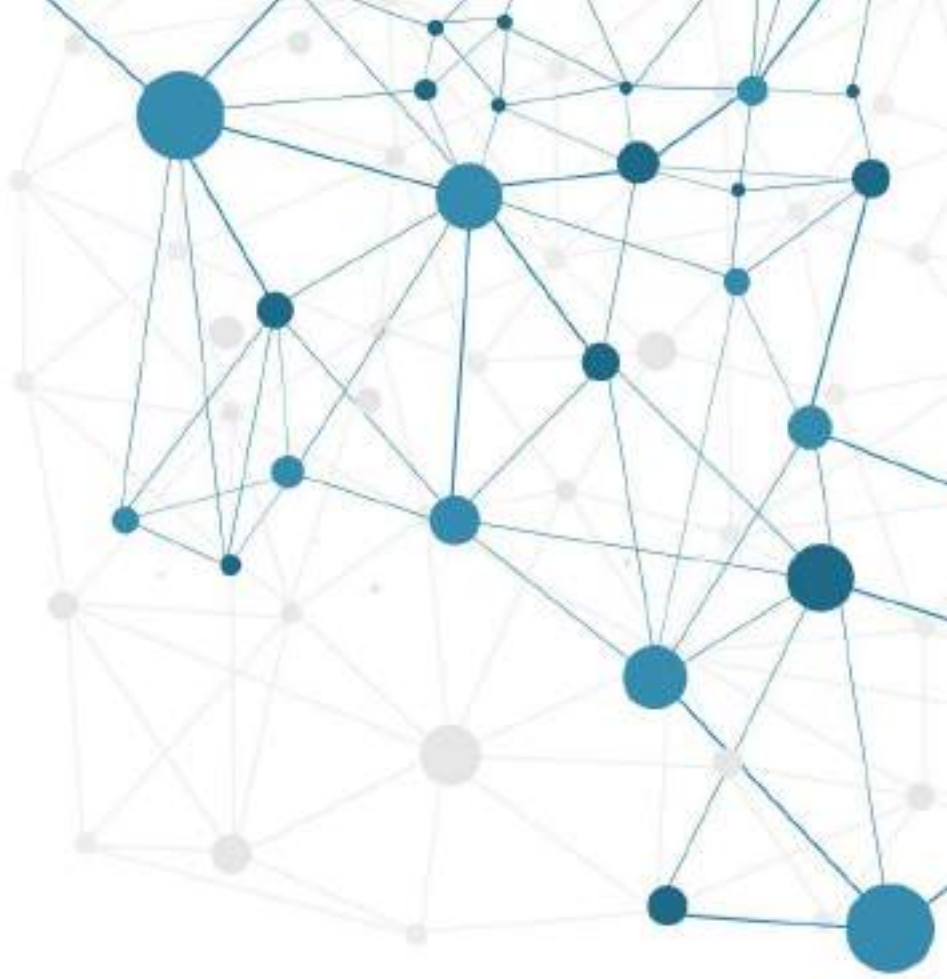


Cisco Catalyst 9500 Switch Datasheet

Router-Switch.com
Leading Network Hardware Supplier

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OVERVIEW

The Cisco® Catalyst® 9500 Series switches are the next generation of enterprise-class core and aggregation layer switches, supporting full programmability and serviceability. Based on an x86 CPU, the Cisco Catalyst 9500 Series is Cisco's lead purpose-built fixed core and aggregation enterprise switching platform, built for security, IoT, and cloud. The switches come with a 4-core x86, 2.4-GHz CPU, 16-GB DDR4 memory, and 16-GB internal storage.

APPEARANCE

All switches ship with the 650W/950W/1600W AC power supply as default. Figures 1 through 8 show the Cisco Catalyst 9500 Series Switches.

Figure 1. C9500-32C: Cisco Catalyst 9500 Series high-performance switch with 32x 100 Gigabit Ethernet



Figure 2. C9500-32QC: Cisco Catalyst 9500 Series high-performance switch with 32x 40 Gigabit Ethernet



Figure 3. C9500-48Y4C: Cisco Catalyst 9500 Series high-performance switch with 48x 25 Gigabit Ethernet + 4x 100G Uplink



Figure 4. C9500-24Y4C: Cisco Catalyst 9500 Series high-performance switch with 24x 25 Gigabit Ethernet + 4x 100G Uplink



Figure 5. C9500-24Q: Cisco Catalyst 9500 Series switch with 24x 40 Gigabit Ethernet



Figure 6. C9500-12Q: Cisco Catalyst 9500 Series switch with 12x 40 Gigabit Ethernet



Figure 7. C9500-40X: Cisco Catalyst 9500 Series switch with 40x 1 and 10 Gigabit Ethernet



Figure 8. C9500-16X: Cisco Catalyst 9500 Series switch with 16x 1 and 10 Gigabit Ethernet



Product highlights

▶Cisco Unified Access™ Data Plane (UADP) Application-Specific Integrated Circuit (ASIC) ready for next-generation technologies with its programmable pipeline, microengine capabilities, and template-based, configurable allocation of Layer 2 and Layer 3 forwarding, Access Control Lists (ACLs), and Quality-of-Service (QoS) entries

▶Intel® 2.4-GHz x86 CPU with up to 120 GB of USB 3.0 or up to 960 GB of SATA SSD storage for container-based application hosting

▶Up to 6.4-Tbps switching capacity with up to 2 Bpps of forwarding performance

▶Up to 32 nonblocking 100 Gigabit Ethernet QSFP28 ports

▶Up to 32 nonblocking 40 Gigabit Ethernet QSFP ports

▶Up to 48 nonblocking 25 Gigabit Ethernet SFP28 ports

▶Platinum-rated AC power supplies

▶Up to 512,000 Flexible NetFlow (FNF) entries in hardware

▶Up to 36 MB of unified buffer per ASIC

▶Up to 212,000 routing entries (IPv4/IPv6) for high-end campus core and aggregation deployments

▶IPv6 support in hardware, providing wire-rate forwarding for IPv6 networks

▶IEEE 802.1ba AV Bridging (AVB) built in to provide a better AV experience through improved time synchronization and QoS

▶Precision Time Protocol (PTP; IEEE 1588v2) provides accurate clock synchronization with sub-microsecond accuracy, making it suitable for distribution and synchronization of time and frequency over the network

▶Dual-stack support for IPv4/IPv6 and dynamic hardware forwarding table allocations, for ease of IPv4-to-IPv6 migration

▶Support for both static and dynamic NAT and Port Address Translation (PAT)

▶Scalable routing (IPv4, IPv6, and multicast) tables and Layer 2 tables

▶Cisco IOS® XE Software, a modern operating system for the enterprise with support for model-driven programmability, on-box Python scripting, streaming telemetry, container-based application hosting, and patching for critical bug fixes. The OS also has built-in defenses to protect against runtime attacks

▶StackWise Virtual technology, a network system virtualization technology that increases operational efficiency and boosts nonstop communications and scaled system bandwidth

▶SD-Access: With the Cisco Catalyst 9500 Series, you can be part of the future of networking with features that include:

· Policy-based automation from edge to cloud

· Segmentation and micro-segmentation made easy, with predictable performance and scalability

· Automation and network assurance through the Cisco DNA Center™ Appliance

· Faster launch of new business services and significantly improved issue resolution time

▶Cisco Plug and Play (PnP) enabled: A simple, secure, unified, and integrated offering to ease new branch or campus device rollouts or updates to an existing network

▶Advanced security:

· Encrypted Traffic Analytics (ETA): You benefit from the power of machine learning to identify and take actions toward threats or anomalies in your network, including malware detection in encrypted traffic and distributed anomaly detection. Additionally, ETA is able to detect vulnerable implementations in encrypted traffic

· Support for AES-256 with the powerful MACsec 256-bit encryption algorithm available on all models

· Trustworthy systems: Secure Unique Device Identification (SUDI) support for Plug and Play, enabling tamper-proof device identity capability, which secures zero-touch provisioning by allowing your device to show a certificate to the server to be able to get onto your network

Platforms

The Catalyst 9400 Series provide four platforms.

▶Catalyst 9500 100/40-G 32-port switches: C9500-32C, C9500-32QC

· 32 ports of 100 G and 40 G with rich campus features

· Industry-first 100 G and 40 G enterprise-class switch

· High performance, QSFP+

· Secure segmentation with SD-Access

· MPLS L2/L3 VPNs, MVPN; flexible design templates

· Enhanced Limited Lifetime Warranty (E-LLW)

▶Catalyst 9500 25-G 24- and 48-port switches: C9500-24Y4C, C9500-48Y4C

· 24 and 48 ports of 25 G with rich campus features

· Cisco innovation extending SR reach to 300 million

· High performance, SFP28

· Secure segmentation with SD-Access

· MPLS Level 2/3 VPNs, MVPN; flexible design templates

· Enhanced Limited Lifetime Warranty (E-LLW)

▶Catalyst 9500 40-G 12- and 24-port switches: C9500-12Q, C9500-24Q

· 32 ports of 40 G with rich campus features

· QSFP+, 10/40 G uplinks

· Secure segmentation with SD-Access

· MPLS Level 2/3 VPNs, MVPN; flexible design templates

· Enhanced Limited Lifetime Warranty (E-LLW)

▶Catalyst 9500 1/10-G 16- and 40-port switches: C9500-16X, C9500-48X

· 16 to 40 ports of 1/10 G with rich campus features

· SFP/SFP+, 8 x 1/10 G or 2 x 40 G uplinks

· Secure segmentation with SD-Access

· MPLS Level 2/3 VPNs, MVPN; flexible design templates

· Enhanced Limited Lifetime Warranty (E-LLW)

SPECIFICATIONS

Table 1. Dimensions, physical specifications, weight, and MTBF

Description	**Specifications**							
SKU	C9500-32C	C9500-32QC	C9500-48YC	C9500-24YC	C9500-12Q	C9500-24Q	C9500-40X	C9500-16X
Dimensions (H x W x D)	1.73 x 17.5 x 21.2 in	1.73 x 17.5 x 18.0 in			1.73 x 17.5 x 21.52 in			
Rack units (RU)	1 RU							
Chassis with 2 power supplies and built-In fan	25.64 lb (11.63 kg)	21.85lLb (9.91 kg)	21.96 lb (9.96 kg)	20.99 lb (9.52 kg)	25.75 lb (11.68 kg)			23.6 lb (10.7 kg)
Input voltage	90 to 264 VAC*				115 to 230 VAC*			
Operating temperature	32° to 104°F (0° to 40°C)				32° to 104°F (0° to 40°C)			
Storage temperature	-4° to 149°F (-20° to 65°C)				-4° to 149°F (-20° to 65°C)			
Relative humidity operating and nonoperating noncondensing	Ambient (noncondensing) operating: 5% to 90% Ambient (noncondensing) nonoperating and storage: 5% to 95%							
Altitude	Operation up to 13,000 feet at 40°C				Operation up to 6000 feet at 55°C and 13,000 feet at 45°C			
MTBF (hours)	212,820	307,200	316,960	336,780	276,430	230,770	277,310	315,790

* Minimum input voltage is 90VAC, and maximum input voltage is 264VAC.

ROUTER-SWITCH.COM ORDERING INFORMATION

Table 2. Order these items via Router-switch.com.

SKU	Description
Switches	
C9500-12Q-A	Catalyst 9500 12-port 40G switch, Advantage
C9500-12Q-E	Catalyst 9500 12-port 40G switch, Network Essentials
C9500-24Q-A	Catalyst 9500 24-port 40G switch, Network Advantage
C9500-24Q-E	Catalyst 9500 24-port 40G switch, Network Essentials
C9500-40X-2Q-A	Catalyst 9500 40 x 10G, 2 x 40G Bundle, Network Advantage
C9500-40X-2Q-E	Catalyst 9500 40 x 10G, 2 x 40G Bundle, Network Essentials
C9500-40X-A	Catalyst 9500 40-port 10Gig switch, Network Advantage
C9500-40X-E	Catalyst 9500 40-port 10Gig switch, Network Essentials
C9500-48X-A	Catalyst 9500 48-port 10G bundle, Network Advantage
C9500-48X-E	Catalyst 9500 48-port 10G Bundle, Network Essentials
C9500-16X-EDU	Catalyst 9500 16-port 10G, K12
C9500-24Q-10E	9500 10Y DNA Essentials, HW
C9500-24Y4C-1A	9500 1Y DNA Advantage, HW
C9500-24Y4C-1E	9500 1Y DNA Essentials, HW
C9500-24Y4C-EDU	Catalyst 9500 24x1/10/25G and 4-port 40/100G, K12
C9500-32C-EDU	Catalyst 9500 32x100G, K12

C9500-32QC-EDU	Catalyst 9500 32x40G, K12
C9500-40X-10A	9500 10Y DNA Advantage, HW
C9500-40X-10E	9500 10Y DNA Essentials, HW
C9500-48Y4C-EDU	Catalyst 9500 48-port x 1/10/25G and 4-port 40/100G, EDU
C9500-16X-A	Catalyst 9500 16-port 10Gig switch, Network Advantage
C9500-32QC-E	Cisco Catalyst 9500 Series high performance 32-port 40G switch, NW Ess. License
C9500-32QC-A	Cisco Catalyst 9500 Series high performance 32-port 40G switch, NW Adv. License
C9500-32C-E	Cisco Catalyst 9500 Series high performance 32-port 100G switch, NW Ess. License
C9500-32C-A	Cisco Catalyst 9500 Series high performance 32-port 100G switch, NW Adv. License
C9500-48Y4C-E	Cisco Catalyst 9500 Series high performance 48-port 25G switch, NW Ess. License
C9500-48Y4C-A	Cisco Catalyst 9500 Series high performance 48-port 25G switch, NW Adv. License
C9500-24Y4C-E	Cisco Catalyst 9500 Series high performance 24-port 1/10/25G switch, NW Ess. License
C9500-24Y4C-A	Cisco Catalyst 9500 Series high performance 24-port 1/10/25G switch, NW Adv. License
C9500-16X-E	Cisco Catalyst 9500 16-port 10G switch, NW Ess. License
C9500-24X-A	Cisco Catalyst 9500 16-port 10G switch, 8 x 10GE Network Module, NW Adv. License
C9500-24X-E	Cisco Catalyst 9500 16-port 10G switch, 8 x 10GE Network Module, NW Ess. License
C9500-16X-2Q-A	Cisco Catalyst 9500 16-port 10G switch, 2 x 40GE Network Module, NW Adv. License
C9500-16X-2Q-E	Cisco Catalyst 9500 16-port 10G switch, 2 x 40GE Network Module, NW Ess. License
Licenses	
C9500-DNA-16X-A	C9500 DNA Advantage, Term licenses

C9500-DNA-16X-E	C9500 DNA Essentials, Term licenses
C9500-DNA-24Y4C-A	C9500 DNA Advantage, Term License
C9500-DNA-32C-E	C9500 DNA Essentials, Term License
C9500-DNA-32QC-A	C9500 DNA Advantage, Term License
C9500-DNA-32QC-E	C9500 DNA Essentials, Term License
C9500-DNA-48Y4C-E	C9500 DNA Essentials, Term License
C9500-DNA-A-10Y	C9500 DNA Advantage, Term licenses
C9500-DNA-E-10Y	C9500 DNA Essentials, Term licenses
Here doesn't include all license models. For more, please visit: Cisco Catalyst 9500 Switch Licenses	
Accessories	
C9500-ACC-KIT-19I=	Accessory Kit for Cisco Catalyst 9500 Series - 19" rack mount
C9500-ACC-KIT-23I=	Accessory Kit for Cisco Catalyst 9500 Series - 23" rack mount
C9500-4PT-KIT=	Extension rails and brackets for four-point mounting for Cisco Catalyst 9500 Series
C9K-PWR-1600WAC-R	1600W AC Power Supply
C9K-PWR-650WAC-R	650W AC Power Supply
C9K-PWR-1600WDC-R	1600W DC Power Supply
C9K-PWR-930WDC-R	930W DC Power Supply
C9K-PWR-1600WACR/2	1600W AC Power Supply, Redundant
C9K-PWR-650WAC-R/2	650W AC Power Supply, Redundant
C9K-PWR-1600WDCR/2	1600W DC Power Supply, Redundant

C9K-PWR-930WDC-R/2	930W DC Power Supply, Redundant
C9K-PWR-C4-BLANK	Catalyst 9500 power supply blank cover
C9K-PWR-C5-BLANK	Catalyst 9500 power supply blank cover
C9K-T1-FANTRAY	Catalyst 9500 fan tray
C9500-ACCKITH-19I=	Accessory Kit for Cisco Catalyst 9500 Series High-End - 19" rack mount
C9500-ACCKITH-23I=	Accessory Kit for Cisco Catalyst 9500 Series High-End - 23" rack mount
C9500-4PTH-KIT=	Extension rails and brackets for four-point mounting for Cisco Catalyst 9500 Series High-End

ADDITIONAL INFORMATION

Guide to Upgrade Cisco Access and Backbone Switch

Cisco's New Switch Selection Decision 2018

WHERE TO BUY

Want to buy this series of products? please contact:

- Tel: +1-626-239-8066 (USA)/ +852-3050-1066 / +852-3174-6166
- Fax: +852-3050-1066 (Hong Kong)
- Email: sales@router-switch.com (Sales Inquiries)

Or visit: Cisco Catalyst 9500 Series Switches

About us

Router-switch.com, founded in 2002, is one of the biggest Global Network Hardware Supplier. We are a leading provider of network products with 14,500+ customers in over 200 countries. We provide original new and used network equipments (Cisco, Huawei, HPE, Dell, Hikvision, Juniper, EMC, etc.), including Routers, Switches, Servers, Storage, Telepresence and Videoconferencing, IP Phones, Firewalls, Wireless APs & Controllers, EHWIC/HWIC/VWIC Cards, SFPs, Memory & Flash, Hard Disk, Cables, and all kinds of network solutions related products.

SOURCES

https://www.cisco.com/c/en/us/products/collateral/switches/catalyst-9500-series-switches/data_sheet-c78-738978.html