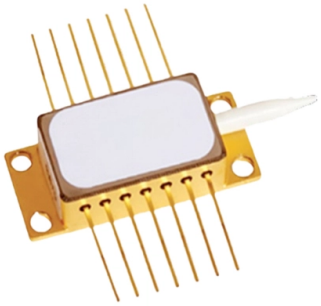
10G optical module model



Overview

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

Key Takeaways

10G optical modules include SR, LRM, LR, ER, and ZR types, each designed for specific fiber types, distances, and network applications. Overview of 10G Optical ModulesA 10G optical module (also called a 10G transceiver or SFP+ module) converts electrical signals into optical signals for high-speed data transmission over fiber or copper cables. These modules are widely used in data centers, enterprise networks, and telecom networks to support 10Gbps Ethernet links.

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Common 10G Module Types10GBASE-SR (Short Reach): Fiber type: Multimode fiber (MMF)Wavelength: 850 nmDistance: Typically up to 300 m on OM3 and 400 m on OM4Use case: Short connections within racks or between adjacent racks in data centers 10GBASE-LRM (Long Reach Multimode): Fiber type: Multimode fiberWavelength: 1310 nmDistance: Up to 220 m on legacy MMFUse case: Extends 10G transmission over existing multimode fiber infrastructure 10GBASE-LR (Long Reach): Fiber type: Single-mode fiber (SMF)Wavelength: 1310 nmDistance: Up to 10 kmUse case: Standard single-mode 10G links for enterprise backbones, metro access, and data center interconnects 10GBASE-ER (Extended Reach): Fiber type: Single-mode fiberWavelength: 1550 nmDistance: Up to 40 kmUse case: Longer-distance connections between buildings or across campuses 10GBASE-ZR (Ultra-Long Reach): Fiber type: Single-mode fiberWavelength: 1550 nmDistance: Typically up to 80–100 kmUse case: Telecom networks and ultra-long-haul links Other 10G Module Options10GBASE-T SFP+: Uses RJ45 connectors over Cat6A/Cat7 copper cables, suitable for short distances up to 30 meters, often used within racks Direct Attach Copper (DAC): Fixed twinax cables with SFP+ ends, available in passive or active versions, ideal for very short connections within racks Selection ConsiderationsWhen choosing a 10G optical module, consider: Transmission distance requiredFiber type already installed (MMF or SMF)Wavelength compatibility with existing equipmentCost and power consumptionSwitch or router compatibility and vendor support Selecting the appropriate module ensures optimal network performance, reliability, and cost efficiency, avoiding unnecessary over-specification or link instability.

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

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.

Cisco 10GBASE SFP+ Modules Data Sheet

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

Reach Further, Faster: Your Ultimate Guide to Long-Range 10G

Long-range 10G optical modules enable high-speed data over distances up to 80km. Learn about types, specs, compatibility, and choosing the right module.

10GB SFP Module Guide: Types, Specs, and How to Choose

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Learn everything about 10GB SFP modules, including types, specifications, compatibility, and how to choose the right 10G SFP+ transceiver for your network.

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 data center, enterprise

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

10G Single-Mode Optical Module Model: UACC-OM-SM-10G-D Product Description SFP+ transceiver that supports 10G connections up to 10 km using single-mode fiber with a duplex LC UPC connector.

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Understanding High-Speed Transceiver Tests in Fiber Networks Why Comprehensive Testing Is Essential for Reliable 100G, 200G, 400G, and 800G Optical Networks As network speeds

Optical Transceiver Module Wholesale,10g/25g/40g/100g SFP+ Optical ...

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Select The Right Fiber Patch Cables For 1G/10G/25G Modules

Deploying optical modules requires the right fiber patch cable. It directly affects network connection stability, performance, and maintenance. This article will explain how to pick the right fiber

SFP Optical Transceiver Modules for Long Distance: A Complete

Discover everything you need to know about SFP optical transceiver modules for long-distance fiber transmission. Compare LX, EX, ZX models and choose the right module for your

SFP Optical Transceiver | SFP Optical Module | Perle

Perle SFP Optical Transceivers are designed for use with Perle SFP Media Converters, Industrial Ethernet Switches, IOLAN SCG Console Servers and third party equipment that supports SFP

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

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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

Meaning of Optical Module Pull Tap Colors

4. 10G SFP+ Optical Module Pull Ring Colors 10G SFP+ red pull tab = ER 40km, white pull tab = ZR 80km; this color rule is the mainstream standard among mainstream brands including

AOC vs Fiber Optic Cable: Which Is Better for Your Network?

Learn the difference between Active Optical Cables (AOC) and fiber optic cables with optical transceivers. Compare features, applications, advantages, FAQs, and popular 10G, 25G,

Cisco 10GBASE SFP Modules Data Sheet

The Cisco SFP-10G-LR-X is a multirate 10GBASE-LR, 10GBASE-LW, and OTU2/OTU2e module for extended operating temperature range. It supports a link length of 10 kilometers on standard single

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

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