

Thank you for purchasing the AQ2200 Series Modules.

To ensure correct use, please read this manual thoroughly before beginning operation. For details on the functions and performance, see the AQ2200 Multi Application Test System User's Manual (IM 735101-01EN, IM 735101-03EN or IM 810518920-05E).

The following manuals, including this one, are provided as manuals for the AQ2200 Series. Please read all manuals.

Manual Title	Manual No.	Description
AQ2200 Series Multi Application Test System User's Manual Startup Guide	IM 735101-01EN	The supplied CD contains the PDF file of this manual. This manual describes the handling precautions for, the names and functions of all parts of, and the firmware upgrade procedure for the AQ2200 Series.
AQ2200 Series Multi Application Test System Frame and Module Operation User's Manual	IM 735101-03EN	The supplied CD contains the PDF file of this manual. This manual describes all the features of the AQ2200 Series and how to use them, with the exception of some of the application and communication features.
AQ2200 Series Multi Application Test System Application Operation User's Manual	IM 735101-04EN	The supplied CD contains the PDF file of this manual. This manual describes the AQ2200 Series application features and how to use them.
AQ2200 Series Multi Application Test System Communication Interface User's Manual	IM735101-17EN	The supplied CD contains the PDF file of this manual. This manual describes the AQ2200 Series communication interface features and how to use them.
64 Mbit Program Pattern Option User's Manual	IM 810518801-61E	This manual describes how to create program patterns for the AQ2200-601 10 Gbit/s BERT module with the /M option.
SDH/SONET Frame Option User's Manual	IM 810518801-62E	This manual describes how to create SDH/SONET patterns for the AQ2200-601 10 Gbit/s BERT module with the /P1 option.
AQ2200 Series Modules Checking the Contents of the Package and Handling Precautions of the Modules	IM 810518901-04E	This manual. This is included with AQ2200 Series modules. It explains the handling precautions of the module and lists the package contents.
Connector Adapter for Multi-Fiber Cable User's Manual	IM AQ9340-01EN	This manual explains the handling precautions of the connector adapters and how to use them.

The "EN" and "E" in the manual numbers are the language codes.

The latest editions of manuals and firmware (AQ2211, AQ2212, AQ2201, or AQ2202 software) are available to registered customers for download from our website. You can register from the following website.

<http://tmi.yokogawa.com/>

Contact information of Yokogawa offices worldwide is provided on the following sheet.

Manual No.	Description
PIM 113-01Z2	List of worldwide contacts

Safety Precautions

The general safety precautions described herein must be observed during all phases of operation. If the instrument is used in a manner not specified in this manual, the protection provided by the instrument may be impaired. YOKOGAWA assumes no liability for the customer's failure to comply with these requirements.

The following symbols are used on this instrument.



Handle with care. Refer to the user's manual or service manual. This symbol appears on dangerous locations on the instrument which require special instructions for proper handling or use. The same symbol appears in the corresponding place in the manual to identify those instructions.



Laser radiation hazard

French



À manipuler délicatement. Toujours se reporter aux manuels d'utilisation et d'entretien. Ce symbole a été apposé aux endroits dangereux de l'instrument pour lesquels des consignes spéciales d'utilisation ou de manipulation ont été émises. Le même symbole apparaît à l'endroit correspondant du manuel pour identifier les consignes qui s'y rapportent.



Danger : Appareil laser à rayonnement.

Safety Precautions of the Modules

The following precautions must be observed when handling the modules. YOKOGAWA assumes no liability for the customer's failure to comply with these requirements. For details on the installation/removal procedure and the specifications of the modules, see the AQ2200 Multi Application Test System User's Manual (IM 735101-01EN or IM 810518920-05E).



WARNING

Use the Instrument Only for Its Intended Purpose

This optical measuring instrument is designed to measure the optical characteristics of light sources and evaluate their performance. Do not use this instrument for anything other than as an optical measuring instrument.

Check the Physical Appearance

Do not use the instrument if there is a problem with its physical appearance.

Do Not Operate in an Explosive Atmosphere

Do not operate the instrument in the presence of flammable gasses or vapors. Doing so is extremely dangerous.

Do Not Remove the Covers or Disassemble or Alter the Instrument

Only qualified YOKOGAWA personnel may remove the covers and disassemble or alter the instrument.

Blank Panel

Make sure to put the AQ2200-901 Blank Panel on the slots that are not being used to prevent electric shock and to satisfy the specifications. Using the main unit without the Blank Panel allows dust to enter the main unit and may cause malfunction due to the rise in temperature inside the main unit.

Do not look at the laser's direct light

Do not look at the laser's direct light, reflected light from a mirror, or indirect light without proper protective eyewear. In addition, avoid being exposed to the laser light. It can cause blindness or damage to the eye. Place a cover over unused optical connectors.

Angled PC Only Connector

Only connect an angled-physical contact type optical fiber to the ANGLED PC ONLY connector. Other types of connectors can damage the connector's ferrule end.

Dispose the Instrument Properly

Do not throw this instrument into a fire to dispose of it. Doing so may cause the instrument to explode, resulting in fire or personal injury.

The devices used in this instrument contain gallium arsenide (GaAs) and indium phosphide (InP). When you dispose this instrument, you must separate it from general industrial waste and household garbage, and dispose of it according to local regulations.

Additionally, gallium arsenide powder and vapor are dangerous substances. Do not burn, cut, crush, chemically disassemble, or otherwise destroy this instrument.

Install or Use the Instrument in Appropriate Locations

- Do not install or use the instrument outdoors or in locations subject to rain or water.
 - Install the instrument so that you can immediately remove the power cord if an abnormal or dangerous condition occurs.
-

**AVERTISSEMENT****Utiliser l'instrument aux seules fins prévues**

Cet instrument de mesure optique est prévu pour mesurer les caractéristiques optiques des sources lumineuses et évaluer leur performance. Ne pas utiliser cet instrument à d'autres fins que celles de mesure optique.

Inspecter l'apparence physique

Ne pas utiliser l'instrument si son intégrité physique semble être compromise.

Ne pas utiliser dans un environnement explosif

Ne pas utiliser l'instrument en présence de gaz ou de vapeurs inflammables. Cela pourrait être extrêmement dangereux.

Ne pas retirer le capot, ni démonter ou modifier l'instrument

Seul le personnel YOKOGAWA qualifié est habilité à retirer le capot et à démonter ou modifier l'instrument.

Panneau vide

Pour éviter tout choc électrique et garantir un fonctionnement de l'instrument conforme aux spécifications, veiller à couvrir tous les emplacements non utilisés des panneaux vides vendus séparément. Si vous utilisez l'instrument sans couvrir les emplacements non utilisés des panneaux vides, celui-ci risque de ne pas fonctionner correctement en raison de l'accumulation de poussière ou d'une surchauffe interne.

Faisceau laser

Ne pas fixer directement ou indirectement le faisceau laser, ni la réflexion spéculaire du faisceau en l'absence d'équipement de protection. Ne pas orienter le faisceau laser en direction des yeux. Le faisceau laser peut entraîner la cécité ou causer des lésions oculaires. Recouvrir le connecteur optique à l'aide du cache pendant les périodes de non-utilisation.

Connecteur optique ANGLED PC ONLY

Ne brancher que des fibres optiques de type APC (contact physique avec angle) au connecteur optique ANGLED PC ONLY. D'autres types de connecteurs pourraient endommager l'embout du connecteur.

Mettre l'instrument au rebut de manière adéquate

Ne pas mettre l'instrument au rebut en le jetant au feu. Il risquerait d'exploser et de provoquer un incendie ou de blesser quelqu'un.

Les dispositifs utilisés avec cet instrument contiennent de l'arséniure de gallium (AsGa) et du phosphore d'indium (InP). Lors de la mise au rebut de l'instrument, vous ne devez pas l'associer aux déchets industriels généraux ni aux déchets domestiques, mais l'éliminer conformément aux réglementations locales.

De plus, la poudre et les vapeurs d'arséniure de gallium sont des substances dangereuses. Ne pas brûler, couper, écraser, démonter chimiquement ou détruire cet instrument.

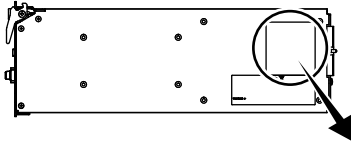
Installer et utiliser l'instrument aux emplacements appropriés

- Ne pas installer, ni utiliser l'instrument à l'extérieur ou dans des lieux exposés à la pluie ou à l'eau.
- Installer l'instrument de manière à pouvoir immédiatement le débrancher du secteur en cas de fonctionnement anormal ou dangereux.

Safety Precautions for Laser Products

This instrument uses a laser light source. This instrument is a Class 1M laser product as defined by IEC 60825-1:2007 Safety of Laser Products—Part1: Equipment Classification and Requirements. In addition, this instrument complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007.

AQ2200-112, AQ2200-131, and AQ2200-132 Modules



CLASS 1 LASER PRODUCT
クラス1レーザー製品
(EN 60825-1:2014)

**INVISIBLE LASER RADIATION
DO NOT VIEW DIRECTLY WITH
OPTICAL INSTRUMENTS
CLASS 1M LASER PRODUCT**
不可見激光辐射
勿通过光学仪器直接观看光束
1M类激光产品
(IEC 60825-1:2007, GB 7247.1-2012)

Complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No.50, dated June 24, 2007
2-9-32 Nakacho, Musashino-shi, Tokyo 180-8750, Japan

Laser Class 1 Label

Laser Class 1M Label

Using an optical instrument, such as a loupe, magnifying glass, or microscope, when observing the laser beam from a distance of less than 100 mm may cause eye injury.
Do not expose users of binoculars or telescopes.
Skin exposure near aperture may cause burns.

Model	Class	Laser Type ¹	Center Wavelength	Maximum Output Power ²	Mode Field Diameter	Beam Divergence (full angle at 1/e ²)	Pulse Duration and Repetition Rate
AQ2200112	1, 1M	DFB-Laser	1310 to 1650 nm	40 mW	9 μm	11.5 degree	CW
AQ2200131	1, 1M	ITLA	1527.60/1608.76 nm	63 mW	9 μm	11.5 degree	CW
AQ2200132	1, 1M	ITLA	1527.60/1608.76 nm	63 mW	9 μm	11.5 degree	CW

- 1 Class 1: EN 60825-1:2014
Class 1M: IEC 60825-1:2007, GB 7247.1-2012
- 2 Under single fault conditions.

Note

Laser classes differ depending on the standard number and the year of the standard.
Take safety measures according to the laser class corresponding to the standard of the country or region that the instrument will be used in.

AQ2200-111, AQAQ2200-141, AQ2200-142, and AQ2200-136 Modules

**INVISIBLE LASER RADIATION
DO NOT VIEW DIRECTLY WITH
OPTICAL INSTRUMENTS
CLASS 1M LASER PRODUCT**
不可見レーザー放射
光学器具で直接ビームを見ないこと
クラス1Mレーザー製品
不可見激光辐射
勿通过光学仪器直接观看光束
1M类激光产品
(IEC/EN60825-1:2007, GB7247.1-2012)

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Laser Class 1 Label

Model	Class	Laser Type	Center Wavelength	Maximum Output Power ¹	Mode Field Diameter	Beam Divergence (full angle at 1/e ²)	Pulse Duration and Repetition Rate
810518901	1M	DFB-Laser	1310 to 1650 nm	40 mW	9 μm	11.5 degree	CW
810518902	1	FP-Laser	1310/1550 nm	10 mW	9 μm	11.5 degree	CW
810518903	1	FP-Laser	1310/1550 nm	10 mW	9 μm	11.5 degree	CW
810518904	1M	EC-Laser	1440 to 1640 nm	50.2 mW	9 μm	11.5 degree	CW

- 1 Under single fault conditions.

Note

- Commercially available XFP transceivers installed in the AQ2200-641 XFP Interface Module are not covered under warranty.
- For safe handling of the laser, consult the user's manual that came with the XFP transceiver.

Waste Electrical and Electronic Equipment



Waste Electrical and Electronic Equipment (WEEE), Directive

(This directive is valid only in the EU.)

This product complies with the WEEE Directive marking requirement. This marking indicates that you must not discard this electrical/electronic product in domestic household waste.

Product Category

With reference to the equipment types in the WEEE directive, this product is classified as a "Monitoring and control instruments" product.

When disposing of products in the EU, contact your local Yokogawa Europe B.V. office.

Do not dispose in domestic household waste.

Authorized Representative in the EEA

Yokogawa Europe B.V. is the authorized representative of Yokogawa Test & Measurement Corporation for this product in the EEA. To contact Yokogawa Europe B.V., see the separate list of worldwide contacts, PIM 113-01Z2.

About Environmental Standard

The following modules do not comply with environment regulation standard EN50581.

Model	Module Name/Application Name
810518901	AQ2200-111 DFB-LD Module
AQ2200131-T4	AQ2200-131 Grid TLS Module(suffix code is -T4 (standard) model)
AQ2200132-T4	AQ2200-132 Grid TLS Module(suffix code is -T4 (standard) model)
810518902	AQ2200-141 FP-LD Module
810518903	AQ2200-142 DUAL FP-LD Module
810518904	AQ2200-136 TLS Module
810518905	AQ2200-201 Interface Module
810518906	AQ2200-231 Optical Sensor Head (Long-Wavelength Sensor)
810518907	AQ2200-241 Optical Sensor Head (Short-Wavelength Sensor)
810518908	AQ2200-211 Sensor Module (High-Sensitivity Sensor)
735185	AQ2200-271 ORL Module
810518915	AQ2200-311 ATTN Module
810518801	AQ2200-601 BERT Module
810518802	AQ2200-621 10 Gbit/s Optical Modulator (Wavelength 1.55 μm)
810518804	AQ2200-622 10 Gbit/s Optical Modulator (Wavelength 1.31 μm)
810518803	AQ2200-631 10 Gbit/s Optical Receiver
735161	AQ2200-641 XFP Interface Module

Compatibility between the AQ2211/AQ2212 Software Version and AQ2200 Series Modules

Some modules cannot be used with older versions of the AQ2211/AQ2212 software. Refer to the table below for version requirements. If your AQ2211/AQ2212 requires a newer version of the software, download from our website.

To determine the software version, press the SYSTEM soft key and then the "Information". The version number is displayed under "FIRM VER" in the Overview screen.

Model	Module Name/Application Name	AQ2211/AQ2212 Version (FIRM VER)
810518901	AQ2200-111 DFB-LD Module	1.01 and later
AQ2200112	AQ2200-112 LS Module	3.08 and later
810518902	AQ2200-141 FP-LD Module	1.01 and later
810518903	AQ2200-142 DUAL FP-LD Module	1.01 and later
AQ2200131-T2, -T4	AQ2200-131 Grid TLS Module	3.00 and later
AQ2200131-T6	AQ2200-131 Grid TLS Module	3.05 and later
AQ2200132-T2, -T4	AQ2200-132 Grid TLS Module	3.00 and later
AQ2200132-T6	AQ2200-132 Grid TLS Module	3.05 and later
810518904	AQ2200-136 TLS Module	2.20 and later
810518905	AQ2200-201 Interface Module	1.01 and later
AQ2200202	AQ2200-202 Interface Module	3.05 and later

Model	Module Name/Application Name	AQ2211/AQ2212 Version (FIRM VER)
810518906	AQ2200-231 Optical Sensor Head (Long-Wavelength Sensor)	1.01 and later
AQ2200232	AQ2200-232 Optical Sensor Head (Long-Wavelength Sensor)	3.05 and later
810518907	AQ2200-241 Optical Sensor Head (Short-Wavelength Sensor)	1.01 and later
AQ2200242	AQ2200-242 Optical Sensor Head (Short-Wavelength Sensor)	3.06 and later
810518908	AQ2200-211 Sensor Module (High-Sensitivity Sensor)	1.01 and later
735122	AQ2200-221 Sensor Module (Dual)	1.01 and later
735125	AQ2200-215 Sensor Module (High Power Sensor)	1.01 and later
735185	AQ2200-271 ORL Module	1.01 and later
810518915	AQ2200-311 ATTN Module	1.01 and later
735131	AQ2200-311A ATTN Module	1.01 and later
AQ2200312	AQ2200-312 ATTN Module	3.04 and later
735133	AQ2200-331 ATTN Module (Built-in Monitor Power Meter)	1.01 and later
AQ2200332	AQ2200-332 ATTN Module (Built-in Monitor Power Meter)	3.04 and later
AQ2200342	AQ2200-342 DUAL ATTN Module (Built-in Monitor Power Meters)	3.01 and later
735141	AQ2200-411 OSW Module	1.01 and later
735142	AQ2200-421 OSW Module (Dual)	1.01 and later
735143	AQ2200-412 OSW Module (1 × 16)	1.01 and later
810518801	AQ2200-601 BERT Module	2.10 and later
810518802	AQ2200-621 10 Gbit/s Optical Modulator (Wavelength 1.55 μm)	2.10 and later
810518804	AQ2200-622 10 Gbit/s Optical Modulator (Wavelength 1.31 μm)	2.10 and later
810518803	AQ2200-631 10 Gbit/s Optical Receiver	2.10 and later
735161	AQ2200-641 XFP Interface Module	2.01 and later
735162	AQ2200-642 Transceiver I/F Module	2.01 and later
735163	AQ2200-651 SG Module	2.01 and later

Compatibility between the AQ2201/AQ2202 Software Version and AQ2200 Series Modules

Some modules cannot be used with older versions of the AQ2201/AQ2202 software. Refer to the table below for version requirements.

If your AQ2201/AQ2202 requires a newer version of the software, download from our website.

To determine the software version, press the SYSTEM key and then the "Information". The version number is displayed under "Soft Version" in the Overview screen.

Model	Module Name/Application Name	AQ2201/AQ2202 Version (Soft Version)
810518901	AQ2200-111 DFB-LD Module	2.0 and later
810518902	AQ2200-141 FP-LD Module	2.0 and later
810518903	AQ2200-142 DUAL FP-LD Module	2.0 and later
810518904	AQ2200-136 TLS Module	2.0 and later
810518905	AQ2200-201 Interface Module	2.0 and later
810518906	AQ2200-231 Optical Sensor Head (Long-Wavelength Sensor)	2.0 and later
810518907	AQ2200-241 Optical Sensor Head (Short-Wavelength Sensor)	2.0 and later
810518908	AQ2200-211 Sensor Module (High-Sensitivity Sensor)	2.0 and later
735122	AQ2200-221 Sensor Module (Dual)	5.0 and later
735125	AQ2200-215 Sensor Module (High Power Sensor)	6.0 and later
735185	AQ2200-271 ORL Module	8.01 and later
810518915	AQ2200-311 ATTN Module	4.0 and later
735131	AQ2200-311A ATTN Module	8.01 and later
735133	AQ2200-331 ATTN Module (Built-in Monitor Power Meter)	5.0 and later
735141	AQ2200-411 OSW Module	5.0 and later
735142	AQ2200-421 OSW Module (Dual)	5.0 and later
735143	AQ2200-412 OSW Module (1 × 16)	7.0 and later
810518801	AQ2200-601 BERT Module	3.0 and later
810518802	AQ2200-621 10 Gbit/s Optical Modulator (Wavelength 1.55 μm)	4.0 and later
810518804	AQ2200-622 10 Gbit/s Optical Modulator (Wavelength 1.31 μm)	4.0 and later
810518803	AQ2200-631 10 Gbit/s Optical Receiver	4.0 and later
735161	AQ2200-641 XFP Interface Module	7.0 and later

Checking the Contents of the Package

If some of the contents are not correct or missing or if there is physical damage, contact the dealer from which you purchased them. Also, check that the model and suffix code on the name plate on the side panel of the module match those of your order.

AQ2200-111 DFB-LD Module (MODEL 810518901)

Item	Suffix Code	Description
Wavelength	-Mxxxx	See the list of supported wavelengths below.
	-W1310	1310 nm
	-W1490	1490 nm
Optical connector	-FCA	FC/Angled PC connector
Optical output level	-P10	10 mW optical output
	-P20	20 mW optical output
Optical fiber	-SMF	SM fiber
	-PMF	PM fiber
External modulation	-MODN	No external modulation
	-MODS	External modulation (sine)
	-MODC	External modulation (chop)

• DFB-LD Module Applicable Wavelengths

UNIT Optical Frequency: THz, Wavelength: nm

Suffix Code	Optical Frequency	Wavelength	Suffix Code	Optical Frequency	Wavelength
M0290	191.60	1564.679	M0145	193.85	1546.518
M0275	191.65	1564.271	M0160	193.90	1546.119
M0270	191.70	1563.863	M0165	193.95	1545.720
M0255	191.75	1563.455	M0180	194.00	1545.322
M0250	191.80	1563.047	M0185	194.05	1544.924
M0235	191.85	1562.640	M0200	194.10	1544.526
M0230	191.90	1562.233	M0205	194.15	1544.128
M0215	191.95	1561.826	M0220	194.20	1543.730
M0210	192.00	1561.419	M0225	194.25	1543.333
M0195	192.05	1561.013	M0240	194.30	1542.936
M0190	192.10	1560.606	M0245	194.35	1542.539
M0175	192.15	1560.200	M0260	194.40	1542.142
M0170	192.20	1559.794	M0265	194.45	1541.746
M0155	192.25	1559.389	M0280	194.50	1541.349
M0150	192.30	1558.983	M0285	194.55	1540.953
M0135	192.35	1558.578	M0300	194.60	1540.557
M0130	192.40	1558.173	M0305	194.65	1540.162
M0115	192.45	1557.768	M0320	194.70	1539.766
M0110	192.50	1557.363	M0325	194.75	1539.371
M0095	192.55	1556.959	M0340	194.80	1538.976
M0090	192.60	1556.555	M0345	194.85	1538.581
M0075	192.65	1556.151	M0360	194.90	1538.186
M0070	192.70	1555.747	M0365	194.95	1537.792
M0055	192.75	1555.343	M0380	195.00	1537.397
M0050	192.80	1554.940	M0385	195.05	1537.003
M0035	192.85	1554.537	M0400	195.10	1536.609
M0030	192.90	1554.134	M0405	195.15	1536.216
M0015	192.95	1553.731	M0420	195.20	1535.822
M0010	193.00	1553.329	M0425	195.25	1535.429
M0005	193.05	1552.926	M0440	195.30	1535.036
M0000	193.10	1552.524	M0445	195.35	1534.643
M000H	193.15	1552.122	M0460	195.40	1534.250
M0020	193.20	1551.721	M0465	195.45	1533.858
M0025	193.25	1551.319	M0480	195.50	1533.465
M0040	193.30	1550.918	M0485	195.55	1533.073
M0045	193.35	1550.517	M0500	195.60	1532.681
M0060	193.40	1550.116	M0505	195.65	1532.290
M0065	193.45	1549.715	M0520	195.70	1531.898
M0080	193.50	1549.315	M0525	195.75	1531.507
M0085	193.55	1548.915	M0540	195.80	1531.116
M0100	193.60	1548.515	M0545	195.85	1530.725
M0105	193.65	1548.115	M0560	195.90	1530.334
M0120	193.70	1547.715	W1310	228.85	1310.000
M0125	193.75	1547.316	W1490	201.203	1490.000
M0140	193.80	1546.917			

• Accessories (*: Already attached to the module)

Name	Q'ty	Notes
Protection cap*	1	Green
Protection cap*	1	White (for use with the external modulation option)
User's manual	1	This manual

AQ2200-112 LS Module (MODEL AQ2200112)

Item	Suffix Code	Description
Wavelength	-D300	DFB-LD, 1310 nm
	-D500	DFB-LD, 1550 nm
	-D600	DFB-LD, 1625 nm
	-D700	DFB-LD, 1650 nm
	-D3D3	DFB-LD, Ch1: 1310 nm, Ch2: 1310 nm
	-D3D5	DFB-LD, Ch1: 1310 nm, Ch2: 1550 nm
	-D3D6	DFB-LD, Ch1: 1310 nm, Ch2: 1625 nm
	-D3D7	DFB-LD, Ch1: 1310 nm, Ch2: 1650 nm
	-D5D5	DFB-LD, Ch1: 1550 nm, Ch2: 1550 nm
	-D5D6	DFB-LD, Ch1: 1550 nm, Ch2: 1625 nm
-D5D7	DFB-LD, Ch1: 1550 nm, Ch2: 1650 nm	
-D6D6	DFB-LD, Ch1: 1625 nm, Ch2: 1625 nm	
-D6D7	DFB-LD, Ch1: 1625 nm, Ch2: 1650 nm	
-D7D7	DFB-LD, Ch1: 1650 nm, Ch2: 1650 nm	
Optical connector	-FCA	FC/Angled PC connector

• Accessories (*: Already attached to the module)

Name	Q'ty	Notes
Protection cap*	1	1-channel model (-D300, -D500, -D600, -D700)
	2	2-channel model (-D3D3, -D3D5, -D3D6, -D3D7, -D5D5, -D5D6, -D5D7, -D6D6, -D6D7, -D7D7)
User's manual	1	This manual

AQ2200-141 FP-LD Module (MODEL 810518902), AQ2200-142 DUAL FP-LD Module (MODEL 810518903)

Item	Suffix Code	Description
Wavelength	-W1310	1310 nm (Model 810518902)
	-W1550	1550 nm (Model 810518902)
	-W135D	1310/1350 nm (Model 810518903)
Optical connector	/FCC	AQ9441 (FC) universal adapter
	/SCC	AQ9441 (SC) universal adapter

• Accessories (*: Already attached to the module)

Name	Q'ty	Notes
Protection cap*	1	
User's manual	1	This manual

AQ2200-131 Grid TLS Module (MODEL AQ2200131)

Item	Suffix Code	Description
Wavelength	-C	C-Band
	-L	L-Band
LD type	-T4	Standard type
	-T2	Advanced type (Fine tuning)
	-T6	Advanced type (Fine tuning)
Optical fiber	-PA	PM fiber
Optical connector	-FCC	FC/PC connector
	-FCA	FC/Angled PC connector

- Accessories (*: Already attached to the module)

Name	Q'ty	Notes
Protection cap*	1	
User's manual	1	This manual

AQ2200-132 Grid TLS Module (MODEL AQ2200132)

Item	Suffix Code	Description
Wavelength	-CC	CH1: C-Band, CH2: C-Band
	-LL	CH1: L-Band, CH2: L-Band
	-CL	CH1: C-Band, CH2: L-Band
LD type	-T4	Standard type
	-T2	Advanced type (Fine tuning)
	-T6	Advanced type (Fine tuning)
Optical fiber	-PA	PM fiber
Optical connector	-FCC	FC/PC connector
	-FCA	FC/Angled PC connector

- Accessories (*: Already attached to the module)

Name	Q'ty	Notes
Protection cap*	2	
User's manual	1	This manual

AQ2200-136 TLS Module (MODEL 810518904)

Item	Suffix Code	Description
Optical connector	-FCA	FC/Angled PC connector
Optical fiber	-SMF	SM fiber
Wavelength	-WLSTD	1440 to 1640 nm

- Accessories (*: Already attached to the module)

Name	Q'ty	Notes
Protection cap (small)*	2	Green
Protection cap (large)*	1	
User's manual	1	This manual

AQ2200-201 Interface Module (MODEL 810518905)

- Accessories

Name	Q'ty	Notes
Analog out plug	1	
Optical sensor head connector cable	1	
User's manual	1	This manual

AQ2200-202 Interface Module (MODEL 810518905)

- Accessories

Name	Q'ty	Notes
User's manual	1	This manual

AQ2200-231 Optical Sensor Head (MODEL 810518906), AQ2200-241 Optical Sensor Head (MODEL 810518907)

Item	Suffix Code	Description
Connector adapter	/FCC	AQ9335C (FC) connector adapter with a light shielding cap
	/SCC	AQ9335C (SC) connector adapter with a light shielding cap
	/STC	AQ9335C (ST) connector adapter with a light shielding cap

- Accessories (*: Already attached to the module)

Name	Q'ty	Notes
Protection cap*	1	
Ring*	1	
User's manual	1	This manual

AQ2200-232 Optical Sensor Head (MODEL AQ2200232), AQ2200-242 Optical Sensor Head (MODEL AQ2200242)

Item	Suffix Code	Description
Connection cable	-L1	Length: 1 m
	-L4	Length: 4 m
Connector adapter	/FCC	AQ9335C (FC) connector adapter with a light shielding cap
	/SCC	AQ9335C (SC) connector adapter with a light shielding cap
	/LCC	AQ9335C (LC) connector adapter with a dust protection cap
	/MUC	AQ9335C (MU) connector adapter with a dust protection cap

- Accessories (*: Already attached to the module)

Name	Q'ty	Notes
Protection cap*	1	
Ring*	1	
Connection cable (1 m, A6318WL)	1	Only for -L1
Connection cable (4 m, A6319WL)	1	Only for -L4
User's manual	1	This manual

AQ2200-211 Sensor Module (MODEL 810518908)

Item	Suffix Code	Description
Connector adapter	/FCC	AQ9447 (FC) connector adapter with a light shielding cap
	/SCC	AQ9447 (SC) connector adapter with a light shielding cap
	/STC	AQ9447 (ST) connector adapter with a light shielding cap

- Accessories (*: Already attached to the module)

Name	Q'ty	Notes
Protection cap*	1	
Analog out plug	1	
User's manual	1	This manual

**AQ2200-215 Sensor Module (MODEL 735125),
AQ2200-221 Sensor Module (MODEL 735122)**

Item	Suffix Code	Description
Connector adapter	-NON	No connector adapter
	-FCC	AQ9335C (FC) connector adapter with a light shielding cap
	-SCC	AQ9335C (SC) connector adapter with a light shielding cap
	-STC	AQ9335C (ST) connector adapter with a light shielding cap
	-LCC	AQ9335C (LC) connector adapter with a dust protection cap
	-MUC	AQ9335C (MU) connector adapter with a dust protection cap

- Accessories (*: Already attached to the module)

Name	Q'ty	Notes
Ring*	1	Model 735125
	2	Model 735122
Protective cover*	1	Model 735125
	2	Model 735122
User's manual	1	This manual

AQ2200-271 ORL Module (MODEL 735185)

Item	Suffix Code	Description
Optical fiber	-SA	SMF (10/125)

- Accessories (*: Already attached to the module)

Name	Q'ty	Notes
Protection cap*	3	
User's manual	1	This manual

AQ2200-311 ATTN Module (MODEL 810518915)

Item	Suffix Code	Description
Optical connector	-FCC	FC/PC connector
	-SCC	SC/PC connector
	-FCA	FC/Angled PC connector
	-SCA	SC/Angled PC connector
Monitor port	/MON	Monitor port included

- Accessories (*: Already attached to the module)

Name	Q'ty	Notes
Protection cap*	2	
	3	Monitor port included
User's manual	1	This manual

**AQ2200-311A ATTN Module (MODEL 735131),
AQ2200-312 ATTN Module (MODEL AQ2200312)**

Item	Suffix Code	Description
Optical fiber	-SA	SMF
	-G5	MMF (GI 50/125)
	-G6	MMF (GI 62.5/125)
Optical connector	-FCC	FC/PC connector
	-SCC	SC/PC connector
Monitor port	/MON	Monitor port included

- Accessories (*: Already attached to the module)

Name	Q'ty	Notes
Protection cap*	2	
	3	Monitor port included
User's manual	1	This manual

**AQ2200-331 ATTN Module (MODEL 735133),
AQ2200-332 ATTN Module (MODEL AQ2200332),**

Item	Suffix Code	Description
Optical fiber	-SA	SMF
	-G5	MMF (GI 50/125)
	-G6	MMF (GI 62.5/125)
Optical connector	-FCC	FC/PC connector
	-SCC	SC/PC connector

- Accessories (*: Already attached to the module)

Name	Q'ty	Notes
Protection cap*	2	
User's manual	1	This manual

AQ2200-342 ATTN Module (MODEL AQ2200342)

Item	Suffix Code	Description
Optical fiber	-SA	SMF
Optical connector	-FCC	FC/PC connector
	-SCA	FC/Angled PC connector

- Accessories (*: Already attached to the module)

Name	Q'ty	Notes
Protection cap*	4	
User's manual	1	This manual

AQ2200-411 OSW Module (MODEL 735141)

Item	Suffix Code	Description
Port configuration	-04	1 × 4 type
	-08	1 × 8 type
Optical fiber	-SA	SMF
	-G5	MMF (GI 50/125)
	-G6	MMF (GI 62.5/125)
Optical connector	-FCC	FC/PC connector
	-SCC	SC/PC connector

- Accessories (*: Already attached to the module)

Name	Q'ty	Notes
Protection cap*	5	1 × 4 type
	9	1 × 8 type
User's manual	1	This manual

AQ2200-412 OSW Module (MODEL 735143)

Item	Suffix Code	Description
Port configuration	-16	1 × 16 type
Optical fiber	-SA	SMF
	-G5	MMF (GI 50/125)
Optical connector	-FCC	FC/PC connector
	-SCC	SC/PC connector

- Accessories (*: Already attached to the module)

Name	Q'ty	Notes
Protection cap*	17	
User's manual	1	This manual

AQ2200-421 OSW Module (MODEL 735142)

Item	Suffix Code	Description
Port configuration	-21	1 × 2 type
	-22	2 × 2 type
Optical fiber	-SA	SMF
	-G5	MMF (GI 50/125)
	-G6	MMF (GI 62.5/125)
Optical connector	-FCC	FC/PC connector
	-SCC	SC/PC connector

- Accessories (*: Already attached to the module)

Name	Q'ty	Notes
Protection cap*	6	1 × 2 type
	8	2 × 2 type
User's manual	1	This manual

AQ2200-601 10 Gbit/s BERT Module (MODEL 810518801)

Item	Suffix Code	Description
Option	/M	64 Mbit-program pattern option. Win PC software for creation of pattern and CF memory are included.
	/P1	SDH/SONET frame pattern option. Win PC software for create of pattern.

- Accessories (*: Already attached to the module)

Name	Q'ty	Notes
Protection cap*	5	
Terminator for circuit protection*	6	
User's manual	1	This manual

AQ2200-621 10 Gbit/s Optical Modulator (MODEL 810518802),**AQ2200-622 10 Gbit/s Optical Modulator (MODEL 810518804)**

Item	Suffix Code	Description
Crystal orientation of the LN modulator	-A	X-cut
	-B	Z-cut
Optical connector	-S	SC connector
	-F	FC connector
Cable	/P	PMF (FC-SC) for 1.5 μm (Model 810518802)
		PMF (FC-SC) for 1.3 μm (Model 810518804)
	/U	U-link coaxial cable

- Accessories (*: Already attached to the module)

Name	Q'ty	Notes
Protection cap*	2	
Terminator for circuit protection*	1	
User's manual	1	This manual

AQ2200-631 10 Gbit/s Optical Receiver (MODEL 810518803)

Item	Suffix Code	Description
Optical connector	-S	SC connector
	-F	FC connector
Cable	/U	U-link coaxial cable

- Accessories (*: Already attached to the module)

Name	Q'ty	Notes
Protection cap*	1	
Terminator for circuit protection*	1	
User's manual	1	This manual

AQ2200-641 XFP Interface Module (MODEL 735161)

- Accessories (*: Already attached to the module)

Name	Q'ty	Notes
Protection cap*	3	
Terminator for circuit protection*	2	
User's manual	1	This manual

AQ2200-642 Transceiver I/F Module (MODEL 735162)

- Accessory

Name	Q'ty	Notes
User's manual	1	This manual

AQ2200-651 SG Module (MODEL 735163)

- Accessories (*: Already attached to the module)

Name	Q'ty	Notes
Protection cap*	1	
Terminator for circuit protection*	6	
User's manual	1	This manual