

Selection Guide for 400G Core Switches Used in Supercomputing Centers



Overview

This article explains the 400G/800G switch market trends and key factors to consider — such as chip type, port configuration, bandwidth, and application scenarios — to help you choose the right switch for building a scalable and lossless AI network. According to the report by Research And Markets, the global market for AI data center switches was valued at US\$4. 0 billion in 2024 and is projected to reach US\$19. Here is a comprehensive analysis of the current market trends: Surging. Meet the high-speed, high-performance 400G Nexus portfolio with more bandwidth and more features. Cost-effectively build high-density 100/400G fabrics for web-scale customers. Telecommunications. Industry Report: The global digital infrastructure is undergoing its most significant transformation in a decade as 400G technologies achieve mainstream adoption and 800G solutions enter commercial deployment. This acceleration in high-speed data center networking is driven by insatiable bandwidth. Asterfusion's SONiC 400G switches— CX732Q-N are designed for next-generation data centers handling AI/ML clusters, financial trading systems, or large-scale VXLAN fabrics. High-density meets high expectations. As AI/ML and cloud workloads drive unprecedented bandwidth demands, Cisco Nexus 400G and 800G switches.



Article Content

SFP vs SFP+ vs QSFP28 vs QSFP-DD: 2026 Optical

SFP vs SFP+ vs QSFP28 vs QSFP-DD: Master optical transceiver selection for 1G to 800G AI networks with our lab-verified guide.

Scaling Data Center Networks: From 100G to 400G/800G Switches

Explore when and how to upgrade data center networks from 100G to 400G/800G switches. Learn about architecture evolution, AI workloads, and FS switch solutions for high

Cisco 400G & 800G Data Center Switches | CloudWifiWorks

Whether you need help selecting the right switch model, port configuration, or licensing, our data center specialists are here to help. Fill out the form and we'll be in touch within one business day.

400G Data Center Switches

Discover the power of Open Networking with 1-1.6T Open switches. Ideal for public and private cloud data centers of all sizes.

AI Data Center Upgrades 2025: Best 400G & 800G

This guide covers why the upgrade is happening now, how to select the right transceivers and cabling, what immersion cooling and open networking

Simplifying 400G for Data Centers

Simplifying 400G for Data Centers Introduction From its origins as an ultra-high performance technology, reserved for a few organizations with extreme networking demands, 400 Gigabit Ethernet (400GbE)

Embracing 400G and 800G

400G. As data centers evolve, the growth of high speed hosts at the network edge inevitably dictates the strategic direction of the overall data center network, driving a need for more fabric bandwidth, with

How to Choose SFP Module for Compatibility, Speed,

Learn how to choose the right SFP module based on compatibility, speed, fiber type, wavelength, and distance. Practical guide for engineers and IT

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400G to 800G Upgrade: The Complete AI Data Center Guide

A comprehensive guide to upgrading your AI data center infrastructure from 400G to 800G networking — covering technical specifications, business ROI, phased migration strategy,

Cisco Nexus 9000 Series 400G Deployment Guide

This Cisco Nexus 9000 Series 400G Deployment Guide white paper investigates the business and technical issues pertaining to a platform, solution,

FS 400G/800G Open Networking Switch for Scalable AI and Multi

FS 400G/800G open networking switches provide scalable, programmable solutions for AI clusters and multi-tenant data center networks.

Cisco 400G Data Center Networking

Transform your data center networking infrastructure with high-density 400G Cisco switches scalable to 800G. Optimized for simplicity and sustainability.

400G-100G Spine-Leaf Architecture: Optical Modules and DAC/AOC ...

The smooth evolution from 100G to a 400G core backbone is fundamentally about finding the optimal balance between performance improvement and investment protection.

Cisco 400G & 800G Data Center Switches | CloudWifiWorks

Cisco Nexus 400G and 800G data center switches for AI/ML, cloud, and enterprise fabrics. High-density, low-latency, Silicon One-powered switching.

Datacenter 400G Switches

When considering 400G Ethernet switches, it's essential to evaluate factors such as performance, scalability, automation capabilities, security, and overall cost-effectiveness.

AI Data Center Upgrades 2025: Best 400G & 800G

Plan AI data center upgrades for 2025. Expert guide to selecting the best 400G and 800G optical transceivers, cables, and network solutions for AI

400G Data Center and Cloud Networking

Transform your cloud networking infrastructure with high-density switches up to 400G. Optimized for simplicity, they are easier than ever to operate.

A Guide to 400G Ethernet and 400G Network Interconnections

A practical guide to 400G Ethernet and 400G network interconnections, covering switches, NICs, optical transceivers, and DAC/AOC cabling to help build scalable, high-bandwidth

Data Center 400G Switch Q& A

Explore the most frequently asked questions about Asterfusion's 400G switches, including latency performance, RoCEv2, SONiC support,

IEEE 802.3 Standards Activities

Recent Activities at TIA Rakesh SAMBARAJU Nexans Data Center Solutions OFC 2018: 400G Standards, MSAs and Related Technologies: What is on the Horizon?

400G/800G Data Center Interconnect: Deployment

Comprehensive analysis of 400G/800G data center interconnect deployment trends, switch technologies, market adoption patterns, and

400G Data Center Networking

See how the high-speed, high-performance 400G Nexus portfolio meets different architectural needs. Review features, benefits, and additional resources on this

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Data Center 400G Switch Q& A

From latency benchmarks and RoCEv2 support to telemetry, automation, SONiC enhancements, and real-world deployment advice, consider

How to Choose a Next-Gen 400/800G Switch for AI

This article explains the 400G/800G switch market trends and key factors to consider — such as chip type, port configuration, bandwidth, and

Higher performance, more capabilities: new generation of Eltex data ...

Launching the new generation of MES data center switches is a significant milestone for us. 400G ports in our devices enable to build high-performance networks entirely based on Eltex

LC Fiber Optics: Complete Guide 2026 to Patch

Explore LC fiber optics in depth: LC connectors, LC patch cables, uniboot designs, attenuators, breakout cables, LC adapters, patch panels, MPO

SFP vs. QSFP: Differences, Use Cases, and How to Choose

SFP vs. QSFP Deployment Tips: Based on large-scale deployment experience across enterprise campuses, hyperscale data centers, and 5G transport networks, a consistent architectural pattern

Contact Us

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