

Pairing of 10 Gigabit Multimode Optical Modules



Overview

Understand SR Cisco SFP+ modules for 10G multimode fiber links, including specifications, transmission distance, compatibility, and data center use cases.

Key Takeaways

A pair of 10G multimode optical modules typically uses 10GBASE-SR SFP+ transceivers with LC duplex connectors, supporting 10 Gbps over multimode fiber up to 300-400 meters.

Key Specifications

Form Factor: SFP+ (Small Form-factor Pluggable Plus), compatible with 10GbE ports on switches and servers. Data Rate: 10 Gbps full-duplex, with some modules offering backward compatibility to 1G/2.5G/5G.

Fiber Type: Multimode fiber (OM3 or OM4) for short-reach connections. Wavelength: 850 nm VCSEL laser, optimized for multimode fiber. Maximum Distance: Up to 300 meters on OM3 fiber and up to 400 meters on OM4 fiber.

Connector Type: Duplex LC UPC connectors for fiber optic cabling. Power Consumption: Typically around 1W or less, making them energy-efficient.



Hot-

Swappable: Can be installed or replaced without powering down the device.

Applications

10G multimode SFP+ modules are widely used in: Data centers for high-density switch-to-switch or switch-to-server connections. Enterprise networks for wiring closets and campus backbone links. Short-reach fiber links where cost-effective, low-power, and interoperable solutions are required.

Deployment Considerations

Ensure the fiber type matches the module specification (OM3 or OM4) to achieve the rated distance. Use duplex LC patch cables for connectivity between modules. Digital optical monitoring (DOM) may be available on some modules for diagnostics and performance monitoring.

Modules from different vendors may be interoperable if they comply with the IEEE 802.3ae 10GBASE-SR standard, but vendor-certified modules ensure full compatibility.

Summary

For a pair of 10G multimode optical modules, select 10GBASE-SR SFP+ transceivers with LC duplex connectors, supporting 10 Gbps over OM3/OM4 multimode fiber up to 300–400 meters. They are ideal for short-range, high-speed Ethernet links in data centers and enterprise networks, offering low power consumption, hot-swappable installation, and broad vendor compatibility.

Article Content

SR Cisco Explained: SFP+ 10G Multimode Optics Guide

Understand SR Cisco SFP+ modules for 10G multimode fiber links, including specifications, transmission distance, compatibility, and data center use cases.

Cisco 10GBASE SFP+ Modules Data Sheet

The Cisco 10GBASE-LRM Module supports link lengths of 220m on standard Fiber Distributed Data Interface (FDDI) grade Multimode Fiber (MMF). To make sure that specifications are

10GE SFP+ Optical Modules

Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-10G-BXU1 must be used with SFP-10G-BXD1.

10G Bidi SFP+ Modules Selection Guide

Choose the right 10G Bidi SFP+ Modules by checking compatibility, distance, wavelength pairing, and reliability for optimal network performance.

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 Transceivers | Transceiver Module

Click to get your 10G SFP+ transceiver modules from nearby warehouses. 30-Day Free Return. Trusted by 260K+ Enterprise Users.

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,

Optic Modules Datasheet

Data Sheet datasheet is intended to guide the user through the various options available when choosing an optic module for a given platform depending on the architecture.

10 Gbit/s SFP+ Optical Modules

10 Gbit/s SFP+ optical modules apply to 10 GE optical ports. The wavelength can be 850 nm, 1310 nm, or 1550 nm, and the transmission distance ranges from 0.5 km (0.31 mi) to 80 km (49.71 mi).

Small Form-factor Pluggable

Small Form-factor Pluggable Small Form-factor Pluggable connected to a pair of fiber-optic cables Small Form-factor Pluggable (SFP) is a compact, hot-pluggable network interface module format used for

Gigabit Ethernet

Optical fiber transceivers are most often implemented as user-swappable modules in SFP form or GBIC on older devices. IEEE 802.3ab, which defines the widely

Cisco 40GBASE QSFP Modules Data Sheet

Cisco QSFP-40G-SR4 The Cisco 40GBASE-SR4 QSFP Modules support link lengths of 100 meters and 150 meters, respectively, on laser-optimized OM3, and OM4/OM5 multimode fibers. It primarily

Understanding Optical Modules

Multimode optical modules are used with multimode fibers. Multimode fibers have lower transmission performance than single-mode fibers because of modal dispersion, but their costs are also lower.

SFP Modules: Types, Selection Guide & Applications

Dual Media Support: Works with both fiber optic cables (single-mode and multimode) and copper cables (twisted-pair), offering flexibility in deployment. Broad Protocol Support: Compatible

Cisco 10GBASE SFP+ Modules Data Sheet

Product overview The Cisco® 10GBASE SFP+ modules (Figure 1) give you a wide variety of 10 Gigabit Ethernet connectivity options for data center, enterprise wiring closet, and service provider transport

100GBASE QSFP-100G Modules Data Sheet

QSFP-100G Optical modules Features and benefits of Cisco QSFP modules Hot-swappable input/output device that plugs into a 100G Gigabit

10G BiDi SFP+ TX1550nm/RX1490nm 70KM LC Optical Transceiver

Get 10G BiDi SFP+ TX1550nm/RX1490nm 70KM LC Optical Transceiver from ETU-Link Technology CO.,LTD,we supply excellent SFP+ 10G BiDi 70KM SFP Module. Long using life,high

QSFP-40GB Transceivers Guide and Compatibility

It has four independent receive and transmit optical channels that can terminate to another 40G QSFP+ transceiver, or can be distributed to four separate 10 Gigabit SFP+ transceivers. The QSFP+

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

