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Cisco 100GBASE CFP2 Modules

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Product overview

The Cisco® 100GBASE CFP2 modules offer customers 100 Gigabit Ethernet connectivity options for data center networking, enterprise core aggregation, and service provider transport applications.

Features and benefits

Main features of Cisco 100GBASE CFP2 modules include:

- Supports 100GBASE Ethernet and OTU3 rates
- Hot-swappable input-output device that plugs into an Ethernet CFP2 port of a Cisco switch or router
- Provides flexibility of interface choice
- Supports “pay-as-you-populate” model
- Supports Digital Optical Monitoring (DOM)
- Supports the Cisco quality identification (ID) feature, which enables a Cisco switch to identify whether the module is certified and tested by Cisco

Cisco CFP2-100G-ER4

The Cisco 100GBASE-ER4 (Figure 1) CFP2 module can support link lengths up to 40 kilometers on standard duplex single-mode fiber (SMF, G.652) terminated with LC optical connectors. The 100 Gigabit Ethernet signal is carried over four wavelengths. Multiplexing and demultiplexing of the four wavelengths are managed within the device. The Cisco 100GBASE-ER4 CFP2 module meets the IEEE 802.3ba requirements for 100GBASE-ER4 performance and also supports DOM of the transmit-and-receive optical signal levels.



Figure 1.
Cisco CFP2-100G-ER4

Technical specifications

Platform Support

Cisco CFP2 modules are supported on Cisco switches and routers. For more details, refer to the document [Cisco 100-Gigabit Ethernet Transceiver Modules Compatibility Matrix](#).

Connectors and Cabling

Connectors: dual LC connector.

Note: Only connections with patch cords with physical contact (PC) or ultraphysical contact (UPC) connectors are supported. Patch cords with APC connectors are not supported. All cables and cable assemblies used must be compliant with the standards specified in the standards section.

Table 1 provides cabling specifications for the Cisco CFP2 modules.

Table 1. CFP2 Port Fiber specifications

Cisco CFP2	Wavelength (nm)	Fiber Type	Core Size (microns)	Modal Bandwidth (MHz-km) ^{***}	Max Distance [*]	Digital Optical Monitoring (DOM)
Cisco CFP2-100G-ER4	1310 band (LAN-WDM)	SMF	G.652	-	40 km ^{****}	Yes

^{***} Specified at transmission wavelength.

^{****} Links longer than 30 km for the same link power budget are considered engineered links. Attenuation for such links needs to be less than the worst case specified for single-mode fiber.

Table 2 shows the main optical characteristics.

Table 2. CFP2 Port Fiber specifications

Product	Type	Average Transmit Power (dBm)		Average Receive Power (dBm)		Transmit and Receive Wavelength
		Max	Min	Max	Min	
Cisco CFP2-100G-ER4	100GBASE-ER4 1310 nm SMF	2.9 per lane	-2.9 per lane	4.5 per lane	-20.9 per lane	Four lanes: 1295.6 nm, 1300.1 nm, 1304.6 nm, and 1309.1 nm

Dimensions

- Dimensions (D x W x H): 144.8 x 82 x 13.6 mm.
- Cisco CFP2 modules typically weigh less than 300 grams.

Environmental conditions and power requirements

- The operating temperature range is from 32 to 158°F (0 to 70°C).
- The storage temperature range is -40 to 185° F (-40 to 85° C).
- The maximum power consumption per Cisco CFP2-100G-ER4 module is 8W.

Warranty

- Standard warranty: 90 days
- Expedited replacement available via a Cisco SMARTnet® Service support contract

Table 3 provides the ordering information for Cisco CFP2 modules and related cables.

Table 3. Ordering Cisco CFP2 modules and respective cables

Description	Part Number
Cisco 100GBASE-ER4 CFP2 Module for SMF (<40 km)	CFP2-100G-ER4

Regulatory and standards compliance

Standards

- GR-20-CORE: Generic Requirements for Optical Fiber and Optical Fiber Cable
- GR-326-CORE: Generic Requirements for Single-Mode Optical Connectors and Jumper Assemblies
- IEEE 802.3ba
- RoHS-6 compliant

Safety

Table 4 provides safety information.

Table 4. Safety information

Product	Laser Class
Cisco CFP2-100G-ER4	1

Cisco environmental sustainability

Information about Cisco's environmental sustainability policies and initiatives for our products, solutions, operations, and extended operations or supply chain is provided in the "Environment Sustainability" section of Cisco's [Corporate Social Responsibility](#) (CSR) Report.

Reference links to information about key environmental sustainability topics (mentioned in the "Environment Sustainability" section of the CSR Report) are provided in the following table:

Sustainability topic	Reference
Information on product material content laws and regulations	Materials
Information on electronic waste laws and regulations, including products, batteries, and packaging	WEEE compliance

Cisco makes the packaging data available for informational purposes only. It may not reflect the most current legal developments, and Cisco does not represent, warrant, or guarantee that it is complete, accurate, or up to date. This information is subject to change without notice.

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Additional information

For more information about Cisco 100GBASE CFP2 modules, contact your sales representative or visit <https://www.cisco.com/go/dcnm>.

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