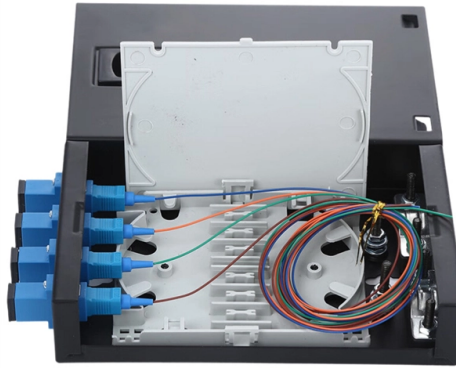


Two switches use fiber optic cables



AI Overview

Two fiber optic cables can connect two switches using SFP or SFP+ modules with duplex LC connectors, ensuring proper send/receive alignment and optional redundancy.

Fiber Type and Cabling For short distances (under 25 meters), multi-mode fiber (MMF) is sufficient, while longer distances may require single-mode fiber (SMF). Each fiber cable typically consists of two strands for duplex communication—one for transmitting and one for receiving. Pre-terminated fiber cables with LC connectors save installation time and reduce errors.

SFP/SFP+ Modules Each switch port requires a matching SFP or SFP+ transceiver compatible with the fiber type and network speed. For 1 Gbps links, use SFP; for 10 Gbps, use SFP+. Ensure the modules on both switches are compatible in terms of wavelength, optical power, and duplex mode.

Connection Method Connect the transmit (TX) of switch A to the receive (RX) of switch B and vice versa to maintain proper duplex communication. For redundancy, consider dual fiber runs or EtherChannel aggregation, so if one fiber fails, the other maintains connectivity.

Topology Considerations

- Star topology:** Each switch connects directly to a central switch, ideal for limited switches and high performance.
- Cascading (ring or daisy chain):** Switches connect sequentially; simpler but may risk network loops and reduced redundancy. Avoid loops unless using Spanning Tree Protocol (STP) to prevent broadcast storms.

Summary To connect two switches with two fiber optic cables: Use duplex fiber cables with LC connectors. Install matching SFP/SFP+ modules on each switch. Align TX/RX correctly between switches. Consider redundancy with dual fibers or EtherChannel. Choose a topology (star or cascade) based on network size and performance needs. This setup ensures high-speed, reliable communication between the switches while minimizing the risk of loops or downtime.

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They need to be linked together on the same network, and the distance between them makes copper “iffy” since they are about 300 feet apart. I'm going to use SFP modules (multimode,

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Tips For Connecting Two Switches Through Fiber Ports

Can two switches with fiber ports be directly connected through fiber ports? The answer is yes. The mainline of the fiber optic LAN directly connects to the switch, then to the router. The

Connecting Network Switches via Fiber

When connecting terminated duplex fiber optic cable between two network switches, ensure the connections are reversed between the SFP transceiver ports (connection A to B and B to A). SFP

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