

RIVO MULTITRADE OPTICAL SYSTEMS

What type of connector should be used for the optical port of the switch



Overview

Choosing the correct connector type ensures ideal performance of the fiber optics cables and devices.

Key Takeaways

For modern SFP optical ports on switches, the LC connector is the standard choice, especially for new installations and high-density setups. Understanding SFP Ports and Optical Modules

Most switches with optical ports use SFP (Small Form-Factor Pluggable) slots, which are modular interfaces that accept either fiber or copper transceivers. The SFP module determines the type of fiber and connector you need, not the switch itself. Optical SFP modules convert electrical signals into light for transmission over fiber, supporting both single-mode and multi-mode fibers depending on the module specifications .

Common Fiber Connectors

There are several types of fiber connectors used with SFP modules:

- LC (Lucent Connector): Small 1.25 mm ferrule with a snap-in latch. It is the most common connector for modern SFP and SFP+ transceivers, especially in data centers and high-density racks. LC connectors are preferred for new installations due to their compact size and high port density .

- SC (Subscriber Connector): Larger 2.5 mm ferrule with a push-pull latch. SC connectors are still used in some enterprise and FTTH networks but are less common in modern SFP deployments .

- ST (Straight Tip): Round, bayonet-style connector. Mostly found in legacy networks and older campus installations; rarely used in new SFP-based setups .

Selecting the Correct Connector

- Check the SFP module type: The module will specify whether it is single-mode or multi-mode and which connector it supports (LC, SC, or ST). Using the wrong connector type can cause signal loss or incompatibility .

- Match fiber type: Multi-mode SFPs typically use 850 nm fiber, while single-mode SFPs use 1310 nm or 1550 nm fiber. Ensure the fiber cable matches the SFP module's mode and wavelength .

- Use LC for new installations: For modern switches and high-density racks, LC connectors are standard and recommended unless the SFP module explicitly requires SC or ST .

Summary

For most modern switches with optical SFP ports, use an LC connector with the appropriate single-mode or multi-mode fiber. Always verify the SFP module's specifications to ensure compatibility with the fiber type, wavelength, and connector. SC and ST connectors are generally reserved for legacy systems or specific older network infrastructures .

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The console port uses an 8-pin RJ-45 connector, which is described in Table C-2 and Table C-2. The supplied RJ-45-to-DB-9

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