

How to stack optical modules in a switch



Summary of Content

Use optical modules with fiber jumpers for switch stacking when the distance between switches exceeds 30 meters, ensuring high-speed, reliable connections.

Choosing the Right Connection Type

When stacking switches, the type of cabling depends on the distance between devices:

- DAC (Direct Attach Copper): Best for distances under 7 meters. It is cost-effective, low-power, and uses copper cables with fixed modules at both ends, but is susceptible to electromagnetic interference .
- AOC (Active Optical Cable): Suitable for distances 7–30 meters. It integrates optical modules and a fixed-length fiber cable, providing optical transmission with lower cost than separate modules and jumpers. However, if one module fails, the entire AOC must be replaced .
- Optical Modules + Fiber Jumpers: Recommended for distances over 30 meters. This setup allows flexibility, as individual modules can be replaced if needed, and supports longer distances with high reliability .

Best Practices for Optical Stack Connections

- Select Compatible Switch Models: Ensure both switches support stacking and have dedicated stack ports. Some models, like Huawei S1700, do not support stacking .
- Use High-Rate Ports for Stack Traffic: When forwarding traffic through stack cables, use high-speed ports to maintain performance .

Article Content

Cisco IOS XE 17

Stacking: Stacking allows multiple physical switches to connect and operate as a single, unified logical switch for

What is Stacking?

A stack port is a port on the switch that is used to communicate with other switches in the stack. Depending on the

Solved: 2960X Switch Stacking with fiber

Hi All, I am trying to stack 2960x "WS-C2960X-48LPD-L" switches in two different racks, and racks are far away from

Silicon Photonics Networking for Agentic AI | NVIDIA

Powering on NVIDIA Quantum-X InfiniBand Photonics Switch Watch NVIDIA's Quantum-X InfiniBand Photonics switch come to life in

How to Stack switches by using DAC cables?

While not able to provide proprietary stacking cables, Skylane Optics offers a wide range of

Stack Switch: Basic Setup and Configuration Steps

A stack switch typically refers to a process or context change in computing where a

Switch Stacking Basic Setup and Configuration Steps

Switch stacking is a feature of certain Cisco access layer switches which allows for the creation of a single logical

Connecting Stack Cables

Select stack cables before connecting them. For details about the stack cables that apply to different ports on different switch

how to connect 4 switches using sfp

You can stack up to 4 units in a stack with a total of 208 ports managed as a single system with hardware failover. In

The Ultimate Guide to SFP Modules (2026): Types, Speeds

Confused by SFP vs SFP+? Read the definitive 2026 guide on SFP modules. We explain Single Mode vs Multimode, DDM

A New Era in Data Center Networking with NVIDIA

Conclusion NVIDIA's silicon photonics-based network switching marks a groundbreaking

The Packaging Technologies Behind NVIDIA's 3D-Stacked CPO

Traditional pluggable optical modules face limitations in signal loss and latency due to long electrical traces. In contrast,

How to Select Optical Modules for Switch Stacking?-JIUZHOU

Switch stacking through optical modules can achieve high network reliability, large network data forwarding, and simplified network

Installing Stack Cables and Powering On the Switch

If there are only two member switches, you are advised to create only one logical stack port on each member switch. The logical

How to Stack Cisco 9300 Switches

Learn how to configure Cisco Catalyst 9300 stacking using StackWise technology. Includes setup steps, model

SFP Stack Optical Modules

GE-CWDM eSFP Optical Modules (Used Only in the OADM scenario) GE-DWDM eSFP Optical Modules GE SFP

Switch Stacking Basic Setup and Configuration Steps

Cost: Switches that support stacking are often more expensive than non-stacking switches. Additionally, specialized

Cisco Switch Stacking Basics | Beginner's Guide to Stack Setup ...

In this Cisco Tech Talk, we explain switch stacking basics for beginners. Learn how switch stacking improves

Catalyst 6500 Series Switch Module Installation Note

This publication contains the procedures for installing Catalyst 6500 series modules in the Catalyst 6500 series

Optical module design resources | TI

View the TI Optical module block diagram, product recommendations, reference designs and start designing.

Cisco Catalyst 9200 & 9300 Stacking Guide

Master Cisco Catalyst 9200 and 9300 stacking. Learn StackWise configuration, mixed

Best Practices for Cisco Switch Stacking

Discover the best practices for Cisco switch stacking to enhance network performance, ensure redundancy, and

How to Stack a 9200 Series Switch

What is a stack module? What do the modules look like? How do you stack multiple

How to Install and Remove Optical Modules Safely

Install optical modules safely with ESD protection, proper handling, and dust control. Follow these steps to avoid

Installing Stack Cables and Powering On the Switch

Multiple stack member ports can be bundled into a logical stack port to improve stack reliability and bandwidth. The stack will not

Installing Stack Cables and Powering On the Switch

Installing Stack Cables and Powering On the Switch Preparing for Installation Ensure that the following components and tools are

How to Connect and Configure Cisco Catalyst 9200L Stack Modules

Learn how to properly install, configure, and monitor Cisco Catalyst 9200L stack modules for enterprise networks. Step-by-step guide

How to Choose Optical Modules for Switch Stacking?

To sum up, from the perspective of practicality and economy, DAC should be used for data

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://madibabayelectrical.co.za>

Email: sales@madibabayelectrical.co.za

Phone: +27 63 947 2185

Address: 15 Fredman Drive, Sandton, Johannesburg, 2196, South Africa

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