

Core Switches for Campus Use



AI Overview

Campus core switches are high-performance, Layer 3 stackable switches designed for scalability, redundancy, and intelligent network management in enterprise or educational campus networks.

Key Features of Campus Core Switches

- Layer 3 Routing and Stackability:** Core switches typically operate at Layer 3, supporting routing between VLANs and aggregation of multiple distribution switches. Stackable designs allow multiple switches to function as a single logical unit, simplifying management and increasing redundancy.
- High-Speed Uplinks:** Core switches should support high-speed uplinks, often ranging from 10 Gbps to 100 Gbps, to handle aggregated traffic from distribution and edge layers. This ensures the network can scale with increasing bandwidth demands, including support for Wi-Fi 6 access points and multimedia services.
- Redundancy and Resiliency:** Core switches must provide continuous availability with features like redundant power supplies, hot-swappable modules, and support for protocols such as VRRP or HSRP. Hierarchical network design with modular layers improves fault isolation and network resiliency.
- Security and Management:** Modern core switches include advanced security features such as MACsec, DHCP snooping, RA Guard, and support for centralized authentication via TACACS+ or RADIUS. They also offer analytics and automation through platforms like Cisco DNA Center or HPE Aruba Fabric Composer for simplified operations and proactive monitoring.
- Power over Ethernet (PoE):** While primarily a core function, some core switches may provide PoE or high-power PoE (up to 100W per port) to support connected devices like access points or IP phones, especially in smaller campus deployments.

Vendor Options

- Cisco:** The Cisco Catalyst and Meraki series provide scalable, secure, and intelligent core and distribution switches. Catalyst 9000 Series switches support multigigabit speeds, PoE, and advanced automation features, making them suitable for modern campus networks.
- HPE Aruba:** Aruba's campus c...

Article Content

Selecting Campus Switches and Routers

Distribution Switch Campus Core Router Campus Border Router In all cases examples of mainstream vendor models are given to guide campus network administrators

HPE Aruba Networking CX campus core switches At-A-Glance

Brochure highlights advantages of CX campus core switches, how they deliver critical high availability, exceptional scalable performance, and robust end-to-end security

Cisco Switch Selection Guide for Enterprise Campus Networks

Cisco's Campus LAN and Wireless LAN Solution Design Guide describes campus networks as ranging from a single-switch remote site to a large multi-building environment.

CX Campus Core Switches at a Glance

CX switches are designed with programmable ASICs that are purpose-built for tighter integration of switch hardware and software within campus and data center architectures, resulting in optimized

A Complete Guide to Select a Campus LAN Switch

With time, campus switches have progressed a lot in terms of integration, performance, and configuration specification (an ever-increasing number), but still, the campus LAN design model

HPE Aruba Networking CX campus core switches

Campus core switches sit at the center of the network, typically connected to a router or gateway. They manage traffic coming to and from aggregation switches, the wide area network (WAN), and the

Campus Switches | Huawei Enterprise

Huawei campus switches offer high-performance, secure, and reliable switching for enterprises, governments, finance and manufacturing networks. Learn more.

Selecting Campus Switches and Routers

L2 device only – connecting edge switches! Fibre to building distribution, or is copper enough? But would you be better buying a whole second device? What would you do if that happened? Don't

Selecting Campus Switches and Routers

Choices! • Minimum requirements for L2 devices • Edge Switch • Distribution Switch • Campus Core Router • Campus Border Router • In all cases examples of mainstream vendor models are given to

Backbone network

A backbone network or core network is a part of a computer network which interconnects networks, providing a path for the exchange of information between different LANs or subnetworks. A

Campus Switches | Huawei Enterprise

Huawei campus switches are ideal for building future-proof campus networks with simplified management, high reliability, and service intelligence, across industries such as enterprises,

FortiSwitch Data Center Series Data Sheet

The FortiSwitch campus core and data center switching architecture empowers network administrators with the requisite performance, control, and manageability for these demanding scenarios. Its

The Roles Campus LAN Switches Play in a Modern Enterprise Network

The second use for edge — and the term we're interested in — is in describing switches that connect end-user devices to the rest of the network. So, it's safe to say edge switch equals

Campus LAN and Wireless LAN Solution Design Guide

The design uses multiple physical switches that act as a single logical switch, such as switch stack or Cisco StackWise Virtual Pair (SVP), or the less

Campus Switches RG-S6150-24VS8CQ-X 24-Port 25GE All-Optical

RG-S6150-24VS8CQ-X 24-Port 25GE All-Optical Layer 3 Managed Core & Aggregation Switch, 100G Uplink Core or aggregation switch for small and medium-sized networks, supporting the smooth

Understanding Core Switch: What It Is and How to Choose the

In the realm of system networking, three key types of switches are frequently mentioned: access switches, aggregation switches, and core switches. The part of the network that directly

Choosing Switches and Routers for the Campus

Distribution Switch Campus Core Router Campus Border Router In all cases examples of mainstream vendor models are given to guide campus network administrators

Campus LAN Core and Distribution Switches

Cisco Catalyst and Meraki Campus LAN core and distribution switches are scalable, secure network switches with exceptional intelligence.

HPE Aruba Networking Campus Core & Data Center

Meet the needs of your evolving campus core and data center networking requirements. Simplify operations with intelligent automation, distributed

Layer 2 vs Layer 3 Switch: Key Differences and Use Cases

Layer 2 vs Layer 3 switch explained. Learn MAC vs IP forwarding, inter-VLAN routing, performance differences, and when to choose each switch type.

Selecting Campus Switches and Routers

- Focus on scalability, sufficient CPU to ensure current and immediate future needs - Router or "L3 Switch" is often appropriate, as routing needs in the Core are not onerous

CloudEngine S12700E Series Switches

Huawei CloudEngine S12700E series switches deliver high performance, unmatched security and reliability at the core of high-end campus networks. Learn more!

All Switches Products

Cisco has a comprehensive portfolio of network switches and switching solutions for enterprise networks, data centers and small businesses. Learn more.

Network Switches | Huawei Enterprise

Data Center Switches CloudEngine data center switches — Ethernet switches widely used in diverse applications and in different network sizes, in both data

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