

Gigabit Optical Mode Module



AI Overview

A gigabit optical module is used to transmit data at speeds up to 1 Gbps over fiber optic networks, enabling reliable, high-speed communication in enterprise, data center, and broadband applications.

Function and Purpose A gigabit optical module is a modular transceiver that converts electrical signals from network devices into optical signals for transmission over fiber optic cables, and vice versa. This allows switches, routers, and other network equipment to communicate over long distances with minimal signal loss. These modules are hot-swappable, meaning they can be installed or replaced without powering down the device, providing flexibility in network management.

Applications

- Enterprise Networks:** Gigabit optical modules provide stable connectivity for office networks, supporting data transfer, VoIP, and video conferencing.
- Data Centers:** They are widely used to interconnect servers, storage systems, and switches, balancing performance and cost for most applications.
- Broadband Services:** In telecommunications, gigabit optical modules are used in GPON (Gigabit Passive Optical Network) setups to deliver high-speed internet, IPTV, and VoIP to homes and businesses.

Advantages

- Moderate Bandwidth:** Supports up to 1.25 Gbps, sufficient for most small to medium-scale applications.
- Cost-Effective:** Lower cost compared to higher-speed modules like 10 Gbps, making it suitable for budget-conscious deployments.
- Compatibility:** Works with various fiber types (single-mode or multimode) and supports multiple connector types (LC or SC) for flexible network design.
- Reliability:** Provides stable and consistent performance for everyday networking needs.

Limitations While gigabit optical modules are versatile, they may not meet the demands of high-bandwidth applications such as cloud computing, big data analytics, or high-definition video streaming, where 10 Gbps or higher modules are preferred.

In summary, gigabit optical modules are essential components for enabling efficient, reliable, and cost-effective fiber optic communication across ente...

Article Content

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

Overview The 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

Arista Optics Modules and Cables

40 Gigabit Ethernet QSFP+ Optical Specifications ... * Proper optical attenuation is required for shorter links to protect the receiver from permanent damage ** Per IEEE 802.3 - Links beyond 30 km over

What Are The Types Of Gigabit Optical Modules

Gigabit optical modules are mainly used in Gigabit switches, Gigabit routers, servers, firewalls and other devices. Of course, they can also be used in storage devices, because gigabit

100GBASE QSFP-100G Modules Data Sheet

QSFP-100G Optical modules Features and benefits of Cisco QSFP modules Hot-swappable input/output device that plugs into a 100G Gigabit

Gigabit Single-mode SFP Optical Module SC Port

Industrial-grade gigabit single-mode single-fiber sc 20km fiber optic cable [1 pair] - temperature resistance: -40°C to 80°C

XFP transceiver

XFP modules use an LC fiber connector type to achieve higher density. Principal applications include 10 Gigabit Ethernet, 10 Gbit/s Fibre Channel, synchronous

How to distinguish whether an optical fiber module is single-mode or ...

Correctly distinguishing single-mode and multi-mode optical modules is critical for matching fiber patch cords, ensuring transmission stability, and avoiding network failures.

100GBASE QSFP-100G Modules Data Sheet

The Cisco QSFP-100G-SR-S Module is a pluggable optical transceiver with a duplex LC connector interface supporting link lengths of 70

100 Gigabit Ethernet

The 40/100 Gigabit Ethernet standards encompass a number of different Ethernet physical layer (PHY) specifications. A networking device may support different PHY types by means of pluggable

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Fiber Modules

SFP modules support very low EMI and excellent ESD protection. Featuring low power consumption, these fiber modules are ideal for enterprise LAN networks and other optical links.

Berns gigabit sfp transceiver $\propto$ Lc photoelectric conversion ...

Have you ever experienced: the network cable in the computer room suddenly breaks in the middle of pulling, and the fiber optic interface does not match and you stare blankly; temporary

Buy low power consumption sfp modules, Good quality low power ...

H3C Gigabit Optical Modules Product Overview Adopting advanced technologies, H3C Gigabit Optical Modules feature low power consumption, hot-swap capability and wide compatibility.

2X SFP Optical Module Gigabit Single-Mode Optical Module SFP-GE

2X SFP Optical Module Gigabit Single-Mode Optical Module SFP-GE-LX-SM1310 20KM Dual Fiber 1.25G for H3C Brand Melitt Ny På lager

SFP Optical Transceiver | SFP Optical Module | Perle

Multimode and single-mode fiber Gigabit Ethernet, Fast Ethernet, Fiber channel, ATM/SONET, SDH Hot-pluggable with durable metal enclosure Can be installed

Overview of SFP Gigabit Optical Module

The SFP (Small Formfactor Pluggable) gigabit optical module is a critical component in optical communication systems, used to achieve optical-to-electrical conversion.

Gigabit Fiber SFP Optical Transceiver Module

Compatibility in your network is everything, and the Intellinet SFP Transceiver

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.

Cisco SFP Modules for Gigabit Ethernet Applications

This data sheet describes the benefits, specifications, and ordering information for the Cisco SFP Modules for Gigabit Ethernet Applications.

How to choose the right optical module

For users, choosing the right optical module for their applications can be a major challenge. This article will provide readers with valuable references and suggestions from multiple

Gigabit Ethernet

1000BASE-T-capable network interface card made by Intel, which connects to a computer via PCI-X There are five physical layer standards for Gigabit Ethernet

Gigabit Fiber SFP Optical Transceiver Module

Compatibility in your network is everything, and the Intellinet SFP Transceiver Module (model 545006) delivers. Use it with any Intellinet SFP equipped network

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

Contact Us

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