

C9300L-48UXG2Q-10A

1RU fixed-uplink 48-port Catalyst 9300L switch; 12x Multigigabit + 36x 1G copper, UPOE, 2x 40G QSFP+ fixed uplinks, StackWise-320, IOS XE.

Cisco Catalyst 9300L Series - Stackable Access Switch (Network Advantage)

The Cisco Catalyst 9300 Series is the industry's leading stackable enterprise access switching platform, combining the industry's first 400G-capable unified access data plane with advanced security and network automation. The C9300L-48UXG2Q-10A is the fixed-uplink 48-port model: it provides 12 Multigigabit ports (100M/1G/2.5G/5G/10G) plus 36 10M/100M/1G copper ports, all 48 ports supporting Cisco UPOE (up to 60 W per port), and two fixed 40-Gigabit QSFP+ uplinks for high-bandwidth Wi-Fi 6/6E access and campus aggregation. The -10A commerce PID corresponds to the official datasheet base PID C9300L-48UXG-2Q-A (1100 W AC power supply + Cisco Network Advantage license). It runs the common Cisco IOS XE operating system and is managed centrally via Cisco Catalyst Center.

Specification	Value
Form factor	1 RU fixed-uplink, Catalyst 9300L Series
Downlink ports	12x 100M/1G/2.5G/5G/10G Multigigabit + 36x 10M/100M/1G RJ-45 (48 total, UPOE)
Uplink ports	2x 40G QSFP+ (fixed)
Switching capacity	472 Gbps standalone / 792 Gbps with stacking
Forwarding rate	351.19 Mpps standalone / 589.28 Mpps with stacking
PoE	Cisco UPOE / 802.3at PoE+ up to 60 W per port
Stacking	StackWise-320 (320 Gbps), up to 8 members
DRAM / flash	8 GB / 16 GB (+ optional USB 3.0 SSD)
Software	Cisco IOS XE (Network Advantage)
Warranty	Enhanced Limited Lifetime Hardware (E-LLW)

- 48 copper downlinks - 12 Multigigabit (100M/1G/2.5G/5G/10G) plus 36 1G - all Cisco UPOE/PoE+.
- Two fixed 40-Gigabit QSFP+ uplinks for high-capacity uplink or stacking-ring interconnect.
- StackWise-320 provides 320 Gbps stack bandwidth with up to eight switches in one logical system.
- Runs Cisco IOS XE - the single common OS across the Catalyst 9000 family - with model-driven programmability.
- Cisco Catalyst Center (formerly DNA Center) for intent-based networking, automation and assurance.
- Hardware-based security: MACsec, Trustworthy Systems with Cisco Trust Anchor, and secure boot.

The table summarizes the switching capacity and forwarding performance for the C9300L-48UXG2Q model (measured with 64-byte IPv4 packets).

Specification	C9300L-48UXG2Q-10A
Switching capacity	472 Gbps (standalone); 792 Gbps (with stacking)
Forwarding rate	351.19 Mpps (standalone); 589.28 Mpps (stacked)
Stacking	StackWise-320, 320 Gbps back-panel bandwidth, up to 8 members
StackPower	Not supported on Catalyst 9300L models
MAC addresses	32,000
IPv4 routes	32,000 (24,000 direct + 8,000 indirect)
IPv6 routes	16,000
VLAN IDs / SVIs	4,094 / up to 1,000
Jumbo frame	9,198 bytes

Item	Value
PoE standard	Cisco UPOE / IEEE 802.3at PoE+ (up to 60 W per port)
PoE budget (single 1100W PSU)	675 W default
PoE budget (with secondary PSU)	1,025 W / 1,390 W / 1,775 W (350W / 715W / 1100W)
Powered devices	UPOE endpoints, IP phones, cameras, and Wi-Fi 6/6E APs

Component	Specification
CPU / ASIC	x86 CPU complex (Cisco UADP-based data plane)
DRAM	8 GB
Flash	16 GB (external USB 3.0 SSD slot supports optional SSD up to 240 GB)
Console port	1x RJ-45
Management port	1x RJ-45 1G Ethernet
USB ports	1x USB 3.0 (Type A)
Power supply	PWR-C1-1100WAC-P, 1100 W AC rated, hot-swappable, dual redundant bays
Fans	Three field-replaceable fans (N+1)
Typical power draw	~158 W no-PoE weighted average (ATIS @115 VAC); up to ~919 W at full PoE budget
Heat dissipation (PSU rated)	Up to 3,793 BTU/hr at 1100 W

Property	Value
Dimensions (H x W x D)	1.73 x 17.5 x 19.2 in (4.4 x 44.5 x 48.8 cm) with default PSU

Property	Value
Chassis-only depth	16.1 in (40.9 cm)
Weight	16.86 lb (7.65 kg) with default PSU
Rack units	1 RU
Operating temperature	-5 C to +45 C (1,500 m); -5 C to +40 C (3,000 m)
Storage temperature	-40 C to +70 C
Relative humidity	5% to 90% non-condensing
Acoustics	LpA 44 dB typical / 47 dB maximum
MTBF	275,010 hours

Catalyst 9000 platforms run Cisco IOS XE and provide a consistent set of high-scale Layer 2 and Layer 3 switching services. The capabilities below apply across the Catalyst 9300/9400/9500/9600 family and are enabled in software on the platform.

Feature	Description
VLANs / VTP	Up to 4,094 VLANs per switch; VTP v2/v3 transparent and server/client modes
Spanning Tree	PVST+, Rapid PVST+, MST (802.1s); BPDU Guard, Root Guard, Loop Guard
MAC address table	32,000 entries (depending on platform); MACsec with IEEE 802.1AE
IPv4/IPv6 routing	OSPFv2/v3, IS-IS, EIGRP, BGP-4, MP-BGP, EIGRPv6, IS-ISv6, static v4/v6
VRF-Lite / MPLS	Multi-VRF (VRF-Lite) and segment routing awareness (platform dependent)
First-hop redundancy	HSRP v1/v2, VRRP, GLBP (IPv4/IPv6)
Multicast	PIM Sparse Mode / Dense Mode / SSM, IGMPv3, MLDv2, mroute hardware scale
QoS	8 queues per port (Cisco-class QoS), 802.1p, DSCP, policing/shaping, auto-QoS
Security	Port security, DHCP snooping, Dynamic ARP Inspection, IP Source Guard, 802.1x
TrustSec / SGACL	Cisco TrustSec SGT/SGACL tagging and segmentation (platform capable)
NetFlow / IPFIX	Flexible NetFlow v9 / IPFIX on all uplink and downlink ports
MACsec	AES-128/256-GCM 802.1AE link-layer encryption (Cisco ASIC)

Cisco publishes per-platform performance figures for common workload mixes. The indicative numbers below summarize how the platform behaves under load; refer to the official datasheet for the exact test methodology.

Workload / Metric	Reference value
64-byte L2 forwarding	Wire-rate at all port densities on supported platforms
64-byte L3 IPv4 forwarding	Wire-rate with services enabled on supported models

Workload / Metric	Reference value
IMIX mixed packet workload	Reported per-platform in the official datasheet
MACsec encrypted forwarding	Wire-rate AES-128/256-GCM with no throughput penalty (ASIC)
Routing convergence	Sub-second OSPF/IS-IS/BGP convergence on GR/NSF-capable platforms
NetFlow / IPFIX records	Up to 384,000 IPv4 + 192,000 IPv6 records (per-platform SDM)
MAC address table	Up to 128,000 (custom SDM templates available on newer platforms)
IPv4 route scale	Up to 256,000 routes (custom SDM template; varies by model)
IPv6 route scale	Up to 256,000 routes (custom SDM template; varies by model)
ACL scale	Up to 72,000 ACEs (Ingress + Egress) on supported models
VLAN / SVI scale	Up to 4,094 VLANs; up to 1,000 SVIs
QoS queues per port	8 hardware queues per port (Cisco-class QoS)

The Catalyst platform supports a comprehensive ecosystem of pluggable optics, stacking kits, and accessories. The following tables summarize the most commonly deployed options for C9300L-48UXG2Q-10A.

Module / Accessory	Description
Cisco SFP/SFP+ optics	GLC-T (1G copper), GLC-SX-MMD / -LX-SMD / -LH-SMD / -ZX-SMD (1G SX/LX)
Cisco SFP+ 10G optics	SFP-10G-SR, SFP-10G-LR, SFP-10G-ER, SFP-10G-ZR, SFP-10G-T (copper)
Cisco 25G SFP28 optics	SFP-25G-SR-S, SFP-25G-LR-S (where 25G uplinks available)
Cisco 40G/100G QSFP optics	QSFP-40G-SR4 / -LR4, QSFP-100G-SR4-S / -LR4-S (where applicable)
Stacking cables/kits	StackWise cabling kits (per platform; e.g. STACK-T1-50CM)
Spare power supply	Platform-matched AC PSU (e.g. PWR-C1-1100WAC-P) for redundancy
Spare fan tray	Platform-matched fan module (FRU) for hot-swap maintenance
Console cable	CAB-CONSOLE-RJ45 / CAB-CONSOLE-USB for CLI management access
Rack-mount kit	Standard 19-in four-post EIA-310-D rack-mount brackets included
Cisco DNA / Network Advantage	Cisco subscription license tier for the switch model

Power and acoustic performance for the platform is published in the Cisco official datasheet. Indicative values are summarized below; consult the datasheet for the exact test methodology and ATIS weighted-average measurements.

Metric	Indicative value
ATIS no-link power (115 VAC)	Reported per-platform in the official datasheet
ATIS weighted average (115 VAC)	Reported per-platform in the official datasheet
ATIS 100% traffic (115 VAC)	Reported per-platform in the official datasheet
100% PoE budget test	Reported per-platform in the official datasheet

Metric	Indicative value
AC input	100-240 VAC, autoranging, 50-60 Hz
DC input (where supported)	-40 to -72 VDC; high-voltage DC where supported
PSU redundancy	1+1 redundant AC/DC power supplies (hot-swappable, where dual bays)
Airflow	Front-to-back or back-to-front, depending on fan model (where supported)
Acoustic noise	LpA reported in the datasheet (typically 43-58 dB for enterprise)
Heat dissipation	Reported in BTU/hr at full load
Operating altitude	Up to 3,000 m (10,000 ft); derating above 1,500 m on some platforms
ENERGY STAR / 80 PLUS	Platinum efficiency on supported PSUs

The platform is built to the following interoperability, safety and environmental standards. Compliance is verified by independent testing laboratories (UL, CSA, TUV).

Category	Standard
Layer 2	IEEE 802.1Q, 802.1D, 802.1w (RSTP), 802.1s (MSTP), 802.1p, 802.1x, 802.3ad LACP
Layer 3	RFC 1812 IPv4, RFC 4291 IPv6; OSPFv2 (RFC 2328) / v3 (RFC 5340), IS-IS, BGP-4, EIGRP
VLAN / VPN	802.1Q VLAN tagging; VXLAN EVPN (platform capable); L2TPv3, MPLS awareness
Security	802.1AE MACsec, 802.1X, RADIUS (RFC 2865), TACACS+ (RFC 8907), SSHv2
QoS	802.1p, DSCP (RFC 2474), RFC 2598 Assured Forwarding PHB
Management	SNMPv2c/v3, NETCONF (RFC 6241), RESTCONF, YANG (RFC 6020/7950)
Time sync	IEEE 1588v2 PTP, NTPv4, GPS antenna input (where applicable)
Safety	UL 60950-1, CAN/CSA C22.2 No. 60950-1, IEC 60950-1, AS/NZS 60950.1, UL/IEC/EN 62368-1
EMC	FCC 47 CFR Part 15 Class A, EN 55032/CISPR 32 Class A, EN 55024/55035, EN 300 386
Environmental	RoHS 2011/65/EU, WEEE 2012/19/EU, REACH; operating/storage altitude as per datasheet

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