

Ethernet 1000Mbps SFP Fiber Transceiver User's Manual (621-0171-000)

1. Overview

With the design of SFP (Small Form-factor Pluggable) fiber transceiver, user or network administrator can change the fiber type such as LC, BiDi-SC, etc. or multi and single mode in the way of hot swap. They are used for high-speed connection expansion, and all of them can be managed via the fiber intelligent switch with SFP slots.

2. Checklist

Before you start installing the SFP products, verify that the package contains the following:

- SFP Fiber Transceiver
- This User's Manual

Please notify your sales representative immediately if any of the aforementioned items is missing or damaged.

3. Model Description

Module Name	Description
SFP.0LC.202	1000Base-SX Fiber with multi-mode LC
SFP.0LC.212.XX	Gigabit Fiber with single-mode LC
SFP.OBS.621.201	1000Base-LX Fiber with BiDi-SC, 20Km, TX: 1550nm, RX: 1310nm
SFP.OBS.621.202	1000Base-LX Fiber with BiDi-SC, 20Km, TX: 1310nm, RX: 1550nm
SFP.DLC.212.10	1000Base-LX Fiber with single-mode LC, 10Km (with DDM)

Note:

- SFP.OBS.621.202 and SFP.OBS.621.201 must be installed in pairs, i.e. install SFP.OBS.621.202 at one end and SFP.OBS.621.201 at the other end.

The following are the model numbers of 1000Mbps SFP fiber transceiver series:

- 1000Base-SX LC, 220m, SFP Fiber transceiver (SFP.0LC.202)
- 1000Base-LX LC, 10km, SFP Fiber transceiver (SFP.0LC.212.10)
- 1000Base-LHX LC, 30km, SFP Fiber transceiver (SFP.0LC.212.30)
- 1000Base-XD LC, 50km, SFP Fiber transceiver (SFP.0LC.212.50)
- 1000Base-ZX LC, 70km, SFP Fiber transceiver (SFP.0LC.212.70)
- 1000Base-UX LC, 110km, SFP Fiber transceiver (SFP.0LC.212.B0)
- 1000Mbps BiDi-SC, type 1, 20km, SFP Fiber WDM transceiver (SFP.OBS.621.201)
- 1000Mbps BiDi-SC, type 2, 20km, SFP Fiber WDM transceiver (SFP.OBS.621.202)
- 1000Base-LX LC, 10km, SFP Fiber transceiver with DDM (Digit Diagnostic Monitoring) (SFP.DLC.212.10)

1000Mbps SFP Fiber transceiver is a Gigabit Ethernet port that fully complies with all IEEE 802.3z and 1000Base-SX/LX/LHX/XD/ZX/UX standards.

1000Mbps Single Fiber WDM transceiver is designed with an optic Wavelength Division Multiplexing (WDM) technology that transports bi-directional full duplex signal over a single fiber simultaneously.



Fig. 1 Front View of 1000Base-SX/LX LC SFP Fiber Transceiver



Fig. 2 Front View of 1000Base-LX BiDi SC SFP Fiber Transceiver

4. Cabling requirements for 1000SX/1000LX Module

1000Base-SX 850nm Fiber Module Models	Multi-mode Fiber Cable and Modal Bandwidth			
	Multi-mode 62.5/125µm		Multi-mode 50/125µm	
	Modal Bandwidth	Distance	Modal Bandwidth	Distance
	160MHz-Km	220m	400MHz-Km	500m
	200MHz-Km	275m	500MHz-Km	550m
1000Base-LX Fiber Module Models	SFP.0LC.212.10/30/50/70/100			
	Single-mode Fiber 9/125µm			
	Single-mode transceiver 1310nm 10, 30Km			
	Single-mode transceiver 1550nm 50, 70, 110Km			
1000Base-LX Single Fiber WDM Module	SFP.OBS.621.202	Single-Mode *20km	Tx(Transmit) 1310nm	Rx(Receive) 1550nm
	SFP.OBS.621.201	Single-Mode *20km	Tx(Transmit) 1550nm	Rx(Receive) 1310nm

*: Default module

Note: The above table lists the types of fiber that we support, and those else not listed here are available upon request.

5. Installing SFP Fiber Transceivers to the Fiber Intelligent Switch

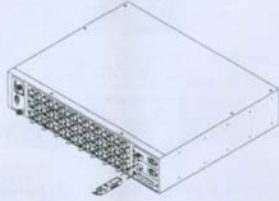


Fig. 3 Installation of SFP Fiber Transceiver

Note: The SFP modules are hot-swappable, so you can plug or unplug it before or after powering on.

- ⇒ Verify that the SFP module is the right model and conforms to the chassis
- ⇒ Slide the SFP module along two guides in the slot. Also be sure that the SFP module is properly seated against the slot connector
- ⇒ Install the media cable for network connection
- ⇒ Repeat the above steps, as needed, for each module to be installed into slot(s)
- ⇒ Have the power ON after the above procedures are done

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6. Technical Specifications

Fiber Connector:

- 1000Base-SX/LX:
 - 850nm LC multi-mode
 - 1310nm LC single-mode
 - 1550nm LC single-mode
- 1000Base-LX Single Fiber:

SFP-0BS.621.202	Single-Mode BiDi SC *20Km	TX(Transmit)	1310nm
		RX(Receive)	1550nm
SFP-0BS.621.201	Single-Mode BiDi SC *20Km	TX(Transmit)	1550nm
		RX(Receive)	1310nm

Cable and Maximum Length:

1000Base-SX LC M-M	Up to 220/275/500/550m, which depends on Multi-Mode Fiber type
1000Base-LX/LHX/XD/ZX/UX LC S-M	Single-Mode Fiber, up to 10/30/50/70/110Km
1000Base-LX WDM BiDi SC S-S-M	Single Fiber, BiDi SC 20Km

Standards:

Gigabit Ethernet 1000Base-SX/LX/LHX/XD/ZX/UX

Ambient Temperature: 0° to 50°C

Transmission Speed and Mode:

1000Mbps for Fiber(full-duplex only)

Fiber Optic Cable:

62.5/125, 50/125 μ m multi-mode
9/125 μ m single-mode

Humidity : 5% to 90%

Dimensions : 8.5(H) x 56(L) x 13.7(W) mm

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7. Ordering Information

- 1000Mbps SFP Fiber transceiver
 - SFP-0LC.202: LC Multi-mode
 - SFP-0LC.212.10: LC 10Km Single-mode
 - SFP-0LC.212.30: LC 30Km Single-mode
 - SFP-0LC.212.50: LC 50Km Single-mode
 - SFP-0LC.212.70: LC 70Km Single-mode
 - SFP-0LC.212.B0: LC 110Km Single-mode
- 1000Mbps SFP Fiber transceiver with DDM
 - SFP-DLC.212.10: LC 10Km Single-mode with DDM
- 1000Mbps SFP Fiber WDM transceiver
 - SFP-0BS.621.201: BiDi-SC 20Km Type 1
 - SFP-0BS.621.202: BiDi-SC 20Km Type 2

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