



C9300X-48HXN-A DataSheet

Cisco Catalyst C9300X-48HXN-A: 48-port mixed UPOE+ multigigabit switch (8×10G + 40×5G) with 1 Tbps stacking, 100 Gbps IPsec, AES-256 MACsec, advanced Layer 3 features.

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C9300X-48HXN-A Description

The Cisco Catalyst C9300X-48HXN-A, known as the “48HXN Advantage multigigabit switch,” delivers converged access and power consolidation for today’s demanding campus and branch-edge environments. With 8×10 Gbps and 40×5 Gbps UPOE+ ports (up to 90 W per port), it powers high-density Wi-Fi 6/6E access points, IP telephony, security cameras, and IoT devices over a single cable. A 1 Tbps StackWise-1T fabric (1.96 Tbps in an eight-member stack) provides seamless scaling, while 100 Gbps hardware IPsec and AES-256 MACsec ensure data-in-transit protection. The on-switch application platform features a quad-core x86 CPU, 16 GB of DRAM, 16 GB flash, and a USB 3.0 SSD slot, supporting containerized services and analytics at the access layer. The Network Advantage license unlocks advanced routing, MPLS, segment routing, and enhanced QoS for mission-critical networks.

Model Meaning: Cisco C9300X-48HXN-A Switch

Segment	Meaning
C	Cisco Catalyst series
9300	9300 Series stackable enterprise access switch
X	UADP 2.0sec ASIC platform with on-chip crypto and app hosting
48	48 downlink ports
H	UPOE+ support (up to 90 W per port)
XN	Mixed multigigabit density: 8×10 Gbps + 40×5 Gbps ports
-A	Network Advantage license (advanced Layer 3, MPLS, segmentation, enhanced security)

Model Comparison

Parameter	C9300X-48HXN-A	C9300X-48HXN-E	C9300X-48HX-A
Downlinks	8×10 Gbps + 40×5 Gbps UPOE+	8×10 Gbps + 40×5 Gbps UPOE+	48×10 Gbps UPOE+ multigigabit
PoE Power	Up to 90 W/port; 690 W budget	Up to 90 W/port; 690 W budget	Up to 90 W/port; 590 W budget
Stacking BW	1 Tbps / 1.96 Tbps stacked	1 Tbps / 1.96 Tbps stacked	1 Tbps / 1.96 Tbps stacked
Switching Capacity	960 Gbps	960 Gbps	1,760 Gbps
Forwarding Rate	714 Mpps / 1,458 Mpps stacked	714 Mpps / 1,458 Mpps stacked	1,309 Mpps
IPsec VPN	100 Gbps hardware	100 Gbps hardware	100 Gbps hardware
MACsec	AES-256	AES-256	AES-256
DRAM / Flash	16 GB / 16 GB	16 GB / 16 GB	16 GB / 16 GB
App Hosting	Quad-core x86; USB 3.0 SSD slot	Quad-core x86; USB 3.0 SSD slot	x86 CPU; USB 3.0 SSD slot
Uplink Slots	4× modular (10/25/40/100 Gbps)	4× modular (10/25/40/100 Gbps)	4× modular (10/25/40/100 Gbps)
License	Network Advantage	Network Essentials	Network Advantage

Specification

Parameter	Specification	Parameter	Specification
Model Number	C9300X-48HXN-A	Platform	Cisco Catalyst 9300X Series
Series	9300X UADP 2.0sec ASIC	Downlink Ports	8×10G + 40×5G UPOE+
Uplink Slots	4 modular 10/25/40/100 Gbps	Stacking Bandwidth	1 Tbps / 1.96 Tbps stacked
Switching Capacity	960 Gbps non-blocking	Forwarding Rate	714 Mpps / 1,458 Mpps stacked
IPsec Throughput	100 Gbps	MACsec Encryption	AES-256 on all ports
CPU	Quad-core x86	DRAM	16 GB
Flash	16 GB	External Storage	USB 3.0 SSD slot (240 GB)
PoE Budget	690 W (1100 W PSU)	Redundant PSU	Supported
App Hosting	2×10 Gbps AppGig ports	Packet Buffer	16 MB
IPv4 Routes	39,000	IPv6 Routes	19,500
VLAN IDs	4,094	QoS Scale	5,120 entries
ACL Scale	8,000 entries	FNF Entries	64,000 flows
MTBF	>500,000 hours	Operating Temp.	-5 °C to 45 °C
Storage Temp.	-40 °C to 70 °C	Humidity	5%-95% non-condensing
Dimensions	1.73"×17.5"×17.57" chassis only	Weight	6.44 kg
Acoustic	45 dB typical	Power Supply	1100 W AC (redundant)
Security Features	TrustSec, ETA, TACACS+	License	Network Advantage

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