

Gigabit Single-Mode Optical Module Ic Interface



AI Overview

Gigabit single-mode optical modules typically use LC or SC interfaces and operate over single-mode fiber (SMF) for long-distance transmission. Interface Type and Fiber Compatibility

Gigabit single-mode optical modules are designed to transmit data over single-mode fiber (SMF), which allows for long-distance communication, often up to 10 km or more depending on the module and fiber quality . The most common interface types for these modules are:

- LC (Lucent Connector):** A small form-factor connector widely used in modern SFP modules for high-density networking.
- SC (Subscriber Connector):** A larger connector type, sometimes used in older or specialized equipment . These connectors are used to physically connect the optical module to the fiber patch cord, ensuring proper alignment for efficient light transmission.

Transmission Characteristics

- Single fiber (simplex) modules:** Use a single strand of fiber for both transmitting and receiving signals, often employing different wavelengths for each direction. This design is cost-effective for long-distance backbone or metropolitan area networks .
- Dual fiber (duplex) modules:** Use two fibers, one for transmitting and one for receiving, and are more common in standard Gigabit Ethernet deployments. Duplex LC connectors are typical for these modules .

SFP Module Standards

Gigabit single-mode SFP modules support various IEEE 802.3 standards, including:

- 1000BASE-LX/LH:** Long-reach single-mode fiber, typically up to 10 km over SMF .
- 1000BASE-EX/ZX:** Extended reach, supporting distances up to 40 km or more depending on the module and fiber type .
- 1000BASE-BX:** Single-fiber bidirectional modules for FTTx applications, using different wavelengths for upstream and downstream communication .

Environmental Considerations

Modules are available in different operating temperature ranges:

- Commercial:** 0°C to 70°C, suitable for ind...

Article Content

F-SFP1G-SM

1GBASE-LX/LH SFP 1310NM 20KM DOM TRANSCEIVER -- SINGLE MODE FIBER - 1EA
The F-SFP1G-SM single-mode transceivers are small form factor pluggable modules for bi-directional serial

Industrial Gigabit Fiber SFP Optical Transceiver Module, Single-Mode

Also known as a mini-Gigabit Interface Converter (GBIC), this industrial SFP module's metal housing offers increased durability while reducing electromagnetic interference.

Choosing Between GBIC vs. SFP Modules: A

Learn about the types, advantages, disadvantages, and applications of GBIC and SFP modules. Compare the two to understand how to make the

OVTSC SFP Optical Module 1.25G Tx1310/Rx1550nm Single Fiber Single Mode ...

High-Speed Performance: Provides reliable 1.25G data transmission speeds designed specifically for seamless gigabit enterprise networking switch applications. Extended Transmission Range: Supports

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

What is an Optical Transceiver? – VCELINK

What are Optical Transceivers? The optical transceiver, also simply known as an optical module or fiber optic transceiver, is an integration of a

HMS Networks

HMS creates products that enable industrial equipment to communicate and share information with software and systems. In short: Hardware Meets Software™.

Top Optical Modules for POTN Deployment: SFP, QSFP, and OSFP

Connector interface: LC duplex, MPO, or MTP, depending on whether the fiber is single-mode or multi-mode. Power and thermal envelope: The heat generated by high-speed optics affects

1G Bidirectional Single-Mode Optical Module

SFP transceiver that supports 1G connections up to 3 km using single-mode fiber with a simplex LC UPC connector.

Gigabit 6-port L2+ managed bypass industrial PoE switch

L2+ managed bypass industrial PoE fiber switch with 4*10/100/1000M RJ45 ports and 2*100/1000M uplink SFP fiber ports. Port 1-4 can support IEEE 802.3 af/at

10G BiDi SFP+ 20km Tx1270/Rx1330

10GBASE-BX20 10G BiDi SFP+, 20km single fiber, Tx1270/Rx1330nm, 9dB budget, DOM. Matched-pair module. EU stock + lifetime warranty. €16.33.

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.

Optic Modules Datasheet

These platforms support multiple interface types and technologies such as Ethernet, ATM, and SONET. Depending on the deployment scenario, they support different pluggable optic modules that can be

1G SFP LX 1310nm 20km Single mode Transceiver

Featuring a built-in Semtec chip and reliable FP laser / PIN receiver, the SFP module delivers low power consumption and stable optical links for 1G single

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

1G SFP Transceivers | Mini-GBIC SFP Modules

FS gigabit ethernet transceiver solutions provide fibre or copper options including 1000BASE-SX, 1000BASE-LX/LH, 1000BASE-T etc., from 100m to 160km, for

SFP Optical Transceivers: How Pluggable Optics Are Reshaping

Compared to older GBIC (Gigabit Interface Converter) modules that preceded them, SFP transceivers occupy roughly half the physical space while delivering equal or superior performance.

Cisco SFP Modules for Gigabit Ethernet Applications

The industry-standard Cisco Small Form-Factor Pluggable (SFP) Gigabit Interface Converter (Figure 1) links your switches and routers to the network. The hot-swappable input/output device plugs into a

The Ultimate Guide to ZTE SFP Module Distance and Wavelength

The host device's ability to support Digital Optical Monitoring (DOM) is crucial for real-time network management, allowing administrators to monitor key parameters like optical power and temperature

1 Gbit/s SFP Optical/Electrical Modules

1 Gbit/s SFP optical/electrical module apply to GE interfaces for interconnection between GE optical and electrical interfaces. SFP-1000BaseT cannot be used on a combo port.

H3CSFP-XG-LX-SM1310-S 10G SFP+ Multi-mode Optical Module

High quality H3CSFP-XG-LX-SM1310-S 10G SFP+ Multi-mode Optical Module from China, China's leading product market Fibre Channel Switch product market, With strict quality control Fibre

Differences Between Optical Modules SFP, SFP+, CFP, XFP, QSFP?

Originally designed to replace single-channel SFPs with high-density optical modules, the QSFP is only 30% larger than a standard SFP module. The device supports rates from 100Mbps to

Contact Us

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