

Fiber Optic Converter Gigabit Single-Mode



Overview

ipolex Gigabit Single-Mode LC Fiber to Ethernet Media Seamless Conversion of LC Fiber to Copper – This fiber optic to ethernet media Fiber to Ethernet Medi.

Key Takeaways

Single-mode gigabit fiber optic converters enable high-speed Ethernet-to-fiber conversion over long distances, supporting up to 20 km with full wire-speed performance.Overview

Single-mode gigabit fiber optic converters are designed to bridge copper Ethernet networks (10/100/1000Base-T) with single-mode fiber networks (1000Base-LX). They are ideal for extending network reach, improving bandwidth, and connecting devices across long distances without signal degradation. These converters typically use SC-type connectors and operate at 1310 nm wavelength, supporting full-duplex transmission at gigabit speeds .

Key Features

- Data Rate: Supports Gigabit Ethernet (1000 Mbps) for high-speed applications .
- Distance: Single-mode fiber allows transmission up to 20 km depending on the model .
- Standards Compliance: Compatible with IEEE 802.3, 802.3u, 802.3ab, and 802.3z standards .

- **Auto-Negotiation:** Many models feature auto MDI/MDI-X detection for easy integration with existing networks .
- **Single-Fiber Operation:** Some converters use bi-directional WDM technology, transmitting and receiving on a single fiber strand using different wavelengths, reducing fiber usage and installation costs .
- **Environmental Tolerance:** Industrial models can operate in temperatures from -5°C to +60°C and tolerate 5% to 90% humidity .
- **Management Features:** Advanced models include link fault pass-through, far-end fault detection, and Smart LFP (Link Fault Pass-through) technology to monitor signal loss .

Installation Options

- **Standalone Units:** Can operate independently without a chassis .
- **Chassis-Mounted Modules:** Compatible with multi-slot chassis for centralized management and redundant power options .
- **DIN Rail Mounting:** Available for industrial environments .

Popular Models

- **Versitron Single-Fiber Gigabit Converters:** Support 10/100/1000Base networks, single-fiber WDM, and industrial-grade options .
- **TP-Link TL-MC101:** Converts 1000Base-LX fiber to 1000Base-T copper, supports up to 20 km, standalone or chassis use, with auto MDI/MDI-X .
- **HiFiber 10/100/1000M Gigabit Converters:** Single-mode, single-fiber, SC to RJ45, with 1-year warranty and long-distance support .
- **LevelOne GVT-2002:** Bridges 10/100/1000Base-T with single-mode SC fiber, extends up to 20 km, features Smart LFP, standalone or rack-mounted .

Benefits

- **Cost-Effective Fiber Usage:** Single-fiber WDM reduces the number of fibers needed.
- **Network Expansion:** Extends Ethernet networks over long distances without signal loss.
- **Legacy Integration:** Connects older copper devices to modern fiber networks.
- **Reliability:** Industrial models withstand harsh environments and maintain stable performance. Single-mode gigabit fiber optic converters are essential for high-speed, long-distance network applications, offering flexibility, efficiency, and robust performance for both commercial and industrial deployments .

Article Content

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Fiber Media Converters

Fiber Savvy supplies this type of Fiber Media Converter in 10/100BASE Fast Ethernet, 10/1000BASE

Gigabit Fiber to RJ45 Ethernet Media Converter Dongle,

Gigabit Fiber to RJ45 Ethernet Media Converter Dongle, Optical Singlemode 10km/Multimode 800m, PoE

StarTech Gigabit Fiber Media Converter, Open SFP,

The Gigabit fiber media converter provides a cost-efficient way to connect your Ethernet network to remote

Single Mode Gigabit Ethernet to Fiber Optic Converter

The ETH-FIBER-SM-2 has a RJ45 connector for the gigabit Ethernet port, and either an ST type or SC type connector for the fiber

Single Mode to Multimode Converters | Fiber to Fiber

Easily connect different fiber types and wavelengths to convert Single Mode to Multimode (SM to MM), or extend the distance of

TL-MC101 | Gigabit Single-Mode Media Converter | TP

TL-MC101 is a media converter designed to convert 1000BASE-LX fiber to 1000Base-T copper media or

Gigabit Media Converter | Gigabit Ethernet Fiber Media

Buy Gigabit fiber media converter designed to convert single mode, multimode of 10, 100 and 1000 Base

Omada Gigabit Single-Mode Media Converter

The MC210CS is a media converter designed to convert 1000BASE-LX fiber to 1000Base-T copper media

10Gtek 10/100/1000M Gigabit Fiber Media Converter,

Hifiber's A7S2-33-1GX1GT-SC20A/A7S2-33-1GX1GT-SC20B are used to expanding existing Gigabit

Gigabit 2-port single-mode single fiber media converter

The ONV1110S-SCX-O-A3 is a Gigabit single-mode single fiber media converter independently developed

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