

RIVO MULTITRADE OPTICAL SYSTEMS

Switches with all fiber optic interfaces



Overview

Discover fiber switches designed for reliable network connectivity. Browse 10G, 2.5G, and gigabit options to expand your bandwidth.

Key Takeaways

Fiber optic switches are network devices that use optical ports to transmit data over fiber, offering high-speed, long-distance, and low-latency connectivity for LANs, WANs, and data centers.

Types of Fiber Optic Switches

Ethernet Switches with Fiber Ports: These are standard Ethernet switches that include fiber optic interfaces alongside or instead of copper RJ45 ports. They operate using IEEE 802.3 Ethernet protocols and are widely used in enterprise networks, campus backbones, and data center interconnections, supporting speeds from 10G to 800G .

Fibre Channel (FC) Switches: Primarily used in storage area networks (SANs), FC switches follow the Fibre Channel protocol to provide high-performance, lossless connections between servers and storage devices. Common speeds range from 32Gbps to 128Gbps .

Optical Circuit Switches (OCS): These switches operate entirely in the photonic domain, routing light signals without optical-electrical-optical (OEO) conversion. They offer ultra-low latency, protocol transparency, and reduced power consumption, making them ideal for high-performance data centers .

Optical Modules and Interfaces

Fiber optic switches rely on optical modules to convert electrical signals to optical signals and vice versa. Common module types include:

- SFP/SFP+: Compact, hot-swappable modules supporting 1G–10G speeds, ideal for high-density deployments .
- GBIC/XFP/XENPAK: Larger modules supporting higher speeds, also hot-swappable . Connector types include LC, SC, ST, and FC, each suited for specific fiber types and network distances. Single-mode fiber supports long-distance links (up to 120 km), while multi-mode fiber is used for shorter connections .

Switching Technologies

Fiber optic switches use different technologies to route light:

- Mechanical switches: Move mirrors or fiber ends to redirect light; switching times are in milliseconds with low insertion loss .
- MEMS (Micro-Electro-Mechanical Systems): Use microscopic tilting mirrors for microsecond switching, scalable to hundreds of ports .
- Solid-state switches: Offer nanosecond switching but higher insertion loss, suitable for high-speed, frequent reconfiguration .

Applications

Fiber optic switches are used in:

- Enterprise and campus networks for backbone connectivity.
- Data centers for high-speed server interconnects and SANs.
- Telecom networks for long-distance, high-bandwidth links.
- Industrial and outdoor deployments with ruggedized modules for environmental resilience .

Key Advantages

- High bandwidth and long-distance support compared to copper.
- Low latency and reduced power consumption in all-optical switches.
- Hot-swappable modules simplify maintenance and upgrades.
- Protocol and data-rate transparency allows simultaneous support for multiple speeds and standards . Fiber optic switches are essential for modern high-performance networks, providing scalable, reliable, and efficient connectivity across diverse environments.

Article Content

Fast, Gigabit, and 10 Gigabit Ethernet Switches with SFP+ Modules

Managed and unmanaged Layer 2 and Layer 3 fiber optic Ethernet switches. With 10G SFP+ fiber optic transceiver modules, they

Fiber Switches

Ethernet Switches with fiber uplink ports or all fiber switches, commercial grade, managed and unmanaged and PoE enabled are all

SFP Network Switches | SFP Managed Port Switches

SFP network switches offer an "All-Fiber" configuration. SFP fiber switches extend the fiber optic network to multiple remote locations

Amazon : Fiber Switches

Discover fiber switches designed for reliable network connectivity. Browse 10G, 2.5G, and gigabit options to expand your bandwidth.

All-Optical Ethernet Switch Explained: Features and Benefits

An all-optical Ethernet switch is a network switch whose service ports are entirely optical, meaning every interface

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These switches exhibit exceptional versatility, supporting all fiber types, including multi-mode, single-mode,

Fiber Optic vs Ethernet Port Differences: Connectors & Speeds

Some of you would ask about the interfaces on the Switch. How to use it? Let's learn more about it now. What is a Fiber Connector?

Fiber Switches – Fiber Savvy

A Fiber Switch is a telecommunication device that receives a message from any device connected to it with the objective of

Fiber Optical Switch System – Turn-Key Solutions

Fiber Optical Switch System – Turn-Key Solutions We produce a wide range of turn-key fiberoptic switch systems that integrate fiber

Fiber Optic Switch: A Comprehensive Guide

Optical switches enable all-optical signal routing in fiber networks. This guide covers MEMS, mechanical & solid-state

Amazon : Fiber Optic Network Switch

1-16 of over 2,000 results for "fiber optic network switch" Results Check each product page for other buying options.

Industrial 8 Ports Gigabit Ethernet Switch Fiber Switch with ...

Overview This is an unmanaged industrial network switch with 8 ports 10/100/1000Base-TX RJ45 and 2 ports 100/1000Base-X SFP.

8 Port Fiber Switch 10/100/1000M RJ45 and 2-port 1000M SFP ...

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

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Fiber-optic Prism Optical Switches

These component-style fiber-optic prism optical switches utilize moving prisms between fixed collimator pairs, which allows bi

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Unmanaged Ethernet switches with fiber optic interfaces, featuring SC/ST/E2000 connectors, cater to the growing demands of

Fiber Optic Convection Cooled Ethernet Switch

Amphenol's rugged 25G/100G Fiber Optic Convection Cooled Ethernet Switch box offers configurable system connectivity,

OmniConverter® Compact Fiber Switches

OmniConverter Compact Ethernet Switches feature one or two uplink ports and up to eight 10/100/1000 RJ-45 ports, and are

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