

10G Optical Module Interface



Article Overview

For 10G optical modules, the most common interface is LC for high-density fiber deployments, while SC is used in lower-density or legacy networks, and RJ45 is used for 10GBASE-T copper connections.

Common Interfaces

LC (Lucent Connector)

- Miniaturized latching interface with a 1.25 mm ferrule, half the size of SC.
- Ideal for high-density deployments such as data centers with dense switch front panels.
- Supports both single-mode and multimode fiber.
- Reduces overall cabling cost and space requirements despite a more complex manufacturing process . SC (Subscriber Connector)
- Square snap-in interface with a 2.5 mm ferrule.
- Larger size, suitable for low-density or legacy networks.
- Commonly used with single-mode fiber in early-stage or less space-constrained deployments . RJ45 (10GBASE-T)
- SFP+ module exposing an RJ45 port for copper cabling (Cat6A/Cat7).
- Suitable for short distances up to 30-100 meters, depending on cable type.
- Offers flexibility when existing copper structured cabling is available but consumes more power and has higher latency compared to optical modules .

Deployment Considerations...

Article Content

Oct 26, 2025

10 Gigabit Optical Transceivers | SFP+ and XFP Modules | Perle

Perle 10G Optical Transceivers available as SFP+ and XFP modules can be used in Perle Media Converters, Cisco switches and

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How to Choose the Right 10G Optical Module?

Understanding the 10G Optical Module Landscape The term 10G optical module generally refers to hot-pluggable

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Understanding SFI Interface and Channels in 10G SFP+ & 40G

Learn how the Serial Framing Interface (SFI) enables high-speed data transmission in 10G SFP+ and 40G QSFP+

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Cisco 10 Gigabit Modules

Discover Cisco 10 Gigabit Ethernet Modules, offering high-speed, reliable connectivity to enhance network

May 01, 2026

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

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A Simple Guide to SFP-10G-SR and Its Practical Uses

When it comes to cost-effective 10 Gigabit Ethernet over short to medium distances, the SFP-10G-SR optical

Dec 22, 2025

What Is 10GBASE-LR? SMF 1310nm 10km SFP+ Explained

10GBASE-LR is a 10-gigabit Ethernet optical standard that operates at 1310 nm over single-mode fiber (SMF), supporting link

May 31, 2026

DATASHEET MODULETEK:SFP-10G-LR-10KM-x-H15

Overview ModuleTek's SFP-10G-LR-10KM-x-H15 SFP+ optical transceivers are based on 10G Ethernet IEEE 802.3ae standard and

Feb 25, 2026

How to Classify SFP+ 10G Optical Transceiver Modules

Learn how to classify 10G SFP+ transceivers by interface, distance, fiber type, and technology. Expert guide for

Nov 25, 2025

10G BiDi SFP+ Optical Module Interface Comparison: SC vs LC

With the increasing demand for high-speed optical communications in data centers, enterprise networks, and carrier

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XG-SFP-LR-SM1310 10GBASE-LR SFP+ 1310-nm 10-km DOM

As an industry-leading ICT infrastructure and industry solution provider, Ruijie offers customers a wide variety of high-density and low

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Optical module

Optical modules can either plug into a front panel socket or an on-board socket. Sometimes the optical module is replaced by an

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Cisco 10GBASE SFP+ Modules Data Sheet

Cisco SFP-10G-T-X module The Cisco 10GBASE-T module (Figure 2) offers connectivity options at the following data rates:

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Introduction of 10G SFP+ Optical Modules

10G SFP+ Optical Module is a type of SFP+ transceiver that supports 10 Gigabit per second (10Gbps) data rates and

Mar 05, 2026

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

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

Nov 21, 2025

Cisco 10GBASE Dense Wavelength-Division Multiplexing SFP+ Modules

Use Dense Wavelength-Division Multiplexing (DWDM) SFP+ modules to integrate WDM transport directly into your

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SFP+ Single Mode LC Module (10km)

TRENDnet's SFP+ Single Mode LC Modules are compatible with standard SFP+ slots found on network switches and fiber

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10G SFP+ Optical Transceivers | Transceiver Module

FS 10GbE SFP+ module solutions provide a wide variety of 10 Gigabit Ethernet connectivity options for

May 11, 2026

Arista Optics Modules and Cables

Overview Arista's Optical Modules and Cable portfolio offer a wide variety of high-density and low-power 800G (dual 400G), 400G,

Dec 01, 2025

10G SFP+ Transceivers | Optical Interconnect | Amphenol

Amphenol's 10G SFP+ optical modules include SFP+ AOC. They are compliant with SFP+ MSA, SFF-8431 and SFF

Mar 03, 2026

What Is 10GBASE-LR? SMF 1310nm 10km SFP+ Explained

These modules follow industry multi-source agreements (MSAs), enabling broad interoperability across switches, routers, and

Nov 23, 2025

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.

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Cisco Transceiver Modules

Cisco Transceiver Modules - Learn product details such as features and benefits, as well as hardware and software specifications.

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UniFi 10G Multi-Mode Optical Module

SFP+ transceiver that supports 10G connections up to 400 m using multi-mode fiber with a duplex LC UPC connector.

Feb 04, 2026

Comprehensive Guide to FS 10G BiDi SFP Modules

Optimize your fiber utilization with FS 10G BiDi SFP+ modules. Single-fiber 10G transmission, lower costs, high

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10G Bidirectional Single-Mode Optical Module

SFP+ transceiver that supports 10G connections up to 10 km using single-mode fiber with a simplex LC

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Cisco 10G Routed PON ONT Data Sheet

These 10G optical network terminals for fiber-to-the-premises applications can be managed remotely and are

Contact Us

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