

Cisco 100BASE-X SFP for Fast Ethernet SFP Ports

Product Overview

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

Main features include the following:

- Hot-swappable when deployed, the switch or router does not have to reboot.
- Supports the “pay-as-you-populate” model.
- Interchangeable with other 100BASE-X SFPs on the same line card.
- Supports the Cisco 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



Cisco 100BASE-FX SFP

The Cisco 100BASE-FX SFP (part numbers GLC-FE-100FX and GLC-FE-100FX-RGD) operates on ordinary multimode fiber-optic (MMF) link spans up to 2 kilometers long.

Cisco 100BASE-LX10 SFP

The Cisco 100BASE-LX10 SFP (part numbers GLC-FE-100LX and GLC-FE-100LX-RGD) operates on ordinary single-mode fiber-optic (SMF) link spans up to 10 kilometers long.

Cisco 100BASE-BX10 SFP

The Cisco 100BASE-BX10 (part numbers GLC-FE-100BX-D and GLC-FE-100BX-U) SFPs operate on ordinary SMF single-strand link spans up to 10 kilometers long.

Cisco 100BASE-EX SFP

The Cisco 100BASE-EX SFP (part number GLC-FE-100EX) operates on ordinary single-mode fiber-optic (SMF) link spans up to 40 kilometers long.

Cisco 100BASE-ZX SFP

The Cisco 100BASE-ZX SFP (part number GLC-FE-100ZX) operates on ordinary single-mode fiber-optic (SMF) link spans up to 80 kilometers long.

Technical Specifications

Platform Support

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

Connectors and Cabling

Connectors: Dual LC connector (GLC-FE-100FX, GLC-FE-100FX-RGD, GLC-FE-100LX, GLC-FE-100LX-RGD, GLC-FE-100EX and GLC-FE-100ZX) or single LC connector (GLC-FE-100BX-D and GLC-FE-100BX-U)

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 (MMF and SMF [G.652] is 2 meters [6.5 feet]).

Table 1. SFP Port Cabling Specifications

SFP	Wavelength (nm)	Fiber Type	Cable Distance
GLC-FE-100FX, GLC-FE-100FX-RGD	1310	MMF	2 km (6562 ft)
GLC-FE-100LX, GLC-FE-100LX-RGD	1310	SMF	10 km (32,810 ft)
GLC-FE-100BX-U	1310	SMF	10 km (32,810 ft)
GLC-FE-100BX-D	1550	SMF	10 km (32,810 ft)
GLC-FE-100EX	1310	SMF	40 km (131,240 ft)
GLC-FE-100ZX	1550	SMF	80 km (262,480 ft)

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
GLC-FE-100FX, GLC-FE-100FX-RGD	100BASE-FX	-14	-20	-14	-31
GLC-FE-100LX, GLC-FE-100LX-RGD	100BASE-LX10	-8	-15	-8	-28
GLC-FE-100BX-U	100BASE-BX10-U	-8	-14	-3	-28.2
GLC-FE-100BX-D	100BASE-BX10-D	-8	-14	-3	-28.2
GLC-FE-100EX	100BASE-EX	0	-5	-8	-28
GLC-FE-100ZX	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:**
 - **Commercial temperature range (COM):** 0 to 70°C (32 to 158°F), applicable to GLC-FE-100FX, GLC-FE-100LX, GLC-FE-100BX-D, GLC-FE-100BX-U, GLC-FE-100EX and GLC-FE-100ZX
 - **Industrial temperature range (IND):** -40 to 85°C (-40 to 185°F), applicable to GLC-FE-100FX-RGD and GLC-FE-100LX-RGD
- **Storage temperature range:** -40 to 85°C (-40 to 185°F)

Table 3. Electrical Power Interface

Parameter	Symbol	Minimum	Typical	Maximum	Units
Supply Current	I _s	–	200	300	mA
Surge Current	I _{Surge}	–	–	30	mA
Input Voltage	V _{cc}	3.1	3.3	3.5	V

Warranty

- **Standard warranty:** 90 days
- **Extended warranty (option):** Available 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-100FX-RGD	100BASE-FX Rugged SFP for Fast Ethernet SFP ports
GLC-FE-100LX	100BASE-LX10 SFP for Fast Ethernet SFP ports
GLC-FE-100LX-RGD	100BASE-LX10 Rugged 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

- Laser Class 1 21CFR1040

Additional Information

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

- United States and Canada: 800 553-6387
- Europe: 32 2 778 4242
- Australia: 61 2 9935 4107
- Other: 408 526-7209
- <http://www.cisco.com>



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