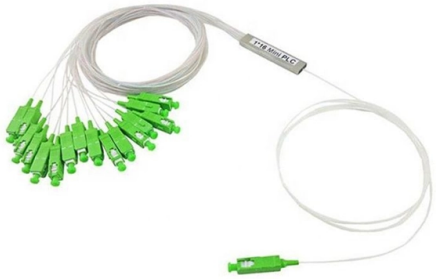
10 Gigabit Single-Mode Fiber Interface Module



Overview

Cisco 10GBASE SFP+ Modules Data SheetIt supports link lengths of up to 70 kilometers on standard Single-Mode Fiber (SMF, G.652), assuming a fiber chromatic.

Key Takeaways

A 10 Gigabit Single-Mode Single-Fiber Module enables high-speed 10GbE data transmission over long distances using a single strand of single-mode fiber.

Core Function

The primary function of a 10G single-mode SFP+ module is to provide 10 Gigabit Ethernet connectivity over single-mode fiber (SMF) for distances up to 10 kilometers. It converts electrical signals from a network switch or router into optical signals for transmission over fiber and then back into electrical signals at the receiving end, enabling high-speed, long-distance communication between network devices.

Key Features

Data Rate: Supports up to 10. 3 Gbps, suitable for 10GbE networks. Wavelength: Operates at 1310 nm, optimized for single-mode fiber transmission.

Fiber Type: Uses single-mode fiber (SMF, 9/125 µm, G. 652 compliant); multimode fiber is not compatible for long-distance links. Connector Type: Typically uses LC duplex connectors for transmit and receive paths.

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Hot-

Pluggable: Can be installed or replaced without powering down the network device. Digital Diagnostic Monitoring (DDM/DOM): Provides real-time monitoring of optical power, temperature, and voltage for network maintenance.

Single-

Fiber Operation: Some modules, like the SFP-10G-BXD/BXU series, use wavelength-division multiplexing (WDM) to transmit and receive over a single fiber strand, effectively doubling fiber efficiency.

Typical Applications

Enterprise Networks: Connecting switches and routers across buildings or campus backbones. Data Centers: High-speed interconnects between servers, storage, and aggregation switches. Metro and Carrier Networks: Long-distance 10GbE links for service provider transport.

Backbone Links: Extending network reach without signal degradation over distances up to 10 km.

Deployment Considerations

Ensure fiber quality with low attenuation (typically 0. 35 dB/km at 1310 nm). Maintain proper bend radius to avoid micro-bending losses.

Verify polarity alignment for LC duplex connectors to maintain correct transmit/receive paths. Check optical power budget to ensure reliable signal transmission over the intended distance. In summary, a 10 Gigabit Single-Mode Single-Fiber Module is a high-performance transceiver that extends 10GbE network connectivity over long distances using single-mode fiber, providing reliable, high-speed data transmission for enterprise, data center, and carrier networks.

Article Content

Cisco 10GBASE SFP+ Modules Data Sheet

It supports link lengths of up to 70 kilometers on standard Single-Mode Fiber (SMF, G.652), assuming a fiber chromatic dispersion of 20 *ps/(nm km). This interface is not specified as part of the 10 Gigabit

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

SFP+ Single Mode LC Module (10km)

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Each single mode 10G SFP+ transceiver is equipped with a duplex LC fiber connection interface, and supports high-speed data rates up to 10.31Gbps. All

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

The Intellinet 10 Gigabit Fiber SFP Optical Transceiver Module (model 507479) is fully hot-pluggable, and that allows you to install the module

10G Single-Mode/10KM Fiber SFP+ Module

The 2A-142G 10G Single-Mode/10KM Fiber SFP+ Module is designed for use in 10GbE Ethernet environment that allows you to connect a single-mode Gigabit

10G Bidirectional Single-Mode Optical Module

SFP+ transceiver that supports 10G connections up to 10 km using single-mode fiber with a simplex LC UPC connector.

Comprehensive Guide to FS 10G BiDi SFP Modules

FS 10G BiDi SFP+ modules are a powerful tool for network engineers seeking to boost bandwidth without doubling fiber investment. With their compact form factor, reduced power draw,

10G Gigabit Single Mode SFP+ LC Module,10G 1310nm

□10GBase-LR SFP+□: 10 Gigabit Ethernet Single mode SFP+ Module, 10 Gb/s, 1310nm wavelength, Duplex Dual LC, SMF, operates on Single

10G CWDM Single-Mode Optical Module

SFP+ transceiver for CWDM that supports 10G connections up to 20 km using single-mode fiber with a duplex LC UPC connector.

Cisco SFP and SFP+ Transceiver Module Installation Notes

This installation note provides the installation instructions for the Cisco small form-factor pluggable (SFP) and SFP+ transceiver modules. These transceiver modules are hot-swappable

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

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 in any Cisco or MSA SFF-8472

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Ubiquiti Compatible XGSPON ONU SFP+ 1270nm-TX/1577nm-RX

Overview The XGS-SFP-ONT-MAC-I is an SFP+ transceiver module engineered for 10-Gigabit capable symmetric passive optical network (XGS-PON) systems. It utilizes bidirectional transmission over a

Network Transceivers

Whether you require an SFP network transceiver or an ethernet plug-in module, our selection offers compatible solutions to help you stay connected. Our comprehensive inventory of internet

Gigabit SFP modules with fiber optic modes » buy online now

Special variants support Digital Diagnostic Monitoring (DDM) or bidirectional single-fiber connections (BiDi). The transmission rates of our SFP modules range from 100 Mbit/s over 1 Gbit/s up to 10

100GBASE QSFP-100G Modules Data Sheet

The Cisco QSFP-100G-CWDM4-S Module supports link lengths of up to 2 km over a standard pair of G.652 Single-Mode Fiber (SMF) with duplex

Installation and Maintenance Guide for Gigabit Optical Modules and 10 ...

Here are some common maintenance tips: Regular Cleaning: Maintaining cleanliness of the optical module interfaces and fiber connections is crucial. Use cotton swabs regularly to clean the

Berns gigabit sfp transceiver ⚡ 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

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