

How to convert fiber optic cable to RS485



Article Overview

To convert a fiber optic signal to RS485, you need a fiber-to-RS485 converter, which translates optical signals into electrical RS485 signals for serial communication.

Methods of Conversion

There are two main approaches to converting fiber optic signals to RS485: 1. Level-Type Conversion: This method directly converts the RS485 electrical signal into an optical signal and vice versa without changing the data format. It is ideal for point-to-point RS485 device connections. You simply use a pair of fiber-to-RS485 converters, one at each end of the fiber link. The computer or RS485 device connects to the converter's serial port, and the data is transmitted over the fiber. This method does not require knowledge of serial parameters like baud rate or parity for the fiber link itself, making it simpler for direct device-to-device communication . 2. Protocol-Type Conversion: Also called a serial device server, this method converts RS485 data into TCP/IP packets for transmission over fiber. It allows the fiber link to be shared with other devices via network switches. However, it requires IP configuration and knowledge of RS485 serial parameters (baud rate, data bits, stop bits, parity) and is more complex to set up. The upper computer accesses the data through the device's IP address .

Equipment Options

- Phoenix Contact PSI-MOS-RS485W2/FO: Converts RS485 2-wire bus systems to fiber optic, supports multimode fiber, and includes optical diagnostics for monitoring signal quality

Article Content

Mar 04, 2026

Serial-to-Fiber Converters

Moxa's industrial-grade serial-to-fiber optic converters can convert RS-232/422/485 to optical fiber, which provides users with an

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How to Use Universal RS-485 Interface Asynchronous Fiber Modem ...

The Universal RS-485 Interface Asynchronous Fiber Modem is a robust communication device designed to extend RS-485 signals

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Serial to Fiber Converter | PSI-MOS-R485/FO 1300 E | Perle

The PSI-MOS-RS485W2/FO 1300 E can be used to convert RS485 2-wire devices to fiber optics. By transmitting serial data over

Nov 06, 2025

Serial to Fiber Media Converters | Perle

PSI-MOS Serial to Fiber Converters transparently connect RS232, RS422 and RS485 devices to fiber optic cable. By transmitting

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RS232 / RS485 / RS422 to Multimode Fiber Optic Converter

The SER-FIBER-MM has a 8 position terminal block for the serial port, and either an ST type or SC type connector for the fiber optic

Feb 09, 2026

Two Ways of RS485 to Fiber Optic

ZLAN9163 is generally used for fiber optic pair-connection, and the two RS485 devices are connected by optical fiber. There is no

Jan 11, 2026

RS-485/Modbus Fiber Optic Converter

It supports transmission of one bi-directional data channel over one multimode or singlemode optical fiber.

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RS-485 to Singlemode Fiber Optic Converter | rdc485SFO

Our fiber optic converter connects your RS-485 devices to fiber optic cables up to 20km long. Multiple build options. 3 years warranty.

Dec 19, 2025

RS485/422 to Fiber Modems

RS485/422 Multi-Drop Self-Healing Ring Fiber Optic Converter RS-485/422 Multi-Drop Self-Healing Ring Fiber Optic Modem

Jun 09, 2026

RS485 4-wire to POF or HCS converter, DL485-4W

The DL485-4W is a RS485 4-wire to POF (Plastic Optical Fiber) or HCS (Hard Clad Silica) fiber optic converter with ST adapter for

Aug 17, 2025

7 Best RS-485 to Fiber Optic Converter | Skip the Copper Hiss

Whether you're connecting a PLC in a substation or running a surveillance link across a campus, finding the best rs-485 to fiber optic

May 08, 2026

RS-485/Modbus Fiber Optic Converter

RS-485 Modbus Fiber Optic Converter Point to point/Multi-drop Bus/Self-healing Ring Fiber Links The RS

Jul 15, 2026

RS232/RS485 to Fiber Converters | Industrial Optic Links

RS232, RS422 and RS485 to fiber converters enable reliable long-distance data transmission between serial devices using fiber

Jun 10, 2026

RS485 / RS422 / RS232 To Single Mode Fiber Optic

The SER-FIBER-SM has a 8 position terminal block for the serial port, and either an ST type or SC type

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PSI-MOS-RS485W2/FO 1300 E Serial to Fiber Converter

The PSI-MOS-RS485W2/FO 1300 E can be used to convert RS485 2-wire devices to fiber optics. By transmitting serial data over

Jul 14, 2026

RS232 / RS485 / RS422 to Fiber Optic Converters

Rugged industrial-grade RS232 / RS485 / RS422 to fiber optic converter. Transmits serial data (RS232, RS485 or RS422) over long

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Serial to Fiber Converter | PSI-MOS-R485/FO 1300 E | Perle

By transmitting serial data over optical fiber, these serial media converters provide an economical path to extend the reach of RS485

Aug 24, 2025

RS485 to FO Converter: A Comprehensive Review and Guide

The blog explains what an RS485 to FO converter is, how it works, and its role in industrial communication. It details the conversion

Jan 07, 2026

Gateway / Multi-drop Fibres Optic Converter

RS232/RS485 / Optic Fiber - Converter (suitable for Modbus, BACnet PTP, IEC131 etc) These Optic Fiber devices are designed to

Nov 23, 2025

Serial to Fiber Converter | PSI-MOS-RS485/FO 850 T | Perle

For applications where redundancy is required, the PSI-MOS-RS485W2/FO 850 T can be used to transmit data from RS485 2-wire

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PSI-MOS-RS485W2/FO 850 E

FO converters convert the electrical data signal into an optical one by protocol

Apr 02, 2026

7XV5650.pdf

This manual describes the optical fiber converter for the conversion of optical and electrical signals for SIPROTEC devices and

Dec 27, 2025

Serial to Fiber Converter, RS485 and RS232 over Fiber

This device is Point to Point Bi-Directional Fiber Optic Converter that transmits RS-232, RS-485 and RS-422 a serial protocol over

Feb 18, 2026

RS485 to RJ45 via fibre optic

I have a MODBUS RTU(RS485) at one end and TCP/IP (RJ45) at another end and I want to connect via Fibre Optic.

Jan 17, 2026

F485C : Fiber-Optic $\rightleftharpoons$ RS485 Converter

R.E.Smith serial communication products is your rs485 rs232 and rs422 authority for converters, repeaters,

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RS-485 to Fiber Optic Converter

RS-485 Multi-Drop Bus Fiber Optic converter The RS-485/422 Multi-Drop Bus Fiber Optic Modem series products provide an optical

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F485CT: Fiber-Optic $\rightleftharpoons$ RS485 Converter

This unit features bi-directional serial conversion from 2 wire RS485 to a pair of ST 62.5 micron multimode

Jul 15, 2026

Media Converters

RS485 to FO : RS485 to Fiber Optic converters enable transmission of RS485 signals to long distances using Fiber optics. We have

Aug 08, 2025

Step-by-Step Guide to Installing an RS-232/422/485 to Fiber Converter

Discover the essential steps for installing an RS-232/422/485 to Fiber Converter in this

Jan 26, 2026

RS 485 to Fiber Optic Converter | Shubham International Inc.

RS 485 to Fiber Optic Converter with Redundant Ring The RS485 Redundant ring multi-drop self-healing ring transmission

May 06, 2026

Industrial Serial to Fibre optic converters | Amplicon

Serial to fibre optic converters allow RS232, RS422 or RS485 signals to be transmitted across a fibre-optic

Dec 04, 2025

RS485 over Fiber: A Comprehensive Guide to Fiber Transceivers for ...

RS485 over Fiber converts RS485 signals to optical signals for long-distance, noise-resistant communication. It offers greater

Contact Us

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