

Dual-core optical module connector



Article Overview

A dual-core optical module connector is an optical interface that supports two fiber channels, typically using LC duplex connectors, enabling simultaneous bidirectional or parallel data transmission.

Overview

A dual-core optical module connector is designed to handle two optical fibers within a single module or connector interface. This configuration allows for simultaneous transmission and reception of optical signals, effectively doubling the data throughput compared to single-core connectors. These connectors are commonly used in 10G SFP+ transceivers, high-speed data centers, enterprise networks, and broadcast applications .

Key Features

- **Connector Type:** Most dual-core modules use LC duplex connectors, which consist of two aligned ferrules in a compact form factor .
- **Module Form Factor:** Commonly implemented in SFP+ or XFP optical transceivers, supporting link lengths up to 10 km over single-mode fiber .
- **Ruggedized Options:** For field or mobile applications, connectors like opticalCON DUO provide a durable, all-metal housing with spring-loaded push-pull locking, aramid yarn cable retention, and protection against dust and dirt .
- **Compatibility:** These modules are tested for interoperability with switches, routers, servers, and NICs from multiple vendors, ensuring reliable network performance .
- **Applications:** Ideal for enterprise wiring closets, service provider transport, audio/...

Article Content

Sep 10, 2025

10G Optical Module Selection Guide: LRM,SR,LR,ER,ZR

The 10G SFP+ dual-fiber optical module is a small pluggable optical transceiver that adopts a dual-fiber bidirectional

Sep 23, 2025

Optical fiber connector

Field-mountable optical fiber connectors are used to join optical fiber jumper cables that contain one single

Jun 01, 2026

SC Duplex Optical Fiber Connector | HYC Co., Ltd

Compliance with international standards The SC dual-core fiber optic connector provided by HYC can meet Telcordia

Nov 25, 2025

Multi-core Fibers – dual core, twisted, space division

Multi-core fibers enable space division multiplexing (SDM) by providing multiple parallel spatial channels

Sep 06, 2025

The Key External Components of Optical Modules

In this blog, we'll explore the core structure of an optical transceiver, explaining the function of each part and how they

Mar 05, 2026

opticalCON® DUO Chassis Connectors

The opticalCON DUO is the ideal solution for equipment connections and system integration offering LC compatibility on chassis

Feb 20, 2026

opticalCON® DUO Cable

The opticalCON DUO is the ideal solution for equipment connections and system integration offering LC

Oct 08, 2025

Different Types of Optical Connectors | Inneos

Optical connectors are the physical interface that links an optical device to a fiber optic cable. Fiber optics are used in

Jan 13, 2026

opticalCON DUO HYBRID

Assembled extra rugged hybrid cable with 2 multi-mode fibers and 4 x 0.75 mm 2 copper conductors, GFK strength member and

Sep 23, 2025

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

Understanding 1-core, 2-core, Single Mode, and Multi-mode optical modules helps you design efficient networks.

Apr 26, 2026

Differences Between Dual Fiber SFP and Simplex SFP Modules

Dual fiber SFP and simplex SFP modules are two different SFP types, and understanding their differences is crucial for making

Aug 27, 2025

Understanding the Duplex LC Connector: The Go-To Fiber Network

Fast and dependable connectivity is crucial in the current world, where information is everything. A Duplex LC

Dec 12, 2025

Difference Between Single and Dual Fiber Optical Transceivers

Fiber optic technology has seen incredible growth over the past several years and will likely experience even more

Mar 17, 2026

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

Read the definitive 2026 guide on SFP modules. We explain Single Mode vs Multimode, DDM diagnostics,

Jan 14, 2026

Integrated optical connection module for 7-core multi-core fiber and 7 ...

An integrated optical connection module was developed that connects 7-core multi-core fiber and 7 single mode fibers. Insertion loss

Nov 07, 2025

Fibre optic connector systems | singlemode and multimode

Fibre optic connector systems for almost every aspect of fibre optic cabling. Standard, individual and robust connectors.

Jul 24, 2026

What Is an SFP Duplex LC Connector in Fiber Networks

Learn what an SFP duplex LC connector is, how it works in optical transceivers, and why it is widely used in fiber

Nov 19, 2025

What Is A Single-Fiber BiDi Transceiver?--ETU-LINK

Single fiber module also called BiDi transceiver or WDM module. It uses WDM technology to realize the bidirectional transmission of

Mar 29, 2026

SFP Optical Transceiver | SFP Optical Module | Perle

Perle SFP Optical Transceivers are hot-swappable, compact media connectors that provide instant fiber connectivity for your

Jul 06, 2026

opticalCON DUO

Ideal for audio and broadcast networks. The opticalCON DUO cable connector accommodates a standard optical LC-Duplex

Dec 08, 2025

Optical module

An optical module is a typically hot-pluggable optical transceiver used in high-bandwidth data communications applications. Optical

Sep 27, 2025

Optical Module | FS

FS CFP2 module is designed for applications over single mode fiber with transmission distances of up to 10km. It uses 4 WDM

Mar 06, 2026

Understanding Optical Modules: A Comprehensive Guide

Optical Module Basics: Understanding the Core ConceptsOptical modules are compact devices that convert electrical

Feb 03, 2026

MPO Cables and Adapters | Molex

The design of the MPO connector incorporates up to 48 fibers into a single connector housing, delivering

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://khanimamboguesthouse.co.za>

Email: sales@khanimamboguesthouse.co.za

Phone: +27 64 852 1973

Address: Unit 7, Greenway Business Park, 8 Innovation Drive, Centurion, 0157, South Africa

This document is for informational purposes only. Specifications subject to change without notice.

