

DVB SPI-ASI Interface Converter

706560 / 706561



The 706560/706561 DVB SPI-ASI converters are interface converter for converting the synchronous parallel interface (SPI) to asynchronous serial interface (ASI), or vice versa.

The compact main unit of the 706560/706561 comes packed with practical functions, such as input TS monitoring, data rate change and packet length change. The converter comes in two models - the 706560 portable type and 706561 rack-mountable type. Thus, the converter supports a wide range of applications, from interface conversion between devices to conversion of TS generator output interfaces.

■ Main Functions and Features

● Conversion between DVB SPI and DVB ASI Interfaces^{*1}

Input Interface	Output Interface
DVB SPI	DVB SPI: One output ^{*2} DVB ASI: Three outputs
DVB ASI	DVB SPI: One output DVB ASI: Three outputs ^{*2}

^{*1} Direction of conversion can be selected from the menu either SPI to ASI or ASI to SPI.

^{*2} The simple, through output mode can also be selected.

● Changing Data Rate^{*3}

An input TS can be output at a different data rate by inserting a Null packet into the TS.

^{*3} It is not possible to decrease the data rate below that of the input TS. The rate can be set in units of 10 Kbps.

● Changing Packet Length^{*4}

The packet length of a 188, 204 or 208 byte long TS can be changed to 188, 204 or 208 bytes for output.

^{*4} Output data rate is also changed.

● Checking Input TSs

The interface converter monitors input TSs for such errors as Sync_Byte_Error, PAT_Error and Continuity_Counter_Error of PAT. If there is any of these errors, the converter turns on an LED indicator and outputs a corresponding signal by means of contact output.

Specification

■ Signal Specifications

Item	Specifications
Signal specifications	Compliant to ISO/IEC-13818
Data rate	10 Kbps to 80 Mbps (Readings are given in 4 digits.)
Packet length	188, 204 or 208 bytes

■ Interfaces

Item	Specifications
Parallel	Compliant to DVB-SPI Number of input terminals: 1 Number of output terminals: 1 Signal level: LVDS (DVB-A10) Connector: 25-pin D-sub Pin assignment: See <i>Pin Assignment Table</i> .
Serial	Compliant to DVB-ASI (BS EN50083-9) Mode: Packet or Burst Number of input terminals: 1 Number of output terminals: 3 Signal level: 800 mVp-p Connector: BNC (75Ω)

Pin Number	Signal Name	Pin Number	Signal Name
1	CLKA	14	CLKB
2	SYS GND	15	SYS GND
3	DATA 7 A	16	DATA 7 B
4	DATA 6 A	17	DATA 6 B
5	DATA 5 A	18	DATA 5 B
6	DATA 4 A	19	DATA 4 B
7	DATA 3 A	20	DATA 3 B
8	DATA 2 A	21	DATA 2 B
9	DATA 1 A	22	DATA 1 B
10	DATA 0 A	23	DATA 0 B
11	DATA VALID A	24	DATA VALID B
12	SYNC A	25	SYNC B
13	NC		

■ Conversion Functions

Item	Specifications
Conversion mode	Input interface Output interface No. of output terminals DVB-SPI DVB-SPI*1 1 DVB-ASI 3 DVB-ASI DVB-ASI*1 3 DVB-SPI 1
Sync signal	Selectable from 47h and Super Frame. (ARIB STD-B20)
Packet length	Input: Covers 188, 204 and 208 bytes. Output*2: Selectable from 188, 204 and 208 bytes.
Type of ASI output	Selectable from Packet and Burst.
External clock	Level: TTL (50 Ω) Input timing: Falling edge Connector: BNC (50 Ω) Notes •Apply an external clock one-eighth the output data rate. •Set the data rates so that "input data rate < output data rate" holds true.

■ Ordering Information

Model	Suffix Code	Description
706560		DVB SPI-API converter (portable)
706561		DVB SPI-API converter (rack-mount, 1U)*5
	Power cord	
	-T	UL/CSA-standard, with 2-to-3-prong adapter
	-U	UL/CSA-standard
	-E	VDE-standard
	-G	SAA-standard
	-S	BS-standard

■ Data Rate Conversion Function*3 *4

Item	Specifications
Maximum data rate	Input data rate to 80 Mbps
Setting resolution	10 Kbps

■ TS Monitor Function

Item	Specifications
Monitored item	Sync OK Sync Byte Error PAT Error Transport Error PAT Continuity Counter Error
Indication/signal output	Indication by LED indicator and signaling by means of contact output

■ General Specifications

Item	Specifications
Standard operating conditions	Ambient temperature: 23 ±5°C Ambient humidity: 55 ±10% RH Supply voltage/frequency errors: 1% of ratings Warm-up time: 30 minutes min. Temperature: -20 to 60°C Humidity: 20 to 85% RH (non-condensing)
Storage conditions	Temperature: 5 to 40°C Humidity: 20 to 85% RH (non-condensing)
Operating temperature /humidity ranges	Temperature: 5 to 40°C Humidity: 20 to 85% RH (non-condensing)
Rated supply voltage range	100 to 120 V AC or 200 to 240 V AC
Allowable supply voltage range	90 to 132 V AC or 180 to 264 V AC
Rated power supply frequency	50 or 60 Hz
Allowable power supply frequency range	48 to 63 Hz
Maximum power consumption	25 VA
Withstanding voltage	1.5 kV AC, 1 min
Insulation resistance	10 MΩ min. at 500 V DC
Weight	Model 706560: approx. 1 kg; Model 706561: approx. 2 kg

*1 The through output mode, which directly outputs the input signal, can also be selected.

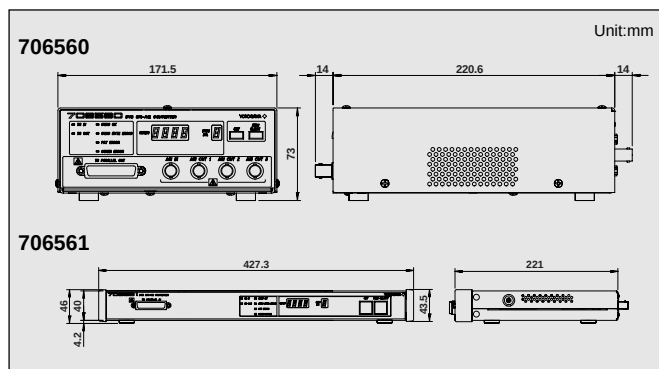
*2 When an input TS is output at the packet length of 204 or 208 bytes, the TS is first adjusted to 188 bytes and then 16- or 20-byte long dummy data (Null) is added to it. For DVB-SPI output, a signal for the Data Valid field of the 16- or 20-byte long dummy data goes low. Data rate is also changed when packet length is changed.

*3 It is not possible to decrease the data rate below that of an input TS.

*4 The output data rate keeps track of the input data rate when the function is set to the Auto mode. For data rate changes greater than 15%, the converter may not output data correctly.

*5 Rack mount kit is sold separately.

■ External Dimensions



NOTICE

- Before operating the product, read the instruction manual thoroughly for proper and safe operation.
- If this product is for use with a system requiring safeguards that directly involve personnel safety, please contact the Yokogawa sales offices.

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