

Dual-fiber optical module products



Article Overview

Dual-fiber optical modules use two separate fibers for transmitting and receiving data, offering high stability, reliability, and long-distance transmission for modern high-speed networks.

Overview

Dual-fiber optical modules, also known as standard duplex transceivers, are essential components in fiber optic communication systems. They convert electrical signals into optical signals for transmission over fiber and then back into electrical signals at the receiving end, ensuring seamless data communication across networks . Unlike single-fiber bidirectional (BIDI) modules, dual-fiber modules use two separate fibers—one for sending and one for receiving—providing higher transmission stability and reliability .

Key Features

- **High Speed and Low Latency:** Modern dual-fiber modules, such as the 25G SFP28 ZR 80KM, support data rates up to 25.78Gb/s with microsecond-level latency, meeting the real-time requirements of data centers and 5G fronthaul networks .
- **Long-Distance Transmission:** Using EML lasers, SOA optical amplifiers, and G.652 single-mode fiber, dual-fiber modules can achieve distances up to 80 km, suitable for inter-metropolitan backbone networks .
- **Industrial-Grade Reliability:** These modules operate across a wide temperature range (-40°C to 85°C) and feature hot-swappable designs for easy maintenance .
- **Compatibility:** Dual-fiber modules typically use a duplex LC interface, making the...

Article Content

Cisco Transceiver Modules

Cisco Transceiver Modules - Learn product details such as features and benefits, as well as hardware and software specifications.

SFP Optical Transceiver Products | Syrotech Networks

Syrotech Networks is market leader in manufacturing and supplier of sfp module, optical transceiver, sfp port, sfp optical

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

Optical Module & Fiber Optic SFP Module Factory

We offer the fiber optic sfp module in many wavelengths. 850nm is popular for short runs. 1310nm is great

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

Optical Transceivers | Fiber Optic Transceivers | Form

Using fiber optic technology, it converts electrical signals from switches or routers into

Difference Between Single vs Dual Fiber Optical Transceivers

Single Fiber: Typically shorter reach compared to dual fiber, ranging from 2km to 120km, depending on the specific module. Dual

Fiber WDMs, Combiners, Splitters and Couplers

For a very cost-effective alternative configuration, combining the functions of a tap and monitor photodiode

Dual-Fiber

SFPs for the existing legacy units, adds an additional physical layer monitoring capability previously

Fiber Optic Connectors | Products | Amphenol

Amphenol provides a series of 40G QSFP+ optical module products, including SR4, eSR4, IR4, LR4, ER4

The Difference Between Single/Dual Fiber and

As fiber optic networks continue to evolve, selecting the right optical transceiver becomes

Single Fiber vs Dual Fiber Transceivers Understanding the Key

In fiber optic communication systems, optical transceivers play a critical role in ensuring seamless data transmission.

The Most Comprehensive Guide Of Optical Modules

Explore the ultimate guide to optical modules. Learn types, functions, performance metrics

Optical Data SFP Modules

Both dual fiber transceivers and single fiber Bi-Directional (BiDi) round out the flexible offering. The

SFP modules – transceivers for 1/2/4G fibre channel

SFP transceivers are valued for their flexibility, low power consumption and ability to support both single

Cisco Optics | Transform Your Network

Get the highest quality, performance-leading optical transceivers for any network architecture. Find the transceiver model to fit your

Compatible 10G SFP+ Transceivers

Long-reach 10G SFP+ portfolio bridges campus and metropolitan networks with cost-effective single-mode fiber connectivity. These

Choosing the Right SFP: Single Fiber vs Dual Fiber

Dual fiber SFPs are the traditional and more widely used type of optical transceivers. These modules use two

SFP Optical Transceiver | SFP Optical Module | Perle

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

Optical Transceiver

The optical transmitter and receiver products of Gearlink are trusted by customers with low power consumption, high compatibility,

Single-fiber Transceiver & Dual-fiber Transceiver

Single-fiber optical modules and dual-fiber optical modules are two common types of optical modules. They all play an important role

The Difference Between Single/Dual Fiber and

Dual fiber modules use two separate fibers: one for transmitting (TX) and one for receiving

What is the difference between single fiber and dual fiber optical ...

Dual fiber: The devices at both ends can use 10G SFP+ dual fiber optical modules with a wavelength of 1310nm.

SFP+ Dual Fiber

SFP+ Standard Dual Fiber Optics (SFP) Transceivers used for only one connection like a connection between two switches, are

100G Optical Module: Single Fiber Vs. Dual Fiber--ETU-LINK

In 100G optical modules, single-fiber modules save fiber resources through wavelength division multiplexing (WDM)

Fiber Optic Connectors | Products | Amphenol

All Products All Connectors Audio-Video Connectors Backplane Connectors Battery Connectors Board-Level Connectors Circular

Optical fibers and modules

Optical fibers and modules Optical fibers are at the heart of everything we do. We embed as many functions as possible directly into

Dual-Fiber

Dual-Fiber Home / Modules / Small Modules / OZ200 Features Benefits The iDFC™ Configuration is the

What Are The Types Of Gigabit Optical Modules

Gigabyte optical module has been a very mature series of products, the common transmission rate is 1.25G, 2.5G,

What is the difference between single fiber and dual fiber optical ...

In this issue, ETU-LINK will introduce what is a single fiber optical module and a dual fiber optical module, and what are

300m SFP+ Optical Module

This product needs to be used in pairs and matched with fiber converter and optical Ethernet switch with SFP

SFP Dual Fiber

Opticonnects offers a range of passive WDM devices for both Dual Fiber as Single Fiber Bidirectional

Contact Us

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