

Switches with all optical module ports



Summary of Content

All-optical switches are network devices with exclusively fiber-optic ports, designed for high-speed, low-latency, and high-performance data transmission.

Overview of All-Optical Switches

All-optical Ethernet switches use fiber interfaces exclusively, eliminating the need for electro-optical conversions that occur in traditional or hybrid switches. This design reduces latency, power consumption, and points of failure while maintaining signal integrity across the network. They are ideal for core, aggregation, and access layers in data centers, campus networks, and high-performance computing clusters, supporting high-speed optical interfaces such as 10G, 25G, 40G, 100G, and beyond.

Key Features

- End-to-end optical signal transmission without electrical conversion.
- High port density with options ranging from 16 to 48 ports or more.
- Support for Layer 2 and Layer 3 features, including routing, VLANs, ACLs, multicast, and IPv6.
- Flexible uplink options with 10G, 25G, or 100G QSFP ports for aggregation.
- Low optical loss, fast switching speeds, and non-blocking architecture for high-performance applications.
- Compact and rack-mountable designs suitable for desktops, walls, or standard racks.

Examples of All-Optical Switch Models

Article Content

View the Optical Module Status on a Switch through the Command

Note: In this example, the detailed version is used thus, all SFP ports are displayed. You should now have viewed the

What is Differences Between Switch Optical Ports and Ethernet Ports

Different Transmission Distances: Optical ports with optical modules can transmit data over distances exceeding

What Is an Optical Module and Its FAQs (V200)

Describes what an optical module is and FAQs, including the fundamentals, appearance and structure, key performance counters,

Network Optical Switch Module Series 6000

The 48xCC is specifically designed for integration with network equipment, fiber management systems along with test and

Cisco Nexus 7700 F3-Series 12-Port 100 Gigabit Ethernet Module

Product Overview The Cisco Nexus ® 7700 F3-Series 12-Port 100 Gigabit Ethernet Module (referred to as the Cisco

Campus Switches RG-SF2920-8GT2MG2XS-P 8-Port GE All-Optical

Various port combinations, rate increase, installation in a concealed telecommunication box, recommended for indoor use,

H+S Polatis

Software Defined Networking enabled All Optical Switches. Industry leading performance - optical loss below 1dB. Customized MxN

What Is an Optical Module

The side with an L-shaped notch close to the connector is the top of a QSFP+ optical module, as shown in Figure 11-6. When

What Is an Optical Module

An optical module is a device for converting electrical signals to optical signals and vice versa, widely used in telecommunications

What is an Optical Switch?

An optical switch is a multi-port network bridge, which connects multiple optic fibers to each other and controls data

CloudEngine S5736-S Series Switches | Huawei

CloudEngine S5736-S series switches are all-optical switches that feature 48 downlink optical ports and

POLATIS series 7000 384x384 switch

SERIES 7000 - 384x384 port Software-Defined Optical Circuit Switch The POLATIS ® Series 7000 384x384 all-optical circuit switch

Cisco Catalyst 6900 Series 40 Gigabit Ethernet Interface Module for ...

The module has two 40-Gbps connections (for a total of 80 Gbps) to the 2-Tbps switch fabric of the Cisco Catalyst

Campus Switches RG-SF2920-16GT2SFP-P 16-Port GE All-Optical PoE Switch ...

RG-SF2920-16GT2SFP-P 16-Port GE All-Optical PoE Switch, 2 × Gigabit Uplink Optical Ports Various port combinations, rate

Campus Switches RG-MUX-8LC/LC All-Optical Modular 8-Port

Features RG-MUX-8LC/LC 8-Port Transparent Distribution All-Optical Network Passive Device An 8-port transparent distribution

Cisco Nexus 7000 M2-Series 6-Port 40 Gigabit Ethernet Module with

The Cisco Nexus 7000 M2-Series module offers outstanding flexibility and full-featured, non-blocking performance on

Common Optical Modules and Interfaces for Switches

The evolution of optical modules has been driven by the need for higher port density and

Fiber Optic Switches, Multiplexers, Demultiplexers

Fiber optic switches, multiplexers and demultiplexers block or route optical signals in a fiber optic network.

POLATIS Optical Switch Modules from 16x16 up to 48x48 Ports

POLATIS ® Series 6000 Optical Switch Modules (OSM) are high-performance, fully non-blocking all-optical matrix switch modules

Campus Switches RG-MUX-8LC/LC All-Optical Modular

An 8-port transparent distribution device on the building side supports both 10 Gbps and 1 Gbps per port,

Cisco Optics-to-Device Compatibility Matrix

Cisco Optics-to-Device Compatibility Matrix Comprehensive compatibility information for Cisco optical transceivers and network

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

MikroTik · Switches

With 16 Gigabit Ethernet ports and 2 SFP+ 10G uplink ports, you get all the connectivity you need without unnecessary bulk. Stack

Cisco Catalyst 6500 Series 10 Gigabit Ethernet Interface Modules

Product Overview The Cisco Catalyst® 6500 Series Switches offer a variety of 10 Gigabit Ethernet modules to serve different needs

Optic Modules Datasheet

Features and Benefits The following table lists the different pluggable optic modules and supported platforms, along with the

Optical Modules for Huawei S Series Switches

A switch must use optical or copper modules that have been certified for use on Huawei switches. Non-certified optical or copper

Optical Circuit Switching for AI Data Centers | Molex

Optical Circuit Switching for AI Data Centers: Scaling Beyond 300 Ports The transition to all-optical data

How to Choose the Right Optical Transceiver in 2025

Learn how to select the right optical transceiver for your switch or router. Compare SFP, SFP+, QSFP28, Cisco SFPs,

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

This document is for informational purposes only. Specifications subject to change without notice.

