

Article Overview

RS485 port fiber optic switches and converters enable reliable, long-distance serial communication over fiber, ideal for industrial environments with electromagnetic interference.

Overview

RS485 to fiber optic solutions convert electrical RS485 signals into optical signals, allowing data transmission over long distances while providing immunity to electromagnetic interference. These devices are commonly used in industrial automation, fieldbus systems, and remote monitoring applications .

Key Features

- o Protocol Support: Many converters support standard RS485 protocols such as Modbus, SUCONET K, MODNET-1/SFB, BIT-BUS, and SAIA-S-BUS .
- o Distance and Fiber Types: Multi-mode fiber can extend RS485 communication up to 5 km (3 miles), while single-mode fiber can reach distances up to 40 km (25 miles), .
- o Industrial Grade: Devices are designed for harsh environments, with operating temperatures ranging from -40°C to 85°C, rugged enclosures, and compliance with ISO 9001 standards .
- o Network Topologies: Some systems, like the DL485-4W, support optical bus, star, tree, and mixed network structures, providing flexibility in network design .
- o Diagnostics and Monitoring: Advanced converters include optical diagnostics, LED indicators, and potential-free alarm contacts to monitor network health and signal integrity .

Example Products

- o Phoenix Contact PSI-MOS-RS485W2/FO: Converts RS485 2-wire bus systems to fiber optic, supports up to 500 kbps, includes integrated optical diagnostics and alarm contacts, suitable for point-to-point connections .
- o Moxa Serial-to-Fiber Converters: Industrial-grade converters for RS232/422/485 to fiber, providing reliable communication with serial devices .
- o EKS DL485 and DL485-4W: Fiber optic systems for RS485 interfaces, supporting multiple fieldbus protocols, multimode and single-mode fiber, and flexible network topologies with visual network status indicators .
- o CommFront RS485 to Fiber Converters: Rugged point-to-point converters for long-distance transmission, certified for industrial standards, with options for ST, SC, and FC connectors .

Applications

- o Industrial automation and control systems



RS485 port fiber optic switch

- o Remote monitoring of sensors and actuators
 - o Environments with high electromagnetic interference
 - o Long-distance serial communication where copper cabling is impractical
- RS485 port fiber optic switches and converters provide a robust solution for extending serial communication over fiber, ensuring reliable data transfer, network flexibility, and industrial-grade durability. They are essential for modern industrial networks requiring secure, long-distance, and interference-free communication .

The DL485 and DL485-4W fiber optic systems serve as vital components for connecting field bus systems

The DL485 is a RS485 2-wire to POF (Plastic Optical Fiber) or HCS (Hard Clad Silica) fiber optic converter for point-to-point

Our 8-port fiber switch offers stable performance and excellent quality. It is ideal for a small optical ethernet and optical networks with

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

The ICF-1150 serial-to-fiber converters transfer RS-232/RS-422/RS-485 signals to optical fiber ports to

Buy RAMEX 2x Singlemode RS485/RS232/RS422 Serial Data Fiber Converter 1 Ports 1000 Mbps Smart Network Switch only for

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

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

The fiber optic linear structure can be used to network several RS-485 2-wire devices. FO 850 E serial to fiber converters are used at

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

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

IES615-2F-2DI (RS-485) is an industrial Ethernet switch with 3 10/100Mbps ports, 2 Fiber ports and 2 RS-485 ports. It has integrated

RS485 port fiber optic switch

Moxa"s industrial-grade serial-to-fiber optic converters can convert RS-232/422/485 to optical fiber, which

VERSITRON manufactures a wide range of fiber optic switches that provide links for your 10Base,

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

You can network RS-485 2-wire devices within a star structure. Depending on the number of star lines required, several PSI-MOS

Web: <https://kremgroup.co.za>

