

Gigabit Single-Mode Fiber Interface



Article Overview

A Gigabit Single-Mode Fiber Interface is a 1Gbps SFP transceiver that enables long-distance Ethernet connectivity over single-mode fiber, typically supporting distances up to 10 km or more at 1310nm wavelength.

Overview

A Gigabit Single-Mode Fiber Interface uses a Small Form-Factor Pluggable (SFP) transceiver to convert electrical signals from a network device into optical signals suitable for single-mode fiber (SMF) transmission. These modules are hot-pluggable, allowing installation or replacement without powering down the switch or router. Single-mode fiber SFPs are ideal for long-distance links, such as campus backbones, industrial networks, or FTTx deployments.

Key Specifications

- Data Rate: 1 Gbps (Gigabit Ethernet)
- Fiber Type: Single-mode fiber (SMF)
- Wavelength: Typically 1310 nm for standard 10 km modules
- Connector Type: LC connectors are commonly used
- Maximum Distance: Up to 10 km for standard modules; extended versions can reach 40–70 km depending on the SFP type
- Form Factor: SFP (mini-GBIC), compatible with MSA-compliant switches and routers
- Operating Temperature: Industrial versions can operate from -40°C to 85°C

Article Content

Gigabit Media Converter | Gigabit Ethernet Fiber Media ...

Buy Gigabit fiber media converter designed to convert single mode, multimode of 10, 100 and 1000 Base fiber optic cable. This

SFP Transceiver

Utilizing LC connectors and operating at a 1310nm wavelength, it enables high-speed data transmission over single-mode fiber for

BiDi Gigabit Single Mode SC Media Converter, 10/100/1000M

BiDi Gigabit Single Mode SC Media Converter, 10/100/1000M Fiber to Ethernet Converter, 1000Base

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

Gigabit SFP Module: A Complete Guide to 1G SFP Transceivers

Learn what a gigabit SFP module is, how it works, main types, key specifications, and common use cases to choose the right 1G

10Gtek Gigabit SingleMode Fiber to Ethernet Media Converter

10Gtek's A7S2 series Media Converter is use to expanding existing Gigabit Ethernet networks. The

Industrial Gigabit Fiber SFP Optical Transceiver

Also known as a mini-Gigabit Interface Converter (GBIC), this industrial SFP module's metal housing offers

ipolex 1000Base-LX/LH SFP Transceiver, 1.25G SFP LC Fiber

Buy ipolex 1000Base-LX/LH SFP Transceiver, 1.25G SFP LC Fiber Module, Gigabit Single Mode Mini GBIC, 1310nm

What Are The Types Of Gigabit Optical Modules

The interface type of dual fiber optical module is duplex LC, and the optical fiber types are single-mode and multi

Multi-mode optical fiber

Applications The equipment used for communications over multi-mode optical fiber is less expensive than that for single-mode

SFP 1000Base-LX Single-mode Fibre Transceiver (80km)

Supporting full duplex, Gigabit speeds on singlemode fiber for distances of up to 80km on 9µm fiber. The unit features

Gigabit Fiber SFP Optical Transceiver Module

The transceiver is available as a mini-GBIC form factor, making it ideal for

Everything You Have to Learn About GBIC and SFP

Understanding GBIC Modules GBIC modules are designed to support Gigabit Ethernet and other protocols like Fiber

TP-Link Gigabit SFP Module | 1000Base-LX Single-mode Fiber Mini

Buy TP-Link Gigabit SFP Module | 1000Base-LX Single-mode Fiber Mini GBIC Module | Plug and Play | LC/UPC Interface | Up to

Cisco SFP Modules for Gigabit Ethernet Applications

1000BASE-EX SFP for long-reach single-mode fibers The 1000BASE-EX SFP operates on standard single-mode fiber-optic link

SFP: 1000BASE-LX Gigabit Ethernet Single-mode Fiber

All product-related documents, such as certificates, declarations of conformity, etc., which were issued prior to the conversion under

Single Mode ST Gigabit Fiber Media Converter

Supports Dual Speed Fiber Mode (configurable by dip switch) – Select 1000Base-LX or 100Base-LX – interconnecting

1 Gigabit Singlemode SFP Fiber Optic Transceivers

Our 1 Gigabit Singlemode SFP Transceivers offer high-performance, reliable connectivity for singlemode

Cisco SFP Modules for Gigabit Ethernet Applications

The 1000BASE-ZX SFP operates on standard single-mode fiber-optic link spans of up to approximately 70 km in length. The SFP

TP-Link Gigabit SFP Module | 1000Base-LX Single-Mode Fiber

Single-Mode MiniGBIC module, Supports full-duplex Wave Length: 1310nm. Data Rate: 1.25Gbps. Port Type: LC/UPC Max. Cable

Amazon : Sfp Single Mode

TP-Link Omada Gigabit SFP Module | 1000Base-LX Single-Mode Fiber Mini GBIC Module | Plug and Play | LC/UPC Interface | Up to

Single Mode Fiber SFP – SFP Single Mode LC Module

Each TEG-MGBS20 single mode fiber SFP is equipped with a duplex LC fiber connection interface,

Add a fiber/copper GbE SFP transceiver or Direct Attach Cable to a ...

1-Port GbE SFP Network Card, PCIe 2.1 x1, Intel I210-IS, 1GbE Controller, 1000BASE Copper/Fiber Optic, Single-Port Gigabit

TP-Link Omada Gigabit SFP Module | 1000Base-LX Single-Mode Fiber

Amazon : TP-Link Omada Gigabit SFP Module | 1000Base-LX Single-Mode Fiber Mini GBIC Module | Plug and

TL-MC101 | Gigabit Single-Mode Media Converter | TP

What This Product Does TL-MC101 is a media converter designed to convert 1000BASE-LX fiber to

1 Gigabit Singlemode SFP Fiber Optic Transceivers | Long-Distance

1 Gigabit Singlemode SFP Transceivers Our 1 Gigabit Singlemode SFP Transceivers offer high-performance, reliable connectivity for

Cisco SFP Modules for Gigabit Ethernet Applications

This data sheet describes the benefits, specifications, and ordering information for the

Fiber to Ethernet Media Converter, Gigabit Single Mode

Fiber to Ethernet Media Converter, Gigabit Single Mode SFP LC Converter, 1000Base-LX to 10/100/1000M

Contact Us

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