

Single-mode dual-core 10 Gigabit fiber optic cable



Article Overview

A two-core single-mode fiber optic cable (OS2, 9/125 μm) supports 10 Gigabit Ethernet over distances up to 10 km at 1310 nm and up to 40 km at 1550 nm, typically using LC-LC duplex connectors.

Key Specifications

- Fiber Type: Single-mode (OS2), 9 μm core, 125 μm cladding, optimized for long-distance, high-speed transmission .
- Configuration: Two-core (duplex) for bidirectional communication, commonly terminated with LC-LC connectors .
- Data Rate: Supports 10GbE and higher speeds, compatible with 1G, 10G, 40G, and 100G Ethernet networks .
- Wavelengths: Operates at 1310 nm for shorter long-distance links (up to 10 km) and 1550 nm for extended distances (up to 40 km), .
- Jacket and Construction: Standard yellow jacket for single-mode, 2.0 mm outer diameter, OFNR (riser-rated) PVC, zip-cord reinforced for indoor use .

Performance Considerations

- Insertion Loss: The total loss along the fiber link, including cable, connectors, and splices, must be within the 10GbE link power budget to maintain signal integrity .
- Compatibility: Works with SFP+ modules and other 10GBASE-LR or 10GBASE-ER transceivers for long-distance single-mode applications

Article Content

What Is 10GBASE-LR? SMF 1310nm 10km SFP+ Explained

10GBASE-LR is a 10-gigabit Ethernet optical standard that operates at 1310 nm over single-mode fiber (SMF), supporting link

Fiber Optic Cable Types – Multimode and Single Mode

The Optical Core – a glass tube (core) propagates the light signals through the fiber cable. Glass is inherently reflective and is a

Multi-mode optical fiber

Multi-mode optical fiber is a type of optical fiber mostly used for communication over short distances, such as within a building or on a

Single Mode Fiber Wiki: Concerning Types and Applications

In optical fiber technology, single mode fiber (SMF) or monomode fiber, is an optical fiber that is designed for the

Single vs Dual Fiber Media Converters (2025): A/B

For many campus and metro use cases, a single-mode BiDi pair is extremely attractive because it halves

SFP+ Single Mode LC Module (10km)

TRENDnet's SFP+ Single Mode LC Modules are compatible with standard SFP+ slots found on network switches and fiber

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

Single Mode vs Multimode Fiber, What is The Difference?

Learn the key differences between single mode vs multimode fiber cables and choose the right one for your fiber optic

OS2 Single Mode Fiber Optic Cables, SMF Duplex

Get OS2 single mode duplex fiber patch cables for 1G/10G/40G/100G/400G Ethernet fiber connections to

SFP-10G-LR Compatible | 10GBASE-LR SFP+ Optical Transceiver

Reliable, high-speed connectivity with the SFP-10G-LR Compatible transceiver. Designed for 10 Gigabit networks, this module

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

Single Mode vs. Multimode Fiber: Core Differences and Selection Guide

How do you choose between single mode and multimode fiber? Compare their differences in core size, light source,

Bulk Fiber Optic Cable

L-com offers bulk fiber optic cable including single mode, multimode, 10 & 100 Gigabit, Hi Flex, breakout style and distribution style.

Fiber Optic Cable Types | Omnitron Systems Guide

Explore fiber optic cable types, features, and applications. Omnitron Systems explains single-mode, multi

1000BASE-T to 1000BASE-SX (SC) 10 km single-mode Media Converter

Copper to Fiber Conversion The D-Link DMC Media Converters support a large variety of optical fiber types including multi-mode,

Multimode Fiber Types: OM1 vs OM2 vs OM3 vs OM4 vs OM5

How Many Types of Multimode Fiber? Identified by ISO 11801 standard, multimode fiber optic cables can be classified

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

Optic Modules Datasheet

datasheet is intended to guide the user through the various options available when choosing an optic module for a given platform

Singlemode Fibre | Comms InfoZone

OS1 and OS2 are the specifications for single-mode optical fibre cable. Maximum bandwidths and corresponding distances for

10 Pack 10Gb Singlemode Module with 10m OS2 LC to LC Fiber Cable ...

10GBase-LR Module: 10 Gigabit Ethernet SFP+ Transceiver, 10Gb/s Singlemode Dual LC interface, 1310nm wavelength, link OS2

Choosing Between Single Mode vs Multimode Fibers - Lightera

Although single-mode optical fiber holds advantages of bandwidth and distance, multimode optical fiber supports most distances for

U®Fiber Modules and FiberCable Datasheet

Scale your fiber network using our flexible and lightweight fiber patch cables. The 10G multi-mode fiber patch cables are ideal for

Contact Us

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

Website: <https://sdesign.net.pl>

Email: sales@sdesign.net.pl

Phone: +48 694 237 815

Address: ul. Marszałkowska 10, 00-001 Warsaw, Poland

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

