C9500-24Y4C-1A Datasheet





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.

Quick Specs

Table 1 shows the Quick Specs.

Product Code	C9500-24Y4C-1A
Product Description	9500 1Y DNA Advantage, HW
Dimensions (H x W x D)	1.73 x 17.5 x 18.0 in
Rack units (RU)	1 RU
MTBF (hours)	336,780
Minimum software requirement	Cisco IOS XE Software Release 16.8.1a

Product Details

Cisco C9500 Series provide these highlights:

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
- •Up to 48 nonblocking 10 Gigabit Ethernet SFP+ ports
- •Platinum-rated AC/DC 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 solutions: 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

The Modules, Cards, Licenses

Table 2 shows the recommended elements for the C950024Y4C-1A.

Category	Model	Description	
Software Subscription	C9500-DNA-L-A-3Y	Catalyst 9500 NW & DNA Advantage low port density license (3Y) for 12P40G SKU	
	C9500-DNA-L-A-5Y	Catalyst 9500 NW & DNA Advantage low port density license (5Y) for 12P40G SKU	
	C9500-DNA-L-A-7Y	Catalyst 9500 NW & DNA Advantage low port density license (7Y) for 12P40G SKU	
	C9500-DNA-L-E-3Y	Catalyst 9500 NW & DNA Essentials. low port density license (3Y) for 12Q, 16X, 24Y4C SKU	
	C9500-DNA-L-E-5Y	Catalyst 9500 NW & DNA Essentials. low port density license (5Y) for 12Q, 16X, 24Y4C SKU	
	C9500-DNA-L-E-7Y	Catalyst 9500 NW & DNA Essentials. low port density license (7Y) for 12Q, 16X, 24Y4C SKU	
Power Supply	C9K-PWR-650WAC-R	650W AC Power Supply	
	C9K-PWR-930WDC-R	950W AC Power Supply	
Console Cables	CAB-CONSOLE-RJ45	Cisco CAB-CONSOLE-RJ45 Console Cable 6ft with RJ45 and DB9F	
	CAB-CONSOLE-USB	Cisco CAB-CONSOLE-USB Console Cable 6 ft with USB Type A and mini-B	

Compare to Similar Items

Table 3 shows the comparison.

Product Code	C9500-24Y4C-1A	C9500-24Y4C-1E	C9500-24Y4C-EDU
Description	9500 1Y DNA Advantage, HW	9500 1Y DNA Essentials, HW	Catalyst 9500 24x1/10/25G and 4-port 40/100G, K12
Switching capacity	Up to 2.0 Tbps	Up to 2.0Tbps	Up to 2.0 Tbps
Forwarding rate	Up to 1 Bpps	Up to 1 Bpps	Up to 1 Bpps
DRAM	16 G	16 G	16 G
Flash	16 G	16 G	16 G
Dimensions (H x W x D)	1.73 x 17.5 x 18.0 in	1.73 x 17.5 x 18.0 in	1.73 x 17.5 x 18.0 in
Rack units (RU)	1RU	1RU	1RU

Get More Information

Do you have any question about the C9500-24Y4C-1A?

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Specification

C9500-24Y4C-1A Specification			
Product Code	C9500-24Y4C-1A		
Product Description	9500 1Y DNA Advantage, HW		
Dimensions (H x W x D)	1.73 x 17.5 x 18.0 in		
Rack units (RU)	1 RU		
Minimum software requirement	Cisco IOS XE Software Release 16.8.1a		
ASIC	UADP 3.0		
Switching capacity	Up to 2.0Tbps		
Forwarding rate	Up to 1 Bpps		
Total number of MAC addresses	Up to 82,000		
Total number of IPv4 routes (Address Resolution Protocol [ARP] plus learned routes)	Up to 212,000 indirect + direct Up to 90,000 host/ARP		
Total number of IPv6 routes	Up to 212,000 indirect + direct Up to 90,000 host		
Total number of IPv4 Multicast routes	Up to 32,000		
Total number of IPv6 Multicast routes	Up to 32,000		
QoS ACL scale	Up to 16000		
Security ACL scale	Up to 27000		
FNF entries	Up to 98,000		
DRAM	16 GB		
Flash	16 GB		
VLAN IDs	4094		
Total Switched Virtual Interfaces (SVIs)	4000		
Jumbo frame	9216 bytes		

EMI and EMC compliance	C9500-12Q, C9500-24Q, C9500-40X, C9500-16X *UL 60950-1 *CAN/CSA-C22.2 No. 60950-1 *EN 60950-1 *AS/NZS 60950-1 *AS/NZS 60950-1 *GB4943 C9500-32C, C9500-32QC, C9500-24Y4C, C9500-48Y4C *IEC 60950-1 plus Am1, Am2 Am9, Am10, Am11, Am12 and all deviations and differences *AS/NZS 60950.1.2011 *CAN/CSA-C22.2 No. 60950-1-07 *GB 4943-95 *EN 60950-1; 2006 plus Am1, Am 2, Am9, Am10, Am11, Am12 and all deviations and differences *NOM-019-SCFI-1998 *UL 60950-1, Second Edition *47 CFR Part 15 Class A *CNS13438: 2006 Class A *EN 300 386 V1.6.1 *EN61000-3-2: 2014 *EN61000-3-3: 2013 *ICES-003 Issue 6: 2016 Class A
	•KN 32: 2015 Class A
	•TCVN 7189: 2009 Class A •EN 55032:2012/ AC:2013 Class A
	•EN 55032:2015 Class A •CISPR 32 Edition 2 Class A
	•V-2/2015.04 Class A
	•V-3/2015.04 Class A •CISPR24: 2010 + A1: 2015
	•EN 300 386 V1.6.1 •EN55024: 2010 + A1: 2015
	•KN35: 2015 •TCVN 7317: 2003
	-10 VIN 7317. 2003
Input voltage	90 to 264 VAC
Operating temperature	32°to 104°F (0°to 40°C)
Storage temperature	-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%
NEBS criteria levels	NEBS: Normal operating temperature range: 5C to 40C (up to 1829 meters (6000 ft) Short term operating temperature range: -5C to 55C Normal Relative Humidity range: 5% to 85% Short term Relative Humidity range: 5% to 93% Operating Altitude: up to 1829 m (6000 ft) at 55C ETSI 300-019 Requirements are covered under GR-63-CORE with some deviations. SR-3580 NEBS level 3 (GR-63-CORE, to current issue, GR-1089-CORE, to current issue
Altitude	Operation up to 13,000 feet at 40°C
MTBF (hours)	336,780
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