlapped Acquisition, Hold Off, Time Base, FFT Interval, Channel Mode)
15. **YKWE ACC Control.vi**
    Performs acquisition start/stop of the accelerometer module operation. (Control Code, Block Length, Block Count, Wait time, Timeout, Event Mode)
16. **YKWE ACC Read Block Data.vi**
    Reads block data from the accelerometer module. (Scaling, Block Num in, Event Timeout)
17. **YKWE ACC Read Current Data.vi**
    Reads current data of the accelerometer module. (Scaling, Latch)
18. **YKWE ACC Config Connection Test.vi**
    Configures the connection test of the accelerometer module. (Connection Test State)
19. **YKWE ACC Config Connection Test Channel.vi**
    Sets the channel which performs the connection test of the accelerometer module. (Channel, Connection Test State)
20. **YKWE ACC Read Connection Test.vi**
    Queries the result of the connection test of the accelerometer module. (Channel)

Strain contains the following VIs.



Simple Level VIs

1. **YKWE STRAIN Acquire Waveform.vi**
   Acquires the specified number of samples as the specified sample rate from a specified input channel, then returns the measurement block data.
2. **YKWE STRAIN Acquire Waveforms.vi**
   Acquires the specified number of samples as the specified sample rate from a specified plural input channels, then returns the measurement block data.
3. **YKWE STRAIN Sample Channel.vi**
   Acquires the specified sample rate from a specified input channel, then returns the instantaneous data.
4. **YKWE STRAIN Sample Channels.vi**
   Acquires the specified sample rate from a specified plural input channels, then returns the instantaneous data.

Intermediate Level VIs

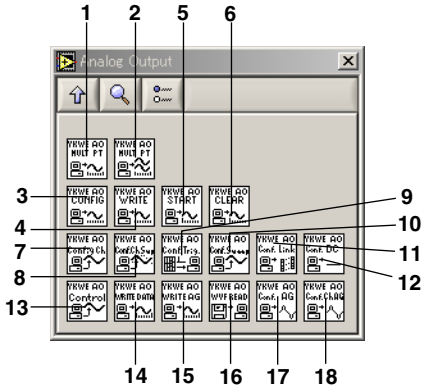
5. **YKWE STRAIN Config.vi**
   Configures settings of the strain module.
6. **YKWE STRAIN Start.vi**
   Starts the strain module operation.

7. **YKWE STRAIN Read Waveform.vi**
   Reads the block data from the strain module.
8. **YKWE STRAIN Single Scan.vi**
   Reads the current data from the input channel of the strain module.
9. **YKWE STRAIN Clear.vi**
   Stops the strain module operation.

Advanced Level VIs

10. **YKWE STRAIN Config Acquisition.vi**
    Configures the input operation settings of the strain module. (Acquisition Mode, Record Length, Memory partition, No.of Acquisitions)
11. **YKWE STRAIN Config Sampling Interval.vi**
    Configures the sampling interval settings of the strain module. (Sampling Interval)
12. **YKWE STRAIN Config Channel.vi**
    Configures the specified channel settings of the strain module. (Channel, State, Range, Excitation, Gauge Factor, Filter, Trigger Type, Trigger Level)
13. **YKWE STRAIN Config Trigger.vi**
    Configures the trigger settings of the strain module. (Trig Combination, Trig Source, Pretrigger, Overlapped Acquisition, Hold Off, Time Base, Channel Mode)
14. **YKWE STRAIN Control.vi**
    Performs acquisition start/stop of the strain module operation. (Control Code, Block Length, Block Count, Wait time, Timeout, Event Mode)
15. **YKWE STRAIN Read Block Data.vi**
    Reads block data from the strain module. (Scaling, Block Num in, Event Timeout)
16. **YKWE STRAIN Read Current Data.vi**
    Reads current data of the strain module. (Scaling, Latch)
17. **YKWE STRAIN Read Balance.vi**
    Reads the balance of the strain module. (Channel)
18. **YKWE STRAIN Config Linear Scaling.vi**
    Configures the linear scaling method settings of the strain module. (Linear Scaling)
19. **YKWE STRAIN Config Linear Scaling Channel.vi**
    Configures the linear scaling settings of the strain module. (Channel, State, A/X1, B/Y1, X2, Y2, Unit)

- **Analog Output**
  Analog output contains the following VIs.



Simple Level VIs

1. **YKWE AO Generate Waveform.vi**
   Generates signals of a specified waveform at a specified frequency and amplitude to a specified output channel.
2. **YKWE AO Generate Waveforms.vi**
   Generates signals of a specified waveform at a specified frequency and amplitude to all output channels.

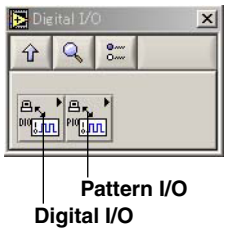
Intermediate Level VIs

3. **YKWE AO Config.vi**
   Configures the analog output for the specified channel.
4. **YKWE AO Write.vi**
   Sets the arbitrary waveform to be output.
5. **YKWE AO Start.vi**
   Starts the analog output operation. This VI sets the output mode and starts the analog output operation.
6. **YKWE AO Clear.vi**
   Stops the analog output operation.

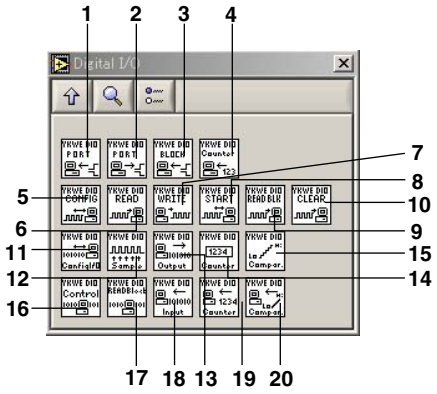
Advanced Level VIs

7. **YKWE AO Config Channel.vi**
   Sets the analog output of a specified channel.(Function, Frequency, Phase, Amplitude, Offset, Duty, Invert, State, Range, Trigger, Tri óer Frequency, and Burst)
8. **YKWE AO Config Channel Sweep.vi**
   Configures sleep mode settings of a specified channel. (Mode, Frequency, Amplitude, Duty, and Pattern Mode)
9. **YKWE AO Config Trigger.vi**
   Configures trigger settings. (Trigger Source Channel and Trigger Output Phase)
10. **YKWE AO Config Sweep.vi**
    Configures sweep settings. (Sweep Mode and Sweep Time)
11. **YKWE AO Config Link.vi**
    Sets the link between modules.
12. **YKWE AO Config DC.vi**
    Configures the DC mode settings of a specified channel. (Range and Output Value)
13. **YKWE AO Control.vi**
    Performs analog output start/stop, phase synchronization and trigger operation.
14. **YKWE AO Write Data.vi**
    Sets the arbitrary waveform data of a specified channel.
15. **YKWE AO Write Data AG.vi**
    Sets the arbitrary waveform data in DC mode of the WE7281.
16. **YKWE AO WVF Read.vi**
    Reads WE7281 format data from a WVF or CSV file.
17. **YKWE AO Config AG.vi**
    Configures AG mode settings of the WE7281.
18. **YKWE AO Config Channel AG.vi**
    Configures AG mode channel settings of the WE7281/WE7282.

- **Digital I/O (Digital I/O, Pattern I/O)**
  Digital I/O contains the following palette.



Digital I/O contains the following VIs.



Simple Level VIs

1. **YKWE DIO Read from Port.vi**
   Selects input/output of the specified port, then reads the input pattern.
2. **YKWE DIO Write to Port.vi**
   Selects input/output of the specified port, then writes the output pattern.
3. **YKWE DIO Read Block from Port.vi**
   Selects input/output of the specified port, then reads the input pattern as the block data.
4. **YKWE DIO Read Counter from Port.vi**
   Reads the count value of the specified port.

Intermediate Level VIs

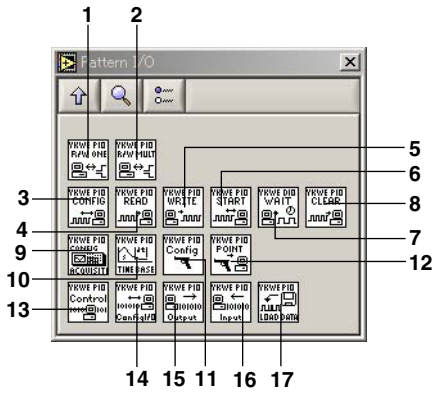
5. **YKWE DIO Config.vi**
   Configures the input/output settings of the specified port. (Port, I/O Select)
6. **YKWE DIO Read.vi**
   Reads the input pattern of the specified port. (Port)
7. **YKWE DIO Write.vi**
   Writes the output pattern to the specified port. (Port, Output Pattern)
8. **YKWE DIO Start.vi**
   Starts the operation of the digital I/O module. This VI sets the sampling speed, block length, and block count. Then, starts the operation of measuring modules.
9. **YKWE DIO Read Block.vi**
   Reads the input pattern as the block data. (time limit, Block Num in, Number of block to read)
10. **YKWE DIO Clear.vi**
    Stops the operation of the digital I/O module.

Advanced Level VIs

11. **YKWE DIO Config IO.vi**
    Configures the input/output of the specified port. (Port, I/O Select)
12. **YKWE DIO Config Sampling Interval.vi**
    Configures the sampling interval. (Sampling Interval, Repeat)
13. **YKWE DIO Write IO.vi**
    Writes the output pattern. (Port, Output Pattern)

14. **YKWE DIO Config Counter.vi**
    Configures the counter. (Gate Mode, Gate Time)
15. **YKWE DIO Config Comparator.vi**
    Configures the Comparator. (Comparator SW, Comparator, Filter)
16. **YKWE DIO Control.vi**
    Performs the operation of Acquisition start/stop and so on.
17. **YKWE DIO Read Block Data.vi**
    Reads the block data. (Block Num, Event Timeout)
18. **YKWE DIO Read IO.vi**
    Reads the input pattern. (Port)
19. **YKWE DIO Read Counter.vi**
    Reads the count value. (Port, Complete)
20. **YKWE DIO Read Comparator.vi**
    Reads the result of comparating. (Port)

Pattern I/O contains the following VIs.



Simple Level VIs

1. **YKWE PIO Read Write One Ch.vi**
   Sets pattern I/O for the specified one channel, then configures data input or output.
2. **YKWE PIO Read Write Multi Ch.vi**
   Sets pattern I/O for the plural channels, then configures data input or output.

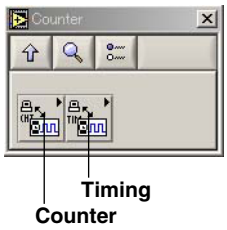
Intermediate Level VIs

3. **YKWE PIO Config.vi**
   Configures pattern I/O for the specified one channel.
4. **YKWE PIO Read.vi**
   Inputs data to the specified one channel.
5. **YKWE PIO Write.vi**
   Outputs data to the specified one channel.
6. **YKWE PIO Start.vi**
   Starts the operation of pattern I/O module.
7. **YKWE PIO Wait.vi**
   Waits for the end of pattern I/O module operation.
8. **YKWE PIO Clear.vi**
   Stops the pattern I/O module operation.

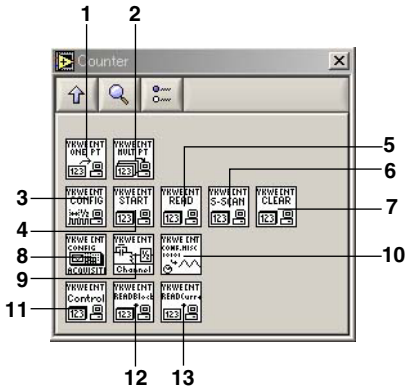
Advanced Level VIs

9. **YKWE PIO Config Acquisition.vi**
   Configures the input operation settings of the accelerometer module. (Mode, Frequency, Memory Length, Pre Trigger)
10. **YKWE PIO Config Time Base.vi**
    Configures the clock relation settings. (Time Base, Output Clock, Arming)
11. **YKWE PIO Config Trigger.vi**
    Configures the trigger setting. (Channel, Mask, Pattern, Disable)
12. **YKWE PIO Read Trigger Point.vi**
    Reads the trigger position of the specified channel. (Channel)
13. **YKWE PIO Control.vi**
    Starts and stops the operation of the pattern module. (Control Code, Wait time, Timeout)
14. **YKWE PIO Config IO.vi**
    Configures input and output to specified one channel. (Channel, I/O Select)
15. **YKWE PIO Write IO.vi**
    Configures data output to specified one channel. (Channel, Output Pattern)
16. **YKWE PIO Read IO.vi**
    Configures data input to specified one channel. (Channel, Complete)
17. **YKWE PIO Load Pattern Data.vi**
    Reads the specified pattern data to the specified one channel. (Channel, File Name)

- **Counter (Counter, Timing)**
  Counter contains the following palette.



Counter contains the following VIs.



Simple Level VIs

1. **YKWE COUNT Sample Channel.vi**
   Acquires the specified number of samples as the specified sample rate, then returns the measurement data.
2. **YKWE COUNT Acquire Waveform.vi**
   Acquires the specified number of samples as the specified sample rate, then returns the measurement block data.

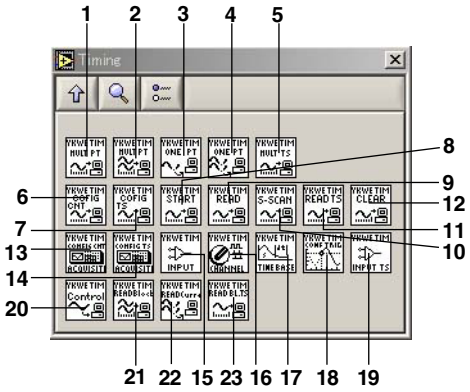
Intermediate Level VIs

3. **YKWE COUNT Config.vi**
   Configures the input settings of the counter module.
4. **YKWE COUNT Start.vi**
   Starts the counter module operation
5. **YKWE COUNT Read Waveform.vi**
   Reads the block data from the counter module.
6. **YKWE COUNT Single Scan.vi**
   Reads the current data from the input channel of the counter module.
7. **YKWE COUNT Clear.vi**
   Stops the counter module operation.

Advanced Level VIs

8. **YKWE COUNT Config Acquisition.vi**
   Configures the input operation settings of the counter module. (Function, Gate Time, Multiplier, Ext Gate, Acquisition Mode, Sampling Interval, Alarm, Difference)
9. **YKWE COUNT Config Channel.vi**
   Configures the specified channel settings of the counter module. (Channel, Coupling, Attenuator, Slope, Auto, Trigger Level, Prescaler)
10. **YKWE COUNT Config Misc.vi**
    Configures the other input settings of the counter module. (Arming, D/A Output, Scaling, Clock)
11. **YKWE COUNT Control.vi**
    Performs acquisition start/stop of the counter module operation. (Control Code, Block Length, Block Count, Wait time, Timeout)
12. **YKWE COUNT Read Block Data.vi**
    Reads block data from the counter module. (Scaling, Block Num in, Event Timeout)
13. **YKWE COUNT Read Current Data.vi**
    Reads current data of the counter module. (Scaling, Latch)

Timing contains the following VIs.



Simple Level VIs

1. **YKWE TIM Acquire Waveform.vi**
   Acquires the specified number of samples as the specified sample rate from the specified input channel, then returns the measured block data.
2. **YKWE TIM Acquire Waveforms.vi**
   Acquires the specified number of samples as the specified sample rate from the plural input channels, then returns the measured block data.
3. **YKWE TIM Sample Channel.vi**
   Acquires with the specified sampling interval from the specified input channel, then returns the instantaneous value data.
4. **YKWE TIM Sample Channels.vi**
   Acquires with the specified sampling interval from the plural input channels, then returns the instantaneous value data.

5. **YKWE TIM Acquire Time Stamp.vi**
   Returns the time stamp data within the specified time.

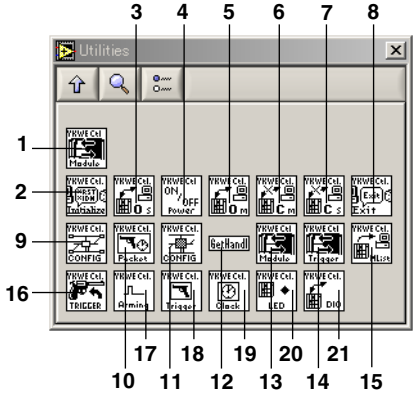
Intermediate Level VIs

6. **YKWE TIM Config Counter.vi**
   Configures the counter operation of the timing measurement module.
7. **YKWE TIM Config Time Stamp.vi**
   Configures the time stamp operation of the timing measurement module.
8. **YKWE TIM Start.vi**
   Starts the timing measurement module operation.
9. **YKWE TIM Read Waveform.vi**
   Reads the block data from the timing measurement module.
10. **YKWE TIM Single Scan.vi**
    Reads the current data from the input channel of the timing measurement module.
11. **YKWE TIM Read Time Stamp.vi**
    Reads the time stamp data from the timing measurement module.
12. **YKWE TIM Clear.vi**
    Stops the timing measurement module operation.

Advanced Level VIs

13. **YKWE TIM Config Acquisition Counter.vi**
    Configures the timing measurement module operation. (Acquisition Mode, Sampling Interval, Record Length, No.of Acquisition, Memory Partition, Counter Reset Type)
14. **YKWE TIM Config Acquisition TS.vi**
    Configures the time stamp operation of the timing measurement module. (Hysteresis)
15. **YKWE TIM Config Input.vi**
    Configures the specified input operation of the timing measurement module. (Input, Coupling, Level, Filter, Hysteresis)
16. **YKWE TIM Config Channel.vi**
    Configures the specified channels settings of the timing measurement module. (Channel, Function, Source A, Source B, Limit)
17. **YKWE TIM Config Time Base.vi**
    Configures the time base settings of the timing measurement module. (Time Base, Slope, Source Number, Data Hold, Hysteresis)
18. **YKWE TIM Config Trigger.vi**
    Configures the trigger settings of the timing measurement module. (Source, Source Number, Slope, Type, Threshold, Condition, Pretrigger, Hold Off)
19. **YKWE TIM Config TS.vi**
    Configures the time stamp operation of the timing measurement module. (Input, State, Coupling, Level, Filter, Hysteresis, Slope)
20. **YKWE TIM Control.vi**
    Starts and stops the timing measurement module operation. (Control Code, Block Length, Block Count, Event Mode, Wait time, Timeout, Acq Count, Channel)
21. **YKWE TIM Read Block Data.vi**
    Reads the block data from the timing measurement module. (Channel Num, Scaling, Block Num in, Event Timeout)
22. **YKWE TIM Read Current Data.vi**
    Reads the current data of the timing measurement module. (Channel Num, Scaling, Latch)
23. **YKWE TIM Read Block Time Stamp.vi**
    Reads the block data of time stamp of the timing measurement module. (Module, Latch, Block Num in)

- **Utility**
  Utility contains the following VIs.



1. **YKWE Module Window.vi**
   Shows or hides the module operation panel (simple level).
2. **YKWE Initialize.vi**
   Initialization.
3. **YKWE Open Station.vi**
   Readies the station for use.
4. **YKWE Power.vi**
   Turns ON/OFF the power to the station.
5. **YKWE Open Module.vi**
   Readies the module for use.
6. **YKWE Close Module.vi**
   Terminates the module usage.
7. **YKWE Close Station.vi**
   Terminates the station usage.
8. **YKWE Exit.vi**
   Termination.
9. **YKWE Config Bus Ex.vi**
   Sets TRIG IN, EXT I/O, TRIG BUS, CLOCK BUS, ARMING BUS
10. **YKWE Config Packet.vi**
    Sets the packet function.
11. **YKWE Config Module Bus EX.vi**
    Sets the input/output of the trigger source, time base, and arming signals.
12. **YKWE Get Station Hamdle.vi**
    Gets the station handle from the station name.
13. **YKWE Show or Close Module Window.vi**
    Shows or hides the module operation panel.
14. **YKWE Show or Close Trigger Window.vi**
    Shows or hides the trigger operation panel.
15. **YKWE Module List.vi**
    Shows the module list of the station.
16. **YKWE Manual Trig.vi**
    Generates a manual trigger.
17. **YKWE Manual Arming.vi**
    Generate an arming signal.
18. **YKWE Manual Trig Packet.vi**
    Issues a trigger packet.
19. **YKWE Manual Clock Packet.vi**
    Issues a time base packet.
20. **YKWE STATUS LED.vi**
    Sets the status LED of the station (WE500/WE900 Only).
21. **YKWE DIO.vi**
    Sets the DIO of the station (WE500/WE900 Only).

4. Initialization VIs

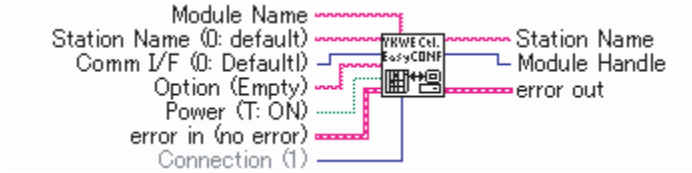
Initialization VIs allow you to select the communication method or set communication parameters according to the communication module that you are using. The VI performs initialization of the measuring station, controls the standby power of the measuring station, and performs initialization of modules. The VI is necessary before handling each module.

Below are the Initialization VIs.

YKWE Easy Config.vi	Performs initialization and readies the modules.
YKWE Easy Clear.vi	Performs termination process (includes termination process for modules and stations).

YKWE Easy Config.vi

This VI configures the stations and modules.



Station Name (0: default)

Specifies the name of the station to be opened.
To open all measuring stations in the network, specify BROADCAST.
To use the station that you used previously, specify 0.
If you specify blank, the first station that is found is opened.

The default value is 0.

Comm I/F (0: DefaultI)

Selects the type of communication interface between the PC and measuring station.
0: Default (interface that was used previously)
1: Optical
2: Serial
3: Ethernet
4: Ethernet95
5: USB

The default value is 0.

Option (Empty)

Specifies the communication interface options.
When using the optical interface card, specify the device name.
When using serial communications, specify the COM port and baud rate. Can be omitted.
When using the Ethernet module, specify the IP address, net mask, and port number. Can be omitted.

The default values is blank (no specification).
(option example)
WE7033/WE7034
devicename =we7034
WE7035/WE7036
devicename =we7036
COM = COM BAUDRATE = 9600
IP = 192.168.21.128 NETMASK = 255.255.255.0 PORTNO = 34191

For more details, see “Start Option” in the WE7000 PC-Based Measurement Instruments and WE7051 Ethernet Module/WE7052 Fast Ethernet Module (IM 707051-01E) User’s Manuals.

Power (T: ON)

Selects ON/OFF of the standby power of the measuring station.
T: ON
F: OFF

The default value is T (ON).

Module Name

Specifies the module product name [:number] or the slot number to be opened.
The number inside the brackets in the former method of specifying the module is a relative number (1 based) counted from the left. This number is necessary in distinguishing the same type of modules when multiple modules of the same type in the measuring station are operating in an unlinked condition (operating independently). This number can be omitted. If omitted, it is considered to be [:1].
To specify the WE7272 4-CH, 100 kS/s Isolated Digitizer Module , use “WE7271”.

The default value is blank.

Connection (1)

The number of modules you wish to link. Specify “1” if you are not linking the modules.

The default value is 1.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Station Name

Indicates the name of the station that was opened.
Nothing is indicated if the station could not be opened.

Module Handle

Indicates the handle of the module that was opened.
Indicates 0 if the module could not be opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

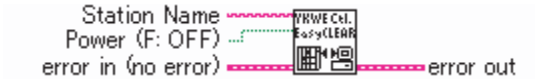
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE Easy Clear.vi

This VI clears (terminates) the station or module.



Station Name

Specifies the station name.
Blank specifies the first station.

The default values is blank (first station).

Power (F: OFF)

Selects the standby power state.
ON/OFF of the standby power after termination.
T: ON
F: OFF

The default value is T (OFF).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

5. Measurement Module VIs

5.1 Digitizer VIs

Digitizer VIs allow you to configure and perform data acquisition on the following modules.

WE7116	2-CH, 20 MS/s Digitizer Module
WE7251	10-CH, 100 kS/s Digitizer Module
WE7271/WE7272	4-CH, 100 kS/s Isolated Digitizer Module
WE7273	8-CH, 20 MS/s Digitizer Module
WE7275	2-CH, 1 MS/s Isolated Digitizer Module
WE7311	1 GS/s Digital Oscilloscope Module (Digitizer Mode)

- Simple Level VIs

YKWE DGTZR Acquire Waveform.vi	Acquires the specified number of samples as the specified sample rate from a single input channel, then returns the acquired data.
YKWE DGTZR Acquire Waveforms.vi	Acquires the specified number of samples as the specified sample rate from all input channels, then returns the acquired data.
YKWE DGTZR Sample Channel.vi	Measures the signal that is connected to the specified channel, then returns the measured voltage.
YKWE DGTZR Sample Channels.vi	Measures the signal that is connected to all channels, then returns the measured voltage.

- Intermediate Level VIs

YKWE DGTZR Config.vi	Configures the analog input for the specified channel.
YKWE DGTZR Start.vi	Starts the analog input operation. This VI sets the sampling rate, block length, and trigger conditions. Then, the VI starts the measurement module operation.
YKWE DGTZR Read Waveform.vi	Reads the acquired data.
YKWE DGTZR Single Scan.vi	Reads the instantaneous value of the analog input.
YKWE DGTZR Clear.vi	Stops the measurement module operation.

- Advanced Level VIs

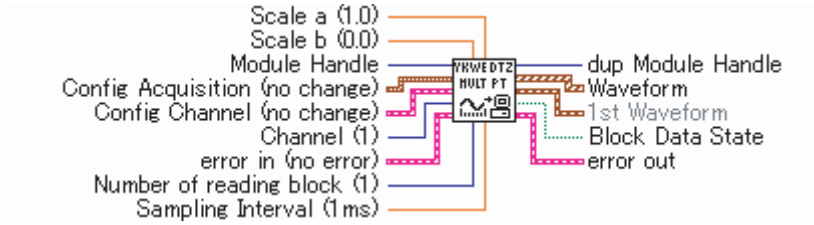
YKWE DGTZR Config Acquisition.vi	Sets parameters related to acquisition (Acquisition Mode, Record Length, No. of Acquisition, Memory Partition, Trigger Mode)
YKWE DGTZR Config Sampling Interval.vi	Sets the sampling interval.
YKWE DGTZR Config Channel.vi	Sets parameters related to the trace (Channel, State, Range, Filter, Trigger (Trig Type, Trig High (Trig Level), Trig Low), Channel WE7311 (Offset, Coupling, Probe)).
YKWE DGTZR Config Trigger.vi	Sets parameters related to the trigger (Trig Combination, Trig Source, Pretrigger, Overlapped Acquisition, Hold Off, Time Base, Channel Mode).
YKWE DGTZR Config Trigger WE7311.vi	Sets parameters related to the WE7311 trigger (Trig Source, Trig Coupling, Slope, Trig Level, Position (Pretrigger, Delay), Clock (Sampling Source, Reference Source, External Threshold Level)).
YKWE DGTZR Config Trigger WE7116.vi	Set parameter related to the WE7116 trigger (Trig Type, Trig Source, Pretrigger, Trig Hysteresis, Trig Level (Upper), Trig Lower, Hold Off, Time Base)
YKWE DGTZR Control.vi	Acquisition start, stop, latch, etc.
YKWE DGTZR Read Block Data.vi	Waveform data for a single channel, data array for a single channel, waveform data for multiple channels, and data array for multiple channels.
YKWE DGTZR Read Current Data.vi	Waveform data format for a single channel, data for a single channel, waveform data format for multiple channels, and data array for multiple channels.

YKWE DGTZR Acquire Waveform.vi

This VI measures a specified number of samples at a specified sampling interval from a single input channel and returns the measured data.

YKWE DGTZR Acquire Waveform.vi is polymorphic and can be set to output the following types of data.
Waveform
Scale array

Waveform



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Sampling Interval (1 ms)

Specifies the sampling interval.

The default value is 1 ms.

Config Acquisition (no change)

Sets the analog input to the digitizer module in a cluster.

The default value is no change.

Acquisition Mode (0: no change)

Selects the acquisition mode from the following.

WE7251

0: no change
1: Triggered
2: Free Run
3: Gate

WE7271/WE7272, WE7273, or WE7275

0: no change
1: Triggered
2: Free Run
3: Gate(Level)
4: Gate(Edge)

The default value is 0.

Note

This value is valid only for WE7251, WE7271/WE7272, WE7273, and WE7275.

Record Length (-1: no change)

Specifies the record length.

Selectable Range

WE7116, WE7271/WE7272, WE7275: 0 to 4194304
WE7251: 0 to 1048576
WE7273: 0 to 8388608
WE7311: 0, 100 to 2000000
no change: –1

The default value is –1 (no change).
For details, see the user's manual for the module.

No. of Acquisition (-1: no change)

Specifies the number of acquisitions.

WE7251, WE7271/WE7272, WE7273, or WE7275

You can specify the number of times to acquire the data when using the trigger or gate mode.

Selectable range

1 to 32,768

If you set the value to 0, the acquisition of data continues until the measurement is stopped.
There are limitations concerning this value. For details, see the user's manual for the module.

WE7116, or WE7311

If the trigger mode is set to [Normal] and the memory is partitioned, enter the number of acquisitions.

Selectable range

1 to the number of memory partitions

The default value is –1 (no change).

I16 Memory Partition (0: no change)

Select the number of memory partitions from below.
When in the trigger mode, you can divide the acquisition memory into multiple blocks and acquire the data to the memory blocks in order every time the trigger occurs. When using memory partitions, if the measurement is stopped before reaching the number of acquisitions, the data in the memory block that was being written at that time are invalid.
0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256
10: 512
11: 1024
12: 2048
13: 4096

Selectable Range

WE7116: 0 to 11 (Number of memory partitions: 1 to 1024)
WE7251, WE7271/WE7272, WE7273, WE7275: 0 to 9 (Number of memory partitions: 1 to 256)
WE7311: 0 to 13 (Number of memory partitions: 1 to 4096)

The default value is 0.

U16 Trigger Mode (0: no change)

Selects the trigger mode.
0: no change
1: Auto
2: Normal

The default value is 0.

Note

This value is valid only for the WE7116 and WE7311.

Config Channel (no change)

Sets ON/OFF, range, trigger, and filter of the specified channel in a cluster.

The default value is no change.

State (F: OFF)

Selects measurement ON/OFF.
T: ON
F: OFF

The default value is F (OFF).

Note

This value is valid only for WE7116, WE7251, WE7271/WE7272, WE7273, and WE7275.

Range (0: no change)

Selects the measurement range from the following.
0: no change
1: 25 mV
2: 50 mV
3: 100 mV
4: 200 mV/250 mV
5: 500 mV
6: 1 V
7: 2 V/2.5 V
8: 5 V
9: 10 V
10: 20 V
11: 50 V/35 V
12: 100 V
13: 200 V
14: 500 V/350 V
15: 1 kV
16: 2 kV
17: 5 kV
18: 10 kV
19: 20 kV
20: 50 kV

Selectable range

WE7116: 0, 3 to 20 (measurement range: 100 mV to 50 kV)
WE7251: 0, 6 to 10 (measurement range: 1 V to 20 V)
WE7271/WE7272: 0, 6 to 11 (measurement range: 1 V to 35 V)
WE7273: 0, 2 to 11 (measurement range: 50 mV to 50 V)
WE7275: 0, 3 to 14 (measurement range: 100 mV to 350 V)
WE7311: 0 to 7 (measurement range: 25 mV to 2.5 V)

The default value is 0.

Trigger (no change)

Sets the trigger type and trigger level.

The default value is no change.

Note

This value is valid only for WE7251, WE7271/WE7272, WE7273, and WE7275.

TrigType (0: no change)

Sets the trigger type.
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low
6: In (WE7251 only)
7: Out (WE7251 only)
8: Off

The default value is 0.

Trig (High) (0 V)

Sets the high trigger level for the WE7251 or the trigger level for the WE7271/WE7272, WE7273, or WE7275 for each channel.
The selectable range is the measurable voltage range determined by the measurement range.
This value is valid when TrigType is set to a value other than OFF or no change.
Resolution
WE7251
0.01 V: ±1/2/5 V
0.1 V: ±10/20 V
WE7271/WE7272
10 mV: ±1/2/5 V
100 mV:±10/20/35 V
WE7273
0.1 mV: ±50 mV
1 mV: ±100/200/500 mV
10 mV: ±1/2/5 V
100 mV: ±10/20/50 V
WE7275
1 mV: ±100/200/500 mV
10 mV: ±1/2/5 V
100 mV: ±10/20/50 V
1 V: ±100/200/350 V

The default value is 0 V.

DBL Trig Low (0 V)

Set the low trigger level for the WE7251 for each channel.
The selectable range is the measurable voltage range determined by the measurement range.
This value is valid when TrigType is set to a value other than Low, In, or Out.

Resolution

0.01 V: ±1/2/5 V
0.1 V: ±10/20 V

The default value is 0 V.

U16 Filter (0: no change)

Selects the input filter for the WE7116, WE7271/WE7272, WE7273, or WE7275.
0: no change
1: Off
2: LPF (400 Hz (WE7275))/(500 Hz (WE7271/WE7272, WE7273))
3: LPF (4 kHz (WE7275))/(5 kHz (WE7271/WE7272, WE7273))
4: LPF (40 kHz (WE7275))/(50 Hz (WE7273))
5: LPF (100 kHz (WE7275))/(500 kHz (WE7116))
6: AAF (20 Hz (WE7275))/(1 MHz (WE7116))
7: AAF (40 Hz)
8: AAF (80 Hz)
9: AAF (200 Hz)
10: AAF (400 Hz)
11: AAF (800 Hz)
12: AAF (2 kHz)
13: AAF (4 kHz)
14: AAF (8 kHz)
15: AAF (20 kHz)
16: AAF (40 kHz)

Selectable Range

WE7116: 0, 1, 5 and 6
WE7271/WE7272: 0 to 3
WE7273: 0 to 4
WE7275: 0 to 16

The default value is 0.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveforms

Indicates the scaled data of the specified channel as an array of blocks.
t0 indicates 0.
dt indicates the sampling interval.
Y indicates the array of measured data.

1st Waveform

Indicates the scaled data of the first block of the scaled data of the specified channel.
t0 indicates 0.
dt indicates the sampling interval.
Y indicates the array of measured data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

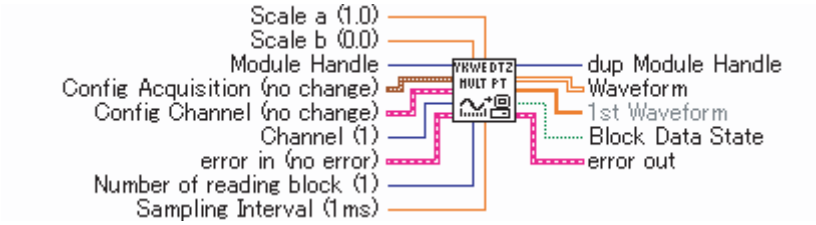
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale array



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Sampling Interval (1 ms)

Specifies the sampling interval.

The default value is 1 ms.

Config Acquisition (no change)

Sets the analog input to the digitizer module in a cluster.

The default value is no change.

Acquisition Mode (0: no change)

Selects the acquisition mode from the following.

WE7251

0: no change
1: Triggered
2: Free Run
3: Gate

WE7271/WE7272, WE7273, or WE7275

0: no change
1: Triggered
2: Free Run
3: Gate (Level)
4: Gate (Edge)

The default value is 0.

Note

This value is valid only for WE7251, WE7271/WE7272, WE7273, and WE7275.

Record Length (-1: no change)

Specifies the record length.

Selectable Range

WE7116, WE7271/WE7272, WE7275: 0 to 4194304
WE7251: 0 to 1048576
WE7273: 0 to 8388608
WE7311: 0, 100 to 2000000
no change: –1

The default value is –1 (no change).
For details, see the user's manual for the module.

No. of Acquisition (-1: no change)

Specifies the number of acquisitions.

WE7251, WE7271/WE7272, WE7273, or WE7275

You can specify the number of times to acquire the data when using the trigger or gate mode.

Selectable range

1 to 32,768

If you set the value to 0, the acquisition of data continues until the measurement is stopped.
There are limitations concerning this value. For details, see the user's manual for the module.

WE7116, or WE7311

If the trigger mode is set to [Normal] and the memory is partitioned, enter the number of acquisitions.

Selectable range

1 to the number of memory partitions

The default value is –1 (no change).

I16 Memory Partition (0: no change)

Select the number of memory partitions from below.
When in the trigger mode, you can divide the acquisition memory into multiple blocks and acquire the data to the memory blocks in order every time the trigger occurs. When using memory partitions, if the measurement is stopped before reaching the number of acquisitions, the data in the memory block that was being written at that time are invalid.
0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256
10: 512
11: 1024
12: 2048
13: 4096

Selectable Range

WE7116: 0 to 11 (Number of memory partitions: 1 to 1024)
WE7251, WE7271/WE7272, WE7273, WE7275: 0 to 9 (Number of memory partitions: 1 to 256)
WE7311: 0 to 13 (Number of memory partitions: 1 to 4096)

The default value is 0.

U16 Trigger Mode (0: no change)

Selects the trigger mode.
0: no change
1: Auto
2: Normal

The default value is 0.

Note

This value is valid only for the WE7116 and WE7311.

Config Channel (no change)

Sets ON/OFF, range, trigger, and filter of the specified channel in a cluster.

The default value is no change.

State (F: OFF)

Selects measurement ON/OFF.
T: ON
F: OFF

The default value is F (OFF).

Note

This value is valid only for WE7116, WE7251, WE7271/WE7272, WE7273, and WE7275.

Range (0: no change)

Selects the measurement range from the following.
0: no change
1: 25 mV
2: 50 mV
3: 100 mV
4: 200 mV/250 mV
5: 500 mV
6: 1 V
7: 2 V/2.5 V
8: 5 V
9: 10 V
10: 20 V
11: 50 V/35 V
12: 100 V
13: 200 V
14: 500 V/350 V
15: 1 kV
16: 2 kV
17: 5 kV
18: 10 kV
19: 20 kV
20: 50 kV

Selectable range

WE7116: 0, 3 to 20 (measurement range: 100 mV to 50 kV)
WE7251: 0, 6 to 10 (measurement range: 1 V to 20 V)
WE7271/WE7272: 0, 6 to 11 (measurement range: 1 V to 35 V)
WE7273: 0, 2 to 11 (measurement range: 50 mV to 50 V)
WE7275: 0, 3 to 14 (measurement range: 100 mV to 350 V)
WE7311: 0 to 7 (measurement range: 25 mV to 2.5 V)

The default value is 0.

Trigger (no change)

Sets the trigger type and trigger level.

The default value is no change.

Note

This value is valid only for WE7251, WE7271/WE7272, WE7273, and WE7275.

TrigType (0: no change)

Sets the trigger type.
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low
6: In (WE7251 only)
7: Out (WE7251 only)
8: Off

The default value is 0.

Trig (High) (0 V)

Sets the high trigger level for the WE7251 or the trigger level for the WE7271/WE7272, WE7273 or WE7275 for each channel.
The selectable range is the measurable voltage range determined by the measurement range.
This value is valid when TrigType is set to a value other than OFF or no change.
Resolution
WE7251
0.01 V: ±1/2/5 V
0.1 V: ±10/20 V
WE7271/WE7272
10 mV: ±1/2/5 V
100 mV: ±10/20/35 V
WE7273
0.1 mV: ±50 mV
1 mV: ±100/200/500 mV
10 mV: ±1/2/5 V
100 mV: ±10/20/50 V
WE7275
1m V: ±100/200/500 mV
10m V: ±1/2/5 V
100 mV: ±10/20/50 V
1 V: ±100/200/350 V

The default value is 0 V.

DBL Trig Low (0 V)

Set the low trigger level for the WE7251 for each channel.
The selectable range is the measurable voltage range determined by the measurement range.
This value is valid when TrigType is set to a value other than Low, In, or Out.

Resolution

0.01 V: ±1/2/5 V
0.1 V: ±10/20 V

The default value is 0 V.

U16 Filter (0: no change)

Selects the input filter for the WE7116, WE7271/WE7272, WE7273, or WE7275.
0: no change
1: Off
2: LPF (400 Hz (WE7275))/(500 Hz (WE7271/WE7272, WE7273))
3: LPF (4 kHz (WE7275))/(5 kHz (WE7271/WE7272, WE7273))
4: LPF (40 kHz (WE7275))/(50 Hz (WE7273))
5: LPF (100 kHz (WE7275))/(500 kHz (WE7116))
6: AAF (20 Hz (WE7275))/(1 MHz (WE7116))
7: AAF (40 Hz)
8: AAF (80 Hz)
9: AAF (200 Hz)
10: AAF (400 Hz)
11: AAF (800 Hz)
12: AAF (2 kHz)
13: AAF (4 kHz)
14: AAF (8 kHz)
15: AAF (20 kHz)
16: AAF (40 kHz)

Selectable Range

WE7116: 0, 1, 5 and 6
WE7271/WE7272: 0 to 3
WE7273: 0 to 4
WE7275: 0 to 16

The default value is 0.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveform

Indicates the scaled data of the specified channel as an array.

1st Waveform

Indicates the scaled data of the first block of the scaled data of the specified channel.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

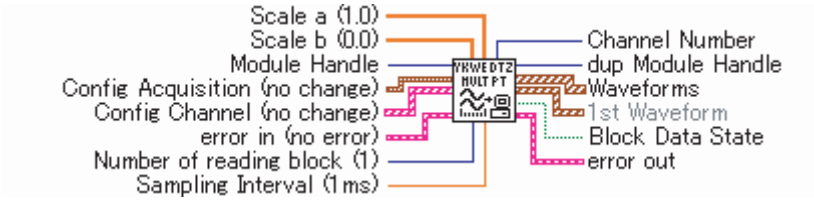
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DGTZR Acquire Waveforms.vi

This VI measures a specified number of samples at a specified sampling interval from multiple input channels and returns the measured data.

YKWE DGTZR Acquire Waveforms.vi is polymorphic and can be set to output the following types of data.
Waveform
Scale array

Waveform



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Sampling Interval (1 ms)

Specifies the sampling interval.

The default value is 1 ms.

Config Acquisition (no change)

Sets the analog input to the digitizer module in a cluster.

The default value is no change.

Acquisition Mode (0: no change)

Selects the acquisition mode from the following.

WE7251

0: no change
1: Triggered
2: Free Run
3: Gate

WE7271/WE7272, WE7273 or WE7275

0: no change
1: Triggered
2: Free Run
3: Gate(Level)
4: Gate(Edge)

The default value is 0.

Note

This value is valid only for WE7251, WE7271/WE7272, WE7273, and WE7275.

Record Length (-1: no change)

Specifies the record length.

Selectable Range

WE7251: 0 to 1048576
WE7271/WE7272, WE7275: 0 to 4194304
WE7273: 0 to 8388608
WE7311: 0, 100 to 2000000
no change: –1

The default value is –1 (no change).
For details, see the user's manual for the module.

No. of Acquisition (-1: no change)

Specifies the number of acquisitions.

WE7251, WE7271/WE7272, WE7273, or WE7275

You can specify the number of times to acquire the data when using the trigger or gate mode.

Selectable range

1 to 32,768

If you set the value to 0, the acquisition of data continues until the measurement is stopped.
There are limitations concerning this value. For details, see the user's manual for the module.

WE7116, or WE7311

If the trigger mode is set to [Normal] and the memory is partitioned, enter the number of acquisitions.

Selectable range

1 to the number of memory partitions

The default value is –1 (no change).

I16 Memory Partition (0: no change)

Select the number of memory partitions from below.
When in the trigger mode, you can divide the acquisition memory into multiple blocks and acquire the data to the memory blocks in order every time the trigger occurs. When using memory partitions, if the measurement is stopped before reaching the number of acquisitions, the data in the memory block that was being written at that time are invalid.
0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256
10: 512
11: 1024
12: 2048
13: 4096

Selectable Range

WE7116: 0 to 11 (Number of memory partitions: 1 to 1024)
WE7251, WE7271/WE7272, WE7273, WE7275: 0 to 9 (Number of memory partitions: 1 to 256)
WE7311: 0 to 13 (Number of memory partitions: 1 to 4096)

The default value is 0.

U16 Trigger Mode (0: no change)

Selects the trigger mode.
0: no change
1: Auto
2: Normal

The default value is 0.

Note

This value is valid only for the WE7116 and WE7311.

Config Channel (no change)

Sets ON/OFF, range, trigger, and filter of channels in an array of clusters.

The default value is no change.

Of the array elements of index 0, if the range, trigger type, and filter are all zeroes, then index 1, 2, 3, and so on correspond to channels 1, 2, 3, and so on, respectively. If any of the three elements is non-zero, then all channels are set using the elements of index 0.

State (F: OFF)

Selects measurement ON/OFF.
T: ON
F: OFF

The default value is F (OFF).

Note

This value is valid only for WE7116, WE7251, WE7271/WE7272, WE7273, and WE7275.

Range (0: no change)

Selects the measurement range from the following.
0: no change
1: 25 mV
2: 50 mV
3: 100 mV
4: 200 mV/250 mV
5: 500 mV
6: 1 V
7: 2 V/2.5 V
8: 5 V
9: 10 V
10: 20 V
11: 50 V/35 V
12: 100 V
13: 200 V
14: 500 V/350 V
15: 1 kV
16: 2 kV
17: 5 kV
18: 10 kV
19: 20 kV
20: 50 kV

Selectable range

WE7116: 0, 3 to 20 (measurement range: 100 mV to 50 kV)
WE7251: 0, 6 to 10 (measurement range: 1 V to 20 V)
WE7271/WE7272: 0, 6 to 11 (measurement range: 1 V to 35 V)
WE7273: 0, 2 to 11 (measurement range: 50 mV to 50 V)
WE7275: 0, 3 to 14 (measurement range: 100 mV to 350 V)
WE7311: 0 to 7 (measurement range: 25 mV to 2.5 V)

The default value is 0.

Trigger (no change)

Sets the trigger type and trigger level.

The default value is no change.

Note

This value is valid only for WE7251, WE7271/WE7272, WE7273, and WE7275.

TrigType (0: no change)

Sets the trigger type.
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low
6: In (WE7251 only)
7: Out (WE7251 only)
8: Off

The default value is 0.

Trig (High) (0 V)

Sets the high trigger level for the WE7251 or the trigger level for the WE7271/WE7272, WE7273, or WE7275 for each channel.
The selectable range is the measurable voltage range determined by the measurement range.
This value is valid when TrigType is set to a value other than OFF or no change.
Resolution
WE7251
0.01 V: ±1/2/5 V
0.1 V: ±10/20 V
WE7271/WE7272
10 mV: ±1/2/5 V
100 mV: ±10/20/35 V
WE7273
0.1 mV: ±50 mV
1 mV: ±100/200/500 mV
10 mV: ±1/2/5 V
100 mV: ±10/20/50 V
WE7275
1 mV: ±100/200/500 mV
10 mV: ±1/2/5 V
100 mV: ±10/20/50 V
1 V: ±100/200/350 V

The default value is 0 V.

DBL Trig Low (0 V)

Set the low trigger level for the WE7251 for each channel.
The selectable range is the measurable voltage range determined by the measurement range.
This value is valid when TrigType is set to a value other than Low, In, or Out.

Resolution

0.01 V: ±1/2/5 V
0.1 V: ±10/20 V

The default value is 0 V.

U16 Filter (0: no change)

Selects the input filter for the WE7116, WE7271/WE7272, WE7273, or WE7275.
0: no change
1: Off
2: LPF (400 Hz (WE7275))/(500 Hz (WE7271/WE7272, WE7273))
3: LPF (4 kHz (WE7275))/(5 kHz (WE7271/WE7272, WE7273))
4: LPF (40 kHz (WE7275))/(50 Hz (WE7273))
5: LPF (100 kHz (WE7275))/(500 kHz (WE7116))
6: AAF (20 Hz (WE7275))/(1 MHz (WE7116))
7: AAF (40 Hz)
8: AAF (80 Hz)
9: AAF (200 Hz)
10: AAF (400 Hz)
11: AAF (800 Hz)
12: AAF (2 kHz)
13: AAF (4 kHz)
14: AAF (8 kHz)
15: AAF (20 kHz)
16: AAF (40 kHz)

Selectable Range

WE7116: 0, 1, 5 and 6
WE7271/WE7272: 0 to 3
WE7273: 0 to 4
WE7275: 0 to 16

The default value is 0.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveforms

Indicates the scaled data of the specified channels as an array of channels and blocks.
t0 indicates 0.
dt indicates the sampling interval.
Y indicates the array of measured data.

1st Waveform

Indicates the scaled data of the first block of the scaled data of the specified channels as an array of channels.
t0 indicates 0.
dt indicates the sampling interval.
Y indicates the array of measured data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

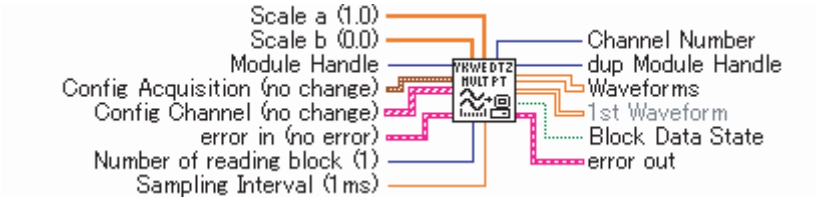
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale array



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Sampling Interval (1 ms)

Specifies the sampling interval.

The default value is 1 ms.

Config Acquisition (no change)

Sets the analog input to the digitizer module in a cluster.

The default value is no change.

Acquisition Mode (0: no change)

Selects the acquisition mode from the following.

WE7251

0: no change
1: Triggered
2: Free Run
3: Gate

WE7271/WE7272, WE7273, or WE7275

1: Triggered
2: Free Run
3: Gate(Level)
4: Gate(Edge)

The default value is 0.

Note

This value is valid only for WE7251, WE7271/WE7272, WE7273, and WE7275.

Record Length (-1: no change)

Specifies the record length.

Selectable Range

WE7116, WE7271/WE7272, WE7275: 0 to 4194304
WE7251: 0 to 1048576
WE7273: 0 to 8388608
WE7311: 0, 100 to 2000000
no change: –1

The default value is –1 (no change).
For details, see the user's manual for the module.

No. of Acquisition (-1: no change)

Specifies the number of acquisitions.

WE7251, WE7271/WE7272, WE7273, or WE7275

You can specify the number of times to acquire the data when using the trigger or gate mode.

Selectable range

1 to 32,768

If you set the value to 0, the acquisition of data continues until the measurement is stopped.
There are limitations concerning this value. For details, see the user's manual for the module.

WE7116, or WE7311

If the trigger mode is set to [Normal] and the memory is partitioned, enter the number of acquisitions.

Selectable range

1 to the number of memory partitions

The default value is –1 (no change).

I16 Memory Partition (0: no change)

Select the number of memory partitions from below.
When in the trigger mode, you can divide the acquisition memory into multiple blocks and acquire the data to the memory blocks in order every time the trigger occurs. When using memory partitions, if the measurement is stopped before reaching the number of acquisitions, the data in the memory block that was being written at that time are invalid.
0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256
10: 512
11: 1024
12: 2048
13: 4096

Selectable Range

WE7116: 0 to 11 (Number of memory partitions: 1 to 1024)
WE7251, WE7271/WE7272, WE7273, WE7275: 0 to 9 (Number of memory partitions: 1 to 256)
WE7311: 0 to 13 (Number of memory partitions: 1 to 4096)

The default value is 0.

U16 Trigger Mode (0: no change)

Selects the trigger mode.
0: no change
1: Auto
2: Normal

The default value is 0.

Note

This value is valid only for the WE7116 and WE7311.

Config Channel (no change)

Sets ON/OFF, range, trigger, and filter of channels in an array of clusters.

The default value is no change.

Of the array elements of index 0, if the range, trigger type, and filter are all zeroes, then index 1, 2, 3, and so on correspond to channels 1, 2, 3, and so on, respectively. If any of the three elements is non-zero, then all channels are set using the elements of index 0.

State (F: OFF)

Selects measurement ON/OFF.
T: ON
F: OFF

The default value is F (OFF).

Note

This value is valid only for WE7116, WE7251, WE7271/WE7272, WE7273, and WE7275.

Range (0: no change)

Selects the measurement range from the following.
0: no change
1: 25 mV
2: 50 mV
3: 100 mV
4: 200 mV/250 mV
5: 500 mV
6: 1 V
7: 2 V/2.5 V
8: 5 V
9: 10 V
10: 20 V
11: 50 V/35 V
12: 100 V
13: 200 V
14: 500 V/350 V
15: 1 kV
16: 2 kV
17: 5 kV
18: 10 kV
19: 20 kV
20: 50 kV

Selectable range

WE7116: 0, 3 to 20 (measurement range: 100 mV to 50 kV)
WE7251: 0, 6 to 10 (measurement range: 1 V to 20 V)
WE7271/WE7272: 0, 6 to 11 (measurement range: 1 V to 35 V)
WE7273: 0, 2 to 11 (measurement range: 50 mV to 50 V)
WE7275: 0, 3 to 14 (measurement range: 100 mV to 350 V)
WE7311: 0 to 7 (measurement range: 25 mV to 2.5 V)

The default value is 0.

Trigger (no change)

Sets the trigger type and trigger level.

The default value is no change.

Note

This value is valid only for WE7251, WE7271/WE7272, WE7273, and WE7275.

TrigType (0: no change)

Sets the trigger type.
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low
6: In (WE7251 only)
7: Out (WE7251 only)
8: Off

The default value is 0.

Trig (High) (0 V)

Sets the high trigger level for the WE7251 or the trigger level for the WE7271/WE7272, We7273, or WE7275 for each channel.
The selectable range is the measurable voltage range determined by the measurement range.
This value is valid when TrigType is set to a value other than OFF or no change.
Resolution
WE7251
0.01 V: ±1/2/5 V
0.1 V: ±10/20 V
WE7271/WE7272
10 mV: ±1/2/5 V
100 mV: ±10/20/35 V
WE7273
0.1 mV: ±50 mV
1 mV: ±100/200/500 mV
10 mV: ±1/2/5 V
100 mV: ±10/20/50 V
WE7275
1 mV: ±100/200/500 mV
10 mV: ±1/2/5 V
100 mV: ±10/20/50 V
1 V: ±100/200/350 V

The default value is 0 V.

DBL Trig Low (0 V)

Set the low trigger level for the WE7251 for each channel.
The selectable range is the measurable voltage range determined by the measurement range.
This value is valid when TrigType is set to a value other than Low, In, or Out.

Resolution

0.01 V: ±1/2/5 V
0.1 V: ±10/20 V

The default value is 0 V.

U16 Filter (0: no change)

Selects the input filter for the WE7116, WE7271/WE7272, WE7273, or WE7275.
0: no change
1: Off
2: LPF (400 Hz (WE7275))/(500 Hz (WE7271/WE7272, WE7273))
3: LPF (4 kHz (WE7275))/(5 kHz (WE7271/WE7272, WE7273))
4: LPF (40 kHz (WE7275))/(50 Hz (WE7273))
5: LPF (100 kHz (WE7275))/(500 kHz (WE7116))
6: AAF (20 Hz (WE7275))/(1 MHz (WE7116))
7: AAF (40 Hz)
8: AAF (80 Hz)
9: AAF (200 Hz)
10: AAF (400 Hz)
11: AAF (800 Hz)
12: AAF (2 kHz)
13: AAF (4 kHz)
14: AAF (8 kHz)
15: AAF (20 kHz)
16: AAF (40 kHz)

Selectable Range

WE7116: 0, 1, 5 and 6
WE7271/WE7272: 0 to 3
WE7273: 0 to 4
WE7275: 0 to 16

The default value is 0.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveforms

Indicates the scaled data of the specified channels as an array of channels and blocks.

1st Waveform

Indicates the scaled data of the first block of the scaled data of the specified channels as an array of channels.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

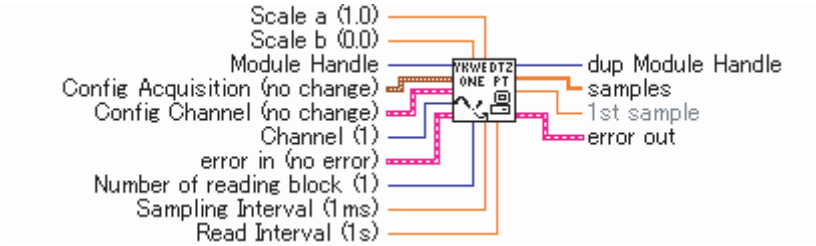
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DGTZR Sample Channel.vi

Measures the signal connected to a specified channel at the specified interval and returns the measured data.

YKWE DGTZR Sample Channel.vi is polymorphic and can be set to output the following types of data.
Scale array
Waveform

Scale array



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Sampling Interval (1 ms)

Specifies the sampling interval.

The default value is 1 ms.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

Config Acquisition (no change)

Sets the analog input to the digitizer module in a cluster.

The default value is no change.

Acquisition Mode (0: no change)

Selects the acquisition mode from the following.

WE7251

0: no change
1: Triggered
2: Free Run
3: Gate

WE7271/WE7272, WE7273, or WE7275

0: no change
1: Triggered
2: Free Run
3: Gate(Level)
4: Gate(Edge)

The default value is 0.

Note

This value is valid only for WE7251, WE7271/WE7272, WE7273, and WE7275.

Record Length (-1: no change)

Specifies the record length.

Selectable Range

WE7116, WE7271/WE7272, WE7275: 0 to 4194304
WE7251: 0 to 1048576
WE7273: 0 to 8388608
WE7311: 0, 100 to 2000000
no change: –1

The default value is –1 (no change).
For details, see the user's manual for the module.

No. of Acquisition (-1: no change)

Specifies the number of acquisitions.

WE7251, WE7271/WE7272, WE7273, or WE7275

You can specify the number of times to acquire the data when using the trigger or gate mode.

Selectable range

1 to 32,768

If you set the value to 0, the acquisition of data continues until the measurement is stopped.
There are limitations concerning this value. For details, see the user's manual for the module.

WE7116, or WE7311

If the trigger mode is set to [Normal] and the memory is partitioned, enter the number of acquisitions.

Selectable range

1 to the number of memory partitions

The default value is –1 (no change).

I16 Memory Partition (0: no change)

Select the number of memory partitions from below.
When in the trigger mode, you can divide the acquisition memory into multiple blocks and acquire the data to the memory blocks in order every time the trigger occurs. When using memory partitions, if the measurement is stopped before reaching the number of acquisitions, the data in the memory block that was being written at that time are invalid.
0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256
10: 512
11: 1024
12: 2048
13: 4096

Selectable Range

WE7116: 0 to 11 (Number of memory partitions: 1 to 1024)
WE7251, WE7271/WE7272, WE7273, WE7275: 0 to 9 (Number of memory partitions: 1 to 256)
WE7311: 0 to 13 (Number of memory partitions: 1 to 4096)

The default value is 0.

U16 Trigger Mode (0: no change)

Selects the trigger mode.
0: no change
1: Auto
2: Normal

The default value is 0.

Note

This value is valid only for the WE7116 and WE7311.

Config Channel (no change)

Sets ON/OFF, range, trigger, and filter of the specified channel in a cluster.

The default value is no change.

State (F: OFF)

Selects measurement ON/OFF.
T: ON
F: OFF

The default value is F (OFF).

Note

This value is valid only for WE7116, WE7251, WE7271/WE7272, WE7273, and WE7275.

Range (0: no change)

Selects the measurement range from the following.
0: no change
1: 25 mV
2: 50 mV
3: 100 mV
4: 200 mV/250 mV
5: 500 mV
6: 1 V
7: 2 V/2.5 V
8: 5 V
9: 10 V
10: 20 V
11: 50 V/35 V
12: 100 V
13: 200 V
14: 500 V/350 V
15: 1 kV
16: 2 kV
17: 5 kV
18: 10 kV
19: 20 kV
20: 50 kV

Selectable range

WE7116: 0, 3 to 20 (measurement range: 100 mV to 50 kV)
WE7251: 0, 6 to 10 (measurement range: 1 V to 20 V)
WE7271/WE7272: 0, 6 to 11 (measurement range: 1 V to 35 V)
WE7273: 0, 2 to 11 (measurement range: 50 mV to 50 V)
WE7275: 0, 3 to 14 (measurement range: 100 mV to 350 V)
WE7311: 0 to 7 (measurement range: 25 mV to 2.5 V)

The default value is 0.

Trigger (no change)

Sets the trigger type and trigger level.

The default value is no change.

Note

This value is valid only for WE7251, WE7271/WE7272, WE7273, and WE7275.

TrigType (0: no change)

Sets the trigger type.
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low
6: In (WE7251 only)
7: Out (WE7251 only)
8: Off

The default value is 0.

Trig (High) (0 V)

Sets the high trigger level for the WE7251 or the trigger level for the WE7271/WE7272, WE7273, or WE7275 for each channel.
The selectable range is the measurable voltage range determined by the measurement range.
This value is valid when TrigType is set to a value other than OFF or no change.
Resolution
WE7251
0.01 V: ±1/2/5 V
0.1 V: ±10/20 V
WE7271/WE7272
10 mV: ±1/2/5 V
100 mV: ±10/20/35 V
WE7273
0.1 mV: ±50 mV
1 mV: ±100/200/500 mV
10 mV: ±1/2/5 V
100 mV: ±10/20/50 V
WE7275
1 mV: ±100/200/500 mV
10 mV: ±1/2/5 V
100 mV: ±10/20/50 V
1 V: ±100/200/350 V

The default value is 0 V.

DBL Trig Low (0 V)

Set the low trigger level for the WE7251 for each channel.
The selectable range is the measurable voltage range determined by the measurement range.
This value is valid when TrigType is set to a value other than Low, In, or Out.

Resolution

0.01 V: ±1/2/5 V
0.1 V: ±10/20 V

The default value is 0 V.

U16 Filter (0: no change)

Selects the input filter for the WE7116, WE7271/WE7272, WE7273, or WE7275.
0: no change
1: Off
2: LPF (400 Hz (WE7275))/(500 Hz (WE7271/WE7272, WE7273))
3: LPF (4 kHz (WE7275))/(5 kHz (WE7271/WE7272, WE7273))
4: LPF (40 kHz (WE7275))/(50 Hz (WE7273))
5: LPF (100 kHz (WE7275))/(500 kHz (WE7116))
6: AAF (20 Hz (WE7275))/(1 MHz (WE7116))
7: AAF (40 Hz)
8: AAF (80 Hz)
9: AAF (200 Hz)
10: AAF (400 Hz)
11: AAF (800 Hz)
12: AAF (2 kHz)
13: AAF (4 kHz)
14: AAF (8 kHz)
15: AAF (20 kHz)
16: AAF (40 kHz)

Selectable Range

WE7116: 0, 1, 5 and 6
WE7271/WE7272: 0 to 3
WE7273: 0 to 4
WE7275: 0 to 16

The default value is 0.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Samples

Indicates the scaled data of the specified channel as an array.

1st sample

Indicates the scaled data of the first block of the scaled data of the specified channel.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

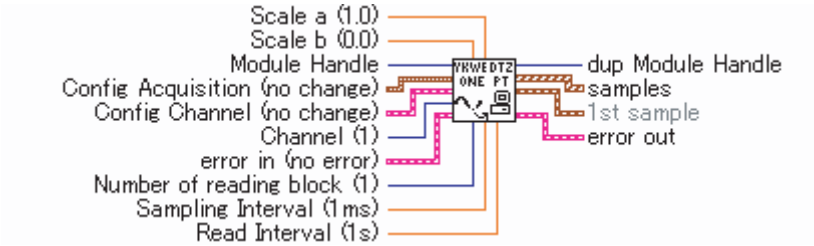
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Sampling Interval (1 ms)

Specifies the sampling interval.

The default value is 1 ms.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

Config Acquisition (no change)

Sets the analog input to the digitizer module in a cluster.

The default value is no change.

Acquisition Mode (0: no change)

Selects the acquisition mode from the following.

WE7251

0: no change
1: Triggered
2: Free Run
3: Gate

WE7271/WE7272, WE7273, or WE7275

0: no change
1: Triggered
2: Free Run
3: Gate(Level)
4: Gate(Edge)

The default value is 0.

Note

This value is valid only for WE7251, WE7271/WE7272, WE7273, and WE7275.

Record Length (-1: no change)

Specifies the record length.

Selectable Range

WE7116, WE7271/WE7272, WE7275: 0 to 4194304
WE7251: 0 to 1048576
WE7273: 0 to 8388608
WE7311: 0, 100 to 2000000
no change: –1

The default value is –1 (no change).
For details, see the user's manual for the module.

No. of Acquisition (-1: no change)

Specifies the number of acquisitions.

WE7251, WE7271/WE7272, WE7273, or WE7275

You can specify the number of times to acquire the data when using the trigger or gate mode.

Selectable range

1 to 32,768

If you set the value to 0, the acquisition of data continues until the measurement is stopped.
There are limitations concerning this value. For details, see the user's manual for the module.

WE7116, or WE7311

If the trigger mode is set to [Normal] and the memory is partitioned, enter the number of , acquisitions.

Selectable range

1 to the number of memory partitions

The default value is –1 (no change).

I16 Memory Partition (0: no change)

Select the number of memory partitions from below.
When in the trigger mode, you can divide the acquisition memory into multiple blocks and acquire the data to the memory blocks in order every time the trigger occurs. When using memory partitions, if the measurement is stopped before reaching the number of acquisitions, the data in the memory block that was being written at that time are invalid.
0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256
10: 512
11: 1024
12: 2048
13: 4096

Selectable Range

WE7116: 0 to 11 (Number of memory partitions: 1 to 1024)
WE7251, WE7271/WE7272, WE7273, WE7275: 0 to 9 (Number of memory partitions: 1 to 256)
WE7311: 0 to 13 (Number of memory partitions: 1 to 4096)

The default value is 0.

U16 Trigger Mode (0: no change)

Selects the trigger mode.
0: no change
1: Auto
2: Normal

The default value is 0.

Note

This value is valid only for the WE7116 and WE7311.

Config Channel (no change)

Sets ON/OFF, range, trigger, and filter of the specified channel in a cluster.

The default value is no change.

State (F: OFF)

Selects measurement ON/OFF.
T: ON
F: OFF

The default value is F (OFF).

Note

This value is valid only for WE7116, WE7251, WE7271/WE7272, WE7273, and WE7275.

Range (0: no change)

Selects the measurement range from the following.
0: no change
1: 25 mV
2: 50 mV
3: 100 mV
4: 200 mV/250 mV
5: 500 mV
6: 1 V
7: 2 V/2.5 V
8: 5 V
9: 10 V
10: 20 V
11: 50 V/35 V
12: 100 V
13: 200 V
14: 500 V/350 V
15: 1 kV
16: 2 kV
17: 5 kV
18: 10 kV
19: 20 kV
20: 50 kV

Selectable range

WE7116: 0, 3 to 20 (measurement range: 100 mV to 50 kV)
WE7251: 0, 6 to 10 (measurement range: 1 V to 20 V)
WE7271/WE7272: 0, 6 to 11 (measurement range: 1 V to 35 V)
WE7273: 0, 2 to 11 (measurement range: 50 mV to 50 V)
WE7275: 0, 3 to 14 (measurement range: 100 mV to 350 V)
WE7311: 0 to 7 (measurement range: 25 mV to 2.5 V)

The default value is 0.

Trigger (no change)

Sets the trigger type and trigger level.

The default value is no change.

Note

This value is valid only for WE7251, WE7271/WE7272, WE7273, and WE7275.

TrigType (0: no change)

Sets the trigger type.
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low
6: In (WE7251 only)
7: Out (WE7251 only)
8: Off

The default value is 0.

Trig (High) (0 V)

Sets the high trigger level for the WE7251 or the trigger level for the WE7271/WE7272, WE7273, or WE7275 for each channel.
The selectable range is the measurable voltage range determined by the measurement range.
This value is valid when TrigType is set to a value other than OFF or no change.
Resolution
WE7251
0.01 V: ±1/2/5 V
0.1 V: ±10/20 V
WE7271/WE7272
10 mV: ±1/2/5 V
100 mV: ±10/20/35 V
WE7273
0.1 mV: ±50 mV
1 mV: ±100/200/500 mV
10 mV: ±1/2/5 V
100 mV: ±10/20/50 V
WE7275
1 mV: ±100/200/500 mV
10 mV: ±1/2/5 V
100 mV: ±10/20/50 V
1 V: ±100/200/350 V

The default value is 0 V.

DBL Trig Low (0 V)

Set the low trigger level for the WE7251 for each channel.
The selectable range is the measurable voltage range determined by the measurement range.
This value is valid when TrigType is set to a value other than Low, In, or Out.

Resolution

0.01 V: ±1/2/5 V
0.1 V: ±10/20 V

The default value is 0 V.

U16 Filter (0: no change)

Selects the input filter for the WE7116, WE7271/WE7272, WE7273, or WE7275.
0: no change
1: Off
2: LPF (400 Hz (WE7275))/(500 Hz (WE7271/WE7272, WE7273))
3: LPF (4 kHz (WE7275))/(5 kHz (WE7271/WE7272, WE7273))
4: LPF (40 kHz (WE7275))/(50 Hz (WE7273))
5: LPF (100 kHz (WE7275))/(500 kHz (WE7116))
6: AAF (20 Hz (WE7275))/(1 MHz (WE7116))
7: AAF (40 Hz)
8: AAF (80 Hz)
9: AAF (200 Hz)
10: AAF (400 Hz)
11: AAF (800 Hz)
12: AAF (2 kHz)
13: AAF (4 kHz)
14: AAF (8 kHz)
15: AAF (20 kHz)
16: AAF (40 kHz)

Selectable Range

WE7116: 0, 1, 5 and 6
WE7271/WE7272: 0 to 3
WE7273: 0 to 4
WE7275: 0 to 16

The default value is 0.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Samples

Indicates the scaled data of the specified channel as an array of blocks.
t0 indicates 0.
Y indicates the array of measured data.

1st sample

Indicates the scaled data of the specified channel.
t0 indicates 0.
Y indicates the array of measured data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

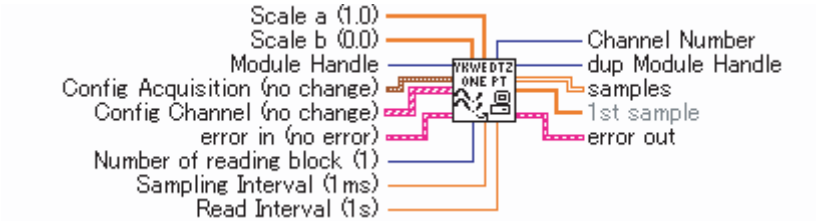
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DGTZR Sample Channels.vi

Measures the signal connected to multiple channels at the specified interval and returns the measured data.

YKWE DGTZR Sample Channels.vi is polymorphic and can be set to output the following types of data.
Scale array
Waveform

Scale array



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Sampling Interval (1 ms)

Specifies the sampling interval.

The default value is 1 ms.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

Config Acquisition (no change)

Sets the analog input to the digitizer module in a cluster.

The default value is no change.

Acquisition Mode (0: no change)

Selects the acquisition mode from the following.

WE7251

0: no change
1: Triggered
2: Free Run
3: Gate

WE7271/WE7272, WE7273, or WE7275

0: no change
1: Triggered
2: Free Run
3: Gate(Level)
4: Gate(Edge)

The default value is 0.

Note

This value is valid only for WE7251, WE7271/WE7272, WE7273, and WE7275.

Record Length (-1: no change)

Specifies the record length.

Selectable Range

WE7116, WE7271/WE7272, WE7275: 0 to 4194304
WE7251: 0 to 1048576
WE7273: 0 to 8388608
WE7311: 0, 100 to 2000000
no change: –1

The default value is –1 (no change).
For details, see the user's manual for the module.

No. of Acquisition (-1: no change)

Specifies the number of acquisitions.

WE7251, WE7271/WE7272, WE7273, or WE7275

You can specify the number of times to acquire the data when using the trigger or gate mode.

Selectable range

1 to 32,768

If you set the value to 0, the acquisition of data continues until the measurement is stopped.
There are limitations concerning this value. For details, see the user's manual for the module.

WE7116, or WE7311

If the trigger mode is set to [Normal] and the memory is partitioned, enter the number of acquisitions.

Selectable range

1 to the number of memory partitions

The default value is –1 (no change).

I16 Memory Partition (0: no change)

Select the number of memory partitions from below.
When in the trigger mode, you can divide the acquisition memory into multiple blocks and acquire the data to the memory blocks in order every time the trigger occurs. When using memory partitions, if the measurement is stopped before reaching the number of acquisitions, the data in the memory block that was being written at that time are invalid.
0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256
10: 512
11: 1024
12: 2048
13: 4096

Selectable Range

WE7116: 0 to 11 (Number of memory partitions: 1 to 1024)
WE7251, WE7271/WE7272, WE7273, WE7275: 0 to 9 (Number of memory partitions: 1 to 256)
WE7311: 0 to 13 (Number of memory partitions: 1 to 4096)

The default value is 0.

U16 Trigger Mode (0: no change)

Selects the trigger mode.
0: no change
1: Auto
2: Normal

The default value is 0.

Note

This value is valid only for the WE7116 and WE7311.

Config Channel (no change)

Sets ON/OFF, range, trigger, and filter of channels in an array of clusters.

The default value is no change.

Of the array elements of index 0, if the range, trigger type, and filter are all zeroes, then index 1, 2, 3, and so on correspond to channels 1, 2, 3, and so on, respectively. If any of the three elements is non-zero, then all channels are set using the elements of index 0.

State (F: OFF)

Selects measurement ON/OFF.
T: ON
F: OFF

The default value is F (OFF).

Note

This value is valid only for WE7116, WE7251, WE7271/WE7272, WE7273, and WE7275.

Range (0: no change)

Selects the measurement range from the following.
0: no change
1: 25 mV
2: 50 mV
3: 100 mV
4: 200 mV/250 mV
5: 500 mV
6: 1 V
7: 2 V/2.5 V
8: 5 V
9: 10 V
10: 20 V
11: 50 V/35 V
12: 100 V
13: 200 V
14: 500 V/350 V
15: 1 kV
16: 2 kV
17: 5 kV
18: 10 kV
19: 20 kV
20: 50 kV

Selectable range

WE7116: 0, 3 to 20 (measurement range: 100 mV to 50 kV)
WE7251: 0, 6 to 10 (measurement range: 1 V to 20 V)
WE7271/WE7272: 0, 6 to 11 (measurement range: 1 V to 35 V)
WE7273: 0, 2 to 11 (measurement range: 50 mV to 50 V)
WE7275: 0, 3 to 14 (measurement range: 100 mV to 350 V)
WE7311: 0 to 7 (measurement range: 25 mV to 2.5 V)

The default value is 0.

Trigger (no change)

Sets the trigger type and trigger level.

The default value is no change.

Note

This value is valid only for WE7251, WE7271/WE7272, WE7273, and WE7275.

TrigType (0: no change)

Sets the trigger type.
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low
6: In (WE7251 only)
7: Out (WE7251 only)
8: Off

The default value is 0.

Trig (High) (0 V)

Sets the high trigger level for the WE7251 or the trigger level for the WE7271/WE7272, WE7273, or WE7275 for each channel.
The selectable range is the measurable voltage range determined by the measurement range.
This value is valid when TrigType is set to a value other than OFF or no change.
Resolution
WE7251
0.01 V: ±1/2/5 V
0.1 V: ±10/20 V
WE7271/WE7272
10 mV: ±1/2/5 V
100 mV: ±10/20/35 V
WE7273
0.1 mV: ±50 mV
1 mV: ±100/200/500 mV
10 mV: ±1/2/5 V
100 mV: ±10/20/50 V
WE7275
1 mV: ±100/200/500 mV
10 mV: ±1/2/5 V
100 mV: ±10/20/50 V
1 V: ±100/200/350 V

The default value is 0 V.

DBL Trig Low (0 V)

Set the low trigger level for the WE7251 for each channel.
The selectable range is the measurable voltage range determined by the measurement range.
This value is valid when TrigType is set to a value other than Low, In, or Out.

Resolution

0.01 V: ±1/2/5 V
0.1 V: ±10/20 V

The default value is 0 V.

U16 Filter (0: no change)

Selects the input filter for the WE7116, WE7271/WE7272, WE7273, or WE7275.
0: no change
1: Off
2: LPF (400 Hz (WE7275))/(500 Hz (WE7271/WE7272, WE7273))
3: LPF (4 kHz (WE7275))/(5 kHz (WE7271/WE7272, WE7273))
4: LPF (40 kHz (WE7275))/(50 Hz (WE7273))
5: LPF (100 kHz (WE7275))/(500 kHz (WE7116))
6: AAF (20 Hz (WE7275))/(1 MHz (WE7116))
7: AAF (40 Hz)
8: AAF (80 Hz)
9: AAF (200 Hz)
10: AAF (400 Hz)
11: AAF (800 Hz)
12: AAF (2 kHz)
13: AAF (4 kHz)
14: AAF (8 kHz)
15: AAF (20 kHz)
16: AAF (40 kHz)

Selectable Range

WE7116: 0, 1, 5 and 6
WE7271/WE7272: 0 to 3
WE7273: 0 to 4
WE7275: 0 to 16

The default value is 0.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Samples

Indicates the scaled data of the specified channels as an array of channels and blocks.

1st samples

Indicates the scaled data of the first block of the scaled data of the specified channels as an array of channels.

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

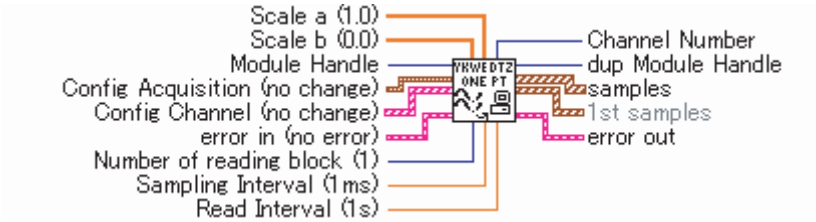
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Sampling Interval (1 ms)

Specifies the sampling interval.

The default value is 1 ms.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

Config Acquisition (no change)

Sets the analog input to the digitizer module in a cluster.

The default value is no change.

Acquisition Mode (0: no change)

Selects the acquisition mode from the following.

WE7251

0: no change
1: Triggered
2: Free Run
3: Gate

WE7271/WE7272, WE7273, or WE7275

0: no change
1: Triggered
2: Free Run
3: Gate(Level)
4: Gate(Edge)

The default value is 0.

Note

This value is valid only for WE7251, WE7271/WE7272, WE7273, and WE7275.

Record Length (-1: no change)

Specifies the record length.

Selectable Range

WE7116, WE7271/WE7272, WE7275: 0 to 4194304
WE7251: 0 to 1048576
WE7273: 0 to 8388608
WE7311: 0, 100 to 2000000
no change: –1

The default value is –1 (no change).
For details, see the user's manual for the module.

No. of Acquisition (-1: no change)

Specifies the number of acquisitions.

WE7251, WE7271/WE7272, WE7273, or WE7275

You can specify the number of times to acquire the data when using the trigger or gate mode.

Selectable range

1 to 32,768

If you set the value to 0, the acquisition of data continues until the measurement is stopped.
There are limitations concerning this value. For details, see the user's manual for the module.

WE7116, or WE7311

If the trigger mode is set to [Normal] and the memory is partitioned, enter the number of acquisitions.

Selectable range

1 to the number of memory partitions

The default value is –1 (no change).

I16 Memory Partition (0: no change)

Select the number of memory partitions from below.
When in the trigger mode, you can divide the acquisition memory into multiple blocks and acquire the data to the memory blocks in order every time the trigger occurs. When using memory partitions, if the measurement is stopped before reaching the number of acquisitions, the data in the memory block that was being written at that time are invalid.
0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256
10: 512
11: 1024
12: 2048
13: 4096

Selectable Range

WE7116: 0 to 11 (Number of memory partitions: 1 to 1024)
WE7251, WE7271/WE7272, WE7273, WE7275: 0 to 9 (Number of memory partitions: 1 to 256)
WE7311: 0 to 13 (Number of memory partitions: 1 to 4096)

The default value is 0.

U16 Trigger Mode (0: no change)

Selects the trigger mode.
0: no change
1: Auto
2: Normal

The default value is 0.

Note

This value is valid only for the WE7116 and WE7311.

Config Channel (no change)

Sets ON/OFF, range, trigger, and filter of channels in an array of clusters.

The default value is no change.

Of the array elements of index 0, if the range, trigger type, and filter are all zeroes, then index 1, 2, 3, and so on correspond to channels 1, 2, 3, and so on, respectively. If any of the three elements is non-zero, then all channels are set using the elements of index 0.

State (F: OFF)

Selects measurement ON/OFF.
T: ON
F: OFF

The default value is F (OFF).

Note

This value is valid only for WE7116, WE7251, WE7271/WE7272, WE7273, and WE7275.

Range (0: no change)

Selects the measurement range from the following.
0: no change
1: 25 mV
2: 50 mV
3: 100 mV
4: 200 mV/250 mV
5: 500 mV
6: 1 V
7: 2 V/2.5 V
8: 5 V
9: 10 V
10: 20 V
11: 50 V/35 V
12: 100 V
13: 200 V
14: 500 V/350 V
15: 1 kV
16: 2 kV
17: 5 kV
18: 10 kV
19: 20 kV
20: 50 kV

Selectable range

WE7116: 0, 3 to 20 (measurement range: 100 mV to 50 kV)
WE7251: 0, 6 to 10 (measurement range: 1 V to 20 V)
WE7271/WE7272: 0, 6 to 11 (measurement range: 1 V to 35 V)
WE7273: 0, 2 to 11 (measurement range: 50 mV to 50 V)
WE7275: 0, 3 to 14 (measurement range: 100 mV to 350 V)
WE7311: 0 to 7 (measurement range: 25 mV to 2.5 V)

The default value is 0.

Trigger (no change)

Sets the trigger type and trigger level.

The default value is no change.

Note

This value is valid only for WE7251, WE7271/WE7272, WE7273, and WE7275.

TrigType (0: no change)

Sets the trigger type.
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low
6: In (WE7251 only)
7: Out (WE7251 only)
8: Off

The default value is 0.

Trig (High) (0 V)

Sets the high trigger level for the WE7251 or the trigger level for the WE7271/WE7272, WE7273, or WE7275 for each channel.
The selectable range is the measurable voltage range determined by the measurement range.
This value is valid when TrigType is set to a value other than OFF or no change.
Resolution
WE7251
0.01 V: ±1/2/5 V
0.1 V: ±10/20 V
WE7271/WE7272
10 mV: ±1/2/5 V
100 mV: ±10/20/35 V
WE7273
0.1 mV: ±50 mV
1 mV: ±100/200/500 mV
10 mV: ±1/2/5 V
100 mV: ±10/20/50 V
WE7275
1 mV: ±100/200/500 mV
10 mV: ±1/2/5 V
100 mV: ±10/20/50 V
1 V: ±100/200/350 V

The default value is 0 V.

DBL Trig Low (0 V)

Set the low trigger level for the WE7251 for each channel.
The selectable range is the measurable voltage range determined by the measurement range.
This value is valid when TrigType is set to a value other than Low, In, or Out.

Resolution

0.01 V: ±1/2/5 V
0.1 V: ±10/20 V

The default value is 0 V.

U16 Filter (0: no change)

Selects the input filter for the WE7116, WE7271/WE7272, WE7273, or WE7275.
0: no change
1: Off
2: LPF (400 Hz (WE7275))/(500 Hz (WE7271/WE7272, WE7273))
3: LPF (4 kHz (WE7275))/(5 kHz (WE7271/WE7272, WE7273))
4: LPF (40 kHz (WE7275))/(50 Hz (WE7273))
5: LPF (100 kHz (WE7275))/(500 kHz (WE7116))
6: AAF (20 Hz (WE7275))/(1 MHz (WE7116))
7: AAF (40 Hz)
8: AAF (80 Hz)
9: AAF (200 Hz)
10: AAF (400 Hz)
11: AAF (800 Hz)
12: AAF (2 kHz)
13: AAF (4 kHz)
14: AAF (8 kHz)
15: AAF (20 kHz)
16: AAF (40 kHz)

Selectable Range

WE7116: 0, 1, 5 and 6
WE7271/WE7272: 0 to 3
WE7273: 0 to 4
WE7275: 0 to 16

The default value is 0.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Samples

Indicates the scaled data of the specified channels as an array of channels and blocks.
t0 indicates 0.
Y indicates the array of measured data.

1st samples

Indicates the scaled data of the first block of the scaled data of the specified channels as an array of channels.
t0 indicates 0.
Y indicates the array of measured data.

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

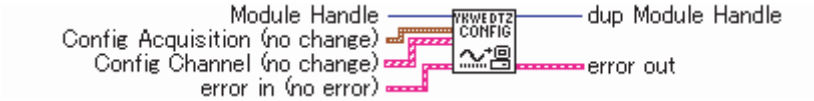
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DGTZR Config.vi

This VI configures the analog input of the digitizer module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Config Acquisition (no change)

Sets the analog input to the digitizer module in a cluster.

The default value is no change.

U16 Acquisition Mode (0: no change)

Selects the acquisition mode from the following.
WE7251
0: no change
1: Triggered
2: Free Run
3: Gate
WE7271/WE7272, WE7273, or WE7275
0: no change
1: Triggered
2: Free Run
3: Gate(Level)
4: Gate(Edge)

The default value is 0.

Note

This value is valid only for WE7251, WE7271/WE7272, WE7273, and WE7275.

U32 Record Length (-1: no change)

Specifies the record length.
Selectable Range
WE7116, WE7271/WE7272, WE7275: 0 to 4194304
WE7251: 0 to 1048576
WE7273: 0 to 8388608
WE7311: 0, 100 to 2000000
no change: –1

The default value is –1 (no change).
For details, see the user's manual for the module.

I32 No. of Acquisition (-1: no change)

Specifies the number of acquisitions.

WE7251, WE7271/WE7272, WE7273, or WE7275

You can specify the number of times to acquire the data when using the trigger or gate mode.

Selectable range

1 to 32,768

If you set the value to 0, the acquisition of data continues until the measurement is stopped.

There are limitations concerning this value. For details, see the user's manual for the module.

We7116, or WE7311

If the trigger mode is set to [Normal] and the memory is partitioned, enter the number of acquisitions.

Selectable range

1 to the number of memory partitions

The default value is –1 (no change).

I16 Memory Partition (0: no change)

Select the number of memory partitions from below.

When in the trigger mode, you can divide the acquisition memory into multiple blocks and acquire the data to the memory blocks in order every time the trigger occurs. When using memory partitions, if the measurement is stopped before reaching the number of acquisitions, the data in the memory block that was being written at that time are invalid.

0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256
10: 512
11: 1024
12: 2048
13: 4096

Selectable Range

WE7116: 0 to 11 (Number of memory partitions: 1 to 1024)
WE7251, WE7271/WE7272, WE7273, WE7275: 0 to 9 (Number of memory partitions: 1 to 256)
WE7311: 0 to 13 (Number of memory partitions: 1 to 4096)

The default value is 0.

U16 Trigger Mode (0: no change)

Selects the trigger mode.

0: no change
1: Auto
2: Normal

The default value is 0.

Note

This value is valid only for the WE7116 and WE7311.

Config Channel (no change)

Sets ON/OFF, range, trigger, and filter of channels in an array of clusters.

The default value is no change.

Of the array elements of index 0, if the range, trigger type, and filter are all zeroes, then index 1, 2, 3, and so on correspond to channels 1, 2, 3, and so on, respectively. If any of the three elements is non-zero, then all channels are set using the elements of index 0.

State (F: OFF)

Selects measurement ON/OFF.
T: ON
F: OFF

The default value is F (OFF).

Note

This value is valid only for WE7116, WE7251, WE7271/WE7272, WE7273, and WE7275.

Range (0: no change)

Selects the measurement range from the following.
0: no change
1: 25 mV
2: 50 mV
3: 100 mV
4: 200 mV/250 mV
5: 500 mV
6: 1 V
7: 2 V/2.5 V
8: 5 V
9: 10 V
10: 20 V
11: 50 V/35 V
12: 100 V
13: 200 V
14: 500 V/350 V
15: 1 kV
16: 2 kV
17: 5 kV
18: 10 kV
19: 20 kV
20: 50 kV

Selectable range

WE7116: 0, 3 to 20 (measurement range: 100 mV to 50 kV)
WE7251: 0, 6 to 10 (measurement range: 1 V to 20 V)
WE7271/WE7272: 0, 6 to 11 (measurement range: 1 V to 35 V)
WE7273: 0, 2 to 11 (measurement range: 50 mV to 50 V)
WE7275: 0, 3 to 14 (measurement range: 100 mV to 350 V)
WE7311: 0 to 7 (measurement range: 25 mV to 2.5 V)

The default value is 0.

Trigger (no change)

Sets the trigger type and trigger level.

The default value is no change.

Note

This value is valid only for WE7251, WE7271/WE7272, WE7273, and WE7275.

TrigType (0: no change)

Sets the trigger type.
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low
6: In (WE7251 only)
7: Out (WE7251 only)
8: Off

The default value is 0.

Trig (High) (0 V)

Sets the high trigger level for the WE7251 or the trigger level for the WE7271/WE7272, WE7273, or WE7275 for each channel.
The selectable range is the measurable voltage range determined by the measurement range.
This value is valid when TrigType is set to a value other than OFF or no change.
Resolution
WE7251
0.01 V: ±1/2/5 V
0.1 V: ±10/20 V
WE7271/WE7272
10 mV: ±1/2/5 V
100 mV: ±10/20/35 V
WE7273
0.1 mV: ±50 mV
1 mV: ±100/200/500 mV
10 mV: ±1/2/5 V
100 mV: ±10/20/50 V
WE7275
1 mV: ±100/200/500 mV
10 mV: ±1/2/5 V
100 mV: ±10/20/50 V
1 V: ±100/200/350 V

The default value is 0 V.

DBL Trig Low (0 V)

Set the low trigger level for the WE7251 for each channel.
The selectable range is the measurable voltage range determined by the measurement range.
This value is valid when TrigType is set to a value other than Low, In, or Out.

Resolution

0.01 V: ±1/2/5 V
0.1 V: ±10/20 V

The default value is 0 V.

U16 Filter (0: no change)

Selects the input filter for the WE7116, WE7271/WE7272, WE7273, or WE7275.
0: no change
1: Off
2: LPF (400 Hz (WE7275))/(500 Hz (WE7271/WE7272, WE7273))
3: LPF (4 kHz (WE7275))/(5 kHz (WE7271/WE7272, WE7273))
4: LPF (40 kHz (WE7275))/(50 Hz (WE7273))
5: LPF (100 kHz (WE7275))/(500 kHz (WE7116))
6: AAF (20 Hz (WE7275))/(1 MHz (WE7116))
7: AAF (40 Hz)
8: AAF (80 Hz)
9: AAF (200 Hz)
10: AAF (400 Hz)
11: AAF (800 Hz)
12: AAF (2 kHz)
13: AAF (4 kHz)
14: AAF (8 kHz)
15: AAF (20 kHz)
16: AAF (40 kHz)

Selectable Range

WE7116: 0, 1, 5 and 6
WE7271/WE7272: 0 to 3
WE7273: 0 to 4
WE7275: 0 to 16

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

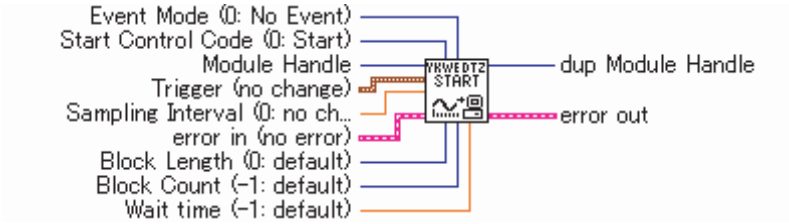
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DGTZR Start.vi

This VI starts the analog input of the digitizer module.



Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Trigger (no change)

Sets the trigger combination, trigger source, amount of pretrigger, overlapped acquisition, hold off, time base, and channel mode in a cluster.

The default value is no change.

Note

This value is valid only for WE7251, WE7271/WE7272, WE7273, and WE7275.

Trig Combination (0: no change)

Selects the trigger combination.
This value is valid when Trig Source is set to Internal.
0: no change
1: AND
2: OR

The default value is 0.

Trig Source (0: no change)

Selects the trigger source.
0: no change
1: Internal
2: BUSTRG

The default value is 0.

Pretrigger (-1: no change)

Specifies the amount of pretrigger.
Selectable Range
0 to record length – 2
Specifying the value –1 indicates no change.

The default value is –1 (no change).

U16 Overlapped Acquisition (0: no change)

Selects the overlapped acquisition.
0: no change
1: OFF
2: ON

The default value is 0.

U32 Hold Off (0: no change)

Specifies the hold off time.
Selectable Range
WE7251: 1 to 1,048,576
WE7271/WE7272 or WE7275: When Overlapped Acquisition is ON, 1 to 4,194,304. When OFF, record length to 4,194,304. When set to 0, no change.
WE7273: When Overlapped Acquisition is ON, 1 to 8,388,608. When OFF, record length to 8,388,608, When 0, no change.

The default value is 0.

U16 Time Base (0: no change)

Selects the time base.
WE7251, WE7271/WE7272, or WE7273
0: no change
1: Internal
2: BUSCLK
WE7275
0: no change
1: Internal
2: BUSCLK (Slow)
3: BUSCLK (Fast)
4: External (Slow)
5: External (Fast)

The default value is 0.

U16 Channel Mode (0: no change)

Selects the number of measurement channels.
0: no change
1: 1 CH
2: 2 CH
3: 4 CH
4: 8 CH
Selectable Range
WE7271/WE7272: 0 to 3
WE7273: 0 to 4
WE7275: 0 to 2

The default value is 0.

DBL Sampling Interval (0: no change)

Specifies the sampling interval.

Selectable Range

WE7116: 50 ns to 1 ms (10 ns steps)
WE7251: 10 µs to 10 s (10 µs steps)
WE7271/WE7272 or WE7273: 10 µs to 10 s (1 µs steps)
WE7275: 1 µs to 1 s (1 µs steps)
WE7311: 1 ns to 10 ms (1-2-2.5-4-5 steps)

The default value is 0.
For details, see the user's manual for the module.

U16 Start Control Code (0: Start)

Selects the control code.
0: Start
1: Single Start
2: Start Event

The default setting is "0."

I32 Block Length (-1: default)

Specifies the block length.
This value is valid when Start Control Code is set to Start or Start Event.

The default value is –1.
For a description of the selectable range, see the user's manual for the module.

I8 Block Count (-1: default)

Specifies the block count.
This value is valid when Start Control Code is set to Start or Start Event.
Specify the exponential part of the number of memory partitions (number of blocks) expressed as a power of 2.

The default value is –1.
For a description of the selectable range, see the user's manual for the module.

I16 Event Mode (0: No Event)

Selects the acquisition operation mode.
This value is valid when Start Control Code is set to Start Event.
0: No Event
1: Block_Event
2: Stop Event

The default value is 0 (No Event).

DBL WaitTime (-1: default)

Specifies the wait time after the start operation.

The default value is –1.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

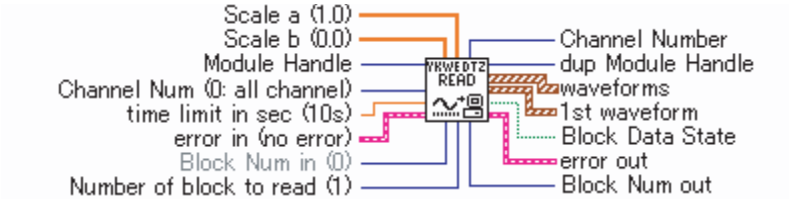
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DGTZR Read Waveform.vi

This VI reads block data from a specified input channel of the digitizer module.

YKWE DGTZR Read Waveform.vi is polymorphic and can be set to output the following types of data.
Waveform (multiple channels)
Scale array (multiple channels)
Waveform (1 channel)
Scale array (1 channel)

Waveform (Multiple Channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL time limit in sec (10s)

Specifies the time limit for the read operation.
The actual time limit is time limit in sec + sampling interval ¥ record length.

The default value is 10 s.

[DBL] Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

[DBL] Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveforms

Indicates the scaled data of the specified channels as an array of channels and blocks.
t0 indicates 0.
dt indicates the sampling interval.
Y indicates the array of measured data.

1st Waveform

Indicates the scaled data of the first block of the scaled data of the specified channels as an array of channels.
t0 indicates 0.
dt indicates the sampling interval.
Y indicates the array of measured data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Channel Number

Indicates the number of channels of the loaded data.

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

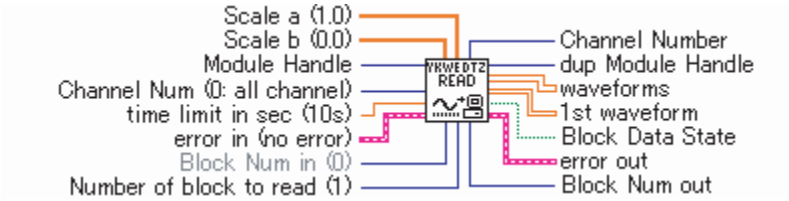
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale Array (Multiple Channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL time limit in sec (10s)

Specifies the time limit for the read operation.
The actual time limit is time limit in sec + sampling interval ¥ record length.

The default value is 10 s.

[DBL] Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

[DBL] Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveforms

Indicates the scaled data of the specified channels as an array of channels and blocks.

1st Waveform

Indicates the scaled data of the first block of the scaled data of the specified channels as an array of channels.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Channel Number

Indicates the number of channels of the loaded data.

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

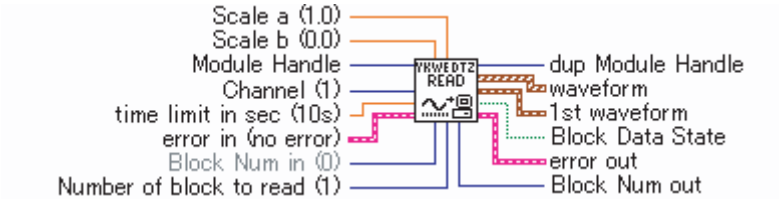
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform (1 Channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL time limit in sec (10s)

Specifies the time limit for the read operation.
The actual time limit is time limit in sec + sampling interval ¥ record length.

The default value is 10 s.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveform

Indicates the scaled data of the specified channel as an array of blocks.
t0 indicates 0.
dt indicates the sampling interval.
Y indicates the array of measured data.

1st Waveform

Indicates the scaled data of the first block of the scaled data of the specified channel.
t0 indicates 0.
dt indicates the sampling interval.
Y indicates the array of measured data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

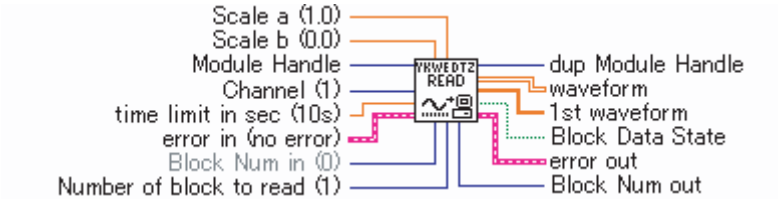
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale Array (1 Channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL time limit in sec (10s)

Specifies the time limit for the read operation.
The actual time limit is time limit in sec + sampling interval ¥ record length.

The default value is 10 s.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveform

Indicates the scaled data of the specified channel as an array.

1st Waveform

Indicates the scaled data of the first block of the scaled data of the specified channel.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

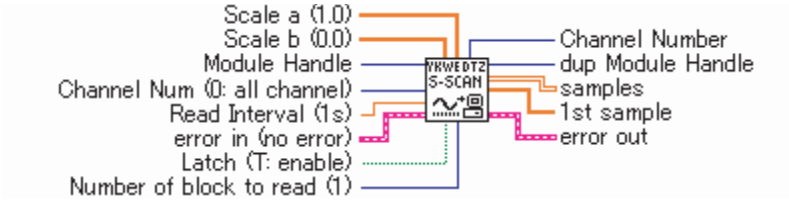
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DGTZR Single Scan.vi

This VI reads current data from a specified input channel of the digitizer module.

YKWE DGTZR Single Scan.vi is polymorphic and can be set to output the following types of data.
Scale array (multiple channels)
Waveform (multiple channels)
Scale array (1 channel)
Waveform (1 channel)

Scale Array (Multiple Channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

[DBL] Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

[DBL] Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Samples

Indicates the scaled data of the specified channels as an array of channels and blocks.

1st samples

Indicates the scaled data of the first block of the scaled data of the specified channels as an array of channels.

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

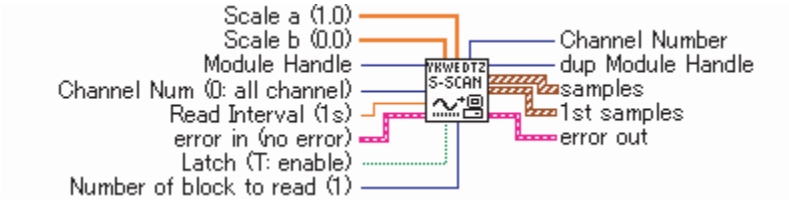
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform (Multiple Channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

[DBL] Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

[DBL] Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Samples

Indicates the scaled data of the specified channels as an array of channels and blocks.
t0 indicates 0.
Y indicates the array of measured data.

1st samples

Indicates the scaled data of the first block of the scaled data of the specified channels as an array of channels.
t0 indicates 0.
Y indicates the array of measured data.

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

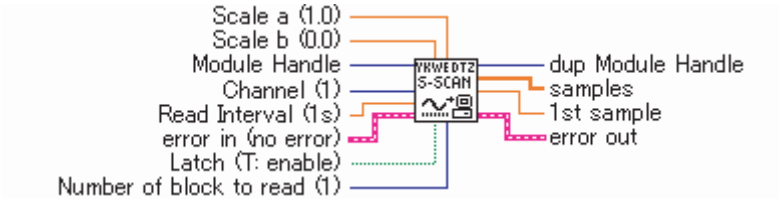
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale Array (1 Channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 0.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Samples

Indicates the scaled data of the specified channel as an array.

1st sample

Indicates the scaled data of the first block of the scaled data of the specified channel.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

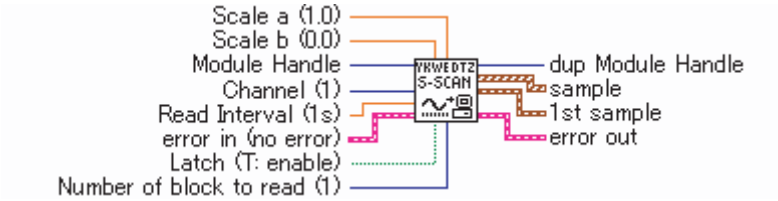
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform (1 Channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Sample

Indicates the scaled data of the specified channel as an array.
t0 indicates 0.
Y indicates the array of measured data.

1st sample

Indicates the scaled data of the specified channel.
t0 indicates 0.
Y indicates the array of measured data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DGTZR Clear.vi

This VI terminates the analog input of the digitizer module.

Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DGTZR Config Acquisition.vi

This VI configures the analog input operation of a specified channel of the digitizer module.

I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Acquisition Mode (0: no change)

Selects the acquisition mode from the following.

WE7251

0: no change
1: Triggered
2: Free Run
3: Gate

WE7271/WE7272, WE7273, or WE7275

0: no change
1: Triggered
2: Free Run
3: Gate(Level)
4: Gate(Edge)

The default value is 0.

Note

This value is valid only for WE7251, WE7271/WE7272, WE7273, and WE7275.

U32 Record Length (-1: no change)

Specifies the record length.

Selectable Range

WE7116, WE7271/WE7272, WE7275: 0 to 4194304
WE7251: 0 to 1048576
WE7273: 0 to 8388608
WE7311: 0, 100 to 2000000
no change: –1

The default value is –1 (no change).
For details, see the user's manual for the module.

I32 No. of Acquisition (-1: no change)

Specifies the number of acquisitions.

WE7251, WE7271/WE7272, WE7273, or WE7275

You can specify the number of times to acquire the data when using the trigger or gate mode.

Selectable range

1 to 32,768

If you set the value to 0, the acquisition of data continues until the measurement is stopped.

There are limitations concerning this value. For details, see the user's manual for the module.

WE7116, or WE7311

If the trigger mode is set to [Normal] and the memory is partitioned, enter the number of acquisitions.

Selectable range

1 to the number of memory partitions

The default value is –1 (no change).

I16 Memory Partition (0: no change)

Select the number of memory partitions from below.

When in the trigger mode, you can divide the acquisition memory into multiple blocks and acquire the data to the memory blocks in order every time the trigger occurs. When using memory partitions, if the measurement is stopped before reaching the number of acquisitions, the data in the memory block that was being written at that time are invalid.

0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256
10: 512
11: 1024
12: 2048
13: 4096

Selectable Range

WE7116: 0 to 11 (Number of memory partitions: 1 to 1024)
WE7251, WE7271/WE7272, WE7273, WE7275: 0 to 9 (Number of memory partitions: 1 to 256)
WE7311: 0 to 13 (Number of memory partitions: 1 to 4096)

The default value is 0.

U16 Trigger Mode (0: no change)

Selects the trigger mode.

0: no change
1: Auto
2: Normal

The default value is 0.

Note

This value is valid only for the WE7116 and WE7311.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Acquisition Mode

Indicates the specified acquisition mode.
1: Triggered
2: Free Run
3: Gate(Level)
4: Gate(Edge)

Record Length

Indicates the specified record length.

No. of Acquisition

Indicates the specified number of acquisitions.

Memory Partition

Indicates the specified number of memory partitions.
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256

Trigger Mode

Indicates the specified trigger mode.
1: Auto
2: Normal

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

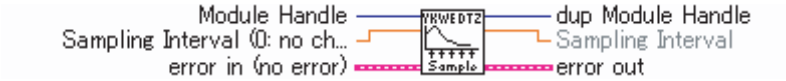
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DGTZR Config Sampling Interval.vi

This VI sets the sampling interval of the digitizer module.



Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Sampling Interval (0: no change)

Specifies the sampling interval.
Selectable Range
WE7116: 50 ns to 1 ms (10 ns steps)
WE7251: 10 µs to 10 s (10 µs steps)
WE7271/WE7272 or WE7273: 10 µs to 10 s (1 µs steps)
WE7275: 1 µs to 1 s (1 µs steps)
WE7311: 1 ns to 10 ms (1-2-2.5-4-5 steps)

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Sampling Interval

Indicates the specified sampling interval.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

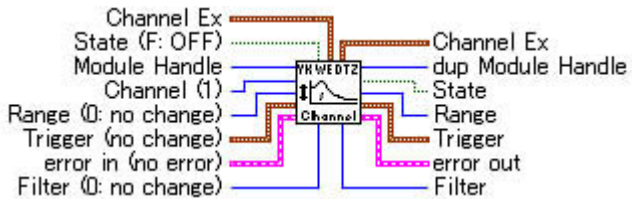
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DGTZR Config Channel.vi

This VI configures a specified channel of the digitizer module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

TF State (F: OFF)

Selects measurement ON/OFF.
T: ON
F: OFF

The default value is F (OFF).

Note

This value is valid only for WE7116, WE7251, WE7271/WE7272, WE7273, and WE7275.

U16 Range (0: no change)

Selects the measurement range from the following.
0: no change
1: 25 mV
2: 50 mV
3: 100 mV
4: 200 mV/250 mV
5: 500 mV
6: 1 V
7: 2 V/2.5 V
8: 5 V
9: 10 V
10: 20 V
11: 50 V/35 V
12: 100 V
13: 200 V
14: 500 V/350 V
15: 1 kV
16: 2 kV
17: 5 kV
18: 10 kV
19: 20 kV

20: 50 kV

Selectable range

WE7116: 0, 3 to 20 (measurement range: 100 mV to 50 kV)
WE7251: 0, 6 to 10 (measurement range: 1 V to 20 V)
WE7271/WE7272: 0, 6 to 11 (measurement range: 1 V to 35 V)
WE7273: 0, 2 to 11 (measurement range: 50 mV to 50 V)
WE7275: 0, 3 to 14 (measurement range: 100 mV to 350 V)
WE7311: 0 to 7 (measurement range: 25 mV to 2.5 V)

The default value is 0.

U16 Filter (0: no change)

Selects the input filter for the WE7116, WE7271/WE7272, WE7273, or WE7275.

0: no change
1: Off
2: LPF (400 Hz (WE7275))/(500 Hz (WE7271/WE7272, WE7273))
3: LPF (4 kHz (WE7275))/(5 kHz (WE7271/WE7272, WE7273))
4: LPF (40 kHz (WE7275))/(50 Hz (WE7273))
5: LPF (100 kHz (WE7275))/(500 kHz (WE7116))
6: AAF (20 Hz (WE7275))/(1 MHz (WE7116))
7: AAF (40 Hz)
8: AAF (80 Hz)
9: AAF (200 Hz)
10: AAF (400 Hz)
11: AAF (800 Hz)
12: AAF (2 kHz)
13: AAF (4 kHz)
14: AAF (8 kHz)
15: AAF (20 kHz)
16: AAF (40 kHz)

Selectable Range

WE7116: 0, 1, 5 and 6
WE7271/WE7272: 0 to 3
WE7273: 0 to 4
WE7275: 0 to 16

The default value is 0.

Trigger (no change)

Sets the trigger type and trigger level.

The default value is no change.

Note

This value is valid only for WE7251, WE7271/WE7272, WE7273, and WE7275.

TrigType (0: no change)

Sets the trigger type.
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low
6: In (WE7251 only)
7: Out (WE7251 only)
8: Off

The default value is 0.

Trig (High) (0 V)

Sets the high trigger level for the WE7251 or the trigger level for the WE7271/WE7272, WE7273, or WE7275 for each channel.
The selectable range is the measurable voltage range determined by the measurement range.
This value is value when TrigType is set to a value other than OFF or no change.

Resolution

WE7251
0.01 V: ±1/2/5 V
0.1 V: ±10/20 V
WE7271/WE7272
10 mV: ±1/2/5 V
100 mV: ±10/20/35 V
WE7273
0.1 mV: ±50 mV
1 mV: ±100/200/500 mV
10 mV: ±1/2/5 V
100 mV: ±10/20/50 V
WE7275
1 mV: ±100/200/500 mV
10 mV: ±1/2/5 V
100 mV: ±10/20/50 V
1 V: ±100/200/350 V

The default value is 0 V.

Trig Low (0 V)

Set the low trigger level for the WE7251 for each channel.
The selectable range is the measurable voltage range determined by the measurement range.
This value is value when TrigType is set to a value other than OFF or no change.

Resolution

0.01 V: ±1/2/5 V
0.1 V: ±10/20 V

The default value is 0 V.

Channel Ex

Sets the analog input to the WE7311 (digitizer mode) in a cluster.

Offset (0 V)

Specifies the offset.

WE7116

The selectable range varies according to the measurement range setting as shown below. The range shown below are values when the probe attenuation is set to “1:1.’

Measurement Range	Selectabe Range	Resolution
100 mV	–0.2 to 0.2 V	0.1 mV
200 mV	–0.4 to 0.4 V	0.2 mV
500 mV	–1 to 1 V	0.5 mV
1 V	–2 to 2V	1 mV
2 V	–4 to 4 V	2 mV
5 V	–10 to 10 V	5 mV
10 V	–20 to 20 V	10 mV
20 V	–40 to 40 V	20 mV
50 V	–100 to 100 V	50 mV

WE7311

The selectable range varies according to the measurement range setting as shown below. The ranges shown below are values when the probe attenuation is set to “1:1.”

Measurement Range	Selectable Range	Resolution
25 mV to 250 mV	–2.0000 V to +2.0000 V	0.1 mV
500 mV to 2.5 V	–20.000 V to +20.000 V	1 mV

Coupling (1: DC)

Selects the input coupling.

0: AC

1: DC

2: GND

3: AC 50

4: DC 50

Selectable Range

WE7116: 0 to 2

WE7273: 0 to 1

WE7311: 0 to 4

The default value is 1 (DC).

Note

This value is valid only for WE7116 and WE7311.

Probe (0: 1:1)

Selects the probe attenuation.

0: 1:1

1: 10:1

2: 100:1

3: 1000:1

The default value is 0 (1:1).

Note

This value is valid only for WE7116, WE7273, and WE7311.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

State

Indicates the specified ON/OFF state of measurement.
T: ON
F: OFF

Range

Indicates the specified measurement range.
1: 25 mV
2: 50 mV
3: 100 mV
4: 200 mV/250 mV
5: 500 mV
6: 1 V
7: 2 V/2.5 V
8: 5 V
9: 10 V
10: 20 V
11: 50 V/35 V
12: 100 V
13: 200 V
14: 500 V/350 V
15: 1 kV
16: 2 kV
17: 5 kV
18: 10 kV
19: 20 kV
20: 50 kV

Filter

Indicates the specified input filter.

1: Off
2: LPF (400 Hz (WE7275))/(500 Hz (WE7271/WE7272, WE7273))
3: LPF (4 kHz (WE7275))/(5 kHz (WE7271/WE7272, WE7273))
4: LPF (40 kHz (WE7275))/(50 Hz (WE7273))
5: LPF (100 kHz (WE7275))/(500 kHz (WE7116))
6: AAF (20 Hz (WE7275))/(1 MHz (WE7116))
7: AAF (40 Hz)
8: AAF (80 Hz)
9: AAF (200 Hz)
10: AAF (400 Hz)
11: AAF (800 Hz)
12: AAF (2 kHz)
13: AAF (4 kHz)
14: AAF (8 kHz)
15: AAF (20 kHz)
16: AAF (40 kHz)

Trigger

Indicates the specified trigger.

TrigType

Indicates the specified trigger type.

1: Rise
2: Fall
3: Both
4: High
5: Low
6: In(for WE7251)
7: Out(for WE7251)
8: Off

Trig High

Indicates the specified trigger level (High).

Trig Low

Indicates the specified trigger level (Low).

Channel Ex

Indicates the offset of analog input, coupling, or probe.

Offset (0 V)

Indicates the specified offset.

Coupling (1: DC)

Indicates the specified input coupling.
0: AC
1: DC
2: GND
3: AC 50
4: DC 50

Probe (0: 1:1)

Indicates the specified probe attenuation.
0: 1:1
1: 10:1
2: 100:1
3: 1000:1

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

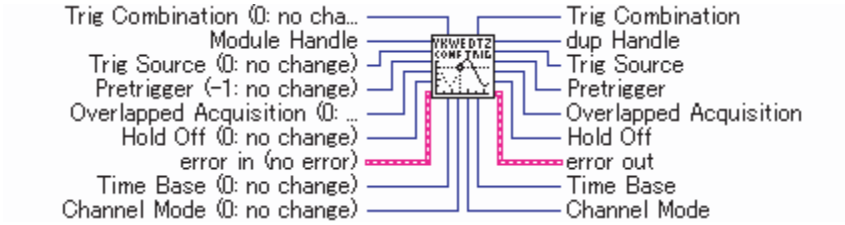
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DGTZR Config Trigger.vi

This VI sets the trigger of the digitizer module (WE7251, WE7271/WE7272, or WE7275).



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Trig Combination (0: no change)

Selects the trigger combination.
This value is valid when Trig Source is set to Internal.
0: no change
1: AND
2: OR

The default value is 0.

U16 Trig Source (0: no change)

Selects the trigger source.
0: no change
1: Internal
2: BUSTRG

The default value is 0.

I32 Pretrigger (-1: no change)

Specifies the amount of pretrigger.
Selectable Range
0 to record length – 2
Specifying the value –1 indicates no change.

The default value is –1 (no change).

U16 Overlapped Acquisition (0: no change)

Selects the overlapped acquisition.
0: no change
1: OFF
2: ON

The default value is 0.

U32 Hold Off (0: no change)

Specifies the hold off time.

Selectable Range

WE7251: 1 to 1,048,576

WE7271/WE7272 or WE7275: When Overlapped Acquisition is ON, 1 to 4,194,304. When OFF, record length to 4,194,304. When set to 0, no change.

WE7273: When Overlapped Acquisition is ON, 1 to 8,388,608. When OFF, record length to 8,388,608, When 0, no change.

The default value is 0.

U16 Time Base (0: no change)

Selects the time base.

WE7251, WE7271/WE7272, or WE7273

0: no change
1: Internal
2: BUSCLK

WE7275

0: no change
1: Internal
2: BUSCLK (Slow)
3: BUSCLK (Fast)
4: External (Slow)
5: External (Fast)

The default value is 0.

U16 Channel Mode (0: no change)

Selects the number of measurement channels.

0: no change
1: 1 CH
2: 2 CH
3: 4 CH

Selectable Range

WE7271/WE7272: 0 to 3
WE7273: 0 to 4
WE7275: 0 to 2

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Trig Combination

Indicates the specified trigger combination.
1: AND
2: OR

Trig Source

Indicates the specified trigger source.
1: Internal
2: BUSTRG

Pretrigger

Indicates the specified amount of pretrigger.

Overlapped Acquisition

Indicates the specified overlapped acquisition.
1: OFF
2: ON

Hold Off

Indicates the specified hold off time.

Time Base

Indicates the specified time base.

WE7251, WE7271/WE7272, or WE7273

1: Internal

2: BUSCLK

WE7275

1: Internal

2: BUSCLK (Slow)

3: BUSCLK (Fast)

4: External (Slow)

5: External (Fast)

Channel Mode

Indicates the specified number of measurement channels.

0: no change

1: 1 CH

2: 2 CH

3: 4 CH

4: 8 CH

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

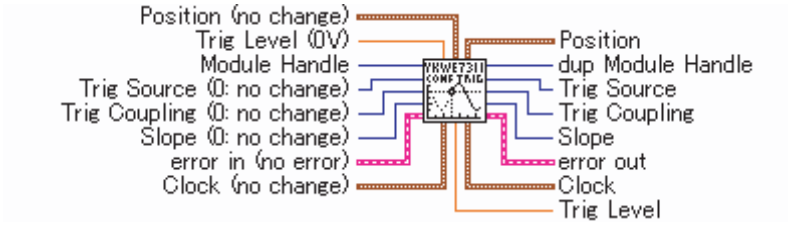
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DGTZR Config Trigger WE7311.vi

This VI sets the trigger of the WE7311 (digitizer mode).



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Trig Source (0: no change)

Selects the trigger source.
0: no change
1: CH1
2: CH2
3: CH3
4: CH4
5: CH5
6: CH6
7: CH7
8: CH8
9: BUSTRG
10: External 1M
11: External 50
12: CH9

The default value is 0.

U16 Trig Coupling (0: no change)

Selects the trigger coupling.
When you select measurement input signal [CHx] or external input signal [External 1M]/[External 50] as the trigger source, you can select the input coupling of the signal that will be used as the trigger.
0: no change
1: LF Reject
2: DC

The default value is 0.

U16 Slope (0: no change)

Selects the trigger slope.
The trigger occurs when the input signal rises above the trigger level (Rise) or falls below the trigger level (Fall). The rising or falling signal is called the trigger slope.
0: no change
1: Rise
2: Fall

The default value is 0.

Trig Level (0 V)

Specifies the trigger level.
Trigger level refers to the voltage level that is used to determine the trigger slope (rising/falling edge of the signal), a trigger condition.
When in oscilloscope mode: Voltage that corresponds to 5.0 times the voltage sensitivity
When in digitizer mode: Measurable range determined by the measurement range
The range when the trigger is activated using the external input signal (External 1M/50) is "±4 V" (in 0.1 V steps).

The default value is 0 V.

Position (no change)

Sets the amount of pretrigger and the amount of delay in a cluster.

Pretrigger (-1: no change)

Specifies the amount of pretrigger.
You can acquire the measured data before the trigger point into the acquisition memory. Set how many points before the trigger point to begin the acquisition in the range, "0 to specified record length."

The default value is –1 (no change).

Delay (-1: no change)

Specifies the amount of delay.
Normally, the waveform around the trigger point is displayed. However, by using this function, you can display the waveform that is acquired the specified amount of time after the trigger point.
Set the delay in terms of the number of samples in the range of "0 to 200,000,000 (the maximum value is the value corresponding to 300 s when converted into delay time)."

The default value is –1 (no change).

Clock (no change)

Sets the clock source in a cluster.

Sampling Source (0: no change)

Selects the sampling clock source.
When the reference clock source is set to internal clock and the trigger mode is normal, the waveform data can be sampled using an external input clock signal in addition to the clock signal that is generated within the module. The external clock signal is input through the external input terminal (EXT IN) of the module. When multiple modules are linked, apply the clock signal to the CH1 module when modules 1 through 4 are linked and CH5 module when modules 5 through 8 are linked. The input frequency range of the external clock signal is from "10 MHz to 500 MHz."
0: no change
1: Internal
2: External 1M
3: External 50

The default value is 0.

Reference Source (0: no change)

Selects the reference clock source.
You can input a 10-MHz external clock signal that will be used as a sampling clock reference. The signal can be input from the external input terminal (EXT IN) of the module or the clock bus of the measuring station. When multiple modules are linked, apply the clock signal to the CH1 module when modules 1 through 4 are linked and CH5 module when modules 5 through 8 are linked.
0: no change
1: Internal
2: External 1M
3: External 50
4: BUSCLK

The default value is 0.

External Threshold Level (0 V)

Specifies the threshold level of the external input clock.
When using the input signal from the "EXT IN" terminal, set the threshold level in the range from "–2.0 to 2.0 V" (in 0.1 V steps).

The default value is 0.0 V.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Trig Source

Indicates the specified trigger source.
1: CH1
2: CH2
3: CH3
4: CH4
5: CH5
6: CH6
7: CH7
8: CH8
9: BUSTRG
10: External 1M
11: External 50

Trig Coupling

Indicates the specified trigger coupling.
1: LF Reject
2: DC

Slope

Indicates the specified trigger slope.
1: Rise
2: Fall

Trig Level

Indicates the specified trigger level.

Position

Indicates the specified trigger position in a cluster.

Pretrigger

Indicates the specified amount of pretrigger.

Delay

Indicates the specified amount of trigger delay.

Clock

Indicates the specified clock in a cluster.

Sampling Source

Indicates the specified sampling source.
1: Internal
2: External 1M
3: External 50

Reference Source

Indicates the specified reference clock source.
1: Internal
2: External 1M
3: External 50
4: BUSCLK

External Threshold Level

Indicates the threshold level of the external input clock.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

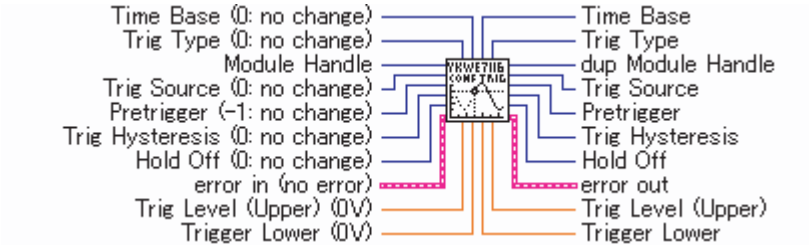
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DGTZR Config Trigger WE7116.vi

This VI sets the trigger of the WE7116 (digitizer mode).



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Trig Type (0: no change)

Selects the trigger source.
0: no change
1: Rise
2: Fall
3: Both
4: Enter
5: Exit

The default value is 0.

U16 Trig Source (0: no change)

Selects the trigger source.
0: no change
1: CH1
.
.
17: CH17
18: CH18
19: External
20: BUSTRG
21: Line

The default value is 0.

I32 Pretrigger (-1: no change)

Specifies the amount of pretrigger.
You can acquire the measured data before the trigger point into the acquisition memory. Set how many points before the trigger point to begin the acquisition in the range, “0 to record length – 2.”

The default value is –1 (no change).

U16 Trig Hysteresis (0: no change)

Selects the hysteresis.
For hysteresis, select 3% or 10% of the measurement range. If the hysteresis is set to 3%, trigger occurs when the trigger input signal changes by an amount exceeding ±1.5% of the full scale with respect to the trigger level. Likewise, if the hysteresis is set to 10%, trigger occurs when the trigger input signal changes by an amount exceeding ±5% of the full scale.
This value is valid when TrigType is set to Rise, Fall, or Both.
0: no change
1: 3%
2: 10%

The default value is 0.

DBL Trig Level (Upper) (0V)

Specifies the trigger level.
If the trigger type is set to Rise, Fall, or Both, you can select the trigger level and hysteresis. The selectable range of trigger levels is a voltage that is 5% to 95% of the full scale (range from the uppser limit to the lower limit of the measurement range). The resolution is 0.5% of the full scale.
If the trigger type is set to Enter or Exit, you can set the window trigger range. The selectable range of voltage is 5% to 95% of the full scale. The resolution is 0.5% of the full scale. This value sets up the maximum value (Upper Level).

The default value is 0 V.

DBL Trigger Lower (0V)

Specifies the lower level of trigger level.
This value can be set when a trigger type is Enter/Exit. The selectable range of trigger lower is a voltage that is 5% to 95% of the full scale. The resolution is 0.5% of the full scale.

The default value is 0 V.

U32 Hold Off (0: no change)

Specifies the hold off time.
Select the trigger hold off period that is used to temporarily stop the detection of the next trigger once a trigger occurs. The hold off period can be set in the range of “the record length to 4,194,304” (data points).

The default value is 0.

U16 Time Base (0: no change)

Selects the time base.
Selects the standard clock signal when sampling measured value. Measured values can be sampled not only by using the clock signal generated within the module, but also by using clock signals from external sources or by signals generated by other modules. External clock signals are input through the external clock input terminal. Apply a continuous external input clock signal of 50-ns to 100-µs cycles.
Correct data cannot be acquired if the clock signal is outside this range.
0: no change
1: Internal: Internal clock
2: External: EXT.CLOCK IN signal on the module’s front panel
3: BUSCLK: Time base signal (CMNCLK) of measuring station

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Trig Type

Indicates the specified trigger type.
1: Rise
2: Fall
3: Both
4: Enter
5: Exit

Trig Source

Indicates the specified trigger source.
1: CH1
: :
19: External
20: BUSTRG
21: Line

Pretrigger

Indicates the specified amount of pretrigger.

Trig Hysteresis

Indicates the specified trigger hysteresis.
1: 3%
2: 10%

Trig Level (Upper)

Indicates the specified trigger level (upper).

Trigger Lower

Indicates the specified low limit of trigger level.

Hold Off

Indicates the specified trigger hold off time.

Time Base

Indicates the specified time base.
1: Internal
2: External
3: BUSCLK

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

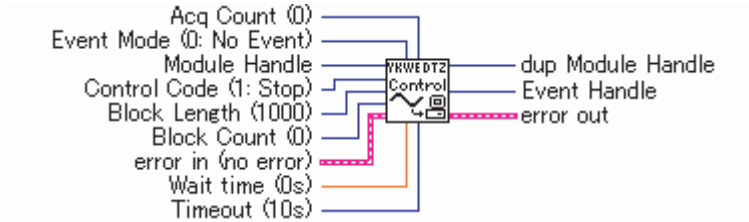
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DGTZR Control.vi

This VI controls the digitizer module.



Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Control Code (1: Stop)

Selects the digitizer control.
0: Start
1: Stop
2: Latch
3: Single Start
4: Start Event
5: Stop Event

The default value is 1 (Stop).

Block Length (1000)

Specifies the block length.
This value is valid when Control Code is set to 0 (Start), 3 (Single Start), or 4 (Start Event).

The default value is 1000.

U8 Block Count (0)

Specifies the number of blocks (number of memory partitions).
Select the number of memory partitions from below.
0: 1
1: 2
2: 4
3: 8
4: 16
5: 32
6: 64
7: 128
8: 256
9: 512
10: 1024
11: 2048
12: 4096

Selectable Range

WE7251, WE7271/WE7272, WE7275: 0 to 8 (Number of memory partitions: 1 to 256)
WE7311: 0 to 12 (Number of memory partitions: 1 to 4096)
This value is valid when Control Code is set to 0 (Start) or 4 (Start Event).

The default value is 0 (1).

DBL WaitTime (0s)

Specifies the wait time after the control operation.

The default value is 0 s.

I16 Event Mode (0: No Event)

Selects the event mode.
This value is valid when Control Code is set to 4 (Start Event).
0: No Event
1: Block_Event
2: Stop Event

The default value is 0 (No Event).

I32 Acq Count (0)

Specifies the acquisition count.
This value is valid when Control Code is set to 4 (Start Event).
The data acquisition operation terminates after acquiring the data amount specified by this value. If the value 0 is specified, measurement continues until the user issues an abort command.

The default value is 0.

I32 Timeout (10s)

Sets the timeout time of single start.
This value is valid when Control Code is set to 3 (Single Start).
The selectable range is 1 to 32767 s.

The default value is 10 s.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Event Handle

Indicates the event handle.
This value is valid when Control Code is set to 4 (Start Event).

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

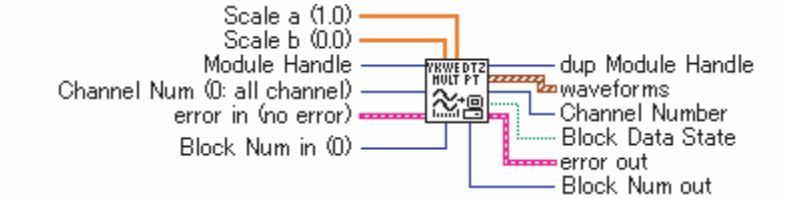
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DGTZR Read Block Data.vi

This VI reads block data from a specified input channel or from multiple input channels of the digitizer module.

YKWE DGTZR Read Block Data.vi is polymorphic and can be set to output the following types of data.
Waveform (multiple channels)
Scale array (multiple channels)
Waveform (1 channel)
Scale array (1 channel)

Waveform (Multiple Channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveforms

Indicates the scaled data of the specified channel as an array of channels.
t0 indicates 0.
dt indicates the sampling interval.
Y indicates the array of measured data.

Channel Number

Indicates the number of channels of the loaded data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

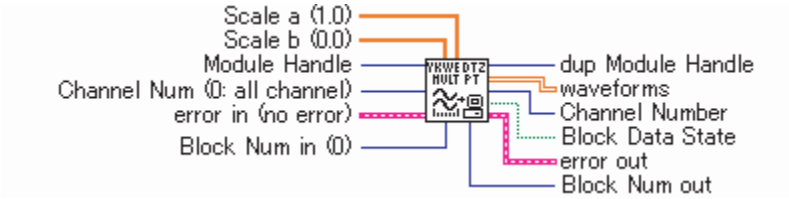
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale Array (Multiple Channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveforms

Indicates the scaled data of the specified channel as an array of channels.

Channel Number

Indicates the number of channels of the loaded data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

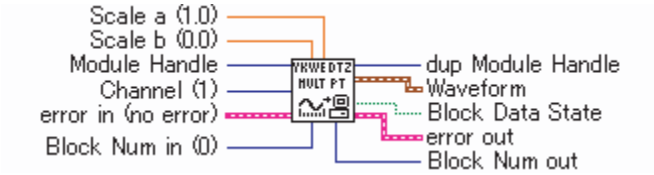
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform (1 Channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 1.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveform

Indicates the scaled data of the specified channel as an array.
t0 indicates 0.
dt indicates the sampling interval.
Y indicates the array of measured data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

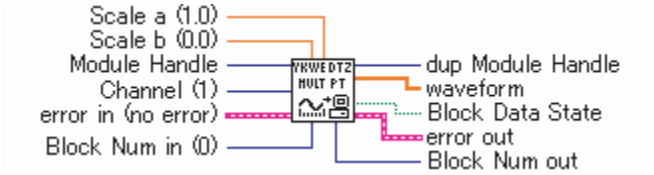
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale Array (1 Channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveform

Indicates the scaled data of the specified channel as an array.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

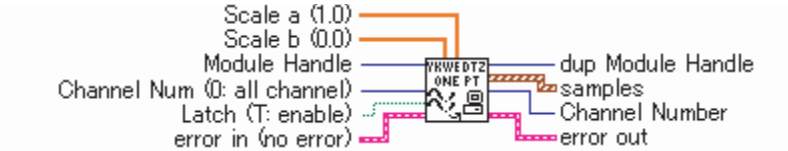
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DGTZR Read Current Data.vi

This VI reads current data from a specified input channel of the digitizer module.

YKWE DGTZR Read Current Data.vi is polymorphic and can be set to output the following types of data.
Waveform (multiple channels)
Scale array (multiple channels)
Waveform (1 channel)
Scale array (1 channel)

Waveform (Multiple Channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Samples

Indicates the scaled data of the specified channels as an array of channels and blocks.
t0 indicates 0.
Y indicates the array of measured data.

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

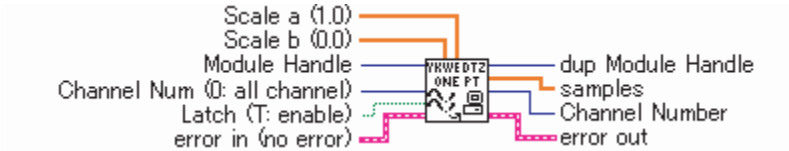
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale Array (Multiple Channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Samples

Indicates the scaled data of the specified channels as an array of channels and blocks.

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

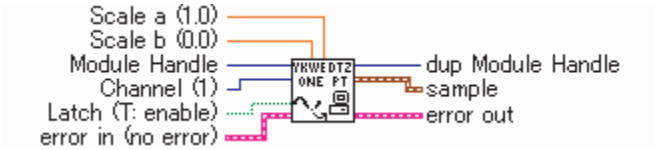
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform (1 Channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Sample

Indicates the scaled data of the specified channel as an array.
t0 indicates 0.
Y indicates the array of measured data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

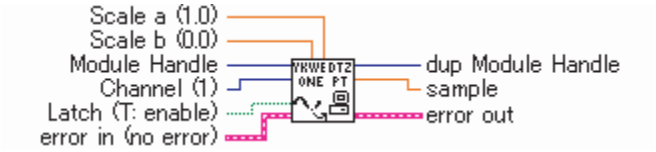
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale Array (1 Channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Sample

Indicates the scaled data of the specified channel as an array.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

5.2 Oscilloscope VI

Oscilloscope VIs allow you to configure and perform data acquisition on the following modules.

WE7111	100MS/s Digital Oscilloscope Module
WE7311	1GS/s Digital Oscilloscope Moduke (Oscilloscope Mode)

- Simple Level VIs

YKWE OSC Acquire Waveform.vi	Acquires the specified number of samples as the specified sample rate from a single input channel, then returns the acquired data.
YKWE OSC Acquire Waveforms.vi	Acquires the specified number of samples as the specified sample rate from all input channels, then returns the acquired data.

- Intermediate Level VIs

YKWE OSC Config.vi	Configures the analog input for the specified channel.
YKWE OSC Start.vi	Starts the analog input operation. This VI sets the sampling speed, block length and trigger condition. Then, the VI starts the measurement module operation.
YKWE OSC Read Waveform.vi	Reads the acquired data.
YKWE OSC Clear.vi	Stops the measurement module operation.

- Advanced Level VIs

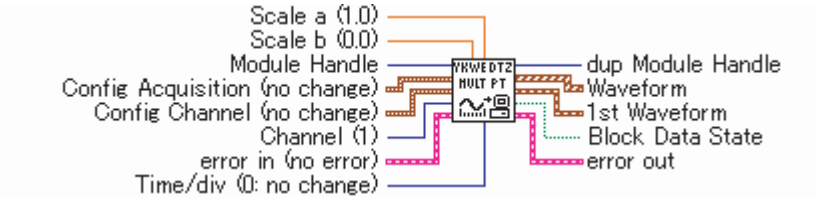
YKWE OSC Config Acquisition.vi	Sets parameters related to acquisition. (Acquisition Mode, Record Length, No. of Acquisition, Memory Partition, Average Count, Trigger Mode, Filter)
YKWE OSC Config Time Base.vi	Sets parameters related to time base. (Time/div, Time Base)
YKWE OSC Config Channel.vi	Sets parameters related to trace. (Channel, V/div, Coupling, Offset, Probe, Measure)
YKWE OSC Config Trigger.vi	Sets parameters related to trigger. (Trig Source, Trig Level, Trig Coupling, Slope, Trig Delay, Trig Position, Hold Off, HF Rejection)
YKWE OSC Config Clock.vi	Sets parameters related to clock. (Sampling Source, Reference Source, External Threshold Level)
YKWE OSC Config Calibration.vi	Sets the Auto Calibration.
YKWE OSC Control.vi	Acquisition start, stop, etc.
YKWE OSC Read Block Data.vi	Read the block data. Waveform data for a single channel, data array for a single channel, waveform data for multiple channels, and data array for multiple channels.

YKWE OSC Acquire Waveform.vi

This VI measures a specified number of samples at a specified sampling interval from a single input channel and returns the measured data.

YKWE OSC Acquire Waveform.vi is polymorphic and can be set to output the following types of data.
Waveform
Scale array

Waveform



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

U16 Time/div (0: no change)

Selects the time axis [Time/div] mode from the following.
0: no change
1: 10 ns/div
2: 20 ns/div
3: 50 ns/div
4: 100 ns/div
5: 200 ns/div
•
•
20: 20 ms/div
21: 50 ms/div
22: 100 ms/div
23: 200 ms/div
•
•
28: 10 s/div
29: 20 s/div
30: 50 s/div
Selectable Range
WE7111: 100 ns/div to 200 ms/div
WE7311: 10 ns/div to 50 s/div

The default value is 0.
For details, see the user's manual for the module.

Config Acquisition (no change)

Sets the analog input to the oscilloscope module in a cluster.

The default value is no change.

Acquisition Mode (0: no change)

Selects the acquisition mode from the following.
0: no change
1: Normal
2: Envelope
3: Average

The default value is 0.

Note

This value is valid only for WE7111.

Record Length (-1: no change)

Specifies the record length.
Selectable Range
WE7111: 1 k, 5 k, 10 k, 30 k, 100 k
WE7311: 100 to 2000000
no change: –1

The default value is –1 (no change).
For details, see the user's manual for the module.

No. of Acquisition (-1: no change)

Specifies the number of acquisitions.
If the trigger mode is set to [Normal] and the memory is partitioned, enter the number of acquisitions. Selectable range is 1 to the number of memory partitions.

The default value is –1 (no change).
For details, see the user's manual for the module.

Note

This value is valid only for WE7311.

I16 Memory Partition (0: no change)

Select the number of memory partitions from below.
When in the trigger mode, you can divide the acquisition memory into multiple blocks and acquire the data to the memory blocks in order every time the trigger occurs. When using memory partitions, if the measurement is stopped before reaching the number of acquisitions, the data in the memory block that was being written at that time are invalid.
0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256
10: 512
11: 1024
12: 2048
13: 4096

The default value is 0.

Note

This value is valid only for WE7311.

U16 Average Count (0: no change)

Select the number of average.
This setting is valid when acquisition mode is average.
0: no change
1: 2
2: 4
3: 8
4: 16
5: 32
6: 64
7: 128
8: 256

The default value is 0.

U16 Trigger Mode (0: no change)

Selects the trigger mode.
0: no change
1: Auto
2: Normal
3: Auto Level

The default value is 0.

U16 Filter (0: no change)

Selects the input filter.
0: no change
1: OFF
2: ON

The default value is 0.

Note

This value is valid only for WE7111.

Config Channel (no change)

Sets vertical sensitivity, input coupling, offset, probe attenuation, and auto measuring of the specified channel in a cluster.

The default value is no change.

V/div (0: no change)

Selects the vertical sensitivity [V/div].

Selectable Range

WE7111

5 mV to 5 V/div (1: 1)
50 mV to 50 V/div (10: 1)
500 mV to 500 V/div (100: 1)
5 V to 5000 V/div (1000: 1)

WE7311

5 mV to 500 mV/div (1: 1)
50 mV to 5 V/div (10: 1)
500 mV to 50 V/div (100: 1)
5 V to 500 V/div (1000: 1)

The default value is 0.

Coupling (0: no change)

Selects the input coupling.

0: no change
1: AC
2: DC
3: GND
4: AC50
5: DC50

The default value is 0.

Offset (0V)

Selects the offset voltage from the following.

The selectable range below are those when the probe attenuation is set to “10:1.” If the probe attenuation is 1:1 multiply these values by 1/10. If it is 100:1 multiply by 10. If it is 1000:1 multiply by 100.

Offset is not changed when V/div is 0 (no change).

This setting is valid when coupling is DC50.

Voltage Sensitivity	Selectable Range	Setting Step
5 mV to 50 mV/div	–10 V to 10 V	0.001 V
1 V to 5 V/div	–100 V to 100 V	0.01 V

The default value is 0.000 V.

Probe (0: no change)

Selects the probe attenuation.

0: no change
1: 1:1
2: 10:1
3: 100:1
4: 1000:1

The default value is 0.

Measure (0: no change)

Selects the automated measurement of waveform parameters.
0: no change
1: OFF
2: ON

The default value is 0.

Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveform

Indicates the scaled data of the specified channel as an array of blocks.
t0 indicates 0.
dt indicates the sampling interval.
Y indicates the array of measured data.

1st Waveform

Indicates the scaled data of the first block of the scaled data of the specified channel.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

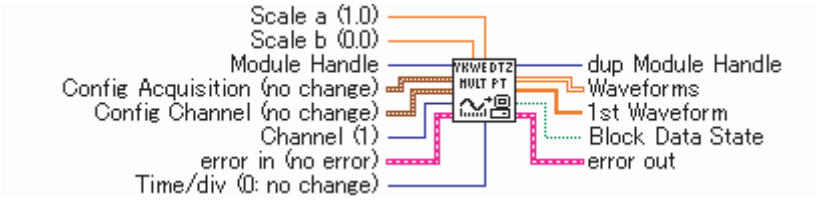
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale array



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

U16 Time/div (0: no change)

Selects the time axis [Time/div] mode from the following.
0: no change
1: 10 ns/div
2: 20 ns/div
3: 50 ns/div
4: 100 ns/div
5: 200 ns/div
•
•
20: 20 ms/div
21: 50 ms/div
22: 100 ms/div
23: 200 ms/div
•
•
28: 10 s/div
29: 20 s/div
30: 50 s/div
Selectable Range
WE7111: 100 ns/div to 200 ms/div
WE7311: 10 ns/div to 50 s/div

The default value is 0.
For details, see the user's manual for the module.

Config Acquisition (no change)

Sets the analog input to the oscilloscope module in a cluster.

The default value is no change.

Acquisition Mode (0: no change)

Selects the acquisition mode from the following.
0: no change
1: Normal
2: Envelope
3: Average

The default value is 0.

Note

This value is valid only for WE7111.

Record Length (-1: no change)

Specifies the record length.
Selectable Range
WE7111: 1 k, 5 k, 10 k, 30 k, 100 k
WE7311: 100 to 2000000
no change: –1

The default value is –1 (no change).
For details, see the user's manual for the module.

No. of Acquisition (-1: no change)

Specifies the number of acquisitions.
If the trigger mode is set to [Normal] and the memory is partitioned, enter the number of acquisitions. Selectable range is 1 to the number of memory partitions.

The default value is –1 (no change).
For details, see the user's manual for the module.

Note

This value is valid only for WE7311.

I16 Memory Partition (0: no change)

Select the number of memory partitions from below.
When in the trigger mode, you can divide the acquisition memory into multiple blocks and acquire the data to the memory blocks in order every time the trigger occurs. When using memory partitions, if the measurement is stopped before reaching the number of acquisitions, the data in the memory block that was being written at that time are invalid.
0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256
10: 512
11: 1024
12: 2048
13: 4096

The default value is 0.

Note

This value is valid only for WE7311.

U16 Average Count (0: no change)

Select the number of average.
This setting is valid when acquisition mode is average.
0: no change
1: 2
2: 4
3: 8
4: 16
5: 32
6: 64
7: 128
8: 256

The default value is 0.

U16 Trigger Mode (0: no change)

Selects the trigger mode.
0: no change
1: Auto
2: Normal
3: Auto Level

The default value is 0.

U16 Filter (0: no change)

Selects the input filter.
0: no change
1: OFF
2: ON

The default value is 0.

Note

This value is valid only for WE7111.

Config Channel (no change)

Sets vertical sensitivity, input coupling, offset, probe attenuation, and auto measuring of the specified channel in a cluster.

The default value is no change.

V/div (0: no change)

Selects the vertical sensitivity [V/div].

Selectable Range

WE7111
- 5 mV to 5 V/div (1:1)
- 50 mV to 50 V/div (10:1)
- 500 mV to 500 V/div (100:1)
- 5 V to 5000 V/div (1000:1)

WE7311
- 5 mV to 500 mV/div (1:1)
- 50 mV to 5 V/div (10:1)
- 500 mV to 50 V/div (100:1)
- 5 V to 500 V/div (1000:1)

The default value is 0.

Coupling (0: no change)

Selects the input coupling.

0: no change
1: AC
2: DC
3: GND
4: AC50
5: DC50

The default value is 0.

Offset (0V)

Selects the offset voltage from the following.

The selectable range below are those when the probe attenuation is set to “10:1.” If the probe attenuation is 1:1 multiply these values by 1/10. If it is 100:1 multiply by 10. If it is 1000:1 multiply by 100.

Offset is not changed when V/div is 0 (no change).

This setting is valid when coupling is DC or DC50.

Voltage Sensitivity	Selectable Range	Setting Step
5 mV to 50 mV/div	–10 V to 10 V	0.001 V
1 V to 5 V/div	–100 V to 100 V	0.01 V

The default value is 0.000 V.

Probe (0: no change)

Selects the probe attenuation.

0: no change
1: 1:1
2: 10:1
3: 100:1
4: 1000:1

The default value is 0.

Measure (0: no change)

Selects the automated measurement of waveform parameters.
0: no change
1: OFF
2: ON

The default value is 0.

Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveform

Indicates the scaled data of the specified channel as an array of blocks.

1st Waveform

Indicates the scaled data of the first block of the scaled data of the specified channel.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

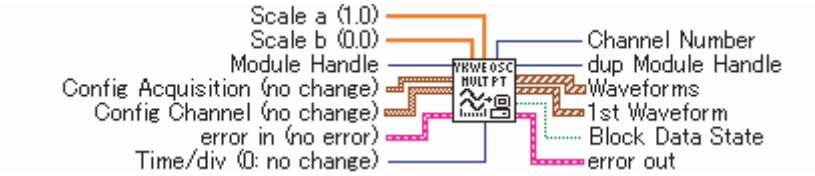
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE OSC Acquire Waveforms.vi

This VI measures a specified number of samples at a specified sampling interval from multiple input channels and returns the measured data.

Waveforms.vi is polymorphic and can be set to output the following types of data.
Waveform
Scale array

Waveform



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Time/div (0: no change)

Selects the time axis [Time/div] mode from the following.
0: no change
1: 10 ns/div
2: 20 ns/div
3: 50 ns/div
4: 100 ns/div
5: 200 ns/div
•
•
20: 20 ms/div
21: 50 ms/div
22: 100 ms/div
23: 200 ms/div
•
•
28: 10 s/div
29: 20 s/div
30: 50 s/div
Selectable Range
WE7111: 100 ns/div to 200 ms/div
WE7311: 10 ns/div to 50 s/div

The default value is 0.
For details, see the user's manual for the module.

Config Acquisition (no change)

Sets the analog input to the oscilloscope module in a cluster.

The default value is no change.

U16 Acquisition Mode (0: no change)

Selects the acquisition mode from the following.
0: no change
1: Normal
2: Envelope
3: Average

The default value is 0.

Note

This value is valid only for WE7111.

I32 Record Length (-1: no change)

Specifies the record length.
Selectable Range
WE7111: 1 k, 5 k, 10 k, 30 k, 100 k
WE7311: 100 to 2000000
no change: –1

The default value is –1(no change).
For details, see the user's manual for the module.

I32 No. of Acquisition (-1: no change)

Specifies the number of acquisitions.
If the trigger mode is set to [Normal] and the memory is partitioned, enter the number of acquisitions. Selectable range is 1 to the number of memory partitions.

The default value is –1 (no change).
For details, see the user's manual for the module.

Note

This value is valid only for WE7311.

I16 Memory Partition (0: no change)

Select the number of memory partitions from below.
When in the trigger mode, you can divide the acquisition memory into multiple blocks and acquire the data to the memory blocks in order every time the trigger occurs. When using memory partitions, if the measurement is stopped before reaching the number of acquisitions, the data in the memory block that was being written at that time are invalid.
0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256
10: 512
11: 1024
12: 2048
13: 4096

The default value is 0.

Note

This value is valid only for WE7311.

U16 Average Count (0: no change)

Select the number of average from below.
This setting is valid when acquisition mode is average.
0: no change
1: 2
2: 4
3: 8
4: 16
5: 32
6: 64
7: 128
8: 256

The default value is 0.

U16 Trigger Mode (0: no change)

Selects the trigger mode.
0: no change
1: Auto
2: Normal
3: Auto Level

The default value is 0.

U16 Filter (0: no change)

Selects the input filter.
0: no change
1: OFF
2: ON

The default value is 0.

Note

This value is valid only for WE7111.

Config Channel (no change)

Sets vertical sensitivity, input coupling, offset, probe attenuation, and auto measuring of the specified channel in a cluster.
Of the array elements of index 0, if the V/div, Coupling, Probe, and Measure are all zeroes, then index 1, 2, 3, and so on correspond to channels 1, 2, 3, and so on, respectively. If any of the four elements is nonzero, then all channels are set using the elements of index 0.

The default value is no change.

V/div (0: no change)

Selects the vertical sensitivity [V/div].

Selectable Range

WE7111
- 5 mV to 5 V/div (1:1)
- 50 mV to 50 V/div (10:1)
- 500 mV to 500 V/div (100:1)
- 5 V to 5000 V/div (1000:1)

WE7311
- 5 mV to 500 mV/div (1:1)
- 50 mV to 5 V/div (10:1)
- 500 mV to 50 V/div (100:1)
- 5 V to 500 V/div (1000:1)

The default value is 0.

Coupling (0: no change)

Selects the input coupling.
0: no change
1: AC
2: DC
3: GND
4: AC50
5: DC50

The default value is 0.

Offset (0V)

Selects the offset voltage from the following.
The selectable range below are those when the probe attenuation is set to “10:1.” If the probe attenuation is 1:1 multiply these values by 1/10. If it is 100:1 multiply by 10. If it is 1000:1 multiply by 100.
Offset is not changed when V/div is 0 (no change).
This setting is valid when coupling is DC or DC50.

Voltage Sensitivity	Selectable Range	Setting Step
5 mV to 50 mV/div	–10 V to 10 V	0.001 V
1 V to 5 V/div	–100 V to 100 V	0.01 V

The default value is 0.000 V.

Probe (0: no change)

Selects the probe attenuation.
0: no change
1: 1:1
2: 10:1
3: 100:1
4: 1000:1

The default value is 0.

Measure (0: no change)

Selects the automated measurement of waveform parameters.
0: no change
1: OFF
2: ON

The default value is 0.

Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveform

Indicates the scaled data of the specified channel as an array of blocks.
t0 indicates 0.
dt indicates the sampling interval.
Y indicates the array of measured data.

1st Waveform

Indicates the scaled data of the first block of the scaled data of the specified channel.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

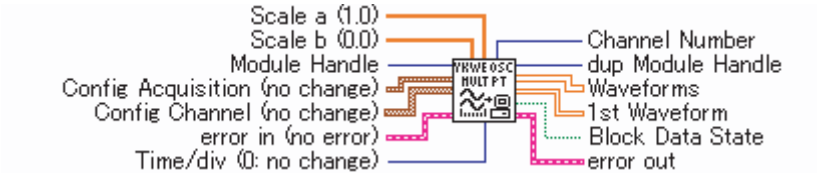
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale array



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Time/div (0: no change)

Selects the time axis [Time/div] mode from the following.
0: no change
1: 10 ns/div
2: 20 ns/div
3: 50 ns/div
4: 100 ns/div
5: 200 ns/div
•
•
20: 20 ms/div
21: 50 ms/div
22: 100 ms/div
23: 200 ms/div
•
•
28: 10 s/div
29: 20 s/div
30: 50 s/div
Selectable Range
WE7111: 100 ns/div to 200 ms/div
WE7311: 10 ns/div to 50 s/div

The default value is 0.
For details, see the user's manual for the module.

Config Acquisition (no change)

Sets the analog input to the oscilloscope module in a cluster.

The default value is no change.

Acquisition Mode (0: no change)

Selects the acquisition mode from the following.
0: no change
1: Normal
2: Envelope
3: Average

The default value is 0.

Note

This value is valid only for WE7111.

Record Length (-1: no change)

Specifies the record length.
Selectable Range
WE7111: 1 k, 5 k, 10 k, 30 k, 100 k
WE7311: 100 to 2000000
no change: –1

The default value is –1 (no change).
For details, see the user's manual for the module.

No. of Acquisition (-1: no change)

Specifies the number of acquisitions.
Specifies the number of acquisitions.
If the trigger mode is set to [Normal] and the memory is partitioned, enter the number of acquisitions. Selectable range is 1 to the number of memory partitions.

The default value is –1 (no change).

This value is valid only for WE7311.
For details, see the user's manual for the module.

I16 Memory Partition (0: no change)

Select the number of memory partitions from below.
When in the trigger mode, you can divide the acquisition memory into multiple blocks and acquire the data to the memory blocks in order every time the trigger occurs. When using memory partitions, if the measurement is stopped before reaching the number of acquisitions, the data in the memory block that was being written at that time are invalid.
0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256
10: 512
11: 1024
12: 2048
13: 4096

The default value is 0.

Note

This value is valid only for WE7311.

U16 Average Count (0: no change)

Select the number of average from below.
This setting is valid when acquisition mode is average.
0: no change
1: 2
2: 4
3: 8
4: 16
5: 32
6: 64
7: 128
8: 256

The default value is 0.

U16 Trigger Mode (0: no change)

Selects the trigger mode.
0: no change
1: Auto
2: Normal
3: Auto Level

The default value is 0.

U16 Filter (0: no change)

Selects the input filter.
0: no change
1: OFF
2: ON

The default value is 0.

Note

This value is valid only for WE7111.

Config Channel (no change)

Sets vertical sensitivity, input coupling, offset, probe attenuation, and auto measuring of the specified channel in a cluster.
Of the array elements of index 0, if the V/div, Coupling, Probe, and Measure are all zeroes, then index 1, 2, 3, and so on correspond to channels 1, 2, 3, and so on, respectively. If any of the four elements is nonzero, then all channels are set using the elements of index 0.

The default value is no change.

V/div (0: no change)

Selects the vertical sensitivity [V/div].

Selectable Range

WE7111
- 5 mV to 5 V/div (1:1)
- 50 mV to 50 V/div (10:1)
- 500 mV to 500 V/div (100:1)
- 5 V to 5000 V/div (1000:1)

WE7311
- 5 mV to 500 mV/div (1:1)
- 50 mV to 5 V/div (10:1)
- 500 mV to 50 V/div (100:1)
- 5 V to 500 V/div (1000:1)

The default value is 0.

Coupling (0: no change)

Selects the input coupling.
0: no change
1: AC
2: DC
3: GND
4: AC50
5: DC50

The default value is 0.

Offset (0V)

Selects the offset voltage from the following.
The selectable range below are those when the probe attenuation is set to “10:1.” If the probe attenuation is 1:1 multiply these values by 1/10. If it is 100:1 multiply by 10. If it is 1000:1 multiply by 100.
Offset is not changed when V/div is 0 (no change).
This setting is valid when coupling is DC or DC50.

Voltage Sensitivity	Selectable Range	Setting Step
5 mV to 50 mV/div	–10 V to 10 V	0.001 V
1 V to 5 V/div	–100 V to 100 V	0.01 V

The default value is 0.000 V.

Probe (0: no change)

Selects the probe attenuation.
0: no change
1: 1:1
2: 10:1
3: 100:1
4: 1000:1

The default value is 0.

Measure (0: no change)

Selects the automated measurement of waveform parameters.
0: no change
1: OFF
2: ON

The default value is 0.

Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveforms

Indicates the scaled data of the specified channel as an array of blocks.

1st waveform

Indicates the scaled data of the first block of the scaled data of the specified channel.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

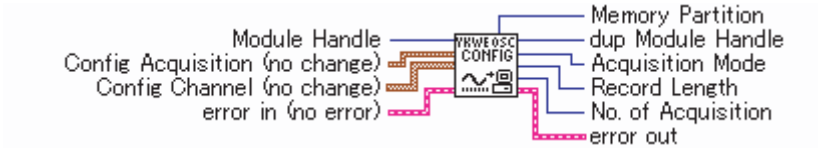
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE OSC Config.vi

This VI configures the analog input of the oscilloscope module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Config Acquisition (no change)

Sets the analog input to the oscilloscope module in a cluster.

The default value is no change.

U16 Acquisition Mode (0: no change)

Selects the acquisition mode from the following.
0: no change
1: Normal
2: Envelope
3: Average

The default value is 0.

Note

This value is valid only for WE7111.

I32 Record Length (-1: no change)

Specifies the record length.
Selectable Range
WE7111: 1 k, 5 k, 10 k, 30 k, 100 k
WE7311: 100 to 2000000
no change: –1

The default value is –1.
For details, see the user's manual for the module.

I32 No. of Acquisition (-1: no change)

Specifies the number of acquisitions.
If the trigger mode is set to [Normal] and the memory is partitioned, enter the number of acquisitions. Selectable range is 1 to the number of memory partitions.

The default value is –1 (no change).
For details, see the user's manual for the module.

Note

This value is valid only for WE7311.

I16 Memory Partition (0: no change)

Select the number of memory partitions from below.
When in the trigger mode, you can divide the acquisition memory into multiple blocks and acquire the data to the memory blocks in order every time the trigger occurs. When using memory partitions, if the measurement is stopped before reaching the number of acquisitions, the data in the memory block that was being written at that time are invalid.
0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256
10: 512
11: 1024
12: 2048
13: 4096

The default value is 0.

Note

This value is valid only for WE7311.

U16 Average Count (0: no change)

Select the number of average from below.
This setting is valid when acquisition mode is average.
0: no change
1: 2
2: 4
3: 8
4: 16
5: 32
6: 64
7: 128
8: 256

The default value is 0.

U16 Trigger Mode (0: no change)

Selects the trigger mode.
0: no change
1: Auto
2: Normal
3: Auto Level

The default value is 0.

U16 Filter (0: no change)

Selects the input filter.

0: no change

1: OFF

2: ON

The default value is 0.

Note

This value is valid only for WE7111.

Config Channel (no change)

Sets vertical sensitivity, input coupling, offset, probe attenuation, and auto measuring of the specified channel in a cluster.
Of the array elements of index 0, if the V/div, Coupling, Probe, and Measure are all zeroes, then index 1, 2, 3, and so on correspond to channels 1, 2, 3, and so on, respectively. If any of the four elements is nonzero, then all channels are set using the elements of index 0.

The default value is no change.

V/div (0: no change)

Selects the vertical sensitivity [V/div].

Selectable Range

WE7111
- 5 mV to 5 V/div (1:1)
- 50 mV to 50 V/div (10:1)
- 500 mV to 500 V/div (100:1)
- 5 V to 5000 V/div (1000:1)

WE7311
- 5 mV to 500 mV/div (1:1)
- 50 mV to 5 V/div (10:1)
- 500 mV to 50 V/div (100:1)
- 5 V to 500 V/div (1000:1)

The default value is 0.

Coupling (0: no change)

Selects the input coupling.
0: no change
1: AC
2: DC
3: GND
4: AC50
5: DC50

The default value is 0.

Offset (0V)

Selects the offset voltage from the following.
The selectable range below are those when the probe attenuation is set to “10:1.” If the probe attenuation is 1:1 multiply these values by 1/10. If it is 100:1 multiply by 10. If it is 1000:1 multiply by 100.
Offset is not changed when V/div is 0 (no change).
This setting is valid when coupling is DC or DC50.

Voltage Sensitivity	Selectable Range	Setting Step
5 mV to 50 mV/div	–10 V to 10 V	0.001 V
1 V to 5 V/div	–100 V to 100 V	0.01 V

The default value is 0.000 V.

Probe (0: no change)

Selects the probe attenuation.
0: no change
1: 1:1
2: 10:1
3: 100:1
4: 1000:1

The default value is 0.

Measure (0: no change)

Selects the automated measurement of waveform parameters.
0: no change
1: OFF
2: ON

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Acquisition Mode

Indicates the specified acquisition mode.
1: Normal
2: Envelope
3: Average

Record Length

Indicates the specified record length.

No. of Acquisition

Indicates the specified number of acquisition.

Memory Partition

Indicates the specified memory partition.

1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

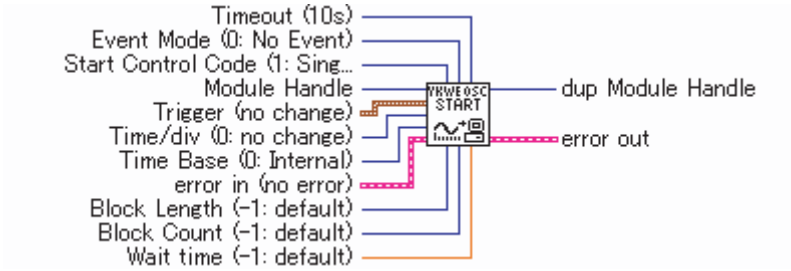
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE OSC Start.vi

This VI starts the analog input of the oscilloscope module.



Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Trigger (no change)

Sets the trigger source, trigger level, trigger coupling, trigger slope, amount of trigger delay, trigger position, hold off, and trigger HF rejection in a cluster.

The default value is no change.

Trig Source (0: no change)

Selects the trigger source.
0: no change
1: CH1
2: CH2
3: CH3
4: CH4
5: CH5
6: CH6
7: CH7
8: CH8
9: BUSTRG
10: External 1M
11: External 50
12: Line
13: CH9

The default value is 0.

Trig Level (0V)

Specifies the trigger level.
Trigger level refers to the voltage level that is used to determine the trigger slope (rising/falling edge ofthe signal), a trigger condition.
Measurable range determined by the voltage that corresponds to –10 to +10 times the voltage sensitivity.
Setting resolution is 1/50 of voltage sensitivity.

The default value is 0 V.

U16 Trig Coupling (0: no change)

Selects the trigger coupling.
0: no change
1: AC
2: DC

The default value is 0.

U16 Slope (0: no change)

Selects the trigger slope.
0: no change
1: Rise
2: Fall
3: Both

The default value is 0.

DBL Trig Delay (0.0s)

Specifies the amount of delay.
Selectable Range
0 to 9.99999999 s
Setting resolution is 10 ns.

The default value is 0.0 s.

DBL Trig Position (0.0div)

Specifies the trigger position.
Selectable Range
–5 to+5 div
Setting resolution is 0.1div.

The default value is 0.0 div.

DBL Hold Off (0.0s: OFF)

Specifies the hold off time.
Selectable Range
200 ns to 9.99999999 s
Setting resolution is 10 ns.
When set to 0 s, OFF.

The default value is 0.

U16 HF Rejection (0: no change)

Selects the trigger HF rejection.
0: no change
1: OFF
2: ON

The default value is 0.

U16 Start Control Code (0: Start)

Selects the control code.
0: Start
1: Single Start
2: Start Event

The default value is 0.

I32 Block Length (-1: default)

Specifies the block length.
This value is valid when Start Control Code is set to Start or Start Event.

The default value is –1.
For a description of the selectable range, see the user's manual for the module.

I8 Block Count (-1: default)

Specifies the block count.
This value is valid when Start Control Code is set to Start or Start Event.
Specify the exponential part of the number of memory partitions (number of blocks) expressed as a power of 2.

The default value is –1.
For a description of the selectable range, see the user's manual for the module.

I16 Event Mode (0: No Event)

Selects the acquisition operation mode.
This value is valid when Start Control Code is set to Start Event.
0: No Event
1: Block_Event
2: Stop Event

The default value is 0.

U16 Time/div (0: no change)

Selects the time axis [Time/div] from the following.
0: no change
1: 10 ns/div
2: 20 ns/div
3: 50 ns/div
4: 100 ns/div
5: 200 ns/div
•
•
20: 20 ms/div
21: 50 ms/div
22: 100 ms/div
23: 200 ms/div
•
•
28: 10 s/div
29: 20 s/div
30: 50 s/div

Selectable Range

WE7111: 100 ns/div to 200 ms/div
WE7311: 10 ns/div to 50 s/div

The default value is 0.
For a description of the selectable range, see the user's manual for the module.

U16 Time Base Mode (0: no change)

Selects the time base.
0: no change
1: Internal
2: EXT CLOCK IN
3: BUSCLK

The default value is 0.

Note

This value is valid only for WE7111.

DBL Wait time (-1: default)

Specifies the wait time after the start operation.

The default value is –1.0.

I32 Timeout (10s)

Sets the timeout time of single start.
This value is valid when the Time Base Mode is except 1 (Internal).
The selectable range is 1 to 32767 s.

The default value is 10 s.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

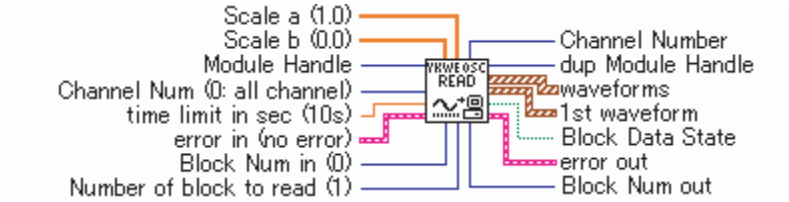
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE OSC Read Waveform.vi

This VI reads block data from a specified input channel of the oscilloscope module.

YKWE OSC Read Waveform.vi is polymorphic and can be set to output the following types of data.
Waveform (multiple channels)
Scale array (multiple channels)
Waveform (1 channel)
Scale array (1 channel)

Waveform (multiple channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL time limit in sec (10s)

Specifies the time limit for the read operation.
The actual time limit is time limit in sec + sampling interval × record length.

The default value is 10 s.

[DBL] Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

[DBL] Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveforms

Indicates the scaled data of the specified channel as an array of blocks.
t0 indicates 0.
dt indicates the sampling interval.
Y indicates the array of measured data.

1st waveform

Indicates the scaled data of the first block of the scaled data of the specified channel.
t0 indicates 0.
dt indicates the sampling interval.
Y indicates the array of measured data.

Block Data State

Block Data State
Indicates the status of the measured data.
T: Invalid
F: Valid

Channel Number

Indicates the number of channels of the loaded data.

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

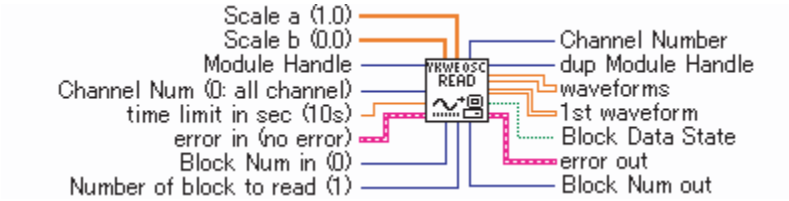
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale array (multiple channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL time limit in sec (10s)

Specifies the time limit for the read operation.
The actual time limit is time limit in sec + sampling interval × record length.

The default value is 10 s.

[DBL] Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

[DBL] Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveforms

Indicates the scaled data of the specified channel as an array of blocks.

1st waveform

Indicates the scaled data of the first block of the scaled data of the specified channel.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Channel Number

Indicates the number of channels of the loaded data.

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

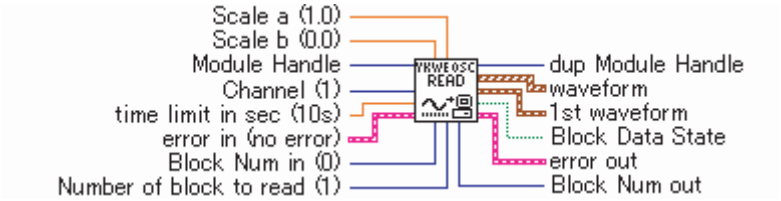
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform (1 channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL time limit in sec (10s)

Specifies the time limit for the read operation.
The actual time limit is time limit in sec + sampling interval × record length.

The default value is 10 s.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveform

Indicates the scaled data of the specified channels as an array of channels and blocks.
t0 indicates 0.
dt indicates the sampling interval.
Y indicates the array of measured data.

1st waveform

Indicates the scaled data of the first block of the scaled data of the specified channels as an array of channels.
t0 indicates 0.
dt indicates the sampling interval.
Y indicates the array of measured data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

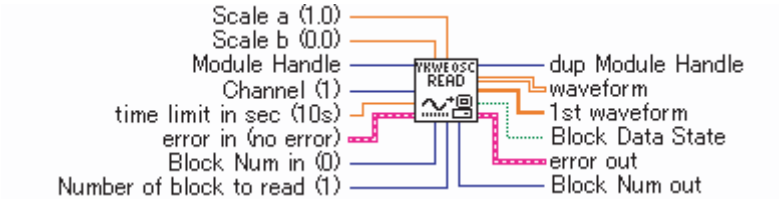
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale array (1 channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL time limit in sec (10s)

Specifies the time limit for the read operation.
The actual time limit is time limit in sec + sampling interval × record length.

The default value is 10 s.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveform

Indicates the scaled data of the specified channel as an array of blocks.

1st waveform

Indicates the scaled data of the first block of the scaled data of the specified channel.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

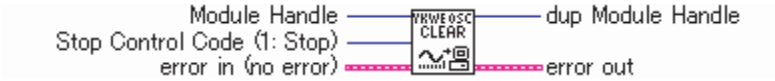
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE OSC Clear.vi

This VI terminates the analog input of the oscilloscope module.



Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Stop Control Code (1: Stop)

Selects the control code.
0: Stop Event
1: Stop

The default value is 1.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

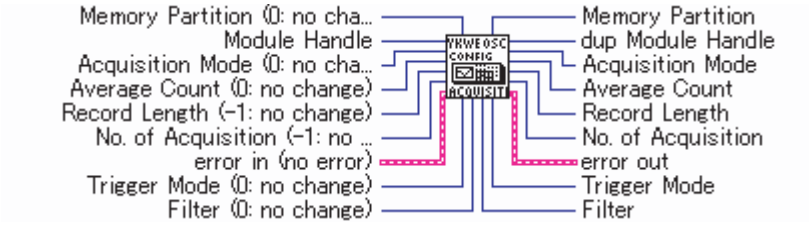
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE OSC Config Acquisition.vi

This VI configures the analog input operation of a specified channel of the oscilloscope module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Acquisition Mode (0: no change)

Selects the acquisition mode from the following.
0: no change
1: Normal
2: Envelope
3: Average

The default value is 0.

Note

This value is valid only for WE7111.

I32 Record Length (-1: no change)

Specifies the record length.
Selectable Range
WE7111: 1 k, 5 k, 10 k, 30 k, 100 k
WE7311: 100 to 2000000
no change: –1

The default value is –1.
For a description of the selectable range, see the user's manual for the module.

I32 No. of Acquisition (-1: no change)

Specifies the number of acquisitions.
If the trigger mode is set to [Normal] and the memory is partitioned, enter the number of acquisitions.
Selectable range is 1 to the number of memory partitions.

The default value is –1 (no change).
For details, see the user's manual for the module.

Note

This value is valid only for WE7311.

I16 Memory Partition (0: no change)

Select the number of memory partitions from below.
When in the trigger mode, you can divide the acquisition memory into multiple blocks and acquire the data to the memory blocks in order every time the trigger occurs. When using memory partitions, if the measurement is stopped before reaching the number of acquisitions, the data in the memory block that was being written at that time are invalid.
0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256
10: 512
11: 1024
12: 2048
13: 4096

The default value is 0.

Note

This value is valid only for WE7311.

U16 Average Count (0: no change)

Select the number of average from below.
This setting is valid when acquisition mode is average.
0: no change
1: 2
2: 4
3: 8
4: 16
5: 32
6: 64
7: 128
8: 256

The default value is 0.

U16 Trigger Mode (0: no change)

Selects the trigger mode.
0: no change
1: Auto
2: Normal
3: Auto Level

The default value is 0.

Filter (0: no change)

Selects the input filter.
0: no change
1: OFF
2: ON

The default value is 0.

Note

This value is valid only for WE7111.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Acquisition Mode

Indicates the specified acquisition mode.
1: Normal
2: Envelope
3: Average

Record Length

Indicates the specified record length.

No. of Acquisition

Indicates the specified number of acquisition.

Memory Partition

Indicates the specified memory partition.

1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256

Average Count (0: no change)

Indicates the specified number of average.

1: 2
2: 4
3: 8
4: 16
5: 32
6: 64
7: 128
8: 256

Trigger Mode (0: no change)

Indicates the specified trigger mode.

1: Auto
2: Normal
3: Auto Level

Filter (0: no change)

Selects the input filter.

1: OFF
2: ON

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

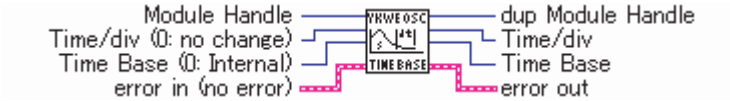
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE OSC Config Time Base.vi

This VI configures the time base of the oscilloscope module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Time/div (0: no change)

Selects the time axis [Time/div] from the following.
0: no change
1: 10 ns/div
2: 20 ns/div
3: 50 ns/div
4: 100 ns/div
5: 200 ns/div
•
•
20: 20 ms/div
21: 50 ms/div
22: 100 ms/div
23: 200 ms/div
•
•
28: 10 s/div
29: 20 s/div
30: 50 s/div
Selectable Range
WE7111: 100 ns/div to 200 ms/div
WE7311: 10 ns/div to 50 s/div

The default value is 0.
For a description of the selectable range, see the user's manual for the module.

U16 Time Base Mode (0: no change)

Selects the time base.
0: no change
1: Internal
2: EXT CLOCK IN
3: BUSCLK

The default value is 0.

Note

This value is valid only for WE7111.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Time/div

Indicates the specified time axis [Time/div].
1: 10 ns/div
2: 20 ns/div
3: 50 ns/div
4: 100 ns/div
5: 200 ns/div
•
•
14: 200 us/div
15: 500 us/div
16: 1 ms/div
17: 2 ms/div
18: 5 ms/div
•
•
28: 10 s/div
29: 20 s/div
30: 50 s/div

Time Base

Indicates the specified time base.
1: Internal
2: EXT CLOCK IN
3: BUSCLK

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

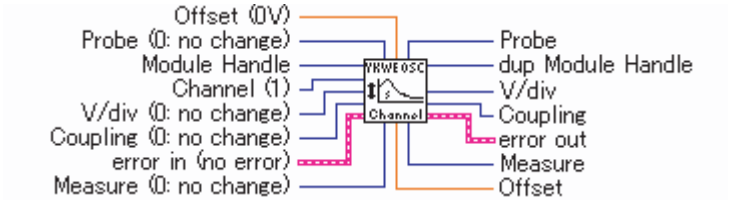
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE OSC Config Channel.vi

This VI configures a specified input channel of the oscilloscope module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

U16 V/div (0: no change)

Selects the vertical sensitivity [V/div].

Selectable Range

WE7111
- 5 mV to 5 V/div (1:1)
- 50 mV to 50 V/div (10:1)
- 500 mV to 500 V/div (100:1)
- 5 V to 5000 V/div (1000:1)

WE7311
- 5 mV to 500 mV/div (1:1)
- 50 mV to 5 V/div (10:1)
- 500 mV to 50 V/div (100:1)
- 5 V to 500 V/div (1000:1)

The default value is 0.

U16 Coupling (0: no change)

Selects the input coupling.
0: no change
1: AC
2: DC
3: GND
4: AC50
5: DC50

The default value is 0.

Offset (0V)

Selects the offset voltage from the following.
The selectable range below are those when the probe attenuation is set to “10:1.” If the probe attenuation is 1:1 multiply these values by 1/10. If it is 100:1 multiply by 10. If it is 1000:1 multiply by 100.
Offset is not changed when V/div is 0 (no change).
This setting is valid when coupling is DC or DC50.

Voltage Sensitivity	Selectable Range	Setting Step
5 mV to 50 mV/div	–10 V to 10 V	0.001 V
1 V to 5 V/div	–100 V to 100 V	0.01 V

The default value is 0.000 V.

Probe (0: no change)

Selects the probe attenuation.
0: no change
1: 1:1
2: 10:1
3: 100:1
4: 1000:1

The default value is 0.

Measure (0: no change)

Selects the automated measurement of waveform parameters.
0: no change
1: OFF
2: ON

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

U16 V/div

Indicates the specified vertical sensitivity.
1: 5 mV
2: 10 mV
3: 20 mV
•
•
•
17: 1 kV
18: 2 kV
19: 5 kV

U16 Coupling

Indicates the specified input coupling.
1: AC
2: DC
3: GND
4: AC 50
5: DC 50

DBL Offset

Indicates the specified offset voltage.

U16 Probe

Indicates the specified probe attenuation.
1: 1:1
2: 10:1
3: 100:1
4: 1000:1

U16 Measure

Indicates the specified automated measurement of waveform parameters.
1: OFF
2: ON

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

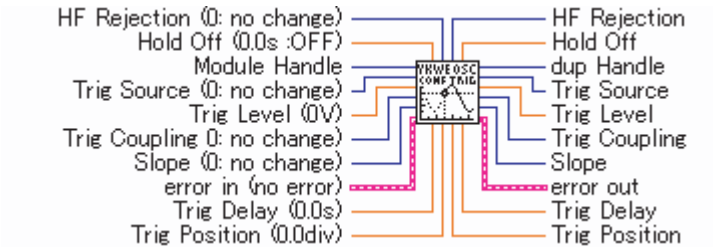
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE OSC Config Trigger.vi

This VI sets the trigger of the oscilloscope module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Trig Source (0: no change)

Selects the trigger source.
0: no change
1: CH1
2: CH2
3: CH3
4: CH4
5: CH5
6: CH6
7: CH7
8: CH8
9: BUSTRG
10: External 1M
11: External 50
12: Line
13: CH9

The default value is 0.

DBL Trig Level (0V)

Specifies the trigger level.
Trigger level refers to the voltage level that is used to determine the trigger slope (rising/falling edge of the signal), a trigger condition.
Measurable range determined by the voltage that corresponds to –10 to +10 times the voltage sensitivity.
Setting resolution is 1/50 of voltage sensitivity.

The default value is 0 V.

U16 Trig Coupling (0: no change)

Selects the trigger coupling.
0: no change
1: AC
2: DC

The default value is 0.

U16 Slope (0: no change)

Selects the trigger slope.
0: no change
1: Rise
2: Fall
3: Both

The default value is 0.

DBL Trig Delay (0.0s)

Specifies the amount of delay.
Selectable Range
0 to 9.99999999 s
Setting resolution is 10 ns.

The default value is 0.0 s.

DBL Trig Position (0.0div)

Specifies the trigger position.
Selectable Range
–5 to +5 div
Setting resolution is 0.1 div.

The default value is 0.0 div.

DBL Hold Off (0.0s: OFF)

Specifies the hold off time.
Selectable Range
200 ns to 9.99999999 s
Setting resolution is 10 ns.
When set to 0 s, OFF.

The default value is 0.

U16 HF Rejection (0: no change)

Selects the trigger HF rejection.
0: no change
1: OFF
2: ON

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Trig Source

Indicates the specified trigger source.
1: CH1
2: CH2
3: CH3
4: CH4
5: CH5
6: CH6
7: CH7
8: CH8
9: BUSTRG
10: Line

Trig Level

Indicates the specified trigger level.

Trig Coupling

Indicates the specified trigger coupling.
1: AC
2: DC

Slope

Indicates the specified trigger slope.
1: Rise
2: Fall
3: Both

Trig Delay

Indicates the specified amount of trigger delay.

Trig Position

Indicates the specified trigger trigger position.

Hold Off

Indicates the specified hold off time.
When set to 0 s, OFF.

HF Rejection

Indicates the specified trigger HF rejection.
1: OFF
2: ON

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

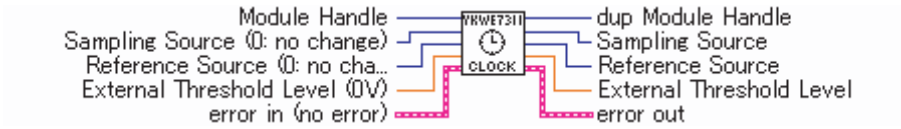
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE OSC Config Clock.vi

This VI sets the clock input of the oscilloscope module
This VI is valid only for WE7311.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Sampling Source (0: no change)

Selects the sampling source.
When the reference clock source is set to internal clock and the trigger mode is normal, the waveform data can be sampled using the external input clock signal or a signal output from another module in addition to the clock signal that is generated within the module. Select the source from the following list of choices. The input frequency rangeof the external clock signal is from 10 MHz to 500 MHz.
0: no change
1: Internal
2: External 1 M
3: External 50

The default value is 0.

U16 Reference Source (0: no change)

Selects the Reference clock source.
You can input a 10-MHz external clock signal that will be used as a sampling clock reference. You can input the signal from the external input terminal of a module or the clock bus of a measurement station. When modules are connected, you can input a clock signal to CH1's module in 1 to 4 module connection, or to CH5's module in 5 to 8 module connection.
0: no change
1: Internal
2: External 1 M
3: External 50
4: BUSCLK

The default value is 0.

DBL External Threshold Level (0V)

Specifies the external threshold level.
When using the input signal from the "EXT IN" terminal, set the threshold level in therange from "–2.0 to 2.0 V" (in 0.1 V steps).

The default value is 0.0 V.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Sampling Source

Indicates the specified sampling source.
1: Internal
2: External 1 M
3: External 50

Reference Source

Indicates the specified reference clock source.
1: Internal
2: External 1 M
3: External 50
4: BUSCLK

External Threshold Level

Indicates the threshold level of the external input clock.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

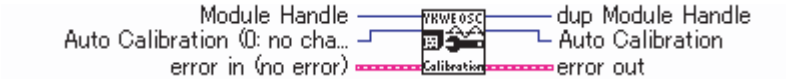
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE OSC Config Calibration.vi

This VI sets the auto calibration of the oscilloscope module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Auto Calibration (0: no change)

Selects the auto calibration.
0: no change
1: OFF
2: ON

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

TF status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

abc source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

U16 Auto Calibration

Indicates the specified auto calibration.
1: OFF
2: ON

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

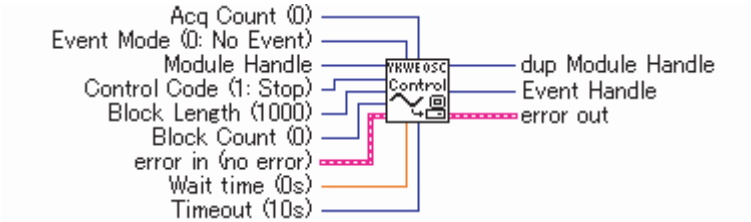
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE OSC Control.vi

This VI controls the oscilloscope module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Control Code (1: Stop)

Selects the oscilloscope control.
0: Start
1: Stop
3: Single Start
4: Start Event
5: Stop Event

The default value is 1.

I32 Block Length (1000)

Specifies the block length.
This value is valid when Control Code is set to 0 (Start), 3 (Single Start), or 4 (Start Event).

The default value is 1000.

U8 Block Count (0)

Specifies the number of blocks (number of memory partitions).
This value is valid when Control Code is set to 0 (Start) or 4 (Start Event).
0: 1
1: 2
2: 4
3: 8
4: 16
5: 32
6: 64
7: 128
8: 256
9: 512
10: 1024
11: 2048
12: 4096

The default value is 0 (1).

Wait time (0s)

Specifies the wait time after the control operation.

The default value is 0 s.

Event Mode (0: No Event)

Selects the event mode.
This value is valid when Control Code is set to 4 (Start Event).
0: No Event
1: Block Event
2: Stop Event

The default value is 0 (No Event).

Acq Count (0)

Specifies the acquisition count.
This value is valid when Control Code is set to 4 (Start Event).
The data acquisition operation terminates after acquiring the data amount specified by this value. If the value 0 is specified, measurement continues until the user issues an abort command.

The default value is 0.

Timeout (10s)

Sets the timeout time of single start.
This value is valid when Control Code is set to 3 (Single Start).
The selectable range is 1 to 32767 s.

The default value is 10 s.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Event Handle

Indicates the event handle.
This value is valid when Control Code is set to 4 (Start Event).

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

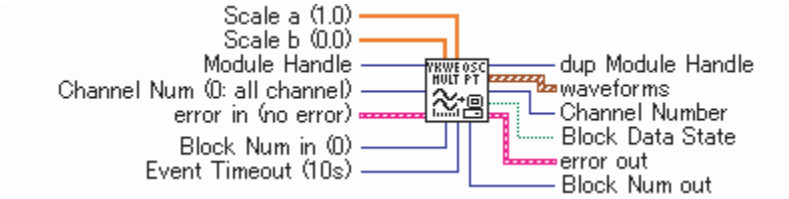
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE OSC Read Block Data.vi

This VI reads block data from a specified input channel or from multiple input channels of the oscilloscope module.

YKWE OSC Read Block Data.vi is polymorphic and can be set to output the following types of data.
Waveform (multiple channels)
Scale array (multiple channels)
Waveform (1 channel)
Scale array (1 channel)

Waveform (multiple channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

I32 Event Timeout (10s)

Specifies the wait time until receiving an event in unit of ms.
This value is value when waiting for an event.

The default value is 10 s.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveforms

Indicates the scaled data of the specified channels as an array of channels and blocks.
t0 indicates 0.
dt indicates the sampling interval.
Y indicates the array of measured data.

Channel Number

Indicates the number of channels of the loaded data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

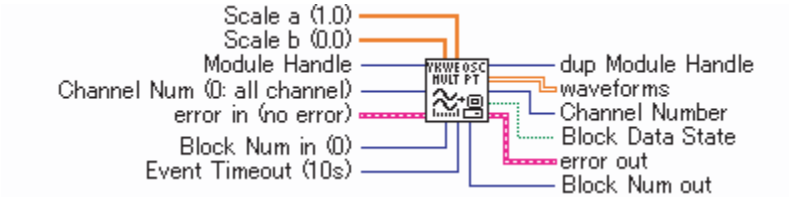
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale array (multiple channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

I32 Event Timeout (10s)

Specifies the wait time until receiving an event in unit of ms.
This value is value when waiting for an event.

The default value is 10 s.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

waveforms

Indicates the scaled data of the specified channels as an array of channels and blocks.
t0 indicates 0.
dt indicates the sampling interval.
Y indicates the array of measured data.

Channel Number

Indicates the number of channels of the loaded data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

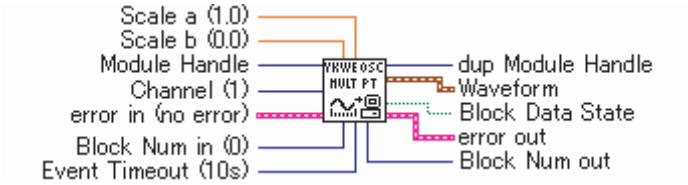
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform (1 channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

I32 Event Timeout (10s)

Specifies the wait time until receiving an event in unit of ms.
This value is value when waiting for an event.

The default value is 10 s.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveform

Indicates the scaled data of the specified channel as an array of blocks.
t0 indicates 0.
dt indicates the sampling interval.
Y indicates the array of measured data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

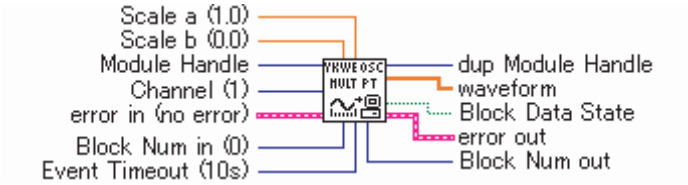
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale array (1 channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

I32 Event Timeout (10s)

Specifies the wait time until receiving an event in unit of ms.
This value is value when waiting for an event.

The default value is 10 s.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

waveform

Indicates the scaled data of the specified channel as an array of blocks.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

5.3 Thermometer VI

Thermometer VIs allow you to configure and perform data acquisition on the following modules.

WE7231	30-CH Fast Digital Thermometer Module
WE7241	10-CH Digital Thermometer Module

- Simple Level VIs

YKWE THERMO Acquire Waveform.vi	Acquires the specified number of samples as the specified sample rate from a single input channel, then returns the acquired data.
YKWE THERMO Acquire Waveforms.vi	Acquires the specified number of samples as the specified sample rate from all input channels, then returns the acquired data.
YKWE THERMO Sample Channel.vi	Measures the signal that is connected to the specified channel, then returns the measured value.
YKWE THERMO Sample Channels.vi	Measures the signal that is connected to all channels, then returns the measured value.

- Intermediate Level VIs

YKWE THERMO Config.vi	Configures the analog input for the specified channel.
YKWE THERMO Start.vi	Starts the analog input operation. This VI sets the sampling speed and block length. Then, the VI starts the measurement module operation.
YKWE THERMO Read Waveform.vi	Reads the acquired data.
YKWE THERMO Single Scan.vi	Reads the instantaneous value of the analog input.
YKWE THERMO Clear.vi	Stops the measurement module operation.

- Advanced Level VIs

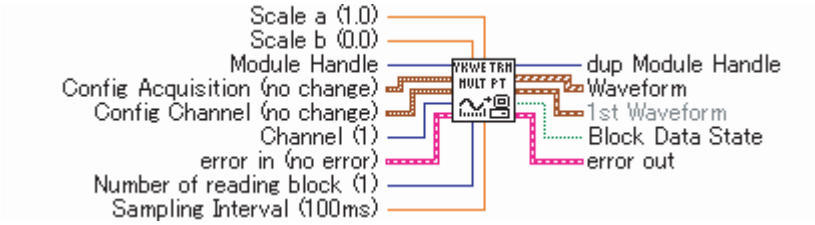
YKWE THERMO Config Acquisition.vi	Configures acquisition settings.(Reference Channel, Unit, Fast Scan Mode, Time Base Mode, RJC Source, RJC Value, Integ Time, and Burn Out Auto)
YKWE THERMO Config Sampling Interval.vi	Sets the sampling interval.
YKWE THERMO Config Channel.vi	Configures sweep settings.(Range, NULL, Delta, and Averaging Count)
YKWE THERMO Config Channel Alarm.vi	Configures alarm settings.(Alarm Type, Alarm High, Alarm Low, and Alarm Group)
YKWE THERMO Config Alarm Combination.vi	Configures alarm combination settings.
YKWE THERMO Check.vi	Executes null computation and executes burnout.
YKWE THERMO Query Status.vi	Reads various statuses.(Alarm, Alarm Hold, and Burn Out)
YKWE THERMO Control.vi	Performs acquisition start/stop and latch operation.
YKWE THERMO Read Block Data.vi	Reads block data. Waveform data for a single channel, data array for a single channel, waveform data for multiple channels, and data array for multiple channels.
YKWE THERMO Read Current Data.vi	Reads the instantaneous value. Waveform data format for a single channel, data for a single channel, waveform data format for multiple channels, and data array for multiple channels.

YKWE THERMO Acquire Waveform.vi

This VI measures a specified number of samples at a specified sampling interval from a single input channel and returns the measured data.

YKWE THERMO Acquire Waveform.vi is polymorphic and can be set to output the following types of data.
Waveform
Scale array

Waveform



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Sampling Interval (100ms)

Specifies the sampling interval.

The default value is 100 ms.

Config Acquisition (no change)

Sets the analog input to the thermometer module in a cluster.

The default value is no change.

Unit (0: no change)

Selects the temperature unit.

Select the temperature unit from the following:

0: no change
1: Centigrade
2: Kelvin
3: Fahrenheit

The selectable range are as follows:

0 to 3: WE7231
0 to 2: WE7241

The default value is 0 (no change).

Fast Scan Mode (0: no change)

Turns ON/OFF skip mode.

0: no change
1: OFF
2: ON

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

Time Base Mode (0: no change)

Selects the time base.

0: no change
1: Internal
2: BUSCLK

The default value is 0 (no change).

RJC Source (0: no change)

Selects the RJC source.

0: no change
1: OFF*
2: Internal
3: External
*: OFF is valid only for the WE7241.

The default value is 0 (no change).

RJC Value (0)

Specifies the reference value of the external RJC source.
The selectable range is –273 to 2000°C.

The default value is 0.
Cannot be changed if RJC Source is set to 0 (no change).

U16 Integ Time (0: no change)

Selects the integration time.
0: no change
1: Auto
2: 1.0 ms
3: 4.0 ms
4: 16.6/20.0 ms
5: 100.0 ms

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

U16 Reference Channel (0: no change)

Specifies the reference channel.
Selectable range for the WE7231:
1 to (30 * the number of modules)
For the WE7241:
1 to (10 * the number of modules)
0: no change.

The default value is 0 (no change).

U16 Burn Out Auto (0: no change)

Selects the auto burnout check.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Config Channel (no change)

Sets range, null, delta, and average of the specified channel in a cluster.

The default value is no change.

Range (0: no change)

Selects the range.
0: no change
1: Off
2: Type K
3: Type E
4: Type J
5: Type T
6: Type L *2
7: Type U *2
8: Type N *2
9: Type R *2
10: Type S *2
11: Type B *2
12: Type W *2
13: KPvsAu7Fe *2
14: 20 mV *1
15: 50 mV *2
16: 100 mV *2
17: 200 mV
18: 500 mV *2
19: 1 V *2
20: 2 V
21: 5 V *2
22: 10 V *2
23: 20 V
24: 50 V *2
25: Pt100 *1
26: 20 OHM *1
27: 200 OHM *1
28: 2 kOHM *1
29: 20 kOHM *1
30: 200 kOHM *1
31: 2 MOHM *1
*1: Valid only on the WE7231.
*2: Valid only on the WE7241.

The default value is 0 (no change).

NULL (0: no change)

Turns ON/OFF the null computation.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

Delta (0: no change)

Turns ON/OFF the delta computation.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Averaging Count (0: no change)

Specifies the average count.
The selectable range are as follows:
2 to 100
0: no change
1: OFF

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveform

Indicates the scaled data of the specified channel as an array of blocks.
t0 indicates 0.
dt indicates the sampling interval.
Y indicates the array of measured data.

1st Waveform

Indicates the scaled data of the first block of the scaled data of the specified channel.
t0 indicates 0.
dt indicates the sampling interval.
Y indicates the array of measured data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

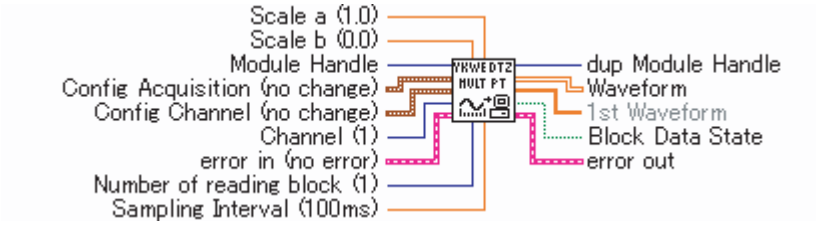
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale Array



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Sampling Interval (100ms)

Specifies the sampling interval.

The default value is 100 ms.

Config Acquisition (no change)

Sets the analog input to the thermometer module in a cluster.

The default value is no change.

Unit (0: no change)

Selects the temperature unit.

Select the temperature unit from the following:

0: no change
1: Centigrade
2: Kelvin
3: Fahrenheit

The selectable range are as follows:

0 to 3: WE7231
0 to 2: WE7241

The default value is 0 (no change).

Fast Scan Mode (0: no change)

Turns ON/OFF skip mode.

0: no change
1: OFF
2: ON

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

Time Base Mode (0: no change)

Selects the time base.

0: no change
1: Internal
2: BUSCLK

The default value is 0 (no change).

RJC Source (0: no change)

Selects the RJC source.

0: no change
1: OFF*
2: Internal
3: External
*: OFF is valid only for the WE7241.

The default value is 0 (no change).

RJC Value (0)

Specifies the reference value of the external RJC source.

The selectable range are as follows:

–273 to 2000°C

The default value is 0.
Cannot be changed if RJC Source is set to 0 (no change).

U16 Integ Time (0: no change)

Selects the integration time.
0: no change
1: Auto
2: 1.0 ms
3: 4.0 ms
4: 16.6/20.0 ms
5: 100.0 ms

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

U16 Reference Channel (0: no change)

Specifies the reference channel.
Selectable range for the WE7231:
1 to (30 * the number of modules)
For the WE7241:
1 to (10 * the number of modules)
0: no change.

The default value is 0 (no change).

U16 Burn Out Auto (0: no change)

Selects the auto burnout check.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Config Channel (no change)

Sets range, null, delta, and average of the specified channel in a cluster.

The default value is no change.

Range (0: no change)

Selects the range.
0: no change
1: Off
2: Type K
3: Type E
4: Type J
5: Type T
6: Type L *2
7: Type U *2
8: Type N *2
9: Type R *2
10: Type S *2
11: Type B *2
12: Type W *2
13: KPvsAu7Fe *2
14: 20 mV *1
15: 50 mV *2
16: 100 mV *2
17: 200 mV
18: 500 mV *2
19: 1 V *2
20: 2 V
21: 5 V *2
22: 10 V *2
23: 20 V
24: 50 V *2
25: Pt100 *1
26: 20 OHM *1
27: 200 OHM *1
28: 2 kOHM *1
29: 20 kOHM *1
30: 200 kOHM *1
31: 2 MOHM *1
*1: Valid only on the WE7231.
*2: Valid only on the WE7241.

The default value is 0 (no change).

NULL (0: no change)

Turns ON/OFF the null computation.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

U16 Delta (0: no change)

Turns ON/OFF the delta computation.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

U16 Averaging Count (0: no change)

Specifies the average count.
The selectable range are as follows:
2 to 100
0: no change
1: OFF

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

TF status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

abc source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveform

Indicates the scaled data of the specified channel as an array.

1st Waveform

Indicates the scaled data of the first block of the scaled data of the specified channel.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

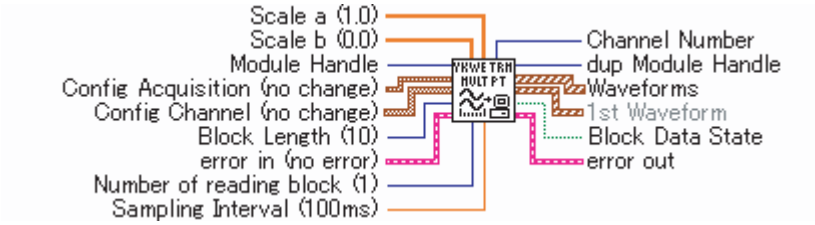
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE THERMO Acquire Waveforms.vi

This VI measures a specified number of samples at a specified sampling interval from multiple input channels and returns the measured data.

YKWE THERMO Acquire Waveforms.vi is polymorphic and can be set to output the following types of data.
Waveform
Scale array

Waveform



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Sampling Interval (100ms)

Specifies the sampling interval.

The default value is 100 ms.

Config Acquisition (no change)

Sets the analog input to the thermometer module in a cluster.

The default value is no change.

Unit (0: no change)

Selects the temperature unit.

Select the temperature unit from the following:

0: no change
1: Centigrade
2: Kelvin
3: Fahrenheit

The selectable range are as follows:

0 to 3: WE7231
0 to 2: WE7241

The default value is 0 (no change).

Fast Scan Mode (0: no change)

Turns ON/OFF skip mode.

0: no change
1: OFF
2: ON

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

Time Base Mode (0: no change)

Selects the time base.

0: no change
1: Internal
2: BUSCLK

The default value is 0 (no change).

RJC Source (0: no change)

Selects the RJC source.

0: no change
1: OFF
2: Internal
3: External

The default value is 0 (no change).

RJC Value (0)

Specifies the reference value of the external RJC source.

The selectable range are as follows:

–273 to 2000°C

The default value is 0.
Cannot be changed if RJC Source is set to 0 (no change).

U16 Integ Time (0: no change)

Selects the integration time.
0: no change
1: Auto
2: 1.0 ms
3: 4.0 ms
4: 16.6/20.0 ms
5: 100.0 ms

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

U16 Reference Channel (0: no change)

Specifies the reference channel.
Selectable range for the WE7231:
1 to (30 * the number of modules)
For the WE7241:
1 to (10 * the number of modules)
0: no change.

The default value is 0 (no change).

U16 Burn Out Auto (0: no change)

Selects the auto burnout check.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Config Channel (no change)

Sets range, null, delta, and average of the specified channel in an array of clusters.

The default value is no change.

U16 Range (0: no change)

Selects the range.
0: no change
1: Off
2: Type K
3: Type E
4: Type J
5: Type T
6: Type L *2
7: Type U *2
8: Type N *2
9: Type R *2
10: Type S *2
11: Type B *2
12: Type W *2
13: KPvsAu7Fe *2
14: 20 mV *1
15: 50 mV *2
16: 100 mV *2
17: 200 mV
18: 500 mV *2
19: 1 V *2
20: 2 V
21: 5 V *2
22: 10 V *2
23: 20 V
24: 50 V *2
25: Pt100 *1
26: 20 OHM *1
27: 200 OHM *1
28: 2 kOHM *1
29: 20 kOHM *1
30: 200 kOHM *1
31: 2 MOHM *1
*1: Valid only on the WE7231.
*2: Valid only on the WE7241.

The default value is 0 (no change).

U16 NULL (0: no change)

Turns ON/OFF the null computation.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

U16 Delta (0: no change)

Turns ON/OFF the delta computation.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

U16 Averaging Count (0: no change)

Specifies the average count.
The selectable range are as follows:
2 to 100
0: no change
1: OFF

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”) in an array.

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”) in an array.

The default value is 0.0.

I32 Block Length (10)

Specifies the block length.
Selectable range for the WE7231:
1 to 64
For the WE7241:
1 to 102

The default value is 10.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.

If Module Handle is 0, it is the module handle first opened.

Waveforms

Indicates the scaled data of the specified channels as an array of channels and blocks.
t0 indicates 0.
dt indicates the sampling interval.
Y indicates the array of measured data.

1st Waveform

Indicates the scaled data of the first block of the scaled data of the specified channels as an array of channels.
t0 indicates 0.
dt indicates the sampling interval.
Y indicates the array of measured data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

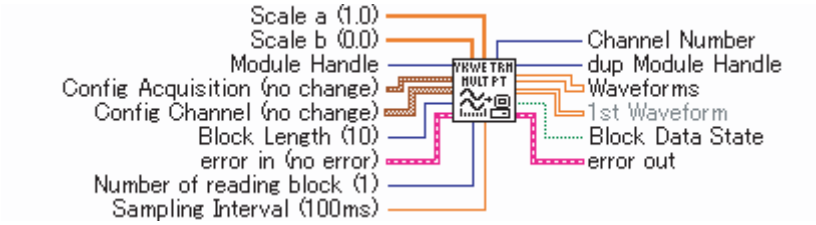
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale Array



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Sampling Interval (100ms)

Specifies the sampling interval.

The default value is 100 ms.

Config Acquisition (no change)

Sets the analog input to the thermometer module in a cluster.

The default value is no change.

Unit (0: no change)

Selects the temperature unit.

Select the temperature unit from the following:

0: no change
1: Centigrade
2: Kelvin
3: Fahrenheit

The selectable range are as follows:

0 to 3: WE7231
0 to 2: WE7241

The default value is 0 (no change).

Fast Scan Mode (0: no change)

Turns ON/OFF skip mode.

0: no change
1: OFF
2: ON

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

Time Base Mode (0: no change)

Selects the time base.

0: no change
1: Internal
2: BUSCLK

The default value is 0 (no change).

RJC Source (0: no change)

Selects the RJC source.

0: no change
1: OFF
2: Internal
3: External

The default value is 0 (no change).

RJC Value (0)

Specifies the reference value of the external RJC source.

The selectable range are as follows:

–273 to 2000°C

The default value is 0.
Cannot be changed if RJC Source is set to 0 (no change).

U16 Integ Time (0: no change)

Selects the integration time.
0: no change
1: Auto
2: 1.0 ms
3: 4.0 ms
4: 16.6/20.0 ms
5: 100.0 ms

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

U16 Reference Channel (0: no change)

Specifies the reference channel.
Selectable range for the WE7231:
1 to (30 * the number of modules)
For the WE7241:
1 to (10 * the number of modules)
0: no change.

The default value is 0 (no change).

U16 Burn Out Auto (0: no change)

Selects the auto burnout check.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Config Channel (no change)

Sets range, null, delta, and average of the specified channel in an array of clusters.

The default value is no change.

U16 Range (0: no change)

Selects the range.
0: no change
1: Off
2: Type K
3: Type E
4: Type J
5: Type T
6: Type L *2
7: Type U *2
8: Type N *2
9: Type R *2
10: Type S *2
11: Type B *2
12: Type W *2
13: KPvsAu7Fe *2
14: 20 mV *1
15: 50 mV *2
16: 100 mV *2
17: 200 mV
18: 500 mV *2
19: 1 V *2
20: 2 V
21: 5 V *2
22: 10 V *2
23: 20 V
24: 50 V *2
25: Pt100 *1
26: 20 OHM *1
27: 200 OHM *1
28: 2 kOHM *1
29: 20 kOHM *1
30: 200 kOHM *1
31: 2 MOHM *1
*1: Valid only on the WE7231.
*2: Valid only on the WE7241.

The default value is 0 (no change).

U16 NULL (0: no change)

Turns ON/OFF the null computation.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

U16 Delta (0: no change)

Turns ON/OFF the delta computation.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

U16 Averaging Count (0: no change)

Specifies the average count.
The selectable range are as follows:
2 to 100
0: no change
1: OFF

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”) in an array.

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”) in an array.

The default value is 0.0.

I32 Block Length (10)

Specifies the block length.
Selectable range for the WE7231:
1 to 64
For the WE7241:
1 to 102

The default value is 10.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveforms

Indicates the scaled data of the specified channels as an array of channels and blocks.

1st Waveform

Indicates the scaled data of the first block of the scaled data of the specified channels as an array of channels.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

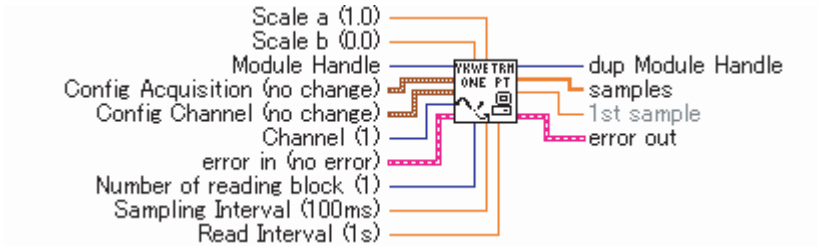
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE THERMO Sample Channel.vi

This VI measures the signal connected to a specified channel at the specified interval and returns the measured data.

YKWE THERMO Sample Channel.vi is polymorphic and can be set to output the following types of data.
Scale array
Waveform

Scale Array



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Sampling Interval (100ms)

Specifies the sampling interval.

The default value is 100 ms.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

Config Acquisition (no change)

Sets the analog input to the digitizer module in a cluster.

The default value is no change.

Unit (0: no change)

Selects the temperature unit.

Select the temperature unit from the following:

0: no change
1: Centigrade
2: Kelvin
3: Fahrenheit

The selectable range are as follows:

0 to 3: WE7231
0 to 2: WE7241

The default value is 0 (no change).

Fast Scan Mode (0: no change)

Turns ON/OFF skip mode.

0: no change
1: OFF
2: ON

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

Time Base Mode (0: no change)

Selects the time base.

0: no change
1: Internal
2: BUSCLK

The default value is 0 (no change).

RJC Source (0: no change)

Selects the RJC source.

0: no change
1: OFF*
2: Internal
3: External
*: OFF is valid only for the WE7241.

The default value is 0 (no change).

RJC Value (0)

Specifies the reference value of the external RJC source.
The selectable range are as follows:
–273 to 2000°C

The default value is 0.
Cannot be changed if RJC Source is set to 0 (no change).

U16 Integ Time (0: no change)

Selects the integration time.
0: no change
1: Auto
2: 1.0 ms
3: 4.0ms
4: 16.6/20.0 ms
5: 100.0 ms

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

U16 Reference Channel (0: no change)

Specifies the reference channel.
Selectable range for the WE7231:
1 to (30 * the number of modules)
For the WE7241:
1 to (10 * the number of modules)
0: no change.

The default value is 0 (no change).

U16 Burn Out Auto (0: no change)

Selects the auto burnout check.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Config Channel (no change)

Sets range, null, delta, and average of the specified channel in a cluster.

The default value is no change.

U16 Range (0: no change)

Selects the range.
0: no change
1: Off
2: Type K
3: Type E
4: Type J
5: Type T
6: Type L*2
7: Type U*2
8: Type N*2
9: Type R*2
10: Type S*2
11: Type B*2
12: Type W*2
13: KPvsAu7Fe*2
14: 20 mV *1
15: 50 mV*2
16: 100 mV*2
17: 200 mV
18: 500 mV*2
19: 1 V*2
20: 2 V
21: 5 V*2
22: 10 V*2
23: 20 V
24: 50 V*2
25: Pt100 *1
26: 20 OHM *1
27: 200 OHM *1
28: 2 kOHM *1
29: 20 kOHM *1
30: 200 kOHM *1
31: 2 MOHM *1
*1: Valid only on the WE7231.
*2: Valid only on the WE7241.

The default value is 0 (no change).

U16 NULL (0: no change)

Turns ON/OFF the null computation.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

Delta (0: no change)

Turns ON/OFF the delta computation.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Averaging Count (0: no change)

Specifies the average count.
The selectable range are as follows:
2 to 100
0: no change
1: OFF

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data of the specified channel as an array of blocks.

1st sample

Indicates the scaled data of the first block of the scaled data of the specified channel.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

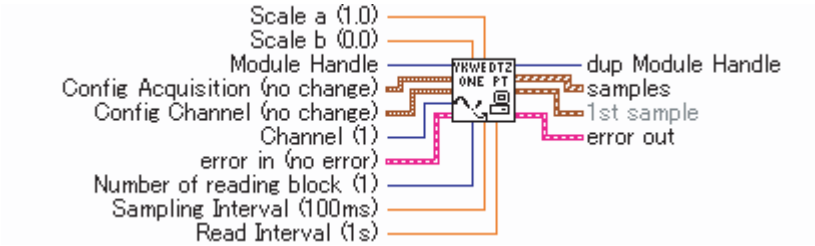
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Sampling Interval (100ms)

Specifies the sampling interval.

The default value is 100 ms.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

Config Acquisition (no change)

Sets the analog input to the digitizer module in a cluster.

The default value is no change.

Unit (0: no change)

Selects the temperature unit.
Select the temperature unit from the following:
0: no change
1: Centigrade
2: Kelvin
3: Fahrenheit
The selectable range are as follows:
0 to 3: WE7231
0 to 2: WE7241

The default value is 0 (no change).

Fast Scan Mode (0: no change)

Turns ON/OFF skip mode.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

Time Base Mode (0: no change)

Selects the time base.
0: no change
1: Internal
2: BUSCLK

The default value is 0 (no change).

RJC Source (0: no change)

Selects the RJC source.
0: no change
1: OFF*
2: Internal
3: External
*: 1: OFF is valid only for the WE7241.

The default value is 0 (no change).

RJC Value (0)

Specifies the reference value of the external RJC source.
The selectable range are as follows:
–273 to 2000°C

The default value is 0.
Cannot be changed if RJC Source is set to 0 (no change).

U16 Integ Time (0: no change)

Selects the integration time.
0: no change
1: Auto
2: 1.0 ms
3: 4.0 ms
4: 16.6/20.0 ms
5: 100.0 ms

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

U16 Reference Channel (0: no change)

Specifies the reference channel.
Selectable range for the WE7231:
1 to (30 * the number of modules)
For the WE7241:
1 to (10 * the number of modules)
0: no change.

The default value is 0 (no change).

U16 Burn Out Auto (0: no change)

Selects the auto burnout check.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Config Channel (no change)

Sets range, null, delta, and average of the specified channel in a cluster.

The default value is no change.

U16 Range (0: no change)

Selects the range.
0: no change
1: Off
2: Type K
3: Type E
4: Type J
5: Type T
6: Type L *2
7: Type U *2
8: Type N *2
9: Type R *2
10: Type S *2
11: Type B *2
12: Type W *2
13: KPvsAu7Fe *2
14: 20 mV *1
15: 50 mV *2
16: 100 mV *2
17: 200 mV
18: 500 mV *2
19: 1 V *2
20: 2 V
21: 5 V *2
22: 10 V *2
23: 20 V
24: 50 V *2
25: Pt100 *1
26: 20 OHM *1
27: 200 OHM *1
28: 2 kOHM *1
29: 20 kOHM *1
30: 200 kOHM *1
31: 2 MOHM *1
*1: Valid only on the WE7231.
*2: Valid only on the WE7241.

The default value is 0 (no change).

U16 NULL (0: no change)

Turns ON/OFF the null computation.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

Delta (0: no change)

Turns ON/OFF the delta computation.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Averaging Count (0: no change)

Specifies the average count.
The selectable range are as follows:
2 to 100
0: no change
1: OFF

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data of the specified channel as an array of blocks.

1st sample

Indicates the scaled data of the first block of the scaled data of the specified channel.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

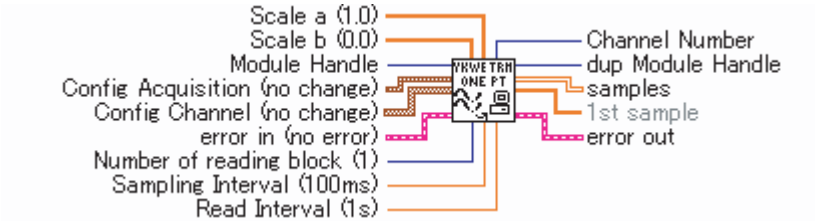
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE THERMO Sample Channels.vi

Measures the signal connected to multiple channels at the specified interval and returns the measured data.

YKWE THERMO Sample Channels.vi is polymorphic and can be set to output the following types of data.
Scale array
Waveform

Scale Array



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Sampling Interval (100ms)

Specifies the sampling interval.

The default value is 100 ms.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

Config Acquisition (no change)

Sets the analog input to the digitizer module in a cluster.

The default value is no change.

Unit (0: no change)

Selects the temperature unit.

Select the temperature unit from the following:

0: no change
1: Centigrade
2: Kelvin
3: Fahrenheit

The selectable range are as follows:

0 to 3: WE7231
0 to 2: WE7241

The default value is 0 (no change).

Fast Scan Mode (0: no change)

Turns ON/OFF skip mode.

0: no change
1: OFF
2: ON

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

Time Base Mode (0: no change)

Selects the time base.

0: no change
1: Internal
2: BUSCLK

The default value is 0 (no change).

RJC Source (0: no change)

Selects the RJC source.

0: no change
1: OFF*
2: Internal
3: External
*: 1: OFF is valid only for the WE7241.

The default value is 0 (no change).

RJC Value (0)

Specifies the reference value of the external RJC source.

The selectable range are as follows:

–273 to 2000°C

The default value is 0.
Cannot be changed if RJC Source is set to 0 (no change).

U16 Integ Time (0: no change)

Selects the integration time.
0: no change
1: Auto
2: 1.0 ms
3: 4.0 ms
4: 16.6/20.0 ms
5: 100.0 ms

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

U16 Reference Channel (0: no change)

Specifies the reference channel.
Selectable range for the WE7231:
1 to (30 * the number of modules)
For the WE7241:
1 to (10 * the number of modules)
0: no change.

The default value is 0 (no change).

U16 Burn Out Auto (0: no change)

Selects the auto burnout check.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Config Channel (no change)

Sets range, null, delta, and average of the specified channel in an array of clusters.

The default value is no change.

U16 Range (0: no change)

Selects the range.
0: no change
1: Off
2: Type K
3: Type E
4: Type J
5: Type T
6: Type L *2
7: Type U *2
8: Type N *2
9: Type R *2
10: Type S *2
11: Type B *2
12: Type W *2
13: KPvsAu7Fe *2
14: 20 mV *1
15: 50 mV *2
16: 100 mV *2
17: 200 mV
18: 500 mV *2
19: 1 V *2
20: 2 V
21: 5 V *2
22: 10 V *2
23: 20 V
24: 50 V *2
25: Pt100 *1
26: 20 OHM *1
27: 200 OHM *1
28: 2 kOHM *1
29: 20 kOHM *1
30: 200 kOHM *1
31: 2 MOHM *1
*1: Valid only on the WE7231.
*2: Valid only on the WE7241.

The default value is 0 (no change).

U16 NULL (0: no change)

Turns ON/OFF the null computation.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

Delta (0: no change)

Turns ON/OFF the delta computation.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Averaging Count (0: no change)

Specifies the average count.
The selectable range are as follows:
2 to 100
0: no change
1: OFF

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”) in an array.

The default value is 1.0.

Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”) in an array.

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data of the specified channels as an array of channels and blocks.

1st samples

Indicates the scaled data of the first block of the scaled data of the specified channel in an array.

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

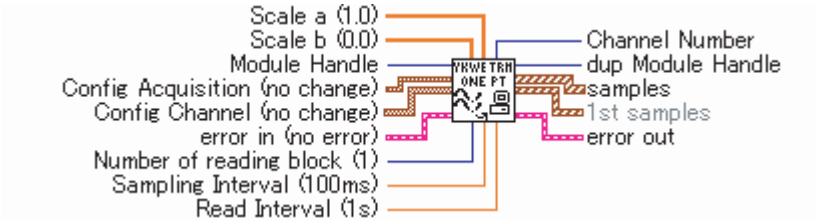
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Sampling Interval (100ms)

Specifies the sampling interval.

The default value is 100 ms.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

Config Acquisition (no change)

Sets the analog input to the digitizer module in a cluster.

The default value is no change.

Unit (0: no change)

Selects the temperature unit.

Select the temperature unit from the following:

0: no change
1: Centigrade
2: Kelvin
3: Fahrenheit

The selectable range are as follows:

0 to 3: WE7231
0 to 2: WE7241

The default value is 0 (no change).

Fast Scan Mode (0: no change)

Turns ON/OFF skip mode.

0: no change
1: OFF
2: ON

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

Time Base Mode (0: no change)

Selects the time base.

0: no change
1: Internal
2: BUSCLK

The default value is 0 (no change).

RJC Source (0: no change)

Selects the RJC source.

0: no change
1: OFF*
2: Internal
3: External

* 1: OFF is valid only for the WE7241.

The default value is 0 (no change).

RJC Value (0)

Specifies the reference value of the external RJC source.

The selectable range are as follows:

–273 to 2000°C

The default value is 0.
Cannot be changed if RJC Source is set to 0 (no change).

U16 Integ Time (0: no change)

Selects the integration time.
0: no change
1: Auto
2: 1.0 ms
3: 4.0 ms
4: 16.6/20.0 ms
5: 100.0 ms

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

U16 Reference Channel (0: no change)

Specifies the reference channel.
Selectable range for the WE7231:
1 to (30 * the number of modules)
For the WE7241:
1 to (10 * the number of modules)
0: no change.

The default value is 0 (no change).

U16 Burn Out Auto (0: no change)

Selects the auto burnout check.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Config Channel (no change)

Sets range, null, delta, and average of the specified channel in an array of clusters.

The default value is no change.

U16 Range (0: no change)

Selects the range.
0: no change
1: Off
2: Type K
3: Type E
4: Type J
5: Type T
6: Type L *2
7: Type U *2
8: Type N *2
9: Type R *2
10: Type S *2
11: Type B *2
12: Type W *2
13: KPvsAu7Fe *2
14: 20 mV *1
15: 50 mV *2
16: 100 mV *2
17: 200 mV
18: 500 mV *2
19: 1 V *2
20: 2 V
21: 5 V *2
22: 10 V *2
23: 20 V
24: 50 V *2
25: Pt100 *1
26: 20 OHM *1
27: 200 OHM *1
28: 2 kOHM *1
29: 20 kOHM *1
30: 200 kOHM *1
31: 2 MOHM *1
*1: Valid only on the WE7231.
*2: Valid only on the WE7241.

The default value is 0 (no change).

U16 NULL (0: no change)

Turns ON/OFF the null computation.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

Delta (0: no change)

Turns ON/OFF the delta computation.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Averaging Count (0: no change)

Specifies the average count.
The selectable range are as follows:
2 to 100
0: no change
1: OFF

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”) in an array.

The default value is 1.0.

Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”) in an array.

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data of the specified channels as an array of channels and blocks.

1st samples

Indicates the scaled data of the first block of the scaled data of the specified channel in an array.

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

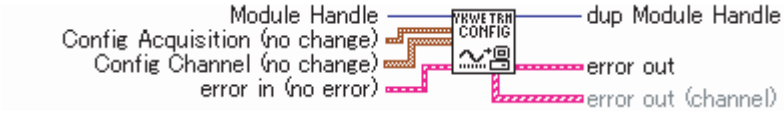
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE THERMO Config.vi

This VI configures the analog input of the thermometer module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Config Acquisition (no change)

Sets the analog input to the thermometer module in a cluster.

The default value is no change.

U16 Unit (0: no change)

Selects the temperature unit.
Select the temperature unit from the following:
0: no change
1: Centigrade
2: Kelvin
3: Fahrenheit
The selectable range are as follows:
0 to 3: WE7231
0 to 2: WE7241

The default value is 0 (no change).

U16 Fast Scan Mode (0: no change)

Turns ON/OFF skip mode.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

U16 Time Base Mode (0: no change)

Selects the time base.
0: no change
1: Internal
2: BUSCLK

The default value is 0 (no change).

U16 RJC Source (0: no change)

Selects the RJC source.
0: no change
1: OFF*
2: Internal
3: External
*: OFF is valid only for the WE7241.

The default value is 0 (no change).

DBL RJC Value (0)

Specifies the reference value of the external RJC source.
The selectable range are as follows:
–273 to 2000°C

The default value is 0.
Cannot be changed if RJC Source is set to 0 (no change).

U16 Integ Time (0: no change)

Selects the integration time.
0: no change
1: Auto
2: 1.0 ms
3: 4.0 ms
4: 16.6/20.0 ms
5: 100.0 ms

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

U16 Reference Channel (0: no change)

Specifies the reference channel.
Selectable range for the WE7231:
1 to (30 * the number of modules)
For the WE7241:
1 to (10 * the number of modules)
0: no change.

The default value is 0 (no change).

U16 Burn Out Auto (0: no change)

Selects the auto burnout check.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Config Channel (no change)

Sets range, null, delta, and average of the specified channel in an array of cluster.

The default value is no change.

U16 Range (0: no change)

Selects the range.
0: no change
1: Off
2: Type K
3: Type E
4: Type J
5: Type T
6: Type L *2
7: Type U *2
8: Type N *2
9: Type R *2
10: Type S *2
11: Type B *2
12: Type W *2
13: KPvsAu7Fe *2
14: 20 mV *1
15: 50 mV *2
16: 100 mV *2
17: 200 mV
18: 500 mV *2
19: 1 V *2
20: 2 V
21: 5 V *2
22: 10 V *2
23: 20 V
24: 50 V *2
25: Pt100 *1
26: 20 OHM *1
27: 200 OHM *1
28: 2 kOHM *1
29: 20 kOHM *1
30: 200 kOHM *1
31: 2 MOHM *1
*1: Valid only on the WE7231.
*2: Valid only on the WE7241.

The default value is 0 (no change).

U16 NULL (0: no change)

Turns ON/OFF the null computation.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

Delta (0: no change)

Turns ON/OFF the delta computation.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Averaging Count (0: no change)

Specifies the average count.
The selectable range are as follows:
2 to 100
0: no change
1: OFF

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

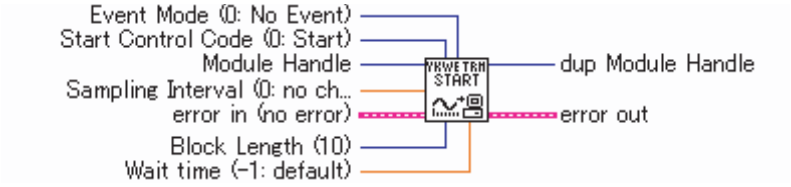
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

error out (channel)

Indicates the error of each channel in an array.

YKWE THERMO Start.vi

This VI starts the analog input of the thermometer module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

DBL Sampling Interval (0: no change)

Specifies the sampling interval.
The selectable range are as follows:
60 ms to 60 min: WE7231
0.2 s to 60 s: WE7241

The default value is 0 (no change).
For details, see the user's manual.

U16 Start Control Code (0: Start)

Selects the control code.
0: Start
2: Start Event

The default value is 0 (Start).

I32 Block Length (10:)

Specifies the block length.
Selectable range for the WE7231:
1 to 64
For the WE7241:
1 to 102

The default value is 10.

I16 Event Mode (0: No Event)

Selects the acquisition operation mode.
0: No Event
1: Block_Event
2: Stop Event

The default value is 0 (No Event).
This value is valid when Start Control Code is set to 2 (Start Event).

DBL Wait time (-1: default)

Specifies the wait time after the start operation.

The default value is -1.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

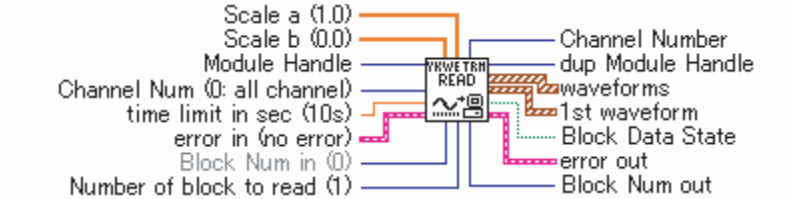
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE THERMO Read Waveform.vi

This VI reads block data from a specified input channel of the thermometer module.

YKWE THERMO Read Waveform.vi is polymorphic and can be set to output the following types of data.
Waveform (multiple channels)
Scale array (multiple channels)
Waveform (1 channel)
Scale array (1 channel)

Waveform (Multiple Channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL time limit in sec (10s)

Specifies the time limit for the read operation.
The actual time limit is time limit in sec + sampling interval × record length.

The default value is 10 s.

[DBL] Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”) in an array.

The default value is 1.0.

[DBL] Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”) in an array.

The default value is 0.0.

Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

waveforms

Indicates the scaled data of the specified channels as an array of channels and blocks.
t0 indicates 0.
dt indicates the sampling interval.
Y indicates the array of measured data.

1st waveform

Indicates the scaled data of the first block of the scaled data of the specified channels as an array of channels.
t0 indicates 0.
dt indicates the sampling interval.
Y indicates the array of measured data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Channel Number

Indicates the number of channels of the loaded data.

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

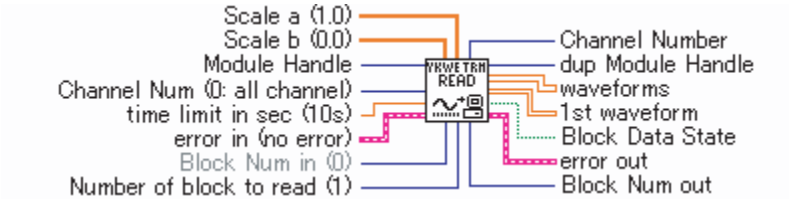
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale Array (Multiple Channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL time limit in sec (10s)

Specifies the time limit for the read operation.
The actual time limit is time limit in sec + sampling interval × record length.

The default value is 10 s.

[DBL] Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”) in an array.

The default value is 1.0.

[DBL] Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”) in an array.

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

waveforms

Indicates the scaled data of the specified channels as an array of channels and blocks.

1st waveform

Indicates the scaled data of the first block of the scaled data of the specified channels as an array of channels.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Channel Number

Indicates the number of channels of the loaded data.

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

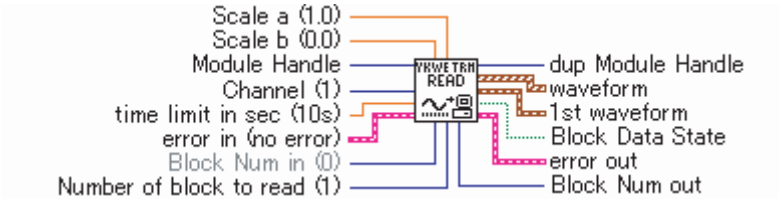
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform (1 Channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL time limit in sec (10s)

Specifies the time limit for the read operation.
The actual time limit is time limit in sec + sampling interval × record length.

The default value is 10 s.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

waveform

Indicates the scaled data of the specified channel as an array of blocks.
t0 indicates 0.
dt indicates the sampling interval.
Y indicates the array of measured data.

1st waveform

Indicates the scaled data of the first block of the scaled data of the specified channel.
t0 indicates 0.
dt indicates the sampling interval.
Y indicates the array of measured data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

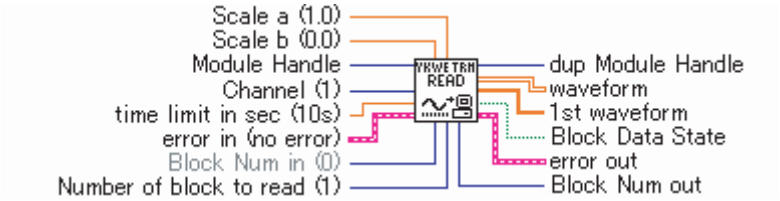
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale Array (1 Channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL time limit in sec (10s)

Specifies the time limit for the read operation.
The actual time limit is time limit in sec + sampling interval × record length.

The default value is 10 s.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

waveform

Indicates the scaled data of the specified channel as an array.

1st waveform

Indicates the scaled data of the first block of the scaled data of the specified channel.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

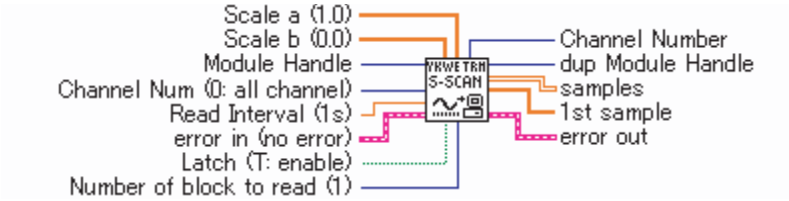
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE THERMO Single Scan.vi

This VI reads current data from a specified input channel of the thermometer module.

YKWE THERMO Single Scan.vi is polymorphic and can be set to output the following types of data.
Scale array (multiple channels)
Waveform (multiple channels)
Scale array (1 channel)
Waveform (1 channel)

Scale Array (Multiple Channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

[DBL] Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

[DBL] Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data of the specified channels as an array of channels and blocks.

1st samples

Indicates the scaled data of the first block of the scaled data of the specified channels as an array of channels.

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

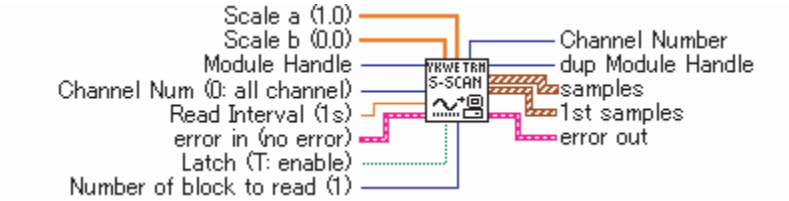
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform (multiple channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

[DBL] Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

[DBL] Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data of the specified channels as an array of channels and blocks.
t0 indicates 0.
Y indicates the array of measured data.

1st samples

Indicates the scaled data of the first block of the scaled data of the specified channels as an array of channels.
t0 indicates 0.
Y indicates the array of measured data.

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

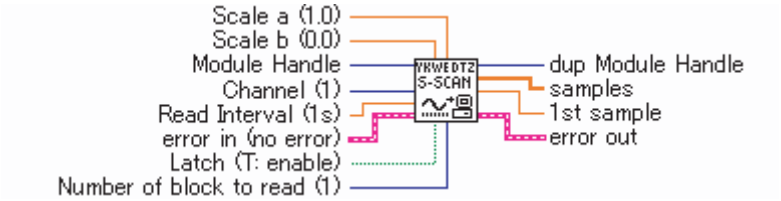
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale Array (1 Channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data of the specified channel as an array.

1st sample

Indicates the scaled data of the first block of the scaled data of the specified channel.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

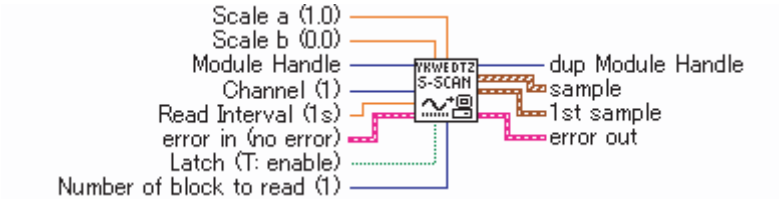
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform (1 Channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

sample

Indicates the scaled data of the specified channel as an array.
t0 indicates 0.
Y indicates the array of measured data.

1st sample

Indicates the scaled data of the specified channel.
t0 indicates 0.
Y indicates the array of measured data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE THERMO Clear.vi

This VI ends the analog input of the thermometer module.

Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

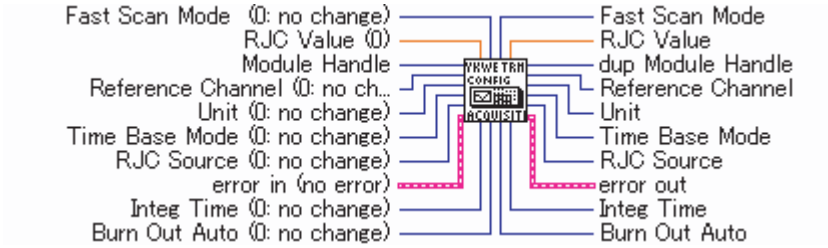
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE THERMO Config Acquisition.vi

This VI configures the analog input operation of a specified channel of the thermometer module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Reference Channel (0: no change)

Specifies the reference channel.
Selectable range for the WE7231:
1 to (30 * the number of modules)
For the WE7241:
1 to (10 * the number of modules)
0: no change.

The default value is 0 (no change).

U16 Unit (0: no change)

Selects the temperature unit.
Select the temperature unit from the following:
0: no change
1: Centigrade
2: Kelvin
3: Fahrenheit
The selectable range are as follows:
0 to 3: WE7231
0 to 2: WE7241

The default value is 0 (no change).

U16 Fast Scan Mode (0: no change)

Turns ON/OFF skip mode.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

U16 Time Base Mode (0: no change)

Selects the time base.
0: no change
1: Internal
2: BUSCLK

The default value is 0 (no change).

U16 RJC Source (0: no change)

Selects the RJC source.
0: no change
1: OFF
2: Internal
3: External

The default value is 0 (no change).

DBL RJC Value (0)

Specifies the reference value of the external RJC source.
The selectable range are as follows:
–273 to 2000°C

The default value is 0.
Cannot be changed if RJC Source is set to 0 (no change).

U16 Integ Time (0: no change)

Selects the integration time.
0: no change
1: Auto
2: 1.0 ms
3: 4.0 ms
4: 16.6/20.0 ms
5: 100.0 ms

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

U16 Burn Out Auto (0: no change)

Selects the auto burnout check.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Reference Channel

Indicates the specified reference channel.

Unit

Indicates the specified temperature unit.
1: Centigrade
2: Kelvin
3: Fahrenheit

Fast Scan Mode

Indicates the specified ON/OFF state of the skip mode.
1: OFF
2: ON

Time Base Mode

Indicates the specified time base.
1: Internal
2: BUSCLK

RJC Source

Indicates the specified RJC source.
1: OFF
2: Internal
3: External

RJC Value

Indicates the reference value of the specified external RJC source.

Integ Time

Indicates the specified integration time.
1: Auto
2: 1.0 ms
3: 4.0 ms
4: 16.6/20.0 ms
5: 100.0 ms

Burn Out Auto

Indicates the specified auto burnout check.
1: OFF
2: ON

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

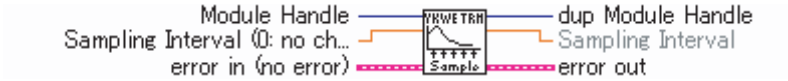
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE THERMO Config Sampling Interval.vi

This VI sets the sampling interval of the thermometer module.



Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Sampling Interval (0: no change)

Specifies the sampling interval.
For the WE7231:
60 ms to 60 min
For the WE7241:
0.2 s to 60 s
0 is no change.

The default value is 0 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Sampling Interval

Indicates the specified sampling interval.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

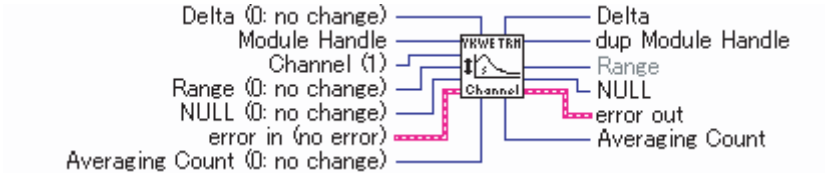
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE THERMO Config Channel.vi

This VI configures a specified channel of the thermometer module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the channel number.
Selectable range for the WE7231:
1 to (30 * the number of modules)
For the WE7241:
1 to (10 * the number of modules)

The default value is 1 (CH1).

U16 Range (0: no change)

Selects the range.
0: no change
1: Off
2: Type K
3: Type E
4: Type J
5: Type T
6: Type L *2
7: Type U *2
8: Type N *2
9: Type R *2
10: Type S *2
11: Type B *2
12: Type W *2
13: KPvsAu7Fe *2
14: 20 mV *1
15: 50 mV *2
16: 100 mV *2
17: 200 mV
18: 500 mV *2
19: 1 V *2
20: 2 V
21: 5 V *2
22: 10 V *2
23: 20 V
24: 50 V *2
25: Pt100 *1
26: 20 OHM *1
27: 200 OHM *1
28: 2 kOHM *1
29: 20 kOHM *1
30: 200 kOHM *1
31: 2 MOHM *1
*1: Valid only on the WE7231.
*2: Valid only on the WE7241.

The default value is 0 (no change).

U16 NULL (0: no change)

Turns ON/OFF the null computation.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

Delta (0: no change)

Turns ON/OFF the delta computation.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Averaging Count (0: no change)

Specifies the average count.
The selectable range are as follows:
2 to 100
0: no change
1: OFF

The default value is 0 (no change).

Note

This value is valid only for the WE7231.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

U16 Range

Indicates the specified range.

1: Off
2: Type K
3: Type E
4: Type J
5: Type T
6: Type L *2
7: Type U *2
8: Type N *2
9: Type R *2
10: Type S *2
11: Type B *2
12: Type W *2
13: KPvsAu7Fe *2
14: 20 mV *1
15: 50 mV *2
16: 100 mV *2
17: 200 mV
18: 500 mV *2
19: 1 V *2
20: 2 V
21: 5 V *2
22: 10 V *2
23: 20 V
24: 50 V *2
25: Pt100 *1
26: 20 OHM *1
27: 200 OHM *1
28: 2 kOHM *1
29: 20 kOHM *1
30: 200 kOHM *1
31: 2 MOHM *1

*1: Valid only on the WE7231.
*2: Valid only on the WE7241.

U16 NULL

Indicates the specified ON/OFF state of the null computation.

1: OFF
2: ON

U16 Delta

Indicates the specified ON/OFF state of the delta computation.

1: OFF
2: ON

U16 Averaging Count.

Indicates the specified average count.

2 to 100
1: OFF

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

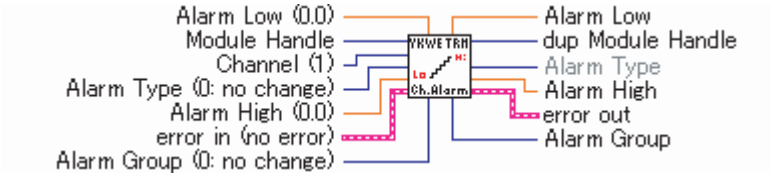
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE THERMO Config Channel Alarm.vi

This VI configures the alarm of a specified channel of the thermometer module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the channel number.
Selectable range for the WE7231:
1 to (30 * the number of modules)
For the WE7241:
1 to (10 * the number of modules)

The default value is 1 (CH1).

U16 Alarm Type (0: no change)

Specifies the alarm type.
0: no change
1: OFF
2: Rise
3: Fall
4: High
5: Low
6: In
7: Out

The default value is 0 (no change).

DBL Alarm High (0.0)

Specifies the alarm high limit.
The selectable range are as follows:
–273 to 2000 at TC (°C)
–273 to 650 at RTD (°C)
–50.0 to 50.0 V
0.0 to 2.0 MΩ

Default is 0.0.

Note

This setting is valid when the Alarm Type is set to Rise, High, In, or Out.

Alarm Low (0.0)

Specifies the alarm low limit.

The selectable range are as follows:

–273 to 2000 at TC (°C)

–273 to 650 at RTD (°C)

–50.0 to 50.0 V

0.0 to 2.0 MΩ

Default is 0.0.

Note

This setting is valid when the Alarm Type is set to Fall, Low, In, or Out.

Alarm Group (0: no change)

Specifies the alarm group.

The selectable range is 1 to 4.

0: no change.

The default value is 0 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.

Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.

Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.

Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.

Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.

If Module Handle is 0, it is the module handle first opened.

Alarm Type

Indicates the specified alarm type.
1: OFF
2: Rise
3: Fall
4: High
5: Low
6: In
7: Out

Alarm High

Indicates the specified alarm high limit.

Alarm Low

Returns the alarm low level.
Indicates the specified alarm low limit.

Alarm Group

Indicates the specified alarm group.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

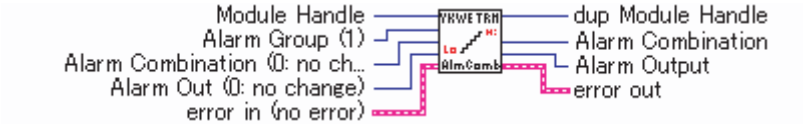
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE THERMO Config Alarm Combination.vi

This VI configures the analog output AND/OR of the thermometer module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Alarm Group (1)

Specifies the alarm group.
The selectable range is 1 to 4.

The default value is 1.

Note

This item is valid only for the WE7231.

U16 Alarm Combination (0: no change)

Selects the alarm combination.
0: no change
1: AND
2: OR

The default value is 0 (no change).

U16 Alarm Out (0: no change)

Selects the alarm output.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Note

This item is valid only for the WE7231.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Alarm Combination

Indicates the specified alarm combination.
1: AND
2: OR

Alarm Output

Indicates the specified alarm output.
1: OFF
2: ON

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE THERMO Check.vi

This VI executes null computation and burnout of the thermometer module.
This VI is valid only for the WE7231.

I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Check Item (0: NULL)

Select the item to be executed.
0: NULL measure
1: Burn Out Check

The default value is 0 (NULL measure).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

TF status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

abc source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

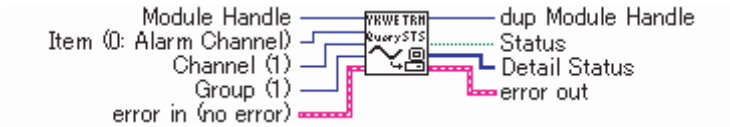
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE THERMO Query Status.vi

This VI reads various statuses of the thermometer module.
This VI is valid only for the WE7231.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Item (0: Alarm Channel)

Selects the item.
0: Alarm Channel
1: Alarm Hold Channel
2: Burn Out Channel
3: Alarm Group
4: Alarm Hold Group
5: Alarm Hold Reset
6: Burn Out Group
7: Alarm Detail
8: Alarm Hold Detail
9: Burn Out Detail

The default value is 0 (Alarm Channel).

U16 Channel (1)

Specifies the channel number.
The selectable range is 1 to (30 * the number of modules).

The default value is 1 (CH1).

Note

This setting is valid when Item is set to Alarm Channel, Alarm Hold Channel, or Burn Out Channel.

U16 Group (1)

Specifies the group number.
The selectable range is 1 to 4.

The default value is 1.

Note

This setting is valid when Item is set to Alarm Group, Alarm Hold Group, Alarm Hold Reset, Alarm Detail, or Alarm Hold Detail.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Status

Indicates the status of the specified item.
F: not detected
T: detected

Detail Status

Indicates the detailed status of the specified item.
0: no detected
1: detected

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

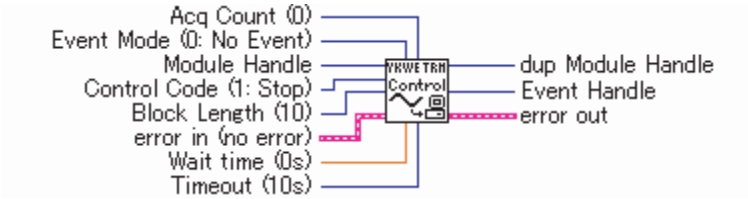
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE THERMO Control.vi

This VI controls the thermometer module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Control Code (1: Stop)

Selects the control of the thermometer module.
0: Start
1: Stop
2: Latch
3: Single Start
4: Start Event
5: Stop Event

The default value is 1 (Stop).

I32 Block Length (10)

Specifies the block length.
Selectable range for the WE7231:
1 to 64
For the WE7241:
1 to 102
This value is valid when Control Code is set to 0 (Start), 3 (Single Start), or 4 (Start Event).

The default value is 10.

DBL Wait time (0s)

Specifies the wait time after the control operation.

The default value is 0 s.

I16 Event Mode (0: No Event)

Selects the event mode.
This value is valid when Control Code is set to 4 (Start Event).
0: No Event
1: Block_Event
2: Stop Event

The default value is 0 (No Event).

Acq Count (0)

Specifies the acquisition count.
This value is valid when Control Code is set to 4 (Start Event).
The data acquisition operation terminates after acquiring the data amount specified by this value. If the value 0 is specified, measurement continues until the user issues an abort command.

The default value is 0.

Timeout (10s)

Sets the timeout time of single start.
This value is valid when Control Code is set to 3 (Single Start).
The selectable range is 1 to 32767 s.

The default value is 10 s.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Event Handle

Indicates the event handle.
This value is valid when Control Code is set to 4 (Start Event).

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

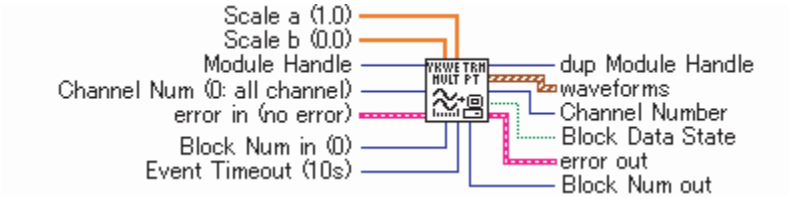
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE THERMO Read Block Data.vi

This VI reads block data from a specified input channel or from multiple input channels of the thermometer module.

YKWE THERMO Read Block Data.vi is polymorphic and can be set to output the following types of data.
Waveform (multiple channels)
Scale array (multiple channels)
Waveform (1 channel)
Scale array (1 channel)

Waveform (Multiple Channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

I32 Event Timeout (10s)

Specifies the wait time until receiving an event in unit of ms.
This value is value when waiting for an event.

The default value is 10 s.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

waveforms

Indicates the scaled data of the specified channel as an array of channels.
t0 indicates 0.
dt indicates the sampling interval.
Y indicates the array of measured data.

Channel Number

Indicates the number of channels of the loaded data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

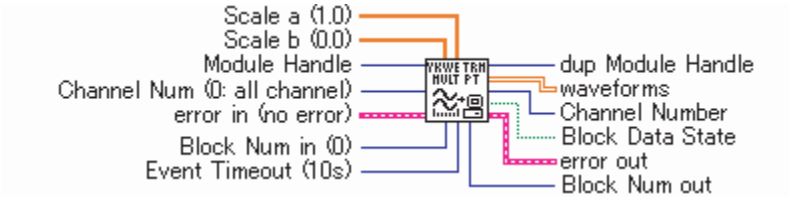
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale Array (Multiple Channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.

The value 0 indicates all channels.
The default value is 0.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

I32 Event Timeout (10s)

Specifies the wait time until receiving an event in unit of ms.
This value is value when waiting for an event.

The default value is 10 s.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

waveforms

Indicates the scaled data of the specified channel as an array of channels.

Channel Number

Indicates the number of channels of the loaded data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

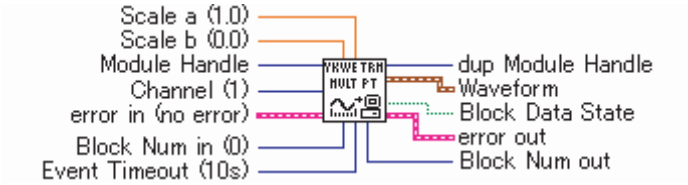
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform (1 Channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 1.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

I32 Event Timeout (10s)

Specifies the wait time until receiving an event in unit of ms.
This value is value when waiting for an event.

The default value is 10 s.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveform

Indicates the scaled data of the specified channel as an array.
t0 indicates 0.
dt indicates the sampling interval.
Y indicates the array of measured data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

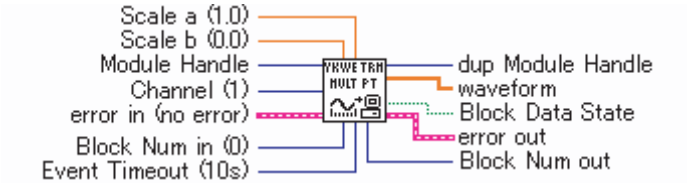
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale Array (1 Channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

I32 Event Timeout (10s)

Specifies the wait time until receiving an event in unit of ms.
This value is value when waiting for an event.

The default value is 10 s.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

waveform

Indicates the scaled data of the specified channel as an array.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

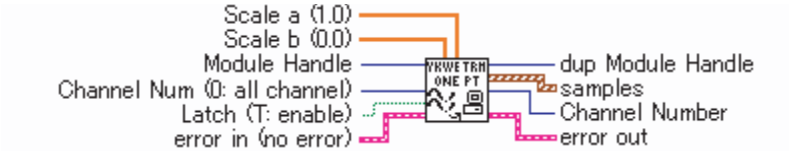
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE THERMO Read Current Data.vi

This VI reads current data from a specified input channel of the thermometer module.

YKWE THERMO Read Current Data.vi is polymorphic and can be set to output the following types of data.
Waveform (multiple channels)
Scale array (multiple channels)
Waveform (1 channel)
Scale array (1 channel)

Waveform (Multiple Channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data of the specified channels as an array of channels and blocks.
t0 indicates 0.
Y indicates the array of measured data.

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI. Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

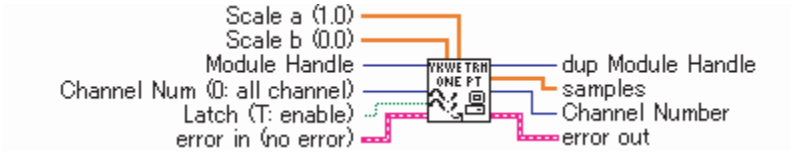
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale Array (Multiple Channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data of the specified channels as an array of channels and blocks.

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

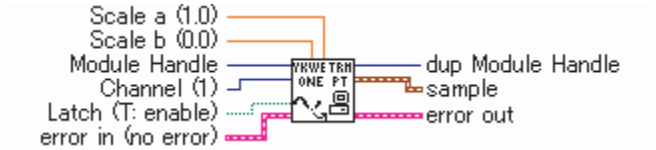
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform (1 Channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

sample

Indicates the scaled data of the specified channel.
t0 indicates 0.
Y indicates the array of measured data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

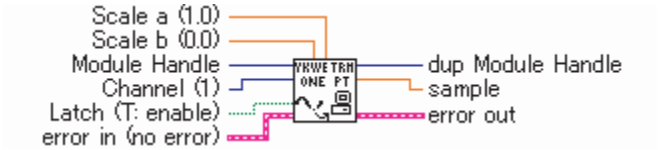
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale Array (1 Channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

sample

Indicates the scaled data of the specified channel.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

5.4 Accelerometer VI

Accelerometer VIs allow you to configure and perform data acquisition on the following modules.

WE7235	4-CH, 100 kS/s accelerometer module

- Simple Level VIs

YKWE ACC Acquire Waveform.vi	Acquires the specified number of samples as the specified sample rate from a specified input channel, then returns the measurement block data.
YKWE ACC Acquire Waveforms.vi	Acquires the specified number of samples as the specified sample rate from a specified plural input channels, then returns the measurement block data.
YKWE ACC Sample Channel.vi	Acquires the specified sample rate from a specified input channel, then returns the instantaneous data.
YKWE ACC Sample Channels.vi	Acquires the specified sample rate from a specified plural input channels, then returns the instantaneous data.

- Intermediate Level VIs

YKWE ACC Config.vi	Configures settings of the accelerometer module.
YKWE ACC Start.vi	Starts the accelerometer module operation
YKWE ACC Read Waveform.vi	Reads the block data from the accelerometer module.
YKWE ACC Single Scan.vi	Reads the current data from the input channel of the accelerometer module.
YKWE ACC Clear.vi	Stops the accelerometer module operation.

- Advanced Level VIs

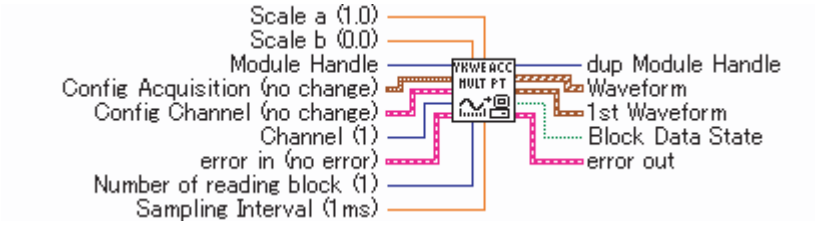
YKWE ACC Config Acquisition.vi	Configures the input operation settings of the accelerometer module. (Acquisition Mode, Record Length, Memory partition, No.of Acquisitions)
YKWE ACC Config Sampling Interval.vi	Configures the sampling interval settings of the accelerometer module. (Sampling Interval)
YKWE ACC Config Channel.vi	Configures the specified channel settings of the accelerometer module. (Channel, State, Coupling, Range, Sensitivity, Bias)
YKWE ACC Config Channel Option.vi	Configures the specified channel (option) settings of the accelerometer module. (Channel, Trig Type, Trig Level, Filter)
YKWE ACC Config Trigger.vi	Configures the trigger settings of the accelerometer module. (Trig Combination, Trig Source, Pretrigger, Overlapped Acquisition, Hold Off, Time Base, FFT Interval, Channel Mode)
YKWE ACC Control.vi	Performs acquisition start/stop of the accelerometer module operation. (Control Code, Block Length, Block Count, Wait time, Timeout, Event Mode)
YKWE ACC Read Block Data.vi	Reads block data from the accelerometer module. (Scaling, Block Num in, Event Timeout)
YKWE ACC Read Current Data.vi	Reads current data of the accelerometer module. (Scaling, Latch)
YKWE ACC Config Connection Test.vi	Configures the connection test of the accelerometer module. (Connection Test State)
YKWE ACC Config Connection Test Channel.vi	Sets the channel which performs the connection test of the accelerometer module. (Channel, Connection Test State)
YKWE ACC Read Connection Test.vi	Queries the result of the connection test of the accelerometer module. (Channel)

YKWE ACC Acquire Waveform.vi

This VI measures a specified number of samples at a specified sampling interval from a single input channel and returns the measured data.

YKWE ACC Acquire Waveform.vi is polymorphic and can be set to output the following types of data.
Waveform
Scale array

Waveform



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Sampling Interval (1ms)

Specifies the sampling interval.
The selectable range is 10 us to 10 s (10 us steps).

The default value is 1 ms.

Config Acquisition (no change)

Sets the analog input to the digitizer module in a cluster.

The default value is no change.

U16 Acquisition Mode (0: no change)

Selects the acquisition mode from the following.
0: no change
1: Triggered
2: Free Run
3: Gate (Level)
4: Gate (Edge)

The default value is 0.

I32 Record Length (-1: no change)

Specifies the record length.
When the acquisition method is trigger mode or gate mode, memory partition is valid and you can specify the points of the measured value written in 1 block of the acquisition memory. However, the following selectable range has restriction of "measurement cycle × record length is greater than or equal to 5 ms." Please notice it.

- Trigger Mode
  The selectable range is "2 to 4,194,304 (4M)/(number of memory partition × number of measurement channels)" points.
- Gate (Level) Mode
  The selectable range is "2 to 4,194,304 (4M)/number of measurement channels" points.
- Free Run Mode
  The selectable range is "1 to 4,194,304 (4M)/number of measurement channels" points.

The default value is –1 (no change).

I32 No. of Acquisitions (-1: no change)

Specifies the number of acquisition.
You can specify the number of times to acquire the data when using the trigger or gate mode. The selectable range is 1 to 32,768.

- If the number of acquisitions is greater than the number of memory partitions in the trigger mode, only the last "number of memory partitions" blocks of measured data are saved. In addition, you can only specify 1 for the number of acquisitions if the number of memory partitions is set to 1.
- If (the number of acquisitions × record length × the number of measurement channels*) is "4M" points or less, and the number of acquisitions exceeds 256, then only the last 256 blocks of measured data are saved. If (the number of acquisitions × record length × the number of measurement channels*) exceeds "4M" points, only the last "4M/(record length × the number of measurement channels)" blocks of measured data are saved. (* When the number of measurement channels is 3, it is considered to be 4.)
- If the specified record length is greater than or equal to "the maximum record length/2" in the gate mode, you can only specify 1 for the number of acquisitions.

The default value is –1 (no change).

I16 Memory Partition (0: no change)

Selects the memory partition.

During the trigger mode, you can divide the acquisition memory into multiple blocks and acquire the data to the memory blocks in order every time the trigger occurs. When using memory partitions, if the measurement is stopped before reaching the number of acquisitions, the data in the memory block that was being written at that time are invalid.

0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256

The default value is 0 (no change).

Config Channel (no change)

Sets ON/OFF of the measurement channel, ON/OFF of the bias current, input coupling, measurement range, the sensitivity of the acceleration sensor, trigger type, trigger level, and input filter in an array of clusters.

The default value is no change.

State (F: OFF)

Selects measurement ON/OFF.
T: ON
F: OFF

The default value is F (OFF).

Bias (0: no change)

Selects bias current ON/OFF.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Coupling (0: no change)

Selects the input coupling.
0: no change
1: AC: Acquire only the AC component of the input signal.
2: DC: Acquires all the components (DC and AC) of the input signal.

The default value is 0 (no change).

Range (0: no change)

Selects the measurement range from the following.
0: no change
1: 50 mV
2: 100 mV
3: 250 mV
4: 500 mV
5: 1 V
6: 2.5 V
7: 5 V
8: 10 V
9: 25 V
10: 50 V
11: × 1
12: × 2
13: × 5
14: × 10
15: × 20
16: × 50
17: × 100

The default value is 0 (no change).

DBL Sensitivity (-1: no change)

Specifies the sensitivity of the acceleration sensor.
The selectable range is 0.0 to 9999.0.
This value is invalid when a measurement range is voltage measurement.

The default value is –1 (no change).

U16 Trig Type (0: no change)

Selects the trigger type.
Only High, Low, and Off can be selected in the gate (level) mode. Select Off when no trigger.
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low
6: Off

The default value is 0 (no change).

DBL Trig Level (0)

Specifies the trigger level.
When measuring acceleration, set the trigger level in terms of a percentage (+100% to –100%) with respect to ±full scale. When measuring voltage, set the trigger level using a voltage level. The selectable ranges are as follows: 0.1 mV for the ±50-mV measurement range, 1 mV for the ±100-mV, ±250-mV, and ±500-mV measurement ranges, 10 mV for the ±1-V, ±2.5-V, and ±5-V measurement ranges, and 100 mV for the ±10-V, ±25-V, and ±50-V measurement ranges.

The default value is 0.

U16 Filter (0: no change)

Selects the input filter.
0: no change
1: Off
2: LPF: 40 Hz
3: LPF: 100 Hz
4: LPF: 400 Hz
5: LPF: 1 kHz
6: LPF: 4 kHz
7: LPF: 10 kHz
8: LPF: 40 kHz
9: AAF: 20 Hz
10: AAF: 40 Hz
11: AAF: 80 Hz
12: AAF: 200 Hz
13: AAF: 400 Hz
14: AAF: 800 Hz
15: AAF: 2 kHz
16: AAF: 4 kHz
17: AAF: 8 kHz
18: AAF: 20 kHz
19: AAF: 40 kHz

The default value is 0 (no change).

Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveform

Indicates the scaled data of the specified channel as an array.
t0 indicates 0.
Y indicates the array of measured data.

1st Waveform

Indicates the scaled data of the first block of the scaled data of the specified channel.
t0 indicates 0.
Y indicates the array of measured data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

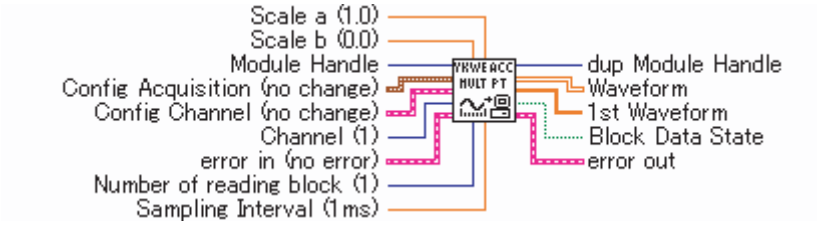
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale array



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Sampling Interval (1ms)

Specifies the sampling interval.
The selectable range is 10 us to 10 s (10 us steps).

The default value is 1 ms.

Config Acquisition (no change)

Sets the analog input to the digitizer module in a cluster.

The default value is no change.

Acquisition Mode (0: no change)

Acquisition Mode (0: no change)
Selects the acquisition mode from the following.
0: no change
1: Triggered
2: Free Run
3: Gate (Level)
4: Gate (Edge)

The default value is 0.

Record Length (-1: no change)

Specifies the record length.
When the acquisition method is trigger mode or gate mode, memory partition is valid and you can specify the points of the measured value written in 1 block of the acquisition memory. However, the following selectable range has restriction of "measurement cycle × record length is greater than or equal to 5 ms." Please notice it.

- Trigger Mode
  The selectable range is "2 to 4,194,304 (4M)/(number of memory partition × number of measurement channels)" points.
- Gate (Level) Mode
  The selectable range is "2 to 4,194,304 (4M)/number of measurement channels" points.
- Free Run Mode
  The selectable range is "1 to 4,194,304 (4M)/number of measurement channels" points.

The default value is –1 (no change).

No. of Acquisitions (-1: no change)

Specifies the number of acquisition.
You can specify the number of times to acquire the data when using the trigger or gate mode. The selectable range is 1 to 32,768.

- If the number of acquisitions is greater than the number of memory partitions in the trigger mode, only the last "number of memory partitions" blocks of measured data are saved. In addition, you can only specify 1 for the number of acquisitions if the number of memory partitions is set to 1.
- If (the number of acquisitions × record length × the number of measurement channels*) is "4M" points or less, and the number of acquisitions exceeds 256, then only the last 256 blocks of measured data are saved. If (the number of acquisitions × record length × the number of measurement channels*) exceeds "4M" points, only the last "4M/(record length × the number of measurement channels)" blocks of measured data are saved. (* When the number of measurement channels is 3, it is considered to be 4.)
- If the specified record length is greater than or equal to "the maximum record length/2" in the gate mode, you can only specify 1 for the number of acquisitions.

The default value is –1 (no change).

I16 Memory Partition (0: no change)

Selects the memory partition.

During the trigger mode, you can divide the acquisition memory into multiple blocks and acquire the data to the memory blocks in order every time the trigger occurs. When using memory partitions, if the measurement is stopped before reaching the number of acquisitions, the data in the memory block that was being written at that time are invalid.

0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256

The default value is 0 (no change).

Config Channel (no change)

Sets ON/OFF of the measurement channel, ON/OFF of the bias current, input coupling, measurement range, the sensitivity of the acceleration sensor, trigger type, trigger level, and input filter in an array of clusters.

The default value is no change.

State (F: OFF)

Selects measurement ON/OFF.
T: ON
F: OFF

The default value is F (OFF).

Bias (0: no change)

Selects bias current ON/OFF.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Coupling (0: no change)

Selects the input coupling.
0: no change
1: AC: Acquire only the AC component of the input signal.
2: DC: Acquires all the components (DC and AC) of the input signal.

The default value is 0 (no change).

Range (0: no change)

Selects the measurement range from the following.
0: no change
1: 50 mV
2: 100 mV
3: 250 mV
4: 500 mV
5: 1 V
6: 2.5 V
7: 5 V
8: 10 V
9: 25 V
10: 50 V
11: × 1
12: × 2
13: × 5
14: × 10
15: × 20
16: × 50
17: × 100

The default value is 0 (no change).

DBL Sensitivity (-1: no change)

Specifies the sensitivity of the acceleration sensor.
The selectable range is 0.0 to 9999.0.
This value is invalid when a measurement range is voltage measurement.

The default value is –1 (no change).

U16 Trig Type (0: no change)

Selects the trigger type.
Only High, Low, and Off can be selected in the gate (level) mode. Select Off when no trigger.
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low
6: Off

The default value is 0 (no change).

DBL Trig Level (0)

Specifies the trigger level.
When measuring acceleration, set the trigger level in terms of a percentage (+100% to –100%) with respect to ±full scale. When measuring voltage, set the trigger level using a voltage level. The selectable ranges are as follows: 0.1 mV for the ±50-mV measurement range, 1 mV for the ±100-mV, ±250-mV, and ±500-mV measurement ranges, 10 mV for the ±1-V, ±2.5-V, and ±5-V measurement ranges, and 100 mV for the ±10-V, ±25-V, and ±50-V measurement ranges.

The default value is 0.

U16 Filter (0: no change)

Selects the input filter.
0: no change
1: Off
2: LPF: 40 Hz
3: LPF: 100 Hz
4: LPF: 400 Hz
5: LPF: 1 kHz
6: LPF: 4 kHz
7: LPF: 10 kHz
8: LPF: 40 kHz
9: AAF: 20 Hz
10: AAF: 40 Hz
11: AAF: 80 Hz
12: AAF: 200 Hz
13: AAF: 400 Hz
14: AAF: 800 Hz
15: AAF: 2 kHz
16: AAF: 4 kHz
17: AAF: 8 kHz
18: AAF: 20 kHz
19: AAF: 40 kHz

The default value is 0 (no change).

Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveform

Indicates the scaled data of the specified channel as an array of blocks.

1st Waveform

Indicates the scaled data of the first block of the scaled data of the specified channels.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

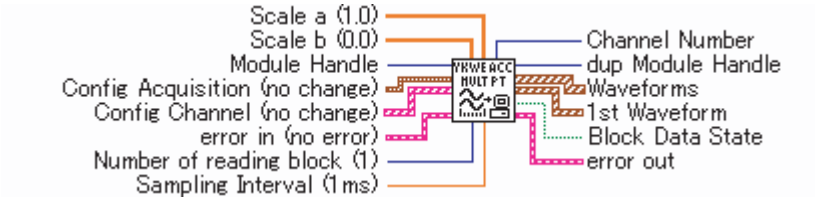
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE ACC Acquire Waveforms.vi

This VI measures a specified number of samples at a specified sampling interval from multiple input channels and returns the measured data.

YKWE ACC Acquire Waveforms.vi is polymorphic and can be set to output the following types of data.
Waveform
Scale array

Waveform



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Sampling Interval (1ms)

Specifies the sampling interval.
The selectable range is 10 us to 10 s (10 us steps).

The default value is 1 ms.

Config Acquisition (no change)

Sets the analog input to the digitizer module in a cluster.

The default value is no change.

U16 Acquisition Mode (0: no change)

Selects the acquisition mode from the following.
0: no change
1: Triggered
2: Free Run
3: Gate (Level)
4: Gate (Edge)

The default value is 0.

I32 Record Length (-1: no change)

Specifies the record length.
When the acquisition method is trigger mode or gate mode, memory partition is valid and you can specify the points of the measured value written in 1 block of the acquisition memory. However, the following selectable range has restriction of "measurement cycle × record length is greater than or equal to 5 ms." Please notice it.

- Trigger Mode
  The selectable range is "2 to 4,194,304 (4M)/(number of memory partition × number of measurement channels)" points.
- Gate (Level) Mode
  The selectable range is "2 to 4,194,304 (4M)/number of measurement channels" points.
- Free Run Mode
  The selectable range is "1 to 4,194,304 (4M)/number of measurement channels" points.

The default value is –1 (no change).

I32 No. of Acquisitions (-1: no change)

Specifies the number of acquisition.
You can specify the number of times to acquire the data when using the trigger or gate mode. The selectable range is 1 to 32,768.

- If the number of acquisitions is greater than the number of memory partitions in the trigger mode, only the last "number of memory partitions" blocks of measured data are saved. In addition, you can only specify 1 for the number of acquisitions if the number of memory partitions is set to 1.
- If (the number of acquisitions × record length × the number of measurement channels) is "4M" points or less, and the number of acquisitions exceeds 256, then only the last 256 blocks of measured data are saved. If (the number of acquisitions × record length × the number of measurement channels) exceeds "4M" points, only the last "4M/(record length × the number of measurement channels)" blocks of measured data are saved. (When the number of measurement channels is 3, it is considered to be 4.)
- If the specified record length is greater than or equal to "the maximum record length/2" in the gate mode, you can only specify 1 for the number of acquisitions.

The default value is –1 (no change).

I16 Memory Partition (0: no change)

Selects the memory partition.

During the trigger mode, you can divide the acquisition memory into multiple blocks and acquire the data to the memory blocks in order every time the trigger occurs. When using memory partitions, if the measurement is stopped before reaching the number of acquisitions, the data in the memory block that was being written at that time are invalid.

0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256

The default value is 0 (no change).

Config Channel (no change)

Sets ON/OFF of the measurement channel, ON/OFF of the bias current, input coupling, measurement range, the sensitivity of the acceleration sensor, trigger type, trigger level, and input filter in an array of clusters.
Of the array elements of index 0, if the ON/OFF of the bias current, input coupling, measurement range, the sensitivity of the acceleration sensor, trigger type, and input filter are all defaults, then index 1, 2, 3, and so on correspond to inputs 1, 2, 3, and so on, respectively. If any of the six elements is nonzero, then all inputs are set using the elements of index 0.

The default value is no change.

State (F: OFF)

Selects measurement ON/OFF.
T: ON
F: OFF

The default value is F (OFF).

Bias (0: no change)

Selects bias current ON/OFF.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Coupling (0: no change)

Selects the input coupling.
0: no change
1: AC: Acquire only the AC component of the input signal.
2: DC: Acquires all the components (DC and AC) of the input signal.

The default value is 0 (no change).

U16 Range (0: no change)

Selects the measurement range from the following.
0: no change
1: 50 mV
2: 100 mV
3: 250 mV
4: 500 mV
5: 1 V
6: 2.5 V
7: 5 V
8: 10 V
9: 25 V
10: 50 V
11: × 1
12: × 2
13: × 5
14: × 10
15: × 20
16: × 50
17: × 100

The default value is 0 (no change).

DBL Sensitivity (-1: no change)

Specifies the sensitivity of the acceleration sensor.
The selectable range is 0.0 to 9999.0.
This value is invalid when a measurement range is voltage measurement.

The default value is –1 (no change).

U16 Trig Type (0: no change)

Selects the trigger type.
Only High, Low, and Off can be selected in the gate (level) mode. Select Off when no trigger.
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low
6: Off

The default value is 0 (no change).

DBL Trig Level (0)

Specifies the trigger level.
When measuring acceleration, set the trigger level in terms of a percentage (+100% to –100%) with respect to ±full scale. When measuring voltage, set the trigger level using a voltage level. The selectable ranges are as follows: 0.1 mV for the ±50-mV measurement range, 1 mV for the ±100-mV, ±250-mV, and ±500-mV measurement ranges, 10 mV for the ±1-V, ±2.5-V, and ±5-V measurement ranges, and 100 mV for the ±10-V, ±25-V, and ±50-V measurement ranges.

The default value is 0.

U16 Filter (0: no change)

Selects the input filter.

0: no change
1: Off
2: LPF: 40 Hz
3: LPF: 100 Hz
4: LPF: 400 Hz
5: LPF: 1 kHz
6: LPF: 4 kHz
7: LPF: 10 kHz
8: LPF: 40 kHz
9: AAF: 20 Hz
10: AAF: 40 Hz
11: AAF: 80 Hz
12: AAF: 200 Hz
13: AAF: 400 Hz
14: AAF: 800 Hz
15: AAF: 2 kHz
16: AAF: 4 kHz
17: AAF: 8 kHz
18: AAF: 20 kHz
19: AAF: 40 kHz

The default value is 0 (no change).

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveforms

Indicates the scaled data as an array of blocks and channels.
t0 indicates 0.
Y indicates the array of measured data.

1st Waveform

Indicates the scaled data of the first block of the scaled data of the specified channel.
t0 indicates 0.
Y indicates the array of measured data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

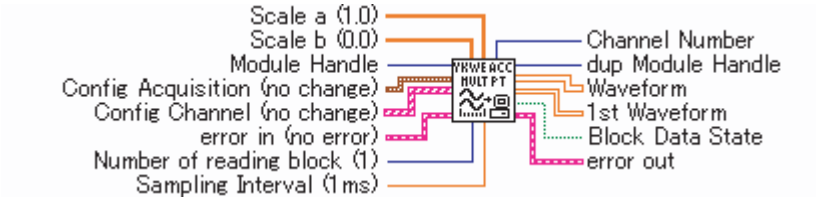
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale array



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Sampling Interval (1ms)

Specifies the sampling interval.
The selectable range is 10 us to 10 s (10 us steps).

The default value is 1 ms.

Config Acquisition (no change)

Sets the analog input to the digitizer module in a cluster.

The default value is no change.

U16 Acquisition Mode (0: no change)

Selects the acquisition mode from the following.
0: no change
1: Triggered
2: Free Run
3: Gate (Level)
4: Gate (Edge)

The default value is 0.

I32 Record Length (-1: no change)

Specifies the record length.
When the acquisition method is trigger mode or gate mode, memory partition is valid and you can specify the points of the measured value written in 1 block of the acquisition memory. However, the following selectable range has restriction of "measurement cycle × record length is greater than or equal to 5 ms." Please notice it.

- Trigger Mode
  The selectable range is "2 to 4,194,304 (4M)/(number of memory partition × number of measurement channels)" points.
- Gate (Level) Mode
  The selectable range is "2 to 4,194,304 (4M)/number of measurement channels" points.
- Free Run Mode
  The selectable range is "1 to 4,194,304 (4M)/number of measurement channels" points.

The default value is –1 (no change).

I32 No. of Acquisitions (-1: no change)

Specifies the number of acquisition.
You can specify the number of times to acquire the data when using the trigger or gate mode. The selectable range is 1 to 32,768.

- If the number of acquisitions is greater than the number of memory partitions in the trigger mode, only the last "number of memory partitions" blocks of measured data are saved. In addition, you can only specify 1 for the number of acquisitions if the number of memory partitions is set to 1.
- If (the number of acquisitions × record length × the number of measurement channels) is "4M" points or less, and the number of acquisitions exceeds 256, then only the last 256 blocks of measured data are saved. If (the number of acquisitions × record length × the number of measurement channels) exceeds "4M" points, only the last "4M/(record length × the number of measurement channels)" blocks of measured data are saved. (When the number of measurement channels is 3, it is considered to be 4.)
- If the specified record length is greater than or equal to "the maximum record length/2" in the gate mode, you can only specify 1 for the number of acquisitions.

The default value is –1 (no change).

I16 Memory Partition (0: no change)

Selects the memory partition.

During the trigger mode, you can divide the acquisition memory into multiple blocks and acquire the data to the memory blocks in order every time the trigger occurs. When using memory partitions, if the measurement is stopped before reaching the number of acquisitions, the data in the memory block that was being written at that time are invalid.

0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256

The default value is 0 (no change).

Config Channel (no change)

Sets ON/OFF of the measurement channel, ON/OFF of the bias current, input coupling, measurement range, the sensitivity of the acceleration sensor, trigger type, trigger level, and input filter in an array of clusters.
Of the array elements of index 0, if the ON/OFF of the bias current, input coupling, measurement range, the sensitivity of the acceleration sensor, trigger type, and input filter are all defaults, then index 1, 2, 3, and so on correspond to inputs 1, 2, 3, and so on, respectively. If any of the six elements is nonzero, then all inputs are set using the elements of index 0.

The default value is no change.

State (F: OFF)

Selects measurement ON/OFF.
T: ON
F: OFF

The default value is F (OFF).

Bias (0: no change)

Selects bias current ON/OFF.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Coupling (0: no change)

Selects the input coupling.
0: no change
1: AC: Acquire only the AC component of the input signal.
2: DC: Acquires all the components (DC and AC) of the input signal.

The default value is 0 (no change).

U16 Range (0: no change)

Selects the measurement range from the following.
0: no change
1: 50 mV
2: 100 mV
3: 250 mV
4: 500 mV
5: 1 V
6: 2.5 V
7: 5 V
8: 10 V
9: 25 V
10: 50 V
11: × 1
12: × 2
13: × 5
14: × 10
15: × 20
16: × 50
17: × 100

The default value is 0 (no change).

DBL Sensitivity (-1: no change)

Specifies the sensitivity of the acceleration sensor.
The selectable range is 0.0 to 9999.0.
This value is invalid when a measurement range is voltage measurement.

The default value is –1 (no change).

U16 Trig Type (0: no change)

Selects the trigger type.
Only High, Low, and Off can be selected in the gate (level) mode. Select Off when no trigger.
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low
6: Off

The default value is 0 (no change).

DBL Trig Level (0)

Specifies the trigger level.
When measuring acceleration, set the trigger level in terms of a percentage (+100% to –100%) with respect to ±full scale. When measuring voltage, set the trigger level using a voltage level. The selectable ranges are as follows: 0.1 mV for the ±50-mV measurement range, 1 mV for the ±100-mV, ±250-mV, and ±500-mV measurement ranges, 10 mV for the ±1-V, ±2.5-V, and ±5-V measurement ranges, and 100 mV for the ±10-V, ±25-V, and ±50-V measurement ranges.

The default value is 0.

U16 Filter (0: no change)

Selects the input filter.

0: no change
1: Off
2: LPF: 40 Hz
3: LPF: 100 Hz
4: LPF: 400 Hz
5: LPF: 1 kHz
6: LPF: 4 kHz
7: LPF: 10 kHz
8: LPF: 40 kHz
9: AAF: 20 Hz
10: AAF: 40 Hz
11: AAF: 80 Hz
12: AAF: 200 Hz
13: AAF: 400 Hz
14: AAF: 800 Hz
15: AAF: 2 kHz
16: AAF: 4 kHz
17: AAF: 8 kHz
18: AAF: 20 kHz
19: AAF: 40 kHz

The default value is 0 (no change).

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveform

Indicates the scaled data as an array of blocks and channels.

1st Waveform

Indicates the scaled data of the first block of the scaled data of the specified channel.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

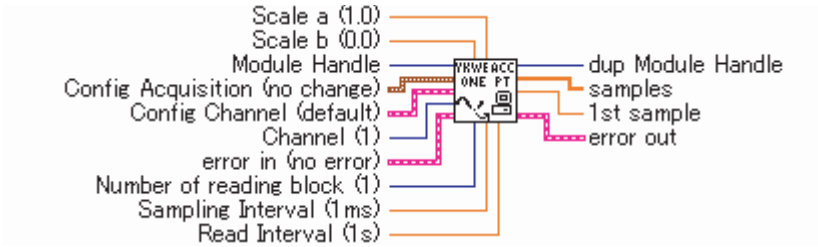
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE ACC Sample Channel.vi

This VI measures the specified number of samples at the specified interval from the specified input channel and returns the measured instantaneous data.

YKWE ACC Sample Channel.vi is polymorphic and can be set to output the following types of data.
Scale array
Waveform

Scale array



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Sampling Interval (1ms)

Specifies the sampling interval.
The selectable range is 10 us to 10 s (10 us steps).

The default value is 1 ms.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

Config Acquisition (no change)

Sets the analog input to the digitizer module in a cluster.

The default value is no change.

U16 Acquisition Mode (0: no change)

Selects the acquisition mode from the following.
0: no change
1: Triggered
2: Free Run
3: Gate (Level)
4: Gate (Edge)

The default value is 0.

I32 Record Length (-1: no change)

Specifies the record length.
When the acquisition method is trigger mode or gate mode, memory partition is valid and you can specify the points of the measured value written in 1 block of the acquisition memory. However, the following selectable range has restriction of "measurement cycle × record length is greater than or equal to 5 ms." Please notice it.

- Trigger Mode
  The selectable range is "2 to 4,194,304 (4M)/(number of memory partition × number of measurement channels)" points.
- Gate (Level) Mode
  The selectable range is "2 to 4,194,304 (4M)/number of measurement channels" points.
- Free Run Mode
  The selectable range is "1 to 4,194,304 (4M)/number of measurement channels" points.

The default value is –1 (no change).

I32 No. of Acquisitions (-1: no change)

Specifies the number of acquisition.
You can specify the number of times to acquire the data when using the trigger or gate mode.
The selectable range is 1 to 32,768.

- If the number of acquisitions is greater than the number of memory partitions in the trigger mode, only the last "number of memory partitions" blocks of measured data are saved. In addition, you can only specify 1 for the number of acquisitions if the number of memory partitions is set to 1.
- If (the number of acquisitions × record length × the number of measurement channels) is "4M" points or less, and the number of acquisitions exceeds 256, then only the last 256 blocks of measured data are saved. If (the number of acquisitions × record length × the number of measurement channels) exceeds "4M" points, only the last "4M/(record length × the number of measurement channels)" blocks of measured data are saved. (When the number of measurement channels is 3, it is considered to be 4.)
- If the specified record length is greater than or equal to "the maximum record length/2" in the gate mode, you can only specify 1 for the number of acquisitions.

The default value is –1 (no change).

I16 Memory Partition (0: no change)

Selects the memory partition.
During the trigger mode, you can divide the acquisition memory into multiple blocks and acquire the data to the memory blocks in order every time the trigger occurs. When using memory partitions, if the measurement is stopped before reaching the number of acquisitions, the data in the memory block that was being written at that time are invalid.
0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256

The default value is 0 (no change).

Config Channel (no change)

Sets ON/OFF of the measurement channel, ON/OFF of the bias current, input coupling, measurement range, the sensitivity of the acceleration sensor, trigger type, trigger level, and input filter in an array of clusters.

The default value is no change.

State (F: OFF)

Selects measurement ON/OFF.
T: ON
F: OFF

The default value is F (OFF).

Bias (0: no change)

Selects bias current ON/OFF.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Coupling (0: no change)

Selects the input coupling.
0: no change
1: AC: Acquire only the AC component of the input signal.
2: DC: Acquires all the components (DC and AC) of the input signal.

The default value is 0 (no change).

Range (0: no change)

Selects the measurement range from the following.
0: no change
1: 50 mV
2: 100 mV
3: 250 mV
4: 500 mV
5: 1 V
6: 2.5 V
7: 5 V
8: 10 V
9: 25 V
10: 50 V
11: × 1
12: × 2
13: × 5
14: × 10
15: × 20
16: × 50
17: × 100

The default value is 0 (no change).

Sensitivity (-1: no change)

Specifies the sensitivity of the acceleration sensor.
The selectable range is 0.0 to 9999.0.
This value is invalid when a measurement range is voltage measurement.

The default value is –1 (no change).

Trig Type (0: no change)

Selects the trigger type.
Only High, Low, and Off can be selected in the gate (level) mode. Select Off when no trigger.
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low
6: Off

The default value is 0 (no change).

Trig Level (0)

Specifies the trigger level.
When measuring acceleration, set the trigger level in terms of a percentage (+100% to –100%) with respect to ±full scale. When measuring voltage, set the trigger level using a voltage level. The selectable ranges are as follows: 0.1 mV for the ±50-mV measurement range, 1 mV for the ±100-mV, ±250-mV, and ±500-mV measurement ranges, 10 mV for the ±1-V, ±2.5-V, and ±5-V measurement ranges, and 100 mV for the ±10-V, ±25-V, and ±50-V measurement ranges.

The default value is 0.

Filter (0: no change)

Selects the input filter.
0: no change
1: Off
2: LPF: 40 Hz
3: LPF: 100 Hz
4: LPF: 400 Hz
5: LPF: 1 kHz
6: LPF: 4 kHz
7: LPF: 10 kHz
8: LPF: 40 kHz
9: AAF: 20 Hz
10: AAF: 40 Hz
11: AAF: 80 Hz
12: AAF: 200 Hz
13: AAF: 400 Hz
14: AAF: 800 Hz
15: AAF: 2 kHz
16: AAF: 4 kHz
17: AAF: 8 kHz
18: AAF: 20 kHz
19: AAF: 40 kHz

The default value is 0 (no change).

Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data of the specified channel as an array of the block.

1st sample

Indicates the scaled data of the first block of the scaled data of the specified channels.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

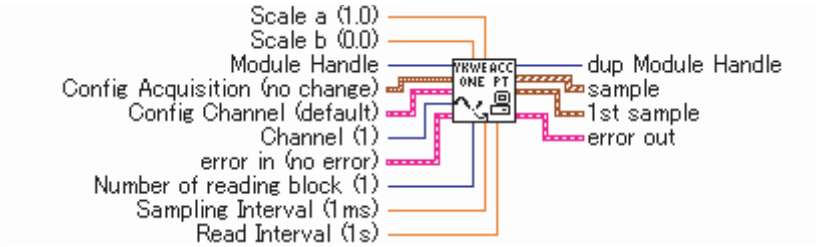
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Sampling Interval (1ms)

Specifies the sampling interval.
The selectable range is 10 us to 10 s (10 us steps).

The default value is 1 ms.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

Config Acquisition (no change)

Sets the analog input to the digitizer module in a cluster.

The default value is no change.

Acquisition Mode (0: no change)

Selects the acquisition mode from the following.
0: no change
1: Triggered
2: Free Run
3: Gate (Level)
4: Gate (Edge)

The default value is 0.

Record Length (-1: no change)

Specifies the record length.
When the acquisition method is trigger mode or gate mode, memory partition is valid and you can specify the points of the measured value written in 1 block of the acquisition memory. However, the following selectable range has restriction of "measurement cycle × record length is greater than or equal to 5 ms." Please notice it.

- Trigger Mode
  The selectable range is "2 to 4,194,304 (4M)/(number of memory partition × number of measurement channels)" points.
- Gate (Level) Mode
  The selectable range is "2 to 4,194,304 (4M)/number of measurement channels" points.
- Free Run Mode
  The selectable range is "1 to 4,194,304 (4M)/number of measurement channels" points.

The default value is –1 (no change).

No. of Acquisitions (-1: no change)

Specifies the number of acquisition.
You can specify the number of times to acquire the data when using the trigger or gate mode. The selectable range is 1 to 32,768.

- If the number of acquisitions is greater than the number of memory partitions in the trigger mode, only the last "number of memory partitions" blocks of measured data are saved. In addition, you can only specify 1 for the number of acquisitions if the number of memory partitions is set to 1.
- If (the number of acquisitions × record length × the number of measurement channels) is "4M" points or less, and the number of acquisitions exceeds 256, then only the last 256 blocks of measured data are saved. If (the number of acquisitions × record length × the number of measurement channels) exceeds "4M" points, only the last "4M/(record length × the number of measurement channels)" blocks of measured data are saved. (When the number of measurement channels is 3, it is considered to be 4.)
- If the specified record length is greater than or equal to "the maximum record length/2" in the gate mode, you can only specify 1 for the number of acquisitions.

The default value is –1 (no change).

I16 Memory Partition (0: no change)

Selects the memory partition.

During the trigger mode, you can divide the acquisition memory into multiple blocks and acquire the data to the memory blocks in order every time the trigger occurs. When using memory partitions, if the measurement is stopped before reaching the number of acquisitions, the data in the memory block that was being written at that time are invalid.

0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256

The default value is 0 (no change).

Config Channel (no change)

Sets ON/OFF of the measurement channel, ON/OFF of the bias current, input coupling, measurement range, the sensitivity of the acceleration sensor, trigger type, trigger level, and input filter in an array of clusters.

The default value is no change.

State (F: OFF)

Selects measurement ON/OFF.
T: ON
F: OFF

The default value is F (OFF).

Bias (0: no change)

Selects bias current ON/OFF.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Coupling (0: no change)

Selects the input coupling.
0: no change
1: AC: Acquire only the AC component of the input signal.
2: DC: Acquires all the components (DC and AC) of the input signal.

The default value is 0 (no change).

Range (0: no change)

Selects the measurement range from the following.
0: no change
1: 50 mV
2: 100 mV
3: 250 mV
4: 500 mV
5: 1 V
6: 2.5 V
7: 5 V
8: 10 V
9: 25 V
10: 50 V
11: × 1
12: × 2
13: × 5
14: × 10
15: × 20
16: × 50
17: × 100

The default value is 0 (no change).

DBL Sensitivity (-1: no change)

Specifies the sensitivity of the acceleration sensor.
The selectable range is 0.0 to 9999.0.
This value is invalid when a measurement range is voltage measurement.

The default value is –1 (no change).

U16 Trig Type (0: no change)

Selects the trigger type.
Only High, Low, and Off can be selected in the gate (level) mode. Select Off when no trigger.
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low
6: Off

The default value is 0 (no change).

DBL Trig Level (0)

Specifies the trigger level.
When measuring acceleration, set the trigger level in terms of a percentage (+100% to –100%) with respect to ±full scale. When measuring voltage, set the trigger level using a voltage level. The selectable ranges are as follows: 0.1 mV for the ±50-mV measurement range, 1 mV for the ±100-mV, ±250-mV, and ±500-mV measurement ranges, 10 mV for the ±1-V, ±2.5-V, and ±5-V measurement ranges, and 100 mV for the ±10-V, ±25-V, and ±50-V measurement ranges.

The default value is 0.

U16 Filter (0: no change)

Selects the input filter.
0: no change
1: Off
2: LPF: 40 Hz
3: LPF: 100 Hz
4: LPF: 400 Hz
5: LPF: 1 kHz
6: LPF: 4 kHz
7: LPF: 10 kHz
8: LPF: 40 kHz
9: AAF: 20 Hz
10: AAF: 40 Hz
11: AAF: 80 Hz
12: AAF: 200 Hz
13: AAF: 400 Hz
14: AAF: 800 Hz
15: AAF: 2 kHz
16: AAF: 4 kHz
17: AAF: 8 kHz
18: AAF: 20 kHz
19: AAF: 40 kHz

The default value is 0 (no change).

Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

sample

Indicates the scaled data of the specified channel as an array.
t0 indicates 0.
Y indicates the array of measured data.

1st sample

Indicates the scaled data of the first block of the scaled data of the specified channel.
t0 indicates 0.
Y indicates the array of measured data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

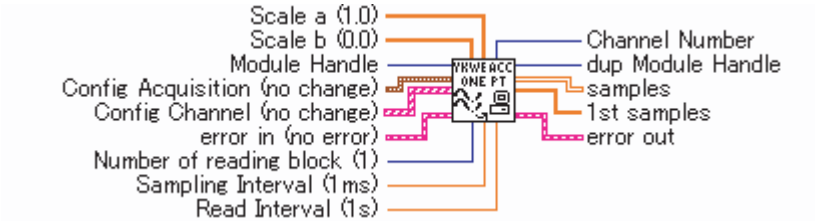
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE ACC Sample Channels.vi

This VI measures the specified number of samples at the specified interval from plural channels and returns the measured instantaneous data.

YKWE ACC Sample Channels.vi is polymorphic and can be set to output the following types of data.
Scale array
Waveform

Scale array



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Sampling Interval (1ms)

Specifies the sampling interval.
The selectable range is 10 us to 10 s (10 us steps).

The default value is 1 ms.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

Config Acquisition (no change)

Sets the analog input to the digitizer module in a cluster.

The default value is no change.

U16 Acquisition Mode (0: no change)

Selects the acquisition mode from the following.
0: no change
1: Triggered
2: Free Run
3: Gate (Level)
4: Gate (Edge)

The default value is 0.

I32 Record Length (-1: no change)

Specifies the record length.
When the acquisition method is trigger mode or gate mode, memory partition is valid and you can specify the points of the measured value written in 1 block of the acquisition memory. However, the following selectable range has restriction of “measurement cycle × record length is greater than or equal to 5 ms.” Please notice it.

- Trigger Mode
  The selectable range is “2 to 4,194,304 (4M)/(number of memory partition × number of measurement channels)” points.
- Gate (Level) Mode
  The selectable range is “2 to 4,194,304 (4M)/number of measurement channels” points.
- Free Run Mode
  The selectable range is “1 to 4,194,304 (4M)/number of measurement channels” points.

The default value is –1 (no change).

I32 No. of Acquisitions (-1: no change)

Specifies the number of acquisition.
You can specify the number of times to acquire the data when using the trigger or gate mode.
The selectable range is 1 to 32,768.

- If the number of acquisitions is greater than the number of memory partitions in the trigger mode, only the last “number of memory partitions" blocks of measured data are saved. In addition, you can only specify 1 for the number of acquisitions if the number of memory partitions is set to 1.
- If (the number of acquisitions × record length × the number of measurement channels) is “4M” points or less, and the number of acquisitions exceeds 256, then only the last 256 blocks of measured data are saved. If (the number of acquisitions × record length × the number of measurement channels) exceeds “4M” points, only the last “4M/(record length × the number of measurement channels)” blocks of measured data are saved. (When the number of measurement channels is 3, it is considered to be 4.)
- If the specified record length is greater than or equal to “the maximum record length/2” in the gate mode, you can only specify 1 for the number of acquisitions.

The default value is –1 (no change).

I16 Memory Partition (0: no change)

Selects the memory partition.

During the trigger mode, you can divide the acquisition memory into multiple blocks and acquire the data to the memory blocks in order every time the trigger occurs. When using memory partitions, if the measurement is stopped before reaching the number of acquisitions, the data in the memory block that was being written at that time are invalid.

0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256

The default value is 0 (no change).

Config Channel (no change)

Sets ON/OFF of the measurement channel, ON/OFF of the bias current, input coupling, measurement range, the sensitivity of the acceleration sensor, trigger type, trigger level, and input filter in an array of clusters.
Of the array elements of index 0, if the ON/OFF of the bias current, input coupling, measurement range, the sensitivity of the acceleration sensor, trigger type, and input filter are all defaults, then index 1, 2, 3, and so on correspond to inputs 1, 2, 3, and so on, respectively. If any of the six elements is nonzero, then all inputs are set using the elements of index 0.

The default value is no change.

State (F: OFF)

Selects measurement ON/OFF.
T: ON
F: OFF

The default value is F (OFF).

Bias (0: no change)

Selects bias current ON/OFF.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Coupling (0: no change)

Selects the input coupling.
0: no change
1: AC: Acquire only the AC component of the input signal.
2: DC: Acquires all the components (DC and AC) of the input signal.

The default value is 0 (no change).

U16 Range (0: no change)

Selects the measurement range from the following.
0: no change
1: 50 mV
2: 100 mV
3: 250 mV
4: 500 mV
5: 1 V
6: 2.5 V
7: 5 V
8: 10 V
9: 25 V
10: 50 V
11: × 1
12: × 2
13: × 5
14: × 10
15: × 20
16: × 50
17: × 100

The default value is 0 (no change).

DBL Sensitivity (-1: no change)

Specifies the sensitivity of the acceleration sensor.
The selectable range is 0.0 to 9999.0.
This value is invalid when a measurement range is voltage measurement.

The default value is –1 (no change).

U16 Trig Type (0: no change)

Selects the trigger type.
Only High, Low, and Off can be selected in the gate (level) mode. Select Off when no trigger.
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low
6: Off

The default value is 0 (no change).

DBL Trig Level (0)

Specifies the trigger level.
When measuring acceleration, set the trigger level in terms of a percentage (+100% to –100%) with respect to ±full scale. When measuring voltage, set the trigger level using a voltage level. The selectable ranges are as follows: 0.1 mV for the ±50-mV measurement range, 1 mV for the ±100-mV, ±250-mV, and ±500-mV measurement ranges, 10 mV for the ±1-V, ±2.5-V, and ±5-V measurement ranges, and 100 mV for the ±10-V, ±25-V, and ±50-V measurement ranges.

The default value is 0.

U16 Filter (0: no change)

Selects the input filter.

0: no change
1: Off
2: LPF: 40 Hz
3: LPF: 100 Hz
4: LPF: 400 Hz
5: LPF: 1 kHz
6: LPF: 4 kHz
7: LPF: 10 kHz
8: LPF: 40 kHz
9: AAF: 20 Hz
10: AAF: 40 Hz
11: AAF: 80 Hz
12: AAF: 200 Hz
13: AAF: 400 Hz
14: AAF: 800 Hz
15: AAF: 2 kHz
16: AAF: 4 kHz
17: AAF: 8 kHz
18: AAF: 20 kHz
19: AAF: 40 kHz

The default value is 0 (no change).

[DBL] Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

[DBL] Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data as an array of blocks and channels.

1st samples

Indicates the scaled data of the first block of the scaled data of the specified channels as an array of channels.

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

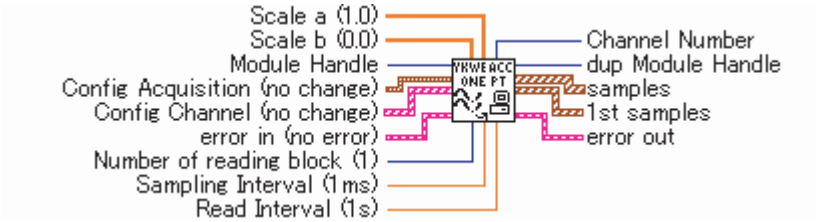
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Sampling Interval (1ms)

Specifies the sampling interval.
The selectable range is 10 us to 10 s (10 us steps).

The default value is 1 ms.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

Config Acquisition (no change)

Sets the analog input to the digitizer module in a cluster.

The default value is no change.

U16 Acquisition Mode (0: no change)

Selects the acquisition mode from the following.
0: no change
1: Triggered
2: Free Run
3: Gate (Level)
4: Gate (Edge)

The default value is 0.

I32 Record Length (-1: no change)

Specifies the record length.
When the acquisition method is trigger mode or gate mode, memory partition is valid and you can specify the points of the measured value written in 1 block of the acquisition memory. However, the following selectable range has restriction of “measurement cycle × record length is greater than or equal to 5 ms.” Please notice it.

- Trigger Mode
  The selectable range is “2 to 4,194,304 (4M)/(number of memory partition × number of measurement channels)” points.
- Gate (Level) Mode
  The selectable range is “2 to 4,194,304 (4M)/number of measurement channels” points.
- Free Run Mode
  The selectable range is “1 to 4,194,304 (4M)/number of measurement channels” points.

The default value is –1 (no change).

I32 No. of Acquisitions (-1: no change)

Specifies the number of acquisition.
You can specify the number of times to acquire the data when using the trigger or gate mode.
The selectable range is 1 to 32,768.

- If the number of acquisitions is greater than the number of memory partitions in the trigger mode, only the last “number of memory partitions" blocks of measured data are saved. In addition, you can only specify 1 for the number of acquisitions if the number of memory partitions is set to 1.
- If (the number of acquisitions × record length × the number of measurement channels) is “4M” points or less, and the number of acquisitions exceeds 256, then only the last 256 blocks of measured data are saved. If (the number of acquisitions × record length × the number of measurement channels) exceeds “4M” points, only the last “4M/(record length × the number of measurement channels)” blocks of measured data are saved. (When the number of measurement channels is 3, it is considered to be 4.)
- If the specified record length is greater than or equal to “the maximum record length/2” in the gate mode, you can only specify 1 for the number of acquisitions.

The default value is –1 (no change).

I16 Memory Partition (0: no change)

Selects the memory partition.
During the trigger mode, you can divide the acquisition memory into multiple blocks and acquire the data to the memory blocks in order every time the trigger occurs. When using memory partitions, if the measurement is stopped before reaching the number of acquisitions, the data in the memory block that was being written at that time are invalid.
0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256

The default value is 0 (no change).

Config Channel (no change)

Sets ON/OFF of the measurement channel, ON/OFF of the bias current, input coupling, measurement range, the sensitivity of the acceleration sensor, trigger type, trigger level, and input filter in an array of clusters.
Of the array elements of index 0, if the ON/OFF of the bias current, input coupling, measurement range, the sensitivity of the acceleration sensor, trigger type, and input filter are all defaults, then index 1, 2, 3, and so on correspond to inputs 1, 2, 3, and so on, respectively. If any of the six elements is nonzero, then all inputs are set using the elements of index 0.

The default value is no change.

State (F: OFF)

Selects measurement ON/OFF.
T: ON
F: OFF

The default value is F (OFF).

Bias (0: no change)

Selects bias current ON/OFF.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Coupling (0: no change)

Selects the input coupling.
0: no change
1: AC: Acquire only the AC component of the input signal.
2: DC: Acquires all the components (DC and AC) of the input signal.

The default value is 0 (no change).

U16 Range (0: no change)

Selects the measurement range from the following.
0: no change
1: 50 mV
2: 100 mV
3: 250 mV
4: 500 mV
5: 1 V
6: 2.5 V
7: 5 V
8: 10 V
9: 25 V
10: 50 V
11: × 1
12: × 2
13: × 5
14: × 10
15: × 20
16: × 50
17: × 100

The default value is 0 (no change).

DBL Sensitivity (-1: no change)

Specifies the sensitivity of the acceleration sensor.
The selectable range is 0.0 to 9999.0.
This value is invalid when a measurement range is voltage measurement.

The default value is –1 (no change).

U16 Trig Type (0: no change)

Selects the trigger type.
Only High, Low, and Off can be selected in the gate (level) mode. Select Off when no trigger.
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low
6: Off

The default value is 0 (no change).

DBL Trig Level (0)

Specifies the trigger level.
When measuring acceleration, set the trigger level in terms of a percentage (+100% to –100%) with respect to ±full scale. When measuring voltage, set the trigger level using a voltage level. The selectable ranges are as follows: 0.1 mV for the ±50-mV measurement range, 1 mV for the ±100-mV, ±250-mV, and ±500-mV measurement ranges, 10 mV for the ±1-V, ±2.5-V, and ±5-V measurement ranges, and 100 mV for the ±10-V, ±25-V, and ±50-V measurement ranges.

The default value is 0.

U16 Filter (0: no change)

Selects the input filter.

0: no change
1: Off
2: LPF: 40 Hz
3: LPF: 100 Hz
4: LPF: 400 Hz
5: LPF: 1 kHz
6: LPF: 4 kHz
7: LPF: 10 kHz
8: LPF: 40 kHz
9: AAF: 20 Hz
10: AAF: 40 Hz
11: AAF: 80 Hz
12: AAF: 200 Hz
13: AAF: 400 Hz
14: AAF: 800 Hz
15: AAF: 2 kHz
16: AAF: 4 kHz
17: AAF: 8 kHz
18: AAF: 20 kHz
19: AAF: 40 kHz

The default value is 0 (no change).

[DBL] Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

[DBL] Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data as an array of blocks and channels.
t0 indicates 0.
Y indicates the array of measured data.

1st samples

Indicates the scaled data of the first block of the scaled data of the specified channels as an array of channels.
t0 indicates 0.
Y indicates the array of measured data.

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

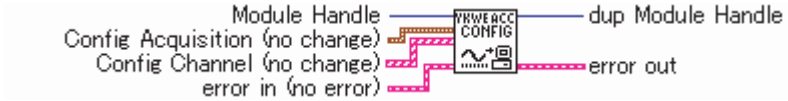
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE ACC Config.vi

This VI configures the input of the Accelerometer module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Config Acquisition (no change)

Sets the analog input to the digitizer module in a cluster.

The default value is no change.

U16 Acquisition Mode (0: no change)

Selects the acquisition mode from the following.
0: no change
1: Triggered
2: Free Run
3: Gate (Level)
4: Gate (Edge)

The default value is 0.

I32 Record Length (-1: no change)

Specifies the record length.
When the acquisition method is trigger mode or gate mode, memory partition is valid and you can specify the points of the measured value written in 1 block of the acquisition memory. However, the following selectable range has restriction of “measurement cycle × record length is greater than or equal to 5 ms.” Please notice it.

- Trigger Mode
  The selectable range is “2 to 4,194,304 (4M)/(number of memory partition × number of measurement channels)” points.
- Gate (Level) Mode
  The selectable range is “2 to 4,194,304 (4M)/number of measurement channels” points.
- Free Run Mode
  The selectable range is “1 to 4,194,304 (4M)/number of measurement channels” points.

The default value is –1 (no change).

I32 No. of Acquisitions (-1: no change)

Specifies the number of acquisition.
You can specify the number of times to acquire the data when using the trigger or gate mode.
The selectable range is 1 to 32,768.

- If the number of acquisitions is greater than the number of memory partitions in the trigger mode, only the last “number of memory partitions” blocks of measured data are saved. In addition, you can only specify 1 for the number of acquisitions if the number of memory partitions is set to 1.
- If (the number of acquisitions × record length × the number of measurement channels) is “4M” points or less, and the number of acquisitions exceeds 256, then only the last 256 blocks of measured data are saved. If (the number of acquisitions × record length × the number of measurement channels) exceeds “4M” points, only the last “4M/(record length × the number of measurement channels)” blocks of measured data are saved. (When the number of measurement channels is 3, it is considered to be 4.)
- If the specified record length is greater than or equal to “the maximum record length/2” in the gate mode, you can only specify 1 for the number of acquisitions.

The default value is –1 (no change).

I16 Memory Partition (0: no change)

Selects the memory partition.
During the trigger mode, you can divide the acquisition memory into multiple blocks and acquire the data to the memory blocks in order every time the trigger occurs. When using memory partitions, if the measurement is stopped before reaching the number of acquisitions, the data in the memory block that was being written at that time are invalid.
0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256

The default value is 0 (no change).

Config Channel (no change)

Sets ON/OFF of the measurement channel, ON/OFF of the bias current, input coupling, measurement range, the sensitivity of the acceleration sensor, trigger type, trigger level, and input filter in an array of clusters.
Of the array elements of index 0, if the ON/OFF of the bias current, input coupling, measurement range, the sensitivity of the acceleration sensor, trigger type, and input filter are all defaults, then index 1, 2, 3, and so on correspond to inputs 1, 2, 3, and so on, respectively. If any of the six elements is nonzero, then all inputs are set using the elements of index 0.

The default value is no change.

State (F: OFF)

Selects measurement ON/OFF.
T: ON
F: OFF

The default value is F (OFF).

Bias (0: no change)

Selects bias current ON/OFF.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Coupling (0: no change)

Selects the input coupling.
0: no change
1: AC: Acquire only the AC component of the input signal.
2: DC: Acquires all the components (DC and AC) of the input signal.

The default value is 0 (no change).

U16 Range (0: no change)

Selects the measurement range from the following.
0: no change
1: 50 mV
2: 100 mV
3: 250 mV
4: 500 mV
5: 1 V
6: 2.5 V
7: 5 V
8: 10 V
9: 25 V
10: 50 V
11: × 1
12: × 2
13: × 5
14: × 10
15: × 20
16: × 50
17: × 100

The default value is 0 (no change).

DBL Sensitivity (-1: no change)

Specifies the sensitivity of the acceleration sensor.
The selectable range is 0.0 to 9999.0.
This value is invalid when a measurement range is voltage measurement.

The default value is –1 (no change).

U16 Trig Type (0: no change)

Selects the trigger type.
Only High, Low, and Off can be selected in the gate (level) mode. Select Off when no trigger.
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low
6: Off

The default value is 0 (no change).

DBL Trig Level (0)

Specifies the trigger level.
When measuring acceleration, set the trigger level in terms of a percentage (+100% to –100%) with respect to ±full scale. When measuring voltage, set the trigger level using a voltage level. The selectable ranges are as follows: 0.1 mV for the ±50-mV measurement range, 1 mV for the ±100-mV, ±250-mV, and ±500-mV measurement ranges, 10 mV for the ±1-V, ±2.5-V, and ±5-V measurement ranges, and 100 mV for the ±10-V, ±25-V, and ±50-V measurement ranges.

The default value is 0.

Filter (0: no change)

Selects the input filter.
0: no change
1: Off
2: LPF: 40 Hz
3: LPF: 100 Hz
4: LPF: 400 Hz
5: LPF: 1 kHz
6: LPF: 4 kHz
7: LPF: 10 kHz
8: LPF: 40 kHz
9: AAF: 20 Hz
10: AAF: 40 Hz
11: AAF: 80 Hz
12: AAF: 200 Hz
13: AAF: 400 Hz
14: AAF: 800 Hz
15: AAF: 2 kHz
16: AAF: 4 kHz
17: AAF: 8 kHz
18: AAF: 20 kHz
19: AAF: 40 kHz

The default value is 0 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

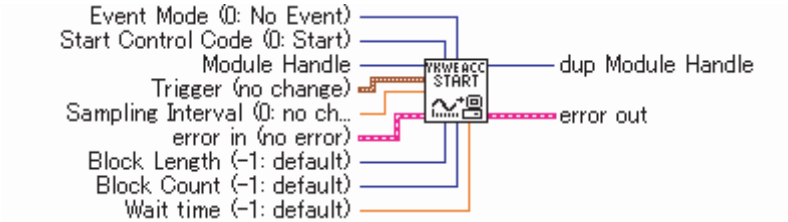
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE ACC Start.vi

This VI starts the operation of the Accelerometer module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Trigger (no change)

Sets the trigger in a cluster.

The default value is no change.

U16 Trig Combination (0: no change)

Selects the trigger combination.
This value is valid when Trig Source is set to Internal.
0: no change
1: AND
2: OR

The default value is 0 (no change).

U16 Trig Source (0: no change)

Selects the trigger source.
0: no change
1: Input
2: BUSTRG

The default value is 0 (no change).

I32 Pretrigger (-1: no change)

Specifies the amount of pretrigger.
The selectable range is 0 to record length – 2.

The default value is –1 (no change).

U16 Overlapped Acquisition (0: no change)

Selects the overlapped acquisition.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

U32 Hold Off (0: no change)

Specifies the hold off time.

Selectable Range

When Overlapped Acquisition is ON, 1 to 4,194,304.
When OFF, record length to 4,194,304.
When set to 0, no change.

The default value is 0 (no change).

U16 Time Base (0: no change)

Selects the time base.

0: no change
1: Internal
2: BUSCLK
3: FFT

The default value is 0 (no change).

U16 FFT Interval (0: no change)

Selects the FFT Interval.
This value is valid when Time Base is set to FFT.

0: no change
1: 51.2 Hz
2: 102.4 Hz
3: 204.8 Hz
4: 512 Hz
5: 1.024 kHz
6: 2.048 kHz
7: 5.12 kHz
8: 10.24 kHz
9: 20.48 kHz
10: 51.2 kHz

The default value is 0 (no change).

U16 Channel Mode (0: no change)

Selects the number of measurement channels.

0: no change
1: 1CH
2: 2CH
3: 4CH

The default value is 0 (no change).

DBL Sampling Interval (0: no change)

Specifies the sampling interval.
The selectable range is 10 μs to 10 s (10 μs steps).

The default value is 0.0 (no change).

U16 Start Control Code (0: Start)

Selects the control code.
0: Start
1: Single Start
2: Start Event

The default value is 0 (Start).

I32 Block Length (-1: default)

Specifies the block length.
This value is valid when Start Control Code is set to Start or Start Event.

The default value is –1.
For a description of the selectable range, see the user's manual for the module.

I8 Block Count (-1: default)

Specifies the block count.
This value is valid when Start Control Code is set to Start or Start Event.
Specify the exponential part of the number of memory partitions (number of blocks) expressed as a power of 2.

The default value is –1.
For a description of the selectable range, see the user's manual for the module.

I16 Event Mode (0: No Event)

Selects the acquisition operation mode.
This value is valid when Start Control Code is set to Start Event.
0: No Event
1: Block Event
2: Stop Event

The default value is 0 (No Event).

DBL Wait time (-1: default)

Specifies the wait time after the start operation.

The default value is –1.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

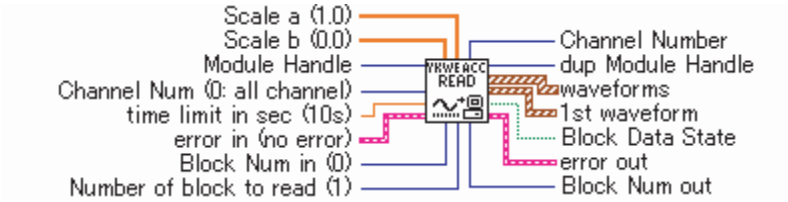
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE ACC Read Waveform.vi

This VI reads block data from a specified input channel of the Accelerometer module.

YKWE ACC Read Waveform.vi is polymorphic and can be set to output the following types of data.
Waveform (multiple channels)
Scale array (multiple channels)
Waveform (1 channel)
Scale array (1 channel)

Waveform (multiple channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL time limit in sec (10s)

Specifies the time limit for the read operation.
The actual time limit is time limit in sec + sampling interval × record length.

The default value is 10 s.

[DBL] Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

[DBL] Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

waveforms

Indicates the scaled data as an array of blocks and channels.
t0 indicates 0.
Y indicates the array of measured data.

1st waveform

Indicates the scaled data of the first block of the scaled data of the specified channel.
t0 indicates 0.
Y indicates the array of measured data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Channel Number

Indicates the number of channels of the loaded data.

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

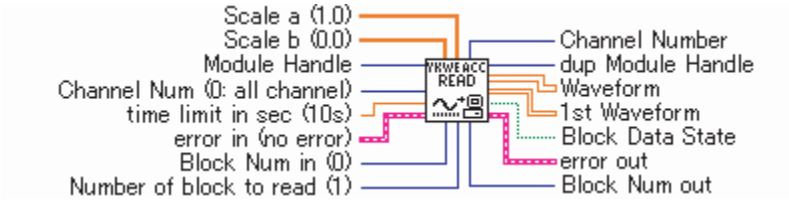
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale array (multiple channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL time limit in sec (10s)

Specifies the time limit for the read operation.
The actual time limit is time limit in sec + sampling interval × record length.

The default value is 10 s.

[DBL] Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

[DBL] Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveform

Indicates the scaled data as an array of blocks and channels.

1st Waveform

Indicates the scaled data of the first block of the scaled data of the specified channel.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Channel Number

Indicates the number of channels of the loaded data.

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

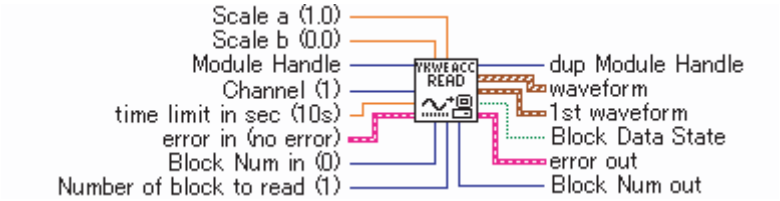
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform (1 channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL time limit in sec (10s)

Specifies the time limit for the read operation.
The actual time limit is time limit in sec + sampling interval × record length.

The default value is 10 s.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

waveform

Indicates the scaled data of the specified channel as an array.
t0 indicates 0.
Y indicates the array of measured data.

1st waveform

Indicates the scaled data of the first block of the scaled data of the specified channel.
t0 indicates 0.
Y indicates the array of measured data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

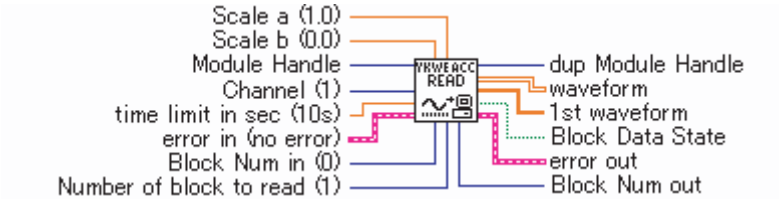
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale array (1 channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL time limit in sec (10s)

Specifies the time limit for the read operation.
The actual time limit is time limit in sec + sampling interval × record length.

The default value is 10 s.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

waveform

Indicates the scaled data of the specified channel as an array of blocks.

1st waveform

Indicates the scaled data of the first block of the scaled data of the specified channel.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

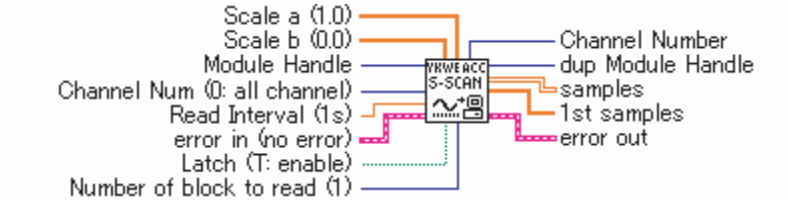
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE ACC Single Scan.vi

This VI reads current data from a specified input channel of the Accelerometer module.

YKWE ACC Single Scan.vi is polymorphic and can be set to output the following types of data.
Scale array (multiple channels)
Waveform (multiple channels)
Scale array (1 channel)
Waveform (1 channel)

Scale array (multiple channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

[DBL] Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

[DBL] Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data as an array of blocks and channels.

1st samples

Indicates the scaled data of the first block of the scaled data as an array of channels.

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

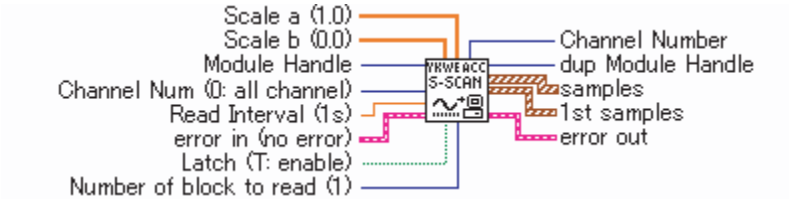
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform (multiple channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data as an array of blocks and channels.
t0 indicates 0.
Y indicates the array of measured data.

1st samples

Indicates the scaled data of the first block of the scaled data as an array ofchannels.
t0 indicates 0.
Y indicates the array of measured data.

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

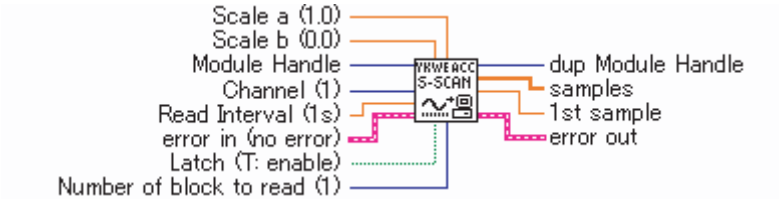
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale array (1 channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data of the specified channel as an array of block.

1st sample

Indicates the scaled data of the first block of the scaled data of the specified channels.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

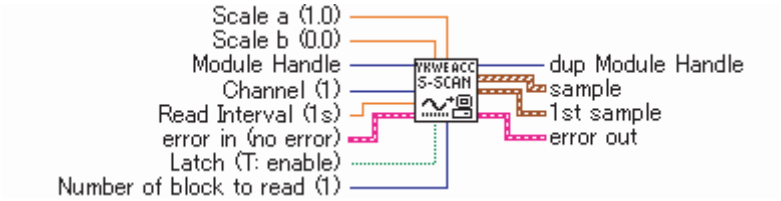
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform (1 channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data of the specified channel as an array of the block.
t0 indicates 0.
Y indicates the array of measured data.

1st sample

Indicates the scaled data of the first block of the scaled data of the specified channels.
t0 indicates 0.
Y indicates the array of measured data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE ACC Clear.vi

This VI terminates the operation of the Accelerometer module.

Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Stop Control Code (1: Stop)

Selects the control code.
0: Stop Event
1: Stop

The default value is 1(Stop).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE ACC Config Acquisition.vi

This VI configures the input operation of a specified channel of the Accelerometer module.

I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Acquisition Mode (0: no change)

Selects the acquisition mode from the following.
0: no change
1: Triggered
2: Free Run
3: Gate (Level)
4: Gate (Edge)

The default value is 0.

I32 Record Length (-1: no change)

Specifies the record length.
When the acquisition method is trigger mode or gate mode, memory partition is valid and you can specify the points of the measured value written in 1 block of the acquisition memory. However, the following selectable range has restriction of “measurement cycle × record length is greater than or equal to 5 ms.” Please notice it.

- Trigger Mode
  The selectable range is “2 to 4,194,304 (4M)/(number of memory partition × number of measurement channels)” points.
- Gate (Level) Mode
  The selectable range is “2 to 4,194,304 (4M)/number of measurement channels” points.
- Free Run Mode
  The selectable range is “1 to 4,194,304 (4M)/number of measurement channels” points.

The default value is –1 (no change).

I32 No. of Acquisitions (-1: no change)

Specifies the number of acquisition.
You can specify the number of times to acquire the data when using the trigger or gate mode.
The selectable range is 1 to 32,768.

- If the number of acquisitions is greater than the number of memory partitions in the trigger mode, only the last "number of memory partitions" blocks of measured data are saved. In addition, you can only specify 1 for the number of acquisitions if the number of memory partitions is set to 1.
- If (the number of acquisitions × record length × the number of measurement channels) is "4M" points or less, and the number of acquisitions exceeds 256, then only the last 256 blocks of measured data are saved. If (the number of acquisitions × record length × the number of measurement channels) exceeds "4M" points, only the last "4M/(record length × the number of measurement channels)" blocks of measured data are saved. (When the number of measurement channels is 3, it is considered to be 4.)
- If the specified record length is greater than or equal to "the maximum record length/2" in the gate mode, you can only specify 1 for the number of acquisitions.

The default value is –1 (no change).

I16 Memory Partition (0: no change)

Selects the memory partition.
During the trigger mode, you can divide the acquisition memory into multiple blocks and acquire the data to the memory blocks in order every time the trigger occurs. When using memory partitions, if the measurement is stopped before reaching the number of acquisitions, the data in the memory block that was being written at that time are invalid.
0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256

The default value is 0 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Acquisition Mode

Indicates the specified acquisition mode.
1: Triggered
2: Free Run
3: Gate (Level)
4: Gate (Edge)

Record Length

Indicates the specified record length.

No. of Acquisitions

Indicates the specified number of acquisitions.

Memory Partition

Indicates the specified number of memory partitions.
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

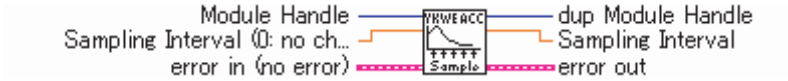
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE ACC Config Sampling Interval.vi

This VI sets the sampling interval of the Accelerometer module.



Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Sampling Interval (0: no change)

Specifies the sampling interval.
The selectable range is 10 µs to 10 s (10 µs steps).

The default value is 0.0 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Sampling Interval

Indicates the specified sampling interval.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

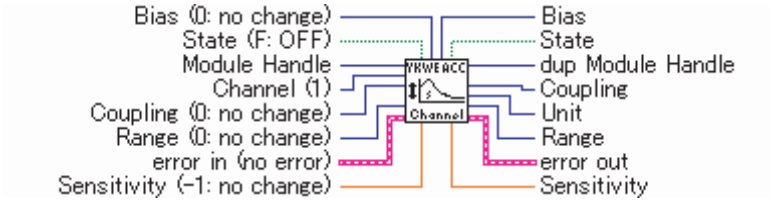
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE ACC Config Channel.vi

This VI configures the input channel of the Accelerometer module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

TF State (F: OFF)

Selects measurement ON/OFF.
T: ON
F: OFF

The default value is F (OFF).

U16 Bias (0: no change)

Selects bias current ON/OFF.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

U16 Coupling (0: no change)

Selects the input coupling.
0: no change
1: AC: Acquire only the AC component of the input signal.
2: DC: Acquires all the components (DC and AC) of the input signal.

The default value is 0 (no change).

Range (0: no change)

Selects the measurement range from the following.
0: no change
1: 50 mV
2: 100 mV
3: 250 mV
4: 500 mV
5: 1 V
6: 2.5 V
7: 5 V
8: 10 V
9: 25 V
10: 50 V
11: × 1
12: × 2
13: × 5
14: × 10
15: × 20
16: × 50
17: × 100

The default value is 0 (no change).

Sensitivity (-1: no change)

Specifies the sensitivity of the acceleration sensor.
The selectable range is 0.0 to 9999.0.
This value is invalid when a measurement range is voltage measurement.

The default value is –1 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

TF State

Indicates the specified ON/OFF state of measurement.
T: ON
F: OFF

U16 Bias

Indicates the specified ON/OFF state of bias current.
1: OFF
2: ON

U16 Coupling

Indicates the specified input coupling.
1: AC
2: DC

U16 Unit

Indicates the measurement range unit.
1: V
2: m/s^2

U16 Range

Indicates the specified measurement range.
1: 50 mV
2: 100 mV
3: 250 mV
4: 500 mV
5: 1 V
6: 2.5 V
7: 5 V
8: 10 V
9: 25 V
10: 50 V
11: × 1
12: × 2
13: × 5
14: × 10
15: × 20
16: × 50
17: × 100

DBL Sensitivity

Indicates the specified sensitivity of the acceleration sensor.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

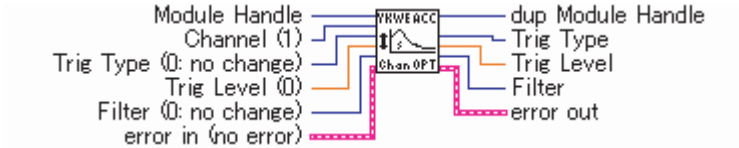
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE ACC Config Channel Option.vi

This VI configures the input channel (option) of the Accelerometer module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

U16 Trig Type (0: no change)

Selects the trigger type.
Only High, Low, and Off can be selected in the gate (level) mode. Select Off when no trigger.
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low
6: Off

The default value is 0 (no change).

DBL Trig Level (0)

Specifies the trigger level.
When measuring acceleration, set the trigger level in terms of a percentage (+100% to –100%) with respect to ±full scale. When measuring voltage, set the trigger level using a voltage level. The selectable ranges are as follows: 0.1 mV for the ±50-mV measurement range, 1 mV for the ±100-mV, ±250-mV, and ±500-mV measurement ranges, 10 mV for the ±1-V, ±2.5-V, and ±5-V measurement ranges, and 100 mV for the ±10-V, ±25-V, and ±50-V measurement ranges.

The default value is 0.

Filter (0: no change)

Selects the input filter.
0: no change
1: Off
2: LPF: 40 Hz
3: LPF: 100 Hz
4: LPF: 400 Hz
5: LPF: 1 kHz
6: LPF: 4 kHz
7: LPF: 10 kHz
8: LPF: 40 kHz
9: AAF: 20 Hz
10: AAF: 40 Hz
11: AAF: 80 Hz
12: AAF: 200 Hz
13: AAF: 400 Hz
14: AAF: 800 Hz
15: AAF: 2 kHz
16: AAF: 4 kHz
17: AAF: 8 kHz
18: AAF: 20 kHz
19: AAF: 40 kHz

The default value is 0 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Trig Type

Indicates the specified trigger type.
1: Rise
2: Fall
3: Both
4: High
5: Low
6: Off

Trig Level

Indicates the specified trigger level.

Filter

Indicates the specified input filter.
1: Off
2: LPF: 40 Hz
3: LPF: 100 Hz
4: LPF: 400 Hz
5: LPF: 1 kHz
6: LPF: 4 kHz
7: LPF: 10 kHz
8: LPF: 40 kHz
9: AAF: 20 Hz
10: AAF: 40 Hz
11: AAF: 80 Hz
12: AAF: 200 Hz
13: AAF: 400 Hz
14: AAF: 800 Hz
15: AAF: 2 kHz
16: AAF: 4 kHz
17: AAF: 8 kHz
18: AAF: 20 kHz
19: AAF: 40 kHz

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

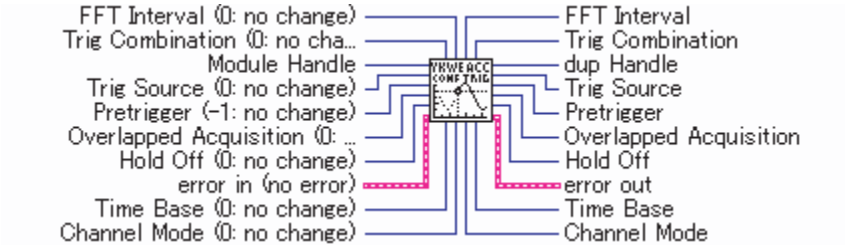
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE ACC Config Trigger.vi

This VI sets the trigger of the Accelerometer module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Trig Combination (0: no change)

Selects the trigger combination.
This value is valid when Trig Source is set to Internal.
0: no change
1: AND
2: OR

The default value is 0 (no change).

U16 Trig Source (0: no change)

Selects the trigger source.
0: no change
1: Input
2: BUSTRG

The default value is 0 (no change).

I32 Pretrigger (-1: no change)

Specifies the amount of pretrigger.
The selectable range is 0 to record length – 2.

The default value is –1 (no change).

U16 Overlapped Acquisition (0: no change)

Selects the overlapped acquisition.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

U32 Hold Off (0: no change)

Specifies the hold off time.

Selectable Range

When Overlapped Acquisition is ON, 1 to 4,194,304.
When OFF, record length to 4,194,304.
When set to 0, no change.

The default value is 0 (no change).

U16 Time Base (0: no change)

Selects the time base.

0: no change
1: Internal
2: BUSCLK
3: FFT

The default value is 0 (no change).

U16 FFT Interval (0: no change)

Selects the FFT Interval.
This value is valid when Time Base is set to FFT.

0: no change
1: 51.2 Hz
2: 102.4 Hz
3: 204.8 Hz
4: 512 Hz
5: 1.024 kHz
6: 2.048 kHz
7: 5.12 kHz
8: 10.24 kHz
9: 20.48 kHz
10: 51.2 kHz

The default value is 0 (no change).

U16 Channel Mode (0: no change)

Selects the number of measurement channels.

0: no change
1: 1CH
2: 2CH
3: 4CH

The default value is 0 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Trig Combination

Indicates the specified trigger combination.
1: AND
2: OR

Trig Source

Indicates the specified trigger source.
1: Internal
2: BUSTRG

Pretrigger

Indicates the specified amount of pretrigger.

Overlapped Acquisition

Indicates the specified overlapped acquisition.
1: OFF
2: ON

Hold Off

Indicates the specified hold off time.

Time Base

Indicates the specified time base.
1: Internal
2: BUSCLK(Slow)
3: FFT

FFT Interval

Indicates the specified sampling interval of FFT.
1: 51.2 Hz
2: 102.4 Hz
3: 204.8 Hz
4: 512 Hz
5: 1.024 kHz
6: 2.048 kHz
7: 5.12 kHz
8: 10.24 kHz
9: 20.48 kHz
10: 51.2 kHz

Channel Mode

Selects the number of measurement channels.
1: 1CH
2: 2CH
3: 4CH

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

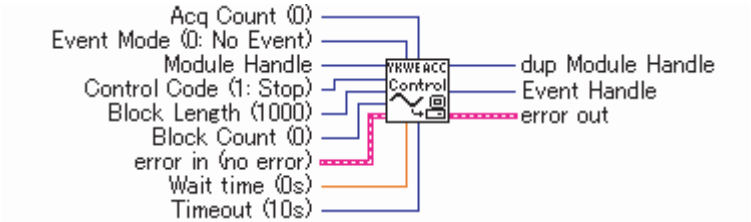
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE ACC Control.vi

This VI controls the Accelerometer module.



Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Control Code (1: Stop)

Selects the control code.
0: Start
1: Stop
2: Latch
3: Single Start
4: Start Event
5: Stop Event
6: Manual Trigger: Performing a manual trigger
7: Connection Test: Performing a connection test

The default value is 1 (Stop).

Block Length (1000)

Specifies the block length.
This value is valid when Control Code is set to Start, Single Start or Start Event.

The default value is 1000.
For a description of the selectable range, see the user's manual for the module.

Block Count (0)

Specifies the block count.
This value is valid when Control Code is set to Start or Start Event.
Specify the exponential part of the number of memory partitions (number of blocks) expressed as a power of 2.

The default value is 0.
For a description of the selectable range, see the user's manual for the module.

Wait time (0.0)

Specifies the wait time after the start operation.

The default value is 0.0.

Event Mode (0: No Event)

Selects the acquisition operation mode.
This value is valid when Start Control Code is set to Start Event.
0: No Event
1: Block Event
2: Stop Event

The default value is 0 (No Event).

Acq Count (0)

Specifies the acquisition count.
This value is valid when Control Code is set to 4 (Start Event).
The data acquisition operation terminates after acquiring the data amount specified by this value. If the value 0 is specified, measurement continues until the user issues an abort command.

The default value is 0.

Timeout (10s)

Sets the timeout time of single start.
This value is valid when Control Code is set to 3 (Single Start).
The selectable range is 1 to 32767 s.

The default value is 10 s.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Event Handle

Indicates the event handle.
This value is valid when Control Code is set to 4 (Start Event).

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

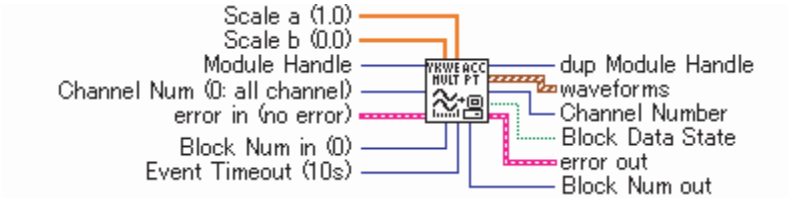
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE ACC Read Block Data.vi

This VI reads block data from a specified input channel of the Accelerometer module.

YKWE ACC Read Waveform.vi is polymorphic and can be set to output the following types of data.
Waveform (multiple channels)
Scale array (multiple channels)
Waveform (1 channel)
Scale array (1 channel)

Waveform (multiple channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

I32 Event Timeout (10s)

Specifies the wait time until receiving an event in unit of ms.
This value is value when waiting for an event.

The default value is 10 s.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

waveforms

Indicates the scaled data as an array of the channel.
t0 indicates 0.
Y indicates the array of measured data.

Channel Number

Indicates the number of channels of the loaded data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

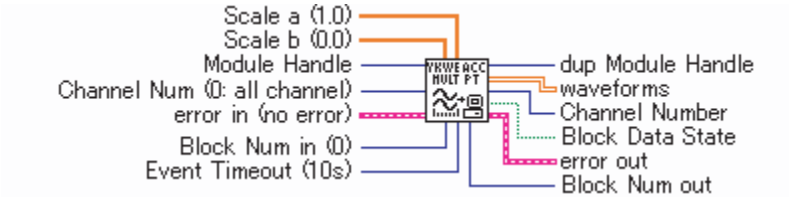
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale array (multiple channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

I32 Event Timeout (10s)

Specifies the wait time until receiving an event in unit of ms.
This value is value when waiting for an event.

The default value is 10 s.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

waveforms

Indicates the scaled data as an array of the channel.

Channel Number

Indicates the number of channels of the loaded data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

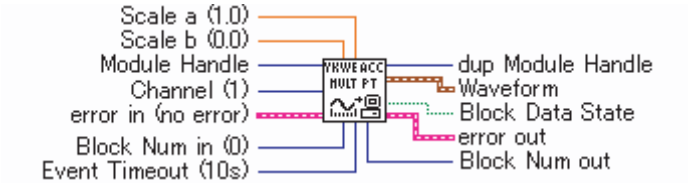
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform (1 channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

I32 Event Timeout (10s)

Specifies the wait time until receiving an event in unit of ms.
This value is value when waiting for an event.

The default value is 10 s.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveform

Indicates the scaled data of the specified channel.
t0 indicates 0.
Y indicates the array of measured data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

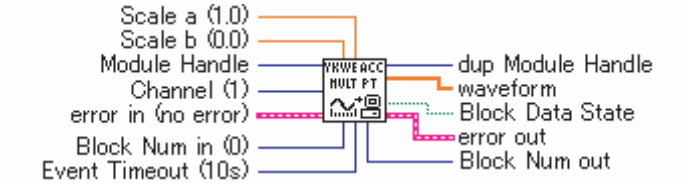
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale array (1 channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

I32 Event Timeout (10s)

Specifies the wait time until receiving an event in unit of ms.
This value is value when waiting for an event.

The default value is 10 s.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

waveform

Indicates the scaled data of the specified channel as an array.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

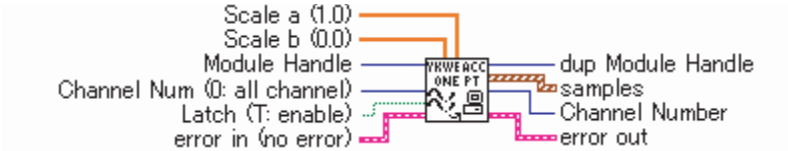
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE ACC Read Current Data.vi

This VI reads current data from a specified input channel of the accelerometer module.

YKWE ACC Single Scan.vi is polymorphic and can be set to output the following types of data.
Waveform (multiple channels)
Scale array (multiple channels)
Waveform (1 channel)
Scale array (1 channel)

Waveform (multiple channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data as an array of channels.
t0 indicates 0.
Y indicates the array of measured data.

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

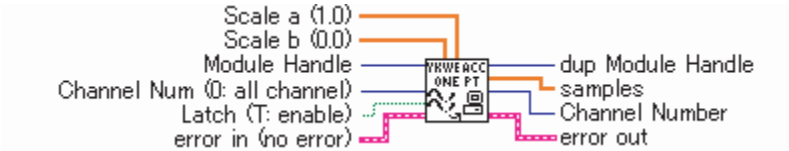
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale array (multiple channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data as an array of channels.

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

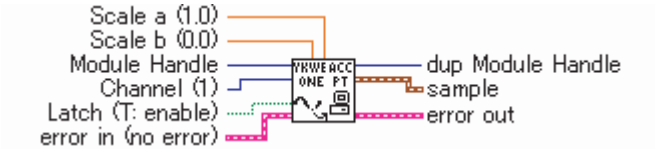
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform (1 channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

sample

Indicates the scaled data of the specified channel.
t0 indicates 0.
Y indicates the array of measured data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

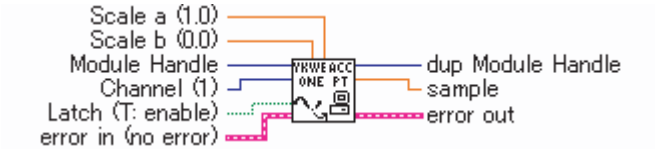
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale array (1 channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

sample

Indicates the scaled data of the specified channel.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE ACC Config Connection Test.vi

This VI sets the connection test of accelerometer module.

I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Connection Test State (0: no change)

Selects ON/OFF of performing of the connection test.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

TF status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

abc source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

U16 Connection Test State

Indicates ON/OFF of the specified connection test.
1: OFF
2: ON

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

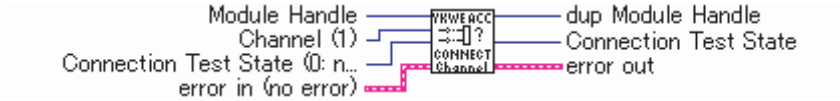
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE ACC Config Connection Test Channel.vi

This VI sets the connection test channels of accelerometer module.



Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

Connection Test State (0: no change)

Selects object or non-object of the connection test.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Connection Test State

Indicates object or non-object of the specified connection test.
1: OFF
2: ON

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE ACC Read Connection Test.vi

This VI queries the result of connection test of accelerometer module.

I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

TF status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

abc source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

U16 Result

Indicates the result of the connection test.
0: OK
1: Short
2: Open
3: --

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

5.5 Strain VI

Strain VIs allow you to configure and perform data acquisition on the following modules.

WE7245 4ch 100kS/s Strain Module

- Simple Level VIs

YKWE STRAIN Acquire Waveform.vi	Acquires the specified number of samples as the specified sample rate from a specified input channel, then returns the measurement block data.
YKWE STRAIN Acquire Waveforms.vi	Acquires the specified number of samples as the specified sample rate from a specified plural input channels, then returns the measurement block data.
YKWE STRAIN Sample Channel.vi	Acquires the specified sample rate from a specified input channel, then returns the instantaneous data.
YKWE STRAIN Sample Channels.vi	Acquires the specified sample rate from a specified plural input channels, then returns the instantaneous data.

- Intermediate Level VIs

YKWE STRAIN Config.vi	Configures settings of the strain module.
YKWE STRAIN Start.vi	Starts the strain module operation.
YKWE STRAIN Read Waveform.vi	Reads the block data from the strain module.
YKWE STRAIN Single Scan.vi	Reads the current data from the input channel of the strain module.
YKWE STRAIN Clear.vi	Stops the strain module operation.

- Advanced Level VIs

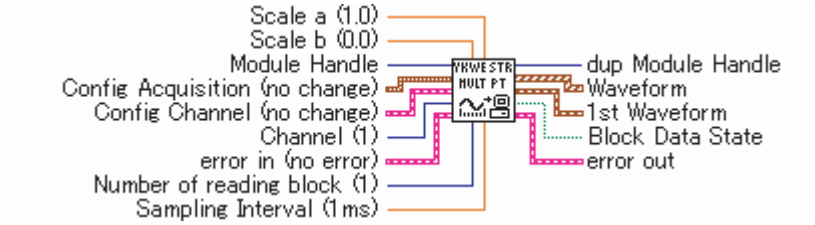
YKWE STRAIN Config Acquisition.vi	Configures the input operation settings of the strain module. (Acquisition Mode, Record Length, Memory partition, No.of Acquisitions)
YKWE STRAIN Config Sampling Interval.vi	Configures the sampling interval settings of the strain module. (Sampling Interval)
YKWE STRAIN Config Channel.vi	Configures the specified channel settings of the strain module. (Channel, State, Range, Excitation, Gauge Factor, Filter, Trigger Type, Trigger Level)
YKWE STRAIN Config Trigger.vi	Configures the trigger settings of the strain module. (Trig Combination, Trig Source, Pretrigger, Overlapped Acquisition, Hold Off, Time Base, Channel Mode)
YKWE STRAIN Control.vi	Performs acquisition start/stop of the strain module operation. (Control Code, Block Length, Block Count, Wait time, Timeout, Event Mode)
YKWE STRAIN Read Block Data.vi	Reads block data from the strain module. (Scaling, Block Num in, Event Timeout)
YKWE STRAIN Read Current Data.vi	Reads current data of the strain module. (Scaling, Latch)
YKWE STRAIN Read Balance.vi	Reads the balance of the strain module. (Channel)
YKWE STRAIN Config Linear Scaling.vi	Configures the linear scaling method settings of the strain module. (Linear Scaling)
YKWE STRAIN Config Linear Scaling Channel.vi	Configures the linear scaling settings of the strain module. (Channel, State, A/X1, B/Y1, X2, Y2, Unit)

YKWE STRAIN Acquire Waveform.vi

This VI measures a specified number of samples at a specified sampling interval from a single input channel and returns the measured data.

YKWE STRAIN Acquire Waveform.vi is polymorphic and can be set to output the following types of data.
Waveform
Scale array

Waveform



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Sampling Interval (1ms)

Specifies the sampling interval.
The selectaboe range is 10 µs to 10 s (in 1 µs steps) during trigger/gate mode and 1 ms to 10 s (in 1 µs steps) during free run mode.

The default value is 1 ms.

Config Acquisition (no change)

Sets the input to the strain module in a cluster.

The default value is no change.

U16 Acquisition Mode (0: no change)

Selects the acquisition mode.
0: no change
1: Triggered
2: Free Run
3: Gate (Level)
4: Gate (Edge)

The default value is 0 (no change).

I32 Record Length (-1: no change)

Specifies the record length.
When the acquisition method is trigger mode or gate (level) mode, memory partition is valid and you can specify the points of the measured value written in 1 block of the acquisition memory. However, the following selectable range has restriction of "measurement cycle × record length is greater than or equal to 5 ms." Please notice it.

- Trigger Mode
  The selectable range is "2 to 4,194,304 (4M)/(number of memory partition × number of measurement channels)" points.
- Gate (Level) Mode
  The selectable range is "2 to 4,194,304 (4M)/number of measurement channels" points.
- Free Run Mode
  The selectable range is "1 to 4,194,304 (4M)/number of measurement channels" points.

The default value is –1 (no change).

I32 No. of Acquisitions (-1: no change)

Specifies the number of acquisition.
You can specify the number of times to acquire the data when using the trigger or gate mode.
The selectable range is 1 to 32,768.

- If the number of acquisitions is greater than the number of memory partitions in the trigger mode, only the last "number of memory partitions" blocks of measured data are saved. In addition, you can only specify 1 for the number of acquisitions if the number of memory partitions is set to 1.
- If (the number of acquisitions × record length × the number of measurement channels) is "4M" points or less, and the number of acquisitions exceeds 256, then only the last 256 blocks of measured data are saved. If (the number of acquisitions × record length × the number of measurement channels) exceeds "4M" points, only the last "4M/(record length × the number of measurement channels)" blocks of measured data are saved. (When the number of measurement channels is 3, it is considered to be 4.)
- If the specified record length is greater than or equal to "the maximum record length/2" in the gate mode, you can only specify 1 for the number of acquisitions.

The default value is –1 (no change).

I16 Memory Partition (0: no change)

Selects the memory partition.

During the trigger mode, you can divide the acquisition memory into multiple blocks and acquire the data to the memory blocks in order every time the trigger occurs. When using memory partitions, if the measurement is stopped before reaching the number of acquisitions, the data in the memory block that was being written at that time are invalid.

0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256

The default value is 0 (no change).

Config Channel (no change)

Sets ON/OFF of measurement channels, measurement range, bridge voltage, gauge factor, input filter, trigger type, and trigger level in an array of clusters.

The default value is no change.

State (F: OFF)

Selects measurement ON/OFF.
T: ON
F: OFF

The default value is F (OFF).

Range (0: no change)

Selects the measurement range.
0: no change
1: 1000 uSTR
2: 2000 uSTR
3: 5000 uSTR
4: 10000 uSTR
5: 20000 uSTR
6: 0.5 mV/V
7: 1 mV/V
8: 2.5 mV/V
9: 5 mV/V
10: 10 mV/V
11: 100 mV
12: 200 mV
13: 500 mV
14: 1 V
15: 2 V
16: 5 V
17: 10 V
18: 20 V

The default value is 0 (no change).

Excitation (0: no change)

Selects the bridge voltage.
You can select “OFF” when the measurement range is set to voltage measurement.
0: no change
1: 2 V
2: 5 V
3: 10 V
4: OFF

The default value is 0 (no change).

Gauge Factor (0: no change)

Specifies the gauge factor.
The selectable range is 1.800 to 2.300 (in 0.001 steps).

The default value is 0 (no change).

U16 Filter (0: no change)

Selects the frequency of the input filter.
0: no change
1: OFF
2: 10 Hz
3: 30 Hz
4: 100 Hz
5: 300 Hz
6: 1 kHz
7: 3 kHz
8: 10 kHz

The default value is 0 (no change).

U16 Trig Type (0: no change)

Selects the trigger type.
You can set High, Low, or Off when the acquisition method is set to gate (level).
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low
6: Off

The default value is 0 (no change).

DBL Trig Level (0)

Specifies the trigger level.
The selectable range of voltage is the measurable range determined by the measurement range. When you set the measurement range to “uSTR” during measuring strain, the resolution is 100 µSTR and 10 µSTR for ±20000 µSTR/±10000 µSTR and ±5000 µSTR/±2000 µSTR/ ±1000 µSTR measurement ranges, or when you set the measurement range to “mV/V”, 100 uV, 10 uV, 1 uV for ±10 mV/V, ±5 mV/V /±2.5 mV/V / ±1 mV/V, and ±0.5 mV/V measurement ranges, respectively. When measuring voltage, the resolution is 1 mV, 10 mV, and 100 mV for ±100 mV/ ±200 mV/±500 mV, ±1 V/±2 V/±5 V, and ±10 V/±20 V measurement ranges, respectively.

The default value is 0.0.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveform

Indicates the scaled data of the specified channels as an array.
t0 indicates 0.
Y indicates the array of measured data.

1st Waveform

Indicates the scaled data of the first block of the scaled data of the specified channels.
t0 indicates 0.
Y indicates the array of measured data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

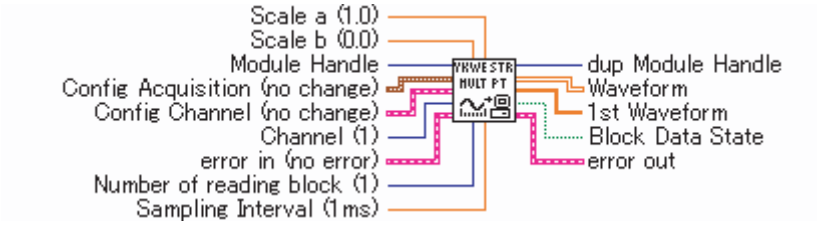
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale array



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Sampling Interval (1ms)

Specifies the sampling interval.
The selectaboe range is 10 µs to 10 s (in 1 µs steps) during trigger/gate mode and 1 ms to 10 s (in 1 µs steps) during free run mode.

The default value is 1 ms.

Config Acquisitions (no change)

Sets the input to the strain module in a cluster.

The default value is no change.

Acquisition Mode (0: no change)

Selects the acquisition mode.
0: no change
1: Triggered
2: Free Run
3: Gate (Level)
4: Gate (Edge)

The default value is 0 (no change).

Record Length (-1: no change)

Specifies the record length.
When the acquisition method is trigger mode or gate (level) mode, memory partition is valid and you can specify the points of the measured value written in 1 block of the acquisition memory. However, the following selectable range has restriction of "measurement cycle × record length is greater than or equal to 5 ms." Please notice it.

- Trigger Mode
  The selectable range is "2 to 4,194,304 (4M)/(number of memory partition × number of measurement channels)" points.
- Gate (Level) Mode
  The selectable range is "2 to 4,194,304 (4M)/number of measurement channels" points.
- Free Run Mode
  The selectable range is "1 to 4,194,304 (4M)/number of measurement channels" points.

The default value is –1 (no change).

No. of Acquisitions (-1: no change)

Specifies the number of acquisition.
You can specify the number of times to acquire the data when using the trigger or gate mode.
The selectable range is 1 to 32,768.

- If the number of acquisitions is greater than the number of memory partitions in the trigger mode, only the last "number of memory partitions" blocks of measured data are saved. In addition, you can only specify 1 for the number of acquisitions if the number of memory partitions is set to 1.
- If (the number of acquisitions × record length × the number of measurement channels) is "4M" points or less, and the number of acquisitions exceeds 256, then only the last 256 blocks of measured data are saved. If (the number of acquisitions × record length × the number of measurement channels) exceeds "4M" points, only the last "4M/(record length × the number of measurement channels)" blocks of measured data are saved. (When the number of measurement channels is 3, it is considered to be 4.)
- If the specified record length is greater than or equal to "the maximum record length/2" in the gate mode, you can only specify 1 for the number of acquisitions.

The default value is –1 (no change).

I16 Memory Partition (0: no change)

Selects the memory partition.

During the trigger mode, you can divide the acquisition memory into multiple blocks and acquire the data to the memory blocks in order every time the trigger occurs. When using memory partitions, if the measurement is stopped before reaching the number of acquisitions, the data in the memory block that was being written at that time are invalid.

0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256

The default value is 0 (no change).

Config Channel (no change)

Sets ON/OFF of measurement channels, measurement range, bridge voltage, gauge factor, input filter, trigger type, and trigger level in an array of clusters.

The default value is no change.

State (F: OFF)

Selects measurement ON/OFF.
T: ON
F: OFF

The default value is F (OFF).

Range (0: no change)

Selects the measurement range.
0: no change
1: 1000 uSTR
2: 2000 uSTR
3: 5000 uSTR
4: 10000 uSTR
5: 20000 uSTR
6: 0.5 mV/V
7: 1 mV/V
8: 2.5 mV/V
9: 5 mV/V
10: 10 mV/V
11: 100 mV
12: 200 mV
13: 500 mV
14: 1 V
15: 2 V
16: 5 V
17: 10 V
18: 20 V

The default value is 0 (no change).

Excitation (0: no change)

Selects the bridge voltage.
You can select “OFF” when the measurement range is set to voltage measurement.
0: no change
1: 2 V
2: 5 V
3: 10 V
4: OFF

The default value is 0 (no change).

Gauge Factor (0: no change)

Specifies the gauge factor.
The selectable range is 1.800 to 2.300 (in 0.001 steps).

The default value is 0 (no change).

U16 Filter (0: no change)

Selects the frequency of the input filter.
0: no change
1: OFF
2: 10 Hz
3: 30 Hz
4: 100 Hz
5: 300 Hz
6: 1 kHz
7: 3 kHz
8: 10 kHz

The default value is 0 (no change).

U16 Trig Type (0: no change)

Selects the trigger type.
You can set High, Low, or Off when the acquisition method is set to gate (level).
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low
6: Off

The default value is 0 (no change).

DBL Trig Level (0)

Specifies the trigger level.
The selectable range of voltage is the measurable range determined by the measurement range. When you set the measurement range to “uSTR” during measuring strain, the resolution is 100 µSTR and 10 µSTR for ±20000 µSTR/±10000 µSTR and ±5000 µSTR/±2000 µSTR/ ±1000 µSTR measurement ranges, or when you set the measurement range to “mV/V”, 100 uV, 10 uV, 1 uV for ±10 mV/V, ±5 mV/V /±2.5 mV/V / ±1 mV/V, and ±0.5 mV/V measurement ranges, respectively. When measuring voltage, the resolution is 1 mV, 10 mV, and 100 mV for ±100 mV/ ±200 mV/±500 mV, ±1 V/±2 V/±5 V, and ±10 V/±20 V measurement ranges, respectively.

The default value is 0.0.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveform

Indicates the scaled data of the specified channels as an array of blocks.

1st Waveform

Indicates the scaled data of the first block of the scaled data of the specified channels as an array.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

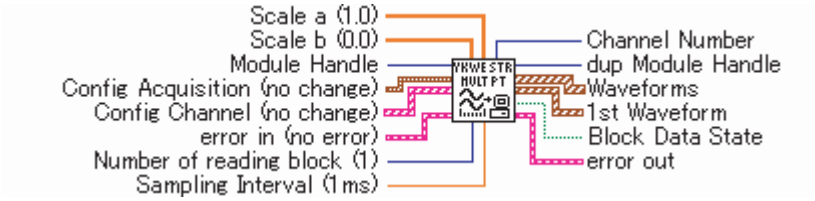
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE STRAIN Acquire Waveforms.vi

This VI acquires the specified number of samples as the specified sample rate from a specified plural input channels, then returns the measurement block data.

YKWE STRAIN Acquire Waveforms.vi is polymorphic and can be set to output the following types of data.
Waveform
Scale array

Waveform



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Sampling Interval (1ms)

The selectaboe range is 10 µs to 10 s (in 1 µs steps) during trigger/gate mode and 1 ms to 10 s (in 1 µs steps) during free run mode.

The default value is 1 ms.

Config Acquisition (no change)

Sets the input to the strain module in a cluster.

The default value is no change.

U16 Acquisition Mode (0: no change)

Selects the acquisition mode.
0: no change
1: Triggered
2: Free Run
3: Gate (Level)
4: Gate (Edge)

The default value is 0 (no change).

I32 Record Length (-1: no change)

Specifies the record length.
When the acquisition method is trigger mode or gate (level) mode, memory partition is valid and you can specify the points of the measured value written in 1 block of the acquisition memory. However, the following selectable range has restriction of "measurement cycle × record length is greater than or equal to 5 ms." Please notice it.

- Trigger Mode
  The selectable range is "2 to 4,194,304 (4M)/(number of memory partition × number of measurement channels)" points.
- Gate (Level) Mode
  The selectable range is "2 to 4,194,304 (4M)/number of measurement channels" points.
- Free Run Mode
  The selectable range is "1 to 4,194,304 (4M)/number of measurement channels" points.

The default value is –1 (no change).

I32 No. of Acquisitions (-1: no change)

Specifies the number of acquisition.
You can specify the number of times to acquire the data when using the trigger or gate mode. The selectable range is 1 to 32,768.

- If the number of acquisitions is greater than the number of memory partitions in the trigger mode, only the last "number of memory partitions" blocks of measured data are saved. In addition, you can only specify 1 for the number of acquisitions if the number of memory partitions is set to 1.
- If (the number of acquisitions × record length × the number of measurement channels) is "4M" points or less, and the number of acquisitions exceeds 256, then only the last 256 blocks of measured data are saved. If (the number of acquisitions × record length × the number of measurement channels) exceeds "4M" points, only the last "4M/(record length × the number of measurement channels)" blocks of measured data are saved. When the number of measurement channels is 3, it is considered to be 4.)
- If the specified record length is greater than or equal to "the maximum record length/2" in the gate mode, you can only specify 1 for the number of acquisitions.

The default value is –1 (no change).

I16 Memory Partition (0: no change)

Selects the memory partition.

During the trigger mode, you can divide the acquisition memory into multiple blocks and acquire the data to the memory blocks in order every time the trigger occurs. When using memory partitions, if the measurement is stopped before reaching the number of acquisitions, the data in the memory block that was being written at that time are invalid.

0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256

The default value is 0 (no change).

Config Channel (no change)

Sets ON/OFF of measurement channels, measurement range, bridge voltage, gauge factor, input filter, trigger type, and trigger level in an array of clusters.
Of the array elements of index 0, if the measurement range, bridge voltage, gauge factor, input filter, trigger type, and filter are all zeroes, then index 1, 2, 3, and so on correspond to channels 1, 2, 3, and so on, respectively. If any of the three elements is nonzero, then all channels are set using the elements of index 0.

The default value is no change.

State (F: OFF)

Selects measurement ON/OFF.
T: ON
F: OFF

The default value is F (OFF).

Range (0: no change)

Selects the measurement range.
0: no change
1: 1000 uSTR
2: 2000 uSTR
3: 5000 uSTR
4: 10000 uSTR
5: 20000 uSTR
6: 0.5 mV/V
7: 1 mV/V
8: 2.5 mV/V
9: 5 mV/V
10: 10 mV/V
11: 100 mV
12: 200 mV
13: 500 mV
14: 1 V
15: 2 V
16: 5 V
17: 10 V
18: 20 V

The default value is 0 (no change).

Excitation (0: no change)

Selects the bridge voltage.
You can select “OFF” when the measurement range is set to voltage measurement.
0: no change
1: 2 V
2: 5 V
3: 10 V
4: OFF

The default value is 0 (no change).

DBL Gauge Factor (0: no change)

Specifies the gauge factor.
The selectable range is 1.800 to 2.300 (in 0.001 steps).

The default value is 0 (no change).

U16 Filter (0: no change)

Selects the frequency of the input filter.
0: no change
1: OFF
2: 10 Hz
3: 30 Hz
4: 100 Hz
5: 300 Hz
6: 1 kHz
7: 3 kHz
8: 10 kHz

The default value is 0 (no change).

U16 Trig Type (0: no change)

Selects the trigger type.
You can set High, Low, or Off when the acquisition method is set to gate (level).
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low
6: Off

The default value is 0 (no change).

DBL Trig Level (0)

Specifies the trigger level.
The selectable range of voltage is the measurable range determined by the measurement range. When you set the measurement range to “uSTR” during measuring strain, the resolution is 100 µSTR and 10 µSTR for ±20000 µSTR/±10000 µSTR and ±5000 µSTR/±2000 µSTR/ ±1000 µSTR measurement ranges, or when you set the measurement range to “mV/V” 100 uV, 10 uV, 1 uV for ±10 mV/V, ±5 mV/V /±2.5 mV/V / ±1 mV/V, and ±0.5 mV/V measurement ranges, respectively. When measuring voltage, the resolution is 1 mV, 10 mV, and 100 mV for ±100 mV/ ±200 mV/±500 mV, ±1 V/±2 V/±5 V, and ±10 V/±20 V measurement ranges, respectively.

The default value is 0.0.

[DBL] Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

[DBL] Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveforms

Indicates the scaled data as an array of channels and blocks.
t0 indicates 0.
Y indicates the array of measured data.

1st Waveform

Indicates the scaled data of the first block of the scaled data as an array of channels.
t0 indicates 0.
Y indicates the array of measured data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

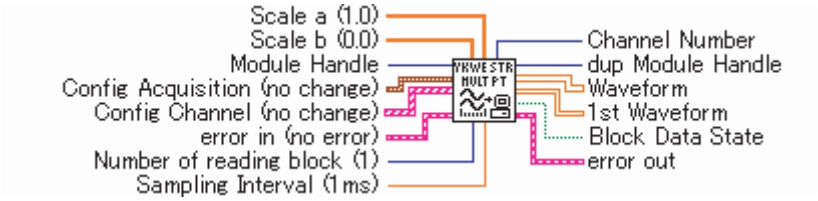
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale array



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Sampling Interval (1ms)

Specifies the sampling interval.
The selectaboe range is 10 µs to 10 s (in 1 µs steps) during trigger/gate mode and 1 ms to 10 s (in 1 µs steps) during free run mode.

The default value is 1 ms.

Config Acquisition (no change)

Sets the input to the strain module in a cluster.

The default value is no change.

U16 Acquisition Mode (0: no change)

Selects the acquisition mode.
0: no change
1: Triggered
2: Free Run
3: Gate (Level)
4: Gate (Edge)

The default value is 0 (no change).

I32 Record Length (-1: no change)

Specifies the record length.
When the acquisition method is trigger mode or gate (level) mode, memory partition is valid and you can specify the points of the measured value written in 1 block of the acquisition memory. However, the following selectable range has restriction of "measurement cycle × record length is greater than or equal to 5 ms." Please notice it.

- Trigger Mode
  The selectable range is "2 to 4,194,304 (4M)/(number of memory partition × number of measurement channels)" points.
- Gate (Level) Mode
  The selectable range is "2 to 4,194,304 (4M)/number of measurement channels" points.
- Free Run Mode
  The selectable range is "1 to 4,194,304 (4M)/number of measurement channels" points.

The default value is –1 (no change).

I32 No. of Acquisitions (-1: no change)

Specifies the number of acquisition.
You can specify the number of times to acquire the data when using the trigger or gate mode.
The selectable range is 1 to 32,768.

- If the number of acquisitions is greater than the number of memory partitions in the trigger mode, only the last "number of memory partitions" blocks of measured data are saved. In addition, you can only specify 1 for the number of acquisitions if the number of memory partitions is set to 1.
- If (the number of acquisitions × record length × the number of measurement channels) is "4M" points or less, and the number of acquisitions exceeds 256, then only the last 256 blocks of measured data are saved. If (the number of acquisitions × record length × the number of measurement channels) exceeds "4M" points, only the last "4M/(record length × the number of measurement channels)" blocks of measured data are saved. (When the number of measurement channels is 3, it is considered to be 4.)
- If the specified record length is greater than or equal to "the maximum record length/2" in the gate mode, you can only specify 1 for the number of acquisitions.

The default value is –1 (no change).

I16 Memory Partition (0: no change)

Selects the memory partition.

During the trigger mode, you can divide the acquisition memory into multiple blocks and acquire the data to the memory blocks in order every time the trigger occurs. When using memory partitions, if the measurement is stopped before reaching the number of acquisitions, the data in the memory block that was being written at that time are invalid.

0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256

The default value is 0 (no change).

Config Channel (no change)

Sets ON/OFF of measurement channels, measurement range, bridge voltage, gauge factor, input filter, trigger type, and trigger level in an array of clusters.
Of the array elements of index 0, if the measurement range, bridge voltage, gauge factor, input filter, trigger type, and filter are all zeroes, then index 1, 2, 3, and so on correspond to channels 1, 2, 3, and so on, respectively. If any of the three elements is nonzero, then all channels are set using the elements of index 0.

The default value is no change.

State (F: OFF)

Selects measurement ON/OFF.
T: ON
F: OFF

The default value is F (OFF).

Range (0: no change)

Selects the measurement range.
0: no change
1: 1000 uSTR
2: 2000 uSTR
3: 5000 uSTR
4: 10000 uSTR
5: 20000 uSTR
6: 0.5 mV/V
7: 1 mV/V
8: 2.5 mV/V
9: 5 mV/V
10: 10 mV/V
11: 100 mV
12: 200 mV
13: 500 mV
14: 1 V
15: 2 V
16: 5 V
17: 10 V
18: 20 V

The default value is 0 (no change).

Excitation (0: no change)

Selects the bridge voltage.
You can select “OFF” when the measurement range is set to voltage measurement.
0: no change
1: 2 V
2: 5 V
3: 10 V
4: OFF

The default value is 0 (no change).

DBL Gauge Factor (0: no change)

Specifies the gauge factor.
The selectable range is 1.800 to 2.300 (in 0.001 steps).

The default value is 0 (no change).

U16 Filter (0: no change)

Selects the frequency of the input filter.
0: no change
1: OFF
2: 10 Hz
3: 30 Hz
4: 100 Hz
5: 300 Hz
6: 1 kHz
7: 3 kHz
8: 10 kHz

The default value is 0 (no change).

U16 Trig Type (0: no change)

Selects the trigger type.
You can set High, Low, or Off when the acquisition method is set to gate (level).
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low
6: Off

The default value is 0 (no change).

DBL Trig Level (0)

Specifies the trigger level.
The selectable range of voltage is the measurable range determined by the measurement range. When you set the measurement range to “uSTR” during measuring strain, the resolution is 100 !µSTR and 10 µSTR for ±20000 µSTR/±10000 µSTR and ±5000 µSTR/±2000 µSTR/ ±1000 µSTR measurement ranges, or when you set the measurement range to “mV/V” 100 uV, 10 uV, 1 uV for ±10 mV/V, ±5 mV/V /±2.5 mV/V / ±1 mV/V, and ±0.5 mV/V measurement ranges, respectively. When measuring voltage, the resolution is 1 mV, 10 mV, and 100 mV for ±100 mV/ ±200 mV/±500 mV, ±1 V/±2 V/±5 V, and ±10 V/±20 V measurement ranges, respectively.

The default value is 0.0.

[DBL] Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

[DBL] Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveform

Indicates the scaled data as an array of channels and blocks.

1st Waveform

Indicates the scaled data of the first block of the scaled data as an array of channels.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

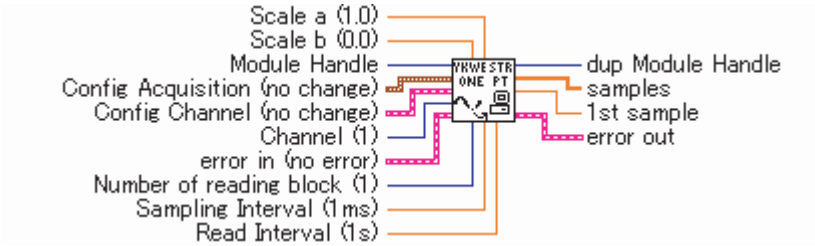
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE STRAIN Sample Channel.vi

This VI acquires the specified sample rate from a specified input channel, then returns the instantaneous data.

YKWE STRAIN Sample Channel.vi is polymorphic and can be set to output the following types of data.
Scale array
Waveform

Scale array



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Sampling Interval (1ms)

Specifies the sampling interval.
The selectaboe range is 10 µs to 10 s (in 1 µs steps) during trigger/gate mode and 1 ms to 10 s (in 1 µs steps) during free run mode.

The default value is 1 ms.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

Config Acquisition (no change)

Sets the input to the strain module in a cluster.

The default value is no change.

U16 Acquisition Mode (0: no change)

Selects the acquisition mode.
0: no change
1: Triggered
2: Free Run
3: Gate (Level)
4: Gate (Edge)

The default value is 0 (no change).

I32 Record Length (-1: no change)

Specifies the record length.
When the acquisition method is trigger mode or gate (level) mode, memory partition is valid and you can specify the points of the measured value written in 1 block of the acquisition memory. However, the following selectable range has restriction of "measurement cycle × record length is greater than or equal to 5 ms." Please notice it.

- Trigger Mode
  The selectable range is "2 to 4,194,304 (4M)/(number of memory partition × number of measurement channels)" points.
- Gate (Level) Mode
  The selectable range is "2 to 4,194,304 (4M)/number of measurement channels" points.
- Free Run Mode
  The selectable range is "1 to 4,194,304 (4M)/number of measurement channels" points.

The default value is –1 (no change).

I32 No. of Acquisitions (-1: no change)

Specifies the number of acquisition.
You can specify the number of times to acquire the data when using the trigger or gate mode.
The selectable range is 1 to 32,768.

- If the number of acquisitions is greater than the number of memory partitions in the trigger mode, only the last "number of memory partitions" blocks of measured data are saved. In addition, you can only specify 1 for the number of acquisitions if the number of memory partitions is set to 1.
- If (the number of acquisitions × record length × the number of measurement channels) is "4M" points or less, and the number of acquisitions exceeds 256, then only the last 256 blocks of measured data are saved. If (the number of acquisitions × record length × the number of measurement channels) exceeds "4M" points, only the last "4M/(record length × the number of measurement channels)" blocks of measured data are saved. (When the number of measurement channels is 3, it is considered to be 4.)
- If the specified record length is greater than or equal to "the maximum record length/2" in the gate mode, you can only specify 1 for the number of acquisitions.

The default value is –1 (no change).

I16 Memory Partition (0: no change)

Selects the memory partition.

During the trigger mode, you can divide the acquisition memory into multiple blocks and acquire the data to the memory blocks in order every time the trigger occurs. When using memory partitions, if the measurement is stopped before reaching the number of acquisitions, the data in the memory block that was being written at that time are invalid.

0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256

The default value is 0 (no change).

Config Channel (no change)

Sets ON/OFF of measurement channels, measurement range, bridge voltage, gauge factor, input filter, trigger type, and trigger level in an array of clusters.

The default value is no change.

State (F: OFF)

Selects measurement ON/OFF.
T: ON
F: OFF

The default value is F (OFF).

Range (0: no change)

Selects the measurement range.
0: no change
1: 1000 uSTR
2: 2000 uSTR
3: 5000 uSTR
4: 10000 uSTR
5: 20000 uSTR
6: 0.5 mV/V
7: 1 mV/V
8: 2.5 mV/V
9: 5 mV/V
10: 10 mV/V
11: 100 mV
12: 200 mV
13: 500 mV
14: 1 V
15: 2 V
16: 5 V
17: 10 V
18: 20 V

The default value is 0 (no change).

Excitation (0: no change)

Selects the bridge voltage.
You can select “OFF” when the measurement range is set to voltage measurement.
0: no change
1: 2 V
2: 5 V
3: 10 V
4: OFF

The default value is 0 (no change).

Gauge Factor (0: no change)

Specifies the gauge factor.
The selectable range is 1.800 to 2.300 (in 0.001 steps).

The default value is 0 (no change).

U16 Filter (0: no change)

Selects the frequency of the input filter.
0: no change
1: OFF
2: 10 Hz
3: 30 Hz
4: 100 Hz
5: 300 Hz
6: 1 kHz
7: 3 kHz
8: 10 kHz

The default value is 0 (no change).

U16 Trig Type (0: no change)

Selects the trigger type.
You can set High, Low, or Off when the acquisition method is set to gate (level).
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low
6: Off

The default value is 0 (no change).

DBL Trig Level (0)

Specifies the trigger level.
The selectable range of voltage is the measurable range determined by the measurement range. When you set the measurement range to “uSTR” during measuring strain, the resolution is 100 µSTR and 10 µSTR for ±20000 µSTR/±10000 µSTR and ±5000 µSTR/±2000 µSTR/ ±1000 µSTR measurement ranges, or when you set the measurement range to “mV/V”, 100 uV, 10 uV, 1 uV for ±10 mV/V, ±5 mV/V /±2.5 mV/V / ±1 mV/V, and ±0.5 mV/V measurement ranges, respectively. When measuring voltage, the resolution is 1 mV, 10 mV, and 100 mV for ±100 mV/ ±200 mV/±500 mV, ±1 V/±2 V/±5 V, and ±10 V/±20 V measurement ranges, respectively.

The default value is 0.0.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data of the specified channel as an array of blocks.

1st sample

Indicates the scaled data of the first block of the scaled data of the specified channel.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

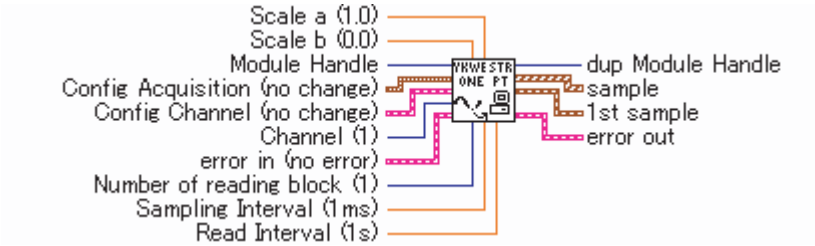
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Sampling Interval (1ms)

Specifies the sampling interval.
The selectaboe range is 10 µs to 10 s (in 1 µs steps) during trigger/gate mode and 1 ms to 10 s (in 1 µs steps) during free run mode.

The default value is 1 ms.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

Config Acquisition (no change)

Sets the input to the strain module in a cluster.

The default value is no change.

Acquisition Mode (0: no change)

Selects the acquisition mode.
0: no change
1: Triggered
2: Free Run
3: Gate (Level)
4: Gate (Edge)

The default value is 0 (no change).

Record Length (-1: no change)

Specifies the record length.
When the acquisition method is trigger mode or gate (level) mode, memory partition is valid and you can specify the points of the measured value written in 1 block of the acquisition memory. However, the following selectable range has restriction of "measurement cycle × record length is greater than or equal to 5 ms." Please notice it.

- Trigger Mode
  The selectable range is "2 to 4,194,304 (4M)/(number of memory partition × number of measurement channels)" points.
- Gate (Level) Mode
  The selectable range is "2 to 4,194,304 (4M)/number of measurement channels" points.
- Free Run Mode
  The selectable range is "1 to 4,194,304 (4M)/number of measurement channels" points.

The default value is –1 (no change).

No. of Acquisitions (-1: no change)

Specifies the number of acquisition.
You can specify the number of times to acquire the data when using the trigger or gate mode. The selectable range is 1 to 32,768.

- If the number of acquisitions is greater than the number of memory partitions in the trigger mode, only the last "number of memory partitions",blocks of measured data are saved. In addition, you can only specify 1 for the number of acquisitions if the number of memory partitions is set to 1.
- If (the number of acquisitions × record length × the number of measurement channels) is "4M" points or less, and the number of acquisitions exceeds 256, then only the last 256 blocks of measured data are saved. If (the number of acquisitions × record length × the number of measurement channels) exceeds "4M" points, only the last "4M/(record length × the number of measurement channels)",blocks of measured data are saved. (When the number of measurement channels is 3, it is considered to be 4.)
- If the specified record length is greater than or equal to "the maximum record length/2",in the gate mode, you can only specify 1 for the number of acquisitions.

The default value is –1 (no change).

I16 Memory Partition (0: no change)

Selects the memory partition.

During the trigger mode, you can divide the acquisition memory into multiple blocks and acquire the data to the memory blocks in order every time the trigger occurs. When using memory partitions, if the measurement is stopped before reaching the number of acquisitions, the data in the memory block that was being written at that time are invalid.

0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256

The default value is 0 (no change).

Config Channel (no change)

Sets ON/OFF of measurement channels, measurement range, bridge voltage, gauge factor, input filter, trigger type, and trigger level in an array of clusters.

The default value is no change.

State (F: OFF)

Selects measurement ON/OFF.
T: ON
F: OFF

The default value is F (OFF).

Range (0: no change)

Selects the measurement range.
0: no change
1: 1000 uSTR
2: 2000 uSTR
3: 5000 uSTR
4: 10000 uSTR
5: 20000 uSTR
6: 0.5 mV/V
7: 1 mV/V
8: 2.5 mV/V
9: 5 mV/V
10: 10 mV/V
11: 100 mV
12: 200 mV
13: 500 mV
14: 1 V
15: 2 V
16: 5 V
17: 10 V
18: 20 V

The default value is 0 (no change).

Excitation (0: no change)

Selects the bridge voltage.
You can select “OFF”,when the measurement range is set to voltage measurement.
0: no change
1: 2 V
2: 5 V
3: 10 V
4: OFF

The default value is 0 (no change).

Gauge Factor (0: no change)

Specifies the gauge factor.
The selectable range is 1.800 to 2.300 (in 0.001 steps).

The default value is 0 (no change).

U16 Filter (0: no change)

Selects the frequency of the input filter.
0: no change
1: OFF
2: 10 Hz
3: 30 Hz
4: 100 Hz
5: 300 Hz
6: 1 kHz
7: 3 kHz
8: 10 kHz

The default value is 0 (no change).

U16 Trig Type (0: no change)

Selects the trigger type.
You can set High, Low, or Off when the acquisition method is set to gate (level).
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low
6: Off

The default value is 0 (no change).

DBL Trig Level (0)

Specifies the trigger level.
The selectable range of voltage is the measurable range determined by the measurement range. When you set the measurement range to “uSTR”,during measuring strain, the resolution is 100 µSTR and 10 µSTR for ±20000 µSTR/±10000 µSTR and ±5000 µSTR/±2000 µSTR/ ±1000 µSTR measurement ranges, or when you set the measurement range to “mV/V”, 100 uV, 10 uV, 1 uV for ±10 mV/V, ±5 mV/V /±2.5 mV/V / ±1 mV/V, and ±0.5 mV/V measurement ranges, respectively. When measuring voltage, the resolution is 1 mV, 10 mV, and 100 mV for ±100 mV/ ±200 mV/±500 mV, ±1 V/±2 V/±5 V, and ±10 V/±20 V measurement ranges, respectively.

The default value is 0.0.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

sample

Indicates the scaled data of the specified channel as an array.
t0 indicates 0.
Y indicates the array of measured data.

1st sample

Indicates the scaled data of the first block of the scaled data of the specified channel.
t0 indicates 0.
Y indicates the array of measured data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

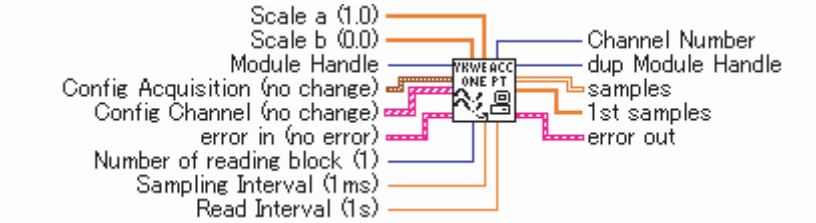
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE STRAIN Sample Channels.vi

This VI acquires the specified sample rate from a specified plural input channels, then returns the instantaneous data.

YKWE STRAIN Sample Channel.vi is polymorphic and can be set to output the following types of data.
Scale array
Waveform

Scale array



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Sampling Interval (1ms)

Specifies the sampling interval.
The selectaboe range is 10 µs to 10 s (in 1 µs steps) during trigger/gate mode and 1 ms to 10 s (in 1 µs steps) during free run mode.

The default value is 1 ms.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

Config Acquisition (no change)

Sets the input to the strain module in a cluster.

The default value is no change.

Acquisition Mode (0: no change)

Selects the acquisition mode.
0: no change
1: Triggered
2: Free Run
3: Gate (Level)
4: Gate (Edge)

The default value is 0 (no change).

Record Length (-1: no change)

Specifies the record length.
When the acquisition method is trigger mode or gate (level) mode, memory partition is valid and you can specify the points of the measured value written in 1 block of the acquisition memory. However, the following selectable range has restriction of "measurement cycle × record length is greater than or equal to 5 ms." Please notice it.

- Trigger Mode
  The selectable range is "2 to 4,194,304 (4M)/(number of memory partition × number of measurement channels)" points.
- Gate (Level) Mode
  The selectable range is "2 to 4,194,304 (4M)/number of measurement channels" points.
- Free Run Mode
  The selectable range is "1 to 4,194,304 (4M)/number of measurement channels" points.

The default value is –1 (no change).

No. of Acquisitions (-1: no change)

Specifies the number of acquisition.
You can specify the number of times to acquire the data when using the trigger or gate mode.
The selectable range is 1 to 32,768.

- If the number of acquisitions is greater than the number of memory partitions in the trigger mode, only the last "number of memory partitions",blocks of measured data are saved. In addition, you can only specify 1 for the number of acquisitions if the number of memory partitions is set to 1.
- If (the number of acquisitions × record length × the number of measurement channels) is "4M" points or less, and the number of acquisitions exceeds 256, then only the last 256 blocks of measured data are saved. If (the number of acquisitions × record length × the number of measurement channels) exceeds "4M" points, only the last "4M/(record length × the number of measurement channels)",blocks of measured data are saved. (When the number of measurement channels is 3, it is considered to be 4.)
- If the specified record length is greater than or equal to "the maximum record length/2",in the gate mode, you can only specify 1 for the number of acquisitions.

The default value is –1 (no change).

I16 Memory Partition (0: no change)

Selects the memory partition.

During the trigger mode, you can divide the acquisition memory into multiple blocks and acquire the data to the memory blocks in order every time the trigger occurs. When using memory partitions, if the measurement is stopped before reaching the number of acquisitions, the data in the memory block that was being written at that time are invalid.

0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256

The default value is 0 (no change).

Config Channel (no change)

Sets ON/OFF of measurement channels, measurement range, bridge voltage, gauge factor, input filter, trigger type, and trigger level in an array of clusters.
Of the array elements of index 0, if the measurement range, bridge voltage, gauge factor, input filter, trigger type, and filter are all zeroes, then index 1, 2, 3, and so on correspond to channels 1, 2, 3, and so on, respectively. If any of the three elements is nonzero, then all channels are set using the elements of index 0.

The default value is no change.

State (F: OFF)

Selects measurement ON/OFF.
T: ON
F: OFF

The default value is F (OFF).

Range (0: no change)

Selects the measurement range.
0: no change
1: 1000 uSTR
2: 2000 uSTR
3: 5000 uSTR
4: 10000 uSTR
5: 20000 uSTR
6: 0.5 mV/V
7: 1 mV/V
8: 2.5 mV/V
9: 5 mV/V
10: 10 mV/V
11: 100 mV
12: 200 mV
13: 500 mV
14: 1 V
15: 2 V
16: 5 V
17: 10 V
18: 20 V

The default value is 0 (no change).

Excitation (0: no change)

Selects the bridge voltage.
You can select “OFF”,when the measurement range is set to voltage measurement.
0: no change
1: 2 V
2: 5 V
3: 10 V
4: OFF

The default value is 0 (no change).

DBL Gauge Factor (0: no change)

Specifies the gauge factor.
The selectable range is 1.800 to 2.300 (in 0.001 steps).

The default value is 0 (no change).

U16 Filter (0: no change)

Selects the frequency of the input filter.
0: no change
1: OFF
2: 10 Hz
3: 30 Hz
4: 100 Hz
5: 300 Hz
6: 1 kHz
7: 3 kHz
8: 10 kHz

The default value is 0 (no change).

U16 Trig Type (0: no change)

Selects the trigger type.
You can set High, Low, or Off when the acquisition method is set to gate (level).
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low
6: Off

The default value is 0 (no change).

DBL Trig Level (0)

Specifies the trigger level.
The selectable range of voltage is the measurable range determined by the measurement range. When you set the measurement range to “uSTR”,during measuring strain, the resolution is 100 µSTR and 10 µSTR for ±20000 µSTR/±10000 µSTR and ±5000 µSTR/±2000 µSTR/ ±1000 µSTR measurement ranges, or when you set the measurement range to “mV/V”, 100 uV, 10 uV, 1 uV for ±10 mV/V, ±5 mV/V /±2.5 mV/V / ±1 mV/V, and ±0.5 mV/V measurement ranges, respectively. When measuring voltage, the resolution is 1 mV, 10 mV, and 100 mV for ±100 mV/ ±200 mV/±500 mV, ±1 V/±2 V/±5 V, and ±10 V/±20 V measurement ranges, respectively.

The default value is 0.0.

[DBL] Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

[DBL] Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data as an array of channels and blocks.

1st samples

Indicates the scaled data of the first block of the scaled data of the specified channel.

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

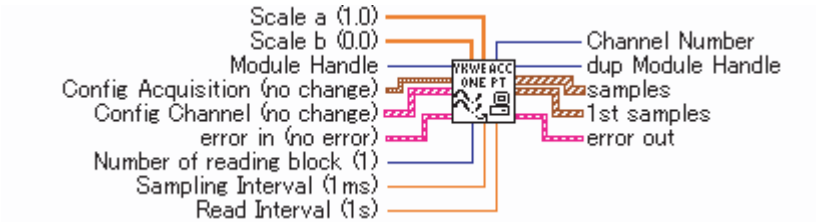
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Sampling Interval (1ms)

Specifies the sampling interval.
The selectaboe range is 10 µs to 10 s (in 1 µs steps) during trigger/gate mode and 1 ms to 10 s (in 1 µs steps) during free run mode.

The default value is 1 ms.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

Config Acquisition (no change)

Sets the input to the strain module in a cluster.

The default value is no change.

Acquisition Mode (0: no change)

Selects the acquisition mode.
0: no change
1: Triggered
2: Free Run
3: Gate (Level)
4: Gate (Edge)

The default value is 0 (no change).

Record Length (-1: no change)

Specifies the record length.
When the acquisition method is trigger mode or gate (level) mode, memory partition is valid and you can specify the points of the measured value written in 1 block of the acquisition memory. However, the following selectable range has restriction of "measurement cycle × record length is greater than or equal to 5 ms." Please notice it.

- Trigger Mode
  The selectable range is "2 to 4,194,304 (4M)/(number of memory partition × number of measurement channels)" points.
- Gate (Level) Mode
  The selectable range is "2 to 4,194,304 (4M)/number of measurement channels" points.
- Free Run Mode
  The selectable range is "1 to 4,194,304 (4M)/number of measurement channels" points.

The default value is –1 (no change).

No. of Acquisitions (-1: no change)

Specifies the number of acquisition.
You can specify the number of times to acquire the data when using the trigger or gate mode.
The selectable range is 1 to 32,768.

- If the number of acquisitions is greater than the number of memory partitions in the trigger mode, only the last "number of memory partitions",blocks of measured data are saved. In addition, you can only specify 1 for the number of acquisitions if the number of memory partitions is set to 1.
- If (the number of acquisitions × record length × the number of measurement channels) is "4M" points or less, and the number of acquisitions exceeds 256, then only the last 256 blocks of measured data are saved. If (the number of acquisitions × record length × the number of measurement channels) exceeds "4M" points, only the last "4M/(record length × the number of measurement channels)",blocks of measured data are saved. (When the number of measurement channels is 3, it is considered to be 4.)
- If the specified record length is greater than or equal to "the maximum record length/2",in the gate mode, you can only specify 1 for the number of acquisitions.

The default value is –1 (no change).

I16 Memory Partition (0: no change)

Selects the memory partition.

During the trigger mode, you can divide the acquisition memory into multiple blocks and acquire the data to the memory blocks in order every time the trigger occurs. When using memory partitions, if the measurement is stopped before reaching the number of acquisitions, the data in the memory block that was being written at that time are invalid.

0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256

The default value is 0 (no change).

Config Channel (no change)

Sets ON/OFF of measurement channels, measurement range, bridge voltage, gauge factor, input filter, trigger type, and trigger level in an array of clusters.
Of the array elements of index 0, if the measurement range, bridge voltage, gauge factor, input filter, trigger type, and filter are all zeroes, then index 1, 2, 3, and so on correspond to channels 1, 2, 3, and so on, respectively. If any of the three elements is nonzero, then all channels are set using the elements of index 0.

The default value is no change.

State (F: OFF)

Selects measurement ON/OFF.
T: ON
F: OFF

The default value is F (OFF).

Range (0: no change)

Selects the measurement range.
0: no change
1: 1000 uSTR
2: 2000 uSTR
3: 5000 uSTR
4: 10000 uSTR
5: 20000 uSTR
6: 0.5 mV/V
7: 1 mV/V
8: 2.5 mV/V
9: 5 mV/V
10: 10 mV/V
11: 100 mV
12: 200 mV
13: 500 mV
14: 1 V
15: 2 V
16: 5 V
17: 10 V
18: 20 V

The default value is 0 (no change).

Excitation (0: no change)

Selects the bridge voltage.
You can select “OFF”,when the measurement range is set to voltage measurement.
0: no change
1: 2V
2: 5V
3: 10V
4: OFF

The default value is 0 (no change).

DBL Gauge Factor (0: no change)

Specifies the gauge factor.
The selectable range is 1.800 to 2.300 (in 0.001 steps).

The default value is 0 (no change).

U16 Filter (0: no change)

Selects the frequency of the input filter.
0: no change
1: OFF
2: 10 Hz
3: 30 Hz
4: 100 Hz
5: 300 Hz
6: 1 kHz
7: 3 kHz
8: 10 kHz

The default value is 0 (no change).

U16 Trig Type (0: no change)

Selects the trigger type.
You can set High, Low, or Off when the acquisition method is set to gate (level).
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low
6: Off

The default value is 0 (no change).

DBL Trig Level (0)

Specifies the trigger level.
The selectable range of voltage is the measurable range determined by the measurement range. When you set the measurement range to “uSTR”,during measuring strain, the resolution is 100 µSTR and 10 µSTR for ±20000 µSTR/±10000 µSTR and ±5000 µSTR/±2000 µSTR/ ±1000 µSTR measurement ranges, or when you set the measurement range to “mV/V”, 100 uV, 10 uV, 1 uV for ±10 mV/V, ±5 mV/V /±2.5 mV/V / ±1 mV/V, and ±0.5 mV/V measurement ranges, respectively. When measuring voltage, the resolution is 1 mV, 10 mV, and 100 mV for ±100 mV/ ±200 mV/±500 mV, ±1 V/±2 V/±5 V, and ±10 V/±20 V measurement ranges, respectively.

The default value is 0.0.

[DBL] Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

[DBL] Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data as an array of channels and blocks.
t0 indicates 0.
Y indicates the array of measured data.

1st samples

Indicates the scaled data of the first block of the scaled data as an array of channels.
t0 indicates 0.
Y indicates the array of measured data.

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

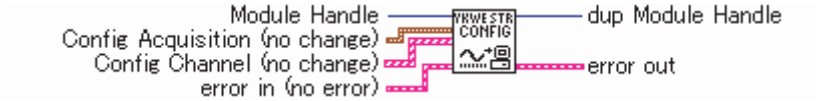
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE STRAIN Config.vi

This configures the input settings of the strain module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

906 Config Acquisition (no change)

Sets the input to the strain module in a cluster.

The default value is no change.

U16 Acquisition Mode (0: no change)

Selects the acquisition mode.
0: no change
1: Triggered
2: Free Run
3: Gate (Level)
4: Gate (Edge)

The default value is 0 (no change).

I32 Record Length (-1: no change)

Specifies the record length.
When the acquisition method is trigger mode or gate (level) mode, memory partition is valid and you can specify the points of the measured value written in 1 block of the acquisition memory. However, the following selectable range has restriction of “measurement cycle × record length is greater than or equal to 5 ms.” Please notice it.

- Trigger Mode
  The selectable range is “2 to 4,194,304 (4M)/(number of memory partition × number of measurement channels)” points.
- Gate (Level) Mode
  The selectable range is “2 to 4,194,304 (4M)/number of measurement channels” points.
- Free Run Mode
  The selectable range is “1 to 4,194,304 (4M)/number of measurement channels” points.

The default value is –1 (no change).

I32 No. of Acquisitions (-1: no change)

Specifies the number of acquisition.
You can specify the number of times to acquire the data when using the trigger or gate mode.
The selectable range is 1 to 32,768.

- If the number of acquisitions is greater than the number of memory partitions in the trigger mode, only the last “number of memory partitions”,blocks of measured data are saved. In addition, you can only specify 1 for the number of acquisitions if the number of memory partitions is set to 1.
- If (the number of acquisitions × record length × the number of measurement channels) is “4M” points or less, and the number of acquisitions exceeds 256, then only the last 256 blocks of measured data are saved. If (the number of acquisitions × record length × the number of measurement channels) exceeds “4M” points, only the last “4M/(record length × the number of measurement channels)”,blocks of measured data are saved. (When the number of measurement channels is 3, it is considered to be 4.)
- If the specified record length is greater than or equal to “the maximum record length/2”,in the gate mode, you can only specify 1 for the number of acquisitions.

The default value is –1 (no change).

I16 Memory Partition (0: no change)

Selects the memory partition.
During the trigger mode, you can divide the acquisition memory into multiple blocks and acquire the data to the memory blocks in order every time the trigger occurs. When using memory partitions, if the measurement is stopped before reaching the number of acquisitions, the data in the memory block that was being written at that time are invalid.
0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256

The default value is 0 (no change).

Config Channel (no change)

Sets ON/OFF of measurement channels, measurement range, bridge voltage, gauge factor, input filter, trigger type, and trigger level in an array of clusters.
Of the array elements of index 0, if the measurement range, bridge voltage, gauge factor, input filter, trigger type, and filter are all zeroes, then index 1, 2, 3, and so on correspond to channels 1, 2, 3, and so on, respectively. If any of the three elements is nonzero, then all channels are set using the elements of index 0.

The default value is no change.

State (F: OFF)

Selects measurement ON/OFF.
T: ON
F: OFF

The default value is F (OFF).

Range (0: no change)

Selects the measurement range.
0: no change
1: 1000 uSTR
2: 2000 uSTR
3: 5000 uSTR
4: 10000 uSTR
5: 20000 uSTR
6: 0.5 mV/V
7: 1 mV/V
8: 2.5 mV/V
9: 5 mV/V
10: 10 mV/V
11: 100 mV
12: 200 mV
13: 500 mV
14: 1 V
15: 2 V
16: 5 V
17: 10 V
18: 20 V

The default value is 0 (no change).

Excitation (0: no change)

Selects the bridge voltage.
You can select “OFF”,when the measurement range is set to voltage measurement.
0: no change
1: 2 V
2: 5 V
3: 10 V
4: OFF

The default value is 0 (no change).

Gauge Factor (0: no change)

Specifies the gauge factor.
The selectable range is 1.800 to 2.300 (in 0.001 steps).

The default value is 0 (no change).

Filter (0: no change)

Selects the frequency of the input filter.
0: no change
1: OFF
2: 10 Hz
3: 30 Hz
4: 100 Hz
5: 300 Hz
6: 1 kHz
7: 3 kHz
8: 10 kHz

The default value is 0 (no change).

Trig Type (0: no change)

Selects the trigger type.
You can set High, Low, or Off when the acquisition method is set to gate (level).
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low
6: Off

The default value is 0 (no change).

Trig Level (0)

Specifies the trigger level.
The selectable range of voltage is the measurable range determined by the measurement range. When you set the measurement range to “uSTR”,during measuring strain, the resolution is 100 µSTR and 10 µSTR for ±20000 µSTR/±10000 µSTR and ±5000 µSTR/±2000 µSTR/ ±1000 µSTR measurement ranges, or when you set the measurement range to “mV/V”, 100 uV, 10 uV, 1 uV for ±10 mV/V, ±5 mV/V /±2.5 mV/V / ±1 mV/V, and ±0.5 mV/V measurement ranges, respectively. When measuring voltage, the resolution is 1 mV, 10 mV, and 100 mV for ±100 mV/ ±200 mV/±500 mV, ±1 V/±2 V/±5 V, and ±10 V/±20 V measurement ranges, respectively.

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

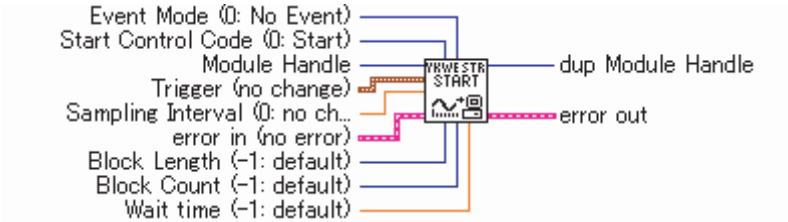
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE STRAIN Start.vi

This VI starts the strain module operation.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Trigger (no change)

Specifies settings of the trigger in a cluster.

The default value is no change.

U16 Trig Combination (0: no change)

Selects the trigger combination.
This value is valid when Trig Source is set to Internal.
0: no change
1: AND
2: OR

The default value is 0 (no change).

U16 Trig Source (0: no change)

Selects the trigger source.
0: no change
1: Internal
2: BUSTRG

The default value is 0 (no change).

I32 Pretrigger (-1: no change)

Specifies the amount of pretrigger.
The selectable range is 0 to record length – 2

The default value is –1 (no change).

U16 Overlapped Acquisition (0: no change)

Selects the overlapped acquisition.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

U32 Hold Off (0: no change)

Specifies the hold off time.
The selectable range is when Overlapped Acquisition is ON, 1 to 4,194,304. When OFF, record length to 4,194,304. When set to 0, no change.

The default value is 0. (no change).

U16 Time Base (0: no change)

Selects the time base.
0: no change
1: Internal
2: BUSCLK

The default value is 0. (no change).

U16 Channel Mode (0: no change)

Selects the number of measurement channels.
0: no change
1: 1CH
2: 2CH
3: 4CH

The default value is 0. (no change).

DBL Sampling Interval (0: no change)

Specifies the sampling interval.
The selectaboe range is 10 µs to 10 s (in 1 µs steps) during trigger/gate mode and 1 ms to 10 s (in 1 µs steps) during free run mode.

The default value is 0.0 (no change).

U16 Start Control Code (0: Start)

Selects the control code.
0: Start
1: Single Start
2: Start Event

The default setting is 0 (Start).

I32 Block Length (-1: default)

Specifies the block length.
This value is valid when Start Control Code is set to Start or Start Event.

The default value is –1.
For a description of the selectable range, see the user's manual for the module.

Block Count (-1: default)

Specifies the block count.
This value is valid when Start Control Code is set to Start or Start Event.
Specify the exponential part of the number of memory partitions (number of blocks) expressed as a power of 2.

The default value is –1.
For a description of the selectable range, see the user's manual for the module.

Event Mode (0: No Event)

Selects the acquisition operation mode.
This value is valid when Start Control Code is set to Start Event.
0: No Event
1: Block_Event
2: Stop Event

The default value is 0 (No Event).

Wait time (-1: default)

Specifies the wait time after the start operation.

The default value is –1.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

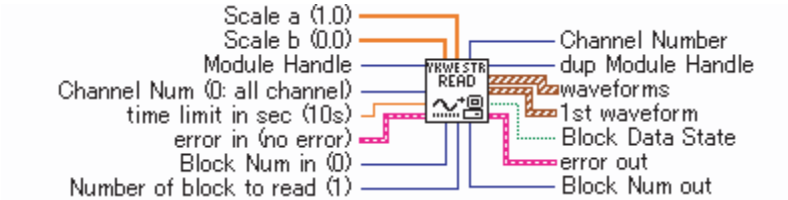
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE STRAIN Read Waveform.vi

This VI Reads the block data from the specified input channel of the strain module.

YKWE STRAIN Read Waveform.vi is polymorphic and can be set to output the following types of data.
Waveform (multiple channels)
Scale array (multiple channels)
Waveform (1 channel)
Scale array (1 channel)

Waveform (multiple channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL time limit in sec (10s)

Specifies the time limit for the read operation.
The actual time limit is time limit in sec + sampling interval × record length.

The default value is 10 s.

[DBL] Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

[DBL] Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

waveforms

Indicates the scaled data as an array of channels and blocks.
t0 indicates 0.
Y indicates the array of measured data.

1st waveform

Indicates the scaled data of the first block of the scaled data as an array of channels.
t0 indicates 0.
Y indicates the array of measured data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Channel Number

Indicates the number of channels of the loaded data.

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

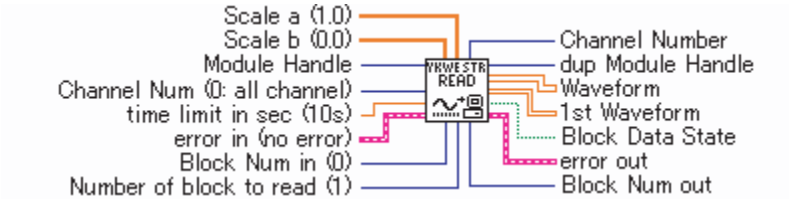
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale array (multiple channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL time limit in sec (10s)

Specifies the time limit for the read operation.
The actual time limit is time limit in sec + sampling interval × record length.

The default value is 10 s.

[DBL] Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

[DBL] Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveform

Indicates the scaled data as an array of channels and blocks.

1st Waveform

Indicates the scaled data of the first block of the scaled data as an array of channels.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Channel Number

Indicates the number of channels of the loaded data.

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

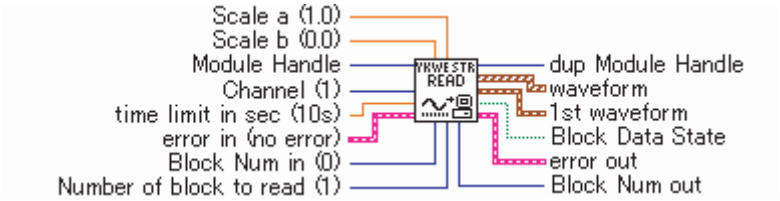
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform (1 channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL time limit in sec (10s)

Specifies the time limit for the read operation.
The actual time limit is time limit in sec + sampling interval × record length.

The default value is 10 s.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

waveform

Indicates the scaled data of the specified channels as an array.
t0 indicates 0.
Y indicates the array of measured data.

1st waveform

Indicates the scaled data of the specified channels.
t0 indicates 0.
Y indicates the array of measured data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

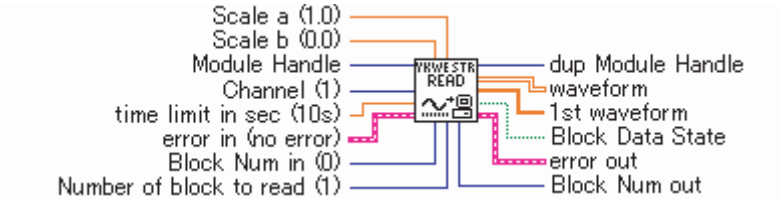
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale array (1 channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL time limit in sec (10s)

Specifies the time limit for the read operation.
The actual time limit is time limit in sec + sampling interval × record length.

The default value is 10 s.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

waveform

Indicates the scaled data of the specified channels as an array of blocks.

1st waveform

Indicates the scaled data of the first block of the scaled data of the specified channels as an array.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

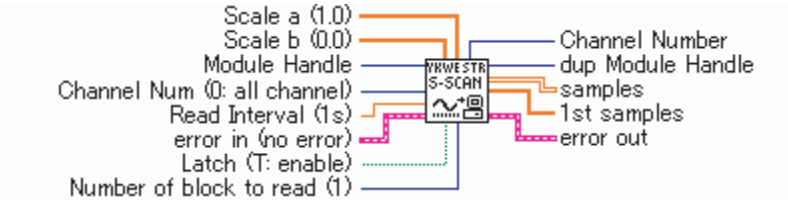
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE STRAIN Single Scan.vi

This VI reads the current data from the specified input channel of the strain module.

YKWE STRAIN Single Scan.vi is polymorphic and can be set to output the following types of data.
Scale array (multiple channels)
Waveform (multiple channels)
Scale array (1 channel)
Waveform (1 channel)

Scale array (multiple channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

[DBL] Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

[DBL] Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data as an array of channels and blocks.

1st samples

Indicates the scaled data of the first block of the scaled data as an array of the channels.

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

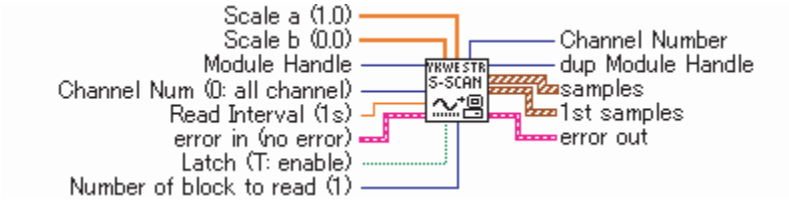
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform (multiple channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data as an array of channels and blocks.
t0 indicates 0.
Y indicates the array of measured data.

1st samples

Indicates the scaled data of the first block of the scaled data as an array of the channel.
t0 indicates 0.
Y indicates the array of measured data.

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

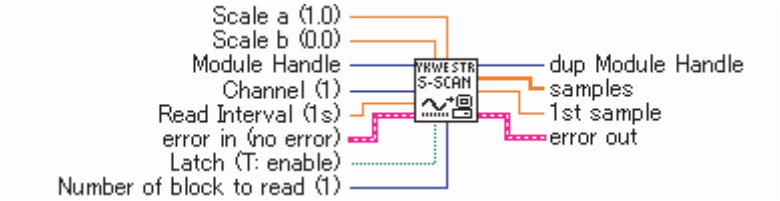
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale array (1 channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data of the specified channel as an array of blocks.

1st sample

Indicates the scaled data of the first block of the scaled data of the specified channel.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

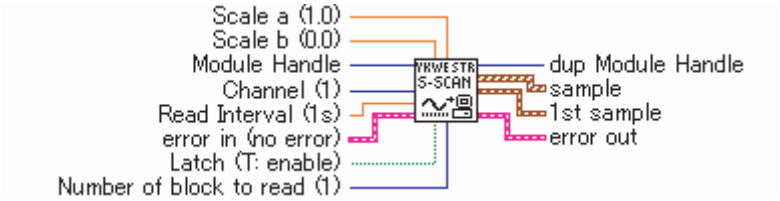
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform (1 channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data of the specified channel as an array of blocks.
t0 indicates 0.
Y indicates the array of measured data.

1st sample

Indicates the scaled data of the first block of the scaled data of the specified channel.
t0 indicates 0.
Y indicates the array of measured data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE STRAIN Clear.vi

This VI stops the strain module operation.

Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Stop Control Code (1: Stop)

Selects the control code to stop.
0: Stop Event
1: Stop

The default setting is 1 (Stop).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE STRAIN Config Acquisition.vi

This VI configures the input settings of the strain module.

I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Acquisition Mode (0: no change)

Selects the acquisition mode.
0: no change
1: Triggered
2: Free Run
3: Gate (Level)
4: Gate (Edge)

The default value is 0 (no change).

I32 Record Length (-1: no change)

Specifies the record length.
When the acquisition method is trigger mode or gate (level) mode, memory partition is valid and you can specify the points of the measured value written in 1 block of the acquisition memory. However, the following selectable range has restriction of “measurement cycle × record length is greater than or equal to 5 ms.” Please notice it.

- Trigger Mode
  The selectable range is “2 to 4,194,304 (4M)/(number of memory partition × number of measurement channels)” points.
- Gate (Level) Mode
  The selectable range is “2 to 4,194,304 (4M)/number of measurement channels” points.
- Free Run Mode
  The selectable range is “1 to 4,194,304 (4M)/number of measurement channels” points.

The default value is –1 (no change).

I32 No. of Acquisitions (-1: no change)

Specifies the number of acquisition.
You can specify the number of times to acquire the data when using the trigger or gate mode.
The selectable range is 1 to 32,768.

- If the number of acquisitions is greater than the number of memory partitions in the trigger mode, only the last “number of memory partitions”,blocks of measured data are saved. In addition, you can only specify 1 for the number of acquisitions if the number of memory partitions is set to 1.
- If (the number of acquisitions × record length × the number of measurement channels) is “4M” points or less, and the number of acquisitions exceeds 256, then only the last 256 blocks of measured data are saved. If (the number of acquisitions × record length × the number of measurement channels) exceeds “4M” points, only the last “4M/(record length × the number of measurement channels)”,blocks of measured data are saved. (When the number of measurement channels is 3, it is considered to be 4.)
- If the specified record length is greater than or equal to “the maximum record length/2”,in the gate mode, you can only specify 1 for the number of acquisitions.

The default value is -1 (no change).

I16 Memory Partition (0: no change)

Selects the memory partition.
During the trigger mode, you can divide the acquisition memory into multiple blocks and acquire the data to the memory blocks in order every time the trigger occurs. When using memory partitions, if the measurement is stopped before reaching the number of acquisitions, the data in the memory block that was being written at that time are invalid.
0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256

The default value is 0 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Acquisition Mode

Indicates the specified acquisition mode.
1: Triggered
2: Free Run
3: Gate (Level)
4: Gate (Edge)

Record Length

Indicates the specified record length.

No. of Acquisitions

Indicates the specified number of acquisitions.

Memory Partition

Indicates the specified number of memory partition.
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

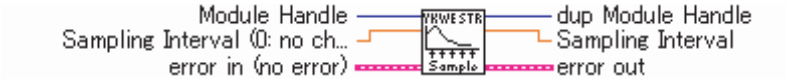
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE STRAIN Config Sampling Interval.vi

This VI configures the sampling interval settings of the strain module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

DBL Sampling Interval (0: no change)

Specifies the sampling interval.
The selectaboe range is 10 µs to 10 s (in 1 µs steps) during trigger/gate mode and 1 ms to 10 s (in 1 µs steps) during free run mode.

The default value is 0.0 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

TF status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

abc source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

DBL Sampling Interval

Indicates the specified sampling interval.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

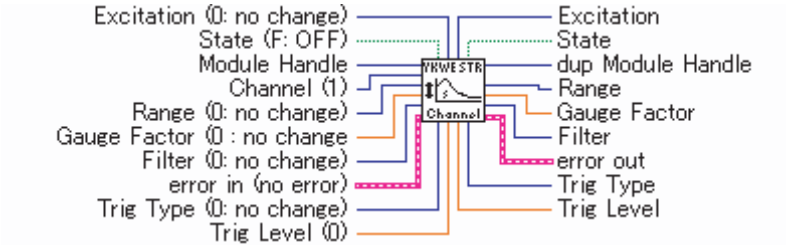
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE STRAIN Config Channel.vi

This VI configures the input channel settings of the strain module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

TF State (F: OFF)

Selects measurement ON/OFF.
T: ON
F: OFF

The default value is F (OFF).

U16 Range (0: no change)

Selects the measurement range.
0: no change
1: 1000 uSTR
2: 2000 uSTR
3: 5000 uSTR
4: 10000 uSTR
5: 20000 uSTR
6: 0.5 mV/V
7: 1 mV/V
8: 2.5 mV/V
9: 5 mV/V
10: 10 mV/V
11: 100 mV
12: 200 mV
13: 500 mV
14: 1 V
15: 2 V
16: 5 V
17: 10 V
18: 20 V

The default value is 0 (no change).

U16 Excitation (0: no change)

Selects the bridge voltage.
You can select “OFF”,when the measurement range is set to voltage measurement.
0: no change
1: 2 V
2: 5 V
3: 10 V
4: OFF

The default value is 0 (no change).

DBL Gauge Factor (0: no change)

Specifies the gauge factor.
The selectable range is 1.800 to 2.300 (in 0.001 steps).

The default value is 0 (no change).

U16 Filter (0: no change)

Selects the frequency of the input filter.
0: no change
1: OFF
2: 10 Hz
3: 30 Hz
4: 100 Hz
5: 300 Hz
6: 1 kHz
7: 3 kHz
8: 10 kHz

The default value is 0 (no change).

U16 Trig Type (0: no change)

Selects the trigger type.
You can set High, Low, or Off when the acquisition method is set to gate (level).
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low
6: Off

The default value is 0 (no change).

DBL Trig Level (0)

Specifies the trigger level.
The selectable range of voltage is the measurable range determined by the measurement range. When you set the measurement range to “uSTR”,during measuring strain, the resolution is 100 µSTR and 10 µSTR for ±20000 µSTR/±10000 µSTR and ±5000 µSTR/±2000 µSTR/±1000 µSTR measurement ranges, or when you set the measurement range to “mV/V”, 100 uV, 10 uV, 1 uV for ±10 mV/V, ±5 mV/V /±2.5 mV/V / ±1 mV/V, and ±0.5 mV/V measurement ranges, respectively. When measuring voltage, the resolution is 1 mV, 10 mV, and 100 mV for ±100 mV/±200 mV/±500 mV, ±1 V/ ±2 V/±5 V, and ±10 V/±20 V measurement ranges, respectively.

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

State

Indicates the specified ON/OFF of measurement channel.
T: ON
F: OFF

Range

Indicates the specified measurement range.
1: 1000 uSTR
2: 2000 uSTR
3: 5000 uSTR
4: 10000 uSTR
5: 20000 uSTR
6: 0.5 mV/V
7: 1 mV/V
8: 2.5 mV/V
9: 5 mV/V
10: 10 mV/V
11: 100 mV
12: 200 mV
13: 500 mV
14: 1 V
15: 2 V
16: 5 V
17: 10 V
18: 20 V

Excitation

Indicates the specified bridge voltage.
1: 2 V
2: 5 V
3: 10 V
4: OFF

Gauge Factor

Indicates the specified gauge factor.

Filter

Indicates the specified frequency of the input filter.
1: OFF
2: 10 Hz
3: 30 Hz
4: 100 Hz
5: 300 Hz
6: 1 kHz
7: 3 kHz
8: 10 kHz

Trig Type

Indicates the specified trigger type.
1: Rise
2: Fall
3: Both
4: High
5: Low
6: Off

Trig Level

Indicates the specified trigger level.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

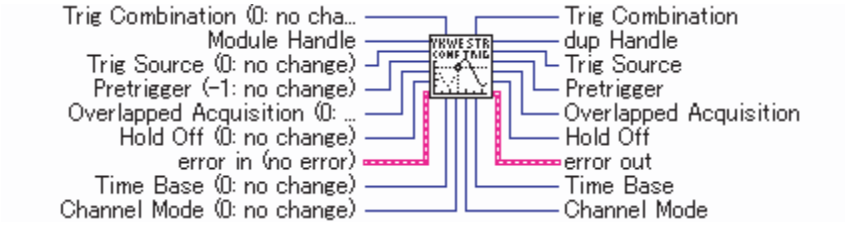
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE STRAIN Config Trigger.vi

This VI configures the trigger settings of the strain module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Trig Combination (0: no change)

Selects the trigger combination.
This value is valid when Trig Source is set to Internal.
0: no change
1: AND
2: OR

The default value is 0 (no change).

U16 Trig Source (0: no change)

Selects the trigger source.
0: no change
1: Internal
2: BUSTRG

The default value is 0 (no change).

I32 Pretrigger (-1: no change)

Specifies the amount of pretrigger.
The selectable range is 0 to record length – 2.

The default value is –1 (no change).

U16 Overlapped Acquisition (0: no change)

Selects the overlapped acquisition.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

U32 Hold Off (0: no change)

Specifies the hold off time.
The selectable range is when Overlapped Acquisition is ON, 1 to 4,194,304. When OFF, record length to 4,194,304. When set to 0, no change.

The default value is 0. (no change).

Time Base (0: no change)

Selects the time base.
0: no change
1: Internal
2: BUSCLK

The default value is 0. (no change).

Channel Mode (0: no change)

Selects the number of measurement channels.
0: no change
1: 1CH
2: 2CH
3: 4CH

The default value is 0. (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Trig Combination

Indicates the specified trigger combination.
1: AND
2: OR

Trig Source

Indicates the specified trigger source.
1: Internal
2: BUSTRG

Pretrigger

Indicates the specified amount of pretrigger.

Overlapped Acquisition

Indicates the specified overlapped acquisition.
1: OFF
2: ON

Hold Off

Indicates the specified hold off time.

Time Base

Indicates the specified time base.
1: Internal
2: BUSCLK

Channel Mode

Indicates the specified measurement channels.
1: 1CH
2: 2CH
3: 4CH

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

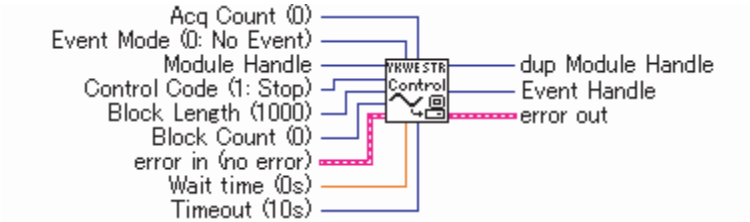
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE STRAIN Control.vi

This VI controls the strain module operation.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Control Code (1: Stop)

Selects the control code.
0: Start
1: Stop
2: Latch
3: Single Start
4: Start Event
5: Stop Event
6: Balance: Execute balancing
7: Shunt: Execute the shunt calibration
8: Get X1: Get the current measured value and store the value in X1.
9: Get X2: Get the current measured value and store the value in X2.

The default value is 1 (Stop).

I32 Block Length (1000)

Specifies the block length.
This value is valid when Control Code is set to Start, Single Start or Start Event.
For a description of the selectable range, see the user's manual for the module.

The default value is 1000.

U8 Block Count (0)

Specifies the block count.
This value is valid when Control Code is set to Start or Start Event.
Specify the exponential part of the number of memory partitions (number of blocks) expressed as a power of 2.
For a description of the selectable range, see the user's manual for the module.

The default value is 0.

DBL Wait time (0.0)

Specifies the wait time after the start operation.

The default value is 0.0.

Event Mode (0: No Event)

Selects the acquisition operation mode.
This value is valid when Control Code is set to Start Event.
0: No Event
1: Block_Event
2: Stop Event

The default value is 0 (No Event).

Acq Count (0)

Specifies the acquisition count.
This value is valid when Control Code is set to 4 (Start Event).
The data acquisition operation terminates after acquiring the data amount specified by this value. If the value 0 is specified, measurement continues until the user issues an abort command.

The default value is 0.

Timeout (10s)

Sets the timeout time of single start.
This value is valid when Control Code is set to 3 (Single Start).
The selectable range is 1 to 32767 s.

The default value is 10 s.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Event Handle

Indicates the event handle.
This value is valid when Control Code is set to 4 (Start Event).

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

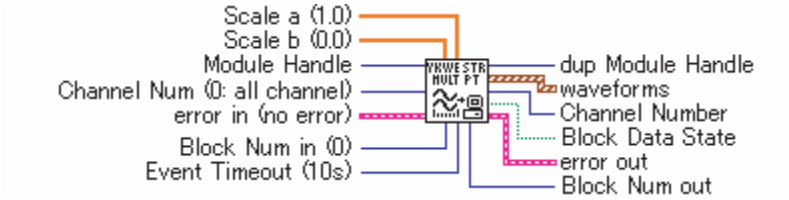
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE STRAIN Read Block Data.vi

This VI reads block data from the specified channels of the strain module.

YKWE STRAIN Read Waveform.vi is polymorphic and can be set to output the following types of data.
Waveform (multiple channels)
Scale array (multiple channels)
Waveform (1 channel)
Scale array (1 channel)

Waveform (multiple channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

I32 Event Timeout (10s)

Specifies the wait time until receiving an event in unit of ms.
This value is value when waiting for an event.

The default value is 10 s.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

waveforms

Indicates the scaled data as an array of channels.
t0 indicates 0.
Y indicates the array of measured data.

Channel Number

Indicates the number of channels of the loaded data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

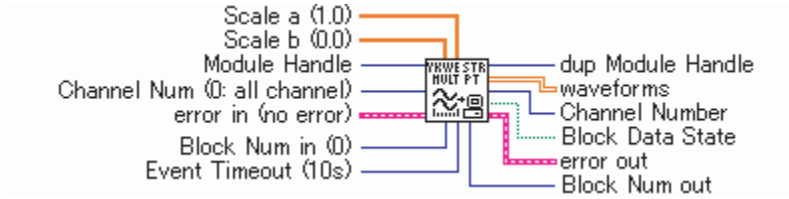
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale array (multiple channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

[DBL] Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

[DBL] Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

I32 Event Timeout (10s)

Specifies the wait time until receiving an event in unit of ms.
This value is value when waiting for an event.

The default value is 10 s.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

waveforms

Indicates the scaled data as an array of channels.

Channel Number

Indicates the number of channels of the loaded data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

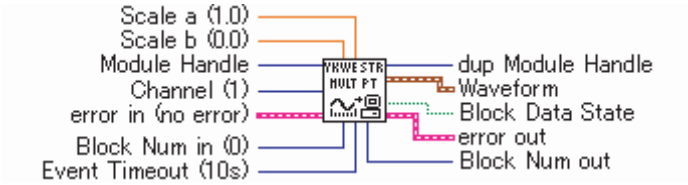
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform (1 channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

I32 Event Timeout (10s)

Specifies the wait time until receiving an event in unit of ms.
This value is value when waiting for an event.

The default value is 10 s.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveform

Indicates the scaled data of the specified channels.
t0 indicates 0.
Y indicates the array of measured data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

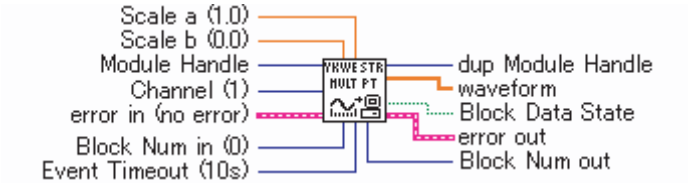
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale array (1 channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

I32 Event Timeout (10s)

Specifies the wait time until receiving an event in unit of ms.
This value is value when waiting for an event.

The default value is 10 s.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

waveform

Indicates the scaled data of the specified channels as an array.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

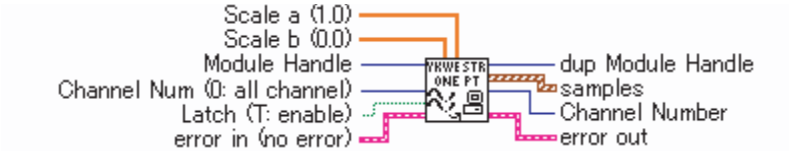
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE STRAIN Read Current Data.vi

This VI reads current data from the specified channels of the strain module

YKWE STRAIN Single Scan.vi is polymorphic and can be set to output the following types of data.
Waveform (multiple channels)
Scale array (multiple channels)
Waveform (1 channel)
Scale array (1 channel)

Waveform (multiple channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data as an array of channels.
t0 indicates 0.
Y indicates the array of measured data.

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

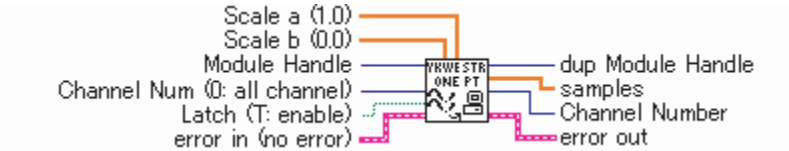
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale array (multiple channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data as an array of channels.

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

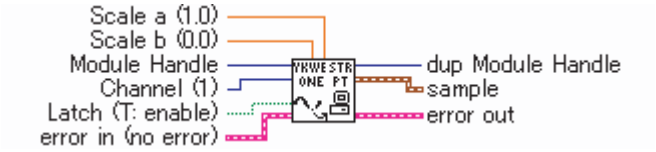
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform (1 channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

sample

Indicates the scaled data of the specified channel.
t0 indicates 0.
Y indicates the array of measured data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

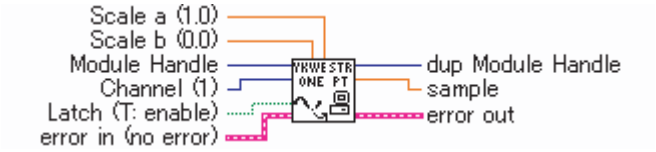
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale array (1 channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

sample

Indicates the scaled data of the specified channel.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE STRAIN Read Balance.vi

This VI queries result of the balance of the strain module.

Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Channel (0: All Channel)

Specifies the channel numbers to be queried.
If the modules are linked, specify a serial number from the parent module.
0: All Channel

The default value is 0 (All Channel).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Balance Status

Indicates the result which executed balance.
0: Complete (Completed the balance)
1: Fail (Balance failure)

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

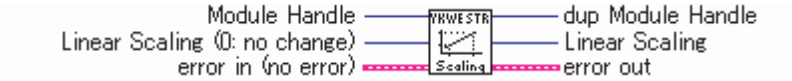
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE STRAIN Config Linear Scaling.vi

This VI configures the linear scaling method settings of the strain module.



Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Linear Scaling (0: no change)

Selects the linear scaling method.
0: no change
1: Off
2: Ax+B
3: P1–P2
4: Shunt

The default value is 0 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Linear Scaling

Indicates the specified linear scaling method.
1: Off
2: Ax+B
3: P1–P2
4: Shunt

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

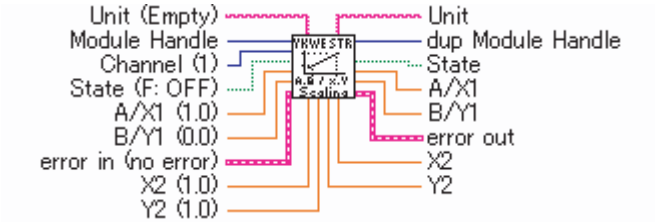
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE STRAIN Config Linear Scaling Channel.vi

This VI configures the linear scaling settings for the specified channels of the strain module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

TF State (F: OFF)

Selects ON/OFF of the linear scaling.
T: ON
F: OFF

The default value is F (OFF).

DBL A/X1 (1.0)

Specifies the parameter A or X1.
Specifies the A of Ax+B when linear scaling method is Ax+B, or specifies the X1 when linear scaling method is P1-P2.
The selectable range is –1e30 to 1e30.

The default value is 1.0.

DBL B/Y1 (0.0)

Specifies the parameter B or Y1.
Specifies the B of Ax+B when linear scaling method is Ax+B, or specifies the Y1 when linear scaling method is P1-P2.
The selectable range is –1e30 to 1e30.

The default value is 0.0.

DBL X2 (1.0)

Specifies the parameter X2 (X2 of P1-P2 of the linear scaling method).
This value is valid when the linear scaling method is set to P1-P2.
The selectable range is –1e30 to 1e30.

The default value is 1.0.

Y2 (1.0)

Specifies the parameter Y2 (Y2 of P1-P2 of the linear scaling method).
This value is valid when the linear scaling method is set to P1-P2.
The selectable range is –1e30 to 1e30.

The default value is 1.0.

Unit (Empty)

Specifies the unit string when the linear scaling is executed.
Specifies the character string to 16 characters.

The default value is a blank.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

State

Indicates the specified ON/OFF of the linear scaling.
T: ON
F: OFF

A/X1

Indicates the specified parameter A or X1.

B/Y1

Indicates the specified parameter B or Y1.

X2

Indicates the specified parameter X2.

Y2

Indicates the specified parameter Y2.

Unit

Indicates the specified unit string.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

5.6 Analog Output VI

Analog output VIs allow you to configure and output signals on the following modules.

WE7121	10 MHz Function Generator Module
WE7281/WE7282	4-CH, 100kS/s D/A Module

- Simple Level VIs

YKWE AO Generate Waveform.vi	Generates signals of a specified waveform at a specified frequency and amplitude to a specified output channel.
YKWE AO Generate Waveforms.vi	Generates signals of a specified waveform at a specified frequency and amplitude to all output channels.

- Intermediate Level VIs

YKWE AO Config.vi	Configures the analog output for the specified channel.
YKWE AO Write.vi	Sets the arbitrary waveform to be output.
YKWE AO Start.vi	Starts the analog output operation. This VI sets the output mode and starts the analog output operation.
YKWE AO Clear.vi	Stops the analog output operation.

- Advanced Level VIs

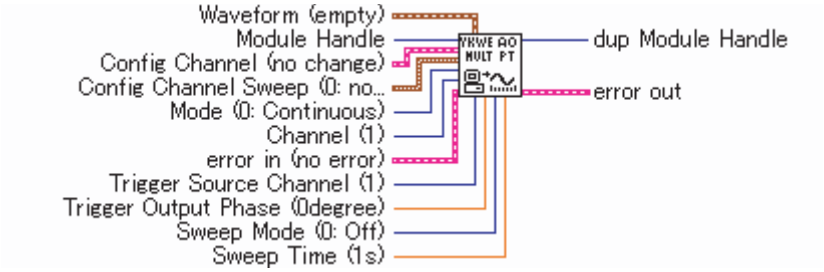
YKWE AO Config Channel.vi	Sets the analog output of a specified channel.(Function, Frequency, Phase, Amplitude, Offset, Duty, Invert, State, Range, Trigger, Trigger Frequency, and Burst)
YKWE AO Config Channel Sweep.vi	Configures sleep mode settings of a specified channel. (Mode, Frequency, Amplitude, Duty, and Pattern Mode)
YKWE AO Config Trigger.vi	Configures trigger settings. (Trigger Source Channel and Trigger Output Phase)
YKWE AO Config Sweep.vi	Configures sweep settings. (Sweep Mode and Sweep Time)
YKWE AO Config Link.vi	Sets the link between modules.
YKWE AO Config DC.vi	Configures the DC mode settings of a specified channel. (Range and Output Value)
YKWE AO Control.vi	Performs analog output start/stop, phase synchronization and trigger operation.
YKWE AO Write Data.vi	Sets the arbitrary waveform data of a specified channel.
YKWE AO Write Data AG.vi	Sets the arbitrary waveform data in DC mode of the WE7281.
YKWE AO WVF Read.vi	Reads WE7281 format data from a WVF or CSV file.
YKWE AO Config AG.vi	Configures AG mode settings of the WE7281.
YKWE AO Config Channel AG.vi	Configures AG mode channel settings of the WE7281/WE7282.

YKWE AO Generate Waveform.vi

This VI generates a waveform of specified settings to a single output channel.
FG mode is enabled on the WE7281/WE7282.

YKWE AO Generate Waveform.vi is polymorphic and can set the following types of data.
Waveform
Scale array

Waveform



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the channel number.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

Config Channel (no change)

Specifies settings of the analog output module in a cluster.

The default value is no change.

Function (0: nochange)

Selects the output waveform from the following:

0: no change
1: Sine: Sine wave
2: Square: Square wave with the duty cycle fixed to 50%
3: Ramp: Ramp wave
4: Triangle: Triangular wave with the symmetry fixed to 50%
5: Pulse: Pulse wave with the duty cycle between 0 and 100%
6: Arbitrary: Arbitrary wave
7: DC

The default value is 0 (no change).

Frequency (1kHz)

Specifies the frequency of the output waveform.

Selectable range for the WE7121:

1 uHz to 10 MHz

For the WE7281/WE7282:

1 mHz to 20 kHz

The default value is 1 kHz.

Phase (0deg)

Specifies the phase of the output waveform.

Selectable range for the WE7121:

–10000 to 10000

For the WE7281/WE7282:

–360 to 360

The default value is 0.

Amplitude (2Vp-p)

Specifies the amplitude of the output waveform.

Selectable range for the WE7121:

0.02 to 20 V

For the WE7281/WE7282:

0 to 20 Vp-p

The default value is 20 Vp-p.

Offset (0V)

Specifies the offset voltage of the output waveform.

The selectable range is from –10 to 10 V.

The default value is 0 V.

DBL Duty (50%)

Specifies the duty cycle of the output waveform.
The selectable range is from 0 to 100%.

The default value is 50%.

TF Invert (F: OFF)

Selects the inversion of the output waveform.
When set to ON, the output waveform is inverted.

The default value is OFF.

TF State (F: OFF)

Turns ON/OFF the output.
T: ON
F: OFF

The default value is OFF.

Note

This setting is valid only for the WE7281/WE7282.

U16 Range (3: 10V)

Selects the output range.
0: 1 V
1: 2 V
2: 5 V
3: 10 V

The default value is 3 (10 V).

Note

This setting is valid only for the WE7281/WE7282.

U16 Trigger (0: Internal)

Selects the trigger signal when the output mode is set to trigger oscillation.
0: Internal
1: BUSTRG

The default value is 0 (Internal).

Note

This setting is valid when the output mode is set to trigger oscillation on the WE7121.

DBL Trigger Frequency (100Hz)

Specifies the trigger frequency when the output mode is set to trigger oscillation and the trigger signal is set to internal trigger.
The selectable range is 1 mHz to 50 kHz.

The default value is 100 Hz.

Note

This setting is valid when the output mode is set to trigger oscillation and the trigger signal is set to internal trigger on the WE7121.

Burst (5)

Specifies the burst count.
The selectable range is from 1 to 65535.

The default value is 5.

Note

This setting is valid when the output mode is set to trigger oscillation on the WE7121.

Config Channel Sweep (0: no change)

Specifies sweep settings of the analog output module in a cluster.

The default value is no change.

Note

This setting is valid only for the WE7281/WE7282.

Sweep (0: no change) Select the sweep

Selects the sweep target.
0: no change
1: Off
2: Frequency
3: Amplitude
4: Duty
5: Frequency & Amplitude

The default value is 0 (no change).

Start Frequency (20Hz)

Specifies the sweep start frequency of the output waveform.
The selectable range is from 1 mHz to 20 kHz.

The default value is 20 Hz.

End Frequency (20kHz)

Specifies the sweep end frequency of the output waveform.
The selectable range is from 1 mHz to 20 kHz.

The default value is 20 kHz.

Start Amplitude (0Vp-p)

Specifies the sweep start amplitude of the output waveform.
The selectable range is from 0 to 20 Vp-p.

The default value is 0 Vp-p.

End Amplitude (2Vp-p)

Specifies the sweep end amplitude of the output waveform.
The selectable range is from 0 to 20 Vp-p.

The default value is 2 Vp-p.

DBL Start Duty (10%)

Specifies the sweep start duty cycle of the output waveform.
The selectable range is from 0 to 100%.

The default value is 10%.

DBL End Duty (90%)

Specifies the sweep end duty cycle of the output waveform.
The selectable range is from 0 to 100%.

The default value is 90%.

U16 Freq Pattern (0: Linear)

Selects the frequency sweep pattern of the output waveform.
0: Linear
1: Log

The default value is 0 (Linear).

U16 Ampl Pattern (0: Linear)

Selects the amplitude sweep pattern of the output waveform.
0: Linear
1: Log

The default value is 0 (Linear).

U16 Duty Pattern (0: Linear)

Selects the duty cycle sweep pattern of the output waveform.
0: Linear
1: Log

The default value is 0 (Linear).

U16 Trigger Source Channel (1)

Specifies the trigger source channel.

The default value is 1 (CH1).

Note

This setting is valid only for the WE7281/WE7282.

DBL Trigger Output Phase (0degree)

Specifies the trigger output timing.
The selectable range is from –360 to +360 degrees.

The default value is 0 degrees.

Note

This setting is valid only for the WE7281/WE7282.

Sweep Mode (0: Off)

Selects the sweep mode.
0: Off
1: Repeat
2: Single
3: Single & Hold

The default value is 0 (Off).

Note

This setting is valid only for the WE7281/WE7282.

Sweep Time (1s)

Specifies the sweep time.
The selectable range is 1 to 1000 s.

The default value is 1 s.

Note

This setting is valid only for the WE7281/WE7282.

Waveform (empty)

Specifies the arbitrary waveform data.

The default value is empty.

Mode (0: Continuous)

Selects the output mode.
0: Cont: Continuous oscillation
1: Trigger: Trigger oscillation
2: Gate: Gate oscillation

The default value is 0 (Cont).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

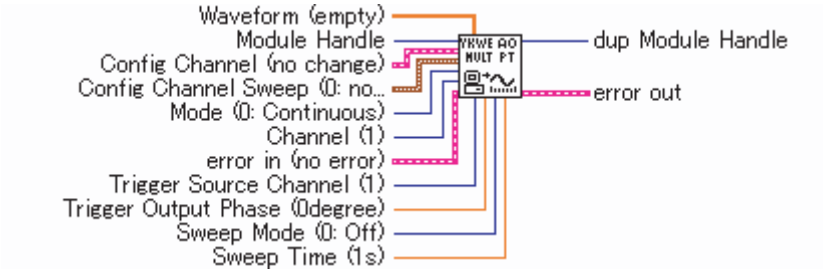
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale Array



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the channel number.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

Config Channel (no change)

Specifies settings of the analog output module in a cluster.

The default value is no change.

U16 Function (0: nochange)

Selects the output waveform from the following:
0: no change
1: Sine: Sine wave
2: Square: Square wave with the duty cycle fixed to 50%
3: Ramp: Ramp wave
4: Triangle: Triangular wave with the symmetry fixed to 50%
5: Pulse: Pulse wave with the duty cycle between 0 and 100%
6: Arbitrary: Arbitrary wave
7: DC

The default value is 0 (no change).

DBL Frequency (1kHz)

Specifies the frequency of the output waveform.
Selectable range for the WE7121:
1 uHz to 10 MHz
For the WE7281/WE7282:
1 mHz to 20 kHz

The default value is 1 kHz.

DBL Phase (0deg)

Specifies the phase of the output waveform.
Selectable range for the WE7121:
–10000 to 10000
For the WE7281/WE7282:
–360 to 360

The default value is 0.

DBL Amplitude (2Vp-p)

Specifies the amplitude of the output waveform.
Selectable range for the WE7121:
0.02 to 20 V
For the WE7281/WE7282:
0 to 20 Vp-p

The default value is 20 Vp-p.

DBL Offset (0V)

Specifies the offset voltage of the output waveform.
The selectable range is from –10 to 10 V.

The default value is 0 V.

DBL Duty (50%)

Specifies the duty cycle of the output waveform.
The selectable range is from 0 to 100%.

The default value is 50%.

TF Invert (F: OFF)

Selects the inversion of the output waveform.
When set to ON, the output waveform is inverted.

The default value is OFF.

TF State (F: OFF)

Turns ON/OFF the output.
T: ON
F: OFF

The default value is OFF.

Note

This setting is valid only for the WE7281/WE7282.

U16 Range (3: 10V)

Selects the output range.
0: 1 V
1: 2 V
2: 5 V
3: 10 V

The default value is 0 (1 V).

Note

This setting is valid only for the WE7281/WE7282.

U16 Trigger (0: Internal)

Selects the trigger signal when the output mode is set to trigger oscillation.
0: Internal
1: BUSTRG

The default value is 0 (Internal).

Note

This setting is valid when the output mode is set to trigger oscillation on the WE7121.

DBL Trigger Frequency (100Hz)

Specifies the trigger frequency when the output mode is set to trigger oscillation and the trigger signal is set to internal trigger.
The selectable range is 1 mHz to 50 kHz.

The default value is 100 Hz.

Note

This setting is valid when the output mode is set to trigger oscillation and the trigger signal is set to internal trigger on the WE7121.

U16 Burst (5)

Specifies the burst count.
The selectable range is from 1 to 65535.

The default value is 5.

Note

This setting is valid when the output mode is set to trigger oscillation on the WE7121.

Config Channel Sweep (0: no change)

Specifies sweep settings of the analog output module in a cluster.

The default value is no change.

Note

This setting is valid only for the WE7281/WE7282.

Sweep (0: no change) Select the sweep

Selects the sweep target.
0: no change
1: Off
2: Frequency
3: Amplitude
4: Duty
5: Frequency & Amplitude

The default value is 0 (no change).

Start Frequency (20Hz)

Specifies the sweep start frequency of the output waveform.
The selectable range is from 1 mHz to 20 kHz.

The default value is 20 Hz.

End Frequency (20kHz)

Specifies the sweep end frequency of the output waveform.
The selectable range is from 1 mHz to 20 kHz.

The default value is 20 kHz.

Start Amplitude (0Vp-p)

Specifies the sweep start amplitude of the output waveform.
The selectable range is from 0 to 20 Vp-p.

The default value is 0 Vp-p.

End Amplitude (2Vp-p)

Specifies the sweep end amplitude of the output waveform.
The selectable range is from 0 to 20 Vp-p.

The default value is 2 Vp-p.

Start Duty (10%)

Specifies the sweep start duty cycle of the output waveform.
The selectable range is from 0 to 100%.

The default value is 10%.

End Duty (90%)

Specifies the sweep end duty cycle of the output waveform.
The selectable range is from 0 to 100%.

The default value is 90%.

U16 Freq Pattern (0: Linear)

Selects the frequency sweep pattern of the output waveform.
0: Linear
1: Log

The default value is 0 (Linear).

U16 Ampl Pattern (0: Linear)

Selects the amplitude sweep pattern of the output waveform.
0: Linear
1: Log

The default value is 0 (Linear).

U16 Duty Pattern (0: Linear)

Selects the duty cycle sweep pattern of the output waveform.
0: Linear
1: Log

The default value is 0 (Linear).

U16 Trigger Source Channel (1)

Specifies the trigger source channel.

The default value is 1 (CH1).

Note

This setting is valid only for the WE7281/WE7282.

DBL Trigger Output Phase (0degree)

Specifies the trigger output timing.
The selectable range is from –360 to +360 degrees.

The default value is 0 degrees.

Note

This setting is valid only for the WE7281/WE7282.

U16 Sweep Mode (0: Off)

Selects the sweep mode.
0: Off
1: Repeat
2: Single
3: Single & Hold

The default value is 0 (Off).

Note

This setting is valid only for the WE7281/WE7282.

Sweep Time (1s)

Specifies the sweep time.
The selectable range is 1 to 1000 s.

The default value is 1 s.

Note

This setting is valid only for the WE7281/WE7282.

Waveform (empty)

Specifies the arbitrary waveform data.

The default value is empty.

Mode (0: Continuous)

Selects the output mode.
0: Cont: Continuous oscillation
1: Trigger: Trigger oscillation
2: Gate: Gate oscillation

The default value is 0 (Cont).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

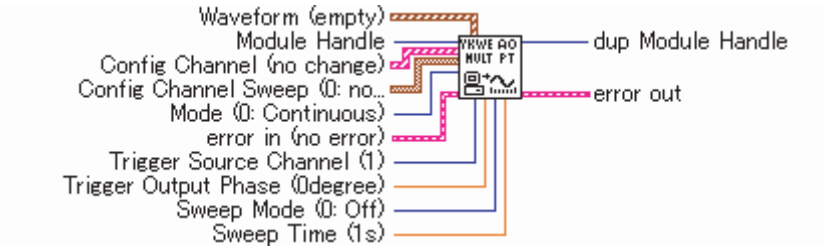
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE AO Generate Waveforms.vi

This VI generates a waveform of specified settings to all output channels.
FG mode is enabled on the WE7281/WE7282.

YKWE AO Generate Waveforms.vi is polymorphic and can set the following types of data.
Waveform
Scale array

Waveform



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Config Channel (no change)

Sets the function, frequency, phase, amplitude, offset, duty cycle, waveform inversion, ON/OFF, and range of each channel in an array of clusters.
When the function of element 0 is 0, the following elements (1 and beyond) are set to respective channels. When the function of element 0 is non-zero, the settings of element 0 are applied to all channels.

The default value is no change.

U16 Function (0: nochange)

Selects the output waveform from the following:
0: no change
1: Sine: Sine wave
2: Square: Square wave with the duty cycle fixed to 50%
3: Ramp: Ramp wave
4: Triangle: Triangular wave with the symmetry fixed to 50%
5: Pulse: Pulse wave with the duty cycle between 0 and 100%
6: Arbitrary: Arbitrary wave
7: DC

The default value is 0 (no change).

DBL Frequency (1kHz)

Specifies the frequency of the output waveform.
Selectable range for the WE7121:
1 uHz to 10 MHz
For the WE7281/WE7282:
1 mHz to 20 kHz

The default value is 1 kHz.

DBL Phase (0deg)

Specifies the phase of the output waveform.
Selectable range for the WE7121:
–10000 to 10000
For the WE7281/WE7282:
–360 to 360

The default value is 0.

DBL Amplitude (2Vp-p)

Specifies the amplitude of the output waveform.
Selectable range for the WE7121:
0.02 to 20 V
For the WE7281/WE7282:
0 to 20 Vp-p

The default value is 20 Vp-p.

DBL Offset (0V)

Specifies the offset voltage of the output waveform.
The selectable range is from –10 to 10 V.

The default value is 0 V.

DBL Duty (50%)

Specifies the duty cycle of the output waveform.
The selectable range is from 0 to 100%.

The default value is 50%.

TF Invert (F: OFF)

Selects the inversion of the output waveform.
When set to ON, the output waveform is inverted.

The default value is OFF.

TF State (F: OFF)

Turns ON/OFF the output.
T: ON
F: OFF

The default value is OFF.

Note

This setting is valid only for the WE7281/WE7282.

U16 Range (3: 10V)

Selects the output range.
0: 1 V
1: 2 V
2: 5 V
3: 10 V

The default value is 0 (1 V).

Note

This setting is valid only for the WE7281/WE7282.

U16 Trigger (0: Internal)

Selects the trigger signal when the output mode is set to trigger oscillation.
0: Internal
1: BUSTRG

The default value is 0 (Internal).

Note

This setting is valid when the output mode is set to trigger oscillation on the WE7121.

DBL Trigger Frequency (100Hz)

Specifies the trigger frequency when the output mode is set to trigger oscillation and the trigger signal is set to internal trigger.
The selectable range is 1 mHz to 50 kHz.

The default value is 100 Hz.

Note

This setting is valid when the output mode is set to trigger oscillation and the trigger signal is set to internal trigger on the WE7121.

U16 Burst (5)

Specifies the burst count.
The selectable range is from 1 to 65535.

The default value is 5.

Note

This setting is valid when the output mode is set to trigger oscillation on the WE7121.

Config Channel Sweep (0: no change)

Sets the sweep of each channel in an array of clusters.
When the function of element 0 is 0, the following elements (1 and beyond) are set to respective channels. When the function of element 0 is non-zero, the settings of element 0 are applied to all channels.

The default value is no change.

Note

This setting is valid only for the WE7281/WE7282.

Sweep (0: no change)

Selects the sweep target.
0: no change
1: Off
2: Frequency
3: Amplitude
4: Duty
5: Frequency & Amplitude

The default value is 0 (no change).

Start Frequency (20Hz)

Specifies the sweep start frequency of the output waveform.
The selectable range is from 1 mHz to 20 kHz.

The default value is 20 Hz.

End Frequency (20kHz)

Specifies the sweep end frequency of the output waveform.
The selectable range is from 1 mHz to 20 kHz.

The default value is 20 kHz.

Start Amplitude (0Vp-p)

Specifies the sweep start amplitude of the output waveform.
The selectable range is from 0 to 20 Vp-p.

The default value is 0 Vp-p.

End Amplitude (2Vp-p)

Specifies the sweep end amplitude of the output waveform.
The selectable range is from 0 to 20 Vp-p.

The default value is 2 Vp-p.

Start Duty (10%)

Specifies the sweep start duty cycle of the output waveform.
The selectable range is from 0 to 100%.

The default value is 10%.

DBL End Duty (90%)

Specifies the sweep end duty cycle of the output waveform.
The selectable range is from 0 to 100%.

The default value is 90%.

U16 Freq Pattern (0: Linear)

Selects the frequency sweep pattern of the output waveform.
0: Linear
1: Log

The default value is 0 (Linear).

U16 Ampl Pattern (0: Linear)

Selects the amplitude sweep pattern of the output waveform.
0: Linear
1: Log

The default value is 0 (Linear).

U16 Duty Pattern (0: Linear)

Selects the duty cycle sweep pattern of the output waveform.
0: Linear
1: Log

The default value is 0 (Linear).

U16 Trigger Source Channel (1)

Specifies the trigger source channel.

The default value is 1 (CH1).

Note

This setting is valid only for the WE7281/WE7282.

DBL Trigger Output Phase (0degree)

Specifies the trigger output timing.
The selectable range is from –360 to +360 degrees.

The default value is 0 degrees.

Note

This setting is valid only for the WE7281/WE7282.

U16 Sweep Mode (0: Off)

Selects the sweep mode.
0: Off
1: Repeat
2: Single
3: Single & Hold

The default value is 0 (Off).

Note

This setting is valid only for the WE7281/WE7282.

Sweep Time (1s)

Specifies the sweep time.
The selectable range is 1 to 1000 s.

The default value is 1 s.

Note

This setting is valid only for the WE7281/WE7282.

Waveform (empty)

Specifies the arbitrary waveform data in an array.

The default value is empty.

Mode (0: Continuous)

Selects the output mode.
0: Cont: Continuous oscillation
1: Trigger: Trigger oscillation
2: Gate: Gate oscillation

The default value is 0 (Cont).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

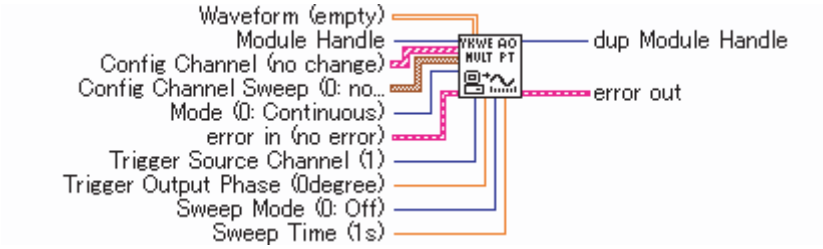
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale Array



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Config Channel (no change)

Sets the function, frequency, phase, amplitude, offset, duty cycle, waveform inversion, ON/OFF, and range of the channel in an array of clusters.
When the function of element 0 is 0, the following elements (1 and beyond) are set to respective channels. When the function of element 0 is non-zero, the settings of element 0 are applied to all channels.

The default value is no change.

U16 Function (0: nochange)

Selects the output waveform from the following:
0: no change
1: Sine: Sine wave
2: Square: Square wave with the duty cycle fixed to 50%
3: Ramp: Ramp wave
4: Triangle: Triangular wave with the symmetry fixed to 50%
5: Pulse: Pulse wave with the duty cycle between 0 and 100%
6: Arbitrary: Arbitrary wave
7: DC

The default value is 0 (no change).

DBL Frequency (1kHz)

Specifies the frequency of the output waveform.
Selectable range for the WE7121:
1 uHz to 10 MHz
For the WE7281/WE7282:
1 mHz to 20 kHz

The default value is 1 kHz.

DBL Phase (0deg)

Specifies the phase of the output waveform.
Selectable range for the WE7121:
–10000 to 10000
For the WE7281/WE7282:
–360 to 360

The default value is 0.

DBL Amplitude (2Vp-p)

Specifies the amplitude of the output waveform.
Selectable range for the WE7121:
0.02 to 20 V
For the WE7281/WE7282:
0 to 20 Vp-p

The default value is 20 Vp-p.

DBL Offset (0V)

Specifies the offset voltage of the output waveform.
The selectable range is from –10 to 10 V.

The default value is 0 V.

DBL Duty (50%)

Specifies the duty cycle of the output waveform.
The selectable range is from 0 to 100%.

The default value is 50%.

TF Invert (F: OFF)

Selects the inversion of the output waveform.
When set to ON, the output waveform is inverted.

The default value is OFF.

TF State (F: OFF)

Turns ON/OFF the output.
T: ON
F: OFF

The default value is OFF.

Note

This setting is valid only for the WE7281/WE7282.

U16 Range (3: 10V)

Selects the output range.
0: 1 V
1: 2 V
2: 5 V
3: 10 V

The default value is 0 (1 V).

Note

This setting is valid only for the WE7281/WE7282.

U16 Trigger (0: Internal)

Selects the trigger signal when the output mode is set to trigger oscillation.
0: Internal
1: BUSTRG

The default value is 0 (Internal).

Note

This setting is valid when the output mode is set to trigger oscillation on the WE7121.

DBL Trigger Frequency (100Hz)

Specifies the trigger frequency when the output mode is set to trigger oscillation and the trigger signal is set to internal trigger.
The selectable range is 1 mHz to 50 kHz.

The default value is 100 Hz.

Note

This setting is valid when the output mode is set to trigger oscillation and the trigger signal is set to internal trigger on the WE7121.

U16 Burst (5)

Specifies the burst count.
The selectable range is from 1 to 65535.

The default value is 5.

Note

This setting is valid when the output mode is set to trigger oscillation on the WE7121.

Config Channel Sweep (0: no change)

Sets the sweep of each channel in an array of clusters.
When the function of element 0 is 0, the following elements (1 and beyond) are set to respective channels. When the function of element 0 is non-zero, the settings of element 0 are applied to all channels.

The default value is no change.

Note

This setting is valid only for the WE7281/WE7282.

Sweep (0: no change)

Selects the sweep target.
0: no change
1: Off
2: Frequency
3: Amplitude
4: Duty
5: Frequency & Amplitude

The default value is 0 (no change).

Start Frequency (20Hz)

Specifies the sweep start frequency of the output waveform.
The selectable range is from 1 mHz to 20 kHz.

The default value is 20 Hz.

End Frequency (20kHz)

Specifies the sweep end frequency of the output waveform.
The selectable range is from 1 mHz to 20 kHz.

The default value is 20 kHz.

Start Amplitude (0Vp-p)

Specifies the sweep start amplitude of the output waveform.
The selectable range is from 0 to 20 Vp-p.

The default value is 0 Vp-p.

End Amplitude (2Vp-p)

Specifies the sweep end amplitude of the output waveform.
The selectable range is from 0 to 20 Vp-p.

The default value is 2 Vp-p.

Start Duty (10%)

Specifies the sweep start duty cycle of the output waveform.
The selectable range is from 0 to 100%.

The default value is 10%.

DBL End Duty (90%)

Specifies the sweep end duty cycle of the output waveform.
The selectable range is from 0 to 100%.

The default value is 90%.

U16 Freq Pattern (0: Linear)

Selects the frequency sweep pattern of the output waveform.
0: Linear
1: Log

The default value is 0 (Linear).

U16 Ampl Pattern (0: Linear)

Selects the amplitude sweep pattern of the output waveform.
0: Linear
1: Log

The default value is 0 (Linear).

U16 Duty Pattern (0: Linear)

Selects the duty cycle sweep pattern of the output waveform.
0: Linear
1: Log

The default value is 0 (Linear).

U16 Trigger Source Channel (1)

Specifies the trigger source channel.

The default value is 1 (CH1).

Note

This setting is valid only for the WE7281/WE7282.

DBL Trigger Output Phase (0degree)

Specifies the trigger output timing.
The selectable range is from –360 to +360 degrees.

The default value is 0 degrees.

Note

This setting is valid only for the WE7281/WE7282.

U16 Sweep Mode (0: Off)

Selects the sweep mode.
0: Off
1: Repeat
2: Single
3: Single & Hold

The default value is 0 (Off).

Note

This setting is valid only for the WE7281/WE7282.

Sweep Time (1s)

Specifies the sweep time.
The selectable range is 1 to 1000 s.

The default value is 1 s.

Note

This setting is valid only for the WE7281/WE7282.

Waveform (empty)

Specifies the arbitrary waveform data.

The default value is empty.

Mode (0: Continuous)

Selects the output mode.
0: Cont: Continuous oscillation
1: Trigger: Trigger oscillation
2: Gate: Gate oscillation

The default value is 0 (Cont).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

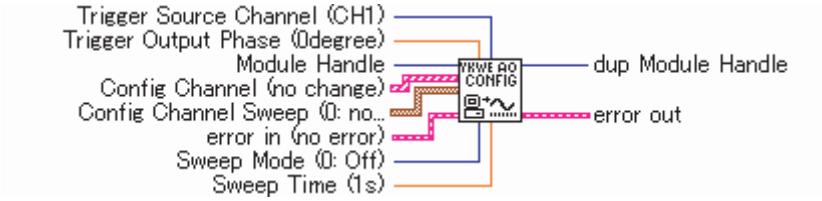
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE AO Config.vi

This VI configures the analog output module.
FG mode is enabled on the WE7281/WE7282.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Config Channel (no change)

Sets the function, frequency, phase, amplitude, offset, duty cycle, waveform inversion, ON/OFF, and range of the channel in an array of clusters.
When the function of element 0 is 0, the following elements (1 and beyond) are set to respective channels. When the function of element 0 is non-zero, the settings of element 0 are applied to all channels.

The default value is no change.

U16 Function (0: nochange)

Selects the output waveform from the following:
0: no change
1: Sine: Sine wave
2: Square: Square wave with the duty cycle fixed to 50%
3: Ramp: Ramp wave
4: Triangle: Triangular wave with the symmetry fixed to 50%
5: Pulse: Pulse wave with the duty cycle between 0 and 100%
6: Arbitrary: Arbitrary wave
7: DC

The default value is 0 (no change).

DBL Frequency (1kHz)

Specifies the frequency of the output waveform.
Selectable range for the WE7121:
1 uHz to 10 MHz
For the WE7281/WE7282:
1 mHz to 20 kHz

The default value is 1 kHz.

DBL Phase (0deg)

Specifies the phase of the output waveform.
Selectable range for the WE7121:
–10000 to 10000
For the WE7281/WE7282:
–360 to 360

The default value is 0.

DBL Amplitude (2Vp-p)

Specifies the amplitude of the output waveform.
Selectable range for the WE7121:
0.02 to 20 V
For the WE7281/WE7282:
0 to 20 Vp-p

The default value is 20 Vp-p.

DBL Offset (0V)

Specifies the offset voltage of the output waveform.
The selectable range is from -10 to 10 V.

The default value is 0 V.

DBL Duty (50%)

Specifies the duty cycle of the output waveform.
The selectable range is from 0 to 100%.

The default value is 50%.

TF Invert (F: OFF)

Selects the inversion of the output waveform.
When set to ON, the output waveform is inverted.

The default value is OFF.

TF State (F: OFF)

Turns ON/OFF the output.
T: ON
F: OFF

The default value is OFF.

Note

This setting is valid only for the WE7281/WE7282.

U16 Range (3: 10V)

Selects the output range.
0: 1 V
1: 2 V
2: 5 V
3: 10 V

The default value is 0 (1 V).

Note

This setting is valid only for the WE7281/WE7282.

U16 Trigger (0: Internal)

Selects the trigger signal when the output mode is set to trigger oscillation.
0: Internal
1: BUSTRG

The default value is 0 (Internal).

Note

This setting is valid when the output mode is set to trigger oscillation on the WE7121.

DBL Trigger Frequency (100Hz)

Specifies the trigger frequency when the output mode is set to trigger oscillation and the trigger signal is set to internal trigger.
The selectable range is 1 mHz to 50 kHz.

The default value is 100 Hz.

Note

This setting is valid when the output mode is set to trigger oscillation and the trigger signal is set to internal trigger on the WE7121.

U16 Burst (5)

Specifies the burst count.
The selectable range is from 1 to 65535.

The default value is 5.

Note

This setting is valid when the output mode is set to trigger oscillation on the WE7121.

Config Channel Sweep (0: no change)

Sets the sweep of each channel in an array of clusters.
When the function of element 0 is 0, the following elements (1 and beyond) are set to respective channels. When the function of element 0 is non-zero, the settings of element 0 are applied to all channels.

The default value is no change.

Note

This setting is valid only for the WE7281/WE7282.

Sweep (0: no change)

Selects the sweep target.
0: no change
1: Off
2: Frequency
3: Amplitude
4: Duty
5: Frequency & Amplitude

The default value is 0 (no change).

Start Frequency (20Hz)

Specifies the sweep start frequency of the output waveform.
The selectable range is from 1 mHz to 20 kHz.

The default value is 20 Hz.

End Frequency (20kHz)

Specifies the sweep end frequency of the output waveform.
The selectable range is from 1 mHz to 20 kHz.

The default value is 20 kHz.

Start Amplitude (0Vp-p)

Specifies the sweep start amplitude of the output waveform.
The selectable range is from 0 to 20 Vp-p.

The default value is 0 Vp-p.

End Amplitude (2Vp-p)

Specifies the sweep end amplitude of the output waveform.
The selectable range is from 0 to 20 Vp-p.

The default value is 2 Vp-p.

Start Duty (10%)

Specifies the sweep start duty cycle of the output waveform.
The selectable range is from 0 to 100%.

The default value is 10%.

DBL End Duty (90%)

Specifies the sweep end duty cycle of the output waveform.
The selectable range is from 0 to 100%.

The default value is 90%.

U16 Freq Pattern (0: Linear)

Selects the frequency sweep pattern of the output waveform.
0: Linear
1: Log
2: Arbitrary

The default value is 0 (Linear).

U16 Ampl Pattern (0: Linear)

Selects the amplitude sweep pattern of the output waveform.
0: Linear
1: Log
2: Arbitrary

The default value is 0 (Linear).

U16 Duty Pattern (0: Linear)

Selects the duty cycle sweep pattern of the output waveform.
0: Linear
1: Log
2: Arbitrary

The default value is 0 (Linear).

U16 Trigger Source Channel (1)

Specifies the trigger source channel.

The default value is 1 (CH1).

Note

This setting is valid only for the WE7281/WE7282.

DBL Trigger Output Phase (0degree)

Specifies the trigger output timing.
The selectable range is from -360 to +360 degrees.

The default value is 0 degrees.

Note

This setting is valid only for the WE7281/WE7282.

Sweep Mode (0: Off)

Selects the sweep mode.
0: Off
1: Repeat
2: Single
3: Single & Hold

The default value is 0 (Off).

Note

This setting is valid only for the WE7281/WE7282.

Sweep Time (1s)

Specifies the sweep time.
The selectable range is 1 to 1000 s.

The default value is 1 s.

Note

This setting is valid only for the WE7281/WE7282.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE AO Write.vi

This VI sets the arbitrary waveform data of the analog output module.

YKWE AO Write.vi is polymorphic and can set the following types of data.
Waveform
Scale array

Waveform

I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

[∿] Waveform (empty)

Specifies the waveform data in an array.

The default value is empty.

U16 Data Mode (0: Arbitrary)

Selects the data mode of the waveform data in an array.
0: Arbitrary Data
1: Sweep Frequency Data
2: Sweep Amplitude Data
3: Sweep Duty Data

The default value is 0 (Arbitrary).

U16 Sweep Pattern (0: Linear)

Selects the sweep pattern mode in an array.
0: Linear
1: Log
2: Arbitrary

The default value is 0 (Linear).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale Array

I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

[DBL] Waveform (empty)

Specifies the arbitrary waveform data in an array.

The default value is empty.

[U16] Data Mode (0: Arbitrary)

Selects the data mode of the waveform data in an array.
0: Arbitrary Data
1: Sweep Frequency Data
2: Sweep Amplitude Data
3: Sweep Duty Data

The default value is 0 (Arbitrary).

[U16] Sweep Pattern (0: Linear)

Selects the sweep pattern mode in an array.
0: Linear
1: Log
2: Arbitrary

The default value is 0 (Linear).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

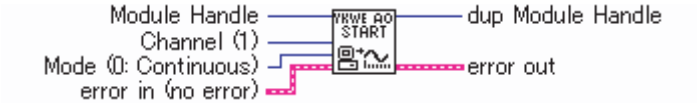
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE AO Start.vi

This VI starts the output operation of a specified channel of the analog output module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the channel number.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

Note

This setting is valid only for the WE7121.

U16 Mode (0: Continuous)

Selects the output mode.
0: Cont: Continuous oscillation
1: Trigger: Trigger oscillation
2: Gate: Gate oscillation
3: Repeat: Continuous oscillation in WE7281 AG mode
4: One Shot: One shot oscillation in WE7281 AG mode

The default value is 0 (Cont).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Mode

Indicates the specified output mode.
0: Cont: Continuous oscillation
1: Trigger: Trigger oscillation
2: Gate: Gate oscillation
3: Repeat: Continuous oscillation in WE7281 AG mode
4: One Shot: One shot oscillation in WE7281 AG mode

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE AO Clear.vi

This VI stops the output operation of a specified channel of the analog output module.

I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the channel number.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

Note

This setting is valid only for the WE7121.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

TF status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

abc source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

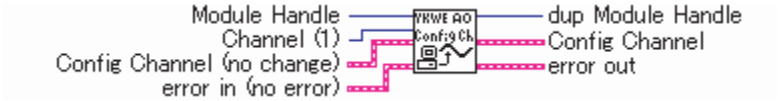
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE AO Config Channel.vi

This VI configures a specified channel of the analog output module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the channel number.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

Config Channel (no change)

Specifies settings of the analog output module in a cluster.

The default value is no change.

U16 Function (0: nochange)

Selects the output waveform from the following:
0: no change
1: Sine: Sine wave
2: Square: Square wave with the duty cycle fixed to 50%
3: Ramp: Ramp wave
4: Triangle: Triangular wave with the symmetry fixed to 50%
5: Pulse: Pulse wave with the duty cycle between 0 and 100%
6: Arbitrary: Arbitrary wave
7: DC

The default value is 0 (no change).

DBL Frequency (1kHz)

Specifies the frequency of the output waveform.
Selectable range for the WE7121:
1 uHz to 10 MHz
For the WE7281/WE7282:
1 mHz to 20 kHz

The default value is 1 kHz.

DBL Phase (0deg)

Specifies the phase of the output waveform.
Selectable range for the WE7121:
–10000 to 10000
For the WE7281/WE7282:
–360 to 360

The default value is 0.

DBL Amplitude (2Vp-p)

Specifies the amplitude of the output waveform.
Selectable range for the WE7121:
0.02 to 20 V
For the WE7281/WE7282:
0 to 20 Vp-p

The default value is 20 Vp-p.

DBL Offset (0V)

Specifies the offset voltage of the output waveform.
The selectable range is from -10 to 10 V.

The default value is 0 V.

DBL Duty (50%)

Specifies the duty cycle of the output waveform.
The selectable range is from 0 to 100%.

The default value is 50%.

TF Invert (F: OFF)

Selects the inversion of the output waveform.
When set to ON, the output waveform is inverted.

The default value is OFF.

TF State (F: OFF)

Turns ON/OFF the output.
T: ON
F: OFF

The default value is OFF.

Note

This setting is valid only for the WE7281/WE7282.

U16 Range (3: 10V)

Selects the output range.
0: 1 V
1: 2 V
2: 5 V
3: 10 V

The default value is 0 (1 V).

Note

This setting is valid only for the WE7281/WE7282.

Trigger (0: Internal)

Selects the trigger signal when the output mode is set to trigger oscillation.
0: Internal
1: BUSTRG

The default value is 0 (Internal).

Note

This setting is valid when the output mode is set to trigger oscillation on the WE7121.

Trigger Frequency (100Hz)

Specifies the trigger frequency when the output mode is set to trigger oscillation and the trigger signal is set to internal trigger.
The selectable range is 1 mHz to 50 kHz.

The default value is 100 Hz.

Note

This setting is valid when the output mode is set to trigger oscillation and the trigger signal is set to internal trigger on the WE7121.

Burst (5)

Specifies the burst count.
The selectable range is from 1 to 65535.

The default value is 5.

Note

This setting is valid when the output mode is set to trigger oscillation on the WE7121.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Config Channel

Indicates the settings of the configured analog output module in a cluster.

Function

Indicates the configured output waveform.
1: Sine: Sine wave
2: Square: Square wave with the duty cycle fixed to 50%
3: Ramp: Ramp wave
4: Triangle: Triangular wave with the symmetry fixed to 50%
5: Pulse: Pulse wave with the duty cycle between 0 and 100%
6: Arbitrary: Arbitrary wave
7: DC

Frequency

Indicates the frequency of the configured output waveform.

Phase

Indicates the phase of the configured output waveform.

Amplitude

Indicates the amplitude of the configured output waveform.

Offset

Indicates the offset of the configured output waveform.

Duty

Indicates the duty cycle of the configured waveform.

Invert

Indicates the inversion of the configured output waveform.

State

Indicates the ON/OFF state of the configured output waveform.

Range

Indicates the specified range.
0: 1 V
1: 2 V
2: 5 V
3: 10 V

Trigger

Indicates the specified trigger.
0: Internal
1: BUSTRG

Trigger Frequency

Indicates the specified trigger frequency.

Burst

Indicates the specified burst count.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE AO Config Channel Sweep.vi

This VI configures the sweep of a specified channel of the analog output module.

Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Channel (1)

Specifies the channel number.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

Config Channel Sweep (0: no change)

Specifies sweep settings of the analog output module in a cluster.

The default value is no change.

Note

This setting is valid only for the WE7281/WE7282.

Sweep (0: no change) Select the sweep

Selects the sweep target.
0: no change
1: Off
2: Frequency
3: Amplitude
4: Duty
5: Frequency & Amplitude

The default value is 0 (no change).

Start Frequency (20Hz)

Specifies the sweep start frequency of the output waveform.
The selectable range is from 1 mHz to 20 kHz.

The default value is 20 Hz.

End Frequency (20kHz)

Specifies the sweep end frequency of the output waveform.
The selectable range is from 1 mHz to 20 kHz.

The default value is 20 kHz.

DBL Start Amplitude (0Vp-p)

Specifies the sweep start amplitude of the output waveform.
The selectable range is from 0 to 20 Vp-p.

The default value is 0 Vp-p.

DBL End Amplitude (2Vp-p)

Specifies the sweep end amplitude of the output waveform.
The selectable range is from 0 to 20 Vp-p.

The default value is 2 Vp-p.

DBL Start Duty (10%)

Specifies the sweep start duty cycle of the output waveform.
The selectable range is from 0 to 100%.

The default value is 10%.

DBL End Duty (90%)

Specifies the sweep end duty cycle of the output waveform.
The selectable range is from 0 to 100%.

The default value is 90%.

U16 Freq Pattern (0: Linear)

Selects the frequency sweep pattern of the output waveform.
0: Linear
1: Log
2: Arbitrary

The default value is 0 (Linear).

U16 Ampl Pattern (0: Linear)

Selects the amplitude sweep pattern of the output waveform.
0: Linear
1: Log
2: Arbitrary

The default value is 0 (Linear).

U16 Duty Pattern (0: Linear)

Selects the duty cycle sweep pattern of the output waveform.
0: Linear
1: Log
2: Arbitrary

The default value is 0 (Linear).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Config Channel Sweep

Indicates the sweep settings of the configured analog output module in a cluster.

Sweep

Indicates the specified sweep target.
1: Off
2: Frequency
3: Amplitude
4: Duty
5: Frequency & Amplitude

Start Frequency

Indicates the sweep start frequency of the configured output waveform.

End Frequency

Indicates the sweep end frequency of the configured output waveform.

Start Amplitude

Indicates the sweep start amplitude of the configured output waveform.

End Amplitude

Indicates the sweep end amplitude of the configured output waveform.

Start Duty

Indicates the sweep start duty cycle of the configured waveform.

End Duty

Indicates the sweep end duty cycle of the configured waveform.

Freq Pattern

Indicates the frequency sweep pattern of the configured output waveform.
0: Linear
1: Log
2: Arbitrary

Ampl Pattern

Indicates the amplitude sweep pattern of the configured output waveform.
0: Linear
1: Log
2: Arbitrary

Duty Pattern

Indicates the duty cycle sweep pattern of the configured waveform.
0: Linear
1: Log
2: Arbitrary

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE AO Config Trigger.vi

This VI configures the trigger of the analog output module.

Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Trigger Source Channel (1)

Specifies the trigger source channel.

The default value is 1 (CH1).

Trigger Output Phase (0degree)

Specifies the trigger output timing.
The selectable range is from –360 to +360 degrees.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Trigger Source Channel

Indicates the specified trigger source channel.

Trigger Output Phase

Indicates the specified trigger output timing.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE AO Config Sweep.vi

This VI configures the sweep of the analog output module.

Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Sweep Mode (0: Off)

Selects the sweep mode.
0: Off
1: Repeat
2: Single
3: Single & Hold

The default value is 0 (Off).

Sweep Time (1s)

Specifies the sweep time.
The selectable range is from 1 to 1000 s.

The default value is 1 s.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Sweep Mode

Indicates the specified sweep mode.
0: Off
1: Repeat
2: Single
3: Single & Hold

Sweep Time

Indicates the specified sweep time.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE AO Config Link.vi

This VI configures the link between the WE7121 modules.

Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Link (F: OFF)

Sets the link between modules in a cluster.

Frequency (F: OFF)

Selects the frequency parameter link.
T: On
F: Off

The default value is F (Off).

Phase (F: OFF)

Selects the phase parameter link.
T: On
F: Off

The default value is F (Off).

Amplitude (F: OFF)

Selects the amplitude parameter link.
T: On
F: Off

The default value is F (Off).

Offset (F: OFF)

Selects the offset parameter link.
T: On
F: Off

The default value is F (Off).

Duty (F: OFF)

Selects the duty cycle parameter link.
T: On
F: Off

The default value is F (Off).

Output (F: OFF)

Selects the waveform output link.
T: On
F: Off

The default value is F (Off).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Link

Indicates the settings of the configured link between modules in a cluster.

Frequency

Indicates the specified frequency parameter link.
T: On
F: Off

Phase

Indicates the specified phase parameter link.
T: On
F: Off

Amplitude

Indicates the specified amplitude parameter link.
T: On
F: Off

Offset

Indicates the specified offset parameter link.
T: On
F: Off

Duty

Indicates the duty cycle parameter link.
T: On
F: Off

Output

Indicates the specified output waveform link.
T: On
F: Off

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

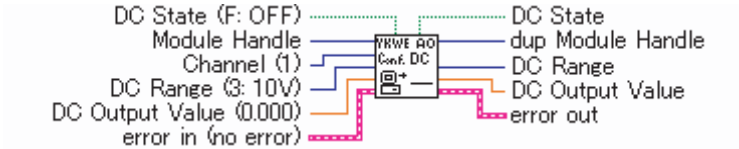
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE AO Config DC.vi

This VI configures the WE7281/WE7282 DC mode.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the channel number.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

TF DC State (F: OFF)

Turns ON/OFF the output.
T: ON
F: OFF

The default value is OFF.

U16 DC Range (3: 10V)

Selects the output range.
0: 1 V
1: 2 V
2: 5 V
3: 10 V

The default value is 3 (10 V).

DBL DC Output Value (0.000)

Specifies the output voltage.
The selectable range are as follows:
For 10 V range: –10.000 to 10.000 V
For 5 V range: –5.000 to 5.000 V
For 2 V range: –2.000 to 2.000 V
For 1 V range: –1.000 to 1.000 V

The default value is 0 V.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

DC State

Indicates the ON/OFF state of the configured output.
T: ON
F: OFF

DC Range

Indicates the specified output range.
0: 1 V
1: 2 V
2: 5 V
3: 10 V

DC Output Value

Indicates the specified output voltage.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

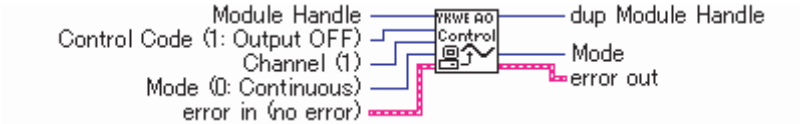
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE AO Control.vi

This VI controls the analog output module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Control Code (1: Output OFF)

Selects the control of the analog output module.
0: Output ON
1: Output OFF
2: Phase Sync
3: Manual Trigger ON
4: Manual Trigger OFF

The default value is 1 (output OFF).

U16 Channel (1)

Specifies the channel number.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

Note

This setting is valid when Control Code of the WE7121 is set to Output ON or OFF.

U16 Mode (0: Continuous)

Selects the output mode.
0: Cont: Continuous oscillation
1: Trigger: Trigger oscillation
2: Gate: Gate oscillation
3: Repeat: Continuous oscillation in WE7281 AG mode
4: One Shot: One shot oscillation in WE7281 AG mode

The default value is 0 (Cont).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Mode

Indicates the specified output mode.
0: Cont: Continuous oscillation
1: Trigger: Trigger oscillation
2: Gate: Gate oscillation
3: Repeat: Continuous oscillation in WE7281 AG mode
4: One Shot: One shot oscillation in WE7281 AG mode

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

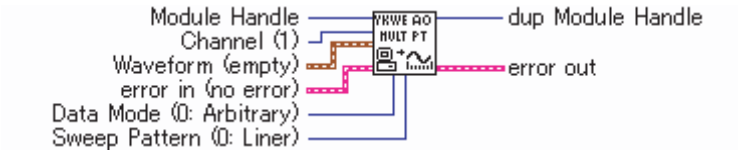
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE AO Write Data.vi

This VI sets the arbitrary waveform data of the analog output module

YKWE AO Write Data.vi is polymorphic and can set the following types of data.
Waveform
Scale array

Waveform



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the channel number.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

Waveform (empty)

Specifies the waveform data.

The default value is empty.

U16 Data Mode (0: Arbitrary)

Selects the data mode of the waveform data.
0: Arbitrary Data
1: Sweep Frequency Data
2: Sweep Amplitude Data
3: Sweep Duty Data

The default value is 0 (Arbitrary).

U16 Sweep Pattern (0: Linear)

Selects the sweep pattern mode.
0: Linear
1: Log
2: Arbitrary

The default value is 0 (Linear).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

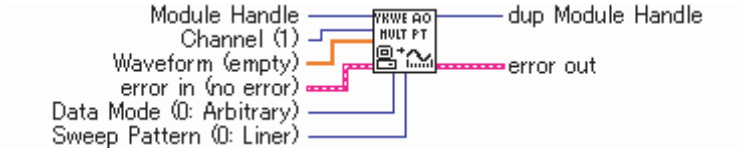
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale Array



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the channel number.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

[DBL] Waveform (empty)

Specifies the waveform data.

The default value is empty.

U16 Data Mode (0: Arbitrary)

Selects the data mode of the waveform data.
0: Arbitrary Data
1: Sweep Frequency Data
2: Sweep Amplitude Data
3: Sweep Duty Data

The default value is 0 (Arbitrary).

U16 Sweep Pattern (0: Linear)

Selects the sweep pattern mode.
0: Linear
1: Log
2: Arbitrary

The default value is 0 (Linear).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

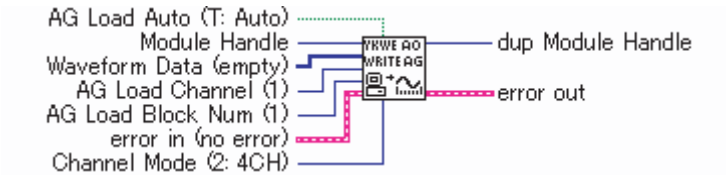
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE AO Write Data AG.vi

This VI sets the arbitrary waveform data of the WE7281/WE7282 AG mode.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

[U8] Waveform Data (empty)

Specifies the waveform data.

The default value is empty.

TF AG Load Auto (T: Auto)

Turns ON/OFF auto load.
T: On: Auto
F: Off: Manual

The default value is T (Auto).

U16 AG Load Channel (1)

Specifies the channel of which the waveform data is to be loaded.

The default value is 1 (CH1).

I16 AG Load Block Num (1)

Specifies the block of which the waveform data is to be loaded.

The default value is 1.

U16 Channel Mode (2: 4CH)

Selects the number of used channels.
0: 1CH
1: 2CH
2: 4CH

The default value is 2 (4CH).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

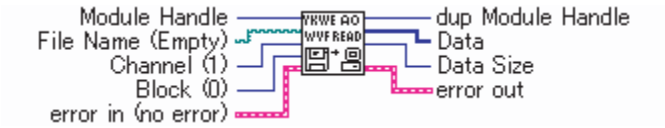
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE AO WVF Read.vi

This VI loads the waveform data from a specified file.

YKWE AO WVF Read(W7281).vi is polymorphic and can be set to load the following types of data.
W7281
W32
S16

W7281



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

File Name (Empty)

Specifies the waveform data file name.
Specify the file name using a full path.

The default value is empty.

I16 Channel (1)

Specifies the channel number of the file data to be loaded.
0 specifies all channels.

The default value is 1.

I32 Block (0)

Specifies the block number of the file data to be loaded.
–1 specifies all blocks.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Data

Displays the loaded data.

Data Size

Indicates the size of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

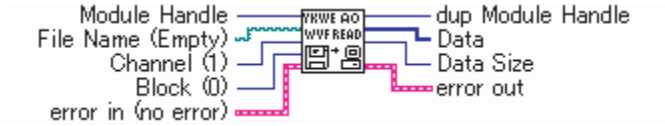
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

W32



Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

File Name (Empty)

Specifies the waveform data file name.
Specify the file name using a full path.

The default value is empty.

Channel (1)

Specifies the channel number of the file data to be loaded.

The default value is 1.

Block (0)

Specifies the block number of the file data to be loaded.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Data

Displays the loaded data.

Data Size

Indicates the size of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

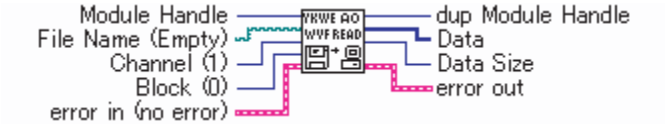
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

S16



Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

File Name (Empty)

Specifies the waveform data file name.
Specify the file name using a full path.

The default value is empty.

Channel (1)

Specifies the channel number of the file data to be loaded.

The default value is 1.

Block (0)

Specifies the block number of the file data to be loaded.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Data

Displays the loaded data.

Data Size

Indicates the size of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

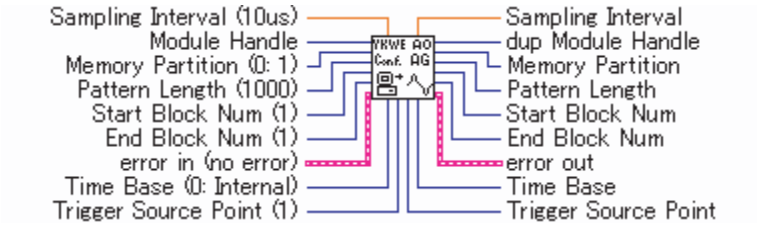
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE AO Config AG.vi

This VI configures the WE7281/WE7282 AG mode.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

DBL Sampling Interval (10us)

Specifies the sampling interval.
The selectable range is 10 µs to 10 s.

The default value is 10 µs.

I16 Memory Partition (0: 1)

Selects the number of memory partitions.
0: 1
1: 2
2: 4
3: 8
4: 16
5: 32
6: 64
7: 128
8: 256

The default value is 0 (1).

I32 Pattern Length (1000)

Specifies the memory length.
The selectable range is from 10 to the maximum data length that can be used.

The default value is 1000.

U16 Start Block Num (1)

Specifies the output start block.

The default value is 1.

U16 End Block Num (1)

Specifies the output end block.

The default value is 1.

Time Base (0: Internal)

Selects the time base.
0: Internal
1: BUSCLK

The default value is 0 (Internal).

Trigger Source Point (1)

Specifies the trigger signal output timing.
The selectable range is from 1 to the data length.

The default value is 1.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Sampling Interval

Indicates the specified sampling interval.

Memory Partition

Indicates the specified number of memory partitions.
0: 1
1: 2
2: 4
3: 8
4: 16
5: 32
6: 64
7: 128
8: 256

Pattern Length

Indicates the specified record length.

Start Block Num

Indicates the specified output start block.

End Block Num

Indicates the specified output end block.

Time Base

Indicates the specified time base.
0: Internal
1: BUSCLK

Trigger Source Point

Indicates the specified trigger signal output timing.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

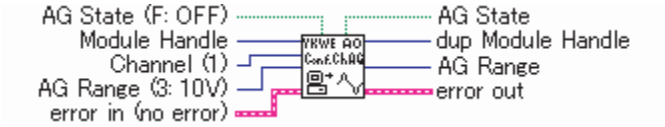
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE AO Config Channel AG.vi

This VI configures the channels of the WE7281/WE7282 AG mode.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the channel number.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

TF AG State (F: OFF)

Turns ON/OFF the AG output.
T: ON
F: OFF

The default value is F (OFF).

U16 AG Range (3: 10V)

Selects the AG output range.
0: 1 V
1: 2 V
2: 5 V
3: 10 V

The default value is 3 (10 V).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

AG State

Indicates the ON/OFF state of the configured AG output.
T: ON
F: OFF

AG Range

Indicates the specified AG output range.
0: 1 V
1: 2 V
2: 5 V
3: 10 V

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

5.7 Digital I/O VI

Digital I/O VIs allow you to configure and perform data acquisition on the following modules.

WE7261/WE7262 32bit Digital I/O Module

- Simple Level VIs

YKWE DIO Read from Port.vi	Selects input/output of the specified port, then reads the input pattern.
YKWE DIO Write to Port.vi	Selects input/output of the specified port, then writes the output pattern.
YKWE DIO Read Block from Port.vi	Selects input/output of the specified port, then reads the input pattern as the block data.
YKWE DIO Read Counter from Port.vi	Reads the count value of the specified port.

- Intermediate Level VIs

YKWE DIO Config.vi	Configures the input/output settings of the specified port. (Port, I/O Select)
YKWE DIO Read.vi	Reads the input pattern of the specified port. (Port)
YKWE DIO Write.vi	Writes the output pattern to the specified port. (Port, Output Pattern)
YKWE DIO Start.vi	Starts the operation of the digital I/O module. This VI sets the sampling speed, block length, and block count. Then, starts the operation of measuring modules.
YKWE DIO Read Block.vi	Reads the input pattern as the block data. (time limit, Block Num in, Number of block to read)
YKWE DIO Clear.vi	Stops the operation of the digital I/O module.

- Advanced Level VIs

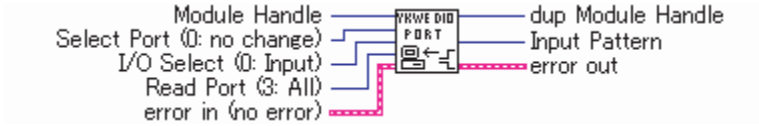
YKWE DIO Config IO.vi	Configures the input/output of the specified port. (Port, I/O Select)
YKWE DIO Config Sampling Interval.vi	Configures the sampling interval. (Sampling Interval, Repeat)
YKWE DIO Write IO.vi	Writes the output pattern. (Port, Output Pattern)
YKWE DIO Config Counter.vi	Configures the counter. (Gate Mode, Gate Time)
YKWE DIO Config Comparater.vi	Configures the Comparater. (Comparater SW, Comparater, Filter)
YKWE DIO Control.vi	Performs the operation of acquisition start/stop and so on.
YKWE DIO Read Block Data.vi	Reads the block data. (Block Num, Event Timeout)
YKWE DIO Read IO.vi	Reads the input pattern. (Port)
YKWE DIO Read Counter.vi	Reads the count value. (Port, Complete)
YKWE DIO Read Comparater.vi	Reads the result of comparating. (Port)

Note

Do not use the command for every port and the command of a 32-bit package, in the intermingled state. It may not become expected state.

YKWE DIO Read from Port.vi

This VI selects input/output of the specified port, then reads the input pattern.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Select Port (0: no change)

Selects a port which chooses input/output.
0: no change
1: Port 1
2: Port 2
3: All

The default value is 0 (no change).

U32 I/O Select (0: Input)

Selects input/output of the port.
1 (On) expresses an output and 0 (Off) expresses an input.
It is not changed when the Select Port is 0 (no change).
Port 1or Port 2
MSB: bit31 (Port1) or bit15 (Port2)
LSB: bit16 (Port1) or bit0 (Port2)
All
MSB: bit31
LSB: bit0

The default value is 0 (Input).

U16 Read Port (3: All)

Selects the input port.
1: Port 1
2: Port 2
3: All

The default value is 3 (All).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Input Pattern

Indicates the input pattern.
Indicates the current input pattern.
For the bits that are set to function as output, the output values are displayed.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

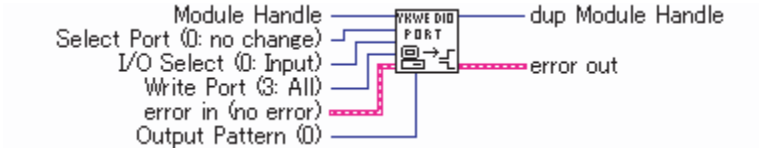
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DIO Write to Port.vi

This VI selects input/output of the specified port, then writes the output pattern.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Select Port (0: no change)

Selects a port which chooses input/output.
0: no change
1: Port 1
2: Port 2
3: All

The default value is 0 (no change).

U32 I/O Select (0: Input)

Selects input/output of the port.
1 (On) expresses an output and 0 (Off) expresses an input.
It is not changed when the Select Port is 0 (no change).
Port 1or Port 2
MSB: bit31 (Port1) or bit15 (Port2)
LSB: bit16 (Port1) or bit0 (Port2)
All
MSB: bit31
LSB: bit0

The default value is 0 (Input).

U16 Write Port (3: All)

Selects the output port.
1: Port 1
2: Port 2
3: All

The default value is 3 (All).

U32 Output Pattern (0)

Specified the output pattern.
For the bits that are set to function as output, select “1” or “0.” The bit that is set to function as an input, becomes invalid.

The default value is all the bits 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

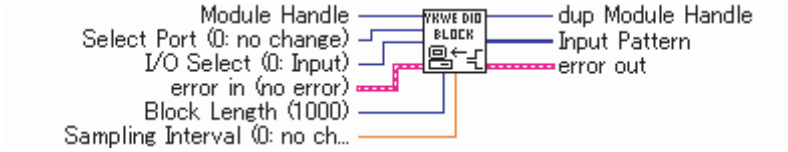
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DIO Read Block from Port.vi

This VI selects input/output of the specified port, then reads the input pattern as the block data.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Select Port (0: no change)

Selects a port which chooses input/output.
0: no change
1: Port 1
2: Port 2
3: All

The default value is 0 (no change).

U32 I/O Select (0: Input)

Selects input/output of the port.
1 (On) expresses an output and 0 (Off) expresses an input.
It is not changed when the Select Port is 0 (no change).
Port 1or Port 2
MSB: bit31 (Port1) or bit15 (Port2)
LSB: bit16 (Port1) or bit0 (Port2)
All
MSB: bit31
LSB: bit0

The default value is 0 (Input).

I32 Block Length (1000)

Specified the block length.

The default value is 1000.

DBL Sampling Interval (0: no change)

Specified the sampling interval.
The selectable range is 0.01 to 10.00 s.
The resolution is 0.01 s.
0 s is no change.

The default value is 0 s (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Input Pattern

Indicates the input pattern as an array.
Indicates the current input pattern.
For the bits that are set to function as output, the output values are displayed.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

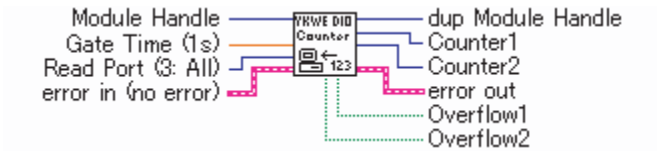
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DIO Read Counter from Port.vi

This VI reads the count value of the specified port.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

DBL Gate Time (1s)

Specified the gate time.
Sets the time when measuring with timer.
The selectable range is 0.0010 s to 600.0000 s.
The resolution is in 0.0001 s steps.

The default value is 1000 s.

U16 Read Port (3: All)

Selects the input port.
1: Port 1
2: Port 2
3: All

The default value is 3 (All).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

TF status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

abc source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Counter1

Indicates the count value of the port 1.
The maximum value is 4,294,836,224 (FFFE0000H).

Counter2

Indicates the count value of the port 2.
The maximum value is 4,294,836,224 (FFFE0000H).

Overflow1

Indicates whether the count value of the port 1 is overflowing.
T: On (count over)
F: Off

Overflow2

Indicates whether the count value of the port 2 is overflowing.
T: On (count over)
F: Off

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

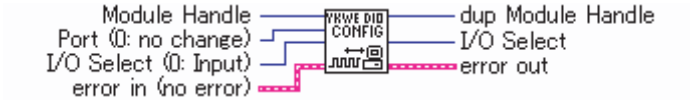
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DIO Config.vi

This VI configures the input/output settings of the specified port.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Port (0: no change)

Selects the port which chooses input/output.
0: no change
1: Port 1
2: Port 2
3: All

The default value is 0 (no change).

U32 I/O Select (0: Input)

Selects input/output of the port.
1 (On) expresses an output and 0 (Off) expresses an input.
It is not changed when the Select Port is 0 (no change).
Port 1or Port 2
  MSB: bit31 (Port1) or bit15 (Port2)
  LSB: bit16 (Port1) or bit0 (Port2)
All
  MSB: bit31
  LSB: bit0

The default value is 0 (Input).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

I/O Select

Indicates input/output of the port.
1 (On) expresses an output and 0 (Off) expresses an input.
It is not changed when the Select Port is 0 (no change).
Port 1or Port 2
  MSB: bit31 (Port1) or bit15 (Port2)
  LSB: bit16 (Port1) or bit0 (Port2)
All
  MSB: bit31
  LSB: bit0

The default value is 0 (Input).

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DIO Read.vi

This VI reads the input pattern of the specified port.

Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Port (3: All)

Selects the input port.
1: Port 1
2: Port 2
3: All

The default value is 3 (All).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Input Pattern

Indicates the input pattern.
Indicates the current input pattern.
For the bits that are set to function as output, the output values are displayed.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DIO Write.vi

This VI writes the output pattern to the specified port.

Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Port (3: All)

Selects the input port.
1: Port 1
2: Port 2
3: All

The default value is 3 (All).

Output Pattern (0)

Specified the output pattern.
For the bits that are set to function as output, select “1” or “0.” The bit that is set to function as an input, becomes invalid.

The default value is all the bits 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

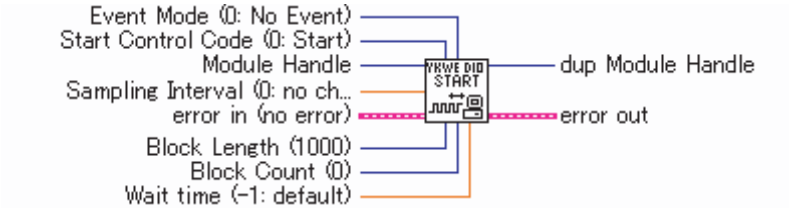
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DIO Start.vi

This VI starts the operation of the digital I/O module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Start Control Code (0: Start)

Selects the control code.
0: Start
1: Single Start
2: Start Event
3: Start Count

The default value is 0 (Start).

I32 Block Length (-1: default)

Specifies the block length.
This value is valid when Start Control Code is set to 0 (Start), or 4 (Start Event).
The selectable range is 1 to 8192

The default value is –1 (default).

I8 Block Count (-1: default)

Specifies the block count.
Specify the exponential part of the number of memory partitions (number of blocks) expressed as a power of 2.
This value is valid when Start Control Code is set to 0 (Start), or 4 (Start Event).

The default value is –1 (default).
For a description of the selectable range, see the user's manual for the module.

I16 Event Mode (0: No Event)

Selects the acquisition operation mode.
This value is valid when Start Control Code is set to Start Event.
0: No Event
1: Block_Event
2: Stop Event

The default value is 0 (No Event).

Sampling Interval (0: no change)

Specified the sampling interval.
The selectable range is 0.01 to 10.00 s.
The resolution is 0.01 s.
0 s is no change.

The default value is 0 s (no change).

Repeat (0: no change)

Selects the continuous measurements on the input pattern.
0: no change
1: OFF
2: ON

The default value is 0 s (no change).

Wait time (-1: default)

Specifies the wait time after the start operation.

The default value is –1.0 (default).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

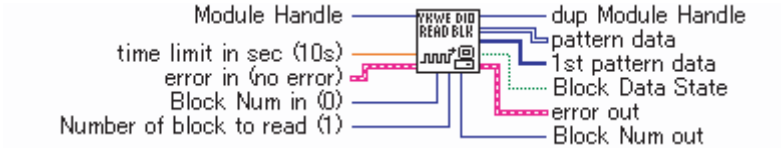
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DIO Read Block.vi

This VI reads the input pattern as the block data.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL time limit in sec (10s)

Specifies the time limit for the read operation.
The actual time limit is time limit in sec + sampling interval × record length.

The default value is 10 s.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

TF status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

abc source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

pattern data

Indicates the input pattern as an array of blocks.

1st pattern data

Indicates the first block of the input pattern.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

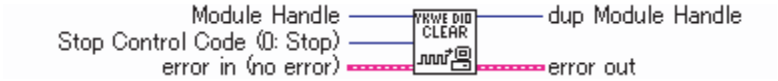
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DIO Clear.vi

This VI stops the operation of the digital I/O module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Stop Control Code (0: Stop)

Selects the stop control code.
0: Stop
1: Stop Event
2: Stop Count

The default value is 0 (Stop).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

TF status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

abc source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

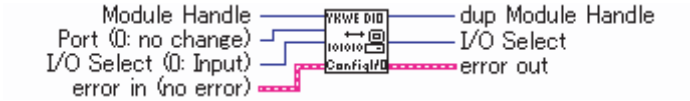
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DIO Config IO.vi

This VI configures the input/output of the specified port.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Port (0: no change)

Selects the port which chooses input/output.
0: no change
1: Port 1
2: Port 2
3: All

The default value is 0 (no change).

U32 I/O Select (0: Input)

Selects input/output of the port.
1 (On) expresses an output and 0 (Off) expresses an input.
It is not changed when the Select Port is 0 (no change).
Port 1or Port 2
MSB: bit31 (Port1) or bit15 (Port2)
LSB: bit16 (Port1) or bit0 (Port2)
All
MSB: bit31
LSB: bit0

The default value is 0 (Input).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

I/O Select

Indicates input/output of the port.
1 (On) expresses an output and 0 (Off) expresses an input.
It is not changed when the Select Port is 0 (no change).
Port 1or Port 2
  MSB: bit31 (Port1) or bit15 (Port2)
  LSB: bit16 (Port1) or bit0 (Port2)
All
  MSB: bit31
  LSB: bit0

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

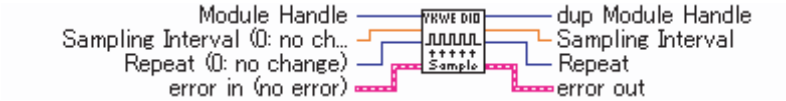
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DIO Config Sampling Interval.vi

This VI configures the sampling interval of the digital I/O module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

DBL Sampling Interval (0: no change)

Specified the sampling interval.
The selectable range is 0.01 to 10.00 s.
The resolution is 0.01 s.
0 s is no change.

The default value is 0 s (no change).

U16 Repeat (0: no change)

Selects the continuous measurements on the input pattern.
0: no change
1: OFF
2: ON

The default value is 0 s (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

TF status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

abc source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Sampling Interval

Indicates the specified sampling interval.

Repeat

Indicates the specified continuous measurements on the input pattern.
T: ON
F: OFF

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

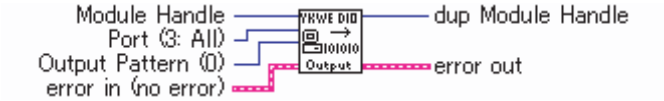
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DIO Write IO.vi

This VI writes the output pattern to the specified port.



Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Port (3: All)

Selects the input port.
1: Port 1
2: Port 2
3: All

The default value is 3 (All).

Output Pattern (0)

Specified the output pattern.
For the bits that are set to function as output, select “1” or “0.” The bit that is set to function as an input, becomes invalid.

The default value is all the bits 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

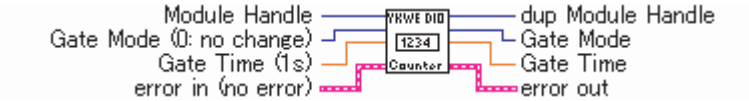
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DIO Config Counter.vi

This VI configures the counter of the specified port.



Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Gate Mode (0: no change)

Selects the gate mode.
0: no change
1: Manual
2: Timer
3: External

The default value is 0 (no change).

Gate Time (1s)

Specified the gate time.
Sets the time when measuring with timer.
The selectable range is 0.0010 s to 600.0000 s.
The resolution is in 0.0001 s steps.

The default value is 1.0000 s.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Gate Mode

Indicates the specified gate mode.
1: Manual
2: Timer
3: External

Gate Time

Indicates the specified gate time.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

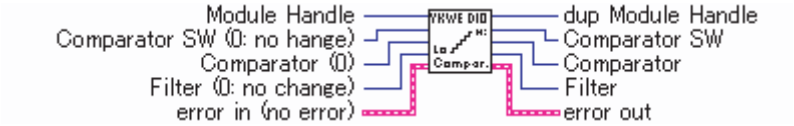
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DIO Config Comparator.vi

This VI configures the Comparater.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Comparator SW (0: no change)

Selects the ON/OFF of the comparator function.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

U32 Comparator (0)

Specifies the comparison value.
MSB: bit31
LSB: bit0

The default value is 0.

U16 Filter (0: no change)

Selects the ON/OFF of the chattering elimination filter.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Comparator SW

Indicates the specified ON/OFF of the comparator function.
1: OFF
2: ON

Comparator

Indicates the specified comparison value.
MSB: bit31
LSB: bit0

Filter

Indicates the ON/OFF of the chattering elimination filter.
1: OFF
2: ON

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

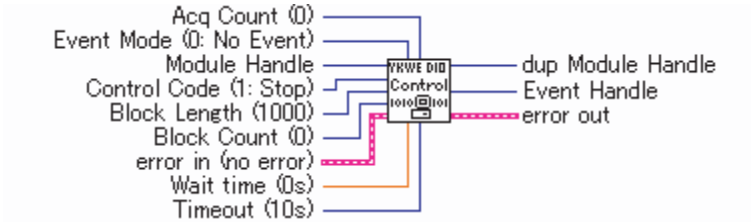
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DIO Control.vi

This VI controls the operation of acquisition start/stop.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Control Code (1: Stop)

Selects the control code.
0: Start
1: Stop
2: Latch
3: Single Start
4: Start Event
5: Stop Event
6: Start Count
7: Stop Count
8: Update

The default value is 1 (Stop).

I32 Block Length (-1: default)

Specifies the block length.
This value is valid when Start Control Code is set to 0 (Start), or 4 (Start Event).
The selectable range is 1 to 8192

The default value is –1 (default).

U8 Block Count (-1: default)

Specifies the block count.
Specify the exponential part of the number of memory partitions (number of blocks) expressed as a power of 2.
This value is valid when Start Control Code is set to 0 (Start), or 4 (Start Event).

The default value is –1 (default).
For a description of the selectable range, see the user's manual for the module.

DBL Wait time (0s)

Specifies the wait time after the start operation.

The default value is 0 s.

Event Mode (0: No Event)

Selects the acquisition operation mode.
This value is valid when Start Control Code is set to 4 (Start Event).
0: No Event
1: Block_Event
2: Stop Event

The default value is 0 (No Event).

Acq Count (0)

Specifies the acquisition count.
You can specify the number of times to acquire the data. If you set the value to 0, the acquisition of data continues until the measurement is stopped.
There are limitations concerning this value. For details, see the user's manual for the module.

The default value is 0.

Timeout (10s)

Specified the timeout time of single start.
This value is valid when Control Code is set to 3 (Single Start).
Selectable range
1 to 32767 s

The default value is 10 s.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Event Handle

Indicates the event handle.
This value is valid when Control Code is set to 4 (Start Event).

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

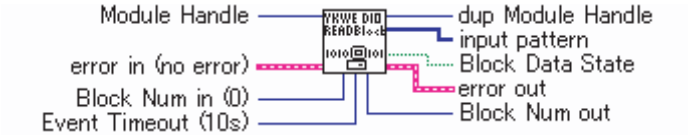
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DIO Read Block Data.vi

This VI reads the input pattern as the block data.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

I32 Event Timeout (10s)

Specifies the wait time until receiving an event in unit of ms.
This value is value when waiting for an event.

The default value is 10 s.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

TF status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

abc source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

input pattern

Indicates the input pattern as an array.
Indicates the current input pattern.
For the bits that are set to function as output, the output values are displayed.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DIO Read IO.vi

This VI reads the input pattern of the specified port.

I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Port (3: All)

Selects the input port.
1: Port 1
2: Port 2
3: All

The default value is 3 (All).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

TF status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

abc source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

U32 Input Pattern

Indicates the input pattern.
Indicates the current input pattern.
For the bits that are set to function as output, the output values are displayed.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

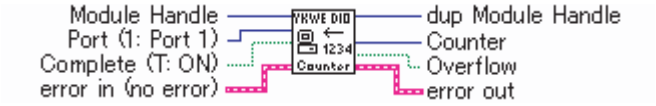
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DIO Read Counter.vi

This VI reads the count value of the specified port.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Port (1: Port 1)

Selects the input port.
1: Port 1
2: Port 2

The default value is 1 (Port1).

TF Complete (T: ON)

Selects the ON/OFF of the completion check of acquisition.
F: OFF
T: ON

The default value is T (ON: Check the completion).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

TF status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

abc source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Counter

Indicates the count value.
The maximum count is 4,294,836,224 (FFFE0000H).

Overflow

Indicates whether the count value is overflowing.
T: On (Count over)
F: Off

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

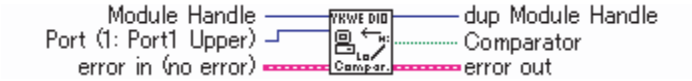
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DIO Read Comparator.vi

This VI reads the result of comparater of the specified port.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Port (1: Port1 Upper)

Selects the input port.
1: Port1 Upper
2: Port1 Lower
3: Port2 Upper
4: Port2 Lower

The default value is 1 (Port1 Upper).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

TF status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

abc source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

TF Comparator

Indicates the result of comparator.
T: On
F: Off

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

5.8 Pattern I/O VI

Pattern I/O VIs allow you to configure and perform data acquisition on the following modules.

WE7131 2MHz Pattern I/O Module

- Simple Level VIs

YKWE PIO Read Write One Ch.vi	Sets pattern I/O for the specified one channel, then configures data input or output.
YKWE PIO Read Write Multi Ch.vi	Sets pattern I/O for the plural channels, then configures data input or output.

- Intermediate Level VIs

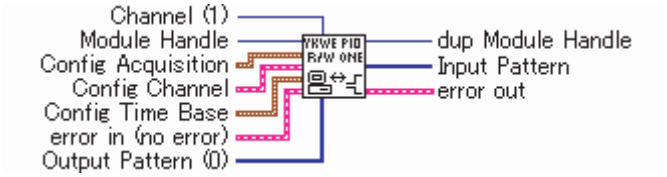
YKWE PIO Config.vi	Configures pattern I/O for the specified one channel.
YKWE PIO Read.vi	Inputs data to the specified one channel.
YKWE PIO Write.vi	Outputs data to the specified one channel.
YKWE PIO Start.vi	Starts the operation of pattern I/O module.
YKWE PIO Wait.vi	Waits for the end of pattern I/O module operation.
YKWE PIO Clear.vi	Stops the pattern I/O module operation.

- Advanced Level VIs

YKWE PIO Config Acquisition.vi	Configures the input operation settings of the accelerometer module. (Mode, Frequency, Memory Length, Pre Trigger)
YKWE PIO Config Time Base.vi	Configures the clock relation settings. (Time Base, Output Clock, Arming)
YKWE PIO Config Trigger.vi	Configures the trigger setting. (Channel, Mask, Pattern, Disable)
YKWE PIO Read Trigger Point.vi	Reads the trigger position of the specified channel. (Channel)
YKWE PIO Control.vi	Starts and stops the operation of the pattern module. (Control Code, Wait time, Timeout)
YKWE PIO Config IO.vi	Configures input and output to specified one channel. (Channel, I/O Select)
YKWE PIO Write IO.vi	Configures data output to specified one channel. (Channel, Output Pattern)
YKWE PIO Read IO.vi	Configures data input to specified one channel. (Channel, Complete)
YKWE PIO Load Pattern Data.vi	Reads the specified pattern data to the specified one channel. (Channel, File Name)

YKWE PIO Read Write One Ch.vi

This VI configures the pattern I/O setting to the specified one channel, then outputs and inputs data.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the channel number.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

Config Acquisition

Sets the analog input to the digital I/O module in a cluster.

U16 Mode (1: One Shot)

Selects the operation mode.
0: no change
1: One shot
2: Repeat

The default value is 1 (One Shot).

U16 Frequency (0: no change)

Specifies the frequency of the internal clock.
You will select the frequency of the internal clock signal that will be used for the input and output of the pattern signal. You can select the frequency of the internal clock, when the time base is set to internal.
0: no change
1: 5 mHz
2: 10 mHz
3: 20 mHz
4: 50 mHz
5: 100 mHz
6: 200 mHz
7: 500 mHz
8: 1 Hz
9: 2 Hz
10: 5 Hz
11: 10 Hz
12: 20 Hz
13: 50 Hz
14: 100 Hz
15: 200 Hz
16: 500 Hz

17: 1 kHz
18: 2 kHz
19: 5 kHz
20: 10 kHz
21: 20 kHz
22: 50 kHz
23: 100 kHz
24: 200 kHz
25: 500 kHz
26: 1 M Hz
27: 2 M Hz

The default value is 0 (no change).

U16 Memory Length (0: no chnage)

Specifies the memory length.
Sets the length of the input and output pattern data (input/output cycles).
Selectable memory length
1 to 32768

The default value is 0 (no change).

DBL Percent (-1: no change)

Specifies the pretrigger.
Set the amount of data before the trigger point to acquire in the memory. You can specify the amount using a percentage (the memory length represents 100%). When specifying the value using a percentage, the setting is rounded to the closest number of cycles.
If the trigger occurs before reaching the specified cycle, the pattern acquired up to that point will be the pre-trigger pattern.
This value is valid when operation mode is set to Repeat, and cycle is set to –1.
The direction of Cycle specification is priority from Percent specification.

The default value is –1 (no change).

I32 Cycle (-1: no change)

Specifies the pretrigger.
You can set the amount of data before the trigger point to acquire in the memory. Specifies the number of cycles.
If the trigger occurs before reaching the specified cycle, the pattern acquired up to that point will be the pre-trigger pattern.
This value is valid when operation mode is set to Repeat.

The default value is –1 (no change).

Config Channel

Sets selection of input or output, invalid of trigger, mask, and pattern of the specified channel in a cluster.

I/O Select (empty)

Specifies the selection of input/output in the array of the cell.
This 2MHz pattern I/O module has the input/output pins of 8 bit × 4. You can select the input or output for digital signal every set as 8 bit for 1 set.
Sets each cell with the binary of 4 digits (one digit corresponds to 8 bits of 1 set).
Blank array is no change.
Output: 1
Input: 0

The default value is no change.

Disable (0: no change)

Selects valid or invalid of trigger.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Mask (FFFFFFFF)

Specifies the trigger mask.
Sets the bits using an 8-digit hexadecimal number within the trigger pattern that will be used during the pattern matching.
This value is valid when the operation mode is set to Repeat.
The bit that are matching to trigger pattern: 1
The bits that are set to not considered(don't care): 0

The default value is all bit 1 (0xFFFFFFFF).

Pattern (FFFFFFFF)

Specifies the trigger pattern.
Set the digital pattern that will be used for the triggering using an 8-digit hexadecimal number. When measurement is started and the pattern of the input signal is matching, the trigger is activated.
This value is valid when the operation mode is set to Repeat.

The default value is all bit 1 (0xFFFFFFFF).

Config Time Base

Sets selection of time base,clock output, and arming in a cluster.

Time Base (0: no change)

Selects the time base.
You can selecs the reference clock.
0: no change
1: Internal
2: EXT CLOCK IN
3: BUSCLK

The default value is 1(Internal).

Output Clock (0: no change)

Selects the clock output.
When you selected Internal or BUSCLK for the time base, sets whether a clock signal is outputted from EXT CLOCK terminal, or it does not carry out.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Arming (1: OFF)

Selects the arming.
You can set this parameter to have the input/output operation of the digital pattern signal start when the bus trigger signal (BUSTRG1,2) of the measuring station is detected, and not when the Start button is clicked.
This value is valid when the time base is set to Internal.
0: no change
1: OFF
2: BUSTRG

The default value is 1 (OFF).

Output Pattern (0)

Specifies the output pattern in the array of cell.
LSB: PD00
MSB: PD37

The default value is All 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Input Pattern

Indicates the input pattern in the array of cell.
LSB: PD00
MSB: PD37

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

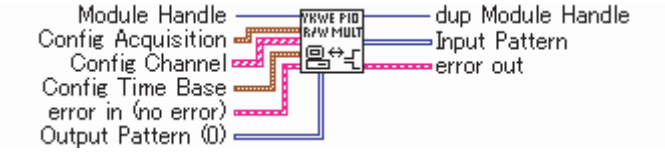
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE PIO Read Write Multi Ch.vi

This VI sets pattern I/O settings to the plural channels, then configures data input or output.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Config Acquisition

Sets the analog input to the digital I/O module in a cluster.

U16 Mode (1: One Shot)

Selects the operation mode.
0: no change
1: One shot
2: Repeat

The default value is 1 (One Shot).

U16 Frequency (0: no change)

Specifies the frequency of the internal clock.
You will select the frequency of the internal clock signal that will be used for the input and output of the pattern signal. You can select the frequency of the internal clock, when the time base is set to internal.
0: no change
1: 5 mHz
2: 10 mHz
3: 20 mHz
4: 50 mHz
5: 100 mHz
6: 200 mHz
7: 500 mHz
8: 1 Hz
9: 2 Hz
10: 5 Hz
11: 10 Hz
12: 20 Hz
13: 50 Hz
14: 100 Hz
15: 200 Hz
16: 500 Hz
17: 1 kHz
18: 2 kHz
19: 5 kHz
20: 10 kHz
21: 20 kHz
22: 50 kHz

23: 100 kHz
24: 200 kHz
25: 500 kHz
26: 1 MHz
27: 2 MHz

The default value is 0 (no change).

U16 Memory Length (0: no chnage)

Specifies the memory length.
Sets the length of the input and output pattern data (input/output cycles).

Selectable memory length

1 to 32768

The default value is 0 (no change).

DBL Percent (-1: no change)

Specifies the pretrigger.
Set the amount of data before the trigger point to acquire in the memory. You can specify the amount using a percentage (the memory length represents 100%). When specifying the value using a percentage, the setting is rounded to the closest number of cycles.
If the trigger occurs before reaching the specified cycle, the pattern acquired up to that point will be the pre-trigger pattern.
This value is valid when operation mode is set to Repeat, and cycle is set to –1.
The direction of Cycle specification is priority from Percent specification.

The default value is –1 (no change).

I32 Cycle (-1: no change)

Specifies the pretrigger.
You can set the amount of data before the trigger point to acquire in the memory. Specifies the number of cycles.
If the trigger occurs before reaching the specified cycle, the pattern acquired up to that point will be the pre-trigger pattern.
This value is valid when operation mode is set to Repeat.

The default value is –1 (no change).

Config Channel (no change)

Sets selection of input/output, invalid of trigger, mask, and pattern of the specified channel in a cluster. Of the array elements of index 0, if all the value is default, then index 1, 2, 3,and so on correspond to channels 1, 2, 3, and so on, respectively. In the other case, all channels are set using the elements of index 0.

The default value is no change.

I/O Select (empty)

Specifies the selection of input/output in the array of the cell.
This 2MHz pattern I/O module has the input/output pins of 8 bit × 4. You can select the input or output for digital signal every set as 8 bit for 1 set.
Sets each cell with the binary of 4 digits (one digit corresponds to 8 bits of 1 set).
Blank array is no change.
Output: 1
Input: 0

The default value is no change.

Disable (0: no change)

Selects valid or invalid of trigger.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Mask (FFFFFFFF)

Specifies the trigger mask.
Sets the bits using an 8-digit hexadecimal number within the trigger pattern that will be used during the pattern matching.
This value is valid when the operation mode is set to Repeat.
The bit that are matching to trigger pattern: 1
The bits that are set to not considered(don't care): 0

The default value is all bit 1 (0xFFFFFFFF).

Pattern (FFFFFFFF)

Specifies the trigger pattern.
Set the digital pattern that will be used for the triggering using an 8-digit hexadecimal number. When measurement is started and the pattern of the input signal is matching, the trigger is activated.
This value is valid when the operation mode is set to Repeat.

The default value is all bit 1 (0xFFFFFFFF).

Config Time Base

Sets selection of time base,clock output, and arming in a cluster.

Time Base (1: Internal)

Selects the time base.
You can selecs the reference clock.
0: no change
1: Internal
2: EXT CLOCK IN
3: BUSCLK

The default value is 1(Internal).

Output Clock (0: no change)

Selects the clock output.
When you selected Internal or BUSCLK for the time base, sets whether a clock signal is outputted from EXT CLOCK terminal, or it does not carry out.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Arming (0: no change)

Selects the arming.
You can set this parameter to have the input/output operation of the digital pattern signal start when the bus trigger signal (BUSTRG1,2) of the measuring station is detected, and not when the Start button is clicked.
This value is valid when the time base is set to Internal.
0: no change
1: OFF
2: BUSTRG

The default value is 0 (no change).

Output Pattern (0)

Specifies the output pattern in the array of cell.
LSB: PD00
MSB: PD37

The default value is All 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Input Pattern

Indicates the input pattern in the array of cell.
LSB: PD00
MSB: PD37

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

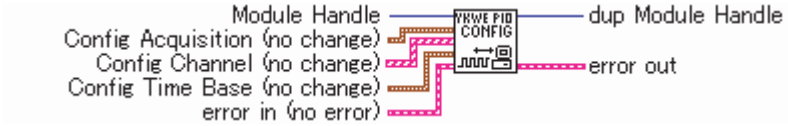
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE PIO Config.vi

This VI cofigures pattern I/O settings for the specified one channel.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Config Acquisition (no change)

Sets the analog input to the digital I/O module in a cluster.

The default value is no change.

U16 Mode (0: no change)

Selects the operation mode.
0: no change
1: One shot
2: Repeat

The default value is 0 (no change).

U16 Frequency (0: no change)

Specifies the frequency of the internal clock.
You will select the frequency of the internal clock signal that will be used for the input and output of the pattern signal. You can select the frequency of the internal clock, when the time base is set to Internal.
0: no change
1: 5 mHz
2: 10 mHz
3: 20 mHz
4: 50 mHz
5: 100 mHz
6: 200 mHz
7: 500 mHz
8: 1 Hz
9: 2 Hz
10: 5 Hz
11: 10 Hz
12: 20 Hz
13: 50 Hz
14: 100 Hz
15: 200 Hz
16: 500 Hz
17: 1 kHz
18: 2 kHz
19: 5 kHz
20: 10 kHz
21: 20 kHz

22: 50 kHz
23: 100 kHz
24: 200 kHz
25: 500 kHz
26: 1 MHz
27: 2 MHz

The default value is 0 (no change).

U16 Memory Length (0: no chnage)

Specifies the memory length.
Sets the length of the input and output pattern data (input/output cycles).
Selectable memory length
1 to 32768

The default value is 0 (no change).

DBL Percent (-1: no change)

Specifies the pretrigger.
Set the amount of data before the trigger point to acquire in the memory. You can specify the amount using a percentage (the memory length represents 100%). When specifying the value using a percentage, the setting is rounded to the closest number of cycles.
If the trigger occurs before reaching the specified cycle, the pattern acquired up to that point will be the pre-trigger pattern.
This value is valid when operation mode is set to Repeat, and cycle is set to –1.
The direction of Cycle specification is priority from Percent specification.

The default value is –1 (no change).

I32 Cycle (-1: no change)

Specifies the pretrigger.
You can set the amount of data before the trigger point to acquire in the memory. Specifies the number of cycles.
If the trigger occurs before reaching the specified cycle, the pattern acquired up to that point will be the pre-trigger pattern.
This value is valid when operation mode is set to Repeat.

The default value is –1 (no change).

Config Channel (no change)

Sets selection of input/output, invalid of trigger, mask, and pattern of the specified channel in a cluster. Of the array elements of index 0, if all the value is default, then index 1, 2, 3,and so on correspond to channels 1, 2, 3, and so on, respectively. In the other case, all channels are set using the elements of index 0.

The default value is no change.

I/O Select (empty)

Specifies the selection of input/output in the array of the cell.
This 2MHz pattern I/O module has the input/output pins of 8 bit × 4. You can select the input or output for digital signal every set as 8 bit for 1 set.
Sets each cell with the binary of 4 digits (one digit corresponds to 8 bits of 1 set).
Blank array is no change.
Output: 1
Input: 0

The default value is no change.

Disable (0: no change)

Selects valid or invalid of trigger.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Mask (FFFFFFFF)

Specifies the trigger mask.
Sets the bits using an 8-digit hexadecimal number within the trigger pattern that will be used during the pattern matching.
This value is valid when the operation mode is set to Repeat.
The bit that are matching to trigger pattern: 1
The bits that are set to not considered(don't care): 0

The default value is all bit 1 (0xFFFFFFFF).

Pattern (FFFFFFFF)

Specifies the trigger pattern.
Set the digital pattern that will be used for the triggering using an 8-digit hexadecimal number. When measurement is started and the pattern of the input signal is matching, the trigger is activated.
This value is valid when the operation mode is set to Repeat.

The default value is all bit 1 (0xFFFFFFFF).

Config Time Base (no change)

Sets selection of time base,clock output, and arming in a cluster.

The default value is no change.

Time Base (0: no change)

Selects the time base.
You can select the reference clock from the followings.
0: no change
1: Internal
2: EXT CLOCK IN
3: BUSCLK

The default value is 0 (no change).

Output Clock (0: no change)

Selects the clock output.
When you selected Internal or BUSCLK for the time base, sets whether a clock signal is outputted from EXT CLOCK terminal, or it does not carry out.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Arming (1: OFF)

Selects the arming.
You can set this parameter to have the input/output operation of the digital pattern signal start when the bus trigger signal (BUSTRG1,2) of the measuring station is detected, and not when the Start button is clicked.
This value is valid when the time base is set to Internal.
0: no change
1: OFF
2: BUSTRG

The default value is 1 (OFF).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE PIO Read.vi

This VI inputs data to the specified one channel.

Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Channel (1)

Specifies the channel number.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

Complete (T: ON)

Selects ON (to check) or OFF (not to check) for completion of acquisition.
F: OFF
T: ON

The default value is T (ON).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Input Pattern

Indicates the input pattern in the array of cell.
LSB: PD00
MSB: PD37

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE PIO Write.vi

This VI outputs data to the specified one channel.

Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Channel (1)

Specifies the channel number.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

Output Pattern (0)

Specifies the output pattern in the array of cell.
LSB: PD00
MSB: PD37

The default value is All 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

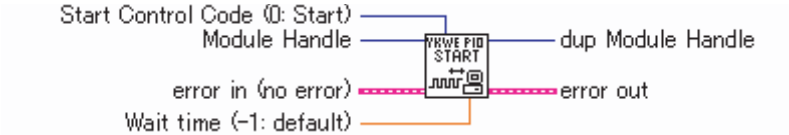
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE PIO Start.vi

This VI starts the operation of pattern I/O module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Start Control Code (0: Start)

Selects the control code.
0: Start
1: Single Start

The default value is 0 (Start).

DBL Wait time (-1: default)

Specifies the wait time after the start operation.

The default value is –1 (default).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

TF status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

abc source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

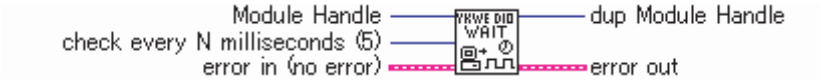
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE PIO Wait.vi

This VI waits for the end of operation of a pattern I/O module.



Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

check every N milliseconds (5)

Specifies the checking interval by the unit of ms.

The default value is 5 ms.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE PIO Clear.vi

This VI stops the pattern I/O module operation.

Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

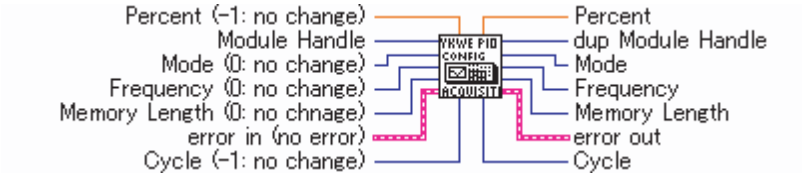
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE PIO Config Acquisition.vi

This VI configures the operation settings of the pattern I/O module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Mode (0: no change)

Selects the operation mode.
0: no change
1: One shot
2: Repeat

The default value is 0 (no change).

U16 Frequency (0: no change)

Specifies the frequency of the internal clock.
You will select the frequency of the internal clock signal that will be used for the input and output of the pattern signal. You can select the frequency of the internal clock, when the time base is set to Internal.
0: no change
1: 5 mHz
2: 10 mHz
3: 20 mHz
4: 50 mHz
5: 100 mHz
6: 200 mHz
7: 500 mHz
8: 1 Hz
9: 2 Hz
10: 5 Hz
11: 10 Hz
12: 20 Hz
13: 50 Hz
14: 100 Hz
15: 200 Hz
16: 500 Hz
17: 1 kHz
18: 2 kHz
19: 5 kHz
20: 10 kHz
21: 20 kHz
22: 50 kHz
23: 100 kHz
24: 200 kHz
25: 500 kHz
26: 1 MHz

27: 2 MHz

The default value is 0 (no change).

U16 Memory Length (0: no change)

Specifies the memory length.
Sets the length of the input and output pattern data (input/output cycles).
Selectable memory length
1 to 32768

The default value is 0 (no change).

DBL Percent (-1: no change)

Specifies the pretrigger.
Set the amount of data before the trigger point to acquire in the memory. You can specify the amount using a percentage (the memory length represents 100%). When specifying the value using a percentage, the setting is rounded to the closest number of cycles.
If the trigger occurs before reaching the specified cycle, the pattern acquired up to that point will be the pre-trigger pattern.
This value is valid when operation mode is set to Repeat, and cycle is set to –1.
The direction of Cycle specification is priority from Percent specification.

The default value is –1 (no change).

I32 Cycle (-1: no change)

Specifies the pretrigger.
You can set the amount of data before the trigger point to acquire in the memory. Specifies the number of cycles.
If the trigger occurs before reaching the specified cycle, the pattern acquired up to that point will be the pre-trigger pattern.
This value is valid when operation mode is set to Repeat.

The default value is –1 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Mode

Indicates the specified operation mode.
1: One Shot.
2: Repeat

U16 Frequency

Indicates the specified frequency of the internal clock..

1: 5 mHz
2: 10 mHz
3: 20 mHz
4: 50 mHz
5: 100 mHz
6: 200 mHz
7: 500 mHz
8: 1 Hz
9: 2 Hz
10: 5 Hz
11: 10 Hz
12: 20 Hz
13: 50 Hz
14: 100 Hz
15: 200 Hz
16: 500 Hz
17: 1 kHz
18: 2 kHz
19: 5 kHz
20: 10 kHz
21: 20 kHz
22: 50 kHz
23: 100 kHz
24: 200 kHz
25: 500 kHz
26: 1 MHz
27: 2 MHz

U16 Memory Length

Indicates the specified memory length.

DBL Percent

Indicates the specified pretrigger (Percent).

U16 Cycle

Indicates the specified pretrigger (Cycle).

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

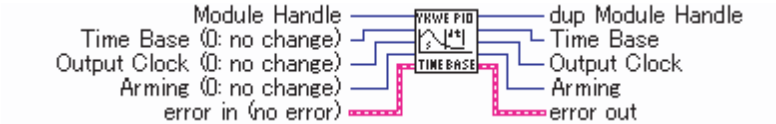
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE PIO Config Time Base.vi

This VI configures the clock relation settings.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Time Base (0: no change)

Selects the time base.
You can select the reference clock from the followings.
0: no change
1: Internal
2: EXT CLOCK IN
3: BUSCLK

The default value is 0 (no change).

U16 Output Clock (0: no change)

Selects the clock output.
When you selected Internal or BUSCLK for the time base, sets whether a clock signal is outputted from EXT CLOCK terminal, or it does not carry out.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

U16 Arming (0: no change)

Selects the arming.
You can set this parameter to have the input/output operation of the digital pattern signal start when the bus trigger signal (BUSTRG1,2) of the measuring station is detected, and not when the Start button is clicked.
This value is valid when the time base is set to Internal.
0: no change
1: OFF
2: BUSTRG

The default value is 0 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Time Base

Indicates the specified time base.
1: Internal
2: EXT CLOCK IN
3: BUSCLK

Output Clock

Indicates the specified clock output.
1: OFF
2: ON

Arming

Indicates the specified arming.
1: OFF
2: BUSTRG

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

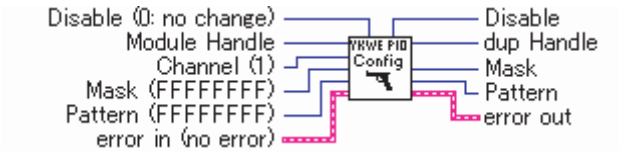
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE PIO Config Trigger.vi

This VI configures the trigger setting to pattern I/O module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the channel number.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

U16 Disable (0: no change)

Selects valid or invalid of trigger.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

U32 Mask (FFFFFFFF)

Specifies the trigger mask.
Sets the bits using an 8-digit hexadecimal number within the trigger pattern that will be used during the pattern matching.
This value is valid when the operation mode is set to Repeat.
The bit that are matching to trigger pattern: 1
The bits that are set to not considered(don't care): 0

The default value is all bit 1 (0xFFFFFFFF).

U32 Pattern (FFFFFFFF)

Specifies the trigger pattern.
Set the digital pattern that will be used for the triggering using an 8-digit hexadecimal number.
When measurement is started and the pattern of the input signal is matching, the trigger is activated.
This value is valid when the operation mode is set to Repeat.

The default value is all bit 1 (0xFFFFFFFF).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Disable

Indicates the specified trigger is invalid (ON) or is not invalid (OFF).
1: OFF
2: ON

Mask

Indicates the specified trgger mask.

Pattern

Indicates the specified trgger pattern.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE PIO Read Trigger Point.vi

This VI reads the trigger position of the specified channel of pattern I/O module.

Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Channel (1)

Specifies the channel number.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Trigger Point

Indicates the read trigger position.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

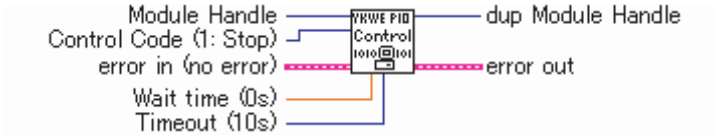
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE PIO Control.vi

This VI controls the pattern module.



Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Control Code (1: Stop)

Selects the digitizer control.
0: Start
1: Stop
3: Single Start

The default value is 1 (Stop).

Wait time (0s)

Specifies the wait time after the start operation.

The default value is 0 s.

Timeout (10s)

Specifies the timeout time of the single start.
This value is valid when Control Code is set to 3 (Single Start).

Selectabale Range

1 to 32767s

The default value is 10 s.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

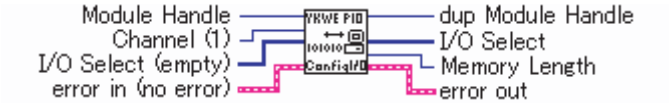
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE PIO Config IO.vi

This VI configures input and output to specified one channel.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the channel number.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

[U8] I/O Select (empty)

Specifies the selection of input/output in the array of the cell.
This 2MHz pattern I/O module has the input/output pins of 8 bit × 4. You can select the input or output for digital signal every set as 8 bit for 1 set.
Sets each cell with the binary of 4 digits (one digit corresponds to 8 bits of 1 set).
Blank array is no change.
Output: 1
Input: 0

The default value is no change.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

TF status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

abc source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

I/O Select

Indicates the selection for input/output in the array of the cell.
Output: 1
Input: 0

Memory Length

Indicates the memory length.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

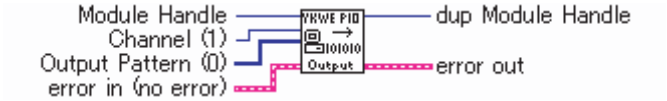
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE PIO Write IO.vi

This VI configures data output to specified one channel.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the channel number.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

[U32] Output Pattern (0)

Specifies the output pattern in the array of cell.
LSB: PD00
MSB: PD37

The default value is All 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

TF status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

abc source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

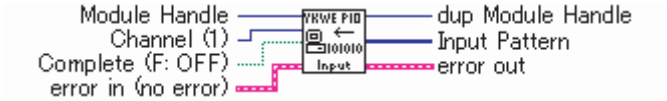
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE PIO Read IO.vi

This VI configures data input to specified one channel.



Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Channel (1)

Specifies the channel number.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

Complete (T: ON)

Selects ON (to check) or OFF (not to check) for completion of acquisition.
F: OFF
T: ON

The default value is T (ON).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Input Pattern

Indicates the input pattern in the array of cell.
LSB: PD00
MSB: PD37

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE PIO Load Pattern Data.vi

This VI reads the specified pattern data to the specified one channel.

Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Channel (1)

Specifies the channel number.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

File Name (Empty)

Specifies the file name.
It is not necessary to specify the extension. Moreover, “wpo” is automatically added to a file name as the extension.

The default value is blank.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

5.9 Counter VI

Counter VIs allow you to configure and perform data acquisition on the following modules.

WE7141 100 MHz Universal Counter Module

- Simple Level VIs

YKWE COUNT Sample Channel.vi	Acquires the specified number of samples as the specified sample rate, then returns the measurement data.
YKWE COUNT Acquire Waveform.vi	Acquires the specified number of samples as the specified sample rate, then returns the measurement block data.

- Intermediate Level VIs

YKWE COUNT Config.vi	Configures the input settings of the counter module.
YKWE COUNT Start.vi	Starts the counter module operation
YKWE COUNT Read Waveform.vi	Reads the block data from the counter module.
YKWE COUNT Single Scan.vi	Reads the current data from the input channel of the counter module.
YKWE COUNT Clear.vi	Stops the counter module operation.

- Advanced Level VIs

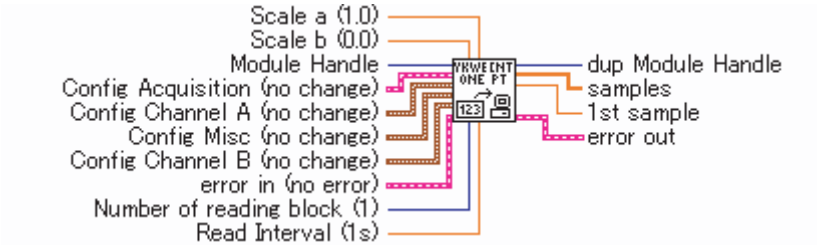
YKWE COUNT Config Acquisition.vi	Configures the input operation settings of the counter module. (Function, Gate Time, Multiplier, Ext Gate, Acquisition Mode, Sampling Interval, Alarm, Difference)
YKWE COUNT Config Channel.vi	Configures the specified channel settings of the counter module. (Channel, Coupling, Attenuator, Slope, Auto, Trigger Level, Prescaler)
YKWE COUNT Config Misc.vi	Configures the other input settings of the counter module. (Arming, D/A Output, Scaling, Clock)
YKWE COUNT Control.vi	Performs acquisition start/stop of the counter module operation. (Control Code, Block Length, Block Count, Wait time, Timeout)
YKWE COUNT Read Block Data.vi	Reads block data from the counter module. (Scaling, Block Num in, Event Timeout)
YKWE COUNT Read Current Data.vi	Reads current data of the counter module. (Scaling, Latch)

YKWE COUNT Sample Channel.vi

This VI measures signals from a input channel with a specified number of samples at a specified sampling interval and returns the measured data.

YKWE COUNT Sample Channel.vi is polymorphic and can be set to output the following types of data.
Scale array
Waveform

Scale array



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

Config Acquisition (no change)

Sets the analog input to the counter module in a cluster.

The default value is no change.

Function (0: no change)

Selects the measurement function.
0: no change
1: Frequency A
2: Period A
3: T Interval A–B (Time Interval A to B)
4: Pulse Width A
5: Duty Cycle A
6: Ratio A/B (Frequency Ratio A/B)
7: Totalize A (Totalize count A)

The default value is 0 (no change).

Gate Time (0: no change)

Selects the gate time.
To control the gate time by applying a gate signal to channel B (CH B), select “External.” However, you cannot select prescaler 1/2 on the gate signal of channel B (CH B).
The rising and falling edges of the input signal are counted during the specified gate time, and the measurement value is found from the count number and the gate time. The longer the gate time, the larger the count number and the higher the measurement resolution. However, making the gate time longer causes the measurement period to be longer and thus the display update rate becomes slower. You can select the gate time from preset values or use the pulse width of the gate signal that is input through channel B.
0: no change
1: 10 ms
2: 100 ms
3: 1 s
4: 10 s
5: External

The default value is 0 (no change).

Multiplier (0: no change)

Selects the multiplier.
In measurements other than the frequency measurement and the totalize measurement, the signal is measured continuously over the specified period of N and the measured value is obtained by taking the average. Therefore, the resolution increases as you make the multiplier larger. However, doing so will cause the measurement period to be longer which causes the display update rate to become slower during continuous measurements.
0: no change
1: ×1
2: ×10
3: ×100
4: ×1000

The default value is 0 (no change).

U16 Ext Gate (0: no change)

Selects the external gate.
To gate control the counter by applying a gate signal to channel B (CH B), select ON.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

U16 Acquisition Mode (0: no change)

Selects the acquisition mode.
Selects “One Shot” when the module makes a measurement and then stops or repeats. Selects “Free Run” when the measurements can be made periodically according to the specified interval and then the trend waveform based on the measured data can be displayed and saved.
0: no change
1: One Shot
2: Free Run

The default value is 0 (no change).

DBL Sampling Interval (0: no change)

Specifies the sampling interval.
This value is the setting of sampling interval when acquisition mode is set to Free Run.
The selectable range is 10ms to 100,000s. (in 10ms steps)

The default value is 0 (no change).

Alarm (no change)

Sets the alarm mode and alarm level in a cluster.

The default value is no change.

Alarm Mode (0: no change)

Selects the alarm mode.
When the acquisition mode is “Free Run”, you can set upper and lower limits on the measured signal and can output a bus trigger signal as an alarm based on those limits to the BUSTRG1 and BUSTRG2 buses in the measuring station. You can select the alarm output condition from the following choices.
0: no change
1: OFF
2: Rise: The measured value changes from a value below the upper limit to a value greater than or equal to the upper limit.
3: Fall: The measured value changes from a value above the lower limit to a value less than or equal to the lower limit.
4: In: The measured value changes from a value above the upper limit or below the lower limit to a value between the lower and upper limits.
5: Out: The measured value changes from a value between the lower and upper limits to a value above the upper limit or below the lower limit.

The default value is 0 (no change).

Alarm High (1)

Specifies the alarm high level.
The selectabale range is 0 to 1,000,000,000.

The default value is 1.

Alarm Low (0)

Specifies the alarm low level.
The selectabale range is 0 to 1,000,000,000.

The default value is 0.

Difference (0: no change)

Selects the totalize count difference measuring
When selecting “ON”, the totalize count difference determined by “(the current totalize count value) – (the previous totalize count value)” is measured. The initial value displays “the current totalize count value.”
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Config Channel A (no change)

Sets the channel A in a cluster.

The default value is no change.

Coupling (0: no change)

Selects the input coupling.
0: no change
1: AC: Only the AC component of the input signal is acquired. Select AC coupling when there is DC component in the signal or when the offset voltage is unstable.
2: DC: Both the AC and DC components of the input signal are acquired.

The default value is 0 (no change).

Attenuator (0: no change)

Selects the attenuator
The trigger circuit of this module adds hysteresis to the trigger level to minimize the effects due to noise. However, if there is noise on the signal that exceeds the hysteresis width, a counting error can occur. In such cases, you can reduce the level of the input signal with the attenuator which also causes the noise to be reduced. Also, the attenuator can be used to reduce the input signal level so that it is within the operational voltage range of the unit. Voltage exceeding the operational range can produce erroneous measurements.
0: no change
1: ×1
2: ×10

The default value is 0 (no change).

Slope (0: no change)

Selects the trigger slope.
Sets whether to trigger on the rising or the falling edge of the input signal.
0: no change
1: Rise
2: Fall

The default value is 0 (no change).

Auto (0: no change)

Selects the auto trigger.
0: no change
1: OFF: The trigger is activated using the specified trigger level.
2: ON: The center value of the amplitude of the input signal is detected, and is used as the trigger level. However, this mode is available only for sine waves with frequencies in the range from 50 Hz to 120 MHz.

The default value is 0 (no change).

Trigger Level (0)

Specifies the trigger level.
The setting range and the resolution vary depending on the attenuator setting as follows.
×1: Selectable range is –5.00 V to 5.00 V, and resolution is 20 mV.
×10: Selectable range is –40.0 V to 40.0 V, and resolution is 200 mV.

The default value is 0.0 V.

U16 Prescaler (0: no change)

Selects the prescaler.
The measurement frequency range is widened by dividing the frequency of the input signal to reduce the measurement frequency. If 1/2 prescaler is selected, the measurement range changes from (1 mHz to 60 MHz) to (1 Hz to 120 MHz).
This value is valid during frequency measurement.
0: no change
1: 1/1
2: 1/2

The default value is 0 (no change).

Config Channel B (no change)

Sets the channel B in a cluster.

The default value is no change.

Coupling (0: no change)

Selects the input coupling.
0: no change
1: AC: Only the AC component of the input signal is acquired. Select AC coupling when there is DC component in the signal or when the offset voltage is unstable.
2: DC: Both the AC and DC components of the input signal are acquired.

The default value is 0 (no change).

Attenuator (0: no change)

Selects the attenuator
The trigger circuit of this module adds hysteresis to the trigger level to minimize the effects due to noise. However, if there is noise on the signal that exceeds the hysteresis width, a counting error can occur. In such cases, you can reduce the level of the input signal with the attenuator which also causes the noise to be reduced. Also, the attenuator can be used to reduce the input signal level so that it is within the operational voltage range of the unit. Voltage exceeding the operational range can produce erroneous measurements.
0: no change
1: ×1
2: ×10

The default value is 0 (no change).

Slope (0: no change)

Selects the trigger slope.
Sets whether to trigger on the rising or the falling edge of the input signal.
0: no change
1: Rise
2: Fall

The default value is 0 (no change).

Auto (0: no change)

Selects the auto trigger.
0: no change
1: OFF: The trigger is activated using the specified trigger level.
2: ON: The center value of the amplitude of the input signal is detected, and is used as the trigger level. However, this mode is available only for sine waves with frequencies in the range from 50 Hz to 120 MHz.

The default value is 0 (no change).

Trigger Level (0)

Specifies the trigger level.
The setting range and the resolution vary depending on the attenuator setting as follows.
×1: Selectable range is –5.00 V to 5.00 V, and resolution is 20 mV.
×10: Selectable range is –40.0 V to 40.0 V, and resolution is 200 mV.

The default value is 0.0 V.

Config Misc (no change)

Sets the other count operation in a cluster.

The default value is no change.

Arming (0: no change)

Selects the arming.
Sets BUSTRG, when the acquisition mode is set as “One Shot”, the bus trigger signal of a measurement station is detected and you start measurement operation.
0: no change
1: OFF
2: BUSTRG

The default value is 0 (no change).

D/A output (0: no change)

Selects the D/A output.
All of the measured values are converted to a voltage value (analog signal) between 0 and 10 V and are output. Set the D/A output to ON when you perform the analog output.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Scaling 0V (0)

Specifies the 0 V of scaling of the D/A output.
Sets the measured values corresponding to 0 V.
The selectable range is 0 to 52nd power of 2 (=4.5035996e15).

The default value is 0.

Scaling 10V (100)

Specifies the 10 V of scaling of the D/A output.
Sets the measured values corresponding to 10 V.
The selectable range is 0 to 52nd power of 2 (=4.5035996e15).

The default value is 100.

Clock (0: no change)

Selects the reference signal.
When set to Internal, the measurement is performed using the reference signal from the internal crystal oscillator (10 MHz). You can set the reference signal to be an external signal that is input through the external reference signal input terminal (REFERENCE INPUT). Sets External, when the measurement is performed using the external input signal as the reference signal.
0: no change
1: Internal
2: External

The default value is 0 (no change).

Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data as an array of blocks.

1st sample

Indicates the scaled data of the first block of the scaled data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

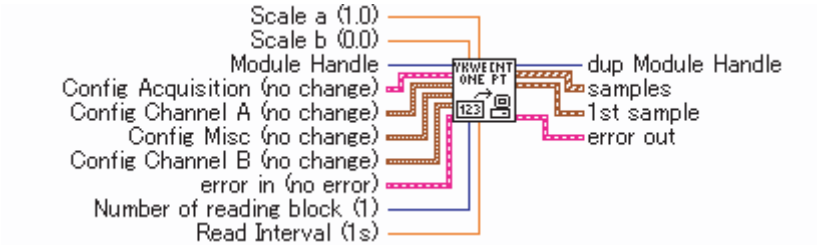
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

Config Acquisition (no change)

Sets the analog input to the counter module in a cluster.

The default value is no change.

U16 Function (0: no change)

Selects the measurement function.
0: no change
1: Frequency A
2: Period A
3: T Interval A–B (Time Interval A to B)
4: Pulse Width A
5: Duty Cycle A
6: Ratio A/B (Frequency Ratio A/B)
7: Totalize A (Totalize count A)

The default value is 0 (no change).

U16 Gate Time (0: no change)

Selects the gate time.
To control the gate time by applying a gate signal to channel B (CH B), select “External.” However, you cannot select prescaler 1/2 on the gate signal of channel B (CH B).
The rising and falling edges of the input signal are counted during the specified gate time, and the measurement value is found from the count number and the gate time. The longer the gate time, the larger the count number and the higher the measurement resolution. However, making the gate time longer causes the measurement period to be longer and thus the display update rate becomes slower. You can select the gate time from preset values or use the pulse width of the gate signal that is input through channel B.
0: no change
1: 10 ms
2: 100 ms
3: 1 s
4: 10 s
5: External

The default value is 0 (no change).

U16 Multiplier (0: no change)

Selects the multiplier.
In measurements other than the frequency measurement and the totalize measurement, the signal is measured continuously over the specified period of N and the measured value is obtained by taking the average. Therefore, the resolution increases as you make the multiplier larger. However, doing so will cause the measurement period to be longer which causes the display update rate to become slower during continuous measurements.
0: no change
1: ×1
2: ×10
3: ×100
4: ×1000

The default value is 0 (no change).

U16 Ext Gate (0: no change)

Selects the external gate.
To gate control the counter by applying a gate signal to channel B (CH B), select ON.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

U16 Acquisition Mode (0: no change)

Selects the acquisition mode.
Selects “One Shot” when the module makes a measurement and then stops or repeats. Selects “Free Run” when the measurements can be made periodically according to the specified interval and then the trend waveform based on the measured data can be displayed and saved.
0: no change
1: One Shot
2: Free Run

The default value is 0 (no change).

DBL Sampling Interval (0: no change)

Specifies the sampling interval.
This value is the setting of sampling interval when acquisition mode is set to Free Run.
The selectable range is 10ms to 100,000s. (in 10ms steps)

The default value is 0 (no change).

Alarm (no change)

Sets the alarm mode and alarm level in a cluster.

The default value is no change.

Alarm Mode (0: no change)

Selects the alarm mode.
When the acquisition mode is “Free Run”, you can set upper and lower limits on the measured signal and can output a bus trigger signal as an alarm based on those limits to the BUSTRG1 and BUSTRG2 buses in the measuring station. You can select the alarm output condition from the following choices.
0: no change
1: OFF
2: Rise: The measured value changes from a value below the upper limit to a value greater than or equal to the upper limit.
3: Fall: The measured value changes from a value above the lower limit to a value less than or equal to the lower limit.
4: In: The measured value changes from a value above the upper limit or below the lower limit to a value between the lower and upper limits.
5: Out: The measured value changes from a value between the lower and upper limits to a value above the upper limit or below the lower limit.

The default value is 0 (no change).

Alarm High (1)

Specifies the alarm high level.
The selectabale range is 0 to 1,000,000,000.

The default value is 1.

Alarm Low (0)

Specifies the alarm low level.
The selectabale range is 0 to 1,000,000,000.

The default value is 0.

Difference (0: no change)

Selects the totalize count difference measuring
When selecting “ON”, the totalize count difference determined by “(the current totalize count value) – (the previous totalize count value)” is measured. The initial value displays “the current totalize count value.”
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Config Channel A (no change)

Sets the channel A in a cluster.

The default value is no change.

Coupling (0: no change)

Selects the input coupling.
0: no change
1: AC: Only the AC component of the input signal is acquired. Select AC coupling when there is DC component in the signal or when the offset voltage is unstable.
2: DC: Both the AC and DC components of the input signal are acquired.

The default value is 0 (no change).

Attenuator (0: no change)

Selects the attenuator
The trigger circuit of this module adds hysteresis to the trigger level to minimize the effects due to noise. However, if there is noise on the signal that exceeds the hysteresis width, a counting error can occur. In such cases, you can reduce the level of the input signal with the attenuator which also causes the noise to be reduced. Also, the attenuator can be used to reduce the input signal level so that it is within the operational voltage range of the unit. Voltage exceeding the operational range can produce erroneous measurements.
0: no change
1: ×1
2: ×10

The default value is 0 (no change).

Slope (0: no change)

Selects the trigger slope.
Sets whether to trigger on the rising or the falling edge of the input signal.
0: no change
1: Rise
2: Fall

The default value is 0 (no change).

Auto (0: no change)

Selects the auto trigger.
0: no change
1: OFF: The trigger is activated using the specified trigger level.
2: ON: The center value of the amplitude of the input signal is detected, and is used as the trigger level. However, this mode is available only for sine waves with frequencies in the range from 50 Hz to 120 MHz.

The default value is 0 (no change).

Trigger Level (0)

Specifies the trigger level.
The setting range and the resolution vary depending on the attenuator setting as follows.
×1: Selectable range is –5.00 V to 5.00 V, and resolution is 20 mV.
×10: Selectable range is –40.0 V to 40.0 V, and resolution is 200 mV.

The default value is 0.0 V.

U16 Prescaler (0: no change)

Selects the prescaler.
The measurement frequency range is widened by dividing the frequency of the input signal to reduce the measurement frequency. If 1/2 prescaler is selected, the measurement range changes from (1 mHz to 60 MHz) to (1 Hz to 120 MHz).
This value is valid during frequency measurement.
0: no change
1: 1/1
2: 1/2

The default value is 0 (no change).

Config Channel B (no change)

Sets the channel B in a cluster.

The default value is no change.

Coupling (0: no change)

Selects the input coupling.
0: no change
1: AC: Only the AC component of the input signal is acquired. Select AC coupling when there is DC component in the signal or when the offset voltage is unstable.
2: DC: Both the AC and DC components of the input signal are acquired.

The default value is 0 (no change).

Attenuator (0: no change)

Selects the attenuator
The trigger circuit of this module adds hysteresis to the trigger level to minimize the effects due to noise. However, if there is noise on the signal that exceeds the hysteresis width, a counting error can occur. In such cases, you can reduce the level of the input signal with the attenuator which also causes the noise to be reduced. Also, the attenuator can be used to reduce the input signal level so that it is within the operational voltage range of the unit. Voltage exceeding the operational range can produce erroneous measurements.
0: no change
1: ×1
2: ×10

The default value is 0 (no change).

Slope (0: no change)

Selects the trigger slope.
Sets whether to trigger on the rising or the falling edge of the input signal.
0: no change
1: Rise
2: Fall

The default value is 0 (no change).

Auto (0: no change)

Selects the auto trigger.
0: no change
1: OFF: The trigger is activated using the specified trigger level.
2: ON: The center value of the amplitude of the input signal is detected, and is used as the trigger level. However, this mode is available only for sine waves with frequencies in the range from 50 Hz to 120 MHz.

The default value is 0 (no change).

Trigger Level (0)

Specifies the trigger level.
The setting range and the resolution vary depending on the attenuator setting as follows.
×1: Selectable range is –5.00 V to 5.00 V, and resolution is 20 mV.
×10: Selectable range is –40.0 V to 40.0 V, and resolution is 200 mV.

The default value is 0.0 V.

Config Misc (no change)

Sets the other count operation in a cluster.

The default value is no change.

Arming (0: no change)

Selects the arming.
Sets BUSTRG, when the acquisition mode is set as “One Shot”, the bus trigger signal of a measurement station is detected and you start measurement operation.
0: no change
1: OFF
2: BUSTRG

The default value is 0 (no change).

D/A output (0: no change)

Selects the D/A output.
All of the measured values are converted to a voltage value (analog signal) between 0 and 10 V and are output. Set the D/A output to ON when you perform the analog output.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Scaling 0V (0)

Specifies the 0 V of scaling of the D/A output.
Sets the measured values corresponding to 0 V.
The selectable range is 0 to 52nd power of 2 (=4.5035996e15).

The default value is 0.

Scaling 10V (100)

Specifies the 10 V of scaling of the D/A output.
Sets the measured values corresponding to 10 V.
The selectable range is 0 to 52nd power of 2 (=4.5035996e15).

The default value is 100.

Clock (0: no change)

Selects the reference signal.
When set to Internal, the measurement is performed using the reference signal from the internal crystal oscillator (10 MHz). You can set the reference signal to be an external signal that is input through the external reference signal input terminal (REFERENCE INPUT). Sets External, when the measurement is performed using the external input signal as the reference signal.
0: no change
1: Internal
2: External

The default value is 0 (no change).

Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data as an array.
t0 indicates 0.
Y indicates the array of measured data.

1st sample

Indicates the scaled data.
t0 indicates 0.
Y indicates the array of measured data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

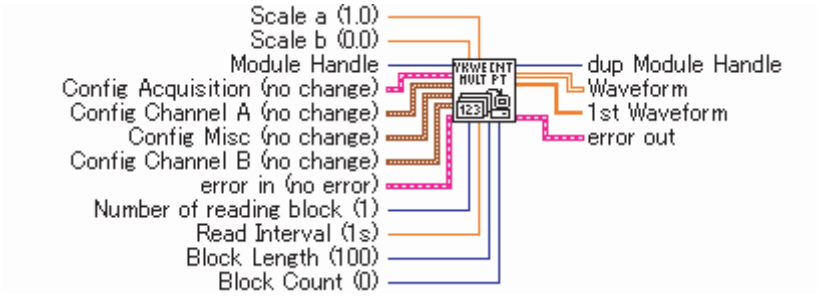
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE COUNT Acquire Waveform.vi

This VI measures signals from a input channel with a specified number of samples at a specified sampling interval, and returns the measured block data.

YKWE COUNT Acquire Waveform.vi is polymorphic and can be set to output the following types of data.
Scale array
Waveform

Scale array



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

Config Acquisition (no change)

Sets the analog input to the counter module in a cluster.

The default value is no change.

U16 Function (0: no change)

Selects the measurement function.
0: no change
1: Frequency A
2: Period A
3: T Interval A–B (Time Interval A to B)
4: Pulse Width A
5: Duty Cycle A
6: Ratio A/B (Frequency Ratio A/B)
7: Totalize A (Totalize count A)

The default value is 0 (no change).

U16 Gate Time (0: no change)

Selects the gate time.
To control the gate time by applying a gate signal to channel B (CH B), select “External.” However, you cannot select prescaler 1/2 on the gate signal of channel B (CH B).
The rising and falling edges of the input signal are counted during the specified gate time, and the measurement value is found from the count number and the gate time. The longer the gate time, the larger the count number and the higher the measurement resolution. However, making the gate time longer causes the measurement period to be longer and thus the display update rate becomes slower. You can select the gate time from preset values or use the pulse width of the gate signal that is input through channel B.
0: no change
1: 10 ms
2: 100 ms
3: 1 s
4: 10 s
5: External

The default value is 0 (no change).

U16 Multiplier (0: no change)

Selects the multiplier.
In measurements other than the frequency measurement and the totalize measurement, the signal is measured continuously over the specified period of N and the measured value is obtained by taking the average. Therefore, the resolution increases as you make the multiplier larger. However, doing so will cause the measurement period to be longer which causes the display update rate to become slower during continuous measurements.
0: no change
1: ×1
2: ×10
3: ×100
4: ×1000

The default value is 0 (no change).

U16 Ext Gate (0: no change)

Selects the external gate.
To gate control the counter by applying a gate signal to channel B (CH B), select ON.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

U16 Acquisition Mode (0: no change)

Selects the acquisition mode.
Selects “One Shot” when the module makes a measurement and then stops or repeats. Selects “Free Run” when the measurements can be made periodically according to the specified interval and then the trend waveform based on the measured data can be displayed and saved.
0: no change
1: One Shot
2: Free Run

The default value is 0 (no change).

DBL Sampling Interval (0: no change)

Specifies the sampling interval.
This value is the setting of sampling interval when acquisition mode is set to Free Run.
The selectable range is 10ms to 100,000s. (in 10ms steps)

The default value is 0 (no change).

Alarm (no change)

Sets the alarm mode and alarm level in a cluster.

The default value is no change.

Alarm Mode (0: no change)

Selects the alarm mode.
When the acquisition mode is “Free Run”, you can set upper and lower limits on the measured signal and can output a bus trigger signal as an alarm based on those limits to the BUSTRG1 and BUSTRG2 buses in the measuring station. You can select the alarm output condition from the following choices.
0: no change
1: OFF
2: Rise: The measured value changes from a value below the upper limit to a value greater than or equal to the upper limit.
3: Fall: The measured value changes from a value above the lower limit to a value less than or equal to the lower limit.
4: In: The measured value changes from a value above the upper limit or below the lower limit to a value between the lower and upper limits.
5: Out: The measured value changes from a value between the lower and upper limits to a value above the upper limit or below the lower limit.

The default value is 0 (no change).

Alarm High (1)

Specifies the alarm high level.
The selectabale range is 0 to 1,000,000,000.

The default value is 1.

Alarm Low (0)

Specifies the alarm low level.
The selectabale range is 0 to 1,000,000,000.

The default value is 0.

Difference (0: no change)

Selects the totalize count difference measuring
When selecting “ON”, the totalize count difference determined by “(the current totalize count value) – (the previous totalize count value)” is measured. The initial value displays “the current totalize count value.”
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Config Channel A (no change)

Sets the channel A in a cluster.

The default value is no change.

Coupling (0: no change)

Selects the input coupling.
0: no change
1: AC: Only the AC component of the input signal is acquired. Select AC coupling when there is DC component in the signal or when the offset voltage is unstable.
2: DC: Both the AC and DC components of the input signal are acquired.

The default value is 0 (no change).

Attenuator (0: no change)

Selects the attenuator
The trigger circuit of this module adds hysteresis to the trigger level to minimize the effects due to noise. However, if there is noise on the signal that exceeds the hysteresis width, a counting error can occur. In such cases, you can reduce the level of the input signal with the attenuator which also causes the noise to be reduced. Also, the attenuator can be used to reduce the input signal level so that it is within the operational voltage range of the unit. Voltage exceeding the operational range can produce erroneous measurements.
0: no change
1: ×1
2: ×10

The default value is 0 (no change).

Slope (0: no change)

Selects the trigger slope.
Sets whether to trigger on the rising or the falling edge of the input signal.
0: no change
1: Rise
2: Fall

The default value is 0 (no change).

Auto (0: no change)

Selects the auto trigger.
0: no change
1: OFF: The trigger is activated using the specified trigger level.
2: ON: The center value of the amplitude of the input signal is detected, and is used as the trigger level. However, this mode is available only for sine waves with frequencies in the range from 50 Hz to 120 MHz.

The default value is 0 (no change).

Trigger Level (0)

Specifies the trigger level.
The setting range and the resolution vary depending on the attenuator setting as follows.
×1: Selectable range is –5.00 V to 5.00 V, and resolution is 20 mV.
×10: Selectable range is –40.0 V to 40.0 V, and resolution is 200 mV.

The default value is 0.0 V.

U16 Prescaler (0: no change)

Selects the prescaler.
The measurement frequency range is widened by dividing the frequency of the input signal to reduce the measurement frequency. If 1/2 prescaler is selected, the measurement range changes from (1 mHz to 60 MHz) to (1 Hz to 120 MHz).
This value is valid during frequency measurement.
0: no change
1: 1/1
2: 1/2

The default value is 0 (no change).

Config Channel B (no change)

Sets the channel B in a cluster.

The default value is no change.

Coupling (0: no change)

Selects the input coupling.
0: no change
1: AC: Only the AC component of the input signal is acquired. Select AC coupling when there is DC component in the signal or when the offset voltage is unstable.
2: DC: Both the AC and DC components of the input signal are acquired.

The default value is 0 (no change).

Attenuator (0: no change)

Selects the attenuator
The trigger circuit of this module adds hysteresis to the trigger level to minimize the effects due to noise. However, if there is noise on the signal that exceeds the hysteresis width, a counting error can occur. In such cases, you can reduce the level of the input signal with the attenuator which also causes the noise to be reduced. Also, the attenuator can be used to reduce the input signal level so that it is within the operational voltage range of the unit. Voltage exceeding the operational range can produce erroneous measurements.
0: no change
1: ×1
2: ×10

The default value is 0 (no change).

Slope (0: no change)

Selects the trigger slope.
Sets whether to trigger on the rising or the falling edge of the input signal.
0: no change
1: Rise
2: Fall

The default value is 0 (no change).

Auto (0: no change)

Selects the auto trigger.
0: no change
1: OFF: The trigger is activated using the specified trigger level.
2: ON: The center value of the amplitude of the input signal is detected, and is used as the trigger level. However, this mode is available only for sine waves with frequencies in the range from 50 Hz to 120 MHz.

The default value is 0 (no change).

Trigger Level (0)

Specifies the trigger level.
The setting range and the resolution vary depending on the attenuator setting as follows.
×1: Selectable range is –5.00 V to 5.00 V, and resolution is 20 mV.
×10: Selectable range is –40.0 V to 40.0 V, and resolution is 200 mV.

The default value is 0.0 V.

Config Misc (no change)

Sets the other count operation in a cluster.

The default value is no change.

Arming (0: no change)

Selects the arming.
Sets BUSTRG, when the acquisition mode is set as “One Shot”, the bus trigger signal of a measurement station is detected and you start measurement operation.
0: no change
1: OFF
2: BUSTRG

The default value is 0 (no change).

D/A output (0: no change)

Selects the D/A output.
All of the measured values are converted to a voltage value (analog signal) between 0 and 10 V and are output. Set the D/A output to ON when you perform the analog output.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Scaling 0V (0)

Specifies the 0 V of scaling of the D/A output.
Sets the measured values corresponding to 0 V.
The selectable range is 0 to 52nd power of 2 (=4.5035996e15).

The default value is 0.

Scaling 10V (100)

Specifies the 10 V of scaling of the D/A output.
Sets the measured values corresponding to 10 V.
The selectable range is 0 to 52nd power of 2 (=4.5035996e15).

The default value is 100.

Clock (0: no change)

Selects the reference signal.
When set to Internal, the measurement is performed using the reference signal from the internal crystal oscillator (10 MHz). You can set the reference signal to be an external signal that is input through the external reference signal input terminal (REFERENCE INPUT). Sets External, when the measurement is performed using the external input signal as the reference signal.
0: no change
1: Internal
2: External

The default value is 0 (no change).

Block Length (100)

Specifies the block length.
For the selectable range, see the user's manual for the module.

The default value is 100.

Block Count (0)

Specifies the block count.
Specify the exponential part of the number of memory partitions (number of blocks) expressed as a power of 2.

The default value is 0.
For the selectable range, see the user's manual for the module.

Scale a (1.0)

Specifies the scale value a ("a" of the scale conversion equation "ax+b").

The default value is 1.0.

Scale b (0.0)

Specifies the scale value b ("b" of the scale conversion equation "ax+b").

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveform

Indicates the scaled data as an array of blocks.

1st Waveform

Indicates the scaled data of the first block of the scaled data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

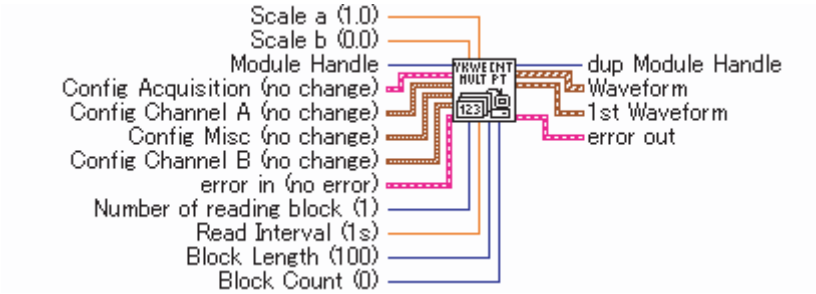
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

Config Acquisition (no change)

Sets the analog input to the counter module in a cluster.

The default value is no change.

U16 Function (0: no change)

Selects the measurement function.
0: no change
1: Frequency A
2: Period A
3: T Interval A–B (Time Interval A to B)
4: Pulse Width A
5: Duty Cycle A
6: Ratio A/B (Frequency Ratio A/B)
7: Totalize A (Totalize count A)

The default value is 0 (no change).

U16 Gate Time (0: no change)

Selects the gate time.
To control the gate time by applying a gate signal to channel B (CH B), select “External.” However, you cannot select prescaler 1/2 on the gate signal of channel B (CH B).
The rising and falling edges of the input signal are counted during the specified gate time, and the measurement value is found from the count number and the gate time. The longer the gate time, the larger the count number and the higher the measurement resolution. However, making the gate time longer causes the measurement period to be longer and thus the display update rate becomes slower. You can select the gate time from preset values or use the pulse width of the gate signal that is input through channel B.
0: no change
1: 10 ms
2: 100 ms
3: 1 s
4: 10 s
5: External

The default value is 0 (no change).

U16 Multiplier (0: no change)

Selects the multiplier.
In measurements other than the frequency measurement and the totalize measurement, the signal is measured continuously over the specified period of N and the measured value is obtained by taking the average. Therefore, the resolution increases as you make the multiplier larger. However, doing so will cause the measurement period to be longer which causes the display update rate to become slower during continuous measurements.
0: no change
1: ×1
2: ×10
3: ×100
4: ×1000

The default value is 0 (no change).

U16 Ext Gate (0: no change)

Selects the external gate.
To gate control the counter by applying a gate signal to channel B (CH B), select ON.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

U16 Acquisition Mode (0: no change)

Selects the acquisition mode.
Selects “One Shot” when the module makes a measurement and then stops or repeats. Selects “Free Run” when the measurements can be made periodically according to the specified interval and then the trend waveform based on the measured data can be displayed and saved.
0: no change
1: One Shot
2: Free Run

The default value is 0 (no change).

DBL Sampling Interval (0: no change)

Specifies the sampling interval.
This value is the setting of sampling interval when acquisition mode is set to Free Run.
The selectable range is 10ms to 100,000s. (in 10ms steps)

The default value is 0 (no change).

Alarm (no change)

Sets the alarm mode and alarm level in a cluster.

The default value is no change.

Alarm Mode (0: no change)

Selects the alarm mode.
When the acquisition mode is “Free Run”, you can set upper and lower limits on the measured signal and can output a bus trigger signal as an alarm based on those limits to the BUSTRG1 and BUSTRG2 buses in the measuring station. You can select the alarm output condition from the following choices.
0: no change
1: OFF
2: Rise: The measured value changes from a value below the upper limit to a value greater than or equal to the upper limit.
3: Fall: The measured value changes from a value above the lower limit to a value less than or equal to the lower limit.
4: In: The measured value changes from a value above the upper limit or below the lower limit to a value between the lower and upper limits.
5: Out: The measured value changes from a value between the lower and upper limits to a value above the upper limit or below the lower limit.

The default value is 0 (no change).

Alarm High (1)

Specifies the alarm high level.
The selectabale range is 0 to 1,000,000,000.

The default value is 1.

Alarm Low (0)

Specifies the alarm low level.
The selectabale range is 0 to 1,000,000,000.

The default value is 0.

Difference (0: no change)

Selects the totalize count difference measuring
When selecting “ON”, the totalize count difference determined by “(the current totalize count value) – (the previous totalize count value)” is measured. The initial value displays “the current totalize count value.”
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Config Channel A (no change)

Sets the channel A in a cluster.

The default value is no change.

Coupling (0: no change)

Selects the input coupling.
0: no change
1: AC: Only the AC component of the input signal is acquired. Select AC coupling when there is DC component in the signal or when the offset voltage is unstable.
2: DC: Both the AC and DC components of the input signal are acquired.

The default value is 0 (no change).

Attenuator (0: no change)

Selects the attenuator
The trigger circuit of this module adds hysteresis to the trigger level to minimize the effects due to noise. However, if there is noise on the signal that exceeds the hysteresis width, a counting error can occur. In such cases, you can reduce the level of the input signal with the attenuator which also causes the noise to be reduced. Also, the attenuator can be used to reduce the input signal level so that it is within the operational voltage range of the unit. Voltage exceeding the operational range can produce erroneous measurements.
0: no change
1: ×1
2: ×10

The default value is 0 (no change).

Slope (0: no change)

Selects the trigger slope.
Sets whether to trigger on the rising or the falling edge of the input signal.
0: no change
1: Rise
2: Fall

The default value is 0 (no change).

Auto (0: no change)

Selects the auto trigger.
0: no change
1: OFF: The trigger is activated using the specified trigger level.
2: ON: The center value of the amplitude of the input signal is detected, and is used as the trigger level. However, this mode is available only for sine waves with frequencies in the range from 50 Hz to 120 MHz.

The default value is 0 (no change).

Trigger Level (0)

Specifies the trigger level.
The setting range and the resolution vary depending on the attenuator setting as follows.
×1: Selectable range is –5.00 V to 5.00 V, and resolution is 20 mV.
×10: Selectable range is –40.0 V to 40.0 V, and resolution is 200 mV.

The default value is 0.0 V.

U16 Prescaler (0: no change)

Selects the prescaler.
The measurement frequency range is widened by dividing the frequency of the input signal to reduce the measurement frequency. If 1/2 prescaler is selected, the measurement range changes from (1 mHz to 60 MHz) to (1 Hz to 120 MHz).
This value is valid during frequency measurement.
0: no change
1: 1/1
2: 1/2

The default value is 0 (no change).

Config Channel B (no change)

Sets the channel B in a cluster.

The default value is no change.

Coupling (0: no change)

Selects the input coupling.
0: no change
1: AC: Only the AC component of the input signal is acquired. Select AC coupling when there is DC component in the signal or when the offset voltage is unstable.
2: DC: Both the AC and DC components of the input signal are acquired.

The default value is 0 (no change).

Attenuator (0: no change)

Selects the attenuator
The trigger circuit of this module adds hysteresis to the trigger level to minimize the effects due to noise. However, if there is noise on the signal that exceeds the hysteresis width, a counting error can occur. In such cases, you can reduce the level of the input signal with the attenuator which also causes the noise to be reduced. Also, the attenuator can be used to reduce the input signal level so that it is within the operational voltage range of the unit. Voltage exceeding the operational range can produce erroneous measurements.
0: no change
1: ×1
2: ×10

The default value is 0 (no change).

Slope (0: no change)

Selects the trigger slope.
Sets whether to trigger on the rising or the falling edge of the input signal.
0: no change
1: Rise
2: Fall

The default value is 0 (no change).

Auto (0: no change)

Selects the auto trigger.
0: no change
1: OFF: The trigger is activated using the specified trigger level.
2: ON: The center value of the amplitude of the input signal is detected, and is used as the trigger level. However, this mode is available only for sine waves with frequencies in the range from 50 Hz to 120 MHz.

The default value is 0 (no change).

Trigger Level (0)

Specifies the trigger level.
The setting range and the resolution vary depending on the attenuator setting as follows.
×1: Selectable range is –5.00 V to 5.00 V, and resolution is 20 mV.
×10: Selectable range is –40.0 V to 40.0 V, and resolution is 200 mV.

The default value is 0.0 V.

Config Misc (no change)

Sets the other count operation in a cluster.

The default value is no change.

Arming (0: no change)

Selects the arming.
Sets BUSTRG, when the acquisition mode is set as “One Shot”, the bus trigger signal of a measurement station is detected and you start measurement operation.
0: no change
1: OFF
2: BUSTRG

The default value is 0 (no change).

D/A output (0: no change)

Selects the D/A output.
All of the measured values are converted to a voltage value (analog signal) between 0 and 10 V and are output. Set the D/A output to ON when you perform the analog output.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Scaling 0V (0)

Specifies the 0 V of scaling of the D/A output.
Sets the measured values corresponding to 0 V.
The selectable range is 0 to 52nd power of 2 (=4.5035996e15).

The default value is 0.

Scaling 10V (100)

Scaling 10V (100)
Specifies the 10 V of scaling of the D/A output.
Sets the measured values corresponding to 10 V.
The selectable range is 0 to 52nd power of 2 (=4.5035996e15).

The default value is 100.

Clock (0: no change)

Selects the reference signal.
When set to Internal, the measurement is performed using the reference signal from the internal crystal oscillator (10 MHz). You can set the reference signal to be an external signal that is input through the external reference signal input terminal (REFERENCE INPUT). Sets External, when the measurement is performed using the external input signal as the reference signal.
0: no change
1: Internal
2: External

The default value is 0 (no change).

Block Length (100)

Specifies the block length.
For the selectable range, see the user's manual for the module.

The default value is 100.

Block Count (0)

Specifies the block count.
Specify the exponential part of the number of memory partitions (number of blocks) expressed as a power of 2.

The default value is 0.
For the selectable range, see the user's manual for the module.

Scale a (1.0)

Specifies the scale value a ("a" of the scale conversion equation "ax+b").

The default value is 1.0.

Scale b (0.0)

Specifies the scale value b ("b" of the scale conversion equation "ax+b").

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveform

Indicates the scaled data of as an array.
t0 indicates 0.
Y indicates the array of measured data.

1st Waveform

Indicates the scaled data.
t0 indicates 0.
Y indicates the array of measured data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

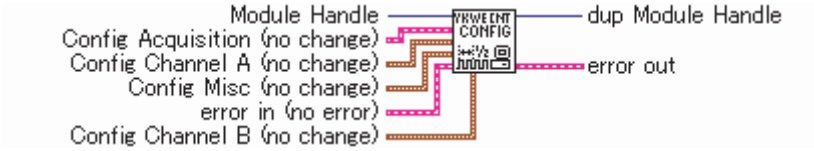
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE COUNT Config.vi

This VI configures the input settings of the counter module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Config Acquisition (no change)

Sets the analog input to the counter module in a cluster.

The default value is no change.

U16 Function (0: no change)

Selects the measurement function.
0: no change
1: Frequency A
2: Period A
3: T Interval A–B (Time Interval A to B)
4: Pulse Width A
5: Duty Cycle A
6: Ratio A/B (Frequency Ratio A/B)
7: Totalize A (Totalize count A)

The default value is 0 (no change).

U16 Gate Time (0: no change)

Selects the gate time.
To control the gate time by applying a gate signal to channel B (CH B), select “External.” However, you cannot select prescaler 1/2 on the gate signal of channel B (CH B).
The rising and falling edges of the input signal are counted during the specified gate time, and the measurement value is found from the count number and the gate time. The longer the gate time, the larger the count number and the higher the measurement resolution. However, making the gate time longer causes the measurement period to be longer and thus the display update rate becomes slower. You can select the gate time from preset values or use the pulse width of the gate signal that is input through channel B.
0: no change
1: 10 ms
2: 100 ms
3: 1 s
4: 10 s
5: External

The default value is 0 (no change).

U16 Multiplier (0: no change)

Selects the multiplier.
In measurements other than the frequency measurement and the totalize measurement, the signal is measured continuously over the specified period of N and the measured value is obtained by taking the average. Therefore, the resolution increases as you make the multiplier larger. However, doing so will cause the measurement period to be longer which causes the display update rate to become slower during continuous measurements.
0: no change
1: ×1
2: ×10
3: ×100
4: ×1000

The default value is 0 (no change).

U16 Ext Gate (0: no change)

Selects the external gate.
To gate control the counter by applying a gate signal to channel B (CH B), select ON.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

U16 Acquisition Mode (0: no change)

Selects the acquisition mode.
Selects “One Shot” when the module makes a measurement and then stops or repeats. Selects “Free Run” when the measurements can be made periodically according to the specified interval and then the trend waveform based on the measured data can be displayed and saved.
0: no change
1: One Shot
2: Free Run

The default value is 0 (no change).

DBL Sampling Interval (0: no change)

Specifies the sampling interval.
This value is the setting of sampling interval when acquisition mode is set to Free Run.
The selectable range is 10ms to 100,000s. (in 10ms steps)

The default value is 0 (no change).

Alarm (no change)

Sets the alarm mode and alarm level in a cluster.

The default value is no change.

Alarm Mode (0: no change)

Selects the alarm mode.
When the acquisition mode is “Free Run”, you can set upper and lower limits on the measured signal and can output a bus trigger signal as an alarm based on those limits to the BUSTRG1 and BUSTRG2 buses in the measuring station. You can select the alarm output condition from the following choices.
0: no change
1: OFF
2: Rise: The measured value changes from a value below the upper limit to a value greater than or equal to the upper limit.
3: Fall: The measured value changes from a value above the lower limit to a value less than or equal to the lower limit.
4: In: The measured value changes from a value above the upper limit or below the lower limit to a value between the lower and upper limits.
5: Out: The measured value changes from a value between the lower and upper limits to a value above the upper limit or below the lower limit.

The default value is 0 (no change).

Alarm High (1)

Specifies the alarm high level.
The selectabale range is 0 to 1,000,000,000.

The default value is 1.

Alarm Low (0)

Specifies the alarm low level.
The selectabale range is 0 to 1,000,000,000.

The default value is 0.

Difference (0: no change)

Selects the totalize count difference measuring
When selecting “ON”, the totalize count difference determined by “(the current totalize count value) – (the previous totalize count value)” is measured. The initial value displays “the current totalize count value.”
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Config Channel A (no change)

Sets the channel A in a cluster.

The default value is no change.

U16 Coupling (0: no change)

Selects the input coupling.
0: no change
1: AC: Only the AC component of the input signal is acquired. Select AC coupling when there is DC component in the signal or when the offset voltage is unstable.
2: DC: Both the AC and DC components of the input signal are acquired.

The default value is 0 (no change).

U16 Attenuator (0: no change)

Selects the attenuator
The trigger circuit of this module adds hysteresis to the trigger level to minimize the effects due to noise. However, if there is noise on the signal that exceeds the hysteresis width, a counting error can occur. In such cases, you can reduce the level of the input signal with the attenuator which also causes the noise to be reduced. Also, the attenuator can be used to reduce the input signal level so that it is within the operational voltage range of the unit. Voltage exceeding the operational range can produce erroneous measurements.
0: no change
1: ×1
2: ×10

The default value is 0 (no change).

U16 Slope (0: no change)

Selects the trigger slope.
Sets whether to trigger on the rising or the falling edge of the input signal.
0: no change
1: Rise
2: Fall

The default value is 0 (no change).

U16 Auto (0: no change)

Selects the auto trigger.
0: no change
1: OFF: The trigger is activated using the specified trigger level.
2: ON: The center value of the amplitude of the input signal is detected, and is used as the trigger level. However, this mode is available only for sine waves with frequencies in the range from 50 Hz to 120 MHz.

The default value is 0 (no change).

DBL Trigger Level (0)

Specifies the trigger level.
The setting range and the resolution vary depending on the attenuator setting as follows.
×1: Selectable range is –5.00 V to 5.00 V, and resolution is 20 mV.
×10: Selectable range is –40.0 V to 40.0 V, and resolution is 200 mV.

The default value is 0.0 V.

U16 Prescaler (0: no change)

Selects the prescaler.
The measurement frequency range is widened by dividing the frequency of the input signal to reduce the measurement frequency. If 1/2 prescaler is selected, the measurement range changes from (1 mHz to 60 MHz) to (1 Hz to 120 MHz).
This value is valid during frequency measurement.
0: no change
1: 1/1
2: 1/2

The default value is 0 (no change).

Config Channel B (no change)

Sets the channel B in a cluster.

The default value is no change.

Coupling (0: no change)

Selects the input coupling.
0: no change
1: AC: Only the AC component of the input signal is acquired. Select AC coupling when there is DC component in the signal or when the offset voltage is unstable.
2: DC: Both the AC and DC components of the input signal are acquired.

The default value is 0 (no change).

Attenuator (0: no change)

Selects the attenuator
The trigger circuit of this module adds hysteresis to the trigger level to minimize the effects due to noise. However, if there is noise on the signal that exceeds the hysteresis width, a counting error can occur. In such cases, you can reduce the level of the input signal with the attenuator which also causes the noise to be reduced. Also, the attenuator can be used to reduce the input signal level so that it is within the operational voltage range of the unit. Voltage exceeding the operational range can produce erroneous measurements.
0: no change
1: ×1
2: ×10

The default value is 0 (no change).

Slope (0: no change)

Selects the trigger slope.
Sets whether to trigger on the rising or the falling edge of the input signal.
0: no change
1: Rise
2: Fall

The default value is 0 (no change).

Auto (0: no change)

Selects the auto trigger.
0: no change
1: OFF: The trigger is activated using the specified trigger level.
2: ON: The center value of the amplitude of the input signal is detected, and is used as the trigger level. However, this mode is available only for sine waves with frequencies in the range from 50 Hz to 120 MHz.

The default value is 0 (no change).

Trigger Level (0)

Specifies the trigger level.
The setting range and the resolution vary depending on the attenuator setting as follows.
×1: Selectable range is –5.00 V to 5.00 V, and resolution is 20 mV.
×10: Selectable range is –40.0 V to 40.0 V, and resolution is 200 mV.

The default value is 0.0 V.

Config Misc (no change)

Sets the other count operation in a cluster.

The default value is no change.

Arming (0: no change)

Selects the arming.
Sets BUSTRG, when the acquisition mode is set as “One Shot”, the bus trigger signal of a measurement station is detected and you start measurement operation.
0: no change
1: OFF
2: BUSTRG

The default value is 0 (no change).

D/A output (0: no change)

Selects the D/A output.
All of the measured values are converted to a voltage value (analog signal) between 0 and 10 V and are output. Set the D/A output to ON when you perform the analog output.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Scaling 0V (0)

Specifies the 0 V of scaling of the D/A output.
Sets the measured values corresponding to 0 V.
The selectable range is 0 to 52nd power of 2 (=4.5035996e15).

The default value is 0.

Scaling 10V (100)

Specifies the 10 V of scaling of the D/A output.
Sets the measured values corresponding to 10 V.
The selectable range is 0 to 52nd power of 2 (=4.5035996e15).

The default value is 100.

Clock (0: no change)

Selects the reference signal.
When set to Internal, the measurement is performed using the reference signal from the internal crystal oscillator (10 MHz). You can set the reference signal to be an external signal that is input through the external reference signal input terminal (REFERENCE INPUT). Sets External, when the measurement is performed using the external input signal as the reference signal.
0: no change
1: Internal
2: External

The default value is 0 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

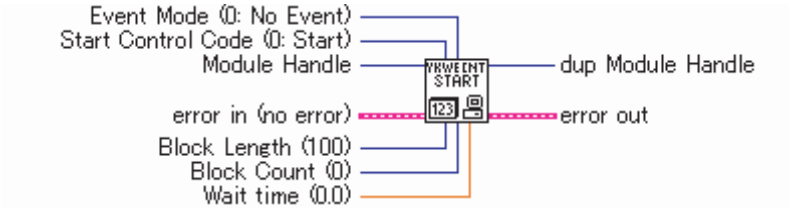
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE COUNT Start.vi

This VI Starts the counter module operation.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Start Control Code (0: Start)

Selects the control code.
0: Start
1: Single Start
2: Start Event

The default value is 0 (Start).

I32 Block Length (100)

Specifies the block length.
This value is valid when Start Control Code is set to Start or Start Event.

The default value is 100.
For the selectable range, see the user's manual for the module.

U8 Block Count (0)

Specifies the block count.
This value is valid when Start Control Code is set to Start or Start Event.
Specify the exponential part of the number of memory partitions (number of blocks) expressed as a power of 2.

The default value is 0.
For the selectable range, see the user's manual for the module.

I16 Event Mode (0: No Event)

Selects the acquisition operation mode.
This value is valid when Start Control Code is set to Start Event.
0: No Event
1: Block_Event
2: Stop Event

The default value is 0 (No Event).

DBL Wait time (0.0)

Specifies the wait time after the start operation.

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

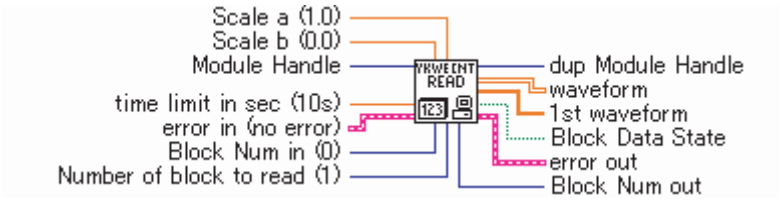
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE COUNT Read Waveform.vi

This VI reads the block data from the counter module.

YKWE COUNT Read Waveform.vi is polymorphic and can be set to output the following types of data.
Scale array
Waveform

Scale array



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL time limit in sec (10s)

Specifies the time limit for the read operation.
The actual time limit is time limit in sec + sampling interval × record length.

The default value is 10 s.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveform

Indicates the scaled data as an array of blocks.

1st Waveform

Indicates the scaled data of the first block of the scaled data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

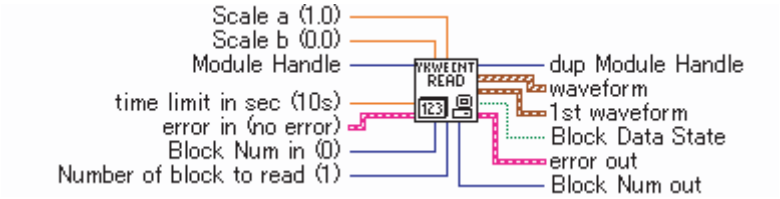
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL time limit in sec (10s)

Specifies the time limit for the read operation.
The actual time limit is time limit in sec + sampling interval × record length.

The default value is 10 s.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveform

Indicates the scaled data as an array.
t0 indicates 0.
Y indicates the array of measured data.

1st Waveform

Indicates the scaled data.
t0 indicates 0.
Y indicates the array of measured data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

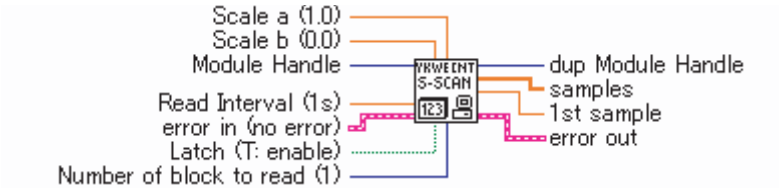
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE COUNT Single Scan.vi

This VI reads the current data from the input channel of the counter module.

YKWE COUNT Single Scan.vi is polymorphic and can be set to output the following types of data.
Scale array
Waveform

Scale array



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data as an array of blocks.

1st sample

Indicates the scaled data of the first block of the scaled data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

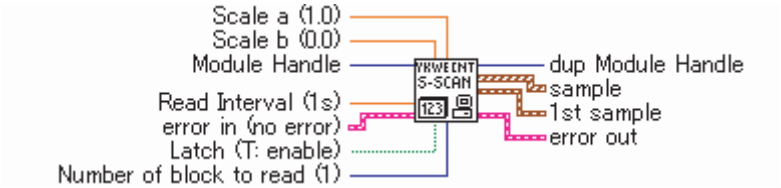
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data as an array.
t0 indicates 0.
Y indicates the array of measured data.

1st sample

Indicates the scaled data.
t0 indicates 0.
Y indicates the array of measured data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

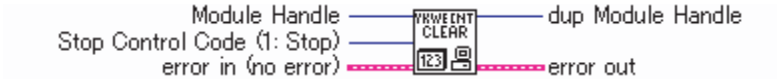
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE COUNT Clear.vi

This VI stops the counter module operation.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Stop Control Code (1: Stop)

Selects the control code.
0: Stop Event
1: Stop

The default value is 0 (Stop).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

TF status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

abc source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

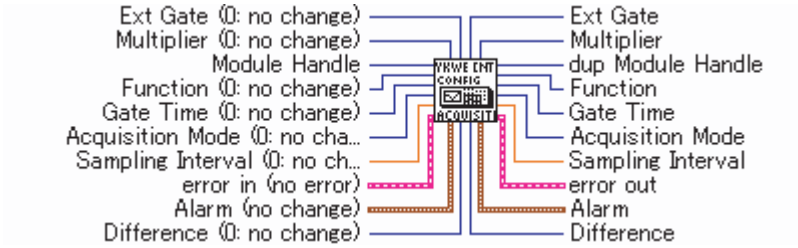
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE COUNT Config Acquisition.vi

This VI configures the input operation settings of the counter module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Function (0: no change)

Selects the measurement function.
0: no change
1: Frequency A
2: Period A
3: T Interval A–B (Time Interval A to B)
4: Pulse Width A
5: Duty Cycle A
6: Ratio A/B (Frequency Ratio A/B)
7: Totalize A (Totalize count A)

The default value is 0 (no change).

U16 Gate Time (0: no change)

Selects the gate time.
To control the gate time by applying a gate signal to channel B (CH B), select “External.”
However, you cannot select prescaler 1/2 on the gate signal of channel B (CH B).
The rising and falling edges of the input signal are counted during the specified gate time, and the measurement value is found from the count number and the gate time. The longer the gate time, the larger the count number and the higher the measurement resolution. However, making the gate time longer causes the measurement period to be longer and thus the display update rate becomes slower.
You can select the gate time from preset values or use the pulse width of the gate signal that is input through channel B.
0: no change
1: 10 ms
2: 100 ms
3: 1 s
4: 10 s
5: External

The default value is 0 (no change).

U16 Multiplier (0: no change)

Selects the multiplier.
In measurements other than the frequency measurement and the totalize measurement, the signal is measured continuously over the specified period of N and the measured value is obtained by taking the average. Therefore, the resolution increases as you make the multiplier larger. However, doing so will cause the measurement period to be longer which causes the display update rate to become slower during continuous measurements.
0: no change
1: ×1
2: ×10
3: ×100
4: ×1000

The default value is 0 (no change).

U16 Ext Gate (0: no change)

Selects the external gate.
To gate control the counter by applying a gate signal to channel B (CH B), select ON.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

U16 Acquisition Mode (0: no change)

Selects the acquisition mode.
Selects “One Shot” when the module makes a measurement and then stops or repeats. Selects “Free Run” when the measurements can be made periodically according to the specified interval and then the trend waveform based on the measured data can be displayed and saved.
0: no change
1: One Shot
2: Free Run

The default value is 0 (no change).

DBL Sampling Interval (0: no change)

Specifies the sampling interval.
This value is the setting of sampling interval when acquisition mode is set to Free Run.
The selectable range is 10ms to 100,000s. (in 10ms steps)

The default value is 0 (no change).

Alarm (no change)

Sets the alarm mode and alarm level in a cluster.

The default value is no change.

Alarm Mode (0: no change)

Selects the alarm mode.
When the acquisition mode is “Free Run”, you can set upper and lower limits on the measured signal and can output a bus trigger signal as an alarm based on those limits to the BUSTRG1 and BUSTRG2 buses in the measuring station. You can select the alarm output condition from the following choices.
0: no change
1: OFF
2: Rise: The measured value changes from a value below the upper limit to a value greater than or equal to the upper limit.
3: Fall: The measured value changes from a value above the lower limit to a value less than or equal to the lower limit.
4: In: The measured value changes from a value above the upper limit or below the lower limit to a value between the lower and upper limits.
5: Out: The measured value changes from a value between the lower and upper limits to a value above the upper limit or below the lower limit.

The default value is 0 (no change).

Alarm High (1)

Specifies the alarm high level.
The selectabale range is 0 to 1,000,000,000.

The default value is 1.

Alarm Low (0)

Specifies the alarm low level.
The selectabale range is 0 to 1,000,000,000.

The default value is 0.

Difference (0: no change)

Selects the totalize count difference measuring
When selecting “ON”, the totalize count difference determined by “(the current totalize count value) – (the previous totalize count value)” is measured. The initial value displays “the current totalize count value.”
0: no change
1: OFF
2: ON

The default value is 0 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Function

Indicates the specified measurement function.
1: Frequency A
2: Period A
3: T Interval A–B (Time Interval A to B)
4: Pulse Width A
5: Duty Cycle A
6: Ratio A/B (Frequency Ratio A/B)
7: Totalize A (Totalize count A)

Gate Time

Indicates the specified gate time.
1: 10 ms
2: 100 ms
3: 1 s
4: 10 s
5: External

Multiplier

Indicates the specified muitiplier.
1: ×1
2: ×10
3: ×100
4: ×1000

Ext Gate

Indicates the specified external gate.
1: OFF
2: ON

Acquisition Mode

Indicates the specified acquisition mode.
1: One Shot
2: Free Run

Sampling Interval

Indicates the specified sampling intereval.

Alarm

Indicates the alarm mode and alarm level in a cluster.

Alarm Mode

Indicates the specified alarm mode.
1: OFF
2: Rise
3: Fall
4: In
5: Out

Alarm High

Indicates the specified alarm high level.

Alarm Low

Indicates the specified alarm low level.

Difference

Indicates the specified totalize count difference
1: OFF
2: ON

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

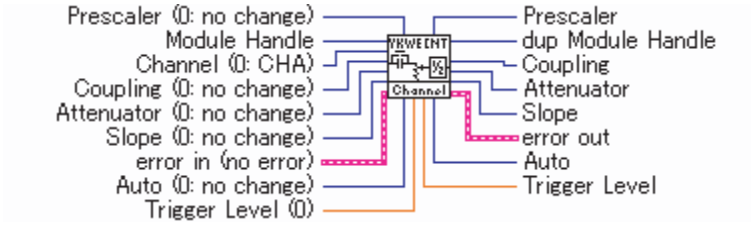
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE COUNT Config Channel.vi

This VI configures the input operation settings of a specified channel of the counter module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (0: CHA)

Selects the channel.
0: CHA
1: CHB

The default value is 0 (CHA).

U16 Coupling (0: no change)

Selects the input coupling.
0: no change
1: AC: Only the AC component of the input signal is acquired. Select AC coupling when there is DC component in the signal or when the offset voltage is unstable.
2: DC: Both the AC and DC components of the input signal are acquired.

The default value is 0 (no change).

U16 Attenuator (0: no change)

Selects the attenuator
The trigger circuit of this module adds hysteresis to the trigger level to minimize the effects due to noise. However, if there is noise on the signal that exceeds the hysteresis width, a counting error can occur. In such cases, you can reduce the level of the input signal with the attenuator which also causes the noise to be reduced. Also, the attenuator can be used to reduce the input signal level so that it is within the operational voltage range of the unit. Voltage exceeding the operational range can produce erroneous measurements.
0: no change
1: ×1
2: ×10

The default value is 0 (no change).

U16 Slope (0: no change)

Selects the trigger slope.
Sets whether to trigger on the rising or the falling edge of the input signal.
0: no change
1: Rise
2: Fall

The default value is 0 (no change).

U16 Auto (0: no change)

Selects the auto trigger.
0: no change
1: OFF: The trigger is activated using the specified trigger level.
2: ON: The center value of the amplitude of the input signal is detected, and is used as the trigger level. However, this mode is available only for sine waves with frequencies in the range from 50 Hz to 120 MHz.

The default value is 0 (no change).

DBL Trigger Level (0)

Specifies the trigger level.
The setting range and the resolution vary depending on the attenuator setting as follows.
×1: Selectable range is –5.00 V to 5.00 V, and resolution is 20 mV.
×10: Selectable range is –40.0 V to 40.0 V, and resolution is 200 mV.

The default value is 0.0 V.

U16 Prescaler (0: no change)

Selects the prescaler.
The measurement frequency range is widened by dividing the frequency of the input signal to reduce the measurement frequency. If 1/2 prescaler is selected, the measurement range changes from (1 mHz to 60 MHz) to (1 Hz to 120 MHz).
This value is valid during frequency measurement.
0: no change
1: 1/1
2: 1/2

The default value is 0 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Coupling

Indicates the specified input coupling.
1: AC
2: DC

Attenuator

Indicates the specified attenuator.
1: ×1
2: ×10

Slope

Indicates the specified trigger slope.
1: Rise
2: Fall

Auto

Indicates the specified auto trigger.
1: OFF
2: ON

Trigger Level

Indicates the specified trigger level.

Prescaler

Indicates the specified prescaler.
1: 1/1
2: 1/2

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

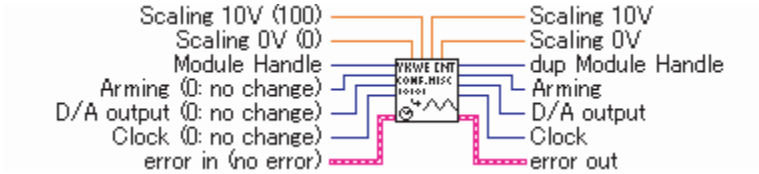
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE COUNT Config Misc.vi

This VI configures the other input settings of the counter module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Arming (0: no change)

Selects the arming.
Sets BUSTRG, when the acquisition mode is set as “One Shot”, the bus trigger signal of a measurement station is detected and you start measurement operation.
0: no change
1: OFF
2: BUSTRG

The default value is 0 (no change).

U16 D/A output (0: no change)

Selects the D/A output.
All of the measured values are converted to a voltage value (analog signal) between 0 and 10 V and are output. Set the D/A output to ON when you perform the analog output.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

DBL Scaling 0V (0)

Specifies the 0 V of scaling of the D/A output.
Sets the measured values corresponding to 0 V.
The selectable range is 0 to 52nd power of 2 (=4.5035996e15).

The default value is 0.

DBL Scaling 10V (100)

Specifies the 10 V of scaling of the D/A output.
Sets the measured values corresponding to 10 V.
The selectable range is 0 to 52nd power of 2 (=4.5035996e15).

The default value is 100.

Clock (0: no change)

Selects the reference signal.
When set to Internal, the measurement is performed using the reference signal from the internal crystal oscillator (10 MHz). You can set the reference signal to be an external signal that is input through the external reference signal input terminal (REFERENCE INPUT). Sets External, when the measurement is performed using the external input signal as the reference signal.
0: no change
1: Internal
2: External

The default value is 0 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Arming

Indicates the specified arming.
1: OFF
2: BUSTRG

D/A output

Indicates the specified D/A output.
1: OFF
2: ON

Scaling 0V

Indicates the specified 0 V of the scaling of the D/A output.

Scaling 10V

Indicates the specified 10 V of the scaling of the D/A output.

Clock

Indicates the specified reference signal.
1: Internal
2: External

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

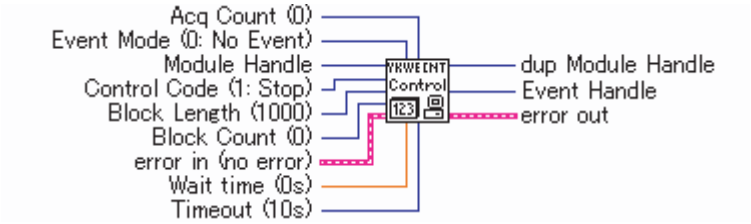
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE COUNT Control.vi

This VI controls the counter module operation.



Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Control Code (1: Stop)

Selects the counter control code.
0: Start
1: Stop
2: Latch
3: Single Start
4: Start Event
5: Stop Event

The default value is 1 (Stop).

Block Length (1000)

Specifies the block length.
This value is valid when Start Control Code is set to Start, Single Start or Start Event.

The default value is 1000.
For the selectable range, see the user's manual for the module.

Block Count (0)

Specifies the block count.
This value is valid when Start Control Code is set to Start or Start Event.
Specify the exponential part of the number of memory partitions (number of blocks) expressed as a power of 2.

The default value is 0.
For the selectable range, see the user's manual for the module.

Wait time (0.0)

Specifies the wait time after the start operation.

The default value is 0.0.

Event Mode (0: No Event)

Selects the acquisition operation mode.
This value is valid when Start Control Code is set to Start Event.
0: No Event
1: Block_Event
2: Stop Event

The default value is 0 (No Event).

Acq Count (0)

Specifies the acquisition count.
This value is valid when Control Code is set to 4 (Start Event).
The data acquisition operation terminates after acquiring the data amount specified by this value. If the value 0 is specified, measurement continues until the user issues an abort command.

The default value is 0.

Timeout (10s)

Sets the timeout time of single start.
This value is valid when Control Code is set to 3 (Single Start).
The selectable range is 1 to 32767 s.

The default value is 10 s.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Event Handle

Indicates the event handle.
This value is valid when Control Code is set to 4 (Start Event).

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

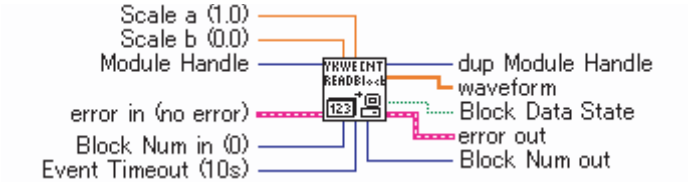
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE COUNT Read Block Data.vi

This VI Reads block data from the counter module.

YKWE COUNT Read Block Data.vi is polymorphic and can be set to output the following types of data.
Scale array
Waveform

Scale array



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

I32 Event Timeout (10s)

Specifies the wait time until receiving an event in unit of ms.
This value is value when waiting for an event.

The default value is 10 s.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

waveform

Indicates the scaled data as an array.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

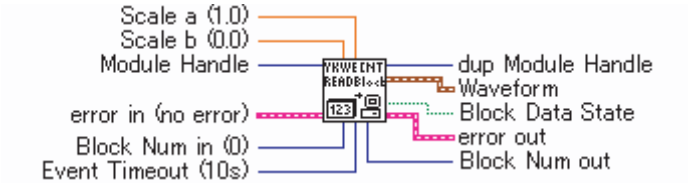
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

I32 Event Timeout (10s)

Specifies the wait time until receiving an event in unit of ms.
This value is value when waiting for an event.

The default value is 10 s.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveform

Indicates the scaled data.
t0 indicates 0.
Y indicates the array of measured data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

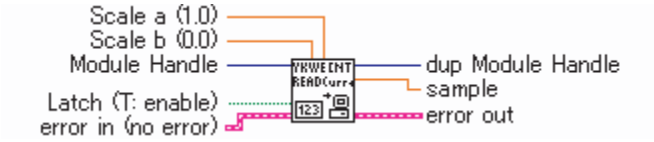
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE COUNT Read Current Data.vi

This VI reads current data of the counter module.

YKWE COUNT Read Current Data.vi is polymorphic and can be set to output the following types of data.
Scale array
Waveform

Scale array



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

sample

Indicates the scaled data as an array.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

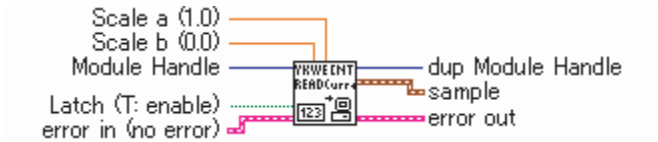
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

TF status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

abc source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

sample

Indicates the scaled data.
t0 indicates 0.
Y indicates the array of measured data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

5.10 Timing Measurement VI

Timing measurement VIs allow you to configure and perform data acquisition on the following modules.

WE7521 4-CH Timing Measurement Module

- Simple Level VIs

YKWE TIM Acquire Waveform.vi	Acquires the specified number of samples as the specified sample rate from the specified input channel, then returns the measured block data.
YKWE TIM Acquire Waveforms.vi	Acquires the specified number of samples as the specified sample rate from the plural input channels, then returns the measured block data.
YKWE TIM Sample Channel.vi	Acquires with the specified sampling interval from the specified input channel, then returns the instantaneous value data.
YKWE TIM Sample Channels.vi	Acquires with the specified sampling interval from the plural input channels, then returns the instantaneous value data.
YKWE TIM Acquire Time Stamp.vi	Returns the time stamp data within the specified time.

- Intermediate Level VIs

YKWE TIM Config Counter.vi	Configures the counter operation of the timing measurement module.
YKWE TIM Config Time Stamp.vi	Configures the time stamp operation of the timing measurement module.
YKWE TIM Start.vi	Starts the timing measurement module operation.
YKWE TIM Read Waveform.vi	Reads the block data from the timing measurement module.
YKWE TIM Single Scan.vi	Reads the current data from the input channel of the timing measurement module.
YKWE TIM Read Time Stamp.vi	Reads the time stamp data from the timing measurement module.
YKWE TIM Clear.vi	Stops the timing measurement module operation.

- Advanced Level VIs

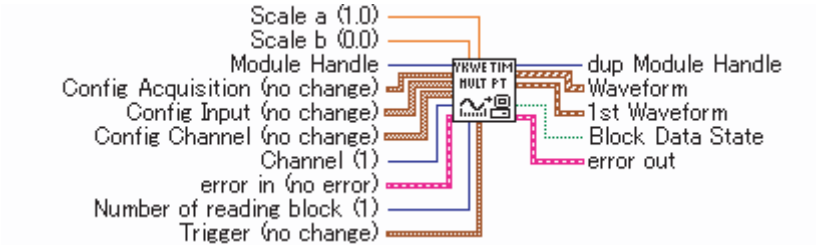
YKWE TIM Config Acquisition Counter.vi	Configures the timing measurement module operation. (Acquisition Mode, Sampling Interval, Record Length, No.of Acquisition, Memory Partition, Counter Reset Type)
YKWE TIM Config Acquisition TS.vi	Configures the time stamp operation of the timing measurement module. (Hysteresis)
YKWE TIM Config Input.vi	Configures the specified input operation of the timing measurement module. (Input, Coupling, Level, Filter, Hysteresis)
YKWE TIM Config Channel.vi	Configures the specified channels settings of the timing measurement module. (Channel, Function, Source A, Source B, Limit)
YKWE TIM Config Time Base.vi	Configures the time base settings of the timing measurement module. (Time Base, Slope, Source Number, Data Hold, Hysteresis)
YKWE TIM Config Trigger.vi	Configures the trigger settings of the timing measurement module. (Source, Source Number, Slope, Type, Threshold, Condition, Pretrigger, Hold Off)
YKWE TIM Config TS.vi	Configures the time stamp operation of the timing measurement module. (Input, State, Coupling, Level, Filter, Hysteresis, Slope)
YKWE TIM Control.vi	Starts and stops the timing measurement module operation. (Control Code, Block Length, Block Count, Event Mode, Wait time, Timeout, Acq Count, Channel)
YKWE TIM Read Block Data.vi	Reads the block data from the timing measurement module. (Channel Num, Scaling, Block Num in, Event Timeout)
YKWE TIM Read Current Data.vi	Reads the current data of the timing measurement module. (Channel Num, Scaling, Latch)
YKWE TIM Read Block Time Stamp.vi	Reads the block data of time stamp of the timing measurement module. (Module, Latch, Block Num in)(Channel)

YKWE TIM Acquire Waveform.vi

This VI acquires the specified number of samples as the specified sampling interval from the specified one input channel, then returns the measured block data.

YKWE TIM Acquire Waveform.vi is polymorphic and can be set to output the following types of data.
Waveform
Scale Array

Waveform



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

Config Acquisition (no change)

Sets the input to the timing measurement module in a cluster.

The default value is no change.

Acquisition Mode (0: no change)

Selects the acquisition mode from the following.
0: no change
1: Triggered
2: Free Run
3: Gate (Level)
4: Gate (Edge)

The default value is 0 (no change).

Sampling Interval (0: no change)

Specifies the sampling interval.
This is the interval at which the measured values are written to the acquisition memory when the time base is set to “Internal.” The selectable range varies depending on the acquisition mode.
Selectable range
During trigger/gate mode: 2 μ to10 s (1 μs steps).
During free run mode: The selectable range is 1 ms to 10 s (1 μs steps).

The default value is 0 (no change).

Record Length (-1: no change)

Specifies the record length.
When the acquisition mode is set to trigger or gate (level), you can partition the memory and specify the number of points of measured values to be written to one block of the acquisition memory. Note that for the following selectable ranges, a limit as defined by sampling interval × record length ±5 ms exists.

- During trigger mode
  The selectable range is 2 to 1,048,576 (1M)/the number of memory partitions. The record length is set to maximum record length/the number of memory partitions when 0 is specified.
- During gate (level) mode
  The selectable range is 2 to 1,048,576 (1M)/the number of memory partitions. The record length is set to the maximum record length when 0 is specified. In this case, the memory is partitioned according to the satisfied and unsatisfied conditions of the trigger.
  The maximum number of memory blocks that can be created in this way is 256.

The default value is 0 (no change).

U16 Memory Partition (0: no change)

Selects the number of memory partition.
During the trigger mode, you can divide the acquisition memory into multiple blocks and write the values to the memory blocks in order every time the trigger occurs.
0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256

The default value is 0 (no change).

I32 No. of Acquisitions (-1: no change)

Specifies the number of acquisition.
When the acquisition mode is set to Triggerd or Gate (Level/Edge) you can partition the memory and specify the number of acquisitions to be carried out. The range is 1 to 65,535 times.
However, the operation varies depending on the acquisition mode.

- When in trigger mode
  You can only specify 1 for the number of acquisitions, if the number of memory partitions is set to 1.
- When in gate (level) mode
  If the record length is greater than or equal to half the maximum record length, you can only specify 1 for the number of acquisitions.

The default value is –1 (no change).

U16 Counter Reset Type (0: no change)

Selects the counter reset type.
You can select the timing when the counter for totalize count and up and down count is reset.
0: no change
1: Auto: Resets the counter when starting measurements. When modules are linked, the counter is reset on all channels.
2: Manual: Does not reset the counter when starting measurements. You can reset the counter at an arbitrary time.

The default value is 0 (no change).

Config Input (no change)

Sets input coupling, level, filter, and hysteresis in an array of clusters.
Of the array elements of index 0, if the input coupling, filter, and hestelesis, then index 1, 2, 3, and so on correspond to channels 1, 2, 3, and so on, respectively. If any of the four elements is nonzero, then all inputs are set using the elements of index 0.

The default value is no change.

Coupling (0: no change)

Selects the input coupling.
You can select which component of the input signal is to be acquired.
0: no change
1: AC: Acquire only the AC component of the input signal. The lower limit of the input frequency is approximately 10 Hz.
2: DC: Acquires all the components (DC and AC) of the input signal.

The default value is 0 (no change).

Level (0V)

Specifies the Input Threshold Level.
Specify the threshold level used to detect the point of change (rising or falling edge, for example) of the input signal.
The selectable range is –20.0 V to 20.0 V (in 0.1 V steps).

The default value is 0.0 V.

Filter (0: no change)

Selects the input filter.
You can set a low–pass filter used to eliminate high–frequency noise from the input signal.
0: no change
1: Off
2: 1 kHz
3: 10 kHz
4: 100 kHz

The default value is 0 (no change).

Hysteresis (0: no change)

Selects the hysteresis width.
By default, the hysteresis width is set to NORMAL (approximately 0.8 Vpp) as a measure against noise during the detection of the point of change of the input signal. If you select the On, the hysteresis width is set to WIDE (approximately 2.5 Vpp).
0: no change
1: Off (NORMAL)
2: On (WIDE)

The default value is 0 (no change).

Config Channel (no change)

Sets measurement function, source A, source B, and limit in an array of clusters.
Of the array elements of index 0, if the measurement function, source A, source B, and limit, then index 1, 2, 3, and so on correspond to channels 1, 2, 3, and so on, respectively. If any of the four elements is nonzero, then all channels are set using the elements of index 0.

The default value is no change.

Function (0: no change)

Selects the measurement function.
0: no change
1: Off
2: Period
3: Time Interval
4: Totalize
5: Totalize (Gate)
6: UpDown1
7: UpDown2
8: UpDown4
9: Ratio × 1
10: Ratio × 16
11: Ratio × 128
12: Ratio × 1024
13: Frequency

The default value is 0 (no change).

Source A (0: no change)

Selects Source A.
Select the input (IN1 to IN4) to be measured or to be used as a gate and the slope (Rise or Fall) for detecting the point of change of the input signal according to the measurement function. However, for up and down count, select the combination of the input to be measured through Source A and the input used to reset the counter through Source B.
0: no change
1: IN1_Rise
2: IN1_Fall
3: IN2_Rise
4: IN2_Fall
5: IN3_Rise
6: IN3_Fall
7: IN4_Rise
8: IN4_Fall
9: IN1-IN2
10: IN3-IN4

The default value is 0 (no change).

U16 Source B (0: no change)

Selects Source B.
Select the input (IN1 to IN4) to be measured or to be used as a gate and the slope (Rise or Fall) for detecting the point of change of the input signal according to the measurement function. However, for up and down count, select the combination of the input to be measured through Source A and the input used to reset the counter through Source B.
0: no change
1: IN1_Rise
2: IN1_Fall
3: IN2_Rise
4: IN2_Fall
5: IN3_Rise
6: IN3_Fall
7: IN4_Rise
8: IN4_Fall
9: IN1
10: IN2
11: IN3
12: IN4
13: Off

The default value is 0 (no change).

U16 Limit (0: no change)

Selects the Period Stop Determination Function.
To enable the period stop determination on each channel, select ON. When enabled, if a signal is not detected within the specified timeout time, the measured data is set to invalid value. If the period stop determination function is OFF, the measured data is set to invalid value when the measurement period is 20 s or more (0.5 Hz or less in terms of the frequency).
This function is valid only when the measurement function of the target channel is set to Period, TI, or Frequency.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Trigger (no change)

Specifies the trigger settings in a cluster.

The default value is no change.

Source (0: no change)

Selects the trigger source.
0: no change
1: Input
2: Measure
3: BUSTRG

The default value is 0 (no change).

Source Number (0: no change)

Selects the target input when the input signal is used as a trigger source.
The selectable range is 1 to 32.
0 indicates no change.

The default value is 0 (no change).

Slope (0: no change)

Selects the trigger slope.
High and Low is valid when the acquisition mode is set to Gate (Level).
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low

The default value is 0 (no change).

Type (0: no change)

Selects the trigger type.
When the measurement function is Totalize or Totalize (Gate): >= (greater than or equal to the threshold level) or == (equal to the threshold level)
UpDown1, UpDpwn2 or UpDown4: >= (greater than or equal to the threshold level), == (equal to the threshold level), or <= (less than or equal to the threshold level)
Other: >= (greater than or equal to the threshold level) or <= (less than or equal to the threshold level)
0: no change
1: >=
2: ==
3: <=

The default value is 0 (no change).

DBL Threshold Level (0)

Specifies the threshold level.
Specify the threshold level of measured values used to detect the trigger. The trigger is detected on the edge of the signal. The selectable range is the measurement range of the corresponding measurement function.

Selectable Range

During measurement function is set to Period or Time Interval: 100 ns to 20 s
Totalize or Totalize(Gate): 0 to 536870911
UpDown1, UpDown2 or UpDown4: –268435456 to 268435455
Ratio × 1: 0 to 536780911
Ratio × 16: 0 to 33554431.9
Ratio × 128: 0 to 4194303.99
Ratio × 1024: 0 to 524287.999

The default value is 0.

U16 Condition (0: no change)

Selects the bus trigger detection.
0: no change
1: Enter (When the bus trigger signal changes from DISABLE to ENABLE)
2: Exit (When the bus trigger signal changes from ENABLE to DISABLE)
3: Both (When the bus trigger signal changes from DISABLE to ENABLE or from ENABLE to DISABLE)
4: True (While the bus trigger signal is ENABLE)
5: False (While the bus trigger signal is DISABLE)

The default value is 0 (no change).

I32 Pretrigger (-1: no change)

Specifies the pretrigger.
The measured values before the trigger point can be written to the acquisition memory.
Set how many points before the trigger point to begin writing values in the range, 0 to specified record length – 2.

The default value is –1 (no change).

U32 Hold Off (0: no change)

Specifies the hold off.
You can specify the trigger hold off period that is used to temporarily stop the detection of the next trigger once a trigger occurs. The range varies depending on the acquisition mode as follows:
Trigger mode: Record length to 1,048,576 (1M)
Gate (edge) mode: 1 to 1,048,576 (1M)

The default value is 0 (no change).

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveform

Indicates the scaled data as an array of blocks.
t0 indicates 0.
Y indicates the array of measured data.

1st Waveform

Indicates the scaled data of the first block of the scaled data.
t0 indicates 0.
Y indicates the array of measured data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

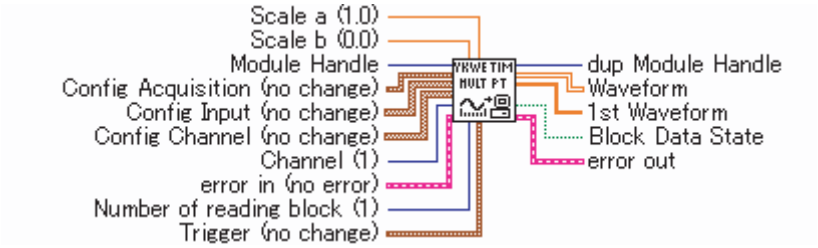
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale Array



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

Config Acquisition (no change)

Sets the input to the timing measurement module in a cluster.

The default value is no change.

Acquisition Mode (0: no change)

Selects the acquisition mode from the following.
0: no change
1: Triggered
2: Free Run
3: Gate (Level)
4: Gate (Edge)

The default value is 0 (no change).

Sampling Interval (0: no change)

Specifies the sampling interval.
This is the interval at which the measured values are written to the acquisition memory when the time base is set to “Internal.” The selectable range varies depending on the acquisition mode.
Selectable range
During trigger/gate mode: 2 μ to10 s (1 μs steps).
During free run mode: The selectable range is 1 ms to 10 s (1 μs steps).

The default value is 0 (no change).S

Record Length (-1: no change)

Specifies the record length.
When the acquisition mode is set to trigger or gate (level), you can partition the memory and specify the number of points of measured values to be written to one block of the acquisition memory. Note that for the following selectable ranges, a limit as defined by sampling interval × record length ±5 ms exists.

- During trigger mode
  The selectable range is 2 to 1,048,576 (1M)/the number of memory partitions. The record length is set to maximum record length/the number of memory partitions when 0 is specified.
- During gate (level) mode
  The selectable range is 2 to 1,048,576 (1M)/the number of memory partitions. The record length is set to the maximum record length when 0 is specified. In this case, the memory is partitioned according to the satisfied and unsatisfied conditions of the trigger.
  The maximum number of memory blocks that can be created in this way is 256.

The default value is 0 (no change).

U16 Memory Partition (0: no change)

Selects the number of memory partition.
During the trigger mode, you can divide the acquisition memory into multiple blocks and write the values to the memory blocks in order every time the trigger occurs.
0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256

The default value is 0 (no change).

I32 No. of Acquisitions (-1: no change)

Specifies the number of acquisition.
When the acquisition mode is set to Triggerd or Gate (Level/Edge) you can partition the memory and specify the number of acquisitions to be carried out. The range is 1 to 65,535 times.
However, the operation varies depending on the acquisition mode.

- When in trigger mode
  You can only specify 1 for the number of acquisitions, if the number of memory partitions is set to 1.
- When in gate (level) mode
  If the record length is greater than or equal to half the maximum record length, you can only specify 1 for the number of acquisitions.

The default value is –1 (no change).

U16 Counter Reset Type (0: no change)

Selects the counter reset type.
You can select the timing when the counter for totalize count and up and down count is reset.
0: no change
1: Auto: Resets the counter when starting measurements. When modules are linked, the counter is reset on all channels.
2: Manual: Does not reset the counter when starting measurements. You can reset the counter at an arbitrary time.

The default value is 0 (no change).

Config Input (no change)

Sets input coupling, level, filter, and hysteresis in an array of clusters.
Of the array elements of index 0, if the input coupling, filter, and hestelesis, then index 1, 2, 3, and so on correspond to channels 1, 2, 3, and so on, respectively. If any of the four elements is nonzero, then all inputs are set using the elements of index 0.

The default value is no change.

Coupling (0: no change)

Selects the input coupling.
You can select which component of the input signal is to be acquired.
0: no change
1: AC: Acquire only the AC component of the input signal. The lower limit of the input frequency is approximately 10 Hz.
2: DC: Acquires all the components (DC and AC) of the input signal.

The default value is 0 (no change).

Level (0V)

Specifies the Input Threshold Level.
Specify the threshold level used to detect the point of change (rising or falling edge, for example) of the input signal.
The selectable range is –20.0 V to 20.0 V (in 0.1 V steps).

The default value is 0.0 V

Filter (0: no change)

Selects the input filter.
You can set a low–pass filter used to eliminate high–frequency noise from the input signal.
0: no change
1: Off
2: 1 kHz
3: 10 kHz
4: 100 kHz

The default value is 0 (no change).

Hysteresis (0: no change)

Selects the hysteresis width.
By default, the hysteresis width is set to NORMAL (approximately 0.8 Vpp) as a measure against noise during the detection of the point of change of the input signal. If you select the On, the hysteresis width is set to WIDE (approximately 2.5 Vpp).
0: no change
1: Off (NORMAL)
2: On (WIDE)

The default value is 0 (no change).

Config Channel (no change)

Sets measurement function, source A, source B, and limit in an array of clusters.
Of the array elements of index 0, if the measurement function, source A, source B, and limit, then index 1, 2, 3, and so on correspond to channels 1, 2, 3, and so on, respectively. If any of the four elements is nonzero, then all channels are set using the elements of index 0.

The default value is no change.

Function (0: no change)

Selects the measurement function.
0: no change
1: Off
2: Period
3: Time Interval
4: Totalize
5: Totalize (Gate)
6: UpDown1
7: UpDown2
8: UpDown4
9: Ratio × 1
10: Ratio × 16
11: Ratio × 128
12: Ratio × 1024
13: Frequency

The default value is 0 (no change).

Source A (0: no change)

Selects Source A.
Select the input (IN1 to IN4) to be measured or to be used as a gate and the slope (Rise or Fall) for detecting the point of change of the input signal according to the measurement function. However, for up and down count, select the combination of the input to be measured through Source A and the input used to reset the counter through Source B.
0: no change
1: IN1_Rise
2: IN1_Fall
3: IN2_Rise
4: IN2_Fall
5: IN3_Rise
6: IN3_Fall
7: IN4_Rise
8: IN4_Fall
9: IN1-IN2
10: IN3-IN4

The default value is 0 (no change).

U16 Source B (0: no change)

Selects Source B.
Select the input (IN1 to IN4) to be measured or to be used as a gate and the slope (Rise or Fall) for detecting the point of change of the input signal according to the measurement function. However, for up and down count, select the combination of the input to be measured through Source A and the input used to reset the counter through Source B.
0: no change
1: IN1_Rise
2: IN1_Fall
3: IN2_Rise
4: IN2_Fall
5: IN3_Rise
6: IN3_Fall
7: IN4_Rise
8: IN4_Fall
9: IN1
10: IN2
11: IN3
12: IN4
13: Off

The default value is 0 (no change).

U16 Limit (0: no change)

Selects the Period Stop Determination Function.
To enable the period stop determination on each channel, select ON. When enabled, if a signal is not detected within the specified timeout time, the measured data is set to invalid value. If the period stop determination function is OFF, the measured data is set to invalid value when the measurement period is 20 s or more (0.5 Hz or less in terms of the frequency).
This function is valid only when the measurement function of the target channel is set to Period, TI, or Frequency.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Trigger (no change)

Specifies the trigger settings in a cluster.

The default value is no change.

Source (0: no change)

Selects the trigger source.
0: no change
1: Input
2: Measure
3: BUSTRG

The default value is 0 (no change).

Source Number (0: no change)

Selects the target input when the input signal is used as a trigger source.
The selectable range is 1 to 32.
0 indicates no change.

The default value is 0 (no change).

Slope (0: no change)

Selects the trigger slope.
High and Low is valid when the acquisition mode is set to Gate (Level).
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low

The default value is 0 (no change).

Type (0: no change)

Selects the trigger type.
When the measurement function is Totalize or Totalize (Gate): >= (greater than or equal to the threshold level) or == (equal to the threshold level)
UpDown1, UpDpwn2 or UpDown4: >= (greater than or equal to the threshold level), == (equal to the threshold level), or <= (less than or equal to the threshold level)
Other: >= (greater than or equal to the threshold level) or <= (less than or equal to the threshold level)
0: no change
1: >=
2: ==
3: <=

The default value is 0 (no change).

DBL Threshold Level (0)

Specifies the threshold level.
Specify the threshold level of measured values used to detect the trigger. The trigger is detected on the edge of the signal. The selectable range is the measurement range of the corresponding measurement function.

Selectable Range

During measurement function is set to Period or Time Interval: 100 ns to 20 s
Totalize or Totalize(Gate): 0 to 536870911
UpDown1, UpDown2 or UpDown4: –268435456 to 268435455
Ratio × 1: 0 to 536780911
Ratio × 16: 0 to 33554431.9
Ratio × 128: 0 to 4194303.99
Ratio × 1024: 0 to 524287.999

The default value is 0.

U16 Condition (0: no change)

Selects the bus trigger detection.
0: no change
1: Enter (When the bus trigger signal changes from DISABLE to ENABLE)
2: Exit (When the bus trigger signal changes from ENABLE to DISABLE)
3: Both (When the bus trigger signal changes from DISABLE to ENABLE or from ENABLE to DISABLE)
4: True (While the bus trigger signal is ENABLE)
5: False (While the bus trigger signal is DISABLE)

The default value is 0 (no change).

I32 Pretrigger (-1: no change)

Specifies the pretrigger.
The measured values before the trigger point can be written to the acquisition memory.
Set how many points before the trigger point to begin writing values in the range, 0 to specified record length – 2.

The default value is –1 (no change).

U32 Hold Off (0: no change)

Specifies the hold off.
You can specify the trigger hold off period that is used to temporarily stop the detection of the next trigger once a trigger occurs. The range varies depending on the acquisition mode as follows:
Trigger mode: Record length to 1,048,576 (1M)
Gate (edge) mode: 1 to 1,048,576 (1M)

The default value is 0 (no change).

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveforms

Indicates the scaled data of the specified channel as an array of blocks.

1st Waveform

Indicates the scaled data of the specified channel of the first block of the scaled data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

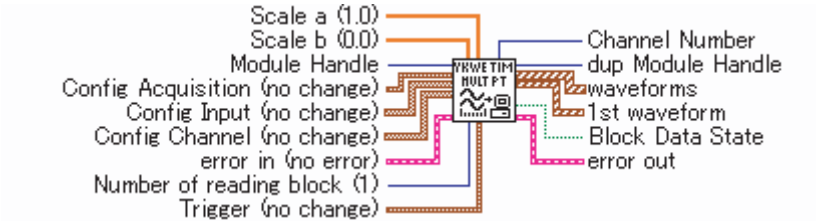
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE TIM Acquire Waveforms.vi

This VI acquires the specified number of samples as the specified sample rate from the plural input channels, then returns the measured block data.

YKWE TIM Acquire Waveforms.vi is polymorphic and can be set to output the following types of data.
Waveform
Scale Array

Waveform



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

Config Acquisition (no change)

Sets the input to the timing measurement module in a cluster.

The default value is no change.

Acquisition Mode (0: no change)

Selects the acquisition mode from the following.
0: no change
1: Triggered
2: Free Run
3: Gate (Level)
4: Gate (Edge)

The default value is 0 (no change).

Sampling Interval (0: no change)

Specifies the sampling interval.
This is the interval at which the measured values are written to the acquisition memory when the time base is set to “Internal.” The selectable range varies depending on the acquisition mode.
Selectable range
During trigger/gate mode: 2 µ to10 s (1 µs steps).
During free run mode: The selectable range is 1 ms to 10 s (1 µs steps).

The default value is 0 (no change).

Record Length (-1: no change)

Specifies the record length.
When the acquisition mode is set to trigger or gate (level), you can partition the memory and specify the number of points of measured values to be written to one block of the acquisition memory. Note that for the following selectable ranges, a limit as defined by sampling interval × record length ±5 ms exists.

- During trigger mode
  The selectable range is 2 to 1,048,576 (1M)/the number of memory partitions. The record length is set to maximum record length/the number of memory partitions when 0 is specified.
- During gate (level) mode
  The selectable range is 2 to 1,048,576 (1M)/the number of memory partitions. The record length is set to the maximum record length when 0 is specified. In this case, the memory is partitioned according to the satisfied and unsatisfied conditions of the trigger.
  The maximum number of memory blocks that can be created in this way is 256.

The default value is 0 (no change).

U16 Memory Partition (0: no change)

Selects the number of memory partition.
During the trigger mode, you can divide the acquisition memory into multiple blocks and write the values to the memory blocks in order every time the trigger occurs.
0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256

The default value is 0 (no change).

I32 No. of Acquisitions (-1: no change)

Specifies the number of acquisition.
When the acquisition mode is set to Triggerd or Gate (Level/Edge) you can partition the memory and specify the number of acquisitions to be carried out. The range is 1 to 65,535 times.
However, the operation varies depending on the acquisition mode.

- When in trigger mode
  You can only specify 1 for the number of acquisitions, if the number of memory partitions is set to 1.
- When in gate (level) mode
  If the record length is greater than or equal to half the maximum record length, you can only specify 1 for the number of acquisitions.

The default value is –1 (no change).

U16 Counter Reset Type (0: no change)

Selects the counter reset type.
You can select the timing when the counter for totalize count and up and down count is reset.
0: no change
1: Auto: Resets the counter when starting measurements. When modules are linked, the counter is reset on all channels.
2: Manual: Does not reset the counter when starting measurements. You can reset the counter at an arbitrary time.

The default value is 0 (no change).

Config Input (no change)

Sets input coupling, level, filter, and hysteresis in an array of clusters.
Of the array elements of index 0, if the input coupling, filter, and hestelesis, then index 1, 2, 3, and so on correspond to channels 1, 2, 3, and so on, respectively. If any of the four elements is nonzero, then all inputs are set using the elements of index 0.

The default value is no change.

Coupling (0: no change)

Selects the input coupling.
You can select which component of the input signal is to be acquired.
0: no change
1: AC: Acquire only the AC component of the input signal. The lower limit of the input frequency is approximately 10 Hz.
2: DC: Acquires all the components (DC and AC) of the input signal.

The default value is 0 (no change).

Level (0V)

Specifies the Input Threshold Level.
Specify the threshold level used to detect the point of change (rising or falling edge, for example) of the input signal.
The selectable range is –20.0 V to 20.0 V (in 0.1 V steps).

The default value is 0.0 V.

Filter (0: no change)

Selects the input filter.
You can set a low–pass filter used to eliminate high–frequency noise from the input signal.
0: no change
1: Off
2: 1 kHz
3: 10 kHz
4: 100 kHz

The default value is 0 (no change).

Hysteresis (0: no change)

Selects the hysteresis width.
By default, the hysteresis width is set to NORMAL (approximately 0.8 Vpp) as a measure against noise during the detection of the point of change of the input signal. If you select the On, the hysteresis width is set to WIDE (approximately 2.5 Vpp).
0: no change
1: Off (NORMAL)
2: On (WIDE)

The default value is 0 (no change).

Config Channel (no change)

Sets measurement function, source A, source B, and limit in an array of clusters.
Of the array elements of index 0, if the measurement function, source A, source B, and limit, then index 1, 2, 3, and so on correspond to channels 1, 2, 3, and so on, respectively. If any of the four elements is nonzero, then all channels are set using the elements of index 0.

The default value is no change.

Function (0: no change)

Selects the measurement function.
0: no change
1: Off
2: Period
3: Time Interval
4: Totalize
5: Totalize (Gate)
6: UpDown1
7: UpDown2
8: UpDown4
9: Ratio × 1
10: Ratio × 16
11: Ratio × 128
12: Ratio × 1024
13: Frequency

The default value is 0 (no change).

Source A (0: no change)

Selects Source A.
Select the input (IN1 to IN4) to be measured or to be used as a gate and the slope (Rise or Fall) for detecting the point of change of the input signal according to the measurement function. However, for up and down count, select the combination of the input to be measured through Source A and the input used to reset the counter through Source B.
0: no change
1: IN1_Rise
2: IN1_Fall
3: IN2_Rise
4: IN2_Fall
5: IN3_Rise
6: IN3_Fall
7: IN4_Rise
8: IN4_Fall
9: IN1-IN2
10: IN3-IN4

The default value is 0 (no change).

U16 Source B (0: no change)

Selects Source B.
Select the input (IN1 to IN4) to be measured or to be used as a gate and the slope (Rise or Fall) for detecting the point of change of the input signal according to the measurement function. However, for up and down count, select the combination of the input to be measured through Source A and the input used to reset the counter through Source B.
0: no change
1: IN1_Rise
2: IN1_Fall
3: IN2_Rise
4: IN2_Fall
5: IN3_Rise
6: IN3_Fall
7: IN4_Rise
8: IN4_Fall
9: IN1
10: IN2
11: IN3
12: IN4
13: Off

The default value is 0 (no change).

U16 Limit (0: no change)

Selects the Period Stop Determination Function.
To enable the period stop determination on each channel, select ON. When enabled, if a signal is not detected within the specified timeout time, the measured data is set to invalid value. If the period stop determination function is OFF, the measured data is set to invalid value when the measurement period is 20 s or more (0.5 Hz or less in terms of the frequency).
This function is valid only when the measurement function of the target channel is set to Period, TI, or Frequency.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Trigger (no change)

Specifies the trigger settings in a cluster.

The default value is no change.

Source (0: no change)

Selects the trigger source.
0: no change
1: Input
2: Measure
3: BUSTRG

The default value is 0 (no change).

Source Number (0: no change)

Selects the target input when the input signal is used as a trigger source.
The selectable range is 1 to 32.
0 indicates no change.

The default value is 0 (no change).

Slope (0: no change)

Selects the trigger slope.
High and Low is valid when the acquisition mode is set to Gate (Level).
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low

The default value is 0 (no change).

Type (0: no change)

Selects the trigger type.
When the measurement function is Totalize or Totalize (Gate): >= (greater than or equal to the threshold level) or == (equal to the threshold level)
UpDown1, UpDpwn2 or UpDown4: >= (greater than or equal to the threshold level), == (equal to the threshold level), or <= (less than or equal to the threshold level)
Other: >= (greater than or equal to the threshold level) or <= (less than or equal to the threshold level)
0: no change
1: >=
2: ==
3: <=

The default value is 0 (no change).

DBL Threshold Level (0)

Specifies the threshold level.
Specify the threshold level of measured values used to detect the trigger. The trigger is detected on the edge of the signal. The selectable range is the measurement range of the corresponding measurement function.

Selectable Range

During measurement function is set to Period or Time Interval: 100 ns to 20 s
Totalize or Totalize(Gate): 0 to 536870911
UpDown1, UpDown2 or UpDown4: –268435456 to 268435455
Ratio × 1: 0 to 536780911
Ratio × 16: 0 to 33554431.9
Ratio × 128: 0 to 4194303.99
Ratio × 1024: 0 to 524287.999

The default value is 0.

U16 Condition (0: no change)

Selects the bus trigger detection.
0: no change
1: Enter (When the bus trigger signal changes from DISABLE to ENABLE)
2: Exit (When the bus trigger signal changes from ENABLE to DISABLE)
3: Both (When the bus trigger signal changes from DISABLE to ENABLE or from ENABLE to DISABLE)
4: True (While the bus trigger signal is ENABLE)
5: False (While the bus trigger signal is DISABLE)

The default value is 0 (no change).

I32 Pretrigger (-1: no change)

Specifies the pretrigger.
The measured values before the trigger point can be written to the acquisition memory.
Set how many points before the trigger point to begin writing values in the range, 0 to specified record length – 2.

The default value is –1 (no change).

U32 Hold Off (0: no change)

Specifies the hold off.
You can specify the trigger hold off period that is used to temporarily stop the detection of the next trigger once a trigger occurs. The range varies depending on the acquisition mode as follows:
Trigger mode: Record length to 1,048,576 (1M)
Gate (edge) mode: 1 to 1,048,576 (1M)

The default value is 0 (no change).

[DBL] Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

[DBL] Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

waveforms

Indicates the scaled data as an array of channels and blocks.
t0 indicates 0.
Y indicates the array of measured data.

1st Waveform

Indicates the scaled data of the first block of the scaled data as an array.
t0 indicates 0.
Y indicates the array of measured data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

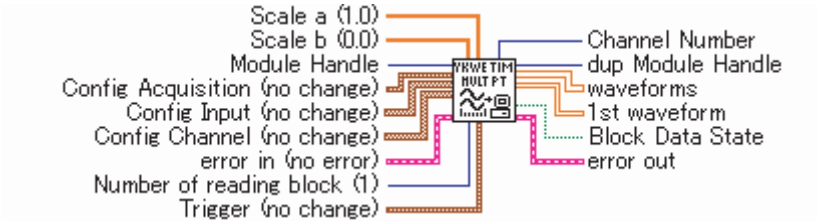
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale Array



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

Config Acquisition (no change)

Sets the input to the timing measurement module in a cluster.

The default value is no change.

Acquisition Mode (0: no change)

Selects the acquisition mode from the following.
0: no change
1: Triggered
2: Free Run
3: Gate (Level)
4: Gate (Edge)

The default value is 0 (no change).

Sampling Interval (0: no change)

Specifies the sampling interval.
This is the interval at which the measured values are written to the acquisition memory when the time base is set to “Internal.” The selectable range varies depending on the acquisition mode.
Selectable range
During trigger/gate mode: 2 µ to10 s (1 µs steps).
During free run mode: The selectable range is 1 ms to 10 s (1 µs steps).

The default value is 0 (no change).

Record Length (-1: no change)

Specifies the record length.
When the acquisition mode is set to trigger or gate (level), you can partition the memory and specify the number of points of measured values to be written to one block of the acquisition memory. Note that for the following selectable ranges, a limit as defined by sampling interval × record length ±5 ms exists.

- During trigger mode
  The selectable range is 2 to 1,048,576 (1M)/the number of memory partitions. The record length is set to maximum record length/the number of memory partitions when 0 is specified.
- During gate (level) mode
  The selectable range is 2 to 1,048,576 (1M)/the number of memory partitions. The record length is set to the maximum record length when 0 is specified. In this case, the memory is partitioned according to the satisfied and unsatisfied conditions of the trigger.
  The maximum number of memory blocks that can be created in this way is 256.

The default value is 0 (no change).

U16 Memory Partition (0: no change)

Selects the number of memory partition.
During the trigger mode, you can divide the acquisition memory into multiple blocks and write the values to the memory blocks in order every time the trigger occurs.
0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256

The default value is 0 (no change).

I32 No. of Acquisitions (-1: no change)

Specifies the number of acquisition.
When the acquisition mode is set to Triggerd or Gate (Level/Edge) you can partition the memory and specify the number of acquisitions to be carried out. The range is 1 to 65,535 times.
However, the operation varies depending on the acquisition mode.

- When in trigger mode
  You can only specify 1 for the number of acquisitions, if the number of memory partitions is set to 1.
- When in gate (level) mode
  If the record length is greater than or equal to half the maximum record length, you can only specify 1 for the number of acquisitions.

The default value is –1 (no change).

U16 Counter Reset Type (0: no change)

Selects the counter reset type.
You can select the timing when the counter for totalize count and up and down count is reset.
0: no change
1: Auto: Resets the counter when starting measurements. When modules are linked, the counter is reset on all channels.
2: Manual: Does not reset the counter when starting measurements. You can reset the counter at an arbitrary time.

The default value is 0 (no change).

Config Input (no change)

Sets input coupling, level, filter, and hysteresis in an array of clusters.
Of the array elements of index 0, if the input coupling, filter, and hestelesis, then index 1, 2, 3, and so on correspond to channels 1, 2, 3, and so on, respectively. If any of the four elements is nonzero, then all inputs are set using the elements of index 0.

The default value is no change.

Coupling (0: no change)

Selects the input coupling.
You can select which component of the input signal is to be acquired.
0: no change
1: AC: Acquire only the AC component of the input signal. The lower limit of the input frequency is approximately 10 Hz.
2: DC: Acquires all the components (DC and AC) of the input signal.

The default value is 0 (no change).

Level (0V)

Specifies the Input Threshold Level.
Specify the threshold level used to detect the point of change (rising or falling edge, for example) of the input signal.
The selectable range is –20.0 V to 20.0 V (in 0.1 V steps).

The default value is 0.0 V.

Filter (0: no change)

Selects the input filter.
You can set a low–pass filter used to eliminate high–frequency noise from the input signal.
0: no change
1: Off
2: 1 kHz
3: 10 kHz
4: 100 kHz

The default value is 0 (no change).

Hysteresis (0: no change)

Selects the hysteresis width.
By default, the hysteresis width is set to NORMAL (approximately 0.8 Vpp) as a measure against noise during the detection of the point of change of the input signal. If you select the On, the hysteresis width is set to WIDE (approximately 2.5 Vpp).
0: no change
1: Off (NORMAL)
2: On (WIDE)

The default value is 0 (no change).

Config Channel (no change)

Sets measurement function, source A, source B, and limit in an array of clusters.
Of the array elements of index 0, if the measurement function, source A, source B, and limit, then index 1, 2, 3, and so on correspond to channels 1, 2, 3, and so on, respectively. If any of the four elements is nonzero, then all channels are set using the elements of index 0.

The default value is no change.

Function (0: no change)

Selects the measurement function.
0: no change
1: Off
2: Period
3: Time Interval
4: Totalize
5: Totalize (Gate)
6: UpDown1
7: UpDown2
8: UpDown4
9: Ratio × 1
10: Ratio × 16
11: Ratio × 128
12: Ratio × 1024
13: Frequency

The default value is 0 (no change).

Source A (0: no change)

Selects Source A.
Select the input (IN1 to IN4) to be measured or to be used as a gate and the slope (Rise or Fall) for detecting the point of change of the input signal according to the measurement function. However, for up and down count, select the combination of the input to be measured through Source A and the input used to reset the counter through Source B.
0: no change
1: IN1_Rise
2: IN1_Fall
3: IN2_Rise
4: IN2_Fall
5: IN3_Rise
6: IN3_Fall
7: IN4_Rise
8: IN4_Fall
9: IN1-IN2
10: IN3-IN4

The default value is 0 (no change).

U16 Source B (0: no change)

Selects Source B.
Select the input (IN1 to IN4) to be measured or to be used as a gate and the slope (Rise or Fall) for detecting the point of change of the input signal according to the measurement function. However, for up and down count, select the combination of the input to be measured through Source A and the input used to reset the counter through Source B.
0: no change
1: IN1_Rise
2: IN1_Fall
3: IN2_Rise
4: IN2_Fall
5: IN3_Rise
6: IN3_Fall
7: IN4_Rise
8: IN4_Fall
9: IN1
10: IN2
11: IN3
12: IN4
13: Off

The default value is 0 (no change).

U16 Limit (0: no change)

Selects the Period Stop Determination Function.
To enable the period stop determination on each channel, select ON. When enabled, if a signal is not detected within the specified timeout time, the measured data is set to invalid value. If the period stop determination function is OFF, the measured data is set to invalid value when the measurement period is 20 s or more (0.5 Hz or less in terms of the frequency).
This function is valid only when the measurement function of the target channel is set to Period, TI, or Frequency.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Trigger (no change)

Specifies the trigger settings in a cluster.

The default value is no change.

Source (0: no change)

Selects the trigger source.
0: no change
1: Input
2: Measure
3: BUSTRG

The default value is 0 (no change).

Source Number (0: no change)

Selects the target input when the input signal is used as a trigger source.
The selectable range is 1 to 32.
0 indicates no change.

The default value is 0 (no change).

Slope (0: no change)

Selects the trigger slope.
High and Low is valid when the acquisition mode is set to Gate (Level).
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low

The default value is 0 (no change).

Type (0: no change)

Selects the trigger type.
When the measurement function is Totalize or Totalize (Gate): >= (greater than or equal to the threshold level) or == (equal to the threshold level)
UpDown1, UpDpwn2 or UpDown4: >= (greater than or equal to the threshold level), == (equal to the threshold level), or <= (less than or equal to the threshold level)
Other: >= (greater than or equal to the threshold level) or <= (less than or equal to the threshold level)
0: no change
1: >=
2: ==
3: <=

The default value is 0 (no change).

DBL Threshold Level (0)

Specifies the threshold level.
Specify the threshold level of measured values used to detect the trigger. The trigger is detected on the edge of the signal. The selectable range is the measurement range of the corresponding measurement function.

Selectable Range

During measurement function is set to Period or Time Interval: 100 ns to 20 s
Totalize or Totalize(Gate): 0 to 536870911
UpDown1, UpDown2 or UpDown4: –268435456 to 268435455
Ratio × 1: 0 to 536780911
Ratio × 16: 0 to 33554431.9
Ratio × 128: 0 to 4194303.99
Ratio × 1024: 0 to 524287.999

The default value is 0.

U16 Condition (0: no change)

Selects the bus trigger detection.
0: no change
1: Enter (When the bus trigger signal changes from DISABLE to ENABLE)
2: Exit (When the bus trigger signal changes from ENABLE to DISABLE)
3: Both (When the bus trigger signal changes from DISABLE to ENABLE or from ENABLE to DISABLE)
4: True (While the bus trigger signal is ENABLE)
5: False (While the bus trigger signal is DISABLE)

The default value is 0 (no change).

I32 Pretrigger (-1: no change)

Specifies the pretrigger.
The measured values before the trigger point can be written to the acquisition memory.
Set how many points before the trigger point to begin writing values in the range, 0 to specified record length – 2.

The default value is –1 (no change).

U32 Hold Off (0: no change)

Specifies the hold off.
You can specify the trigger hold off period that is used to temporarily stop the detection of the next trigger once a trigger occurs. The range varies depending on the acquisition mode as follows:
Trigger mode: Record length to 1,048,576 (1M)
Gate (edge) mode: 1 to 1,048,576 (1M)

The default value is 0 (no change).

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

waveforms

Indicates the scaled data as an array of channels and blocks.

1st waveform

Indicates the scaled data of the first block of the scaled data as an array of channels.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

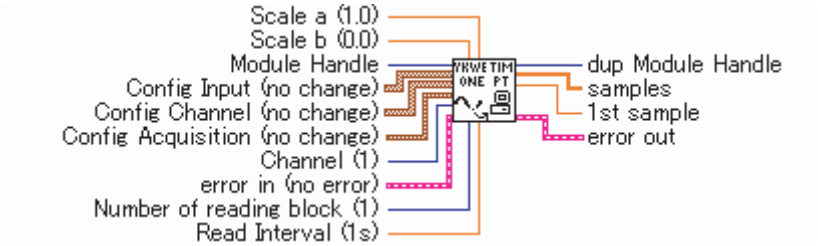
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE TIM Sample Channel.vi

This VI acquires with the specified sampling interval from the specified one input channel, then returns the instantaneous value data.

YKWE TIM Sample Channel.vi is polymorphic and can be set to output the following types of data.
Scale Array
Waveform

Scale Array



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

Config Acquisition (no change)

Sets the input to the timing measurement module in a cluster.

The default value is no change.

Acquisition Mode (0: no change)

Selects the acquisition mode from the following.
0: no change
1: Triggered
2: Free Run
3: Gate (Level)
4: Gate (Edge)

The default value is 0 (no change).

Sampling Interval (0: no change)

Specifies the sampling interval.
This is the interval at which the measured values are written to the acquisition memory when the time base is set to “Internal.” The selectable range varies depending on the acquisition mode.
Selectable range
During trigger/gate mode: 2 μ to10 s (1 μs steps).
During free run mode: The selectable range is 1 ms to 10 s (1 μs steps).

The default value is 0 (no change).

Record Length (-1: no change)

Specifies the record length.
When the acquisition mode is set to trigger or gate (level), you can partition the memory and specify the number of points of measured values to be written to one block of the acquisition memory. Note that for the following selectable ranges, a limit as defined by sampling interval × record length ±5 ms exists.

- During trigger mode
  The selectable range is 2 to 1,048,576 (1M)/the number of memory partitions. The record length is set to maximum record length/the number of memory partitions when 0 is specified.
- During gate (level) mode
  The selectable range is 2 to 1,048,576 (1M)/the number of memory partitions. The record length is set to the maximum record length when 0 is specified. In this case, the memory is partitioned according to the satisfied and unsatisfied conditions of the trigger.
  The maximum number of memory blocks that can be created in this way is 256.

The default value is 0 (no change).

U16 Memory Partition (0: no change)

Selects the number of memory partition.
During the trigger mode, you can divide the acquisition memory into multiple blocks and write the values to the memory blocks in order every time the trigger occurs.
0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256

The default value is 0 (no change).

I32 No. of Acquisitions (-1: no change)

Specifies the number of acquisition.
When the acquisition mode is set to Triggerd or Gate (Level/Edge) you can partition the memory and specify the number of acquisitions to be carried out. The range is 1 to 65,535 times.
However, the operation varies depending on the acquisition mode.

- When in trigger mode
  You can only specify 1 for the number of acquisitions, if the number of memory partitions is set to 1.
- When in gate (level) mode
  If the record length is greater than or equal to half the maximum record length, you can only specify 1 for the number of acquisitions.

The default value is –1 (no change).

U16 Counter Reset Type (0: no change)

Selects the counter reset type.
You can select the timing when the counter for totalize count and up and down count is reset.
0: no change
1: Auto: Resets the counter when starting measurements. When modules are linked, the counter is reset on all channels.
2: Manual: Does not reset the counter when starting measurements. You can reset the counter at an arbitrary time.

The default value is 0 (no change).

Config Input (no change)

Sets input coupling, level, filter, and hysteresis in an array of clusters.
Of the array elements of index 0, if the input coupling, filter, and hestelesis, then index 1, 2, 3, and so on correspond to channels 1, 2, 3, and so on, respectively. If any of the four elements is nonzero, then all inputs are set using the elements of index 0.

The default value is no change.

Coupling (0: no change)

Selects the input coupling.
You can select which component of the input signal is to be acquired.
0: no change
1: AC: Acquire only the AC component of the input signal. The lower limit of the input frequency is approximately 10 Hz.
2: DC: Acquires all the components (DC and AC) of the input signal.

The default value is 0 (no change).

Level (0V)

Specifies the Input Threshold Level.
Specify the threshold level used to detect the point of change (rising or falling edge, for example) of the input signal.
The selectable range is –20.0 V to 20.0 V (in 0.1 V steps).

The default value is 0.0 V.

Filter (0: no change)

Selects the input filter.
You can set a low–pass filter used to eliminate high–frequency noise from the input signal.
0: no change
1: Off
2: 1 kHz
3: 10 kHz
4: 100 kHz

The default value is 0 (no change).

Hysteresis (0: no change)

Selects the hysteresis width.
By default, the hysteresis width is set to NORMAL (approximately 0.8 Vpp) as a measure against noise during the detection of the point of change of the input signal. If you select the On, the hysteresis width is set to WIDE (approximately 2.5 Vpp).
0: no change
1: Off (NORMAL)
2: On (WIDE)

The default value is 0 (no change).

Config Channel (no change)

Sets measurement function, source A, source B, and limit in an array of clusters.
Of the array elements of index 0, if the measurement function, source A, source B, and limit, then index 1, 2, 3, and so on correspond to channels 1, 2, 3, and so on, respectively. If any of the four elements is nonzero, then all channels are set using the elements of index 0.

The default value is no change.

Function (0: no change)

Selects the measurement function.
0: no change
1: Off
2: Period
3: Time Interval
4: Totalize
5: Totalize (Gate)
6: UpDown1
7: UpDown2
8: UpDown4
9: Ratio × 1
10: Ratio × 16
11: Ratio × 128
12: Ratio × 1024
13: Frequency

The default value is 0 (no change).

Source A (0: no change)

Selects Source A.
Select the input (IN1 to IN4) to be measured or to be used as a gate and the slope (Rise or Fall) for detecting the point of change of the input signal according to the measurement function. However, for up and down count, select the combination of the input to be measured through Source A and the input used to reset the counter through Source B.
0: no change
1: IN1_Rise
2: IN1_Fall
3: IN2_Rise
4: IN2_Fall
5: IN3_Rise
6: IN3_Fall
7: IN4_Rise
8: IN4_Fall
9: IN1-IN2
10: IN3-IN4

The default value is 0 (no change).

U16 Source B (0: no change)

Selects Source B.
Select the input (IN1 to IN4) to be measured or to be used as a gate and the slope (Rise or Fall) for detecting the point of change of the input signal according to the measurement function. However, for up and down count, select the combination of the input to be measured through Source A and the input used to reset the counter through Source B.
0: no change
1: IN1_Rise
2: IN1_Fall
3: IN2_Rise
4: IN2_Fall
5: IN3_Rise
6: IN3_Fall
7: IN4_Rise
8: IN4_Fall
9: IN1
10: IN2
11: IN3
12: IN4
13: Off

The default value is 0 (no change).

U16 Limit (0: no change)

Selects the Period Stop Determination Function.
To enable the period stop determination on each channel, select ON. When enabled, if a signal is not detected within the specified timeout time, the measured data is set to invalid value. If the period stop determination function is OFF, the measured data is set to invalid value when the measurement period is 20 s or more (0.5 Hz or less in terms of the frequency).
This function is valid only when the measurement function of the target channel is set to Period, TI, or Frequency.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data of the specified channel as an array of blocks.

1st sample

Indicates the scaled data of the first block of the scaled data of the specified channel.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

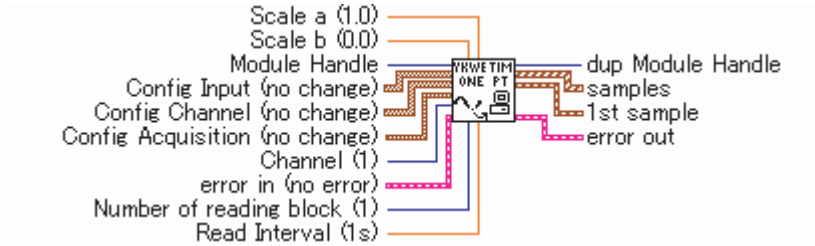
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

Config Acquisition (no change)

Sets the input to the timing measurement module in a cluster.

The default value is no change.

Acquisition Mode (0: no change)

Selects the acquisition mode from the following.
0: no change
1: Triggered
2: Free Run
3: Gate (Level)
4: Gate (Edge)

The default value is 0 (no change).

Sampling Interval (0: no change)

Specifies the sampling interval.
This is the interval at which the measured values are written to the acquisition memory when the time base is set to “Internal.” The selectable range varies depending on the acquisition mode.
Selectable range
During trigger/gate mode: 2 µ to10 s (1 µs steps).
During free run mode: The selectable range is 1 ms to 10 s (1 µs steps).

The default value is 0 (no change).

Record Length (-1: no change)

Specifies the record length.
When the acquisition mode is set to trigger or gate (level), you can partition the memory and specify the number of points of measured values to be written to one block of the acquisition memory. Note that for the following selectable ranges, a limit as defined by sampling interval × record length ±5 ms exists.

- During trigger mode
  The selectable range is 2 to 1,048,576 (1M)/the number of memory partitions. The record length is set to maximum record length/the number of memory partitions when 0 is specified.
- During gate (level) mode
  The selectable range is 2 to 1,048,576 (1M)/the number of memory partitions. The record length is set to the maximum record length when 0 is specified. In this case, the memory is partitioned according to the satisfied and unsatisfied conditions of the trigger.
  The maximum number of memory blocks that can be created in this way is 256.

The default value is 0 (no change).

U16 Memory Partition (0: no change)

Selects the number of memory partition.
During the trigger mode, you can divide the acquisition memory into multiple blocks and write the values to the memory blocks in order every time the trigger occurs.
0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256

The default value is 0 (no change).

I32 No. of Acquisitions (-1: no change)

Specifies the number of acquisition.
When the acquisition mode is set to Triggerd or Gate (Level/Edge) you can partition the memory and specify the number of acquisitions to be carried out. The range is 1 to 65,535 times.
However, the operation varies depending on the acquisition mode.

- When in trigger mode
  You can only specify 1 for the number of acquisitions, if the number of memory partitions is set to 1.
- When in gate (level) mode
  If the record length is greater than or equal to half the maximum record length, you can only specify 1 for the number of acquisitions.

The default value is –1 (no change).

U16 Counter Reset Type (0: no change)

Selects the counter reset type.
You can select the timing when the counter for totalize count and up and down count is reset.
0: no change
1: Auto: Resets the counter when starting measurements. When modules are linked, the counter is reset on all channels.
2: Manual: Does not reset the counter when starting measurements. You can reset the counter at an arbitrary time.

The default value is 0 (no change).

Config Input (no change)

Sets input coupling, level, filter, and hysteresis in an array of clusters.
Of the array elements of index 0, if the input coupling, filter, and hestelesis, then index 1, 2, 3, and so on correspond to channels 1, 2, 3, and so on, respectively. If any of the four elements is nonzero, then all inputs are set using the elements of index 0.

The default value is no change.

Coupling (0: no change)

Selects the input coupling.
You can select which component of the input signal is to be acquired.
0: no change
1: AC: Acquire only the AC component of the input signal. The lower limit of the input frequency is approximately 10 Hz.
2: DC: Acquires all the components (DC and AC) of the input signal.

The default value is 0 (no change).

Level (0V)

Specifies the Input Threshold Level.
Specify the threshold level used to detect the point of change (rising or falling edge, for example) of the input signal.
The selectable range is –20.0 V to 20.0 V (in 0.1 V steps).

The default value is 0.0 V.

Filter (0: no change)

Selects the input filter.
You can set a low–pass filter used to eliminate high–frequency noise from the input signal.
0: no change
1: Off
2: 1 kHz
3: 10 kHz
4: 100 kHz

The default value is 0 (no change).

Hysteresis (0: no change)

Selects the hysteresis width.
By default, the hysteresis width is set to NORMAL (approximately 0.8 Vpp) as a measure against noise during the detection of the point of change of the input signal. If you select the On, the hysteresis width is set to WIDE (approximately 2.5 Vpp).
0: no change
1: Off (NORMAL)
2: On (WIDE)

The default value is 0 (no change).

Config Channel (no change)

Sets measurement function, source A, source B, and limit in an array of clusters.
Of the array elements of index 0, if the measurement function, source A, source B, and limit, then index 1, 2, 3, and so on correspond to channels 1, 2, 3, and so on, respectively. If any of the four elements is nonzero, then all channels are set using the elements of index 0.

The default value is no change.

Function (0: no change)

Selects the measurement function.
0: no change
1: Off
2: Period
3: Time Interval
4: Totalize
5: Totalize (Gate)
6: UpDown1
7: UpDown2
8: UpDown4
9: Ratio × 1
10: Ratio × 16
11: Ratio × 128
12: Ratio × 1024
13: Frequency

The default value is 0 (no change).

Source A (0: no change)

Selects Source A.
Select the input (IN1 to IN4) to be measured or to be used as a gate and the slope (Rise or Fall) for detecting the point of change of the input signal according to the measurement function. However, for up and down count, select the combination of the input to be measured through Source A and the input used to reset the counter through Source B.
0: no change
1: IN1_Rise
2: IN1_Fall
3: IN2_Rise
4: IN2_Fall
5: IN3_Rise
6: IN3_Fall
7: IN4_Rise
8: IN4_Fall
9: IN1-IN2
10: IN3-IN4

The default value is 0 (no change).

U16 Source B (0: no change)

Selects Source B.
Select the input (IN1 to IN4) to be measured or to be used as a gate and the slope (Rise or Fall) for detecting the point of change of the input signal according to the measurement function. However, for up and down count, select the combination of the input to be measured through Source A and the input used to reset the counter through Source B.
0: no change
1: IN1_Rise
2: IN1_Fall
3: IN2_Rise
4: IN2_Fall
5: IN3_Rise
6: IN3_Fall
7: IN4_Rise
8: IN4_Fall
9: IN1
10: IN2
11: IN3
12: IN4
13: Off

The default value is 0 (no change).

U16 Limit (0: no change)

Selects the Period Stop Determination Function.
To enable the period stop determination on each channel, select ON. When enabled, if a signal is not detected within the specified timeout time, the measured data is set to invalid value. If the period stop determination function is OFF, the measured data is set to invalid value when the measurement period is 20 s or more (0.5 Hz or less in terms of the frequency).
This function is valid only when the measurement function of the target channel is set to Period, TI, or Frequency.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data as an array of blocks.
t0 indicates 0.
Y indicates the array of measured data.

1st sample

Indicates the scaled data of the first block of the scaled data.
t0 indicates 0.
Y indicates the array of measured data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

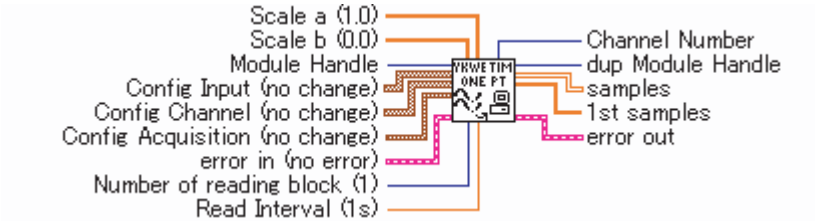
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE TIM Sample Channels.vi

This VI acquires with the specified sampling interval from the plural input channels, then returns the instantaneous value data.

YKWE TIM Sample Channels.vi is polymorphic and can be set to output the following types of data.
Scale Array
Waveform

Scale Array



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

Config Acquisition (no change)

Sets the input to the timing measurement module in a cluster.

The default value is no change.

U16 Acquisition Mode (0: no change)

Selects the acquisition mode from the following.
0: no change
1: Triggered
2: Free Run
3: Gate (Level)
4: Gate (Edge)

The default value is 0 (no change).

DBL Sampling Interval (0: no change)

Specifies the sampling interval.
This is the interval at which the measured values are written to the acquisition memory when the time base is set to “Internal.” The selectable range varies depending on the acquisition mode.
Selectable range
During trigger/gate mode: 2 µ to10 s (1 µs steps).
During free run mode: The selectable range is 1 ms to 10 s (1 µs steps).

The default value is 0 (no change).

I32 Record Length (-1: no change)

Specifies the record length.
When the acquisition mode is set to trigger or gate (level), you can partition the memory and specify the number of points of measured values to be written to one block of the acquisition memory. Note that for the following selectable ranges, a limit as defined by sampling interval × record length ±5 ms exists.

- During trigger mode
  The selectable range is 2 to 1,048,576 (1M)/the number of memory partitions. The record length is set to maximum record length/the number of memory partitions when 0 is specified.
- During gate (level) mode
  The selectable range is 2 to 1,048,576 (1M)/the number of memory partitions. The record length is set to the maximum record length when 0 is specified. In this case, the memory is partitioned according to the satisfied and unsatisfied conditions of the trigger.
  The maximum number of memory blocks that can be created in this way is 256.

The default value is 0 (no change).

U16 Memory Partition (0: no change)

Selects the number of memory partition.
During the trigger mode, you can divide the acquisition memory into multiple blocks and write the values to the memory blocks in order every time the trigger occurs.
0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256

The default value is 0 (no change).

I32 No. of Acquisitions (-1: no change)

Specifies the number of acquisition.
When the acquisition mode is set to Triggerd or Gate (Level/Edge) you can partition the memory and specify the number of acquisitions to be carried out. The range is 1 to 65,535 times.
However, the operation varies depending on the acquisition mode.

- When in trigger mode
  You can only specify 1 for the number of acquisitions, if the number of memory partitions is set to 1.
- When in gate (level) mode
  If the record length is greater than or equal to half the maximum record length, you can only specify 1 for the number of acquisitions.

The default value is –1 (no change).

U16 Counter Reset Type (0: no change)

Selects the counter reset type.
You can select the timing when the counter for totalize count and up and down count is reset.
0: no change
1: Auto: Resets the counter when starting measurements. When modules are linked, the counter is reset on all channels.
2: Manual: Does not reset the counter when starting measurements. You can reset the counter at an arbitrary time.

The default value is 0 (no change).

Config Input (no change)

Sets input coupling, level, filter, and hysteresis in an array of clusters.
Of the array elements of index 0, if the input coupling, filter, and hestelesis, then index 1, 2, 3, and so on correspond to channels 1, 2, 3, and so on, respectively. If any of the four elements is nonzero, then all inputs are set using the elements of index 0.

The default value is no change.

U16 Coupling (0: no change)

Selects the input coupling.
You can select which component of the input signal is to be acquired.
0: no change
1: AC: Acquire only the AC component of the input signal. The lower limit of the input frequency is approximately 10 Hz.
2: DC: Acquires all the components (DC and AC) of the input signal.

The default value is 0 (no change).

DBL Level (0V)

Specifies the Input Threshold Level.
Specify the threshold level used to detect the point of change (rising or falling edge, for example) of the input signal.
The selectable range is –20.0 V to 20.0 V (in 0.1 V steps).

The default value is 0.0 V.

U16 Filter (0: no change)

Selects the input filter.
You can set a low–pass filter used to eliminate high–frequency noise from the input signal.
0: no change
1: Off
2: 1 kHz
3: 10 kHz
4: 100 kHz

The default value is 0 (no change).

U16 Hysteresis (0: no change)

Selects the hysteresis width.
By default, the hysteresis width is set to NORMAL (approximately 0.8 Vpp) as a measure against noise during the detection of the point of change of the input signal. If you select the On, the hysteresis width is set to WIDE (approximately 2.5 Vpp).
0: no change
1: Off (NORMAL)
2: On (WIDE)

The default value is 0 (no change).

Config Channel (no change)

Sets measurement function, source A, source B, and limit in an array of clusters.
Of the array elements of index 0, if the measurement function, source A, source B, and limit, then index 1, 2, 3, and so on correspond to channels 1, 2, 3, and so on, respectively. If any of the four elements is nonzero, then all channels are set using the elements of index 0.

The default value is no change.

U16 Function (0: no change)

Selects the measurement function.
0: no change
1: Off
2: Period
3: Time Interval
4: Totalize
5: Totalize (Gate)
6: UpDown1
7: UpDown2
8: UpDown4
9: Ratio × 1
10: Ratio × 16
11: Ratio × 128
12: Ratio × 1024
13: Frequency

The default value is 0 (no change).

U16 Source A (0: no change)

Selects Source A.
Select the input (IN1 to IN4) to be measured or to be used as a gate and the slope (Rise or Fall) for detecting the point of change of the input signal according to the measurement function. However, for up and down count, select the combination of the input to be measured through Source A and the input used to reset the counter through Source B.
0: no change
1: IN1_Rise
2: IN1_Fall
3: IN2_Rise
4: IN2_Fall
5: IN3_Rise
6: IN3_Fall
7: IN4_Rise
8: IN4_Fall
9: IN1-IN2
10: IN3-IN4

The default value is 0 (no change).

U16 Source B (0: no change)

Selects Source B.
Select the input (IN1 to IN4) to be measured or to be used as a gate and the slope (Rise or Fall) for detecting the point of change of the input signal according to the measurement function. However, for up and down count, select the combination of the input to be measured through Source A and the input used to reset the counter through Source B.
0: no change
1: IN1_Rise
2: IN1_Fall
3: IN2_Rise
4: IN2_Fall
5: IN3_Rise
6: IN3_Fall
7: IN4_Rise
8: IN4_Fall
9: IN1
10: IN2
11: IN3
12: IN4
13: Off

The default value is 0 (no change).

U16 Limit (0: no change)

Selects the Period Stop Determination Function.
To enable the period stop determination on each channel, select ON. When enabled, if a signal is not detected within the specified timeout time, the measured data is set to invalid value. If the period stop determination function is OFF, the measured data is set to invalid value when the measurement period is 20 s or more (0.5 Hz or less in terms of the frequency).
This function is valid only when the measurement function of the target channel is set to Period, TI, or Frequency.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data as an array of channels and blocks.

1st samples

Indicates the scaled data of the first block of the scaled data as an array of channel.

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

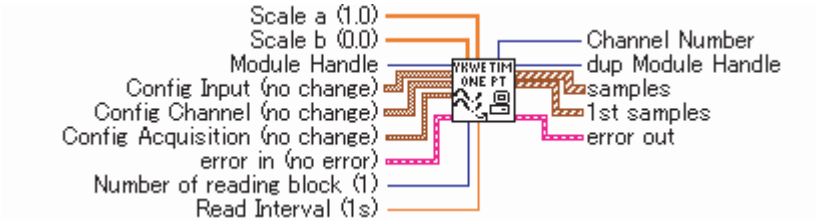
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

Config Acquisition (no change)

Sets the input to the timing measurement module in a cluster.

The default value is no change.

Acquisition Mode (0: no change)

Selects the acquisition mode from the following.
0: no change
1: Triggered
2: Free Run
3: Gate (Level)
4: Gate (Edge)

The default value is 0 (no change).

Sampling Interval (0: no change)

Specifies the sampling interval.
This is the interval at which the measured values are written to the acquisition memory when the time base is set to “Internal.” The selectable range varies depending on the acquisition mode.
Selectable range
During trigger/gate mode: 2 µ to10 s (1 µs steps).
During free run mode: The selectable range is 1 ms to 10 s (1 µs steps).

The default value is 0 (no change).

Record Length (-1: no change)

Specifies the record length.
When the acquisition mode is set to trigger or gate (level), you can partition the memory and specify the number of points of measured values to be written to one block of the acquisition memory. Note that for the following selectable ranges, a limit as defined by sampling interval × record length ±5 ms exists.

- During trigger mode
  The selectable range is 2 to 1,048,576 (1M)/the number of memory partitions. The record length is set to maximum record length/the number of memory partitions when 0 is specified.
- During gate (level) mode
  The selectable range is 2 to 1,048,576 (1M)/the number of memory partitions. The record length is set to the maximum record length when 0 is specified. In this case, the memory is partitioned according to the satisfied and unsatisfied conditions of the trigger.
  The maximum number of memory blocks that can be created in this way is 256.

The default value is 0 (no change).

U16 Memory Partition (0: no change)

Selects the number of memory partition.
During the trigger mode, you can divide the acquisition memory into multiple blocks and write the values to the memory blocks in order every time the trigger occurs.
0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256

The default value is 0 (no change).

I32 No. of Acquisitions (-1: no change)

Specifies the number of acquisition.
When the acquisition mode is set to Triggerd or Gate (Level/Edge) you can partition the memory and specify the number of acquisitions to be carried out. The range is 1 to 65,535 times.
However, the operation varies depending on the acquisition mode.

- When in trigger mode
  You can only specify 1 for the number of acquisitions, if the number of memory partitions is set to 1.
- When in gate (level) mode
  If the record length is greater than or equal to half the maximum record length, you can only specify 1 for the number of acquisitions.

The default value is –1 (no change).

U16 Counter Reset Type (0: no change)

Selects the counter reset type.
You can select the timing when the counter for totalize count and up and down count is reset.
0: no change
1: Auto: Resets the counter when starting measurements. When modules are linked, the counter is reset on all channels.
2: Manual: Does not reset the counter when starting measurements. You can reset the counter at an arbitrary time.

The default value is 0 (no change).

Config Input (no change)

Sets input coupling, level, filter, and hysteresis in an array of clusters.
Of the array elements of index 0, if the input coupling, filter, and hestelesis, then index 1, 2, 3, and so on correspond to channels 1, 2, 3, and so on, respectively. If any of the four elements is nonzero, then all inputs are set using the elements of index 0.

The default value is no change.

Coupling (0: no change)

Selects the input coupling.
You can select which component of the input signal is to be acquired.
0: no change
1: AC: Acquire only the AC component of the input signal. The lower limit of the input frequency is approximately 10 Hz.
2: DC: Acquires all the components (DC and AC) of the input signal.

The default value is 0 (no change).

Level (0V)

Specifies the Input Threshold Level.
Specify the threshold level used to detect the point of change (rising or falling edge, for example) of the input signal.
The selectable range is –20.0 V to 20.0 V (in 0.1 V steps).

The default value is 0.0 V.

Filter (0: no change)

Selects the input filter.
You can set a low–pass filter used to eliminate high–frequency noise from the input signal.
0: no change
1: Off
2: 1 kHz
3: 10 kHz
4: 100 kHz

The default value is 0 (no change).

Hysteresis (0: no change)

Selects the Hysteresis Width.
By default, the hysteresis width is set to NORMAL (approximately 0.8 Vpp) as a measure against noise during the detection of the point of change of the input signal. If you select the On, the hysteresis width is set to WIDE (approximately 2.5 Vpp).
0: no change
1: Off (NORMAL)
2: On (WIDE)

The default value is 0 (no change).

Config Channel (no change)

Sets measurement function, source A, source B, and limit in an array of clusters.
Of the array elements of index 0, if the measurement function, source A, source B, and limit, then index 1, 2, 3, and so on correspond to channels 1, 2, 3, and so on, respectively. If any of the four elements is nonzero, then all channels are set using the elements of index 0.

The default value is no change.

Function (0: no change)

Selects the measurement function.
0: no change
1: Off
2: Period
3: Time Interval
4: Totalize
5: Totalize (Gate)
6: UpDown1
7: UpDown2
8: UpDown4
9: Ratio × 1
10: Ratio × 16
11: Ratio × 128
12: Ratio × 1024
13: Frequency

The default value is 0 (no change).

Source A (0: no change)

Selects Source A.
Select the input (IN1 to IN4) to be measured or to be used as a gate and the slope (Rise or Fall) for detecting the point of change of the input signal according to the measurement function. However, for up and down count, select the combination of the input to be measured through Source A and the input used to reset the counter through Source B.
0: no change
1: IN1_Rise
2: IN1_Fall
3: IN2_Rise
4: IN2_Fall
5: IN3_Rise
6: IN3_Fall
7: IN4_Rise
8: IN4_Fall
9: IN1-IN2
10: IN3-IN4

The default value is 0 (no change).

U16 Source B (0: no change)

Selects Source B.
Select the input (IN1 to IN4) to be measured or to be used as a gate and the slope (Rise or Fall) for detecting the point of change of the input signal according to the measurement function. However, for up and down count, select the combination of the input to be measured through Source A and the input used to reset the counter through Source B.
0: no change
1: IN1_Rise
2: IN1_Fall
3: IN2_Rise
4: IN2_Fall
5: IN3_Rise
6: IN3_Fall
7: IN4_Rise
8: IN4_Fall
9: IN1
10: IN2
11: IN3
12: IN4
13: Off

The default value is 0 (no change).

U16 Limit (0: no change)

Selects the Period Stop Determination Function.
To enable the period stop determination on each channel, select ON. When enabled, if a signal is not detected within the specified timeout time, the measured data is set to invalid value. If the period stop determination function is OFF, the measured data is set to invalid value when the measurement period is 20 s or more (0.5 Hz or less in terms of the frequency).
This function is valid only when the measurement function of the target channel is set to Period, TI, or Frequency.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data as an array of channels and blocks.
t0 indicates 0.
Y indicates the array of measured data.

1st samples

Indicates the scaled data of the first block of the scaled data as an array of channels.
t0 indicates 0.
Y indicates the array of measured data.

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

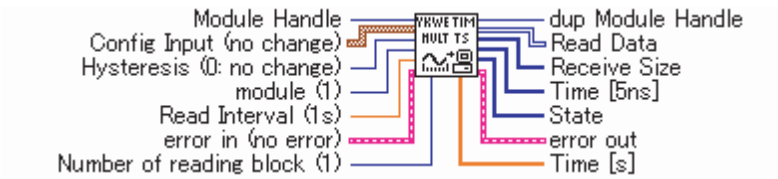
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE TIM Acquire Time Stamp.vi

This VI acquires with the specified sampling interval from the specified input channel, then returns the time stamp data.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

I16 module (1)

Specifies the number of the module to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

I32 Number of reading block (1)

Specifies the number of blocks of data to be read.

The default value is 1.

Config Input (no change)

Sets input coupling, level, filter, and hysteresis in an array of clusters.
Of the array elements of index 0, if the input coupling, filter, and hestelesis, then index 1, 2, 3, and so on correspond to channels 1, 2, 3, and so on, respectively. If any of the four elements is nonzero, then all inputs are set using the elements of index 0.

The default value is no change.

State (0: no change)

Selects measurement ON/OFF.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Coupling (0: no change)

Selects the input coupling.
You can select which component of the input signal is to be acquired.
0: no change
1: AC: Acquire only the AC component of the input signal. The lower limit of the input frequency is approximately 10 Hz.
2: DC: Acquires all the components (DC and AC) of the input signal.

The default value is 0 (no change).

Slope (0: no change)

Selects the trigger slope.
High and Low is valid when the acquisition mode is set to Gate (Level).
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low

The default value is 0 (no change).

Level (0V)

Specifies the Input Threshold Level.
Specify the threshold level used to detect the point of change (rising or falling edge, for example) of the input signal.
This value is valid when Slope is not set to 0 (no change).
The selectable range is –20.0 V to 20.0 V (in 0.1 V steps).

The default value is 0.0 V.

Filter (0: no change)

Selects the input filter.
You can set a low–pass filter used to eliminate high–frequency noise from the input signal.
0: no change
1: Off
2: 1 kHz
3: 10 kHz
4: 100 kHz

The default value is 0 (no change).

Hysteresis (0: no change)

Selects the hysteresis width.
By default, the hysteresis width is set to NORMAL (approximately 0.8 Vpp) as a measure against noise during the detection of the point of change of the input signal. If you select the On, the hysteresis width is set to WIDE (approximately 2.5 Vpp).
0: no change
1: Off (NORMAL)
2: On (WIDE)

The default value is 0 (no change).

Hysteresis (0: no change)

Selects the hysteresis direction.
0: no change
1: Upper
2: Center
3: Lower

The default value is 0 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Read Data

Indicates the read data as an array. (32 bit data)

Receive Size

Indicates the size of read data as an array.

Time [5ns]

Indicates the time data of the first block of the time data as an array. (data of 5 ns unit)

State

Indicates the read data of the first block of the read data as an array of channel change information.

Time [s]

Indicates the read data of the first block of the read data as an array. (data of a second unit)

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

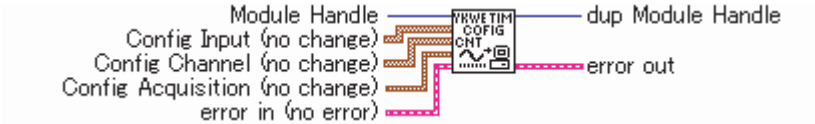
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE TIM Config Counter.vi

This VI configures the counter operation of the timing measurement module.



Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Config Acquisition (no change)

Sets the input to the timing measurement module in a cluster.

The default value is no change.

Acquisition Mode (0: no change)

Selects the acquisition mode from the following.
0: no change
1: Triggered
2: Free Run
3: Gate (Level)
4: Gate (Edge)

The default value is 0 (no change).

Sampling Interval (0: no change)

Specifies the sampling interval.
This is the interval at which the measured values are written to the acquisition memory when the time base is set to “Internal.” The selectable range varies depending on the acquisition mode.
Selectable range
During trigger/gate mode: 2 µ to10 s (1 µs steps).
During free run mode: The selectable range is 1 ms to 10 s (1 µs steps).

The default value is 0 (no change).

I32 Record Length (-1: no change)

Specifies the record length.
When the acquisition mode is set to trigger or gate (level), you can partition the memory and specify the number of points of measured values to be written to one block of the acquisition memory. Note that for the following selectable ranges, a limit as defined by sampling interval × ecord length ±5 ms exists.

- During trigger mode
  The selectable range is 2 to 1,048,576 (1M)/the number of memory partitions. The record length is set to maximum record length/the number of memory partitions when 0 is specified.
- During gate (level) mode
  The selectable range is 2 to 1,048,576 (1M)/the number of memory partitions. The record length is set to the maximum record length when 0 is specified. In this case, the memory is partitioned according to the satisfied and unsatisfied conditions of the trigger.
  The maximum number of memory blocks that can be created in this way is 256.

The default value is 0 (no change).

U16 Memory Partition (0: no change)

Selects the number of memory partition.
During the trigger mode, you can divide the acquisition memory into multiple blocks and write the values to the memory blocks in order every time the trigger occurs.
0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256

The default value is 0 (no change).

I32 No. of Acquisitions (-1: no change)

Specifies the number of acquisition.
When the acquisition mode is set to Triggerd or Gate (Level/Edge) you can partition the memory and specify the number of acquisitions to be carried out. The range is 1 to 65,535 times.
However, the operation varies depending on the acquisition mode.

- When in trigger mode
  You can only specify 1 for the number of acquisitions, if the number of memory partitions is set to 1.
- When in gate (level) mode
  If the record length is greater than or equal to half the maximum record length, you can only specify 1 for the number of acquisitions.

The default value is –1 (no change).

U16 Counter Reset Type (0: no change)

Selects the counter reset type.

You can select the timing when the counter for totalize count and up and down count is reset.

0: no change

1: Auto: Resets the counter when starting measurements. When modules are linked, the counter is reset on all channels.

2: Manual: Does not reset the counter when starting measurements. You can reset the counter at an arbitrary time.

The default value is 0 (no change).

Config Input (no change)

Sets input coupling, level, filter, and hysteresis in an array of clusters.
Of the array elements of index 0, if the input coupling, filter, and hestelesis, then index 1, 2, 3, and so on correspond to channels 1, 2, 3, and so on, respectively. If any of the four elements is nonzero, then all inputs are set using the elements of index 0.

The default value is no change.

Coupling (0: no change)

Selects the input coupling.
You can select which component of the input signal is to be acquired.
0: no change
1: AC: Acquire only the AC component of the input signal. The lower limit of the input frequency is approximately 10 Hz.
2: DC: Acquires all the components (DC and AC) of the input signal.

The default value is 0 (no change).

Level (0V)

Specifies the Input Threshold Level.
Specify the threshold level used to detect the point of change (rising or falling edge, for example) of the input signal.
The selectable range is –20.0 V to 20.0 V (in 0.1 V steps).

The default value is 0.0 V.

Filter (0: no change)

Selects the input filter.
You can set a low–pass filter used to eliminate high–frequency noise from the input signal.
0: no change
1: Off
2: 1 kHz
3: 10 kHz
4: 100 kHz

The default value is 0 (no change).

Hysteresis (0: no change)

Selects the hysteresis width.
By default, the hysteresis width is set to NORMAL (approximately 0.8 Vpp) as a measure against noise during the detection of the point of change of the input signal. If you select the On, the hysteresis width is set to WIDE (approximately 2.5 Vpp).
0: no change
1: Off (NORMAL)
2: On (WIDE)

The default value is 0 (no change).

Config Channel (no change)

Sets measurement function, source A, source B, and limit in an array of clusters.
Of the array elements of index 0, if the measurement function, source A, source B, and limit, then index 1, 2, 3, and so on correspond to channels 1, 2, 3, and so on, respectively. If any of the four elements is nonzero, then all channels are set using the elements of index 0.

The default value is no change.

U16 Function (0: no change)

Selects the measurement function.
0: no change
1: Off
2: Period
3: Time Interval
4: Totalize
5: Totalize (Gate)
6: UpDown1
7: UpDown2
8: UpDown4
9: Ratio × 1
10: Ratio × 16
11: Ratio × 128
12: Ratio × 1024
13: Frequency

The default value is 0 (no change).

U16 Source A (0: no change)

Selects Source A.
Select the input (IN1 to IN4) to be measured or to be used as a gate and the slope (Rise or Fall) for detecting the point of change of the input signal according to the measurement function. However, for up and down count, select the combination of the input to be measured through Source A and the input used to reset the counter through Source B.
0: no change
1: IN1_Rise
2: IN1_Fall
3: IN2_Rise
4: IN2_Fall
5: IN3_Rise
6: IN3_Fall
7: IN4_Rise
8: IN4_Fall
9: IN1-IN2
10: IN3-IN4

The default value is 0 (no change).

U16 Source B (0: no change)

Selects Source B.
Select the input (IN1 to IN4) to be measured or to be used as a gate and the slope (Rise or Fall) for detecting the point of change of the input signal according to the measurement function. However, for up and down count, select the combination of the input to be measured through Source A and the input used to reset the counter through Source B.
0: no change
1: IN1_Rise
2: IN1_Fall
3: IN2_Rise
4: IN2_Fall
5: IN3_Rise
6: IN3_Fall
7: IN4_Rise
8: IN4_Fall
9: IN1
10: IN2
11: IN3
12: IN4
13: Off

The default value is 0 (no change).

U16 Limit (0: no change)

Selects the Period Stop Determination Function.
To enable the period stop determination on each channel, select ON. When enabled, if a signal is not detected within the specified timeout time, the measured data is set to invalid value. If the period stop determination function is OFF, the measured data is set to invalid value when the measurement period is 20 s or more (0.5 Hz or less in terms of the frequency).
This function is valid only when the measurement function of the target channel is set to Period, TI, or Frequency.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

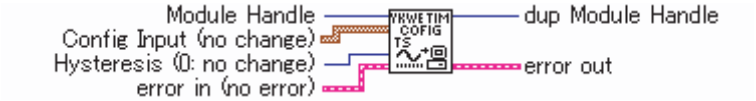
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE TIM Config Time Stamp.vi

This VI configures the time stamp operation of the timing measurement module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Config Input (no change)

Sets input coupling, level, filter, and hysteresis in an array of clusters.
Of the array elements of index 0, if the input coupling, filter, and hestelesis, then index 1, 2, 3, and so on correspond to channels 1, 2, 3, and so on, respectively. If any of the four elements is nonzero, then all inputs are set using the elements of index 0.

The default value is no change.

U16 State (0: no change)

Selects measurement ON/OFF.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

U16 Coupling (0: no change)

Selects the input coupling.
You can select which component of the input signal is to be acquired.
0: no change
1: AC: Acquire only the AC component of the input signal. The lower limit of the input frequency is approximately 10 Hz.
2: DC: Acquires all the components (DC and AC) of the input signal.

The default value is 0 (no change).

U16 Slope (0: no change)

Selects the slope.
0: no change
1: Rise
2: Fall
3: Both

The default value is 0 (no change).

DBL Level (0V)

Specifies the Input Threshold Level.
Specify the threshold level used to detect the point of change (rising or falling edge, for example) of the input signal.
This value is valid when Slope is not set to 0 (no change).
The selectable range is –20.0 V to 20.0 V (in 0.1 V steps).

The default value is 0.0 V.

U16 Filter (0: no change)

Selects the input filter.
You can set a low–pass filter used to eliminate high–frequency noise from the input signal.
0: no change
1: Off
2: 1 kHz
3: 10 kHz
4: 100 kHz

The default value is 0 (no change).

U16 Hysteresis (0: no change)

Selects the hysteresis width.
By default, the hysteresis width is set to NORMAL (approximately 0.8 Vpp) as a measure against noise during the detection of the point of change of the input signal. If you select the On, the hysteresis width is set to WIDE (approximately 2.5 Vpp).
0: no change
1: Off (NORMAL)
2: On (WIDE)

The default value is 0 (no change).

U16 Hysteresis (0: no change)

Selects the hysteresis direction.
0: no change
1: Upper
2: Center
3: Lower

The default value is 0 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

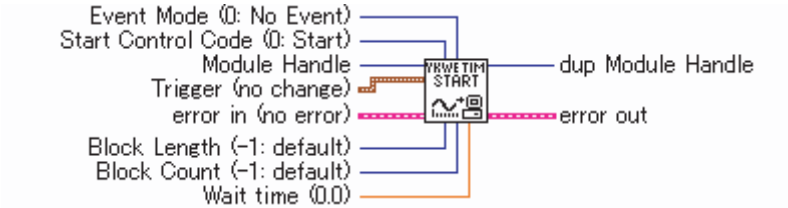
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE TIM Start.vi

This VI starts the timing measurement module operation.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Trigger (no change)

Specifies the trigger settings in a cluster.

The default value is no change.

U16 Source (0: no change)

Selects the trigger source.
0: no change
1: Input
2: Measure
3: BUSTRG

The default value is 0 (no change).

U16 Source Number (0: no change)

Selects the target input when the input signal is used as a trigger source.
This value is valid when the Source is set to Input or Measure.
The selectable range is 1 to 32.
0 indicates no change.

The default value is 0 (no change).

U16 Slope (0: no change)

Selects the trigger slope.
High and Low is valid when the acquisition mode is set to Gate (Level).
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low

The default value is 0 (no change).

U16 Type (0: no change)

Selects the trigger type.
When the measurement function is Totalize or Totalize (Gate): >= (greater than or equal to the threshold level) or == (equal to the threshold level)
UpDown1, UpDpwn2 or UpDown4: >= (greater than or equal to the threshold level), == (equal to the threshold level), or <= (less than or equal to the threshold level)
Other: >= (greater than or equal to the threshold level) or <= (less than or equal to the threshold level)
0: no change
1: >=
2: ==
3: <=

The default value is 0 (no change).

DBL Threshold Level (0)

Specifies the threshold level.
Specify the threshold level of measured values used to detect the trigger. The trigger is detected on the edge of the signal. The selectable range is the measurement range of the corresponding measurement function.
Selectable Range
During measurement function is set to Period or Time Interval: 100 ns to 20 s
Totalize or Totalize(Gate): 0 to 536870911
UpDown1, UpDown2 or UpDown4: –268435456 to 268435455
Ratio × 1: 0 to 536780911
Ratio × 16: 0 to 33554431.9
Ratio × 128: 0 to 4194303.99
Ratio × 1024: 0 to 524287.999

The default value is 0.

U16 Condition (0: no change)

Selects the bus trigger detection.
0: no change
1: Enter (When the bus trigger signal changes from DISABLE to ENABLE)
2: Exit (When the bus trigger signal changes from ENABLE to DISABLE)
3: Both (When the bus trigger signal changes from DISABLE to ENABLE or from ENABLE to DISABLE)
4: True (While the bus trigger signal is ENABLE)
5: False (While the bus trigger signal is DISABLE)

The default value is 0 (no change).

I32 Pretrigger (-1: no change)

Specifies the pretrigger.
The measured values before the trigger point can be written to the acquisition memory.
Set how many points before the trigger point to begin writing values in the range, 0 to specified record length – 2.

The default value is –1 (no change).

U32 Hold Off (0: no change)

Specifies the hold off.
You can specify the trigger hold off period that is used to temporarily stop the detection of the next trigger once a trigger occurs. The range varies depending on the acquisition mode as follows:
Trigger mode: Record length to 1,048,576 (1M)
Gate (edge) mode: 1 to 1,048,576 (1M)

The default value is 0 (no change).

U16 Start Control Code (0: Start)

Selects the control code.
0: Start
1: Single Start
2: Start Event

The default value is 0 (Start).

I32 Block Length (-1: default)

Specifies the block length.
This value is valid when Start Control Code is set to Start or Start Event.

The default value is –1.
For a description of the selectable range, see the user's manual for the module.

I8 Block Count (-1: default)

Specifies the block count.
This value is valid when Start Control Code is set to Start or Start Event.
Specify the exponential part of the number of memory partitions (number of blocks) expressed as a power of 2.

The default value is –1.
For a description of the selectable range, see the user's manual for the module.

I16 Event Mode (0: No Event)

Selects the acquisition operation mode.
This value is valid when Start Control Code is set to Start Event.
0: No Event
1: Block Event
2: Stop Event

The default value is 0(No Event).

DBL Wait time (-1: default)

Specifies the wait time after the start operation.

The default value is –1 (default).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

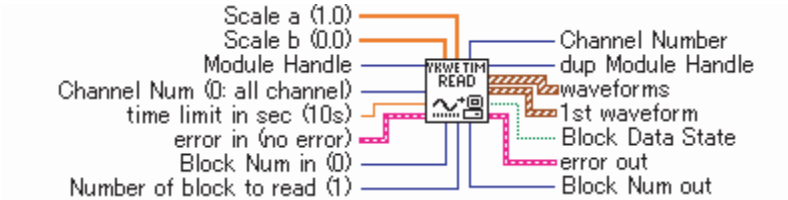
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE TIM Read Waveform.vi

This VI reads the block data from the specified input channel of timing measurement module.

YKWE TIM Read Waveform.vi is polymorphic and can be set to output the following types of data.
Waveform (multiple channels)
Scale Array (multiple channels)
Waveform (1 channel)
Scale Array (1 channel)

Waveform (multiple channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL time limit in sec (10s)

Specifies the time limit for the read operation.
The actual time limit is time limit in sec + sampling interval × record length.

The default value is 10 s.

[DBL] Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

[DBL] Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

waveforms

Indicates the scaled data as an array of channels and blocks.
t0 indicates 0.
Y indicates the array of measured data.

1st waveform

Indicates the scaled data of the first block of the scaled data as an array of channels.
t0 indicates 0.
Y indicates the array of measured data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Channel Number

Indicates the number of channels of the loaded data.

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

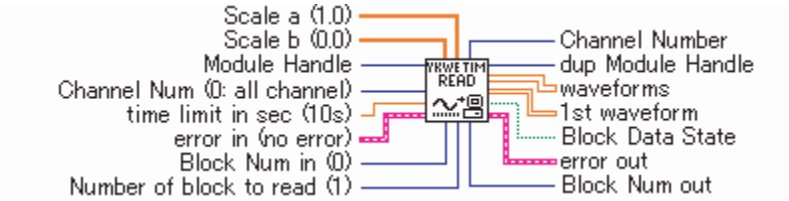
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale Array (multiple channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL time limit in sec (10s)

Specifies the time limit for the read operation.
The actual time limit is time limit in sec + sampling interval × record length.

The default value is 10 s.

[DBL] Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

[DBL] Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

waveforms

Indicates the scaled data as an array of channels and blocks.

1st waveform

Indicates the scaled data of the first block of the scaled data as an array of channels.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Channel Number

Indicates the number of channels of the loaded data.

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

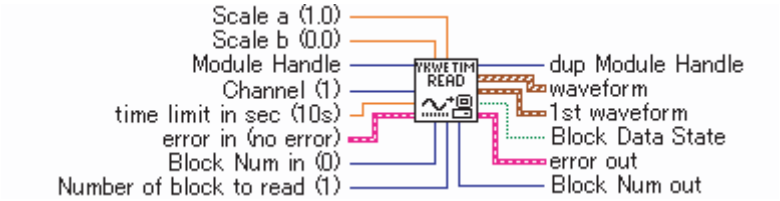
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform (1 channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL time limit in sec (10s)

Specifies the time limit for the read operation.
The actual time limit is time limit in sec + sampling interval × record length.

The default value is 10 s.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

waveform

Indicates the scaled data as an array.
t0 indicates 0.
Y indicates the array of measured data.

1st waveform

Indicates the scaled data.
t0 indicates 0.
Y indicates the array of measured data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

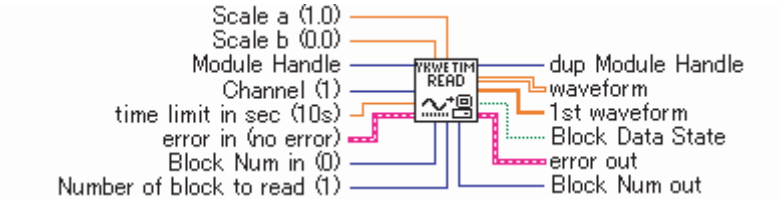
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale Array (1 channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL time limit in sec (10s)

Specifies the time limit for the read operation.
The actual time limit is time limit in sec + sampling interval × record length.

The default value is 10 s.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

waveform

Indicates the scaled data of the specified channel as an array of blocks.

1st waveform

Indicates the scaled data of the first block of the scaled data as an array.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

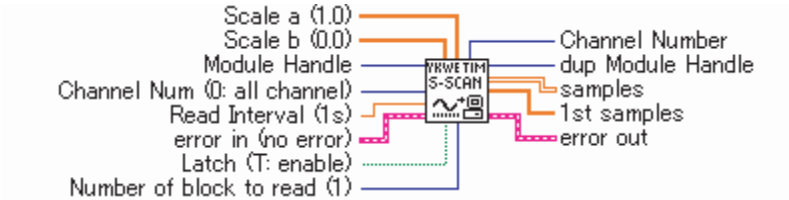
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE TIM Single Scan.vi

This VI reads the current data from the specified input channel of the timing measurement module.

YKWE TIM Single Scan.vi is polymorphic and can be set to output the following types of data.
Scale Array (multiple channels)
Waveform (multiple channels)
Scale Array (1 channel)
Waveform (1 channel)

Scale Array (multiple channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

[DBL] Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

[DBL] Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data as an array of channels and blocks.

1st samples

Indicates the scaled data of the first block of the scaled data as an array of channels.

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

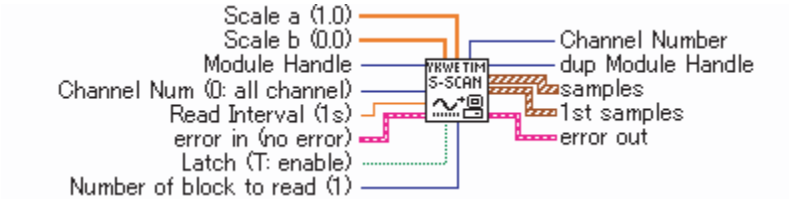
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform (multiple channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

[DBL] Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

[DBL] Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data as an array of channels and blocks.
t0 indicates 0.
Y indicates the array of measured data.

1st samples

Indicates the scaled data of the first block of the scaled data as an array of channels.
t0 indicates 0.
Y indicates the array of measured data.

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

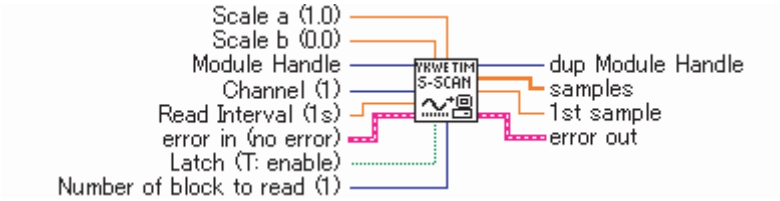
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale Array (1 channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data of the specified channel as an array of blocks.

1st sample

Indicates the scaled data of the first block of the scaled data of the specified channel.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

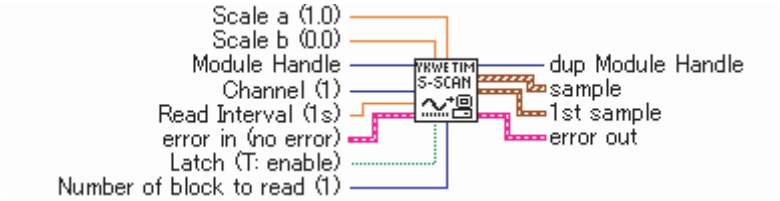
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform (1 channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data as an array of blocks.
t0 indicates 0.
Y indicates the array of measured data.

1st sample

Indicates the scaled data of the first block of the scaled data.
t0 indicates 0.
Y indicates the array of measured data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

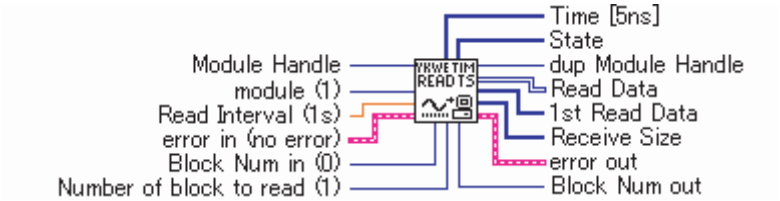
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE TIM Read Time Stamp.vi

This VI reads the time stamp data from the specifies input channel of the timing measurement module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

I16 module (1)

Specifies the number of the module to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

I32 Number of block to read (1)

Specifies the number of blocks of data to be read.

The default value is 1.

DBL Read Interval (1s)

Specifies the read interval.
The resolution is 0.001 s.

The default value is 1 s.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Read Data

Indicates the read data as an array. (32 bit data)

1st Read Data

Indicates the read data of the first block of read data. (32 bit data)

Time [5ns]

Indicates the time data of the first block of the time data as an array. (data of 5 ns unit)

State

Indicates the read data of the first block of the read data as an array of channel change information.

Receive Size

Indicates the size of read data as an array.

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE TIM Clear.vi

This VI Stops the timing measurement module operation.

Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Stop Control Code (1: Stop)

Selects the control code.
0: Stop Event
1: Stop

The default value is 1 (Stop).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

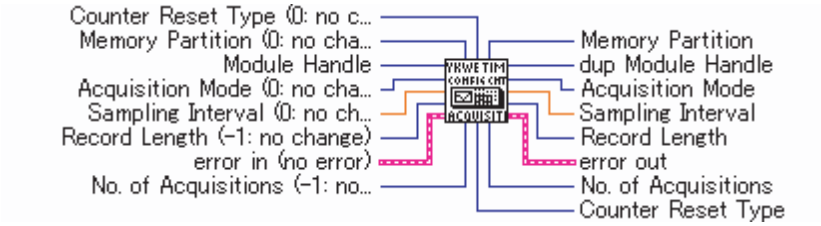
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE TIM Config Acquisition Counter.vi

This VI configures the counter operation of the timing measurement module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Acquisition Mode (0: no change)

Selects the acquisition mode from the following.
0: no change
1: Triggered
2: Free Run
3: Gate (Level)
4: Gate (Edge)

The default value is 0 (no change).

DBL Sampling Interval (0: no change)

Specifies the sampling interval.
This is the interval at which the measured values are written to the acquisition memory when the time base is set to “Internal.” The selectable range varies depending on the acquisition mode.
Selectable range
During trigger/gate mode: 2 μ to10 s (1 μs steps).
During free run mode: The selectable range is 1 ms to 10 s (1 μs steps).

The default value is 0 (no change).

I32 Record Length (-1: no change)

Specifies the record length.
When the acquisition mode is set to trigger or gate (level), you can partition the memory and specify the number of points of measured values to be written to one block of the acquisition memory. Note that for the following selectable ranges, a limit as defined by sampling interval × record length ±5 ms exists.

- During trigger mode
  The selectable range is 2 to 1,048,576 (1M)/the number of memory partitions. The record length is set to maximum record length/the number of memory partitions when 0 is specified.
- During gate (level) mode
  The selectable range is 2 to 1,048,576 (1M)/the number of memory partitions. The record length is set to the maximum record length when 0 is specified. In this case, the memory is partitioned according to the satisfied and unsatisfied conditions of the trigger.
  The maximum number of memory blocks that can be created in this way is 256.

The default value is 0 (no change).

U16 Memory Partition (0: no change)

Selects the number of memory partition.
During the trigger mode, you can divide the acquisition memory into multiple blocks and write the values to the memory blocks in order every time the trigger occurs.
0: no change
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256

The default value is 0 (no change).

I32 No. of Acquisitions (-1: no change)

Specifies the number of acquisition.
When the acquisition mode is set to Triggerd or Gate (Level/Edge) you can partition the memory and specify the number of acquisitions to be carried out. The range is 1 to 65,535 times. However, the operation varies depending on the acquisition mode.

- When in trigger mode
  You can only specify 1 for the number of acquisitions, if the number of memory partitions is set to 1.
- When in gate (level) mode
  If the record length is greater than or equal to half the maximum record length, you can only specify 1 for the number of acquisitions.

The default value is –1 (no change).

U16 Counter Reset Type (0: no change)

Selects the counter reset type.
You can select the timing when the counter for totalize count and up and down count is reset.
0: no change
1: Auto: Resets the counter when starting measurements. When modules are linked, the counter is reset on all channels.
2: Manual: Does not reset the counter when starting measurements. You can reset the counter at an arbitrary time.

The default value is 0 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Acquisition Mode

Indicates the specified acquisition mode.
1: Triggered
2: Free Run
3: Gate (Level)
4: Gate (Edge)

Sampling Interval

Indicates the specified sampling interval.

Record Length

Indicates the specified record length.

Memory Partition

Indicates the specified number of memory partition.
1: 1
2: 2
3: 4
4: 8
5: 16
6: 32
7: 64
8: 128
9: 256

No. of Acquisitions

Indicates the specified number of acquisition.

Counter Reset Type

Indicates the specified counter reset type.
1: Auto
2: Manual

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

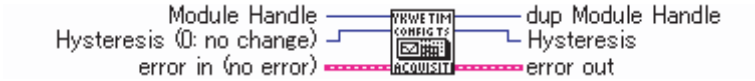
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE TIM Config Acquisition TS.vi

This VI configures the time stamp operation of the timing measurement module.



Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Hysteresis (0: no change)

Selects the hysteresis direction.
0: no change
1: Upper
2: Center
3: Lower

The default value is 0 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Hysteresis

Indicates the specified hysteresis direction.
1: Upper
2: Center
3: Lower

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

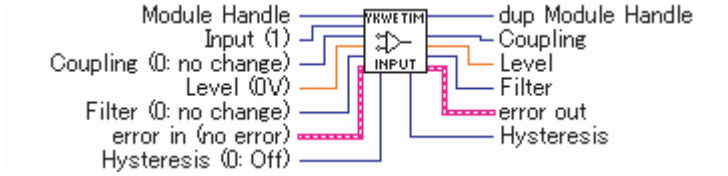
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE TIM Config Input.vi

This VI configures the specified input operation of the timing measurement module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Input (1)

Specified the number of input.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

U16 Coupling (0: no change)

Selects the input coupling.
You can select which component of the input signal is to be acquired.
0: no change
1: AC: Acquire only the AC component of the input signal. The lower limit of the input frequency is approximately 10 Hz.
2: DC: Acquires all the components (DC and AC) of the input signal.

The default value is 0 (no change).

DBL Level (0V)

Specifies the Input Threshold Level.
Specify the threshold level used to detect the point of change (rising or falling edge, for example) of the input signal.
The selectable range is –20.0 V to 20.0 V (in 0.1 V steps).

The default value is 0.0 V.

U16 Filter (0: no change)

Selects the input filter.
You can set a low–pass filter used to eliminate high–frequency noise from the input signal.
0: no change
1: Off
2: 1 kHz
3: 10 kHz
4: 100 kHz

The default value is 0 (no change).

Hysteresis (0: no change)

Selects the hysteresis width.
By default, the hysteresis width is set to NORMAL (approximately 0.8 Vpp) as a measure against noise during the detection of the point of change of the input signal. If you select the On, the hysteresis width is set to WIDE (approximately 2.5 Vpp).
0: no change
1: Off (NORMAL)
2: On (WIDE)

The default value is 0 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Coupling

Indicates the specified input coupling.
1: AC
2: DC

Level

Indicates the specified input threshold level.

Filter

Indicates the specified input filter.
1: Off
2: 1 kHz
3: 10 kHz
4: 100 kHz

Hysteresis

Indicates the specified hysteresis width.
1: Off (NORMAL)
2: On (WIDE)

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

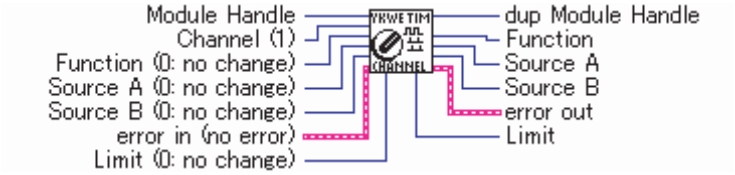
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE TIM Config Channel.vi

This VI configures the input channels settings of the timing measurement module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

U16 Function (0: no change)

Selects the measurement function.
0: no change
1: Off
2: Period
3: Time Interval
4: Totalize
5: Totalize (Gate)
6: UpDown1
7: UpDown2
8: UpDown4
9: Ratio × 1
10: Ratio × 16
11: Ratio × 128
12: Ratio × 1024
13: Frequency

The default value is 0 (no change).

U16 Source A (0: no change)

Selects Source A.
Select the input (IN1 to IN4) to be measured or to be used as a gate and the slope (Rise or Fall) for detecting the point of change of the input signal according to the measurement function. However, for up and down count, select the combination of the input to be measured through Source A and the input used to reset the counter through Source B.
0: no change
1: IN1_Rise
2: IN1_Fall
3: IN2_Rise
4: IN2_Fall
5: IN3_Rise
6: IN3_Fall
7: IN4_Rise
8: IN4_Fall
9: IN1-IN2
10: IN3-IN4

The default value is 0 (no change).

U16 Source B (0: no change)

Selects Source B.
Select the input (IN1 to IN4) to be measured or to be used as a gate and the slope (Rise or Fall) for detecting the point of change of the input signal according to the measurement function. However, for up and down count, select the combination of the input to be measured through Source A and the input used to reset the counter through Source B.
0: no change
1: IN1_Rise
2: IN1_Fall
3: IN2_Rise
4: IN2_Fall
5: IN3_Rise
6: IN3_Fall
7: IN4_Rise
8: IN4_Fall
9: IN1
10: IN2
11: IN3
12: IN4
13: Off

The default value is 0 (no change).

U16 Limit (0: no change)

Selects the Period Stop Determination Function.
To enable the period stop determination on each channel, select ON. When enabled, if a signal is not detected within the specified timeout time, the measured data is set to invalid value. If the period stop determination function is OFF, the measured data is set to invalid value when the measurement period is 20 s or more (0.5 Hz or less in terms of the frequency).
This function is valid only when the measurement function of the target channel is set to Period, TI, or Frequency.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Function

Indicates the specified measurement function.
1: Off
2: Period
3: Time Interval
4: Totalize
5: Totalize (Gate)
6: UpDown1
7: UpDown2
8: UpDown4
9: Ratio × 1
10: Ratio × 16
11: Ratio × 128
12: Ratio × 1024
13: Frequency

Source A

Indicates the specified source A.
1: IN1_Rise
2: IN1_Fall
3: IN2_Rise
4: IN2_Fall
5: IN3_Rise
6: IN3_Fall
7: IN4_Rise
8: IN4_Fall
9: IN1-IN2
10: IN3-IN4

Source B

Indicates the specified source B.
1: IN1_Rise
2: IN1_Fall
3: IN2_Rise
4: IN2_Fall
5: IN3_Rise
6: IN3_Fall
7: IN4_Rise
8: IN4_Fall
9: IN1
10: IN2
11: IN3
12: IN4
13: Off

Limit

Indicates the specified the Period Stop Determination Function.
1: OFF
2: ON

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

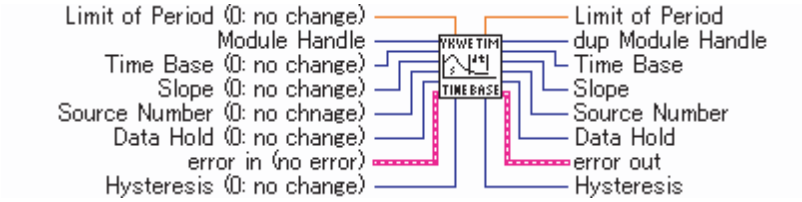
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE TIM Config Time Base.vi

This VI configures the time base of counter operation of the timing measurement module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Time Base (0: no change)

Selects the time base.
0: no change
1: Internal (Internal clock)
2: Input (Specified input signal)
You need to select the target input using the Source number, and the edge, rising or falling, of the input signal used to sample the measured values using the Slope.
3: BUSCLK (Input signal (CMNCLK) according to the time base source.)

The default value is 0 (no change).

U16 Slope (0: no change)

Selects the slope of clock.
0: no change
1: Rise
2: Fall

The default value is 0 (no change).

U16 Source Number (0: no change)

Selects the target input when the input signal is used as a trigger source.
This value is valid when the Time Base is set to Input.
The selectable range is 1 to 32.
0 indicates no change.

The default value is 0 (no change).

U16 Data Hold (0: no change)

Selects the data hold.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

Hysteresis (0: no change)

Selects the hysteresis direction.
0: no change
1: Upper
2: Center
3: Lower

The default value is 0 (no change).

Limit of Period (0: no change)

Selects the timeout time (limit of period).
Sets the timeout time for determining period stop. If a signal is not detected within the specified timeout time, the measured data is set to invalid value. The selectable range of timeout time varies depending on the selected measurement function.

- When the measurement function is not set to Frequency
  Selectable range: 10 ms to 20 s (10 ms resolution)
- When the measurement function of any channel is set to Frequency
  Period value*: 0.01 s, 0.02 s, 0.04 s, 0.08 s, 0.17 s, 0.34 s, 0.67 s, 1.34 s, 2.68 s, 5.37 s, 10.74 s

The default value is 0 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Time Base

Indicates the specified time base.
1: Interna
2: Input
3: BUSCLK

Slope

Indicates the specified slope of clock.
1: Rise
2: Fall

Source Number

Indicates the target input.

Data Hold

Indicates the specified data hold.
1: OFF
2: ON

Hysteresis

Indicates the hysteresis direction.
1: Upper
2: Center
3: Lower

Limit of Period

Indicates the specified timeout time.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

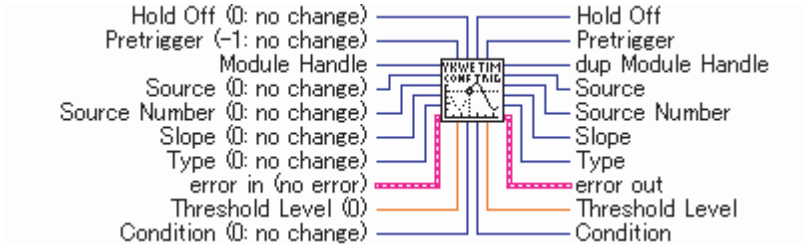
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE TIM Config Trigger.vi

This VI configures the trigger of counter operation of the timing measurement module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Source (0: no change)

Selects the trigger source.
0: no change
1: Input
2: Measure
3: BUSTRG

The default value is 0 (no change).

U16 Source Number (0: no change)

Selects the target input when the input signal is used as a trigger source.
This value is valid when the Source is set to Input or Measure.
The selectable range is 1 to 32.
0 indicates no change.

The default value is 0 (no change).

U16 Slope (0: no change)

Selects the trigger slope.
High and Low is valid when the acquisition mode is set to Gate (Level).
0: no change
1: Rise
2: Fall
3: Both
4: High
5: Low

The default value is 0 (no change).

U16 Type (0: no change)

Selects the trigger type.
When the measurement function is Totalize or Totalize (Gate): >= (greater than or equal to the threshold level) or == (equal to the threshold level)
UpDown1, UpDpwn2 or UpDown4: >= (greater than or equal to the threshold level), == (equal to the threshold level), or <= (less than or equal to the threshold level)
Other: >= (greater than or equal to the threshold level) or <= (less than or equal to the threshold level)
0: no change
1: >=
2: ==
3: <=

The default value is 0 (no change).

DBL Threshold Level (0)

Specifies the threshold level.
Specify the threshold level of measured values used to detect the trigger. The trigger is detected on the edge of the signal. The selectable range is the measurement range of the corresponding measurement function.
Selectable Range
During measurement function is set to Period or Time Interval: 100 ns to 20 s
Totalize or Totalize(Gate): 0 to 536870911
UpDown1, UpDown2 or UpDown4: –268435456 to 268435455
Ratio × 1: 0 to 536780911
Ratio × 16: 0 to 33554431.9
Ratio × 128: 0 to 4194303.99
Ratio × 1024: 0 to 524287.999

The default value is 0.

U16 Condition (0: no change)

Selects the bus trigger detection.
0: no change
1: Enter (When the bus trigger signal changes from DISABLE to ENABLE)
2: Exit (When the bus trigger signal changes from ENABLE to DISABLE)
3: Both (When the bus trigger signal changes from DISABLE to ENABLE or from ENABLE to DISABLE)
4: True (While the bus trigger signal is ENABLE)
5: False (While the bus trigger signal is DISABLE)

The default value is 0 (no change).

I32 Pretrigger (-1: no change)

Specifies the pretrigger.
The measured values before the trigger point can be written to the acquisition memory.
Set how many points before the trigger point to begin writing values in the range, 0 to specified record length – 2.

The default value is –1 (no change).

Hold Off (0: no change)

Specifies the hold off.
You can specify the trigger hold off period that is used to temporarily stop the detection of the next trigger once a trigger occurs. The range varies depending on the acquisition mode as follows:
Trigger mode: Record length to 1,048,576 (1M)
Gate (edge) mode: 1 to 1,048,576 (1M)

The default value is 0 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Source

Indicates the specified trigger source.
1: Input
2: Measure
3: BUSTRG

Source Number

Indicates the specified target input.

Slope

Indicates the specified trigger slope.
1: Rise
2: Fall
3: Both
4: High
5: Low

Type

Indicates the specified trigger type.

1: >=

2: ==

3: <=

Threshold Level

Indicates the specified threshold level.

Condition

Indicates the specified bus trigger detection.

1: Enter

2: Exit

3: Both

4: True

5: False

Pretrigger

Indicates the specified pretrigger.

Hold Off

Indicates the specified hold off.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

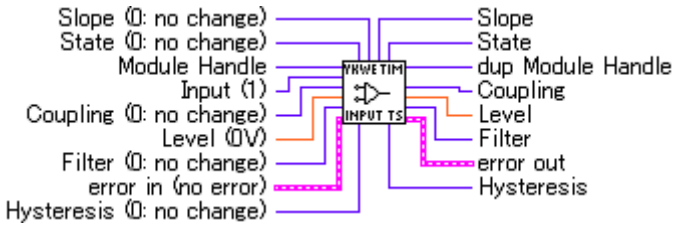
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE TIM Config TS.vi

This VI configures the time stamp operation of the timing measurement module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Input (1)

Specified the number of input.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

U16 State (0: no change)

Selects measurement ON/OFF.
0: no change
1: OFF
2: ON

The default value is 0 (no change).

U16 Coupling (0: no change)

Selects the input coupling.
You can select which component of the input signal is to be acquired.
0: no change
1: AC: Acquire only the AC component of the input signal. The lower limit of the input frequency is approximately 10 Hz.
2: DC: Acquires all the components (DC and AC) of the input signal.

The default value is 0 (no change).

U16 Slope (0: no change)

Selects the slope.
0: no change
1: Rise
2: Fall
3: Both

The default value is 0 (no change).

Level (0V)

Specifies the Input Threshold Level.
Specify the threshold level used to detect the point of change (rising or falling edge, for example) of the input signal.
This value is valid when Slope is not set to 0 (no change).
The selectable range is –20.0 V to 20.0 V (in 0.1 V steps).

The default value is 0.0 V.

Filter (0: no change)

Selects the input filter.
You can set a low–pass filter used to eliminate high–frequency noise from the input signal.
0: no change
1: Off
2: 1 kHz
3: 10 kHz
4: 100 kHz

The default value is 0 (no change).

Hysteresis (0: no change)

Selects the hysteresis width.
By default, the hysteresis width is set to NORMAL (approximately 0.8 Vpp) as a measure against noise during the detection of the point of change of the input signal. If you select the On, the hysteresis width is set to WIDE (approximately 2.5 Vpp).
0: no change
1: Off (NORMAL)
2: On (WIDE)

The default value is 0 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

State

Indicates the specified measurement ON/OFF.
1: OFF
2: ON

Coupling

Indicates the specified input coupling.
1: AC
2: DC

Slope

Indicates the specified slope.
1: Rise
2: Fall
3: Both

Level

Indicates the specified input threshold level.

Filter

Indicates the specified input filter.
1: Off
2: 1 kHz
3: 10 kHz
4: 100 kHz

Hysteresis

Indicates the specified hysteresis width.
1: Off (NORMAL)
2: On (WIDE)

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

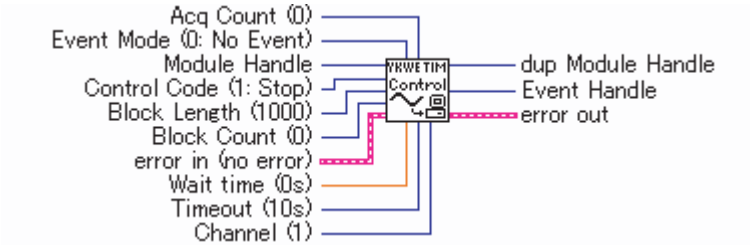
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE TIM Control.vi

This VI controls the timing measurement module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

Control Code (1: Stop)

Selects the control code.
0: Start
1: Stop
2: Latch
3: Single Start
4: Start Event
5: Stop Event
6: Counter Reset

The default value is 1 (Stop).

I32 Block Length (1000)

Indicates the specified block length.
This value is valid when Control Code is set to Start, Single Start or Start Event.

The default value is 1000.
For a description of the selectable range, see the user's manual for the module.

U8 Block Count (0)

Specifies the block count.
This value is valid when Start Control Code is set to Start or Start Event.
Specify the exponential part of the number of memory partitions (number of blocks) expressed as a power of 2.

The default value is –1 (default).
For a description of the selectable range, see the user's manual for the module.

DBL Wait time (0.0)

Specifies the wait time after the start operation.

The default value is 0.0.

Event Mode (0: No Event)

Selects the acquisition operation mode.
This value is valid when Control Code is set to Start Event.
0: No Event
1: Block Event
2: Stop Event

The default value is 0 (No Event).

Acq Count (0)

Specifies the acquisition count.
This value is valid when Control Code is set to 4 (Start Event).
The data acquisition operation terminates after acquiring the data amount specified by this value. If the value 0 is specified, measurement continues until the user issues an abort command.

The default value is 0.

Timeout (10s)

Sets the timeout time of single start.
This value is valid when Control Code is set to 3 (Single Start).
The selectable range is 1 to 32767 s.

The default value is 10 s.

Channel (0: All Channel)

Specifies the channel of counter to be reset.
If the modules are linked, specify a serial number from the parent module.
This value is valid when Control Code is set to 6 (Counter Resett).

The default value is 0 (All Channel).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Event Handle

Indicates the event handle.
This value is valid when Control Code is set to 4 (Start Event).

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

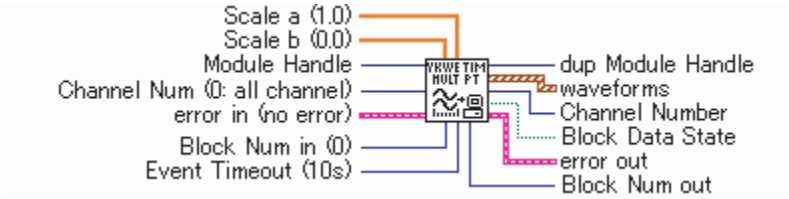
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE TIM Read Block Data.vi

This VI reads the block data from the specified input channel or plural input channels of timing measurement module.

YKWE TIM Read Block Data.vi is polymorphic and can be set to output the following types of data.
Waveform (multiple channels)
Scale Array (multiple channels)
Waveform (1 channel)
Scale Array (1 channel)

Waveform (multiple channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

I32 Event Timeout (10s)

Specifies the wait time until receiving an event in unit of ms.
This value is value when waiting for an event.

The default value is 10 s.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

waveforms

Indicates the scaled data as an array of channels.
t0 indicates 0.
Y indicates the array of measured data.

Channel Number

Indicates the number of channels of the loaded data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

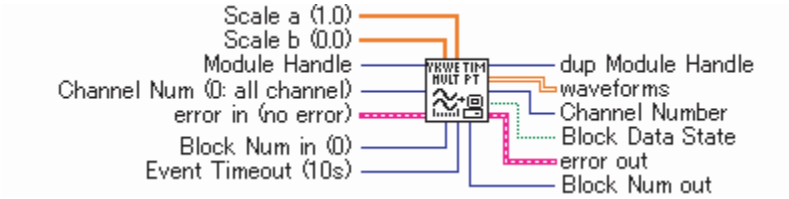
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale Array (multiple channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

I32 Event Timeout (10s)

Specifies the wait time until receiving an event in unit of ms.
This value is value when waiting for an event.

The default value is 10 s.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

waveforms

Indicates the scaled data as an array of channels.

Channel Number

Indicates the number of channels of the loaded data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

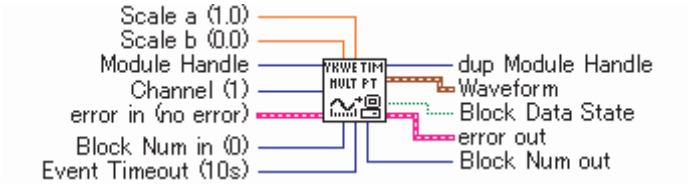
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform (1 channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

I32 Event Timeout (10s)

Specifies the wait time until receiving an event in unit of ms.
This value is value when waiting for an event.

The default value is 10 s.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Waveform

Indicates the scaled data.
t0 indicates 0.
Y indicates the array of measured data.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

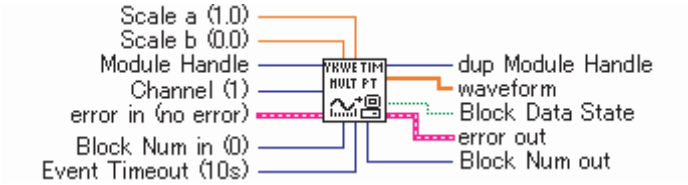
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale Array (1 channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

I32 Event Timeout (10s)

Specifies the wait time until receiving an event in unit of ms.
This value is value when waiting for an event.

The default value is 10 s.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

waveform

Indicates the scaled data of the specified channels.

Block Data State

Indicates the status of the measured data.
T: Invalid
F: Valid

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

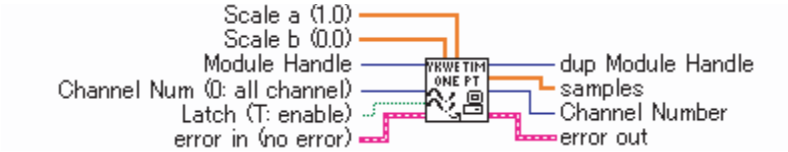
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE TIM Read Current Data.vi

This VI reads the current data of the timing measurement module.

YKWE TIM Read Current Data.vi is polymorphic and can be set to output the following types of data.
Scale Array (multiple channels)
Waveform (multiple channels)
Scale Array (1 channel)
Waveform (1 channel)

Scale Array (multiple channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data as an array of channels.

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

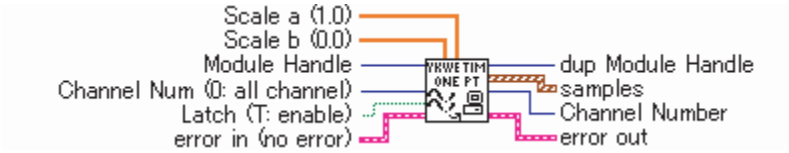
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform (multiple channels)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel Num (0: all channel)

Specifies the number of channels to be measured.
The value 0 indicates all channels.

The default value is 0.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data as an array of channels.
t0 indicates 0.
Y indicates the array of measured data.

Channel Number

Indicates the number of channels of the loaded data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

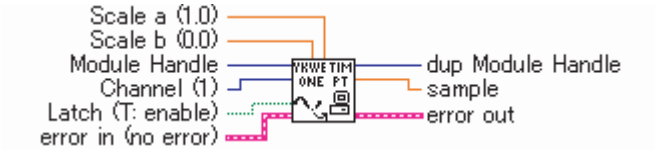
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Scale Array (1 channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

samples

Indicates the scaled data of the specified channel.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

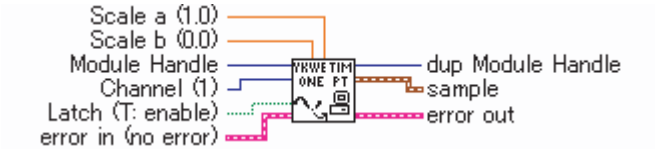
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Waveform (1 channel)



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

U16 Channel (1)

Specifies the number of the channel to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

DBL Scale a (1.0)

Specifies the scale value a (“a” of the scale conversion equation “ax+b”).

The default value is 1.0.

DBL Scale b (0.0)

Specifies the scale value b (“b” of the scale conversion equation “ax+b”).

The default value is 0.0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

sample

Indicates the scaled data.
t0 indicates 0.
Y indicates the array of measured data.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

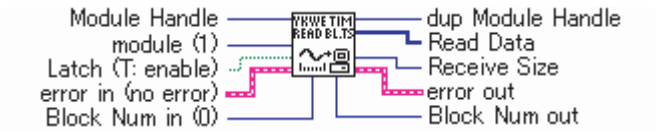
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE TIM Read Block Time Stamp.vi

This VI reads the time stamp data of the timing measurement module.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

I16 module (1)

Specifies the number of the module to be measured.
If the modules are linked, specify a serial number from the parent module.

The default value is 1.

I16 Block Num in (0)

Specifies the number of the block you wish to retrieve.

The default value is 0.

TF Latch (T: enable)

Selects the latch operation.
T: Enable
F: Disable

The default value is T (enable).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

Read Data

Indicates the read data as an array. (32 bit data)

Receive Size

Indicates the size of read data as an array.

Block Num out

Indicates the next number after the block number specified by Block Num in.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The status Boolean is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

6. Utility VIs

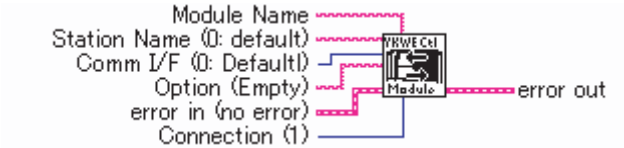
Utilities VIs allow you to select the communication method or set communication parameters according to the communication module that you are using. The VIs include tools for initializing the measuring station, tools for turning ON/OFF the standby power of the measuring station, and tools that deal with the setting and control of the entire measuring station.

Below are the Utility VIs.

YKWE Module Window.vi	Shows or hides the module operation panel (simple level).
YKWE Initialize.vi	Initialization.
YKWE Open Station.vi	Readies the station for use.
YKWE Power.vi	Turns ON/OFF the power to the station.
YKWE Open Module.vi	Readies the module for use.
YKWE Close Module.vi	Terminates the module usage.
YKWE Close Station.vi	Terminates the station usage.
YKWE Exit.vi	Termination.
YKWE Config Bus Ex.vi	Sets TRIG IN, EXT I/O, TRIG BUS, CLOCK BUS, ARMING BUS.
YKWE Config Packet.vi	Sets the packet function.
YKWE Config Module Bus Ex.vi	Sets the input/output of the trigger source, time base, and arming signals.
YKWE Get Station Handle.vi	Gets the station handle from the station name.
YKWE Show or Close Module Window.vi	Shows or hides the module operation panel.
YKWE Show or Close Trigger Window.vi	Shows or hides the trigger operation panel.
YKWE Module List.vi	Shows the module list of the station.
YKWE Manual Trig.vi	Generates a manual trigger.
YKWE Manual Arming.vi	Generate an arming signal.
YKWE Manual Trig Packet.vi	Issues a trigger packet.
YKWE Manual Clock Packet.vi	Issues a time base packet.
YKWE STATUS LED.vi	Sets the status LED.
YKWE DIO.vi	Sets the DIO.

YKWE Module Window.vi

This VI shows or hides the module window.



Station Name (0: default)

Specifies the name of the station to be opened.
To open all measuring stations in the network, specify BROADCAST.
To use the station that you used previously, specify 0.
If you specify blank, the first station that is found is specified.

The default value is 0.

Comm I/F (0: DefaultI)

Selects the type of communication interface between the PC and measuring station.
0: Default (interface that was used previously)
1: Optical
2: Serial
3: Ethernet
4: Ethernet95
5: USB

The default value is 0.

Option (Empty)

Specifies the communication interface options.
When using the optical interface card, specify the device name.
When using serial communications, specify the COM port and baud rate. Can be omitted.
When using the Ethernet module, specify the IP address, net mask, and port number. Can be omitted.

The default values is blank (no specification).
(option example)
WE7033/WE7034
devicename =we7034
WE7035/WE7036
devicename =we7036
COM = COM BAUDRATE = 9600
IP = 192.168.21.128 NETMASK = 255.255.255.0 PORTNO = 34191

For more details, see “Start Option” in the WE7000 PC-Based Measurement Instruments and WE7051 Ethernet Module/WE7052 Fast Ethernet Module (IM 707051-01E) User’s Manuals.

Module Name

Specifies the product name of the module [:number] or the slot number to be opened.
The number inside the brackets in the former method of specifying the module is a relative number (1 based) counted from the left. This number is necessary in distinguishing the same type of modules when multiple modules of the same type in the measuring station are operating in an unlinked condition (operating independently). This number can be omitted. If omitted, it is considered to be [:1].
To specify the WE7272 4-CH, 100 kS/s Isolated Digitizer Module , use “WE7271”.

The default value is blank.

Connection (1)

The number of modules you wish to link. Specify “1” if you are not linking the modules.

The default value is 1.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

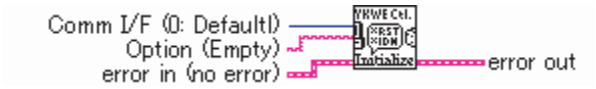
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE Initialize.vi

This VI performs initialization.
This VI must be run first when using the WE7000 from an application program.



U16 Comm I/F (0: DefaultI)

Selects the type of communication interface between the PC and measuring station.
0: Default (interface that was used previously)
1: Optical
2: Serial
3: Ethernet
4: Ethernet95
5: USB

The default value is 0.

abc Option (Empty)

Specifies the communication interface options.
When using the optical interface card, specify the device name.
When using serial communications, specify the COM port and baud rate. Can be omitted.
When using the Ethernet module, specify the IP address, net mask, and port number. Can be omitted.

The default values is blank (no specification).
(option example)
WE7033/WE7034
devicename =we7034
WE7035/WE7036
devicename =we7036
COM = COM BAUDRATE = 9600
IP = 192.168.21.128 NETMASK = 255.255.255.0 PORTNO = 34191

For more details, see “Start Option” in the WE7000 PC-Based Measurement Instruments and WE7051 Ethernet Module/WE7052 Fast Ethernet Module (IM 707051-01E) User’s Manuals.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

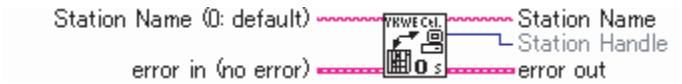
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE Open Station.vi

This VI gets the station handle.
This VI must be run before using various VIs for the station.



Station Name (0: default)

Specifies the name of the station to be opened.
To open all measuring stations in the network, specify BROADCAST.
To use the station that you used previously, specify 0.
If you specify blank, the first station that is found is specified.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Station Name

Indicates the name of the station that was opened.
Nothing is indicated if the station could not be opened.

Station Handle

Indicates the station handle that was opened.
Indicates 0 if the station could not be opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

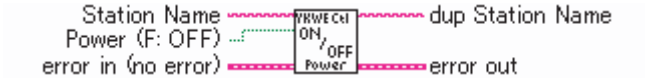
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE Power.vi

This VI turns ON/OFF the standby power to the station.

YKWE Power.vi is polymorphic, and the following types of input can be specified.
Character input (station name)
Numeric input (station handle)

Character Input (Station Name)



Station Name

Specifies the name of the station of which the standby power is turned ON/OFF.
If you specify blank, the first station that is found is specified.

The default value is blank.

Power (F: OFF)

Selects ON/OFF of the standby power of the measuring station.
T: ON
F: OFF

The default value is T (ON).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Station Name

Copy of the station name.
If you specify blank for Station Name, the first station that is found is specified.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

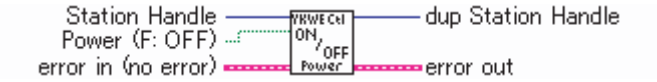
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Numeric Input (Station Handle)



Station Handle

Specifies the handle of the station of which the standby power is turned ON/OFF.

The default value is 0.

Power (F: OFF)

Selects ON/OFF of the standby power of the measuring station.
T: ON
F: OFF

The default value is T (ON).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Station Handle

Copy of the station handle.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE Open Module.vi

This VI gets the module handle.
This VI must be run before using various VIs for the module.

YKWE Open Module.vi is polymorphic, and the following types of input can be specified.
Character input (station name), 1 module
Character input (station name), multiple modules
Numeric input (station handle), 1 module
Numeric input (station handle), multiple modules

Character Input (Station Name), 1 Module

Station Name

Specifies the name of the station containing the module to be opened.
If you specify blank, the first station that is found is specified.

The default value is blank.

Module Name

Specifies the module product name [:number] or the slot number to be opened.
The number inside the brackets in the former method of specifying the module is a relative number (1 based) counted from the left. This number is necessary in distinguishing the same type of modules when multiple modules of the same type in the measuring station are operating in an unlinked condition (operating independently). This number can be omitted. If omitted, it is considered to be [:1].
To specify the WE7272 4-CH, 100 kS/s Isolated Digitizer Module , use “WE7271”.

The default value is blank.

Connection (1)

The number of modules you wish to link. Specify “1” if you are not linking the modules.

The default value is 1.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Station Name

Copy of the station name.
If you specify blank for Station Name, the first station that is found is specified.

Module Handle

Indicates the handle of the module that was opened.
Indicates 0 if the module could not be opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

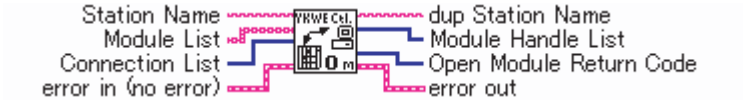
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Character Input (Station Name), Multiple Modules



Station Name

Specifies the name of the station containing the module to be opened.
If you specify blank, the first station that is found is specified.

The default value is blank.

Module List

Specifies the module product names [:number] or the slot numbers to be opened in an array.
The number inside the brackets in the former method of specifying the module is a relative number (1 based) counted from the left. This number is necessary in distinguishing the same type of modules when multiple modules of the same type in the measuring station are operating in an unlinked condition (operating independently). This number can be omitted. If omitted, it is considered to be [:1].
To specify the WE7272 4-CH, 100 kS/s Isolated Digitizer Module , use “WE7271”.

The default value is an array of blanks.

Connection

Specifies the number of modules you wish to link in an array. Specify “1” if you are not linking the modules.

The default value is an array of blanks.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Station Name

Copy of the station name.
If you specify blank for Station Name, the first station that is found is specified.

Module Handle List

Indicates the handles of the modules that were opened in an array.
Indicates 0 if the modules could not be opened.

Open Module Return Code

Indicates the return values of the opened modules in an array.
Returns 0 if successful. Returns an error code if unsuccessful.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Numeric Input (Station Handle), 1 Module

Station Handle

Specifies the handle of the station containing the module to be opened.

The default value is 0.

Module Name

Specifies the module product name [:number] or the slot number to be opened.
The number inside the brackets in the former method of specifying the module is a relative number (1 based) counted from the left. This number is necessary in distinguishing the same type of modules when multiple modules of the same type in the measuring station are operating in an unlinked condition (operating independently). This number can be omitted. If omitted, it is considered to be [:1].
To specify the WE7272 4-CH, 100 kS/s Isolated Digitizer Module , use “WE7271”.

The default value is blank.

Connection (1)

The number of modules you wish to link. Specify “1” if you are not linking the modules.

The default value is 1.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Station Handle

Copy of the station name.

Module Handle

Indicates the handle of the module that was opened.
Indicates 0 if the modules could not be opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

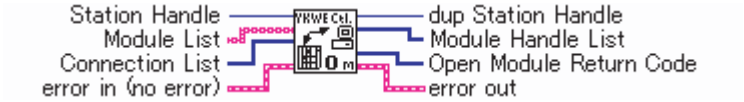
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Numeric Input (Station Handle), Multiple Modules



Station Handle

Specifies the handle of the station containing the module to be opened.

The default value is 0.

Module List

Specifies the module product names [:number] or the slot numbers to be opened in an array.
The number inside the brackets in the former method of specifying the module is a relative number (1 based) counted from the left. This number is necessary in distinguishing the same type of modules when multiple modules of the same type in the measuring station are operating in an unlinked condition (operating independently). This number can be omitted. If omitted, it is considered to be [:1].
To specify the WE7272 4-CH, 100 kS/s Isolated Digitizer Module , use “WE7271”.

The default value is an array of blanks.

Connection List

Specifies the number of modules you wish to link in an array. Specify “1” if you are not linking the modules.

The default value is an array of blanks.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Station Handle

Copy of the station name.

Module Handle List

Indicates the handles of the modules that were opened in an array.
Indicates 0 if the modules could not be opened.

Open Module Return Code

Indicates the return values of the opened modules in an array.
Returns 0 if successful. Returns an error code if unsuccessful.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

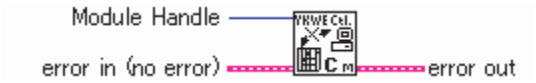
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE Close Module.vi

This VI releases the module handle.

YKWE Close Module.vi is polymorphic, and the following types of input can be specified.
1 module
Multiple modules (array)

1 module



Module Handle

Specifies the handle of the module to be released.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

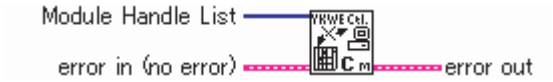
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Multiple Modules (Array)



Module Handle List

Specifies the handles of the modules to be released in an array.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE Close Station.vi

This VI releases the station handle.

YKWE Close Station.vi is polymorphic, and the following types of input can be specified.
Character input (station name)
Numeric input (station handle)

Character Input (Station Name)

Station Name

Specifies the name of the station to be released.
If you specify blank, the first station that is found is specified.

The default value is blank.

Power (F: OFF)

Selects ON/OFF of the standby power of the measuring station before releasing the handle.
T: ON
F: OFF

The default value is F (OFF).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

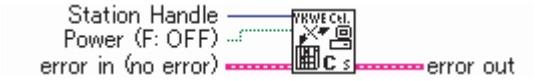
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Numeric Input (Station Handle)



Station Handle

Specifies the station handle to be released.

The default value is 0.

Power (F: OFF)

Selects ON/OFF of the standby power of the measuring station before releasing the handle.
T: ON
F: OFF

The default value is F (OFF).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE Exit.vi

This VI performs termination of communication drivers and the API execution environment.
Be sure to run this VI at the end of the application program.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

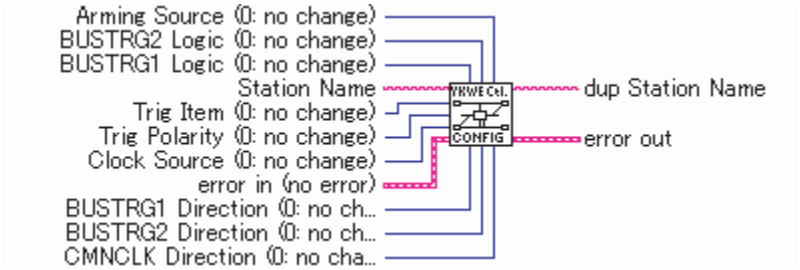
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE Config Bus Ex.vi

This VI configures the measuring station bus.
Signal lines (buses) are present in the measuring station for supporting module linking. They are the two trigger buses (BUSTRG1 and 2) for trigger linking and the clock bus (CMNCLK) for sharing the time base source (sampling clock).
On the front panel of the measuring station are external input/output connectors (TRIG IN and EXT. I/O) for applying external trigger signals and sampling clock. In addition, when communicating via the optical interface or Ethernet network, the packet trigger function used to pass trigger signals via communication packets can be used. Moreover, an arming function is available for synchronizing the start of measurements of modules in the measuring station. These functions also enable linking between measuring stations.

YKWE Config Bus Ex.vi is polymorphic, and the following types of input can be specified.
Character input (station name)
Numeric input (station handle)

Character Input (Station Name)



Station Name

Specifies the station name.
If you specify blank, the first station that is found is specified.

The default value is blank.

Trig Item (0: no change)

Selects the trigger input signal from the external trigger input terminal to the trigger bus.
0: no change
1: NONE (do not input to the trigger bus)
2: BUSTRG1 IN
3: BUSTRG2 IN
4: Both IN (Input to both BUSTRG1 and 2)
5: BUSTRG1 OUT
6: BUSTRG2 OUT
7: CMNCLK OUT

The default value is 0 (no change).

Note

5 to 7 is valid only when the measuring station is WE500 or WE900.

I8 Trig Polarity (0: no change)

Selects the polarity of the input signal of the external trigger input terminal.
0: no change
1: Positive (Input as-is)
2: Negative (Input after inversion)

The default value is 0 (no change).

I8 BUSTRG1 Direction (0: no change)

Selects input/output of the trigger input/output terminal 1.
0: no change
1: input (Set to input terminal. Input the external signal to BUSTRG1)
2: output (Set to output terminal. Output the trigger signal of BUSTRG1 externally)

The default value is 0 (no change).

I8 BUSTRG2 Direction (0: no change)

Selects input/output of the trigger input/output terminal 2.
0: no change
1: input (Set to input terminal. Input the external signal to BUSTRG2)
2: output (Set to output terminal. Output the trigger signal of BUSTRG2 externally)

The default value is 0 (no change).

I8 CMNCLK Direction (0: no change)

Selects input/output of the time base input/output terminal.
0: no change
1: output (Set to output terminal)
2: input (Set to input terminal)

The default value is 0 (output).

I8 BUSTRIG1 Logic (0: no change)

Sets the trigger bus for setting the trigger condition (AND/OR operation) of the trigger bus.
0: no change
1: OR
2: AND

The default value is 0 (no change).

I8 BUSTRIG2 Logic (0: no change)

Selects the trigger AND/OR condition of the trigger bus.
0: no change
1: OR
2: AND

The default value is 0 (no change).

Clock Source (0: change)

Sets the time base source that is output to the clock bus (CMNCLK).
0: no change
1: NONE (No source specified)
2: Input from the TRIG IN terminal
3: Time base input from EXT I/O
4: Time base output of the SLOT 0 module
5: Time base output of the SLOT 1 module
6: Time base output of the SLOT 2 module
7: Time base output of the SLOT 3 module
8: Time base output of the SLOT 4 module
9: Time base output of the SLOT 5 module
10: Time base output of the SLOT 6 module
11: Time base output of the SLOT 7 module
12: Time base output of the SLOT 8 module

The default value is 0 (no change).

Arming Source (0: no change)

Selects the arming signal source.
0: no change
1: NONE (do not select the arming source)
2: Set the BUSTRG1 signal the arming source
3: Set the BUSTRG2 signal the arming source

The default value is 0 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Station Name

Copy of the station name.
If you specify blank for Station Name, the first station that is found is specified.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

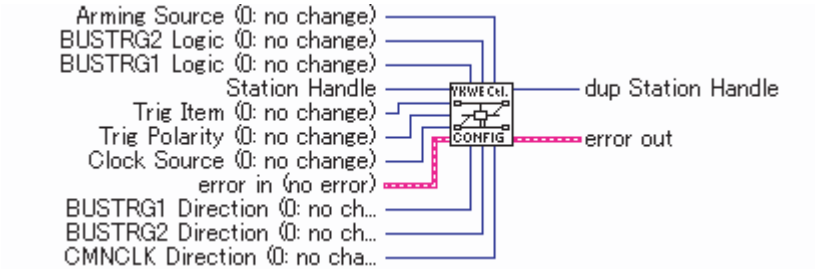
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Numeric Input (Station Handle)



I32 Station Handle

Specifies the station handle.

The default value is 0.

I8 Trig Item (0: no change)

Selects the trigger input signal from the external trigger input terminal to the trigger bus.
0: no change
1: NONE (do not input to the trigger bus)
2: BUSTRG1 IN
3: BUSTRG2 IN
4: Both IN (Input to both BUSTRG1 and 2)
5: BUSTRG1 OUT
6: BUSTRG2 OUT
7: CMNCLK OUT

The default value is 0 (no change).

Note

5 to 7 is valid only when the measuring station is WE500 or WE900.

I8 Trig Polarity (0: no change)

Selects the polarity of the input signal of the external trigger input terminal.
0: no change
1: Positive (Input as-is)
2: Negative (Input after inversion)

The default value is 0 (no change).

I8 BUSTRG1 Direction (0: no change)

Selects input/output of the trigger input/output terminal 1.
0: no change
1: input (Set to input terminal. Input the external signal to BUSTRG1)
2: output (Set to output terminal. Output the trigger signal of BUSTRG1 externally)

The default value is 0 (no change).

I8 BUSTRG2 Direction (0: no change)

Selects input/output of the trigger input/output terminal 2.
0: no change
1: input (Set to input terminal. Input the external signal to BUSTRG2)
2: output (Set to output terminal. Output the trigger signal of BUSTRG2 externally)

The default value is 0 (no change).

I8 CMNCLK Direction (0: no change)

Selects input/output of the time base input/output terminal.
0: no change
1: output (Set to output terminal)
2: input (Set to input terminal)

The default value is 0 (no change).

I8 BUSTRIG1 Logic (0: no change)

Sets the trigger bus for setting the trigger condition (AND/OR operation) of the trigger bus.
0: no change
1: OR
2: AND

The default value is 0 (no change).

I8 BUSTRIG2 Logic (0: no change)

Selects the trigger AND/OR condition of the trigger bus.
0: no change
1: OR
2: AND

The default value is 0 (no change).

I8 Clock Source (0: no change)

Sets the time base source that is output to the clock bus (CMNCLK).
0: no change
1: NONE (No source specified)
2: Input from the TRIG IN terminal
3: Time base input from EXT I/O
4: Time base output of the SLOT 0 module
5: Time base output of the SLOT 1 module
6: Time base output of the SLOT 2 module
7: Time base output of the SLOT 3 module
8: Time base output of the SLOT 4 module
9: Time base output of the SLOT 5 module
10: Time base output of the SLOT 6 module
11: Time base output of the SLOT 7 module
12: Time base output of the SLOT 8 module

The default value is 0 (no change).

I8 Arming Source (0: no change)

Selects the arming signal source.
0: no change
1: NONE (do not select the arming source)
2: Set the BUSTRG1 signal the arming source
3: Set the BUSTRG2 signal the arming source

The default value is 0 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Station Handle

Copy of the station handle.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE Config Packet.vi

This VI sets the trigger packet and clock packet.

YKWE Config Packet.vi is polymorphic, and the following types of input can be specified.
Character input (station name)
Numeric input (station handle)

Character Input (Station Name)

Station Name

Specifies the station name.
If you specify blank, the first station that is found is specified.

The default value is blank.

Rcv Trig Packet Station (Empty)

Specifies the stations receiving the trigger packets in an array of station names.
Up to 8 receiving stations can be specified.

The default value is an array of blanks.

Snd Trig Packet Station (Empty)

Specifies the source station of the trigger packets in an array of station names.
Up to 8 trigger packet source stations can be specified.

The default value is an array of blanks.

Rcv Clock Packet Station (Empty)

Specifies the stations receiving the time base packets in an array of station names.
Up to 8 receiving stations can be specified.

The default value is an array of blanks.

Snd Clock Packet Station (Empty)

Specifies the source station of the time base packets in an array of station names.
Up to 8 time base packet source stations can be specified.

The default value is an array of blanks.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Station Name

Copy of the station name.
If you specify blank for Station Name, the first station that is found is specified.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

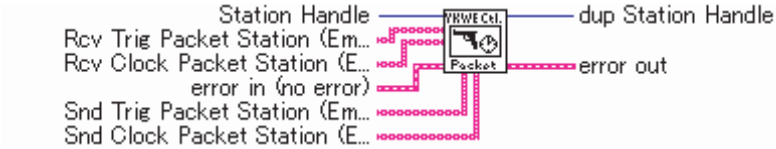
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Numeric Input (Station Handle)



I32 Station Handle

Specifies the station handle.

The default value is 0.

abc Rcv Trig Packet Station (Empty)

Specifies the stations receiving the trigger packets in an array of station names.
Up to 8 receiving stations can be specified.

The default value is an array of blanks.

abc Snd Trig Packet Station (Empty)

Specifies the source station of the trigger packets in an array of station names.
Up to 8 trigger packet source stations can be specified.

The default value is an array of blanks.

abc Rcv Clock Packet Station (Empty)

Specifies the stations receiving the time base packets in an array of station names.
Up to 8 receiving stations can be specified.

The default value is an array of blanks.

abc Snd Clock Packet Station (Empty)

Specifies the source station of the time base packets in an array of station names.
Up to 8 time base packet source stations can be specified.

The default value is an array of blanks.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Station Handle

Copy of the station handle.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

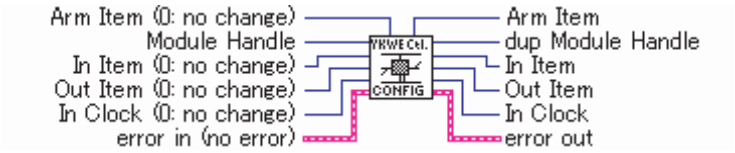
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE Config Module Bus Ex.vi

This VI sets the trigger source and time base as well as set the arming signal input to the module.
If a module that does not have trigger signal, time base, and arming signal input functions is specified, the setting is discarded.



I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

I8 In Item (0: no change)

Selects the trigger input.
0: no change
1: NONE (Not use the BUSTRG1 and 2 trigger signals)
2: Use the BUSTRG1 trigger signal
3: Use the BUSTRG2 trigger signal

The default value is 0 (no change).

I8 Out Item (0: no change)

Selects the trigger output.
0: no change
1: NONE (do not output to the trigger bus)
2: Output the trigger signal to BUSTRG1
3: Output the trigger signal to BUSTRG2
4: Both (Output the trigger signal to both BUSTRG1 and 2)

The default value is 0 (no change).

I8 In Clock (0: no change)

Selects the sampling clock input.
0: no change
1: None (Not use the sampling clock)
2: Clock (Use the sampling clock)

The default value is 0 (no change).

I8 Arm Item (0: no change)

Selects the arming signal input.
0: no change
1: None (Not use the arming signal)
2: ARM (Use the arming signal)

The default value is 0 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

In Item

Indicates the specified trigger input.
1: None
2: BUSTRG1
3: BUSTRG2

Out Item

Indicates the specified trigger output.
1: None
2: BUSTRG1
3: BUSTRG2
4: Both

In Clock

Indicates the specified clock input for sampling.
1: None
2: Clock

Arm Item

Indicates the specified arming signal input.
1: None
2: ARM

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE Get Station Handle.vi

This VI gets the station handle from the station name.

Station Name

Specifies the station name.
If you specify blank, the first station that is found is specified.

The default value is blank.

Timeout (10000 ms)

Specifies the timeout time until reading is complete.

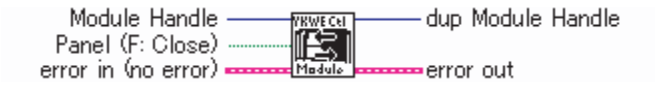
The default value is 10000 ms.

Station Handle

Indicates the station handle that was retrieved.
Indicates 0 if the handle could not be retrieved.

YKWE Show or Close Module Window.vi

This VI shows or hides the module operation panel used to control the modules.
On the operation panel that is displayed using this VI, you can only change the values. You cannot perform Start/Stop operation (button operation) on the module. In addition, if the operation panel displays measured values (instantaneous values), the values are not updated.



Note

Use the R key for decision after inputting a numerical value on the operation panel. The ENTER key cannot be used.

I32 Module Handle

Specifies the module handle.
The value 0 specifies the handle of the module first opened.

The default value is 0.

TF Panel (F: Close)

Selects the operation panel state.
T: Show
F: Close

The default value is F (Close).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

TF status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

abc source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 dup Module Handle

Copy of the module handle.
If Module Handle is 0, it is the module handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE Show or Close Trigger Window.vi

This VI shows or hides the trigger operation panel used to control the trigger.

YKWE Show or Close Trigger Window. vi is polymorphic and can be set to output the following types of data.
Character input (station name)
Numeric input (station Handle)

Character input (station name)

Station Name

Specifies the station name.
If you specify blank, the first station that is found is specified.

The default value is blank.

Panel (F: Close)

Selects the operation panel state
T: Show
F: Close

The default value is F(Close).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Station Name

Copy of the station name.
If Station Name is blank, it is the station handle first opened.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Numeric input (Station Handle)

Station Handle

Specified the station handle.

The default value is 0.

Panel (F: Close)

Selects the operation panel state
T: Show
F: Close

The default value is F(Close).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Station Handle

Copy of the station name.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

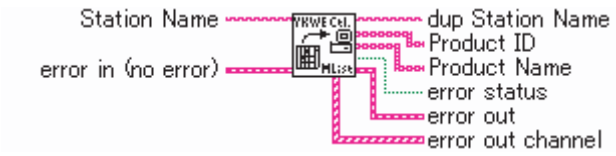
Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE Module List.vi

This VI shows the module list of the specified station.
After turn ON the standby power supply of the station, perform this VI in the state of opening no module.



Station Name

Specifies the station name.
If you specify blank, the first station that is found is specified.

The default value is blank.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Station Name

Copy of the station name.
If Station Name is blank, it is the station handle first opened.

Product ID

Indicates the product ID of each modules in an array.

Product Name

Indicates the product name of each modules in an array.

error status

When information is not able to be acquired by any one or more modules, TRUE (X) is displayed.

error out channel

Indicates the error for every module.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

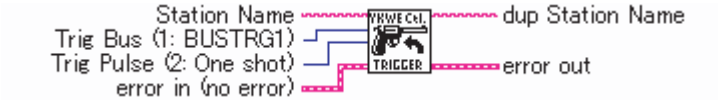
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE Manual Trig.vi

This VI generates a manual trigger signal to the trigger bus common to modules in the measuring station.

YKWE Manual Trig.vi is polymorphic, and the following types of input can be specified.
Character input (station name)
Numeric input (station handle)

Character Input (Station Name)



Station Name

Specifies the name of the station in which the trigger is to be generated.
If you specify blank, the first station that is found is specified.

The default value is blank.

Trig Bus (1: BUSTRG1)

Selects the trigger bus on which the trigger is generated.
1: BUSTRG1
2: BUSTRG2

The default value is 1 (BUSTRG1).

Trig Pulse (2: One shot)

Selects the type of trigger pulse to be generated.
0: Up
1: Down
2: One shot

The default value is 2 (One Shot).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Station Name

Copy of the station name.
If you specify blank for Station Name, the first station that is found is specified.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

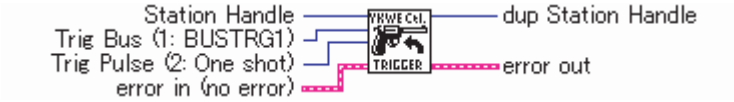
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Numeric Input (Station Handle)



I32 Station Handle

Specifies the handle of the station in which the trigger is to be generated.

The default value is 0.

I8 Trig Bus (1: BUSTRG1)

Selects the trigger bus on which the trigger is generated.
1: BUSTRG1
2: BUSTRG2

The default value is 1 (BUSTRG1).

I8 Trig Pulse (2: One shot)

Selects the type of trigger pulse to be generated.
0: Up
1: Down
2: One shot

The default value is 2 (One Shot).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

TF status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

abc source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 dup Station Handle

Copy of the station handle.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE Manual Arming.vi

This VI generates a manual arming signal to the arming bus common to modules in the measuring station.

YKWE Manual Arming.vi is polymorphic, and the following types of input can be specified.
Character input (station name)
Numeric input (station handle)

Character Input (Station Name)

Station Name

Specifies the name of the station in which the arming signal is to be generated.
If you specify blank, the first station that is found is specified.

The default value is blank.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Station Name

Copy of the station name.
If you specify blank for Station Name, the first station that is found is specified.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Numeric Input (Station Handle)

Station Handle

Specifies the handle of the station in which the arming signal is to be generated.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Station Handle

Copy of the station handle.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE Manual Trig Packet.vi

This VI generates a trigger packet.

YKWE Manual Trig Packet.vi is polymorphic, and the following types of input can be specified.
Character input (station name)
Numeric input (station handle)

Character Input (Station Name)

Station Name

Specifies the name of the station in which the trigger packet is to be generated.
If you specify blank, the first station that is found is specified.

The default value is blank.

Item (1: BUSTRG1)

Selects the trigger bus on which the trigger packet is generated.
1: BUSTRG1
2: BUSTRG2

The default value is 1 (BUSTRG1).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Station Name

Copy of the station name.
If you specify blank for Station Name, the first station that is found is specified.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Numeric Input (Station Handle)

I32 Station Handle

Specifies the handle of the station in which the trigger packet is to be generated.

The default value is 0.

U16 Item (1: BUSTRG1)

Selects the trigger bus on which the trigger packet is generated.
1: BUSTRG1
2: BUSTRG2

The default value is 1 (BUSTRG1).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

TF status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

abc source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 dup Station Handle

Copy of the station handle.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE Manual Clock Packet.vi

This VI generates a time base packet.

YKWE Manual Clock Packet.vi is polymorphic, and the following types of input can be specified.
Character input (station name)
Numeric input (station handle)

Character Input (Station Name)

Station Name

Specifies the name of the station in which the time base packet is to be generated.
If you specify blank, the first station that is found is specified.

The default value is blank.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Station Name

Copy of the station name.
If you specify blank for Station Name, the first station that is found is specified.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

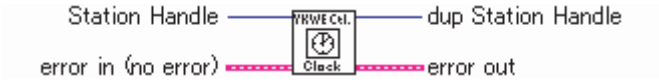
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Numeric Input (Station Handle)



Station Handle

Specifies the handle of the station in which the time base packet is to be generated.

The default value is 0.

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Station Handle

Copy of the station handle.

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

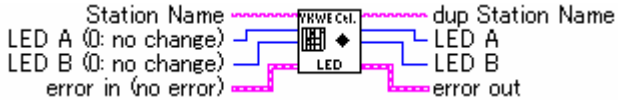
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE STATUS LED.vi

This VI sets the status LED of the WE500 or WE900.

YKWE DIO.vi is polymorphic, and the following types of input can be specified.
Character input (station name)
Numeric input (station handle)

Character Input (Station Name)



Station Name

Specifies the name of the station of which the standby power is turned ON/OFF.
If you specify blank, the first station that is found is specified.

The default value is blank.

LED A (0: no change)

Sets the state of LED A.
0:no change
1:OFF
2:RED
3:GREEN
4:ORANGE

The default value is 0 (no change).

LED B (0: no change)

Sets the state of LED B.
0:no change
1:OFF
2:RED
3:GREEN
4:ORANGE

The default value is 0 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Station Name

Copy of the station name.
If you specify blank for Station Name, the first station that is found is specified.

LED A

Indicates the configured state of the LED A.
1:OFF
2:RED
3:GREEN
4:ORANGE

LED B

Indicates the configured state of the LED B.
1:OFF
2:RED
3:GREEN
4:ORANGE

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

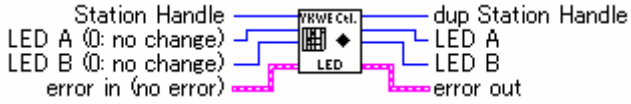
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Numeric Input (Station Handle)



I32 Station Handle

Specifies the station handle.

The default value is 0.

I8 LED A (0: no change)

Sets the state of LED A.
0:no change
1:OFF
2:RED
3:GREEN
4:ORANGE

The default value is 0 (no change).

I8 LED B (0: no change)

Sets the state of LED B.
0:no change
1:OFF
2:RED
3:GREEN
4:ORANGE

The default value is 0 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

TF status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

I32 code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

abc source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Station Name

Copy of the station name.
If you specify blank for Station Name, the first station that is found is specified.

LED A

Indicates the configured state of the LED A.
1:OFF
2:RED
3:GREEN
4:ORANGE

LED B

Indicates the configured state of the LED B.
1:OFF
2:RED
3:GREEN
4:ORANGE

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

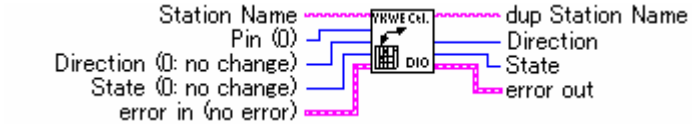
Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

YKWE DIO.vi

This VI sets the DIO of the WE500 or WE900.

YKWE DIO.vi is polymorphic, and the following types of input can be specified.
Character input (station name)
Numeric input (station handle)

Character Input (Station Name)



Station Name

Specifies the name of the station of which the standby power is turned ON/OFF.
If you specify blank, the first station that is found is specified.

The default value is blank.

Pin (0)

Sets the pin number of the DIO to set up.
The selectable range is 0 to 3.

The default value is 0.

Direction (0: no change)

Configures the input/output settings of the specified pin number.
0:no change
1:input
2:output

The default value is 0 (no change).

State (0: no change)

Sets the state of the specified pin number.
0:no change
1:OFF (low)
2:ON (high)

The default value is 0 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Station Name

Copy of the station name.
If you specify blank for Station Name, the first station that is found is specified.

Direction

Indicates the configured input/output of the specified pin number.
1:input
2:output

State

Indicates the configured state of the specified pin number.
1:OFF (low)
2:ON (high)

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

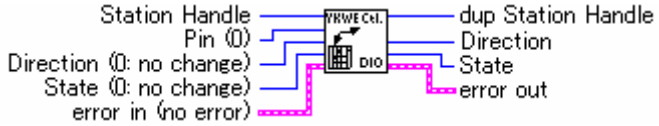
code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Numeric Input (Station Handle)



Station Handle

Specifies the station handle.

The default value is 0.

Pin (0)

Sets the pin number of the DIO to set up.
The selectable range is 0 to 3.

The default value is 0.

Direction (0: no change)

Configures the input/output settings of the specified pin number.
0:no change
1:input
2:output

The default value is 0 (no change).

State (0: no change)

Sets the state of the specified pin number.
0:no change
1:OFF (low)
2:ON (high)

The default value is 0 (no change).

error in (no error)

The error in cluster receives error information from the VI that was called previously. If an error has been detected, the code in this VI is not executed.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

The default value is no error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

dup Station Name

Copy of the station name.
If you specify blank for Station Name, the first station that is found is specified.

Direction

Indicates the configured input/output of the specified pin number.
1:input
2:output

State

Indicates the configured state of the specified pin number.
1:OFF (low)
2:ON (high)

error out

The error out cluster passes the error or warning information from the VI to be used in another VI.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

status

The Boolean status is set to TRUE (X) if an error occurred and FALSE (check mark) if no error occurred or a warning occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

code

Code input identifies the error or warning.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

source

Source string identifies where the error occurred.
Choose Explain Error (or Explain Warning) from the pop-up menu to display details about the error.

Index

T

Page

Terms and Conditions of the Software License 2

Y

Page

YKWE ACC Acquire Waveform.vi 5-373
YKWE ACC Acquire Waveforms.vi 5-387
YKWE ACC Clear.vi 5-467
YKWE ACC Config Acquisition.vi 5-469
YKWE ACC Config Channel Option.vi 5-479
YKWE ACC Config Channel.vi 5-475
YKWE ACC Config Connection Test Channel.vi 5-512
YKWE ACC Config Connection Test.vi 5-510
YKWE ACC Config Sampling Interval.vi 5-473
YKWE ACC Config Trigger.vi 5-482
YKWE ACC Config.vi 5-433
YKWE ACC Control.vi 5-486
YKWE ACC Read Block Data.vi 5-489
YKWE ACC Read Connection Test.vi 5-514
YKWE ACC Read Current Data.vi 5-501
YKWE ACC Read Waveform.vi 5-443
YKWE ACC Sample Channel.vi 5-403
YKWE ACC Sample Channels.vi 5-417
YKWE ACC Single Scan.vi 5-455
YKWE ACC Start.vi 5-439
YKWE AO Clear.vi 5-691
YKWE AO Config AG.vi 5-726
YKWE AO Config Channel AG.vi 5-729
YKWE AO Config Channel Sweep.vi 5-698
YKWE AO Config Channel.vi 5-693
YKWE AO Config DC.vi 5-709
YKWE AO Config Link.vi 5-706
YKWE AO Config Sweep.vi 5-704
YKWE AO Config Trigger.vi 5-702
YKWE AO Config.vi 5-678
YKWE AO Control.vi 5-712
YKWE AO Generate Waveform.vi 5-650
YKWE AO Generate Waveforms.vi 5-664
YKWE AO Start.vi 5-689
YKWE AO Write Data AG.vi 5-718
YKWE AO Write Data.vi 5-714
YKWE AO Write.vi 5-685
YKWE AO WVF Read.vi 5-720
YKWE Close Module.vi 6-21
YKWE Close Station.vi 6-24
YKWE Config Bus Ex.vi 6-29
YKWE Config Module Bus Ex.vi 6-40
YKWE Config Packet.vi 6-36
YKWE COUNT Acquire Waveform.vi 5-848
YKWE COUNT Clear.vi 5-889
YKWE COUNT Config Acquisition.vi 5-891
YKWE COUNT Config Channel.vi 5-897
YKWE COUNT Config Misc.vi 5-901
YKWE COUNT Config.vi 5-868
YKWE COUNT Control.vi 5-904
YKWE COUNT Read Block Data.vi 5-907
YKWE COUNT Read Current Data.vi 5-913
YKWE COUNT Read Waveform.vi 5-878
YKWE COUNT Sample Channel.vi 5-828
YKWE COUNT Single Scan.vi 5-884
YKWE COUNT Start.vi 5-876
YKWE DGTZR Acquire Waveform.vi 5-2
YKWE DGTZR Acquire Waveforms.vi 5-18
YKWE DGTZR Clear.vi 5-100
YKWE DGTZR Config Acquisition.vi 5-102
YKWE DGTZR Config Channel.vi 5-108
YKWE DGTZR Config Sampling Interval.vi 5-106
YKWE DGTZR Config Trigger WE7116.vi 5-124
YKWE DGTZR Config.vi 5-66
YKWE DGTZR ConfigTrigger WE7311.vi 5-119
YKWE DGTZR ConfigTrigger.vi 5-115
YKWE DGTZR Control.vi 5-128
YKWE DGTZR Read Block Data.vi 5-131
YKWE DGTZR Read Current Data.vi 5-143
YKWE DGTZR Read Waveform.vi 5-76
YKWE DGTZR Sample Channel.vi 5-34
YKWE DGTZR Sample Channels.vi 5-50
YKWE DGTZR Single Scan.vi 5-88
YKWE DGTZR Start.vi 5-72
YKWE DIO Clear.vi 5-753
YKWE DIO Config Comparator.vi 5-764
YKWE DIO Config Counter.vi 5-762
YKWE DIO Config IO.vi 5-755
YKWE DIO Config Sampling Interval.vi 5-758
YKWE DIO Config.vi 5-741
YKWE DIO Control.vi 5-767
YKWE DIO Read Block Data.vi 5-770
YKWE DIO Read Block from Port.vi 5-737
YKWE DIO Read Block.vi 5-751
YKWE DIO Read Comparator.vi 5-776
YKWE DIO Read Counter from Port.vi 5-739
YKWE DIO Read Counter.vi 5-774
YKWE DIO Read from Port.vi 5-733
YKWE DIO Read IO.vi 5-772
YKWE DIO Read.vi 5-744
YKWE DIO Start.vi 5-748
YKWE DIO Write IO.vi 5-760
YKWE DIO Write to Port.vi 5-735
YKWE DIO Write.vi 5-746
YKWE DIO.vi 6-73
YKWE Easy Clear.vi 4-5
YKWE Easy Config.vi 4-2
YKWE Exit.vi 6-28
YKWE Get Station Handle.vi 6-43
YKWE Initialize.vi 6-5
YKWE Manual Arming.vi 6-56
YKWE Manual Clock Packet.vi 6-64
YKWE Manual Trig Packet.vi 6-60
YKWE Manual Trig.vi 6-52
YKWE Module List.vi 6-50
YKWE Module Window.vi 6-2

YKWE Open Module.vi 6-13
YKWE Open Station.vi 6-7
YKWE OSC Acquire Waveform.vi 5-155
YKWE OSC Acquire Waveforms.vi 5-169
YKWE OSC Clear.vi 5-206
YKWE OSC Config Acquisition.vi 5-208
YKWE OSC Config Calibration.vi 5-226
YKWE OSC Config Channel.vi 5-215
YKWE OSC Config Clock.vi 5-223
YKWE OSC Config Time Base.vi 5-212
YKWE OSC Config Trigger.vi 5-219
YKWE OSC Config.vi 5-183
YKWE OSC Control.vi 5-228
YKWE OSC Read Block Data.vi 5-231
YKWE OSC Read Waveform.vi 5-194
YKWE OSC Start.vi 5-189
YKWE PIO Clear.vi 5-802
YKWE PIO Config Acquisition.vi 5-804
YKWE PIO Config IO.vi 5-819
YKWE PIO Config Time Base.vi 5-809
YKWE PIO Config Trigger.vi 5-812
YKWE PIO Config.vi 5-789
YKWE PIO Control.vi 5-817
YKWE PIO Load Pattern Data.vi 5-825
YKWE PIO Read IO.vi 5-823
YKWE PIO Read Trigger Point.vi 5-815
YKWE PIO Read Write Multi Ch.vi 5-784
YKWE PIO Read Write One Ch.vi 5-779
YKWE PIO Read.vi 5-794
YKWE PIO Start.vi 5-798
YKWE PIO Wait.vi 5-800
YKWE PIO Write IO.vi 5-821
YKWE PIO Write.vi 5-796
YKWE Power.vi 6-9
YKWE Show or Close Module Window.vi 6-44
YKWE Show or Close Trigger Window.vi 6-46
YKWE STATUS LED.vi 6-68
YKWE STRAIN Acquire Waveform.vi 5-517
YKWE STRAIN Acquire Waveforms.vi 5-531
YKWE STRAIN Clear.vi 5-604
YKWE STRAIN Config Acquisition.vi 5-606
YKWE STRAIN Config Channel.vi 5-612
YKWE STRAIN Config Linear Scaling Channel.vi 5-646
YKWE STRAIN Config Linear Scaling.vi 5-644
YKWE STRAIN Config Sampling Interval.vi 5-610
YKWE STRAIN Config Trigger.vi 5-616
YKWE STRAIN Config.vi 5-572
YKWE STRAIN Control.vi 5-619
YKWE STRAIN Read Balance.vi 5-642
YKWE STRAIN Read Block Data.vi 5-622
YKWE STRAIN Read Current Data.vi 5-634
YKWE STRAIN Read Waveform.vi 5-581
YKWE STRAIN Sample Channel.vi 5-545
YKWE STRAIN Sample Channels.vi 5-558
YKWE STRAIN Single Scan.vi 5-593
YKWE STRAIN Start.vi 5-577
YKWE THERMO Acquire Waveform.vi 5-243
YKWE THERMO Acquire Waveforms.vi 5-255
YKWE THERMO Check.vi 5-342
YKWE THERMO Clear.vi 5-323
YKWE THERMO Config Acquisition.vi 5-325
YKWE THERMO Config Alarm Combination.vi 5-339
YKWE THERMO Config Channel Alarm.vi 5-336
YKWE THERMO Config Channel.vi 5-331
YKWE THERMO Config Sampling Interval.vi 5-329
YKWE THERMO Config.vi 5-293
YKWE THERMO Control.vi 5-347
YKWE THERMO Query Status.vi 5-344
YKWE THERMO Read Block Data.vi 5-350
YKWE THERMO Read Current Data.vi 5-362
YKWE THERMO Read Waveform.vi 5-300
YKWE THERMO Sample Channel.vi 5-269
YKWE THERMO Sample Channels.vi 5-281
YKWE THERMO Single Scan.vi 5-312
YKWE THERMO Start.vi 5-298
YKWE TIM Acquire Time Stamp.vi 5-989
YKWE TIM Acquire Waveform.vi 5-918
YKWE TIM Acquire Waveforms.vi 5-938
YKWE TIM Clear.vi 5-1033
YKWE TIM Config Acquisition Counter.vi 5-1035
YKWE TIM Config Acquisition TS.vi 5-1039
YKWE TIM Config Channel.vi 5-1044
YKWE TIM Config Counter.vi 5-993
YKWE TIM Config Input.vi 5-1041
YKWE TIM Config Time Base.vi 5-1048
YKWE TIM Config Time Stamp.vi 5-1000
YKWE TIM Config Trigger.vi 5-1051
YKWE TIM Config TS.vi 5-1055
YKWE TIM Control.vi 5-1058
YKWE TIM Read Block Data.vi 5-1061
YKWE TIM Read Block Time Stamp.vi 5-1082
YKWE TIM Read Current Data.vi 5-1073
YKWE TIM Read Time Stamp.vi 5-1030
YKWE TIM Read Waveform.vi 5-1007
YKWE TIM Sample Channel.vi 5-958
YKWE TIM Sample Channels.vi 5-973
YKWE TIM Single Scan.vi 5-1019
YKWE TIM Start.vi 5-1003