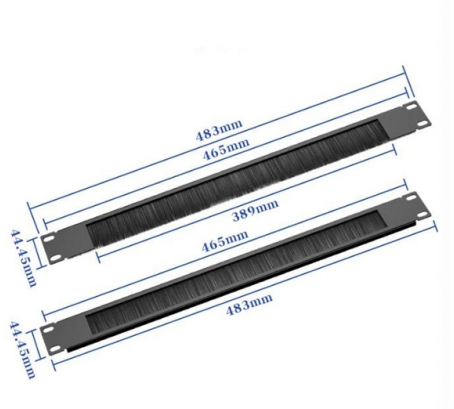


Gigabit Dual-Core Optical Module



Overview

Gigabit Dual-Core 02312uub SFP-Ge-Sx-C Multi-Mode Optical Gigabit Dual-Core 02312uub SFP-Ge-Sx-C Multi-Mode Optical Module with Dual-Fiber Optical receiver.

Key Takeaways

Gigabit Dual-Core Optical Modules are widely used in data centers, enterprise networks, AI computing, and service provider infrastructures to enable high-speed, reliable fiber-optic connectivity.

Data Center and High-Performance Computing

Gigabit dual-core optical modules are essential in data centers for connecting switches, routers, and servers at high speeds, supporting 1 Gbps to multi-gigabit links. They provide hot-swappable, pluggable interfaces that allow flexible network upgrades without downtime, making them ideal for high-performance computing (HPC) networks and enterprise core and distribution layers. These modules support multiple Ethernet standards, including 1000BASE-SX, LX/LH, EX, and ZX, enabling distances from hundreds of meters to tens of kilometers over multimode or single-mode fiber.

AI and Machine Learning Networks



In A

In front-end and back-end networks, gigabit dual-core optical modules facilitate high-bandwidth, low-latency connections between compute nodes and storage systems. Modern modules, such as Cisco OSFP 800G, can aggregate multiple 100GE, 200GE, or 400GE links, providing high port density and flexibility for AI workloads. These modules also support advanced telemetry and diagnostics, allowing real-time monitoring of optical power, temperature, and signal quality, which is critical for maintaining performance in AI clusters.

Enterprise and Service Provider Networks

For enterprise networks, these modules connect switches and routers over fiber or copper, supporting FTTx deployments and long-distance links up to 70 km with single-mode fiber. They are compatible with digital optical monitoring (DOM), enabling network administrators to track link health and optimize performance. Service providers use these modules to deliver high-speed broadband, metro, and long-haul connectivity, ensuring reliable data transmission across large-scale networks.

Flexible Connectivity and Media Support

Gigabit dual-core optical modules support a variety of media types, including multimode fiber, single-mode fiber, and copper cabling. They are available in multiple form factors such as SFP, SFP+, OSFP, QSFP-DD, and DSFP, allowing deployment in different network architectures. Modules can be used for short-reach connections (0.5–2 meters) with direct attach copper cables or long-reach connections (up to 80 km) with single-mode fiber, providing versatility for diverse networking scenarios.

Summary

Overall, gigabit dual-core optical modules are critical for high-speed, scalable, and reliable network connectivity. Their applications span data centers, AI computing, enterprise core networks, service provider infrastructures, and FTTx deployments, offering flexibility in speed, reach, and media type while supporting advanced monitoring and diagnostics for optimal network 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.

Cisco OSFP 800G Transceiver Modules Data Sheet

It is compliant with IEEE 802.3 800GBASE-VR8 and OSFP MSA module requirements with integrated heat sink. Optical signals are carried over

Gigabit Single-mode Dual-fiber Optical Module 1.25G Dual-LC Dual

Product descriptions from the supplier ... The modules in the original package and the small white box with the same SN code are individually packaged with the original factory seal.

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 Providers (ISPs) applications. Click to get

SFP optical transceivers

The SFP-7120-55 is a 1000Base-ZX long-haul single-mode Gigabit Ethernet rate SFP transceiver using 1550nm wavelength and reaching up to 120Km distance on 9/125um fiber.

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

SFP & SFP+ Modules for Fiber Optic Networks | WLAN-Shop24

Whether you want to realize a 1-Gigabit (SFP) or a 10-Gigabit (SFP+) connection over short or long distances - here you will find the right transceiver module for your single-mode or multi-mode fiber

SFP modules – transceivers for 1/2/4G fibre channel

An SFP (Small Form-factor Pluggable) transceiver is a compact optical module designed for high-speed networking applications across enterprise, data center

Gigabit single-mode single-core fiber optic module

Gigabit single-mode single-core optical fiber modules usually have the following specifications: multi-mode 550m, single-mode 15km, 40km, 80km, 120km, etc. In addition to the

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Designed for your current needs and future ambitions, Marvell delivers the data infrastructure technology transforming tomorrow's enterprise, cloud, automotive,

Multi-mode optical fiber

Multi-mode optical fiber is a type of optical fiber mostly used for communication over short distances, such as within a building or on a campus. Multi-mode links can be used for data rates up to 800 Gbit/s.

Gigabit Dual-Core 02312uub SFP-Ge-Sx-C Multi-Mode Optical Module

Gigabit Dual-Core 02312uub SFP-Ge-Sx-C Multi-Mode Optical Module with Dual-Fiber Opticalreceiver and Fibers, Find Details and Price about Active Optical Module Connectors Fiber Optic Module from

Optical Module | FS

CXP module has a smaller form factor than CFP, which is created to satisfy the high-density requirements of the data center. FS 100G CXP module supports link length of 100m and 150m on

Cisco 25GBASE SFP28 Modules Data Sheet

Product overview The Cisco® 25GBASE SFP28 (Small Form-Factor Pluggable) portfolio offers customers a wide variety of high-density and low-power 25 Gigabit Ethernet connectivity options for

Cisco QSFP-DD800 Transceiver Modules Data Sheet

The Cisco QSFP-DD800 modules introduce 8x100G and 2x400GGBASE Quad Small Form-Factor Pluggable Double-Density (QSFP-DD)

Gigabit SFP Module: A Complete Guide to 1G SFP Transceivers

A gigabit SFP module (1G SFP module) is a Small Form-factor Pluggable (SFP) transceiver designed to support 1Gbps Ethernet transmission by converting electrical signals from a network device into

Inventory Of 10G Optical Modules

SFP+ optical modules are widely used in 10G Ethernet due to their advantages of compact size, low cost and high density, and they are currently the most common 10G optical

Cisco XFP Modules for 10 Gigabit Ethernet and Packet Over-Sonet ...

The Cisco® XFP Module (Figure 1) offers customers a variety of 10 Gigabit Ethernet and Packet-over-SONET/SDH (POS) connectivity options for data center, enterprise wiring closet, and service

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

