

# Cisco 100GBASE CFP Modules

## Product Overview

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

## Features and Benefits

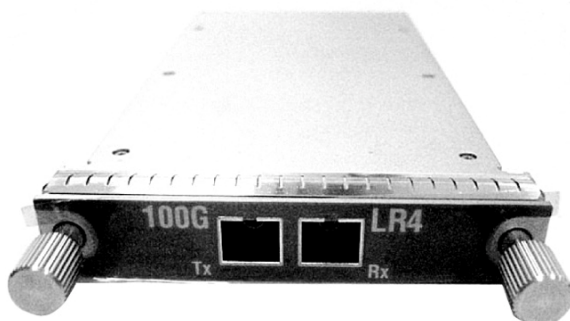
Main features of Cisco 100GBASE CFP modules include:

- Supports 100GBASE Ethernet
- Hot-swappable input/output device that plugs into an Ethernet CFP 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 that enables a Cisco switch to identify whether the module is certified and tested by Cisco

## Cisco CFP-100G-LR4

The Cisco 100GBASE-LR4 (Figure 1) CFP module supports a link length of 10 kilometers on standard single-mode fiber (SMF, G.652). 100 Gigabit Ethernet signal is carried over four wavelengths. Multiplexing and demultiplexing of the four wavelengths are managed within the device.

**Figure 1.** Cisco 100G-LR4 CFP module



## Cisco CFP-100G-SR10

The Cisco 100GBASE-SR10 (Figure 2) CFP module supports link lengths of 100 meters and 150 meters respectively on laser-optimized OM3 and OM4 multifiber cables. It primarily enables high-bandwidth 100-Gigabit links over 24-fiber ribbon cables terminated with MPO/MTP connectors. It can also be used in 10x10G mode along with ribbon to duplex fiber breakout cables for connectivity to ten 10GBASE-SR optical interfaces. Maximum channel insertion loss allowed is respectively 1.9dB over 100m of OM3 cable or 1.5dB over 150m of OM4 cable.

**Figure 2.** Cisco CFP-100G-SR10 module



## Technical Specifications

### Platform Support

Cisco CFP 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 SC/PC Connector (-LR4), 24-fiber MPO/MTP Connector (-SR10).

**Note:** Only connections with patch cords with PC or 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 CFP modules.

**Table 1.** CFP Port Cabling Specifications

Cisco CFP	Wavelength (nm)	Cable Type	Core Size (Microns)	Modal Bandwidth (MHz km) <sup>***</sup>	Cable Distance <sup>*</sup>
Cisco CFP-100G-LR4	1310	SMF	G.652	-	10km
Cisco CFP-100G-SR10	850	MMF	50.0 50.0	2000 (OM3) 4700 (OM4)	100m 150m <sup>**</sup>

<sup>\*</sup> Minimum cabling distance required is 2 meters for 100G-LR4 and 0.5 meters for 100G-SR10.

<sup>\*\*</sup> Considered an engineered link with maximum 1dB allocated to connectors and splice loss.

<sup>\*\*\*</sup> Specified at transmission wavelength.

Table 2 shows the main optical characteristics for the Cisco CFP modules.

**Table 2.** Optical Transmit and Receive Specifications

Product	Type	Transmit Power (dBm)		Receive Power (dBm)		Transmit and Receive Wavelength (nm)
		Max	Min	Max	Min	
Cisco CFP-100G-LR4	100GBASE-LR4 1310 nm SMF	4.5 per lane	-4.3 per lane	4.5 per lane	-10.6 per lane	Four lanes, 1295.6nm, 1300.1nm, 1304.6nm, 1309.1nm
Cisco CFP-100G-SR10	100GBASE-SR10 850 nm MMF	-1.0 per lane	-7.6 per lane	2.4 per lane	-9.5 per lane	Ten lanes, 840 to 860nm

## Dimensions

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

## Environmental Conditions and Power Requirements

- The operating temperature range is between 0 and 70°C (32 to 158°F); storage temperature range is -40 to 85°C (-40 to 185°F).
- The maximum power consumption per Cisco CFP-100G-LR4 module is 24W.
- The maximum power consumption per Cisco CFP-100G-SR10 module is 12W.

## Warranty

- Standard warranty: 90 days.
- Extended warranty (optional): Cisco CFP modules can be covered in a Cisco SMARTnet® Service support contract for the Cisco switch or router chassis.

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

**Table 3.** Ordering Cisco CFP Modules and Respective Cables

Description	Product Number
Cisco 100GBASE-LR4 CFP Module for SMF	CFP-100G-LR4
Cisco 100GBASE-SR10 CFP Module for MMF	CFP-100G-SR10

## 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
- CFP MSA: <http://www.cfp-msa.org>
- RoHS-compliant

Safety:

- Laser Class 1 21CFR-1040 LN#50 7/2001
- Laser Class 1 IEC60825-1

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## Additional Information

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




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