

Are all SFP optical modules LC interface



AI Overview

Most SFP optical modules use LC connectors, but not all; some use SC or MPO connectors depending on the application.

LC as the Standard Connector The LC (Lucent Connector) is the dominant interface for modern SFP modules, especially for standard duplex transceivers used in enterprise LANs and data centers. LC connectors feature a 1.25 mm ferrule, allowing high port density—up to 48 or 96 LC ports in a 1U switch—making them ideal for modern networking equipment. Almost all standard 1G, 10G, and 25G SFP transceivers are designed with LC interfaces.

Exceptions: SC and MPO Connectors While LC is the default, SC connectors are still used in specific scenarios, such as:

- Single-fiber BiDi modules that transmit and receive on one fiber strand
- PON (Passive Optical Network) deployments, including GPON/EPON for FTTH networks
- Legacy telecom or older fiber infrastructure where SC cabling is already installed

MPO/MTP connectors are generally used for high-density backbone or structured cabling, not standard SFP modules, and are more common in multi-fiber transceivers or breakout applications.

Key Considerations The connector type does not affect speed or bandwidth; it only determines the physical interface for fiber patch cables. Using the wrong connector type requires adapters, which can increase insertion loss and operational complexity. When selecting SFP modules, it is important to match the connector type to your existing fiber infrastructure to ensure compatibility and ease of deployment.

Conclusion Not all SFP optical modules are LC. LC is the standard for most modern SFPs due to its compact size and high-density capability, but SC and MPO connectors are used in legacy systems, single-fiber BiDi modules, PON networks, or high-density backbone applications. Always verify the connector type before deployment to ensure proper compatibility with your fiber network.

Article Content

Axiom Sfp-Gsx/Lc-Ae-Ax Network Transceiver Module Fiber Optic

1000BASE-SX SFP Transceiver for Advantech Axiom SFP-GSX/LC-AE-AX. SFP transceiver type: Fiber optic, Interface type: SFP, Fiber optic connector: LC Axiom SFP Transceiver Modules are 100%

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What is SFP+ Module? An Ultimate Guide (2024)

In the previous post, we explained the SFP module and learned its basics. As one of our tutorial series, we focus on the SFP+ module today. In this

SFP Fiber Optic Connector Types: LC, SC, MPO Explained

Most SFP fiber optic modules use LC connectors, while SC connectors are mainly found in legacy networks and MPO/MTP connectors are used for high-density cabling rather than directly on

Axiom AXG100390 SFP Transceiver Module 1000 Mbit/s – TRINCOS

With a transmission speed of 1000 Mbit/s and a distance of 550 meters, this SFP transceiver is perfect for supporting demanding networking environments. Its LC connector interface and short-range

Hilink 10Gbps XFP Optical Transceiver with 80km Reach Duplex LC

Hilink 10Gbps XFP Optical Transceiver offers reliable 80km reach with duplex LC connectivity and digital diagnostic monitoring capabilities, fully RoHS compliant.

2.5Gbps SFP 1310nm Optical Transceiver, 40km LC Reach

ST-OC48-40 2.488Gbps SFP Optical Transceiver, 40km Reach Features Up to 2.488Gb/s bi-directional data links 1310nm DFB laser and APD photodetector for 40km transmission Compliant with SFP

1.25Gbps SFP Bi-Directional Transceiver, 20km LC Reach

SFP Transceiver Module 1.25gbps 20km LC Reach Tx1310nm/Rx1550nm Bi-Directional for Data Center FTTH FTTX Product Overview 1.25Gbps SFP Bi-Directional Transceiver, 20KM Reach The SFP

Small Form-factor Pluggable

Small Form-factor Pluggable (SFP) is a compact, hot-pluggable network interface module format used for both telecommunication and data communications applications.

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

Fiber Optic SFP Connector Types and Their Uses for

SFP modules are compatible with many connectors, such as lc, sc, and fc connector types. This flexibility makes them a popular choice for both new

TP-Link Gigabit SFP Module, Single-mode, MiniGBIC, LC Interface,

TP-Link Omada Gigabit SFP Module, Single-mode, MiniGBIC, LC Interface, Up to 10km Distance, Fiber optic, 1250 Mbit/s, mini-GBIC, LC, 9/125 µm, LX

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SFP LC Connector: Everything You Need to Know

A: SFP LC Connectors are fiber optic transceiver modules that are plugged into network devices such as switches and media converters. They are

Sfp+ Optical Module 10G Single Module Tx1330Nm 10Km Lc Gigabit

Working Wavelength: TX1330nm. Transmission Distance: 10KM. Product Model: SFP+ 10G SM1330. Item Type: SFP+ Optical Module. 1 x SFP+ Optical Module. Speed: 10G. Less than 1.05W

AddOn SFP-8-AO 1000 Mbit/s Fiber Optic Transceiver – TRINCOS

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ComNet SFP-2 Small Form-Factor Pluggable Copper and Optical

The ComNet™ selection of thirty-three Small Form-Factor Pluggable modules allow for an optical or copper interface when using a ComNet managed switch, unmanaged switch or media converter.

SFP, SFP+, And QSFP Form Factor Standards

Connector Options: The optical interface utilizes duplex LC connectors for SFP/SFP+ and MPO/MTP multi-fiber connectors for QSFP, supporting both parallel and wavelength-division multiplexing

SC SFP vs LC SFP Module: Which one should you choose?

Although most SFP modules have an LC connector by default, very few SFPs provide an SC connector. This post will focus on LC SFP vs SC SFP and hopes to provide comprehensive

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

SFP modules are defined by their “Small” form factor, but the interface determines what you can actually plug into them. In the SFP world, there are three main interface standards you must know.

1000BASE-SX vs 1000BASE-LX, EX, ZX & BX SFP Guide

1000BASE-SX, 1000BASE-LX, 1000BASE-EX, 1000BASE-ZX and 1000BASE-BX are all Gigabit Ethernet fiber optic module terms, but they are not the same type of link. They differ in fiber

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SFP Optical Transceiver | SFP Optical Module | Perle

For example, by simply replacing the pluggable optical transceiver, a media converter that was originally used in a multimode network can be re-configured

Differences Between SC and LC Connectors | LC vs SC connector

While both SC SFP module and LC SFP module serve the same purpose of establishing a connection between the network device and fiber optic cable, they differ significantly in design,

Fiber Optic Cable Assembly Guide | LC, SC & ST Connectors Explained

Most pluggable transceivers are tied to specific connector families: SFP/SFP+ and QSFP modules typically present LC duplex

SFP Optical Module Specifications: Standards & Performance

This guide dives into the key SFP Optical Module Specifications that engineers, network architects, and procurement professionals rely on when evaluating optical transceivers.

LC vs SC SFP Module Interface: 2025 Buying Guide for Network

If you are upgrading a network switch or deploying fiber to the home (FTTH), you will inevitably face the connector choice: LC vs SC. While both are proven fiber connectors, they are not interchangeable on

Contact Us

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