

Fiber optic and Ethernet ports of a Layer 3 switch



Article Overview

Layer 3 switches typically combine RJ45 Ethernet ports for copper connections with SFP/SFP+ fiber optic ports for high-speed uplinks and flexible network expansion.

Ethernet (RJ45) Ports

Layer 3 switches often include RJ45 ports for standard Ethernet connections, supporting speeds from 10/100 Mbps to 1 Gbps or higher depending on the switch model . These ports are commonly used for connecting end devices such as computers, IP phones, or access points. They can operate in access, trunk, or hybrid modes, allowing VLAN segmentation and Layer 2 switching functionality while the switch handles Layer 3 routing between VLANs .

Fiber Optic Ports (SFP/SFP+)

Fiber optic connectivity is provided through SFP (Small Form-factor Pluggable) or SFP+ ports, which allow the insertion of modular transceivers for either fiber or copper links . SFP ports typically support 1 Gbps, while SFP+ ports can handle 10 Gbps, and SFP28 supports 25 Gbps. These ports are ideal for uplinks to aggregation or core switches, long-distance connections, or high-bandwidth backbones . Fiber ports can use single-mode or multi-mode fiber, depending on the transceiver and distance requirements.

Combo and Uplink Flexibility...

Article Content

Nov 15, 2025

Ethernet Switch Port Types Explained: Access, Trunk, SFP, QSFP

Explore all Ethernet switch port types including access, trunk, hybrid, SFP, SFP+, QSFP, QSFP28, PoE, and stack

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ES2 | Managed Ethernet Switch with L2/L3 Layer

The ES2 is a high-performance managed Ethernet switch offering 16x 1 GbE ports, 4x 10 Gb fiber optic

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Unlocking the Power of Fiber Switches: A Comprehensive Guide to ...

Fiber switches play an essential role in the architecture of the latest virtual data networks, providing high capacities,

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Get reliable Layer 3 Switches from US stock with fast shipping ...

Product Description The IGR-1604XSM-16PH is a Layer 3 Industrial 16-port RJ45 PoE+ Gigabit Ethernet routing switch with 4-port

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A Comprehensive Overview of Ethernet Switch Port Types

On Ethernet switches, SFP28 ports play a critical role in enabling high-speed, high-density

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Ethernet Switch Port Types: A Complete Guide

This guide should give you a better understanding of the different Ethernet switch port types and help you make a

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Layer 3 Network Switches

Hardened, cost-optimized, fiber-fed only unit offering full Ethernet switching capabilities, supporting four

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Fiber Optic Network Switches | Ethernet to Fiber

Our Ethernet network switches with fiber ports comes in managed or unmanaged formats combined with

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Ethernet Switch Port Types Explained 2026: RJ45,

This guide provides an engineering-level overview of switch port technologies, real-world

Nov 26, 2025

Layer 2, Layer 3, and Layer 4 Switches

Layer 2, Layer 3, and Layer 4 Switches What Is a Layer? A network switch connects devices and switches data between ports.

May 29, 2026

Fundamentals of Operations on a Layer 3 Switch

*Click on the image to enlarge The Assumption SW-1 is a Layer 3 switch SW-1 has the command SW-1 (config)#ip routing applied on

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What is Layer 3 Switch and How Does it Works?

An introduction to Layer 3 switch and how it works within the network to further understand its benefits and capabilities.

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Multilayer Switch Technology: Layer 2, Layer 3, Layer 4 ...

This article introduces the working principle of multilayer switch (layer 2, layer 3 and layer 4) from different dimensions

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24-Port Layer 3 Stackable 10 Gigabit Fiber Managed

The DXS-3400 Series switches feature a modular fan and power supply design for a high availability

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24-Port Layer 3 Stackable 10 Gigabit Fiber Managed Switch

Data Center Bridging (DCB) is an essential set of enhancements to Ethernet for networking in data center environments. The DXS

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24 Ports Gigabit Layer 3 Core Fiber Switches with 4

Explore the 24-Port Gigabit Layer 3 Core Fiber Switch, equipped with 4 Ports of 10G SFP for superior

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Network switch

Network switch Avaya ERS 2550T-PWR, a 50-port Ethernet switch A network switch (also called switching hub, bridging hub,

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A Comprehensive Overview of Ethernet Switch Port Types

The SFP port is commonly found on Gigabit Ethernet switches and is primarily used for fiber optic device connections

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Ethernet Fiber Switch: Integrating Optics in Network Tech

What is a PoE Ethernet fiber switch, and why is it important for industrial networks at different layers? An Ethernet fiber

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Fiber Optic vs Ethernet Port Differences: Connectors

Learn key differences between fiber optic connectors (SC, ST, SFP+) and Ethernet ports. Fiber supports

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Layer 3 switches explained

Layer 3 switches, on the other hand, use a switch backplane that has bandwidth capacity far greater than that of a

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Layer 2 vs Layer 3 switches — Understanding the ...

Layer 2 vs. layer 3 switch: Understanding the differences that impact IT Switch ports are essential components of network

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L3-10XGF12: Layer 3 12-port 10G Managed Full Fiber Switch

The L3-10XGF12 series supports flexible gigabit access and scalability of high-density 10G ports. All models provide fixed 10G fiber

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Cisco Switch Selector

9-Tbps/chassis switching capacity DNA Center, SD-Access, E-LLW This is the next generation of modular Gigabit and Multigigabit

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Layer 2 and Layer 3 switch in networking

A switch can connect the computers via Ethernet port, Fast Ethernet port and optic fibre port. Switch works on its operating software

Feb 03, 2026

What is an Ethernet switch?

What is an Ethernet switch? An Ethernet switch is a type of network hardware that is foundational to networking and the internet.

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RG-S5310-48SFP4XS-E, 48-Port GE Optical Layer 3

Multiple physical switches can be virtualized into one logical unit to simplify network configuration and

Sep 30, 2025

Understanding the Differences Between Layer 3 Switches and Routers

Understanding the differences between a Layer 3 switch and router is essential when implementing your network.

May 18, 2026

Fiber Optic Switch: A Comprehensive Guide

Key Takeaways .An optical switch routes light signals directly between fiber ports without optical-electrical-optical

Contact Us

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