Cisco 100GBASE CXP Modules

Product Overview

The Cisco® CXP 100GBASE modules offer customers a wide variety of high-density 100Gbps connectivity solutions for short-reach data center networking, high-performance computing networks, enterprise core aggregation, and service provider transport applications.

Features and Benefits

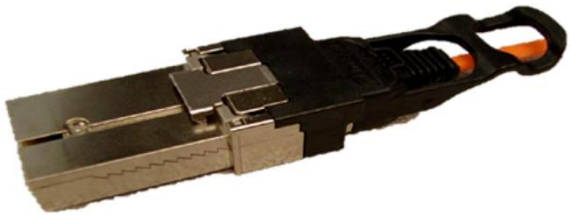
Primary features of Cisco CXP 100GBASE modules include:

- Support for 100 Gigabit Ethernet
- Hot-swappable input/output device that plugs into a Cisco CXP-module-based switch, router, or optical platform port
- Flexibility of interface choice
- Support for a "pay-as-you-grow" model
- Support for digital optical monitoring (DOM)
- CXP-100G-SR10 and CXP-100G-SR12 are both interoperable with any IEEE-compliant 100GBASE-SR10 form factors
- Support for the Cisco quality identification (ID) feature, which enables a Cisco platform to identify whether the module is certified and tested by Cisco
- Easy-to-use pull-release handle that is color coded for reach identification
- Capable of supporting 120Gb/s by utilizing all 12 optical lanes for high-density interconnect applications
- CXP-100G-SR10 supports breakout applications; each lane complies with 10GBASE-SR requirements and OTN rates up to 11.25Gb/s
- CXP-100G-SR10 and CXP-100G-SR12 both support breakout applications for 40GBASE-SR4
- Operating distance of maximum 100 meters over OM3 fibers or maximum 150 meters over OM4 fibers
- Power consumption of maximum 3.5W
- Operating case temperature of 0ºC to 70ºC
- MPO-24 optical receptacle

Cisco CXP 100GBASE-SR10 Module

The Cisco CXP 100GBASE-SR10 module (Figure 1) supports link lengths of 100m and 150m on laser-optimized OM3 and OM4 multifiber cables, respectively. The module delivers high-bandwidth 100-gigabit links over 24-fiber ribbon cables terminated with MPO/MTP-24 optical connectors. It can also be used in 10 x 10-Gb mode along with ribbon-to-duplex-fiber breakout cables for connectivity to ten 10GBASE-SR optical interfaces.

Figure 1. Cisco CXP 100GBASE-SR10 Module



Technical Specifications

Platform Support

Cisco CXP modules are supported on Cisco switches and routers. For more details, refer to Cisco 100 Gigabit Ethernet Transceiver Modules Compatibility Matrix.

Connectors and Cabling

- 24-fiber MPO/MTP connector (CXP 100GBASE-SR10 and CXP-100G-SR12 modules receive a female MPO/MTP-24 connector)

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 Regulatory and Standards Compliance section, later in this document.

Table 1 provides cabling specifications for the Cisco CXP modules.

Table 1. CXP Port Cabling Specifications

Cisco CXP Module	Wavelength (nm)	Cable Type	Core Size (Microns)	Modal Bandwidth (MHz*km)***	Cable Distance*
CXP-100G-SR10	850	MMF	50.0 50.0	2000 (OM3) 4700 (OM4)	100m 150m**
CXP-100G-SR12	850	MMF	50.0 50.0	2000 (OM3) 4700 (OM4)	100m 150m**

* Minimum cabling distance for -LR4 modules is 2m, according to the IEEE 802.3ba.

** Considered an engineered link with maximum 1dB allocated to connectors and splice loss.

*** Specified at transmission wavelength.

Table 2 shows the primary optical characteristics for the Cisco CXP 100GBASE modules.

Table 2. Optical Transmit and Receive Specifications

Module	Type	Transmit Power (dBm)*		Receive Power (dBm)*		Transmit and Receive Center Wavelength Range (nm)
		Maximum	Minimum	Maximum	Minimum	
CXP-100G-SR10	100GBASE-SR10 10GBASE-SR	-1.0 per lane	-7.6 per lane	2.4 per lane	-9.5 per lane	12 lanes: 840 to 860 nm
CXP-100G-SR12	100GBASE-SR10	2.5 per lane	-7.6 per lane	2.4 per lane	-9.5 per lane	12 lanes: 840 to 860 nm

* Transmitter and receiver power are in averages, unless specified.

Dimensions

Maximum outer dimensions for the CXP modules are (H x W x D) 13.3 x 24 x 62 mm (0.52 x 0.94 x 2.44 in).

The Cisco CXP modules typically weigh less than 200 grams (7 oz.).

Environmental Conditions and Power Requirements

- Storage temperature range: -40 to 85°C (-40 to 185°F)
- CXP operating temperature range: 0 to 70°C (32 to 158°F)
- CXP power consumption at 70°C: <3.5W maximum

Warranty

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

Ordering Information

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

Table 3. Ordering Information

Description	Product Number
100GBASE-SR10 CXP Module for MMF compliant to 10GBASE-SR	CXP-100G-SR10
100GBASE-SR10 CXP Module for MMF	CXP-100G-SR12

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
- GR-1435-CORE: Generic Requirements for Multifiber Optical Connectors
- IEEE 802.3ba (LR4, SR10)
- Reduction of Hazardous Substances (RoHS) 6 compliant

Safety:

- Laser Class 1 21CFR-1040 LN50 7/2001
- Laser Class 1 IEC60825-1

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Additional Information

For more information about Cisco CXP 100GBASE optics and copper modules, contact your sales representative or visit http://www.cisco.com/go/dcnm.

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