

What is the fiber optic connector on the optical module called



Overview

LC is the default and most widely used fiber optic connector for SFP modules due to its small size and broad compatibility.

Key Takeaways

The fiber optic connector on most modern optical modules, such as SFP or QSFP transceivers, is typically an LC connector.

Overview

The fiber optic connector on an optical module serves as the physical interface that links the transceiver to fiber optic cables, enabling optical signal transmission between network devices. It does not determine the module's speed or protocol but ensures precise alignment of the fiber core with the optical transmitter and receiver, which is essential for minimizing insertion loss and maintaining signal quality.

Common Connector Types
LC (Lucent Connector): The most widely used connector on modern SFP and QSFP modules.

It features a 1.25 mm ferrule and a push-pull latch, supporting high port density and duplex channels in a compact form factor.

L

C connectors are standard for data centers and high-density networking environments.

S

C (Subscriber Connector): A 2.5 mm ferrule with a square snap-in housing, commonly found in legacy networks and some industrial applications.

S

C connectors are less common on new SFP modules but still used in existing infrastructure. MPO/MTP (Multi-Fiber Push-On / Multi-Fiber Termination Push-On): Used for high-density cabling and backbone connections rather than directly on standard SFP modules. These connectors support multiple fibers in a single interface, ideal for 40G/100G deployments.

Function and Importance

The connector ensures that light from the optical module is efficiently coupled into the fiber, reducing reflection and insertion loss. Proper connector selection is critical for network performance, as mismatched connectors require adapters and can increase operational complexity. Most connectors are spring-loaded to maintain contact pressure and precise alignment when mated.

Summary

In modern optical modules, LC connectors are the default choice, while SC connectors appear in legacy systems, and MPO/MTP connectors are used for high-density multi-fiber applications. Selecting the correct connector type ensures compatibility with patch cables, minimizes signal loss, and supports efficient network deployment.

Article Content

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

LC is the default and most widely used fiber optic connector for SFP modules due to its small size and broad compatibility. It is designed specifically to support high port density without compromising

Common Fiber Connector Types in Optical Transceivers

The LC connector is the most widely used fiber optic connector in modern data center and enterprise environments. It features a small form factor (SFF) with a 1.25mm ferrule, allowing for

Fiber Optic Connectors Decoded: A Comprehensive Guide to LC

The LC (Lucent Connector) is a small form factor connector using a 1.25mm ferrule. Its compact size makes it the preferred choice for high-density data centers and enterprise networks.

Small Form-factor Pluggable

SFP modules that use SC fiber connectors don't always indicate whether they use SC/APC (angled) or SC/UPC (ultra polished) connections. SC/UPC is the most common.

LC Vs SC Vs FC Vs MPO Fiber Optic Connectors: Expert Guide

The MPO connector (Multi-fiber Push On) is a multi-fiber connector designed by NTT Corporation, capable of connecting up to 12 optical fibers. MPO fiber connectors'' modular design and

Fiber Connectors

A multi-fiber connector, such as an MPO connector, is designed to connect many fibers (e.g., 12, 24, or more) at once in a single housing. They are widely used in high-density environments like data centers.

The FOA Reference For Fiber Optics

The SMA connector was the first connector widely used for data links using multimode fiber. It was developed by Amphenol using the hardware from the “SubMiniature A” microwave connector, hence

Different Types of Optical Connectors | Inneos

MTP/MPO (Multi-position parallel optic) is a multi-fiber connector that may have 4, 8, 12, or even 24 fibers in a single connector that mates with a push and click mechanism.

Fiber Optic Cable Assembly Guide | LC, SC & ST

In many procurement specifications, “OFC connector type” is shorthand for the required optical fiber connector on the cable ends. Common

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Fibre Channel

SFP modules support a variety of distances via multi-mode and single-mode optical fiber as shown in the table below. SFP modules use duplex fiber cabling with LC connectors. SFP-DD modules are

Everything you need to know about fiber optic termination

Different connectors and splice termination procedures are used for singlemode and multimode connectors, so make sure you know what the fiber will be before you specify connectors or splices!

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