

What are the types of gigabit multimode fiber optic modules



AI Overview

Gigabit multimode fiber optic modules are used to transmit and receive 1 Gigabit per second data over short-distance multimode fiber networks, enabling high-speed connectivity in data centers, enterprise networks, and campus environments.

Overview Gigabit multimode fiber optic modules, often implemented as 1G SFP (Small Form-Factor Pluggable) transceivers, are designed to convert electrical signals from network devices into optical signals for transmission over multimode fiber (MMF) and then back into electrical signals at the receiving end. They typically operate at an 850 nm wavelength and are optimized for short-range communication, making them ideal for environments where distances are limited but high reliability and low latency are required.

Applications

- Data Centers:** These modules connect servers, switches, and storage devices, supporting high-speed internal data transfer over short distances, often within the same rack or between adjacent racks.
- Enterprise Networks:** Used in office buildings and campus networks to link switches and routers across floors or buildings, providing Gigabit Ethernet connectivity.
- Campus Environments:** Ideal for connecting multiple buildings within a campus where multimode fiber is deployed, leveraging the cost-effectiveness and ease of installation of MMF.

Technical Details

Standards: Most gigabit multimode SFPs follow the 1000BASE-SX standard, ensuring interoperability across different vendors.

Distance Limitations: Depending on the fiber type, distances vary: OM1 (62.5 μm core) supports up to ~220 meters. OM2 (50 μm core) supports up to ~550 meters. OM3/OM4 (laser-optimized 50 μm) can support 10 Gigabit Ethernet up to 300-550 meters.

Fiber Compatibility: These modules are designed for multimode fiber, which has a larger core diameter allowing multiple light modes to propagate,...

Article Content

What is SFP Port? Everything You Need to Know

What is an SFP port? The SFP port also refers to a Small Form-factor Pluggable port. It is a compact mechanical slot that accepts an SFP

100 Gigabit Ethernet

The 40/100 Gigabit Ethernet standards encompass a number of different Ethernet physical layer (PHY) specifications. A networking device may support different PHY types by means of pluggable

Fiber Optic Cable Supply | Buy Fiber Optic Products

Shop for fiber optic cables at Cables Plus USA, leader in fiber optic products supply offering high-quality products at the best value through our fiber optic cable

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

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

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

Multimode Fiber: OM1 to OM5 – MapYourTech

This comprehensive guide explores the five primary categories of multimode fiber—designated as OM1, OM2, OM3, OM4, and OM5—each

Fiber Optic Cable Range: Comprehensive Guide

Fiber optic cable range varies depending on whether you're using single or multimode fiber. Learn the potential for both cable types.

Types of Ethernet Cable

The coating protects the fiber from damage and several layers of protective sheathing, depending on the application are added to form the cable.

Fiber Optic Internet Cables: Benefits, Types, and the

Understanding fiber optics isn't just for tech professionals anymore. If you're choosing an internet plan for your home or office, having a solid grasp of

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

SFP Optical Transceiver | SFP Optical Module | Perle

Multimode and single-mode fiber Gigabit Ethernet, Fast Ethernet, Fiber channel, ATM/SONET, SDH Hot-pluggable with durable metal enclosure Can be installed

Multimode Fiber Types: OM1 vs OM2 vs OM3 vs OM4

A complete guide to multimode fiber types OM1, OM2, OM3, OM4, and OM5. Compare speed, distance, bandwidth, and applications, and learn how

Choosing Between GBIC vs. SFP Modules: A Comprehensive Guide

Learn about the types, advantages, disadvantages, and applications of GBIC and SFP modules. Compare the two to understand how to make the best choice for your network.

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

This guide focuses on what a gigabit SFP module is, how it works, the main types available, and how to choose the right one for your network.

Multimode Fiber Types Explained: OM1 vs OM2 vs OM3 vs OM4 vs OM5

Explore the differences between OM1 to OM5 multimode fiber. Understand bandwidth, reach, and which fiber type suits your network performance and scalability needs.

XFP transceiver

XFP modules use an LC fiber connector type to achieve higher density. Principal applications include 10 Gigabit Ethernet, 10 Gbit/s Fibre Channel, synchronous

Fiber optic cable Market Size, Share & Trends, 2034

Based on cable type, the non-armored fiber optic cables segment dominated the market with 45.1% share in 2025, supported by their cost

Fiber Connector Types

According to the estimating, there are hundreds of different fiber optic connection types on the market. However, the widely used types are about

The Ultimate Guide to SFP Modules (2026): Types,

Confused by SFP vs SFP+? Read the definitive 2026 guide on SFP modules. We explain Single Mode vs Multimode, DDM diagnostics, and how to choose the

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

Multimode Fiber Types: OM1 vs OM2 vs OM3 vs OM4

Learn about the differences between multimode fiber types OM1, OM2, OM3, OM4, and OM5. Discover which one is right for your network with expert insights from

OM1 vs OM2 vs OM3 vs OM4 vs OM5 Multimode Fiber

Compare OM1, OM2, OM3, OM4, and OM5 multimode fiber specs, distances, bandwidth, and applications. Essential guide for data center fiber

Ethernet Cables Types: Cat 3, 5, 5e, 6, 6a, 7, 8 Wires Explained

This tutorial explains the Definition of ethernet cables, ethernet cable types, shielded cables, and Ethernet cables categories like Cat 3, 5, 5E, 6, 6a, 7, 9 ETC.

Offizieller BlueOptics SFP Hersteller

Kaufen Sie BlueOptics SFP, SFP+, QSFP und QSFP28 Transceiver, DAC und AOC Kabel direkt ab Lager. Versand heute.

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://www.sphplantsales.co.za>

Email: info@sphplantsales.co.za

Phone: +27 64 827 3915

Address: Unit 9, Highveld Technopark, 43 Atlas Road, Johannesburg, 2196, South Africa

This document is for informational purposes only. Specifications subject to change without notice.

