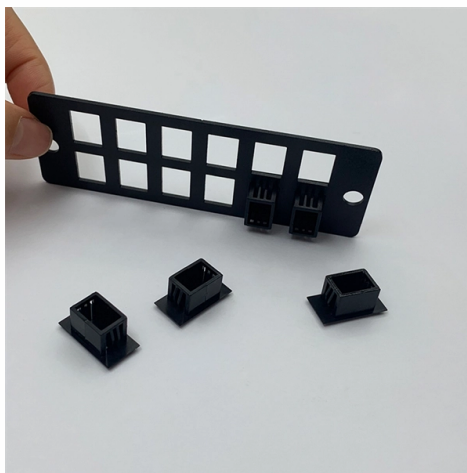


10 Gigabit Module Optical



Overview

Cisco 10GBASE SFP+ Modules Data SheetThe Cisco ® 10GBASE SFP+ modules (Figure 1) give you a wide variety of 10 Gigabit Ethernet connectivity options for 10.

Key Takeaways

A 10 Gigabit optical module is a hot-swappable transceiver that enables 10Gbps data transmission over fiber or copper connections, widely used in data centers, enterprise networks, and telecom infrastructure.

A 10 Gigabit optical module, commonly referred to as 10G SFP+, is a compact, hot-pluggable network interface module designed to transmit and receive data at speeds of up to 10 gigabits per second . It serves as the physical-layer connection between network devices such as switches, routers, and servers, and the transmission medium, which can be either fiber optic cabling or copper cables . The SFP+ form factor is an enhanced version of the original SFP standard, offering higher performance, lower power consumption, and greater port density .

Key Features

- Data Rate: Supports 10Gbps, with some variants also compatible with 1G, 2.5G, or 5G for backward compatibility .
- Form Factor: SFP+ (Small Form-factor Pluggable Plus), compatible with SFP slots but optimized for 10G .
- Connector Types: LC duplex for fiber optic cables or Direct Attach Copper (DAC) for short-range connections .

- **Transmission Distance:** Multimode fiber (SR) up to 300m, single-mode fiber (LR/ER/ZR) from 10km to 80km, and copper DAC up to 7-15m depending on type .
- **Power Efficiency:** Typically consumes 1W or less, making it more efficient than older XFP modules .
- **Hot-Pluggable:** Can be inserted or removed without powering down the network device .

Types

- **Fiber SFP+:** Uses LC connectors for longer distances; includes variations like 10GBASE-SR (short-range) and 10GBASE-LR (long-range) for multimode and single-mode fibers .
- **Copper SFP+:** Uses RJ-45 or DAC cables for short-range connections, ideal for server-to-switch links within racks .
- **Specialized Variants:** BiDi (bidirectional over single fiber), CWDM/DWDM (wavelength-division multiplexing), and tunable modules for metro or long-haul networks .

Applications

- **Data Centers:** High-speed interconnects between servers, storage, and core switches .
- **Enterprise Networks:** Campus networks, backbone links, and high-bandwidth applications like video conferencing and large database access .
- **Telecom Networks:** Metropolitan area networks, backbone networks, and base station backhaul .
- **Industrial and Security Systems:** Video surveillance and industrial automation requiring low-latency, high-bandwidth connections .

Advantages

- **High Bandwidth:** Ten times the capacity of standard gigabit modules .
 - **Flexibility:** Supports multiple protocols (Ethernet, Fibre Channel, SONET/SDH) and media types .
 - **Scalability:** Allows network upgrades to 10Gbps without replacing existing hardware .
 - **Low Power Consumption:** Efficient for high-density deployments .
- In summary, 10G optical modules are essential components for modern high-speed networks, providing reliable, scalable, and energy-efficient connectivity across a wide range of applications, from enterprise data centers to telecom backbones .

Article Content

Cisco 10GBASE SFP+ Modules Data Sheet

The Cisco® 10GBASE SFP+ modules (Figure 1) give you a wide variety of 10 Gigabit Ethernet connectivity options for data center,

10 Gigabit Fiber SFP+ Optical Transceiver Module

10 Gigabit Connectivity Small Size For High-Density Fiber Connections Compatibility Hot-Pluggable Digital Diagnostics Monitoring The Intellinet Network Solutions 10 Gigabit Fiber SFP+ Optical Transceiver Module (model 507479) is fully hot-pluggable, and that allows you to install the module without rebooting your network switch for uninterrupted network traffic. See more on intellinetsolutions Category: Repeaters & Transceivers Perle

10 Gigabit Optical Transceivers | SFP+ and XFP

Perle 10 Gigabit Optical Transceivers are interchangeable, compact media connectors and enable a single

SFP+ Optical Transceiver Modules (10G-SR/LR)

Code: SF-10GSFPPLCL-000 Genuine Amphenol 10GBASE-SR SFP+ Optical Transceiver Modules provide a high-density, high

10 Gigabit Fiber SFP+ Optical Transceiver Module

10 Gigabit Connectivity Whether you need a fast connection to your 10 GbE equipped server or NAS device, or if you simply want to

10 Gigabit Optical Transceivers | SFP+ and XFP Modules | Perle

Perle 10 Gigabit Optical Transceivers are interchangeable, compact media connectors and enable a single network device to

10G Multi-Mode Optical Module

SFP+ transceiver that supports 10G connections up to 400 m using multi-mode fiber with a duplex LC UPC connector.

D-Link 10 Gigabit Ethernet Optical Transceiver Multimode ...

The D-Link DEM-431XT optical transceiver plugs into Ethernet switches via GBIC slots allowing for high-speed connections over

10-GB X2 Transceiver Modules Installation note

10-GB X2 Transceiver Modules Installation note Overview The 10-Gigabit Ethernet X2 transceiver module is a hot-swappable I/O

Cisco 10GBASE X2 Modules Data Sheet

Product overview The Cisco ® 10GBASE X2 modules (Figure 1) offer customers a wide variety of 10 Gigabit Ethernet

10-Gigabit (10G) Ethernet Network Cables & Modules

Buy 10-Gigabit (10G) Ethernet Network Cables & Modules for your AI/datacenter network build-outs factory-direct from Amphenol,

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Quickly configure your fiber optic network with the UACC-OM-MM-10G-D 10G SFP+ Multi-Mode Optical Module. Each multi-mode

Ubiquiti 10Gbps Multi-Mode Optical Module 2-Pack for SFP+ Fiber ...

The 10 Gbps Multi-Mode Optical Module, model UACC-OM-MM-10G-D-2, from Ubiquiti is a high-performance, dual-rate optical

Intel Ethernet SFP+ SR Optics

The dual-rate Intel SFP+ module is compatible with 10 gigabit Ethernet (10 GbE) and gigabit Ethernet (1 GbE) data link protocols for

Cisco Transceiver Modules

Cisco Transceiver Modules - Learn product details such as features and benefits, as well as hardware and software specifications.

10Gtek 10GBase-SR SFP+ LC Transceiver, 10G 850nm MMF

10GBASE-SR SFP+ to LC Optical 10 Gigabit Ethernet Fiber transceiver module, 10GbE Multimode SFP+ (compatible with both

SFP+ Single Mode LC Module (10km)

Duplex LC optical interface Supports data rates of up to 10.31Gbps Supports 1310nm single mode network transmissions Low

Cisco 10GBASE-ER XENPAK Module

Cisco 10GBASE-ER XENPAK Module Cisco offers a range of Xenpack modular optics for 10 Gigabit Ethernet deployments. These

10 Gigabit Multimode SFP+ Fiber Optic Transceivers | High-Speed

The 10 Gigabit Multimode SFP+ Transceivers offer high-speed, reliable fiber optic connections for a wide range of network devices

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