

Layer 2 Switches and Fiber Optic Switches



AI Overview

Layer 2 switches manage data at the MAC address level for LANs, while fiber optic switches extend high-speed connectivity over long distances using optical fiber. Layer 2 Switches Layer 2 (L2) switches operate at the data link layer of the OSI model, forwarding traffic based on MAC addresses. They are commonly used in local area networks (LANs) to connect devices like computers, IP phones, and wireless access points. Modern L2+ switches often include additional features such as VLAN management, Quality of Service (QoS), Access Control Lists (ACLs), static routing, and DHCP server capabilities, making them suitable for small to medium-sized businesses while remaining cost-effective (VERSITRON). Many L2 switches also support Power over Ethernet (PoE/PoE+), which allows them to power devices like cameras and Wi-Fi access points directly through the network cable. Fiber Optic Switches Fiber optic switches are designed to transmit data over optical fiber, enabling long-distance, high-bandwidth connectivity without signal degradation. They are ideal for connecting multiple switches across large campuses, between buildings, or in industrial environments. Fiber switches can be Layer 2 managed, allowing remote provisioning, network segmentation, and integration with IoT devices. They often come in hybrid fiber-copper configurations, supporting both fiber and copper connections to provide flexibility in deployment scenarios. Fiber switches are also secure against electromagnetic interference and eavesdropping, making them suitable for sensitive applications like surveillance, traffic monitoring, and VoIP. Key Features and Applications VLAN Support: Both L2 and fiber switches support VLANs for network segmentation and traffic management. Traffic Prioritization: QoS features allow prioritization of critical traffic such as voice or video. Remote Management: M...

Article Content

Network Devices

Layer 2 Devices: Data Link Layer These devices work with MAC Addresses (Physical Addresses). They are smarter than hubs. 4. Switch A switch

Transmission Media in Computer Networks

Bulkier and less flexible due to multiple layers. More vulnerable to security breaches, as the cable can be physically tapped. 3. Optical Fiber Cable

Layer 3 Switches

A Layer 3 switch is a networking device that operates at the network layer (Layer 3) of the OSI model. Unlike traditional Layer 2 switches that rely on MAC addresses for data forwarding, a Layer 3 switch

Layer 2+ (L2+) Switches

VERSITRON's Layer 2+ Managed switches offer efficient data forwarding, easy setup & PoE+ options for small business LANs. Extend your network with our

Network Switches

Cisco network switches deliver performance, flexibility, and security. Cisco switches are scalable and cost-efficient and meet the demands of hybrid work.

Data Center Network Flattening: \$AAOI Risk or Market Noise? B.

Riley recently warned that new network flattening protocols from Amazon (RNG) and OpenAI (MRC) could cut optical transceiver demand by 40% to 50%. I argue the market is

Layer 2 Switch

Layer 2 switches are often used to create virtual LANs (VLANs), in which the logical segmenting of the network differs from its physical segmentation. Using Layer 2 switches is

Optical networks

An optical transport network is a high-speed communication system that sends light signals over fiber-optic cables to move large amounts of data across long

Cisco Switch Selector

These entry-level, noiseless Gigabit Ethernet switches provide enterprise-class Layer 2 switching with basic security, quality of service (QoS), Power over

Fiber Optic Network Switches

Our Ethernet network switches with fiber ports comes in managed or unmanaged formats combined with both Industrial and Commercial grades. Utilize our PoE

10 port managed Ethernet to multimode fiber optic

The EL-1000-4GM is a 10-port managed Industrial Ethernet Layer 2 switches. Compact Ethernet switch with 2 fiber optic and 8 RJ45 ports which support

We are Nokia | Nokia

NZDF Optic Fiber We invent a new type of optical fiber, Non-Zero Dispersion Fiber (NZDF), that becomes widely deployed in intercontinental and long-haul

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 ports, and Layer 2/3 support. Features include VLAN, QoS,

Understanding the Differences Between Layer 2 and Layer 3 Switches

This article aims to bring clarity surrounding the issue of which type of switch is most appropriate for varying configurations. Understanding the differences between Layer 2 and Layer 3

Layer 2 Vs. Layer 3 Switches Vs. Routers: Key

Compare Layer 2 switches, Layer 3 switches & routers. Learn how each works, their use cases & which device fits best for your network setup.

Best Layer 2 Switch in 2026: Tested and Reviewed

In this guide, we've tested and reviewed the best layer 2 switch to help you choose the perfect switch for your specific needs.

Replace Layer 2 switch with Fiber Optic Splitter

With an aim to achieve high availability, I am looking into the possibility of using a pair of Fiber Optic Splitter rather than a pair of switches to

What is the difference between Layer 2 and Layer 3

The main difference between Layer 2 and Layer 3 switches is whether they have routing functions. The second layer switch is a data link layer

Meraki Switches

Meraki MS Switches combine enterprise-grade hardware with cloud management, allowing your organization to scale effortlessly. Explore the models.

Fiber Switches

Ethernet Switches with fiber uplink ports or all fiber switches, commercial grade, managed and unmanaged and PoE enabled are all available in this section.

Fiber Switches and Aggregation Devices | Actelis

Actelis' fiber portfolio includes our managed layer 2 fiber switches and aggregation devices designed to extend connectivity over fiber, as well as our hybrid fiber

Fast, Gigabit, and 10 Gigabit Ethernet Switches with SFP+ Modules

Managed and unmanaged Layer 2 and Layer 3 fiber optic Ethernet switches. With 10G SFP+ fiber optic transceiver modules, they meet your highest bandwidth demand.

Get reliable Layer 2 Switches from US stock with fast shipping ...

Layer 2 Fiber Switches are perfectly suitable for FTTx Ethernet based deployments providing features like VLAN (port based and IEEE 802.1q based), traffic priority, bandwidth limiting ingress/egress,

Contact Us

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