

Dual-core LC optical module



AI Overview

A dual-core LC optical module is a fiber optic transceiver that uses a duplex LC connector to enable simultaneous bidirectional data transmission over two fibers. Overview A dual-core LC optical module integrates two LC (Lucent Connector) interfaces in a single compact housing, allowing one fiber to transmit optical signals (TX) and the other to receive signals (RX) simultaneously. This design supports full-duplex communication, which is standard for Ethernet and telecom optical links. These modules are widely used in SFP, SFP+, and SFP28 transceivers, providing high-density connectivity in data centers and enterprise networks. Key Features Connector Type: Duplex LC, with a 1.25 mm ceramic ferrule for precise fiber alignment. Fiber Compatibility: Supports both single-mode fiber (SMF) and multimode fiber (MMF) systems. Data Rates: Commonly available in 10G SFP+ modules for 10 Gigabit Ethernet, and higher-speed QSFP modules for 40G or 100G links. Wavelengths and Reach: Typical single-mode modules operate at 1310 nm with distances ranging from 10 km to 20 km, while multimode modules may support shorter distances like 2 km. Hot-Swappable: Most modules are hot-swappable, allowing easy installation or replacement without powering down the network device. Applications Dual-core LC modules are used in: Data centers for high-speed server interconnects. Telecom networks for reliable long-distance optical links. Enterprise backbone networks to support 10G, 25G, 40G, or 100G Ethernet connections. Migration solutions where existing duplex fiber infrastructure is reused for higher-speed links, such as upgrading from 10G to 40G or 100G Ethernet. Advantages Compact form factor suitable for high-density port layouts. Reliable full-duplex communication with low latency and high stability. Flexibility to work with both single-mode and multimode fibers. Ease of deployment due to standardized SFP/SFP+ interfaces and hot-swappable design. In summary, a dual-core LC optical module is a versatile and essential component for modern optical networks.

Article Content

Small Form-factor Pluggable

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 format used for

Qatar Overseas Warehouse 1.6T Optical Module 2.5G

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100M/328FT Outdoor Armored LC to LC Fiber Optic Cable, 4 Core

About This Industrial-Grade Durability: Engineered with a rugged 5.0mm industrial TPU jacket and dual-layer armor (steel tube + stainless mesh), this LC to LC fiber optic cable resists water, UV,

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Fiber Optic Transceiver Guide | PHILISUN

What Is a Fiber Optic Transceiver? A fiber optic transceiver (also called an optical transceiver) is a compact module that both transmits and receives data signals through optical fibers.

SLC-GLXS10 - 1.25Gbps SFP LX 1310nm LC Single

This dual-core small form-factor pluggable (SFP) module supports hot-swappable design and can be applied to long-distance fiber optic networks or fiber

16-port thickened optical fiber terminal box□single ...

Until i found this "lianjitong" thickened 16-port rack-mounted optical fiber terminal box - fresh on the market in november 2023, fully equipped with 16 cores, fully compatible with sc/fc/st/lc,

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 data center, enterprise

SFP SX 0.55km module, MM, dual core, 1.25 Gbps,

Module for operation over two optical fibers in SFP format for Gigabit Ethernet (1000Base-SX). Designed to work on multimode optical fiber (MMF), maximum

The Ultimate Reference Table for SFP & QSFP Optical Transceiver ...

Executive Summary: Navigating the 2025 Optical Landscape In 2025, the optical transceiver market has shifted decisively. While 100G remains the workhorse for enterprise edges,

Simplex vs Duplex Fiber Optic Cables: Key Differences & Guide

Confused about simplex vs duplex fiber optic cables? Learn key differences, BiDi & WDM technology, FTTH vs data center use cases, and how to choose the right fiber.

1.25G SFP Module Transceiver, 1000Base-LX,1310nm

1.25G SFP MODULE- 1.25Gbps SFP Optical Transceiver, Dual LC single-mode fiber, 1310nm, up to 20km super long distance transmission for POE switch with

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.

Odc to lc field optical cable□3.3mm armored waterproof ...

this odc to lc field optical cable from shanze, 3.3mm military-grade armor + dual-core single-mode structure + full-section flame-retardant sheath, zero packet loss tested for 72 hours - it is

Optical Interconnect Technology Analysis: LPO, NPO,

Exploring optical interconnects for AI data centers: LPO for low-power, short-distance links, NPO for high-density, near-package connections,

The Key Differences Between 1-core, 2-core, Single

o In optical modules, "core" refers to the light-transmitting channel in the fiber. A 1-core module uses a single fiber core for data transmission, while a

10Pack 1.25G 850nm Multimode SFP LC Transceiver

Fiber Type:1.25Gb/s Dual LC OM3 Fiber Module 10 Pack; Wavelength: 850 nm Multimode; Reach: up to 550 meters; with Advanced DDM

NADDOD NVIDIA/Mellanox MMS4C11 (980-9IAU1-00XM01)

NVIDIA/Mellanox MMS4C11 (980-9IAU1-00XM01) Compatible 1.6TBASE-2xDR4 OSFP224 IHS/Closed Finned Top 8x200G PAM4 Broadcom 3nm DSP (Sian3 | BCM83628) 1310nm 500m SMF DOM Dual

Cisco OSFP 800G Transceiver Modules Data Sheet

The Cisco OSFP-800G-VR8 module (Figure 1) supports 800GBASE-VR8 as well as 2x 400GBASE-VR4, 4x 200GBASE-VR2, and 8x 100GBASE-VR1 breakouts for links up to 50m(OM4/5) in reach.

10G SFP+ Module Fiber Optic Transceiver Duplex Dual

The 10G SFP+ optical transceiver is a small pluggable optical module with a current maximum rate of 10.3G, usually connected with an LC jumper. It is can be

10G SFP+ Optical Transceivers | Transceiver Module

FS 10GbE SFP+ module solutions provide a wide variety of 10 Gigabit Ethernet connectivity options for data centers, enterprise wiring closets, Internet Service

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