10 Gigabit Single-Mode Fiber SFP



Overview

This data sheet describes the benefits, specifications, and ordering information for the Cisco 10GBASE SFP+ Modules Data Sheet.

Key Takeaways

10G SFP+ modules support single-mode fiber with distances up to 10 km using standard duplex LC connectors or over a single strand using BiDi technology.

Standard Single-

Mode 10G SFP+ ModulesStandard single-mode 10G SFP+ transceivers use duplex LC connectors and operate at 1310 nm wavelength, supporting distances typically up to 10 km at 10 Gbps. These modules are compatible with MSA-compliant SFP+ slots on switches and fiber converters, providing reliable long-distance connectivity for enterprise, campus, and data center networks. They are hot-pluggable and support high-speed data rates up to 10.

31 Gbps while maintaining low power consumption and immunity to electromagnetic interference (TRENDnet, Black Box).

Bi

Di (Bidirectional) 10G SFP+ ModulesBiDi SFP+ modules enable full-duplex communication over a single strand of single-mode fiber using wavelength division multiplexing (WDM). One wavelength is used for transmitting data and another for receiving, typically 1270 nm / 1330 nm. These modules require matched pairs at each end of the link and use a simplex LC connector, effectively reducing fiber usage by 50% compared to traditional duplex SFP+ optics.

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Bi

Di modules support distances commonly up to 10 km, with some models extending to 20 km or 40 km depending on the transceiver type. They are ideal for fiber-constrained environments, metro networks, and data center interconnects (FS, L-com).

Key Considerations

Connector Type: Standard duplex LC for traditional single-mode SFP+, simplex LC for BiDi modules. Wavelengths: 1310 nm for standard single-mode; 1270/1330 nm for BiDi. Distance: Up to 10 km for most single-mode SFP+ modules; longer distances possible with specialized BiDi modules.

Compatibility: Ensure SFP+ modules are MSA-compliant and compatible with the switch or device vendor. Deployment: BiDi modules must be installed in complementary pairs to establish a link; standard duplex modules require two fibers per link.

Summary

For 10G single-mode fiber deployments, you can choose between: Standard duplex SFP+ modules for straightforward 10 km links using two fibers.

Bi

Di SFP+ modules for single-fiber links, reducing cabling complexity and fiber usage while maintaining full-duplex 10G performance. Both options support high-speed 10G Ethernet, are hot-swappable, and are suitable for enterprise, campus, and data center applications.

Article Content

Cisco 10GBASE SFP+ Modules Data Sheet

This data sheet describes the benefits, specifications, and ordering information for the Cisco 10GBASE SFP+ Modules Data Sheet.

10 Gigabit Singlemode SFP+ Fiber Optic Transceivers

The 10 Gigabit Singlemode SFP+ Transceivers provide high-performance, reliable connectivity for modern 10 Gigabit Ethernet (10GbE) networks. These

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

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Cisco 10GB Single Mode SFP: Specs, Types & Features

Explore Cisco 10GB Single Mode SFP modules, including types, specifications, parameters, and key features for reliable long-distance fiber networking.

StarTech Multi-Mode (MM) / Single-Mode (SM) Fiber

The Gigabit fiber media converter provides a cost-efficient way to connect your Ethernet network to remote devices over a fiber backbone. It features an open

Fiber Modules

SFP/SFP+ Modules Grandstream Network offers a wide variety of fiber modules. All of them are hot-pluggable small-form factor transceiver modules integrated with the high sensitivity PIN receiver and

StarTech 10GbE Open SFP+ Fiber Media MCM10GSFP2 | PC-Canada

StarTech 10GbE Open SFP+ Fiber Media Converter, Standalone 10 Gigabit Ethernet RJ-45 to 10GBASE-X SFP+, Single-Mode / Multi-Mode, TAA - Convert 2.5G/5G/10GBASE-T copper (RJ-45)

SFP vs. SFP+ vs. QSFP: Key Differences

Standard SFP transceivers, for 1 Gbps, span up to 550 meters over multi-mode fiber, or 150 kilometers on single-mode fiber for longer connections. Enhanced SFP+ transceivers, for 10

An introduction to SFP ports on a Gigabit switch

An introduction to SFP ports on a Gigabit switch SFP ports enable Gigabit switches to connect to a variety of fiber and Ethernet cables and extend switching functionality throughout the

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

How to Choose SFP Transceivers? In addition to SFP, SFP+, SFP28, QSFP+, and QSFP28, you also need to consider the application. Different types of SFP transceivers depend on

Ubiquiti 10G Single-Mode Optical Module UACC-OM-SM-10G-D-2

Optimize the network''s performance with 10 Gigabit Ethernet connectivity For transmitting data at gigabit speed over hundreds of miles with little integrity loss, single-mode fiber optic is an ideal solution

SFP modules – transceivers for 1/2/4G fibre channel

100M Ethernet and SDH/SONET SFP – SFP modules designed for Fast Ethernet and SDH/SONET applications, supporting speeds from 10 Mbps to 100 Mbps

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Used Tripp-Lite N785-001-LC-MM Gigabit Fiber Media Converter

Search Tags & Keywords • Primary: Tripp Lite, Media Converter, Fiber Optic, Gigabit Ethernet, SFP Module, Finisar, Transceiver, Networking Gear. • Technical: 1000Base-T, 1000Base-LX, 1310nm,

StarTech Cisco GLC-LH-SMD Compatible SFP Module

StarTech Cisco GLC-LH-SMD Compatible SFP Module - 1000BASE-LX/LH - 1GbE Single Mode Fiber Optic Transceiver - 1GbE SFP - LC 10km - 1310nm - DDM Cisco Firepower, ASR920, IE2000

StarTech 10GbE Multi-Gigabit Open MCM10G6SSFP | PC-Canada

StarTech 10GbE Multi-Gigabit Open SFP+ Fiber Media Converter, Standalone Ethernet RJ-45 to 10GBASE-X SFP+, Single/Multi-Mode, TAA Convert 100M MCM10G6SSFP

SFP+ Cables

Online shopping. w/24h-delivery, 7Days & Refund Guarantee. CE, RoHS and ISO9001 Certified. SFP+ Cables, QSFP+ Cables, MiniSAS Cables, XFP Cables, CX4 Cables and Fiber Optic Transceivers.

10-1755-01 SFP Singlemode Fiber Module Gigabit FC2 2.125G

Fiber Optic Receivers 10-1755-01 Gigabit FC2 2.125G 1310NM 2KM Single-Mode SFP Fiber Module LC Dual Interface Unit weight: 0.05 kg

M.2 A E Key to 1 Port for SFP Network Card 10/100/1000Mbps Gigabit ...

Material: PCB M.2 A+E Gigabit fiber server network card, single optical port SFP fiber Ethernet network adapter. Supports 1000M link rate and automatically adapts to the existing Ethernet network ME

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