Single-mode dual-core fiber optic transceiver gigabit

Overview

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

Key Takeaways

A Gigabit Fiber Optic Transceiver Dual-Core Single-Mode module provides 1 Gbps data transfer over single-mode fiber using dual LC fibers, supporting long-distance, reliable, and hot-swappable network connectivity.

Key Features

Data Rate and Core Type: These transceivers operate at 1 Gbps (Gigabit Ethernet) and utilize dual-core single-mode fiber, meaning one fiber strand transmits data while the other receives, enabling full-duplex communication. Wavelength and Distance: Typical modules use a 1310nm wavelength, optimized for single-mode fiber, supporting distances from 10 km up to 180 km depending on the model and fiber quality. Some enhanced modules can reach 20 km or more for enterprise or telecom applications.

Connector Type: Most dual-core single-mode transceivers use LC duplex connectors, which are compact and widely compatible with networking equipment. Compatibility: These modules are compatible with a variety of devices, including Cisco, D-Link, Netgear, TP-Link, Ubiquiti, and other open-switch platforms, making them versatile for network upgrades or expansions.

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Hot-

Swappable and Plug-and-Play: Designed for easy installation, these transceivers can be inserted or removed without powering down the network device, minimizing downtime. Digital Diagnostic Monitoring (DDM): Many modules support real-time monitoring of optical power, temperature, and signal integrity, helping maintain network stability and quickly identify faults. Durability: High-quality metallic or gold-plated casings ensure robust performance in harsh environments, with operating temperature ranges typically from -40°C to 85°C.

Applications

Enterprise Networks: Connecting switches, routers, and servers across buildings or campuses. Data Centers: High-speed, low-latency links for storage and server interconnects. Telecom Networks: Long-distance fiber links for metropolitan or regional networks.

PO

E Switch Uplinks: Extending network reach while maintaining power over Ethernet functionality.

Summary

A Gigabit Fiber Optic Transceiver Dual-Core Single-Mode module is ideal for long-distance, high-speed, and reliable network connections. Its dual-fiber design ensures full-duplex communication, while features like hot-swappability, DDM, and broad device compatibility make it suitable for enterprise, data center, and telecom applications. These modules provide a cost-effective solution for upgrading or expanding fiber optic networks without compromising performance.

Article Content

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.

optical transceiver sfp+ 10g single mode module 1310nm 10km lc

The 1310nm LC Interface 10G Singlemode Dual-fiber Optical Module is the workhorse of the modern network. It combines speed, distance, and reliability into a compact package.

Gigabit single-mode fiber optic transceiver

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Single-fiber refers to a single-core optical fiber, which is transmitted on one core; dual-fiber refers to a dual-core optical fiber, which is transmitted on two cores, one receiving and one sending.

1G SFP Transceivers | Mini-GBIC SFP Modules

FS gigabit ethernet transceiver solutions provide fibre or copper options including 1000BASE-SX, 1000BASE-LX/LH, 1000BASE-T etc., from 100m to 160km, for

SFP Optical Transceiver | SFP Optical Module | Perle

Perle SFP Optical Transceivers are hot-swappable, compact media connectors that provide instant fiber connectivity for your networking gear. They are a cost

SFP Transceivers | 1G, CWDM, DWDM, BiDi | EDGE Optical Solutions

Standard duplex Gigabit Ethernet SFP transceivers operating over dual-fiber single-mode connections. Covering distances from 550m multimode to 160km single-mode fiber, these modules support

10Gtek Gigabit SingleMode Fiber to Ethernet Media Converter

The converter is completely transparent when connected so the network performs exactly the way it did before - only now, it allows the co-existence of both copper and fiber mediums.

Switch Matrix QDD-8X100G-FR CISCO Qsfp-dd Transceiver

QDD-8X100G-FR CISCO Qsfp-dd Transceiver 8x100gbase-fr Dual Mpo-12 2-km Parallel Smf - For Data Networking Optical Network - 2 X Mpo-12/apc 100gbase-fr Network - Optical Fiber - 1310 Nm

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Until i found this "lianjitong" thickened 16-port rack-mounted optical fiber terminal box - fresh on the market in november 2023, fully equipped with 16 cores, fully compatible with sc/fc/st/lc,

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Fiber Optic Transceiver Guide | PHILISUN

A fiber optic transceiver (also called an optical transceiver) is a compact module that both transmits and receives data signals through optical fibers. It serves a dual purpose — transmitting

Used Tripp-Lite N785-001-LC-MM Gigabit Fiber Media Converter

Search Tags & Keywords • Primary: Tripp Lite, Media Converter, Fiber Optic, Gigabit Ethernet, SFP Module, Finisar, Transceiver, Networking Gear. • Technical: 1000Base-T, 1000Base-LX, 1310nm,

100 Gigabit Ethernet

These 40 Gbit/s fiber-optical interfaces using QSFP+ transceivers can be found on the Z9000 distributed core switches, S4810 and S4820 as well as the blade-switches MXL and the IO-Aggregator.

7 Best Fiber Optic LAN Cable | Stop Losing Signal at Distance

Single-Mode vs. Multimode Fiber Single-mode fiber (OS1/OS2) uses a 9-micron core that carries one light path, supporting distances beyond 10 kilometers with the right transceivers. Multimode fiber

Complete Guide to Fiber Optic Cables for Data Centers

Why Fiber Optic Cabling Is the Foundation of Modern Data Centers Copper cabling served data centers well for decades, but the physics of electrical signaling limit copper to approximately 100 meters at 10

nauru-fiber-optic-cold-connector Manufacturer/Producer

All suppliers for nauru-fiber-optic-cold-connector Manufacturer/Producer Find wholesalers and contact them directly B2B martketplace Find companies now!

Best Direct Burial Fiber Optic Cable Solutions for Harsh Environments

Direct burial fiber optic cables are engineered for outdoor deployments where protection against moisture, UV exposure, abrasion, and physical impact is essential. This guide highlights five

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