

Fiber Optic Transceiver Single-Mode Dual-Port



Article Overview

A single-mode dual-fiber dual-port transceiver uses two separate fibers—one for transmitting (TX) and one for receiving (RX)—providing high stability and long-distance communication over a duplex LC interface.

Overview

A single-mode dual-fiber transceiver is designed for long-distance optical communication, typically over tens of kilometers. It uses two separate fibers: one dedicated to transmitting data and the other to receiving data, which ensures minimal signal interference and robust performance for high-bandwidth applications . The transceiver converts electrical signals from network devices into optical signals and vice versa, maintaining signal integrity over long distances .

Key Features

- Dual-port design: Features two ports, TX and RX, corresponding to the two fibers. This duplex configuration aligns with standard network designs and simplifies cabling .
- Single-mode operation: Optimized for long-distance transmission, typically using wavelengths such as 1310 nm or 1550 nm .
- Duplex LC interface: Standard connector type for dual-fiber transceivers, allowing easy integration with existing fiber infrastructure .
- High reliability: Dual-fiber design reduces crosstalk and signal degradation, makin...

Article Content

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Cisco OSFP 800G Transceiver Modules Data Sheet

The module has eight pairs of single-mode fiber with dual MPO-12 APC connectors. It is

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Differences Between Single-mode & Multimode Fiber Optic Transceivers ...

The transmission distance of multimode fiber optic transceiver is less than that of the single-mode transceiver due to

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Optic Modules Datasheet

4 Optic Modules Data Sheet ... SFP (form factor) = small form-factor pluggable transceiver SMF (media) = single-mode fiber-optic

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Differences Between Dual Fiber SFP and Simplex SFP Modules

Dual fiber SFP modules are the commonly used 1G SFP module type. They operate on a bidirectional transmission mechanism and

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Simplex vs Duplex Fiber Cable: Key Differences and How to Choose

Learn the differences between simplex fiber cable and duplex fiber cable, including transmission methods, applications,

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Single-mode vs. Multimode Transceivers: How Do You Choose?

In datacom environments, both singlemode transceivers and multimode transceivers can accommodate speeds

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2 Pack 1.25G/s Bidi Gigabit Single-Mode Fiber to Ethernet Media ...

□Complete Fiber Media Converter Kit□Includes 2x Gigabit Ethernet Media Converters with SFP slots, 2x 1000BASE

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Transceiver difference Between Single Vs Dual Fiber Optical Transceivers

Dual fiber optical transceivers use the same wavelength on two fibers. It has two distinct channels or ports, TX is used for

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BiDi Transceiver: Utilizing WDM Technology for Dual-Direction Data ...

Bi-Directional (BiDi) Transceiver is a compact optical transceiver module that uses WDM (wavelength division

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Arista Optics Modules and Cables

SFP+ Optical interoperability with 10GbE XFP, X2 and XENPAK pluggable form factors
QSFP+ Universal transceiver for 40G

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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-mode and multimode fiber,

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Single Mode SFP Transceiver: Complete Guide Explained

Learn what a single mode SFP transceiver is, how it works, key specs, common types, and real-world use cases for long-distance

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Single Fibre vs Dual Fibre Transceivers: Which One to Choose

They differ in the number of ports. The dual type has two ports, whereas the single type has only one. 100G 40KM

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Single Fiber Bidirectional SFP Transceivers

Single Fiber Bidirectional SFP transceivers use simplex single-mode fiber to double the bandwidth, data rates up to 4G and

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Luminex Transceivers

This single mode fiber (SMF) SFP+ transceiver provides dual rate 1G/10GBase-LR throughput to up to

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Single-mode vs Multimode SFP Transceivers: A Comprehensive

Single-mode SFP and multimode SFP are the two main types of hot-pluggable optical transceivers used in fiber optic

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

When planning a fiber optic network, one key decision is choosing between single-fiber (BiDi) and dual-fiber optical transceivers. This

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Cisco SFP Modules for Gigabit Ethernet Applications

The 1000BASE-ZX SFP operates on standard single-mode fiber-optic link spans of up to

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SEL-2829 Single-Mode Fiber-Optic Transceiver/Modem

Improve safety, signal integrity, and reliability by using two optical fibers instead of wire to transfer bidirectional serial data using

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ipolex Gigabit Single-Mode LC Fiber to Ethernet Media ...

About this item Seamless Conversion of LC Fiber to Copper – This fiber optic to ethernet media

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The Difference Between Single/Dual Fiber and

As a global supplier of high-quality magnetic and optical connectivity solutions, LINK-PP

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Comparing Single-Mode vs Multimode SFP

Explore the differences between single-mode and multimode SFP transceivers. Find the

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Amazon : Fiber To Ethernet Converter

A Pair of 1.25G/s Bidi Gigabit Single-Mode Fiber Ethernet Media Converter with 2PCS Bidi SFP LC Transceiver Module Included,

Sep 30, 2025

Complete Guide to Choosing the Right 100M Optical Transceiver

Choose the right 100M optical transceiver by checking compatibility, fiber type, wavelength, distance, data rate,

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The difference between single and dual fiber optical transceiver

Single fiber module also called WDM module. It uses WDM technology to realize the bidirectional transmission of optical signals on

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Difference Between Single and Dual Fiber Optical Transceivers

Know the key differences between Single and dual-fiber optical transceivers for efficient network deployment and

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NVIDIA MMS4A00 1600Gbps, 2xDR4, Twin-port OSFP, 2xMPO,

The NVIDIA MMS4A00 is a 1600Gb/s 2xDR4, single mode optical transceiver supporting the XDR 800Gb/s InfiniBand

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H!Fiber 1.25G Single Mode SFP LC Module, 1000Base

H!Fiber offers one-stop Datacenter solution and products, including SFP Transceivers, DAC Cables,

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Fiber Modules

Grandstream Network offers a wide variety of fiber modules. All of them are hot-pluggable small-form factor transceiver modules

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

Confused by SFP vs SFP+? Read the definitive 2026 guide on SFP modules. We explain Single Mode vs

Contact Us

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