

LC interface optical module type



AI Overview

LC (Lucent Connector) is a small form factor fiber optic interface widely used in SFP, SFP+, SFP28, QSFP+, QSFP28, and QSFP-DD transceiver modules for high-density optical networking. Overview of LC Connectors LC stands for Lucent Connector, originally developed by Lucent Technologies for telecom applications. It features a 1.25 mm ferrule, which is half the size of the SC connector's 2.5 mm ferrule, allowing high port density in switches, routers, and patch panels. LC connectors use a push-pull latch mechanism, similar to RJ45 connectors, making them easy to insert and remove while maintaining precise fiber alignment. They conform to TIA/EIA-604 standards, ensuring cross-vendor compatibility. Key Features Small Form Factor: Ideal for high-density applications in data centers and enterprise networks. Low Insertion Loss: Many LC connectors include a six-position tuning mechanism to optimize fiber core alignment, reducing signal loss. Duplex and Simplex Options: LC connectors can be duplex (two fibers for bidirectional communication) or simplex (single fiber), depending on the transceiver and network design. Polish Types: LC connectors may have UPC (Ultra Physical Contact) or APC (Angled Physical Contact) end-face polish, affecting return loss and signal quality. LC-Interfaced Optical Modules LC interfaces are standard on many optical transceiver modules, including: SFP (Small Form-factor Pluggable): 1G and 10G modules SFP+: 10G modules SFP28: 25G modules QSFP+: 40G modules QSFP28: 100G modules QSFP-DD: 400G modules, including 400GBASE-FR4 and 400GBASE-LR8 These modules use LC connectors to link with LC fiber patch cables, supporting both single-mode (SMF) and multimode (MMF) fibers. The choice of LC interface ensures compact, high-density deployment while maintaining optical performance. Applications LC interfaces are widely used in: Data centers: Leaf-spine architectures, high-density switch ports Telecom networks: Long-reach backbone links Enterprise networks: High-speed SFP/SFP+ connections Industrial and AI fabrics...

Article Content

10G BiDi SFP+ Optical Module Interface Comparison:

This article will provide an in-depth analysis of the structural characteristics and applicable scenarios of these two types of interfaces to help

LC Fiber Optics: Guide to LC Connectors, ULL Cables,

LC (Lucent Connector) is the world's dominant duplex optical interface, used across enterprise networks, telecom infrastructure, and especially

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

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Optical fiber connector

Optical fiber connectors are categorized into single-mode and multimode types based on their distinct characteristics. Industry standards ensure compatibility

LC Fiber Optics: A Comprehensive Guide - TURNSTONE CABLES

This guide covers everything from types of LC optical fiber connections to patch cable solutions and how to pick the right one. Let's break it down simply and clearly so there is no

Product Type

Frames, Panels, Cassettes & Modules Frames, Panels, Cassettes & Modules ensure superior protection, reliability and scalability for your indoor networks.

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

Although SFP modules share a standardized form factor, the connector type determines how the module physically interfaces with fiber, influencing patch cable selection, fiber management, and future

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

Learn how to select and test LC, SC, and ST connectors for reliable fiber optic cable assemblies. Includes polish types, OFC

LC Fiber Optics: A Comprehensive Guide

What Does "LC" Mean in Fiber Optics? LC stands for Lucent Connector (also colloquially "Little Connector"). It was introduced by Lucent Technologies to deliver small form factor (SFF) optical

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

Differences Between SC and LC Connectors | LC vs SC

However, these modules come with different types of connectors, the most common being SC (Standard Connector) and LC (Lucent Connector).

LC Vs SC Vs FC Vs MPO Fiber Optic Connectors:

Compare LC, SC, FC, ST, MPO & MTP fiber optic connectors with expert insights. Learn which connector fits your data center or enterprise network

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Fiber Connector Types

The above article has comprehensively introduced the LC, SC, FC, ST, MTP, and MPO fiber cable connectors types, including their appearances,

LC Fiber Optics: Complete Guide 2026 to Patch Cables,

This guide provides a fully updated and industry-ready overview of LC fiber optics, explaining the origin and design of LC connectors, their key

Cisco SFP and SFP+ Transceiver Module Installation

This installation note provides the installation instructions for the Cisco small form-factor pluggable (SFP) and SFP+ transceiver modules. These

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 networks, 10G BiDi SFP+ optical modules have become a

Cisco 10GBASE SFP+ Modules Data Sheet

Product overview The Cisco® 10GBASE SFP+ modules (Figure 1) give you a wide variety of 10 Gigabit Ethernet connectivity options for data center, enterprise wiring closet, and service provider transport

SFP LC Connector: Everything You Need to Know

Learn everything you need to know about SFP LC connectors, modules, and transceivers for Gigabit Ethernet transmission over multimode fiber .

Know Your 400G Transceiver | Juniper Networks

However, a 400G module such as FR4 or LR4 that uses 4×100G optical lanes requires only four fibers (two duplex LC connectors) to transmit and receive signals.

LC Fiber Optics: A Comprehensive Guide

LC-interfaced transceiver modules are the modules that use LC interface type so that they can be linked with LC fiber patch cables. These LC

Contact Us

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