

RG-MUX Series

Transparent Distribution Module



01 Product Overview

The RG-MUX series transparent distribution modules are passive devices launched by Ruijie Networks for simplified optical switching. They are applicable to all-optical network scenarios.

Boasting CWDM technology, this series supports 16 standard wavelengths in the 1271–1571 nm range with 20 nm increments. Together with Ruijie's Simplified Optical Ethernet (SOE) Solution, each optical link is physically isolated with no optical splitting, enabling true 1:1 dedicated 10GE/2.5GE/GE bandwidth from the core to the room. The core switch integrates multiplexing functionality, reducing the need for active aggregation devices compared with traditional solutions and enabling passive aggregation nodes in the CWDM network. It also supports Virtual Switch Unit (VSU) to meet diverse network deployment requirements. In addition, the controller provides end-to-end network topology visualization, including device and port usage. In the event of a device failure, it enables rapid response and precise replacement with minimal service impact, helping the network recover quickly.

SOE Solution 3.0

- **RG-MUX-8LC/LC:** Building-side 8-port transparent distribution module, with each port providing 1GE/2.5GE/10GE rates, supporting rack and wall mounting. The RG-MUX-8LC/LC integrates a group of 16 wavelengths for CWDM transport, and can provide the maximum access capability of 8 ports, including 1 multiplexing port.
- **RG-MUX-8LC/LC-H:** Building-side 8-port transparent distribution module, with each port providing 1GE/2.5GE/10GE rates, high-end version with low insertion loss, designed for use with a dual-uplink splitter to enable dual uplinks, supporting rack and wall mounting. RG-MUX-8LC/LC-H integrates a group of 16 wavelengths for CWDM transport, provides the maximum access capability of 8 ports, including 1 multiplexing port, and features low insertion loss characteristics.
- **RG-MUX-EXT:** Building-side transparent distribution module's expansion module (optical splitter). It connects to the transparent distribution module to support 1-to-2 optical link splitting, enabling dual-uplink networking. This product comes with a patch cord and supports rack and wall mounting. Applied in VSU scenarios, RG-MUX-EXT provides two uplink splitting ports.
- **RG-MUX-BOX:** Building-side transparent distribution module's subrack, providing six slots for inserting transparent distribution modules or dual-uplink splitters, supporting rack and wall mounting. The RG-MUX-BOX is used with transparent distribution modules or dual-uplink splitters for rack deployment. It is shipped with filler panels, which can be removed during installation to insert transparent aggregation modules or dual-uplink splitters. The RG-MUX-BOX can be mounted in a building-side 19-inch rack or on a wall.

SOE Solution 4.0

- **RG-MUX-16LC/LC-H-BIDI:** 1:16 transparent distribution module with a single COM port for single-uplink, standalone deployment on the building side, high-end version with low insertion loss, providing 16 single-fiber BiDi downlink ports. The uplink COM port uses an LC/APC connector, and the downlink ports use LC/UPC connectors. It supports standalone deployment scenarios.
- **RG-MUX-16LC/LC-V-BIDI:** 1:16 transparent distribution module with dual COM ports for dual-uplink VSU deployment on the building side, high-end version with low insertion loss, providing 16 single-fiber BiDi downlink ports. The uplink COM ports use LC/APC connectors, and the downlink ports use LC/UPC connectors. It supports VSU deployment scenarios.
- **RG-MUX-BOX-H:** Subrack of the building-side transparent distribution module, 1 RU, providing three slots for inserting 16-port or 8-port transparent distribution modules or dual-uplink splitters.

Note:

- Transparent distribution modules must be used together with Ruijie CWDM transceivers.
- Products in SOE Solution 3.0 and SOE Solution 4.0 cannot be mixed in the same deployment.

02 Product Appearance

1:8 Transparent Distribution Products in SOE Solution 3.0

RG-MUX-8LC/LC



Front View of the RG-MUX-8LC/LC



Top View of the RG-MUX-8LC/LC

RG-MUX-8LC/LC-H

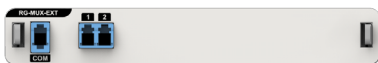


Front View of the RG-MUX-8LC/LC-H



Top View of the RG-MUX-8LC/LC-H

RG-MUX-EXT

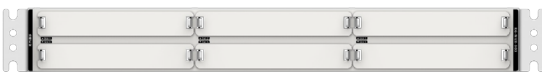


Front View of the RG-MUX-EXT

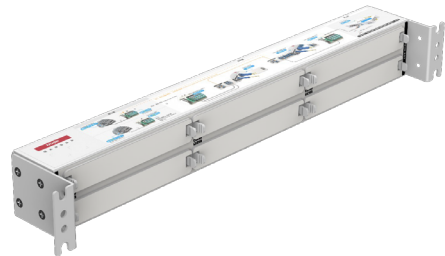


Top View of the RG-MUX-EXT

RG-MUX-BOX



Front View of the RG-MUX-BOX



Top View of the RG-MUX-BOX

1:16 Transparent Distribution Products in SOE Solution 4.0

RG-MUX-16LC/LC-H-BIDI

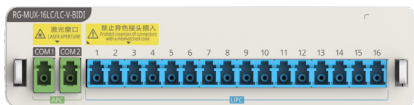


Front View of the RG-MUX-16LC/LC-H-BIDI

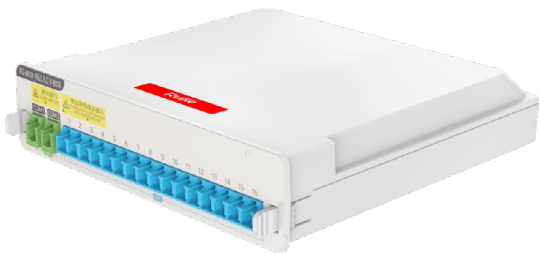


Top View of the RG-MUX-16LC/LC-H-BIDI

RG-MUX-16LC/LC-V-BIDI



Front View of the RG-MUX-16LC/LC-V-BIDI



Top View of the RG-MUX-16LC/LC-V-BIDI

RG-MUX-BOX-H

The subrack is designed for deploying transparent distribution modules and dual-uplink splitters in a standard 19-inch rack. It comes with hinged filler panels. During installation, simply insert the transparent distribution modules directly against the hinged filler panel.



Front View of the RG-MUX-BOX-H



Rear view of the RG-MUX-BOX-H

03 Product Specifications

1:8 Transparent Distribution Products in SOE Solution 3.0

RG-MUX-8LC/LC, RG-MUX-8LC/LC-H, and RG-MUX-EXT

Product Specifications	RG-MUX-8LC/LC	RG-MUX-8LC/LC-H	RG-MUX-EXT
Fixed service port	8 x demultiplexing ports, supporting 1GE/2.5GE/10GE 1 x multiplexing port	8 x demultiplexing ports, supporting 1GE/2.5GE/10GE 1 x multiplexing port, supporting connection to a dual-uplink splitter	1 x multiplexing port 2 x uplink ports for optical splitting
Wavelength range	1271 nm to 1571 nm (CWDM)	1271 nm to 1571 nm (CWDM)	1271 nm to 1571 nm (CWDM)
Channel spacing	20 nm	20 nm	20 nm
Channel bandwidth	±6 nm	±6 nm	±6 nm
Insertion loss	< 3.7 dB	< 2.6 dB	< 4.2 dB
Return loss	> 45 dB	> 45 dB	> 45 dB
Polarization loss	< 0.3 dB	< 0.3 dB	< 0.3 dB
Adjacent channel isolation	> 25 dB	> 25 dB	/
Non-adjacent channel isolation	> 35 dB	> 35 dB	/
Connector type	LC/UPC	LC/UPC	LC/UPC
Unit dimensions (W x D x H)	149.0 mm x 140.5 mm x 22.0 mm (5.87 in. x 5.53 in. x 0.87 in.)		
Shipping dimensions (W x D x H)	405 mm x 378 mm x 425 mm (15.94 in. x 14.88 in. x 16.73 in.)		
Unit weight	0.25 kg (0.55 lbs)	0.25 kg (0.55 lbs)	0.15 kg (0.33 lbs)
Shipping weight	4.53 kg (9.99 lbs)		
Mounting	Mounting on a wall or in a rack (cabinet)		
Temperature	Operating temperature: 0°C to 55°C (32°F to 131°F) Storage temperature: -40°C to +85°C (-40°F to +185°F)		
Humidity	Operating humidity: 5% to 95% RH (non-condensing) Storage humidity: 5% to 95% RH (non-condensing)		
Altitude	Same as the specification of the SOE switch		
Communication standard	GR-1221-Core and GR-1209-Core		

RG-MUX-BOX

Product Specifications	RG-MUX-BOX
Module slot	6 x transparent distribution module/dual-uplink splitter slots
Unit dimensions (W x D x H)	442 mm x 50 mm x 58 mm (17.4 in. x 1.97 in. x 2.28 in.)
Shipping dimensions (W x D x H)	557 mm x 358 mm x 271 mm (21.93 in. x 14.09 in. x 10.67 in.)
Unit weight	0.9 kg (1.98 lbs)
Shipping weight	11.5 kg (25.35 lbs)

Product Specifications	RG-MUX-BOX
Mounting	Mounting on a wall or in a rack (cabinet)
Temperature	Operating temperature: -40°C to +85°C (-40°F to +185°F) Storage temperature: -40°C to +85°C (-40°F to +185°F)
Humidity	Operating humidity: 5% to 95% RH (non-condensing) Storage humidity: 5% to 95% RH (non-condensing)
Altitude	Same as the specification of the SOE switch

1:16 Transparent Distribution Products in SOE Solution 4.0

RG-MUX-16LC/LC-H-BIDI and RG-MUX-16LC/LC-V-BIDI

Product Specifications	RG-MUX-16LC/LC-H-BIDI	RG-MUX-16LC/LC-V-BIDI
Product description	Building-side 16-port transparent distribution module, high-end version with low insertion loss, single-fiber BiDi downlink ports supporting 1GE/2.5GE/10GE rates, and a single uplink COM port, supporting standalone scenarios.	Building-side 16-port transparent distribution module, high-end version with low insertion loss, single-fiber BiDi downlink ports supporting 1GE/2.5GE/10GE rates, built-in dual-uplink splitter, and dual uplink COM ports, supporting VSU scenarios.
Wavelength range	1271–1571 nm (CWDM)	1271–1571 nm (CWDM)
Channel spacing	20 nm	20 nm
Channel bandwidth	±6 nm	±6 nm
Insertion loss	< 5.8 dB	< 9.8 dB
Return loss	> 45 dB	> 45 dB
Polarization loss	< 0.5 dB	< 0.5 dB
Adjacent channel isolation	> 25 dB	> 25 dB
Non-adjacent channel isolation	> 35 dB	> 35 dB
Connector type	LC/APC (uplink COM port) LC/UPC (downlink port)	LC/APC (uplink COM port) LC/UPC (downlink port)
Temperature	Operating temperature: 0°C to 55°C (32°F to 131°F) Storage temperature: -40°C to +85°C (-40°F to +185°F)	Operating temperature: 0°C to 55°C (32°F to 131°F) Storage temperature: -40°C to +85°C (-40°F to +185°F)
Humidity	Operating humidity: 5% to 95% RH (non-condensing) Storage humidity: 5% to 95% RH (non-condensing)	Operating humidity: 5% to 95% RH (non-condensing) Storage humidity: 5% to 95% RH (non-condensing)
Communication standard	GR-1221-Core and GR-1209-Core	GR-1221-Core and GR-1209-Core
Unit dimensions (W x D x H)	149.0 mm x 140.5 mm x 34.0 mm (5.87 in. x 5.53 in. x 1.34 in.)	149.0 mm x 140.5 mm x 34.0 mm (5.87 in. x 5.53 in. x 1.34 in.)
Unit weight	< 0.5 kg (1.10 lbs, excluding the package)	< 0.5 kg (1.10 lbs, excluding the package)

RG-MUX-BOX-H

Product Specifications	RG-MUX-BOX-H
Product description	Subrack of the building-side transparent distribution module, 1 RU, providing three slots for inserting 16-port or 8-port transparent distribution modules or dual-uplink splitters.
Temperature	Operating temperature: -40°C to +85°C (-40°F to +185°F) Storage temperature: -40°C to +85°C (-40°F to +185°F)
Humidity	Operating humidity: 5% to 95% RH (non-condensing) Storage humidity: 5% to 95% RH (non-condensing)
Unit dimensions (W x D x H)	442 mm x 50.4 mm x 43.6 mm (17.40 in. x 1.98 in. x 1.72 in., without rack mounting brackets)
Unit weight	0.6 kg (1.32 lbs, excluding the package)

04 Accessories

Core-side CWDM transceivers are used together with the corresponding switches. Access-side CWDM transceivers are used together with transparent aggregation modules and access switches.

The label of each access-side CWDM transceiver must match the demultiplexing port label on the transparent aggregation module. For example, the CWDM transceiver labeled Access 1 must be connected to Demultiplexing Port 1 on the transparent aggregation module with the same numbering. The same applies to the other transceivers and ports.

A CWDM transceiver operates at wavelengths ranging from 1271 nm to 1571 nm, with a 20 nm channel spacing.

The core-side CWDM transceivers (SFG-LR-SM, SFM-LR-SM, SFX-LR-SM, SFGP-LR-SM, SFMP-LR-SM, and SFXP-LR-SM) must be connected to the multiplexing port of the transparent aggregation module. Core-side CWDM transceivers are installed on the core switches in the core equipment room, while the transparent aggregation modules are installed in the building's ELV room.

1:8 Transparent Distribution Products in SOE Solution 3.0

SFG-LR-SM

This core-side SFG 1GE CWDM transceiver uses single-fiber, single-mode transmission, features an LC connector, and supports a transmission distance of up to 10 km (6.21 miles). It operates at wavelengths ranging from 1271 nm to 1571 nm and can support up to eight 1GE access CWDM transceivers at different wavelengths simultaneously for connecting eight access devices.



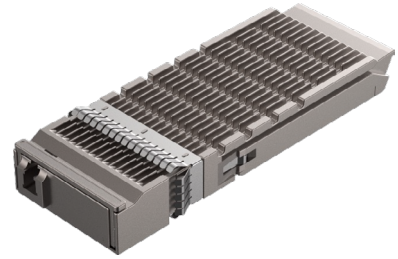
SFM-LR-SM

This core-side SFM 2.5GE CWDM transceiver uses single-fiber, single-mode transmission, features an LC connector, and supports a transmission distance of up to 10 km (6.21 miles). It operates at wavelengths ranging from 1271 nm to 1571 nm and can support up to eight 2.5GE access CWDM transceivers at different wavelengths simultaneously for connecting eight access devices.



SFX-LR-SM

This core-side SFX 10GE CWDM transceiver uses single-fiber, single-mode transmission, features an LC connector, and supports a transmission distance of up to 10 km (6.21 miles). It operates at wavelengths ranging from 1271 nm to 1571 nm and can support up to eight 10GE access CWDM transceivers at different wavelengths simultaneously for connecting eight access devices.

**1:8 CWDM Transceivers in SOE Solution 3.0 (Access Side)****GE-SFP-LR(A1-8)-H**

The GE-SFP-LR(A1-8)-H is a group of access-side high-power 1GE CWDM transceivers, including 8 transceivers with different wavelengths. They use single-mode fiber, support a maximum transmission distance of 10 km (6.21 miles), and feature LC connectors. The operating temperature ranges from 0°C to 70°C (32°F to 158°F, C-Temp). The models are as follows.

The eight CWDM transceivers are listed below:

Series	SFP Transceiver Model	Label	Rate
GE-SFP-LR(A1-8)-H	GE-SFP-LR-SM1431-A1-H	Access 1	1 Gbps
	GE-SFP-LR-SM1451-A2-H	Access 2	1 Gbps
	GE-SFP-LR-SM1471-A3-H	Access 3	1 Gbps
	GE-SFP-LR-SM1491-A4-H	Access 4	1 Gbps
	GE-SFP-LR-SM1511-A5-H	Access 5	1 Gbps
	GE-SFP-LR-SM1531-A6-H	Access 6	1 Gbps
	GE-SFP-LR-SM1551-A7-H	Access 7	1 Gbps
	GE-SFP-LR-SM1571-A8-H	Access 8	1 Gbps

MG-SFP-LR(A1-8)-H-E

The MG-SFP-LR(A1-8)-H-E is a group of access-side quasi-industrial wide-temperature high-power 2.5GE CWDM transceivers, including 8 transceivers with different wavelengths. They use single-mode fiber, support a maximum transmission distance of 10 km (6.21 miles), feature LC connectors, and support DDM. The operating temperature ranges from 0°C to 85°C (32°F to 185°F, quasi-industrial temperature). The models are as follows.

Series	SFP+ Transceiver Model	Label	Rate
MG-SFP-LR(A1-8)-H-E	MG-SFP-LR-SM1431-A1-H-E	Access 1	2.5 Gbps
	MG-SFP-LR-SM1451-A2-H-E	Access 2	2.5 Gbps
	MG-SFP-LR-SM1471-A3-H-E	Access 3	2.5 Gbps
	MG-SFP-LR-SM1491-A4-H-E	Access 4	2.5 Gbps
	MG-SFP-LR-SM1511-A5-H-E	Access 5	2.5 Gbps
	MG-SFP-LR-SM1531-A6-H-E	Access 6	2.5 Gbps
	MG-SFP-LR-SM1551-A7-H-E	Access 7	2.5 Gbps
	MG-SFP-LR-SM1571-A8-H-E	Access 8	2.5 Gbps

XG-SFP-LR(A1-8)-H

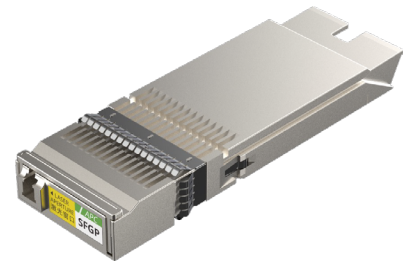
The XG-SFP-LR(A1-8)-H is a group of access-side high-power 10GE CWDM transceivers, including 8 transceivers with different wavelengths. They use single-mode fiber, support a maximum transmission distance of 10 km (6.21 miles), and feature LC connectors. The operating temperature ranges from 0°C to 70°C (32°F to 158°F, C-Temp). The models are as follows.

Series	SFP+ Transceiver Model	Label	Rate
XG-SFP-LR(A1-8)-H	XG-SFP-LR-SM1431-A1-H	Access 1	10 Gbps
	XG-SFP-LR-SM1451-A2-H	Access 2	10 Gbps
	XG-SFP-LR-SM1471-A3-H	Access 3	10 Gbps
	XG-SFP-LR-SM1491-A4-H	Access 4	10 Gbps
	XG-SFP-LR-SM1511-A5-H	Access 5	10 Gbps
	XG-SFP-LR-SM1531-A6-H	Access 6	10 Gbps
	XG-SFP-LR-SM1551-A7-H	Access 7	10 Gbps
	XG-SFP-LR-SM1571-A8-H	Access 8	10 Gbps

1:16 CWDM Transceivers in SOE Solution 4.0 (Core Side)

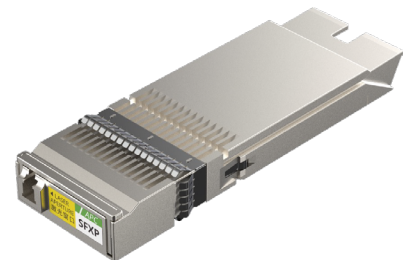
SFGP-LR-SM

This core-side SFGP 1GE high-density CWDM transceiver uses single-fiber, single-mode transmission, features an LC connector, and supports a transmission distance of up to 10 km (6.21 miles). It can support up to 16 different wavelengths simultaneously for connecting 16 access devices.



SFXP-LR-SM

This core-side SFXP 10GE high-density CWDM transceiver uses single-fiber, single-mode transmission, features an LC connector, and supports a transmission distance of up to 10 km (6.21 miles). It can support up to 16 different wavelengths simultaneously for connecting 16 access devices.



1:16 CWDM Transceivers in SOE Solution 4.0 (Access Side)

GE-SFP-LR(A1-16)-H-BIDI

The GE-SFP-LR(A1-16)-H-BIDI is a group of access-side high-power commercial-temperature (C-Temp) 1GE BiDi CWDM transceivers, including 16 transceivers with different wavelengths. They use single-mode fiber, support a maximum transmission distance of 10 km (6.21 miles), and feature single-fiber LC connectors.

Series	SFP Transceiver Model	Label	Rate	Operating Temperature
GE-SFP-LR(A1-16)-H-BIDI	GE-SFP-LR-SM1431-A1-H-BIDI	Access 1	1 Gbps	0°C to 70°C (32°F to 158°F) (Commercial-grade)
	GE-SFP-LR-SM1451-A2-H-BIDI	Access 2	1 Gbps	
	GE-SFP-LR-SM1471-A3-H-BIDI	Access 3	1 Gbps	
	GE-SFP-LR-SM1491-A4-H-BIDI	Access 4	1 Gbps	
	GE-SFP-LR-SM1511-A5-H-BIDI	Access 5	1 Gbps	
	GE-SFP-LR-SM1531-A6-H-BIDI	Access 6	1 Gbps	
	GE-SFP-LR-SM1551-A7-H-BIDI	Access 7	1 Gbps	
	GE-SFP-LR-SM1571-A8-H-BIDI	Access 8	1 Gbps	
	GE-SFP-LR-SM1271-A9-H-BIDI	Access 9	1 Gbps	
	GE-SFP-LR-SM1291-A10-H-BIDI	Access 10	1 Gbps	
	GE-SFP-LR-SM1311-A11-H-BIDI	Access 11	1 Gbps	
	GE-SFP-LR-SM1331-A12-H-BIDI	Access 12	1 Gbps	
	GE-SFP-LR-SM1351-A13-H-BIDI	Access 13	1 Gbps	
	GE-SFP-LR-SM1371-A14-H-BIDI	Access 14	1 Gbps	
	GE-SFP-LR-SM1391-A15-H-BIDI	Access 15	1 Gbps	
	GE-SFP-LR-SM1411-A16-H-BIDI	Access 16	1 Gbps	

GE-SFP-LR(A1-16)-H-E-BIDI

The GE-SFP-LR(A1-16)-H-E-BIDI is a group of access-side high-power quasi-industrial temperature 1GE BiDi CWDM transceivers, including 16 transceivers with different wavelengths. They use single-mode fiber, support a maximum transmission distance of 10 km (6.21 miles), and feature single-fiber LC connectors.

Series	SFP Transceiver Model	Label	Rate	Operating Temperature
GE-SFP-LR(A1-16)-H-E-BIDI	GE-SFP-LR-SM1431-A1-H-E-BIDI	Access 1	1 Gbps	0°C to 85°C (32°F to 185°F) (Quasi-industrial temperature)
	GE-SFP-LR-SM1451-A2-H-E-BIDI	Access 2	1 Gbps	
	GE-SFP-LR-SM1471-A3-H-E-BIDI	Access 3	1 Gbps	
	GE-SFP-LR-SM1491-A4-H-E-BIDI	Access 4	1 Gbps	
	GE-SFP-LR-SM1511-A5-H-E-BIDI	Access 5	1 Gbps	
	GE-SFP-LR-SM1531-A6-H-E-BIDI	Access 6	1 Gbps	
	GE-SFP-LR-SM1551-A7-H-E-BIDI	Access 7	1 Gbps	
	GE-SFP-LR-SM1571-A8-H-E-BIDI	Access 8	1 Gbps	
	GE-SFP-LR-SM1271-A9-H-E-BIDI	Access 9	1 Gbps	

Series	SFP Transceiver Model	Label	Rate	Operating Temperature
GE-SFP-LR(A1-16)-H-E-BIDI	GE-SFP-LR-SM1291-A10-H-E-BIDI	Access 10	1 Gbps	0°C to 85°C (32°F to 185°F) (Quasi-industrial temperature)
	GE-SFP-LR-SM1311-A11-H-E-BIDI	Access 11	1 Gbps	
	GE-SFP-LR-SM1331-A12-H-E-BIDI	Access 12	1 Gbps	
	GE-SFP-LR-SM1351-A13-H-E-BIDI	Access 13	1 Gbps	
	GE-SFP-LR-SM1371-A14-H-E-BIDI	Access 14	1 Gbps	
	GE-SFP-LR-SM1391-A15-H-E-BIDI	Access 15	1 Gbps	
	GE-SFP-LR-SM1411-A16-H-E-BIDI	Access 16	1 Gbps	

XG-SFP-LR(A1-16)-H-BIDI

The XG-SFP-LR(A1-16)-H-BIDI is a group of access-side high-power commercial-temperature (C-Temp) 10GE BiDi CWDM transceivers, including 16 transceivers with different wavelengths. They use single-mode fiber, support a maximum transmission distance of 10 km (6.21 miles), and feature single-fiber LC connectors.

Series	SFP Transceiver Model	Label	Rate	Operating Temperature
XG-SFP-LR(A1-16)-H-BIDI	XG-SFP-LR-SM1431-A1-H-BIDI	Access 1	10 Gbps	0°C to 70°C (32°F to 158°F) (Commercial-grade)
	XG-SFP-LR-SM1451-A2-H-BIDI	Access 2	10 Gbps	
	XG-SFP-LR-SM1471-A3-H-BIDI	Access 3	10 Gbps	
	XG-SFP-LR-SM1491-A4-H-BIDI	Access 4	10 Gbps	
	XG-SFP-LR-SM1511-A5-H-BIDI	Access 5	10 Gbps	
	XG-SFP-LR-SM1531-A6-H-BIDI	Access 6	10 Gbps	
	XG-SFP-LR-SM1551-A7-H-BIDI	Access 7	10 Gbps	
	XG-SFP-LR-SM1571-A8-H-BIDI	Access 8	10 Gbps	
	XG-SFP-LR-SM1271-A9-H-BIDI	Access 9	10 Gbps	
	XG-SFP-LR-SM1291-A10-H-BIDI	Access 10	10 Gbps	
	XG-SFP-LR-SM1311-A11-H-BIDI	Access 11	10 Gbps	
	XG-SFP-LR-SM1331-A12-H-BIDI	Access 12	10 Gbps	
	XG-SFP-LR-SM1351-A13-H-BIDI	Access 13	10 Gbps	
	XG-SFP-LR-SM1371-A14-H-BIDI	Access 14	10 Gbps	
	XG-SFP-LR-SM1391-A15-H-BIDI	Access 15	10 Gbps	
	XG-SFP-LR-SM1411-A16-H-BIDI	Access 16	10 Gbps	

XG-SFP-LR(A1-16)-H-E-BIDI

The XG-SFP-LR(A1-16)-H-E-BIDI is a group of access-side high-power quasi-industrial temperature 10GE BiDi CWDM transceivers, including 16 transceivers with different wavelengths. They use single-mode fiber, support a maximum transmission distance of 10 km (6.21 miles), and feature single-fiber LC connectors.

Series	SFP Transceiver Model	Label	Rate	Operating Temperature
XG-SFP-LR(A1-16)-H-E-BIDI	XG-SFP-LR-SM1431-A1-H-E-BIDI	Access 1	10 Gbps	0°C to 85°C (32°F to 185°F) (Quasi-industrial temperature)
	XG-SFP-LR-SM1451-A2-H-E-BIDI	Access 2	10 Gbps	
	XG-SFP-LR-SM1471-A3-H-E-BIDI	Access 3	10 Gbps	
	XG-SFP-LR-SM1491-A4-H-E-BIDI	Access 4	10 Gbps	
	XG-SFP-LR-SM1511-A5-H-E-BIDI	Access 5	10 Gbps	
	XG-SFP-LR-SM1531-A6-H-E-BIDI	Access 6	10 Gbps	
	XG-SFP-LR-SM1551-A7-H-E-BIDI	Access 7	10 Gbps	
	XG-SFP-LR-SM1571-A8-H-E-BIDI	Access 8	10 Gbps	
	XG-SFP-LR-SM1271-A9-H-E-BIDI	Access 9	10 Gbps	
	XG-SFP-LR-SM1291-A10-H-E-BIDI	Access 10	10 Gbps	
	XG-SFP-LR-SM1311-A11-H-E-BIDI	Access 11	10 Gbps	
	XG-SFP-LR-SM1331-A12-H-E-BIDI	Access 12	10 Gbps	
	XG-SFP-LR-SM1351-A13-H-E-BIDI	Access 13	10 Gbps	
	XG-SFP-LR-SM1371-A14-H-E-BIDI	Access 14	10 Gbps	
	XG-SFP-LR-SM1391-A15-H-E-BIDI	Access 15	10 Gbps	
	XG-SFP-LR-SM1411-A16-H-E-BIDI	Access 16	10 Gbps	

XG-SFP-LR(A1-16)-P-BIDI

The XG-SFP-LR(A1-16)-P-BIDI is a group of access-side ultra-high-power C-Temp 10GE BiDi CWDM transceivers, including 16 transceivers with different wavelengths. They use single-mode fiber, support a maximum transmission distance of 10 km (6.21 miles), and feature single-fiber LC connectors. They are used only in the 10GE dual-uplink scenario.

Series	SFP+ Transceiver Model	Label	Rate	Operating Temperature
XG-SFP-LR(A1-16)-P-BIDI	XG-SFP-LR-SM1431-A1-H-P-BIDI	Access 1	10 Gbps	0°C to 70°C (32°F to +158°F) (Commercial-grade)
	XG-SFP-LR-SM1451-A2-H-P-BIDI	Access 2	10 Gbps	
	XG-SFP-LR-SM1471-A3-H-P-BIDI	Access 3	10 Gbps	
	XG-SFP-LR-SM1491-A4-H-P-BIDI	Access 4	10 Gbps	
	XG-SFP-LR-SM1511-A5-H-P-BIDI	Access 5	10 Gbps	
	XG-SFP-LR-SM1531-A6-H-P-BIDI	Access 6	10 Gbps	
	XG-SFP-LR-SM1551-A7-H-P-BIDI	Access 7	10 Gbps	
	XG-SFP-LR-SM1571-A8-H-P-BIDI	Access 8	10 Gbps	
	XG-SFP-LR-SM1271-A9-H-P-BIDI	Access 9	10 Gbps	
	XG-SFP-LR-SM1291-A10-H-P-BIDI	Access 10	10 Gbps	

Series	SFP+ Transceiver Model	Label	Rate	Operating Temperature
XG-SFP-LR(A1-16)-P-BIDI	XG-SFP-LR-SM1311-A11-H-P-BIDI	Access 11	10 Gbps	0°C to 70°C (32°F to +158°F) (Commercial-grade)
	XG-SFP-LR-SM1331-A12-H-P-BIDI	Access 12	10 Gbps	
	XG-SFP-LR-SM1351-A13-H-P-BIDI	Access 13	10 Gbps	
	XG-SFP-LR-SM1371-A14-H-P-BIDI	Access 14	10 Gbps	
	XG-SFP-LR-SM1391-A15-H-P-BIDI	Access 15	10 Gbps	
	XG-SFP-LR-SM1411-A16-H-P-BIDI	Access 16	10 Gbps	

05 Ordering Information

Chassis

1:8 Transparent Distribution Products in SOE Solution 3.0

Model	Description
RG-MUX-8LC/LC	Building-side 8-port transparent distribution module, 8 x 1GE/2.5GE/10GE demultiplexing ports, 1 x multiplexing port
RG-MUX-8LC/LC-H	Building-side 8-port transparent distribution module (high-end version with low insertion loss), 8 x 1GE/2.5GE/10GE demultiplexing ports, 1 x multiplexing port, supporting connection to a dual-uplink splitter
RG-MUX-EXT	Building-side transparent distribution module's expansion module, or optical dual-uplink splitter (delivered with short fiber jumpers), which connects to the transparent distribution module and provides 1-to-2 optical signal splitting to realize dual-uplink networking; 1 x multiplexing port, 2 x uplink ports for optical splitting
RG-MUX-BOX	Building-side transparent distribution module subrack, 6 x transparent distribution module/dual-uplink splitter slots

1:16 Transparent Distribution Products in SOE Solution 4.0

Model	Description
RG-MUX-16LC/LC-H-BIDI	Building-side 16-port transparent distribution module, high-end version with low insertion loss, single-fiber BiDi downlink ports with LC/UPC connectors, and a single uplink COM port with an LC/APC connector, supporting standalone scenarios
RG-MUX-16LC/LC-V-BIDI	Building-side 16-port transparent distribution module, high-end version with low insertion loss, single-fiber BiDi downlink ports with LC/UPC connectors, and dual uplink COM ports with LC/APC connectors, supporting VSU scenarios
RG-MUX-BOX-H	Subrack of the building-side transparent distribution module, 1 RU, providing three slots, which can accommodate 16-port or 8-port transparent distribution modules or dual-uplink splitters

CWDM Transceiver

Note: The CWDM transceiver is not installed on the transparent distribution module.

- CWDM transceivers are installed on core switches in the core equipment room, and are connected to the multiplexing port of the transparent distribution module through fiber trunk cables.
- The access-side CWDM transceiver is installed on the access switch in the building's ELV room, and is interconnected with the demultiplexing port of the transparent distribution module through a short fiber.

1:8 CWDM Transceivers in SOE Solution 3.0

Model	Description
SFG-LR-SM	Core-side 1GE BASE-LR SFG transceiver, supporting 8 wavelengths, 10 km (6.21 miles), and LC connector
SFM-LR-SM	Core-side SFM 2.5GE CWDM transceiver, supporting 8 wavelengths (for eight access devices), single-fiber, single-mode, 10 km (6.21 miles), and LC connector
SFX-LR-SM	Core-side 10GE BASE-LR SFP+ transceiver, supporting 8 wavelengths, 10 km (6.21 miles), and LC connector
GE-SFP-LR(A1-8)-H	Access-side 1GE BASE-LR SFG transceiver, supporting 8 wavelengths, 10 km (6.21 miles), LC connector, and used in dual uplink scenarios
MG-SFP-LR(A1-8)-H-E	A group of access-side high-power quasi-industrial temperature 2.5GE CWDM transceivers, including 8 transceivers with different wavelengths, single-mode, 10 km (6.21 miles), and LC connectors
XG-SFP-LR(A1-8)-H	Access-side 10GE BASE-LR SFP+ transceiver, supporting 8 wavelengths, 10 km (6.21 miles), LC connector, and used in dual uplink scenarios

1:16 CWDM Transceivers in SOE Solution 4.0

Model	Description
SFGP-LR-SM	Core-side high-density CWDM 16GE SFGP transceiver, supporting 16 distinct wavelengths (corresponding to 16 1GE access devices), SMF, 10 km (6.21 miles), and single-fiber LC/APC connector
SFXP-LR-SM	Core-side high-density CWDM 160GE SFXP transceiver, supporting 16 distinct wavelengths (corresponding to 16 10GE access devices), SMF, 10 km (6.21 miles), and single-fiber LC/APC connector
GE-SFP-LR(A1-16)-H-BIDI	A group of 16 high-power commercial-temperature 1GE BiDi CWDM transceivers with different wavelengths for access-side deployment, SMF, 10 km (6.21 miles), and single-fiber LC/UPC connector
GE-SFP-LR(A1-16)-H-E-BIDI	A group of 16 high-power quasi-industrial temperature 1GE BiDi CWDM transceivers with different wavelengths for access-side deployment, SMF, 10 km (6.21 miles), and single-fiber LC/UPC connector
XG-SFP-LR(A1-16)-H-BIDI	A group of 16 high-power commercial-temperature 10GE BiDi CWDM transceivers with different wavelengths for access-side deployment, SMF, 10 km (6.21 miles), and single LC/UPC connector, designed to be used with single-uplink transparent distribution modules
XG-SFP-LR(A1-16)-H-E-BIDI	A group of 16 high-power quasi-industrial temperature 10GE BiDi CWDM transceivers with different wavelengths for access-side deployment, SMF, 10 km (6.21 miles), and single-fiber LC/UPC connector
XG-SFP-LR(A1-16)-P-BIDI	A group of 16 ultra-high-power commercial-temperature 10GE BiDi CWDM transceivers with different wavelengths for access-side deployment, SMF, 10 km (6.21 miles), and single-fiber LC/UPC connector, designed to be used with dual-uplink transparent distribution modules

06 Package Contents

Item	RG-MUX-8LC/LC RG-MUX-8LC/LC-H RG-MUX-EXT	RG-MUX-BOX
Chassis	1	1
Mounting bracket	2	2
Mounting screw	6	/
M4x8 cross recessed countersunk head screw, GB819-85	/	10
Network Product Warranty Manual and Hazardous Substance Statement	1	1
Cabling Record Sheet	1	/

Item	RG-MUX-16LC/LC-H-BIDI RG-MUX-16LC/LC-V-BIDI	RG-MUX-BOX-H
Chassis	1	1
Mounting bracket	2	2
Mounting screw	6	6
Quick installation Guide	1	1

07 Warranty

For more information about warranty terms and period, contact your local sales agency:

- Warranty terms: <https://www.ruijie.com/support/servicepolicy>
- Warranty period: <https://www.ruijie.com/en-global/support/warranty/check>

Note: The warranty terms are subject to the terms of different countries and distributors.

08 More Information

For more information about Ruijie Networks, visit the official website of Ruijie Networks or contact your local sales agency:

- Ruijie Networks official website: <https://www.ruijie.com/>
- Online support: <https://www.ruijie.com/support>
- Hotline support: <https://www.ruijie.com/support/hotline>
- Email support: service_rj@ruijie.com



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