Gigabit and 10-Gigabit Adaptive Multimode Dual-Fiber Optic Modules



Overview

This data sheet describes the benefits, specifications, and ordering information for the Cisco SFP Modules for Gigabit Ethernet Applications.

Key Takeaways

Adaptive multimode dual-fiber optic modules support high-speed 1G and 10G Ethernet connections over multimode fiber, offering hot-swappable, duplex LC connectivity with distances up to 300 meters.

Overview

Adaptive multimode dual-fiber optic modules, commonly implemented as SFP (1G) or SFP+ (10G) transceivers, are designed for high-speed Ethernet and Fibre Channel networks. They use duplex LC connectors and operate over multimode fiber (MMF), typically OM3 or OM4, allowing reliable data transmission for medium-range distances. These modules are hot-pluggable, enabling seamless integration into switches, routers, or other network devices without downtime.

Key Features

Data Rates: Support 1 Gigabit (SFP) and 10 Gigabit (SFP+) Ethernet, with some modules capable of multi-rate operation up to 11. 3 Gbps for backward compatibility with lower-speed devices. Fiber Type: Optimized for multimode fiber, usually OM3 or OM4, with transmission distances up to 300 meters at 850 nm wavelength.

Connectors: Duplex LC UPC connectors are standard, ensuring compatibility with most multimode fiber systems.

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Hot-

Swappable: Modules can be inserted or removed without powering down the host device, supporting flexible network upgrades. Adaptive Capabilities: Some modules feature rate adaptation, allowing automatic adjustment to the host device's speed and supporting both 1G and 10G connections over the same fiber infrastructure. Low Power Consumption: Typically under 800 mW for 10GBASE-SR multimode modules, reducing heat and energy usage in high-density deployments.

Applications

Enterprise LA

Ns and Data Centers: Ideal for connecting servers, switches, and storage devices over short to medium distances. Campus Networks: Supports high-speed links between buildings or floors using existing multimode fiber infrastructure. Service Provider Networks: Enables scalable 10G Ethernet services with easy deployment and monitoring capabilities.

Compatibility and Standards

These modules are compatible with major vendors such as Cisco, UniFi, Amphenol, and Arista, and adhere to IEEE 802. 3ae 10GBASE-SR standards. Some advanced modules, like Cisco DWDM SFP+ transceivers, also support OTN data rates and digital optical monitoring for enhanced diagnostics.

Arista modules offer rate-adapting options for interoperability with 1G and 10G devices, providing flexibility in mixed-speed environments.

Summary

Gigabit and 10-Gigabit adaptive multimode dual-fiber optic modules provide a versatile, high-performance solution for medium-range fiber optic networking. They combine hot-swappable convenience, duplex LC connectivity, multimode fiber support, and adaptive speed capabilities, making them suitable for enterprise, campus, and service provider networks while ensuring backward compatibility and efficient energy usage.

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Article Content

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

10GbE SFP+ Transceiver Modules

FS 10G SFP+ transceiver module solutions provide a wide variety of reliable 10 Gigabit Ethernet connectivity options for data centre, enterprise, and service

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

Cisco SFP Modules for Gigabit Ethernet Applications

This data sheet describes the benefits, specifications, and ordering information for the Cisco SFP Modules for Gigabit Ethernet Applications.

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.

Multimode SFP+: 10GBASE-SR Specs, Fiber Types

Learn how multimode SFP+ (10GBASE-SR) transceivers work, including fiber types, transmission distance, specifications, and common data

10 Gigabit Multimode SFP+ Fiber Optic Transceivers | High-Speed

These SFP+ modules are designed for 10 Gigabit Ethernet and are equipped with LC duplex connectors, ensuring compatibility with most multimode fiber optic systems.

8 Port 10Gb SFP+ Web Managed Fiber Switch | Multi-Gig 10G-2.5G

□10Gb Super-Fast Fiber Switch□This 10 gigabit switch features 8 x 10G SFP+ ports and 160Gbps switching capacity, providing higher-speed connectivity for your devices and allowing you to easily

Arista Optics Modules and Cables

Arista''s Optical Modules and Cable portfolio offer a wide variety of high-density and low-power 800G (dual 400G), 400G, 200G, 100G, 50G, 40G, 25G, 10G, 1G, and 100M Ethernet connectivity options

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10G Dual Fiber SFP+ Moduals High-Speed | Syrotech

Our 10G Dual Fiber SFP+ transceivers provide fast, reliable connectivity for data centers, enterprise networks, and telecom applications. Designed for high

7 Best Fiber Optic ONT | Don''t Buy Until You Read This

For most users, the best fiber optic ont winner is the 10Gtek Gigabit Ethernet Media Converter because it delivers UL-certified safety, matched SFP modules, and proven surge isolation at a mid-range price

Gigabit Ethernet

Gigabit Ethernet was the next iteration, increasing the speed to 1000 Mbit/s. The initial standard for Gigabit Ethernet was produced by the IEEE in June 1998 as

The Best Routers for Fiber Internet: My Expert Picks

Linksys E8450 AX3200 WiFi 6 Router – best fiber optic Wi-Fi router for simultaneous dual-band streaming The best routers for fiber internet compared After providing you with the general

K6097: Specifications of the Fiber Gigabit Ethernet SFP, XFP, SFP+ ...

Topic The following specifications are for the available Fiber Gigabit Ethernet modules and the platforms that support those modules. Important: The end user must ensure suitability of

100 Gigabit Ethernet

100 Gigabit Ethernet 40 Gigabit Ethernet (40GbE) and 100 Gigabit Ethernet (100GbE) are groups of computer networking technologies for transmitting Ethernet frames at rates of 40 and 100 gigabits

10 Best 10-Gigabit Network Switches (April 2026)

Best 10-Gigabit Network Switches in 2026 Here is a quick comparison of all 10 switches we tested, covering everything from budget 5-port

Gigabit SFP Fiber Media Converter | 10/100/1000Mbps Ethernet

Product description Upgrade your network infrastructure with the FIBERFOX Gigabit Fiber Media Converter designed for high-speed and stable fiber communication. This media converter efficiently

How to Choose a VLAN Media Converter for 802.1Q Tagging

OptiLink Gigabit Simplex Single Mode Fiber Optic Media Converter 10/100/1000M RJ45 to SC Transceiver 3km A/B Pair CE RoHS $9.20-9.30 4.8(197) MOQ: 10 pairs ≤1h response time

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