

Single-mode optical to digital conversion module



Article Overview

Single-mode optical to digital conversion modules convert optical signals from single-mode fiber into electrical or digital signals for network or data applications.

Overview

Single-mode optical to digital conversion modules are devices that translate light signals transmitted over single-mode fiber (SMF) into electrical or digital signals that can be processed by network equipment or digital systems. These modules are widely used in telecommunications, data centers, industrial automation, and video transmission applications .

Types of Modules

- SFP (Small Form-factor Pluggable) Modules
- Compact, hot-swappable transceivers that convert electrical signals to optical signals and vice versa .
- Single-mode SFPs, such as 1000BASE-LX (1310nm), support long-distance transmission up to 20 km over LC duplex fiber .
- Compatible with switches, routers, and media converters, allowing flexible network deployment.
- Fiber-to-Ethernet Media Converters
- Convert single-mode fiber signals to Ethernet (RJ45) digital signals and vice versa .
- Support auto-negotiation for 10/100/1000 Mbps connections and can extend netw...

Article Content

Dec 30, 2025

Single Mode SC WDM Single Fiber Bi-Di Gigabit Media Converter

Single Mode WDM Single Fiber Bi-Di Gigabit Media Converter - Built-in Fiber Module
20km (12.42 Miles) Simplex SC - to UTP

May 15, 2026

Recent advances on all-optical photonic crystal analog-to-digital ...

Today, one of the most important objectives concerned with integrated optical circuits is to realize all-optical networks.

Oct 16, 2025

Optical to Electrical Converters

33 GHz optical-to-electrical converter (including 1x optical-to-electrical converter module, 2x Fiber optic FS/FC-A1 connector, 2x FC

Aug 08, 2025

The Difference Between Single-mode and Multi-mode Optical Modules

When using single-mode optical modules, you need to pay attention to the cleanliness of the optical fiber interface to avoid dust and

Sep 11, 2025

N7005A 60 GHz Optical-to-Electrical Converter

The N7005A Optical-to-Electrical Converter is a high-sensitivity photodetector module for optical-to

Oct 18, 2025

Optical to Electrical Converters

41 Optical to Electrical Converters from 7 manufacturers listed on GoPhotonics.
Search by specification. Selected filters - Country :

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QSFP28-100G-LR1 Optical Transceiver Single-Mode Single

The QSFP-10010-LR1 is a single lambda long reach single-mode 100G QSFP28 optical module transceiver compatible with the

Apr 23, 2026

EO/OE Converters

These EO/OE converters are suitable for long-haul ITV, traffic monitoring, electric power monitoring, river monitoring, CATV,

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Optical-to-Electrical Converter OE695G Datasheet

Typical Optical to Electrical conversion sensitivity variation with optical wavelength. The OE695G receiver functions over a broad

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Optical to Electrical Converters

Optical to Electrical Converter, also known as an optoelectronic converter, is an electronic device that converts optical signals into

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10Mb/s Single Mode 1310nm 10km SC/FC/ST 1x9 TTL Optical

The transceivers are high-performance, cost-effective modules with a TTL data interface that supports a data rate of 10Mbps and a

Jul 08, 2026

Fiber to Fiber Media Converters

Omnitron fiber-to-fiber media converters provide multimode to single-mode fiber conversion and dual fiber

Jan 17, 2026

fiber converter module;Modicon X80;single mode

This fiber converter is part of the Modicon X80 range, a common platform of modules for Modicon M580

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TB826 (Single Mode)

It is used to convert between plastic/opto fiber of HCS fiber with versatile link connectors and single mode field fiber with SC

Nov 23, 2025

EO/OE Converters

EO/OE converters are designed to ensure long-haul transmission of video, audio, and control signals via single-mode optical fibers.

Jul 10, 2026

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

Nov 02, 2025

Fiber Mode Converters

MM-to-SM Fiber Converter (OC-12 rate up to 622 Mbps) (TC3004) The TC3004 Fiber Optic Mode Converter converts multimode to

Jun 16, 2026

A Quick Guide to 1G Optical Transceiver

1G optical module refers to the optical module with a transmission rate of 1.25Gbps. The 1G optical module is already

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Multimode to Singlemode Conversion Kits

The FiberPlex Technologies "TKIT" bundles takes the incredible flexibility of our TD-6010 12.5 Gbps workbox and bundles it with a set

Mar 12, 2026

Optical Fiber Converters Product Family

FiDO is AJA's family of SDI/Optical Fiber converters. FiDO allows the transport of 12G/3G/HD/SD-SDI over distances up to 10km

Oct 20, 2025

Multimode to Single Mode Fiber Converters

Versitron offers multimode to single-mode fiber media converters to convert 100Base and 1000Base multimode networks to single

Sep 24, 2025

Everything You Need to Know About Optical Modules

A: Single-mode optical modules are designed to transmit optical signals over long distances, typically using a single

Nov 27, 2025

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

Jun 07, 2026

The difference between single-mode and multi-mode in optical modules

The optical module (optical module) is composed of optoelectronic devices, functional circuits and optical interfaces.

Apr 13, 2026

Fiber Optic FO Converter

The fiber optic module converts an electrical input signal (TTL or RS-422) into one or more FO (fiber

Contact Us

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