

Optical Module 10 Gigabit Network



AI Overview

10G optical modules, primarily SFP+ transceivers, enable high-speed, low-latency, and flexible network connectivity for enterprise, data center, and telecom applications.

Overview of 10G Optical Modules

10G optical modules are high-speed transceivers that support 10 Gigabit per second (Gbps) data transmission over optical fiber. Common packaging types include SFP+, XFP, X2, and XENPAK, with SFP+ being the most widely used due to its compact size, low power consumption, and cost efficiency. These modules are compatible with multiple protocols such as Ethernet, Fibre Channel, and SONET/SDH, and support hot-plug functionality, allowing easy installation and replacement without powering down network equipment.

Types and Specifications

SFP+ Modules: The mainstream 10G module, available in short-range (SR) for multimode fiber up to 300 meters and long-range (LR/ER) for single-mode fiber up to 10–40 km.

Wavelengths: SR modules typically use 850nm, LR modules use 1310nm, and ER modules use 1550nm for extended reach.

Connectors: Most modules use LC duplex connectors, supporting simplex or duplex fiber configurations.

Power Consumption: SFP+ modules are energy-efficient, often consuming less than 1W, making them suitable for high-density deployments.

Applications

10G optical modules are widely deployed in:

- Data Centers:** For server-to-switch and switch-to-switch interconnects, supporting high-throughput applications and storage networks.
- Enterprise Networks:** Campus backbone networks, high-definition video conferencing, and large database access.
- Telecom Networks:** Metro Ethernet, base station backhaul, and fiber-to-the-premises (FTTP) deployments using XGS-PON ONTs for symmetrical 10G connectivity.
- Industrial and Security Networks:** High-bandwidth video surveillance and production network communications.

Advantages

- High Bandwidth:** 10 times the capacity of gigabit networks, supporting modern high-demand applications.
- Low Latency and Stability:** Ensures reliable transmission for cr...

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Ortronics Cisco SFP+ Module

Ortronics Cisco SFP+ Module - For Optical Network, Data Networking - 1 x LC Duplex 10GBase-BX Network - Optical Fiber - Single-mode - 10 Gigabit Ethernet - 10GBase-BX - 10 Gbit/s -

10Gb SFP+ RJ45 Transceiver, 10GBASE-T SFP to

The 10G RJ45 module uses the electrical signal to transmit data, allowing an upgrade to 10G by reusing existing copper architectures. This 10G SFP+ RJ45

Ubiquiti SFP+ Module UACC-OM-SFP10-1590

Ubiquiti SFP+ Module With 10GBase-DWDM technology, get up to 10Gbps data transfer rate using dense wavelength-division multiplexing Optimize the network's performance with 10 Gigabit Ethernet

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

Genuine Amphenol 10GBASE-SR SFP+ Optical Transceiver Modules provide a high-density, high-performance interface for 10-Gigabit Ethernet and Fibre

Alcatel-Lucent (Nokia) 3HE00564CA 01 10GBASE-LR XFP Optical

The Alcatel-Lucent (Nokia) 3HE00564CA 01 is a genuine original 10GBASE-LR XFP optical transceiver, manufactured by Finisar for Nokia/Alcatel-Lucent. Designed for carrier-grade 10 Gigabit Ethernet

Ubiquiti Compatible XGSPON ONU SFP+ 1270nm-TX/1577nm-RX

Overview The XGS-SFP-ONT-MAC-I is an SFP+ transceiver module engineered for 10-Gigabit capable symmetric passive optical network (XGS-PON) systems. It utilizes bidirectional transmission over a

Introduction of 10G SFP+ Optical Modules

10G SFP+optical module is a popular category widely used in data centers, enterprise networks, edge devices, and CPEs. Function: They're transceiver modules used for 10 Gigabit

QSFP28 Optical Transceiver Modules for Sale (100G) | Cables on

QSFP28 Optical Transceiver Modules (100G-SR/LR) Buy 100G QSFP28 Optical Transceiver Modules by Amphenol XGIGA Factory-Direct at Cables on Demand in 10GBASE-SR4 (Short-Range)

SFP-10G-ER Explained: Powering 40km 10Gbps

This comprehensive guide dives deep into the SFP-10G-ER optical transceiver module. Learn its technical specifications, key applications,

Cisco 10GBASE SFP+ Modules Data Sheet

A broad range of industry-compliant SFP+ modules for 10 Gigabit Ethernet deployments in diverse networking environments. Product overview The Cisco ® 10GBASE SFP+ modules (Figure

10G SFP+ Optical Transceivers | Transceiver Module

FS 10GbE SFP+ module solutions provide a wide variety of 10 Gigabit Ethernet connectivity options for data centers, enterprise wiring closets, Internet Service

XGSPON ONU SFP+ 1270nm-TX/1577nm-RX 9.953G-TX/9.953G-RX

OverviewThe XGS-SFP-ONT-MAC-I is a high-performance optical transceiver module designed for 10-Gigabit-capable passive optical network (XGS-PON) deployments. It functions as an integrated

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.

Ubiquiti SFP+ Module UACC-OM-MM-10G-D-20

Ubiquiti SFP+ Module The 10 Gbps Multi-mode Optical Module is a duplex transceiver that delivers up to 10 Gbps speed over distances up to 300 meters. Optimize the network's performance with 10 Gigabit

Ubiquiti UISP Fiber XGS/XG Optical Transceiver UACC-UF-OM-XGS

Ubiquiti UISP Fiber XGS/XG Optical Transceiver 10 Gbps optical transceiver module designed for the UISP Fiber OLT XGS. With 10GBase-X technology, enjoy up to 10Gbps data transfer rate over

Nokia 3HE11023AAAA01 10GBASE-SR SFP+ Optical Transceiver

The Nokia 3HE11023AAAA01 is a genuine original 10GBASE-SR SFP+ short-range optical transceiver, manufactured by Finisar for Nokia. Designed for high-speed 10 Gigabit Ethernet networks, this

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

Cables on Demand stocks hundreds of popular 10 Gigabit Ethernet products, including CAT6/CAT6a Network Patch Cables, Direct Attach Copper (DAC)

Gigabit SFP modules with fiber optic modes » [buy](#)

SFP modules are available in different varieties, including Gigabit and 10 Gigabit SFP modules, each meeting different bandwidth requirements. Enterprises can

[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, enterprise wiring closet, and service provider transport applications.

10 Gigabit Ethernet

The 10 gigabit module standard is the Enhanced Small Form-factor Pluggable transceiver, generally called SFP+. Based on the Small Form-factor Pluggable

Contact Us

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