

10 Gigabit Fiber Optic Gigabit Optical Module



Overview

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 10.

Key Takeaways

10G SFP+ fiber optic cables use Duplex LC connectors over multimode or single-mode fiber to support distances from 300 meters to over 100 kilometers, depending on the module type. Fiber Types and Distances

- Multimode Fiber (MMF): Typically uses OM3 or OM4 fiber with Duplex LC connectors. Common 10G SFP+ modules include 10GBASE-SR, supporting distances up to 300 meters over OM3 fiber, ideal for short-range data center connections .

- Single-Mode Fiber (SMF): Uses OS1 or OS2 fiber with Duplex LC connectors. Modules like 10GBASE-LR support distances up to 10 km, while 10GBASE-ER and 10GBASE-ZR modules can reach 40 km to 80 km, and specialized ZRC modules can extend up to 100-120 km .

Connector Type

- Duplex LC is the standard for most 10G SFP+ optical modules, providing a compact, high-density interface suitable for racks and switches .



- Simplex LC is used for certain Bidi (Bi-directional) SFP+ modules, which transmit and receive on a single fiber strand using different wavelengths .

Module Compatibility

- 10G SFP+ modules are compatible with a wide range of switches and routers from vendors like Cisco, Arista, Juniper, and Brocade .
- Modules are available in short-range (SR), long-range (LR), extended-range (ER), and ZR/ZRC variants, each optimized for specific distances and fiber types .
- Multi-rate SFP+ modules can support speeds up to 11.3 Gbps while maintaining backward compatibility with 1x, 2x, and 4x devices .

Active Optical Cables (AOCs)

- For very short distances within racks, SFP+ Active Optical Cables provide a cost-effective alternative to traditional fiber transceivers, offering plug-and-play connectivity without separate transceivers .
- AOCs are available in lengths from 1 meter to 10 meters, suitable for high-density server interconnects .

Practical Recommendations

- Use OM3 multimode fiber for distances up to 300 meters in data centers.
- Use OS2 single-mode fiber for distances beyond 10 km, such as campus or metropolitan networks.
- Ensure the SFP+ module type matches the fiber type and distance requirements.
- For short-range connections, consider direct-attach copper (DAC) cables or AOCs to reduce cost and power consumption . By selecting the appropriate fiber type, connector, and SFP+ module, you can achieve reliable 10 Gigabit Ethernet connectivity across a range of distances and deployment scenarios.

Article Content

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

10 Gigabit Fiber SFP+ Optical Transceiver Module

10 Gigabit Connectivity Small Size For High-Density Fiber Connections Compatibility Hot-Pluggable Digital Diagnostics Monitoring The Intellinet Network Solutions 10 Gigabit Fiber SFP+ Optical Transceiver Module (model 507479) is fully hot-pluggable, and that allows you to install the module without rebooting your network switch for uninterrupted network traffic. See more on intellinetsolutions Category: Repeaters & Transceivers Images of 10 Gigabit Fiber Optic Gigabit Optical Module Fiber Module SFP Fiber Optic SFP Fiber Optical Switch Optical Fiber Module Fiber Optical Transceiver Single Module Fiber Intellian Fiber Optic Module Network Module Fiber Optical Fiber Transceiver Intellinet 10 GbE Fiber SFP+ Optical Transceiver Module (508766 ... 10G SFP+ Fiber Optical Transceiver Module 850nm 300M Multi-Mode Duplex ... SFP 10 Gigabit Fiber Module - 10GBase-SR, LC Multimode, 300m, 850nm .. tellinet 507462 10 Gigabit Fiber SFP+ Optical Transceiver Module (LC Intellinet 10 GbE Fiber SFP+ Optical Transceiver Module (508759 .. tellinet 10 GbE Fiber SFP+ Optical Transceiver Module (508759 ... 10 Gigabit Optical Module SFP-10G-SR G10M300 3-Year Warranty Compatible ... 10KM SFP-10G-LR OPTICAL Module 10 Gigabit Single Mode Fiber Dual .. tellinet 10 Gigabit Fiber SFP+ Optical Transceiver Module (508766) SFP 10G SR 10 Gigabit Multimode SFP And Dual Fiber Optical Module For ... Maintechconnect 10 Gigabit Fiber SFP+ Optical Transceiver Module - Shop Amazon : 10Gb SFP+ RJ45 Transceiver, 10GBASE-T SFP to Ethernet ... 10g SFP+ Dual Fiber Optical Transceiver 1310nm 10 Gigabit 10km Optical ... See all images Shop 10 Gigabit Fiber Optic Gigabit Optical Module Fiber Optic Cable Internet Gigabit Ethernet Fiber Optic Line Fiber Optic Network Gigabit WiFi Cox Cable Fiber Optic Gigabit Fibre Giga Fiber Internet 1gb Fiber Internet Gateway Fiber Internet ATEN 10G single-mode/10km Fiber SFP+ Module - 1 X Duplex 10Gbase-X Network - Optical Fiber - 10 Gigabit Ethernet (2A-142G) UUniql \$263.17 \$4261 of 10 ATEN 10G single-mode/10km Fiber SFP+ Module - 1 X Duplex 10Gbase-X Network - Optical Fiber - 10 Gigabit Ethernet (2A-142G) UUniql \$263.17 \$4264.3 Cisco - SFP-10G-LR10-I= - Cisco SFP Module - For Optical Network, Data Networking - 1 X 10Gbase-LR Network - Optical Fiber - Single-Mode - 10 Gigabit Ethernet - 10Gbase-LRN Neobits \$1,864.542 of 104.3 Cisco - SFP-10G-LR10-I= - Cisco SFP Module - For Optical Network, Data Networking - 1 X 10Gbase-LR Network - Optical Fiber - Single-Mode - 10 Gigabit Ethernet - 10Gbase-LRN Neobits \$1,864.544.2 Ubiquiti 10G Single-Mode Optical Module - 2X LC/UPC 10Gbase-X Duplex Network - Optical Fiber - 1310 Nm Wavelength - Single-Mode - 10 Gigabit Ethernet Affordable Cooling Solution Easy Installation Effective Temperature Control Excellent Airflow N Newegg \$781.993 of 104.2 Ubiquiti 10G Single-Mode Optical Module - 2X LC/UPC 10Gbase-X Duplex Network - Optical Fiber - 1310 Nm Wavelength - Single-Mode - 10 Gigabit Ethernet Affordable Cooling Solution Easy Installation Effective Temperature Control Excellent Airflow N Newegg \$781.994.2 Ubiquiti 10 Gbps Bidirectional Single-Mode Optical Module Affordable Cooling Solution Easy Installation Effective Temperature Control Excellent Airflow CCOLAMCO, Inc. \$165.534 of 104.2 Ubiquiti 10 Gbps Bidirectional Single-Mode Optical Module Affordable Cooling Solution Easy Installation Effective Temperature Control Excellent Airflow CCOLAMCO, Inc. \$165.532 Ubiquiti 10G CWDM Single-Mode Optical Module (1310Nm) UACC-OM-SFP10-1310BB&H Photo-Video-Pro A \$995 of 102 Ubiquiti 10G CWDM Single-Mode Optical Module (1310Nm) UACC-OM-SFP10-1310BB&H Photo-Video-Pro A \$9910G ER 1510/1530/1570/1610Nm 40km Singlemode SMF Duplex LC SFP+ Fiber Optic Transceiver Module DDM Compatible

With Huawei SwitchAAliExpress US\$356.40Free shippingFree shipping6 of 1010G ER 1510/1530/1570/1610Nm 40km Singlemode SMF Duplex LC SFP+ Fiber Optic Transceiver Module DDM Compatible With Huawei SwitchAAliExpress US\$356.40Free shippingFree shipping4.6UACC-OM-SM-1G-S-2 10G Bi Directional Single Mode Optical Module, 1GbpsAAzteckComputers\$41.227 of 104.6UACC-OM-SM-1G-S-2 10G Bi Directional Single Mode Optical Module, 1GbpsAAzteckComputers\$41.22"10 Gigabit Fiber SFP+ Optical Module"SShopping FM\$30.998 of 10"10 Gigabit Fiber SFP+ Optical Module"SShopping FM\$30.994.5Startech SFP+ Module - For Optical Network, Data Networking - 1 X LC Duplex 10Gbase-BX Network - Optical Fiber - Single-Mode - 10 Gigabit Ethernet - 10Gbase-BX - Hot-Swappable - 1 EachAllianceSupply \$143.129 of 104.5Startech SFP+ Module - For Optical Network, Data Networking - 1 X LC Duplex 10Gbase-BX Network - Optical Fiber - Single-Mode - 10 Gigabit Ethernet - 10Gbase-BX - Hot-Swappable - 1 EachAllianceSupply \$143.12"10 Gigabit Fiber SFP And Optical Transceiver Module"Ddelupe \$39.18Free shippingFree shipping10 of 10"10 Gigabit Fiber SFP And Optical Transceiver Module"Ddelupe \$39.18Free shippingFree shippingSee allSponsored

See 10 Gigabit Fiber Optic Gigabit Optical Module

SFP+ 10 Gigabit Fiber Module - 10Gbase-LR, LC Singlemode, 10Km, 1310Nm\$33.87

SFP+ 10 Gigabit Fiber Module - 10Gbase-LR, LC Singlemode, 10Km, 1310Nm

Cisco 10 Gigabit Modules

Discover Cisco 10 Gigabit Ethernet Modules, offering high-speed, reliable connectivity to enhance network

SFP+ Optical Transceiver Modules (10G-SR/LR)

Code: SF-10GSFPPLCL-000 Genuine Amphenol 10GBASE-SR SFP+ Optical Transceiver Modules provide a high-density, high

10G Multi-Mode Optical Module

SFP+ transceiver that supports 10G connections up to 400 m using multi-mode fiber with a duplex LC UPC connector.

10G SFP+ Optical Transceiver Modules | AscentOptics

10G SFP+ Product Descriptions AscentOptics" 10G SFP+ modules offer customers a wide variety of 10 Gigabit Ethernet connectivity

10Gb SFP+ RJ45 Transceiver, 10GBASE-T SFP to Ethernet Module, 10 ...

The 10G RJ45 module uses the electrical signal to transmit data, allowing an upgrade to 10G by reusing existing copper

Everything You Need to Know About a 10G Fiber Optic Network

A: A 10-gigabit network card, commonly referred to as a 10G fiber optic network card, is a type of network interface

8 ports SFP slot & 1 port 10/100/1000 Gigabit Optical Fiber Switch

AN-UM-SMC-81-AS - 9 ports Gigabit Ethernet Switch has 1 10/100/1000M UTP port and 8 1000M SFP sockets/slots. Customer can

10Gtek 10GBase-SR SFP+ LC Transceiver, 10G 850nm MMF

10GBASE-SR SFP+ to LC Optical 10 Gigabit Ethernet Fiber transceiver module, 10GbE Multimode SFP+ (compatible with both

10G SFP+ Fiber - SFP+ Single Mode LC Module (10km)| TRENDnet

TRENDnet's SFP+ Single Mode LC Modules are compatible with standard SFP+ slots found on network switches and fiber

Intellinet 10GBase-SR SFP+ to LC Multi-Mode Mini GBIC Module 10G Fiber ...

The Intellinet Network Solutions 10 Gigabit Fiber SFP+ Optical Transceiver Module (model 507462) is fully hot

10Gtek 10GBase-SR SFP+ LC Transceiver, 10G 850nm Multimode SFP Module ...

10GBASE-SR SFP+ to LC Optical 10 Gigabit Ethernet Fiber transceiver module, 10GbE Multimode SFP+ (compatible

Cisco 10GBASE SFP+ Modules Data Sheet

A broad range of industry-compliant SFP+ modules for 10 Gigabit Ethernet deployments in diverse networking

10 Gigabit Fiber SFP+ Optical Transceiver Module

10 Gigabit Connectivity Intellinet Network Solutions 10GBase-LR Fiber SFP+ Optical Transceiver Module, model 507479, is the right

H!Fiber 10G Multimode SFP+ LC Module, 10GBase-SR Fiber

About this item 10GBase-SR SFP+: 10 Gigabit Ethernet Multimode SFP+ Module, 10 Gb/s, 850nm wavelength, Duplex Dual LC,

XG-SFP-LR-SM1310 10GBASE-LR SFP+ 1310-nm 10-km DOM

The XG-SFP-LR-SM1310 is aligned to IEEE 10GBASE-LR optical specifications and supports a link length of up to 10 kilometers

10G SFP+ Transceiver Modules&10Gbase-T | FiberMall

SFP supports SONET, Gigabit Ethernet, Fibre Channel, and some other communication standards. This standard extends to SFP+,

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