



C9500-24X-E DataSheet

Cisco C9500-24X-E - 24-port 10 G SFP+ core switch with MACsec-256, DNA Essentials, modular 8×10 G uplinks and redundant 950 W PSUs for secure campus aggregation.

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C9500-24X-E Description



C9500-24X-E – often searched as Cisco Catalyst 9500 24X Essentials—is a compact 1 RU 24-port 10-Gigabit fibre aggregation switch built for secure campus and SMB data-centre cores. The chassis combines 16 native 10 G SFP+ ports with a hot-swappable C9500-NM-8X module delivering eight extra 10 G uplinks, all running at wire-speed under Cisco IOS-XE. Hardware MACsec-256 encryption, Trust Anchor secure-boot and SD-Access automation protect traffic end-to-end while dual hot-swap 950 W PSUs and N+1 fans ensure nonstop operation. Programmable RESTCONF, NETCONF and gNMI APIs let you integrate the switch into Ansible or Terraform workflows in minutes.

Model Meaning

Segment	Meaning
C	Cisco Catalyst fixed-form-factor switch family
9500	Enterprise-class Core/Aggregation “9500 Series”
-24X	16 × 10 G SFP/SFP+ fixed down-links + 8 × 10 G SFP/SFP+ network-module uplinks for a 24-port total
-E	Ships with DNA Essentials perpetual network stack licence bundle

Model Comparison

Parameter	C9500-24X-E	C9500-16X-E	C9500-40X-E
Total 10 G Ports	24 (16 + 8 NM)	16	40
Uplink Module	C9500-NM-8X	C9500-NM-8X / 2Q	C9500-NM-8X / 2Q
Max Switching Capacity	~960 Gbps*	~320 Gbps*	~800 Gbps*
Forwarding Rate	~1440 Mpps*	~238 Mpps*	~595 Mpps*
MACsec-256	Yes	Yes	Yes
SD-Access Role	Fabric Edge	Edge	Edge
Default PSUs	2 × 950 W	2 × 950 W	2 × 950 W
Dimensions (H × W × D)	1.73 × 17.5 × 21.2 in	Same	Same
Weight	≈ 25.6 lb	25.6 lb	23.6 lb
Licence Tier	DNA Essentials	DNA Essentials	DNA Essentials

Specification

Parameter	Value	Parameter	Value
Product ID	C9500-24X-E	Series	Catalyst 9500
Fixed Down-links	16 × 10 G SFP/SFP+	Network Module	8 × 10 G SFP+ (C9500-NM-8X)
Total 10 G Ports	24	Switching Capacity	≈ 480 Gbps*
Forwarding Rate	≈ 357 Mpps*	MACsec Encryption	256-bit line-rate
CPU	4-core x86	System Memory	16 GB DRAM
On-board Storage	16 GB eMMC	Stacking	StackWise Virtual via 40 G
SD-Access Capability	Fabric Edge	Software Tier	DNA Essentials
Open APIs	NETCONF, RESTCONF, gNMI	Telemetry	Model-driven, streaming
Power Supplies	2 × 950 W AC (hot-swap)	Fan Modules	N+1 front-to-back
Typical Power Draw	≤ 350 W	Heat Dissipation	≈ 1 195 BTU/hr
Dimensions (H×W×D)	1.73 × 17.5 × 21.2 in (4.4 × 44.5 × 56.8 cm)	Weight	≈ 11.6 kg
Operating Temp	0 – 40 °C	Relative Humidity	5 – 90 % non-cond.
Sound Power	≤ 68.3 dB LWAd*	Altitude	Up to 1 800 m
MAC Table Size	128 K	VLANs Supported	4 000
ACL Entries	32 K (IPv4/IPv6)	QoS Queues	8 per port
Management Ports	1 × RJ-45 OOB, 1 × USB 3.0	Console Ports	USB-C & RJ-45
Precision Timing	IEEE 1588 PTP	Warranty	Cisco Enhanced LLW
Mounting	Standard 19-in rack kit	High Availability	ISSU / NSF support

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