

Gigabit Fiber Single-Mode Module



Article Overview

Gigabit Fiber Single-Mode Modules are primarily used for long-distance, high-speed data transmission in enterprise, data center, metro, and telecom networks.

Overview

Single-mode fiber (SMF) SFP modules are compact, hot-swappable transceivers that convert electrical signals from network devices into optical signals for transmission over single-mode fiber cables, and vice versa at the receiving end. They typically use a small core diameter (around 9 microns) to allow a single light mode to propagate, minimizing modal dispersion and enabling long-distance communication, often exceeding 10 km and up to 160 km with specialized modules. These modules support Gigabit Ethernet (1 Gbps) and are compatible with standards such as 1000BASE-LX/LH, 1000BASE-EX, and 1000BASE-ZX.

Key Applications

1. Enterprise and Data Center Networks Single-mode SFP modules are widely used to interconnect switches, routers, and servers across large enterprise campuses or data centers. They provide reliable high-speed links for backbone connections, server-to-switch uplinks, and storage area networks (SANs), ensuring minimal signal degradation over long distances. 2. Metro and Wide Area Networks (MAN/WAN) These modules are ideal for metropolitan area networks, connecting multiple buildings or campuses within a city. Their long reach and low attenuation make them suitable for telecom providers and ISPs to deliver Gigabit Ethernet services over extended distances. 3. Fiber-to-the-Home (FTTx) and Customer Premises Equipmen...

Article Content

Apr 02, 2026

TP-LINK Omada Gigabit SFP Module, 1000Base-SX Multi-Mode Fiber

TP-LINK Omada Gigabit SFP Module, 1000Base-SX Multi-Mode Fiber Mini GBIC Module, Plug and Play, LC/UPC Interface, Up to

Dec 07, 2025

1G SFP Transceivers | Mini-GBIC SFP Modules

FS gigabit ethernet transceiver solutions provide fibre or copper options including 1000BASE-SX,

Sep 29, 2025

Single Mode Fiber SFP – SFP Single Mode LC Module (20km)

Each TEG-MGBS20 single mode fiber SFP is equipped with a duplex LC fiber connection interface, supports high-speed data rates

Jul 11, 2026

Cisco 10GBASE SFP+ Modules Data Sheet

It supports link lengths of up to about 80 kilometers on standard Single-Mode Fiber (SMF,

Feb 17, 2026

UBIQUITI U Fiber Single-Mode SFP 1G

Ubiquiti networks offers a variety of U fiber modules to suit all of your fiber connectivity applications.

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Gigabit Fiber SFP Optical Transceiver Module

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

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1 Gigabit Singlemode SFP Fiber Optic Transceivers

1 Gigabit Singlemode SFP Transceivers Our 1 Gigabit Singlemode SFP Transceivers offer high

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Gigabit single-mode single-core fiber optic module

Therefore, the 155M optical module is also called FE (100M) optical module, and the 1.25G optical module is also called

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Amazon : Single Mode Sfp

Discover high-performance single mode SFP modules for your network. Compatible with major brands like Cisco, Ubiquiti, and more.

Aug 26, 2025

Single Mode SFP Fiber Module

For horizontal shorter-length run, the Fastcabling modules are available with single mode fiber to suit your fiber connectivity

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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

Feb 18, 2026

TP-LINK TL-SM311LS

Single-Mode MiniGBIC module, Supports full-duplex. Max. Cable Length: 12.4miles (20km) for 9/125um Single-Mode Fiber.

Aug 14, 2025

Fiber Modules

SFP/SFP+ Modules Grandstream Network offers a wide variety of fiber modules. All of them are hot-pluggable small-form factor

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Multi-mode optical fiber

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

Apr 28, 2026

Cisco SFP Modules for Gigabit Ethernet Applications

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

Nov 24, 2025

Industrial Gigabit Fiber SFP Optical Transceiver

Compatibility in your network is everything, and this industrial SFP Transceiver Module delivers. Use it with

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Singlemode: Transceiver Lösungen & Einsatzbereiche

Singlemode: Transceiver Lösungen von Fiber24. Individuell ideal für große Entfernungen flexibel Hier bei Fiber24 entdecken und

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What Are The Types Of Gigabit Optical Modules

The Gigabit single-mode optical module can be used together with OS2 single-mode optical fiber patch cord, and the

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Singlemode transceiver modules buy online

Discover our high-quality singlemode transceiver modules at Fiber24. Available in many different models.

Jan 11, 2026

10G SFP+ Optical Transceivers | Transceiver Module

FS 10GbE SFP+ module solutions provide a wide variety of 10 Gigabit Ethernet connectivity options for

Feb 09, 2026

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

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

Mar 24, 2026

Industrial Gigabit Fiber SFP Optical Transceiver

Industrial Gigabit Fiber SFP Optical Transceiver Module, 1000Base-EX (LC) Single-Mode Port, 40 km (25

Aug 18, 2025

H!Fiber 10G Single Mode SFP+ LC Module, 10GBase-LR Fiber

10GBase-LR SFP+: 10 Gigabit Ethernet Single Mode SFP+ Module, 10 Gb/s, 1310nm wavelength, Duplex Dual LC,

Aug 17, 2025

SFP Transceiver

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

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Intellinet 10 Gigabit Fiber SFP + (LC) Single-Mode

10 Gigabit Fiber SFP + (LC) Single-Mode Optical Transceiver Module The new line of

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Gigabit SFP Modules | Fiber SFP | Copper SFP | Antaira

Gigabit SFP Modules Antaira offers a wide range of Gigabit SFP modules for fiber and copper connections including multi-mode and

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://www.chromadecksigns-eastrand.co.za>

Email: sales@chromadecksigns-eastrand.co.za

Phone: +32 2 318 5792

Address: Avenue Louise 500, 1050 Brussels, Belgium

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