Cisco's switching platforms – a comprehensive 25G and 100G enterprise portfolio

The Cisco Catalyst 9500 Series Switches are the industry's first purpose-built fixed-configuration 25G, 40G, and 100G line of switches for enterprise-class core and aggregation layers (Figure 10). The Cisco Catalyst 9500 Series offers customers a wide variety of high-density, low-power switches and optics for both standalone and Cisco Software-Defined Access deployments. The Cisco Catalyst 9500 Series Switches are based on the Cisco Unified Access™ Data Plane (UADP) ASIC architecture, which not only protects your investment but also allows greater scale and higher throughput. These switches deliver unmatched table scale (MAC, route, and Access Control List [ACL]) and buffering for enterprise applications.

The Cisco Catalyst 9500 Series includes nonblocking 40G and 100G QSFP+ and QSFP28, and 1G, 10G, and 25G SFP, SFP+, and SFP28 switches with granular port densities that fit diverse campus needs.

Figure 10. Cisco Catalyst 9500 Series 25G and 100G switches

Cisco Catalyst 9500 Series 25G Switches

C9500-24Y4C   C9500-48Y4C

- 24x or 48x 25G/10G/1G downlink + 4x 100G/40G uplink ports
- Nonblocking architecture with line rate on every port
- 1x UADP 3.0 ASIC with 3.2-Tbps full-duplex throughput and 1 Bpps
- 2.4-GHz quad-core x86 CPU with 16-GB DRAM and 36-MB unified packet buffer
- Platinum-rated AC/DC power supplies
- Up to 960G M2 SATA SSD storage option for app hosting
- Advanced routing and infrastructure services
- Supports advanced high availability capabilities

Cisco Catalyst 9500 Series 100G/40G Switches

C9500-32QC   C9500-32C

- 32x 40G/10G/1G or 16x 100G fixed configuration
- 1x UADP 3.0 ASIC
- 32x 100G/40G/10G/1G fixed configuration
- 2x UADP 3.0 ASICs
- Nonblocking architecture with line rate on every port
- UADP 3.0 ASIC with 3.2-Tbps full-duplex throughput and 1 Bpps per ASIC
- 2.4-GHz quad-core x86 CPU with 16-GB DRAM and 36-MB unified packet buffer per ASIC
- Platinum-rated AC/DC power supplies
- Up to 960G M2 SATA SSD storage option for app hosting
- Advanced routing and infrastructure services
- Supports advanced high availability capabilities

The Cisco Catalyst 9300 Series Switches support optional 4-port 25G network modules for uplink ports only (Figure 11). The default switch configuration does not include the network module. When you purchase the switch, you can choose from the available network modules.

Figure 11. Cisco Catalyst 9300 Series 2-port 25G/10G network module with SFP28

Cisco Catalyst 9300 Series 2x25G module

- 2x 25G/10G/1G uplink ports
- All 9300 Series software feature parity
- MACsec-256 capable
- Hardware authenticity support
- Supported on all 9300 Series SKUs
- Nonblocking architecture with line rate on every port

Cisco 25G optics

The Cisco 25GBASE SFP28 portfolio offers customers a wide variety of high-density and low-power 25G connectivity options for data center and high-performance computing network applications (Figure 12). Table 3 lists the cabling specifications for the Cisco 25G portfolio.

Features and benefits of Cisco 25G modules

- Support for dual-rate optics in enterprise networks that provide unsurpassed **investment protection**
- **Interoperable** with other IEEE-compliant 25G interfaces where applicable
- Certified and tested on Cisco SFP28 ports for **superior performance**, quality, and reliability
- High-speed electrical interface **compliant with IEEE 802.3by**

Figure 12.   Cisco 25G portfolio