

100m Optical Module Single Mode



AI Overview

A 100M single-mode optical module is a hot-swappable SFP transceiver that supports 100 Mbps Ethernet over single-mode fiber, typically with LC duplex connectors and a reach of up to 10 km.

Overview A 100M single-mode SFP module converts electrical signals into optical signals for transmission over single-mode fiber (SMF), enabling Fast Ethernet connectivity at 100 Mbps. These modules are essential for extending network reach beyond copper cabling limits, providing immunity to electromagnetic interference, and supporting secure, long-distance links.

Key Specifications

- Data Rate:** 100 Mbps (Fast Ethernet)
- Fiber Type:** Single-mode fiber (SMF)
- Connector:** LC duplex
- Wavelength:** Typically 1310 nm
- Maximum Distance:** Up to 10 km (6.2 miles) depending on the module and fiber quality
- Duplex Mode:** Half or full-duplex
- Hot-Swappable:** Yes, allowing seamless upgrades or replacements without network downtime
- Digital Diagnostic Monitoring (DDM):** Supported on many modules to monitor transceiver status via SNMP
- Power Consumption:** Usually less than 1 W

Use Cases

- Enterprise LANs:** Connecting switches across buildings or campus networks
- Data Centers:** Linking Fast Ethernet ports over long distances
- Telecom Networks:** Supporting legacy 100 Mbps links or media converters
- Industrial Networks:** Reliable long-distance fiber connections in harsh environments

Selection Considerations

- Distance Requirements:** Single-mode is preferred for links exceeding 2 km, offering lower signal attenuation and higher bandwidth potential.
- Compatibility:** Ensure the SFP module is MSA-compliant and compatible with your switch or router brand to avoid network issues.
- Fiber Availability:** Standard duplex modules use two fibers (one for Tx, one for Rx), while BiDi modules allow single-fiber operation for fiber-efficient deployments.
- Wavelength Matching:** Confirm the module's wavelength (commonly 1310 nm) matches your network design.
- Environmental Conditions:** Check operating temperature and humidity ranges if deploying in industrial or outdoor set...

Article Content

Used Ubiquiti UACC-OM-QSFP28-LR4 100G LR4 Single-Mode Optical Module ...

The Ubiquiti UACC-OM-QSFP28-LR4 is a high-performance 100G LR4 single-mode optical module designed for long-range, high-speed data transmission. Engineered for compatibility with QSFP28

Cisco 10GBASE SFP+ Modules Data Sheet

When shorter distances of single-mode fiber are used (<40km), an inline optical attenuator must be used to avoid overloading and damaging 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

800G Optical Modules Explained: Standards, Types

Discover everything about 800G optical modules—standards, packaging, types & applications. Learn how they power AI, HPC & next-gen data

Optical Transceiver Market Size, Growth Drivers

Our study defines the optical transceiver market as all pluggable, board-mounted electro-optical modules across SFP, QSFP, CFP, OSFP, and

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Hilink Optics QSFP QSFPDD OSFP 10G SFP

If you have any questions about Hilink Optics CWDM DWDM QSFP QSFPDD OSFP 10G SFP transceivers, we will give the professional solutions to you.

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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

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

100M Ethernet and SDH/SONET SFP – SFP modules designed for Fast Ethernet and SDH/SONET applications, supporting speeds from 10 Mbps to 100 Mbps

Fiber Optic Cable Supplier, Distributor

Stocking distributor of fiber optic installation tools, bulk fiber cables, fiber patch cables, test equipment, cable management, fiber optic training and more.

100BASE FX SFP: Complete Guide to 100Mbps Fiber Transceivers

In summary, a 100BASE FX SFP combines the Fast Ethernet 100BASE-FX fiber standard with the flexible SFP form factor, providing a reliable 100Mbps optical connectivity option for environments

SFP Transceiver

It uses LC connectors, operates at a 1310nm wavelength, and supports long-distance data transmission up to 100 kilometers, ideal for extending 100Mbps

Cisco 100BASE-X Small Form-Factor Pluggable

The Cisco 100BASE-LX10 SFP operates on ordinary single-mode fiber-optic (SMF) link spans up to 10 km long. GLC-FE-100LX modules operate

Gigabit SFP modules with fiber optic modes » buy

Our SFP modules support various fiber modes, including singlemode and multimode. Depending on your requirements, you need to select your SFP

155m Sfp Transceiver 1310nm Single Mode Dual Fiber Lc Ddm 20km

Type Fiber Optic Transceivers Connector Type LC Use FTTH FTTxFTTB Network Network Wired LAN, 5g Model Number F6610M Brand Name Hanwey Place of Origin Guangdong, China Warranty Time 1

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ETSC OCI1300/1500 High-Precision OFDR Optical Coherence

Overview The ETSC OCI1300/1500 is a high-precision optical coherence interferometer engineered for full-parameter characterization of passive and active photonic components and fiber-optic networks

100 Mb/s Singlemode Transceivers Fiber Optic Transmitters,

Mouser offers inventory, pricing, & datasheets for 100 Mb/s Singlemode Transceivers Fiber Optic Transmitters, Receivers, Transceivers.

SFP Modul – 100 Mb/s, Singlemode, 10 km, LC Duplex, 1310 nm

Dieses SFP Modul ist eine kosteneffiziente Lösung für Singlemode-Glasfaserverbindungen mit Reichweiten bis 10 km. Es unterstützt Übertragungsraten von 100 Mb/s nach 100BASE-FX-Standard

Cisco 40GBASE QSFP Modules Data Sheet

The Cisco® 40GBASE QSFP (Quad Small Form-Factor Pluggable) portfolio offers customers a wide variety of high-density and low-power 40

What Is StarryLink Optical Module? Why Do We Need It?

The StarryLink optical module is a core component developed by Huawei for data center networks. It delivers ultra-long-distance transmission, exceptional reliability, and enhanced security,

Arista Optics Modules and Cables

Each module is optimized for different media and reach (ranging from 0.5 meters to 80 kilometers). All interface speeds, from 1G to 400GE have connectivity options that include Direct Attach copper

Complete Guide to Choosing the Right 100M Optical

This guide will demystify the key selection criteria— Single-mode vs. Multi-mode and Single-fiber vs. Dual-fiber —to empower you to make an

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.

Specialty Optical Fibers | Coherent

Coherent Specialty Optical Fibers provide a range of SM, MM, and PM fiber for laser and amplifier, beam delivery, geophysical sensing, gyro, and medical applications.

100M SFP Transceiver Modules Data Sheet | FS

Featuring low power consumption, this industrial optic transceiver provides 100BASE Ethernet connectivity options for Fast Ethernet, Telecom and Data Centers, suitable for both outdoor

Contact Us

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