

Cisco 100BASE-X SFP Module for Fast Ethernet SFP Ports

The Cisco® 100BASE-X Small Form-factor Pluggable (SFP) module is a hot-swappable input/output device that plugs into a Fast Ethernet port or slot, linking the port with the network. See Figure 1.

Main features include the following:

- Hot-swappable when deployed; the switch or router does not have to reboot
- Allows easy adjustment to changes in network configuration
- Interchangeable with other Cisco 100BASE-X SFP models on the same line card
- Supports the Cisco Systems® quality ID feature that enables the switch or router to identify whether or not the SFP is a Cisco qualified SFP
- Optically interoperable with respective 100BASE-X Ethernet interfaces on the same link

Figure 1. Cisco 100M Ethernet SFP Module



The Cisco 100BASE-X SFP comes in six configurations:

- The Cisco 100BASE-FX SFP operates on ordinary multimode fiber-optic (MMF) link spans up to 2 kilometers long.
- The Cisco 100BASE-LX10 SFP operates on ordinary single-mode fiber-optic (SMF) link spans up to 10 kilometers long.
- The Cisco 100BASE-BX10-D and 100BASE-BX10-U SFPs operate on ordinary SMF single-strand link spans up to 10 kilometers long.
- The Cisco 100BASE-EX SFP operates on ordinary SMF link spans up to 40 kilometers long.
- The Cisco 100BASE-ZX SFP operates on ordinary SMF link spans up to 80 kilometers long.

TECHNICAL SPECIFICATIONS

Platform Support

The Cisco SFPs are supported across a variety of Cisco switches, routers, and optical transport devices. For more details, refer to the document *Cisco 100M Ethernet SFP Compatibility Matrix*.

Connectors and Cabling

Connectors are dual LC connectors for all models but 100BASE-BX10-U and 100BASE-BX10-D, which use single LC connectors.

Table 1 provides cabling specifications for the SFPs for installation in a Fast Ethernet SFP port. Note that all SFP ports have LC-type connectors, and the minimum cable distance for all SFPs listed is 2 meters.

Table 1. SFP Port Cabling Specifications

SFP	Wavelength (nm)	Fiber Type	Cable Distance
Cisco 100BASE-FX SFP	1310	MMF	2 km
Cisco 100BASE-LX SFP	1310	SMF	10 km
Cisco 100BASE-BX-U SFP	1310	SMF	10 km
Cisco 100BASE-BX-D SFP	1550	SMF	10 km
Cisco 100BASE-EX SFP	1310	SMF	40 km
Cisco 100BASE-ZX SFP	1550	SMF	80 km

Standards

- Compatible with IEEE 802.3ah Draft 3.0
- Compatible with standard as specified in IEEE 802.3; Table 2 gives information about fiber loss

Table 2. Fiber-Loss Budgets

SFP	Type	Transmit (dBm)		Receive (dBm)	
		Maximum	Minimum	Maximum	Minimum
Cisco 100BASE-FX SFP	100BASE-FX	-14	-20	-14	-31
Cisco 100BASE-LX SFP	100BASE-LX10	-8	-15	-8	-28
Cisco 100BASE-BX-U SFP	100BASE-BX10-U	-8	-14	-7	-28.2
Cisco 100BASE-BX-D SFP	100BASE-BS10-D	-8	-14	-7	-28.2
Cisco 100BASE-EX SFP	100BASE-EX	0	-5	-8	-28
Cisco 100BASE-ZX SFP	100BASE-ZX	2	-3	-8	-30

Dimensions

Dimensions (H x W x D): 8.5 x 13.4 x 56.5 mm

Environmental Conditions and Power Requirements

- Operating temperature range: 0 to 50°C (32 to 122°F)
- Storage temperature range: -40 to 85°C (-40 to 185°F)
- Electrical power requirements listed in Table 3

Table 3. Electrical Power Interface

Parameter	Symbol	Minimum	Typical	Maximum
Supply current	I _s	-	200 mA	300 mA
Surge current	I _{Surge}	-	-	30 mA
Input voltage	V ^{CC}	3.1V	3.3V	3.5V

Warranty

Standard warranty is 90 days. Extended warranties are available as an option under a Cisco SMARTnet[®] support contract for the Cisco switch or router chassis.

ORDERING INFORMATION

Table 4 gives ordering information for the Cisco SFP.

Table 4. Ordering Cisco SFP

Product Number	SFP
GLC-FE-100FX	100BASE-FX SFP for Fast Ethernet SFP Ports
GLC-FE-100LX	100BASE-LX10 SFP for Fast Ethernet SFP Ports
GLC-FE-100BX-U	100BASE-BX10-U SFP for Fast Ethernet SFP Ports
GLC-FE-100BX-D	100BASE-BX10-D SFP for Fast Ethernet SFP Ports
GLC-FE-100EX	100BASE-EX for Fast Ethernet SFP Ports
GLC-FE-100ZX	100BASE-ZX for Fast Ethernet SFP Ports

Regulatory and Standards Compliance

Safety standard: Laser Class 1 21CFR1040

ADDITIONAL INFORMATION

For more information about Cisco 100BASE-X SFPs for Fast Ethernet SFP ports, contact your Cisco representative or visit:

<http://www.cisco.com>.



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