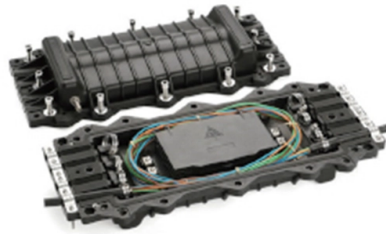


Gigabit Data Center Access Switches



AI Overview

Gigabit data center access switches provide high-density, high-performance connectivity for servers and edge devices, supporting speeds from 1G to multi-gigabit uplinks with advanced management and automation features. Overview Gigabit access switches in data centers serve as the first point of connectivity for servers and storage devices, typically deployed in top-of-rack (ToR) or leaf positions within spine-leaf architectures. They are designed to deliver high throughput, low latency, and reliable connectivity while supporting advanced features such as VLAN segmentation, QoS, and security policies. Key Features Port Speeds and Density: Modern switches offer 1G, 10G, 25G, 40G, and higher uplinks, with gigabit ports for server access. Vendors like Cisco Nexus, Huawei CloudEngine, and Alcatel-Lucent OmniSwitch provide flexible port combinations to scale from small to ultra-large data centers. High Performance and Low Latency: These switches are optimized for line-rate forwarding, ensuring minimal packet loss and latency, which is critical for AI workloads, HPC, and storage networks. Management and Automation: Many switches support cloud-managed interfaces (e.g., FortiEdge Cloud for FortiSwitch) and automation platforms (e.g., Huawei iMaster NCE-Fabric), enabling centralized configuration, monitoring, and orchestration. Scalability: Modular and fixed configurations allow easy expansion from a few hundred to tens of thousands of servers, supporting multi-tiered data center growth. Security and Reliability: Features include line-rate encryption, access control, and redundancy mechanisms to ensure secure and continuous operation. Vendor Examples Cisco Nexus Series: Offers 1G to 800G ports, AI-ready infrastructure, and centralized management for cloud and enterprise data centers. Fortinet FortiSwitch: Provides 10G/40G access ports, ruggedized options for challenging environments, and cloud-based lifecycle management. Huawei CloudEngine: Supports 10/25/50GE access with 40/100/200G...

Article Content

Data Center Multi-Tier Model Design

The enterprise data center contains at least one aggregation module that consists of two aggregation layer switches. The aggregation switch pairs

Best Ethernet Switches for Business (2025): Selection

Selecting the right Ethernet switch for your business network is critical to ensuring optimal performance, security, and scalability while avoiding costly

Data Center Switches

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

The best network switch of 2025 | TechRadar

The best network switch will be a necessity for anyone looking to add more wired connections and gain greater network speeds.

RG-S6000C-48GT4XS-E – Gigabit Data Center Managed Switch

The switch denies unauthorized network access and enables authorized network access by employing multi-tuple binding, port security, time range-based ACL, and traffic-based rate limiting.

Switches: Support and Downloads

Cisco Category page for supported Switches - Support Documentation, Downloads, and End-of-Life status.

H3C S5590-EI Series Data Center Ethernet Switches

H3C S5590-EI series switches implement a hardware-based IPv4/IPv6 dual-stack platform, support multiple tunnel technologies, rich IPv4 and IPv6 Layer 3 routing protocols, multicast technologies and

Cisco Secure Firewall Advanced Threat Protection

Cisco Firewall Gain advanced threat protection at scale without compromising performance across data center, cloud, campus, and IoT environments, with

Switches-H3C

In the new generation of cloud data center and smart campus scenarios, a new generation of intelligent, ultra-wideband, simple, and integrated network is created for users, which is applicable to various

How to Choose the Right Gigabit Access Switch for Future Scalability

This article explains how to choose a scalable Gigabit access switch by focusing on key aspects like port design, uplink performance, stacking, and management.

algeria-customized-25g-optical-switch Distributor

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Arista 7010X Series

The Arista 7010X series delivers line rate switching at layer 2 and layer 3 with support for VXLAN and EVPN to enable simple network designs for data centers

Small and Medium Enterprise Network Switches

Power your growing business with Cisco network switches built to evolve with your network, offering simplicity, security, and seamless scale for SMEs.

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Products

Wired Connectivity Ethernet Connectivity, Switching, and PHYs Designed for today's enterprise, cloud, and data center environments, Broadcom is a leading supplier

CloudEngine S5755-H Series | Huawei Enterprise

Huawei CloudEngine S5755-H series switches are high-quality gigabit access switches that provide 24 or 48 10/100/1000BASE-T downlink ports, four 25GE plus two 100GE uplink ports, and expansion

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

Global IT Products & Network Solutions Provider | Black Box

Black Box provides cutting-edge IT solutions and technology products to businesses worldwide, ensuring innovative and reliable services for global digital transformation.

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

The Edgecore AS4610-54T from Accton

The Edgecore AS4610-54T is a fixed 1U rackmount Gigabit Ethernet access switch with forty-eight 10/100/1000BASE-T ports and six 10G SFP+ uplinks, designed for enterprise and campus

Finding the best network switch: 12 top brands for 2025

Looking for the best network switch? Compare top brands for performance, security, and scalability. Find the right switch to keep your

Cisco Catalyst 9300 Series Switches Data Sheet

Cisco Catalyst™ 9300 Series Switches are Cisco's lead stackable enterprise access switching platform and, as part of the Catalyst 9000 family, are built to transform

Data Center Switches – Cisco Nexus

Transform your data center and cloud networking infrastructure with Cisco Nexus 9000 Series and Cisco MDS switches.

List Rack switches options | Lenovo Server Options

The ThinkSystem NE1032 RackSwitch is an Enterprise-class Gigabit Ethernet data center switch. It has a single ASIC design with low latency and 32 x 1/10GbE SPF+ ports in a 1U chassis.

Contact Us

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

Website: <https://www.araziyahsafety.co.za>

Email: info@araziyahsafety.co.za

Phone: +27 72 418 3692

Address: 123 Rivonia Road, Sandton, Johannesburg, 2196, South Africa

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