Cisco

C9300L-48P-4G-E

Datasheet

Product Overview

- Cisco's Catalyst 9300 Series positions itself as the flagship stackable enterprise switch for next-generation campus and branch deployments.

- This model is ideal for distributed offices, campus sites, and organizations managing hybrid workforces that need robust access and security.

- The C9300L-48P-4G-E sports 48×10/100/1000BASE-T ports, 4×1G SFP uplinks, StackWise-320 technology, and up to 320 Gbps stacking bandwidth.

- It features advanced security functions, efficient policy-based automation, and a flexible modular uplink design unique to the Catalyst family.

- With unified wired and wireless management, simplified deployment, and cloud migration options, it delivers ongoing operational value to IT teams and businesses.

- The switch empowers organizations with scalable performance, agile management, and trusted Cisco reliability—perfect for securely connecting modern workspaces across Asia, Europe, Africa, and North America.

Product Highlights

- **High Port Density:** 48 × 10/100/1000BASE-T ports deliver seamless connectivity for dense user and device environments.

- **Flexible Uplinks:** Four 1G SFP uplink slots provide high-speed aggregation and flexible network expansion.

- **StackWise-320 Technology:** Enables modular stacking with up to 320 Gbps, ensuring scalability and redundancy.

- **Advanced Security Features:** Built-in hardware security and QoS ensure traffic prioritization and protect business-critical data.

Detailed Features

C9300L-48P-4G-E

Component	Specification
Downlink Ports	48 × 10/100/1000BASE-T
Uplink Ports	4 × 1G SFP
Stacking Technology	StackWise-320
Switching Capacity	56 Gbps – 176 Gbps
Forwarding Rate	41.66 Mpps – 130.95 Mpps

Enterprise-Grade Stackability

The C9300L-48P-4G-E leverages StackWise-320 technology for reliable, high-speed stacking. This design supports up to eight switches in a stack, improving network resiliency, simplifying operations, and allowing for incremental expansion while maintaining performance in campus or branch environments.

High-Density PoE+ Support

With 48 full PoE+ ports, the switch powers a wide range of devices such as IP phones, wireless APs, and camerasreducing cabling, deployment cost, and complexity. It supports up to 30W per port, ensuring seamless support of high-power endpoints required in dynamic enterprise spaces.

Flexible Modular Uplink Design

The four 1G SFP uplinks offer high availability and allow for flexible network topology choices, including uplink redundancy and expansion to aggregation or core layers. This flexibility ensures smooth adaptation to evolving network demands without requiring hardware changes.

Advanced Traffic Management Capabilities

Ciscos robust QoS and traffic prioritization technology ensures consistent application performance. The switch manages up to 5,120 QoS entries and supports granular traffic shaping and policing, optimizing real-time traffic for voice, video, and mission-critical apps.

Integrated Security and Segmentation

The switch supports advanced MACsec encryption, group-based policies, and ACLs at scale to enhance security posture. With segmentation through network virtualization and support for 256-bit AES IPsec tunnels, enterprises can enforce zero trust from access edge to cloud services.

Unified Wired-Wireless Management

This model integrates wired and wireless network management with Cisco DNA Center and Meraki Dashboard compatibility. It simplifies the administrators workflow, enabling uniform policy enforcement and centralized monitoring across diverse network devices.

Software-Defined Access Architecture

The programmable hardware and SD-Access support enable effortless automation, network segmentation, and device onboarding. Policy-driven automation helps IT staff reduce repetitive tasks, speed up service rollouts, and optimize resources for business transformation.

Future-Proof Investment Protection

Backward compatibility for StackWise and StackPower, expandable memory, and flexible licensing models ensure long-term ROI. Network Essentials or Advantage IOS support enables advanced features and continued scalability for growing businesses.

Technical Specifications

Product Specifications

Feature	Value
Dimensions (H x W x D) inches	1.73 x 17.5 x 16.1
MTBF (hours)	314,140
Designed to Replace	Catalyst 3850
Supported IOS	Network Advantage, Network Essentials
Network Modules Options	Fixed Modules
Stack Technology	StackWise-320
Stacking Bandwidth	320 Gbps
Total Number of MAC Addresses	32,000
Total Number of IPv4 Routes (ARP plus Learned Routes)	32,000 (24,000 Direct Routes and 8,000 Indirect Routes)
IPv6 Routing Entries	16,000
Multicast Routing Scale	8,000

Feature	Value
QoS Scale Entries	5,120
ACL Scale Entries	5,120
Packet Buffer per SKU	16 MB Buffer for 24 and 48 port Gigabit Ethernet Models
Flexible NetFlow (FNF) Entries	64,000 Flow on 24- and 48-port Gigabit Ethernet Models
DRAM	8 GB
Flash	16 GB
VLAN IDs	4094
Total Switched Virtual Interfaces (SVIs)	1000
Jumbo Frames	9198 Bytes
Switching Capacity	56 Gbps - 176 Gbps
Forwarding Rate	41.66 Mpps - 130.95 Mpps

Product Comparison

Feature	C9300L-48P-4G-E	C9300L-48T-4X-E	C9300-48UXM-E
Downlink Ports	48 × 10/100/1000BASE-T, PoE+	48 × 10/100/1000BASE-T	48 × 100M/1G/2.5G/5G/10G Multigigabit
Uplink Ports	4 × 1G SFP	4 × 10G SFP+	4 × 10G SFP+
Switching Capacity	56–176 Gbps	104 Gbps	128 Gbps
Stacking Bandwidth	320 Gbps	320 Gbps	480 Gbps
PoE Support	Yes, PoE+ up to 30W/port	No PoE	Yes, UPOE/PoE+
Stack Technology	StackWise-320	StackWise-320	StackWise-480
Advanced Features	SD-Access, Network Advantage	SD-Access, Network Advantage	SD-Access, Multigigabit, MACsec
IOS Support	Network Advantage, Essentials	Network Advantage, Essentials	Network Advantage, Essentials

Accessories

Category	Accessories
Included Accessories	- Power Supply - Mounting Brackets - Console Cable
Optional Accessories	- SFP Transceiver Modules - Redundant Power Supply - Rack-Mount Kit

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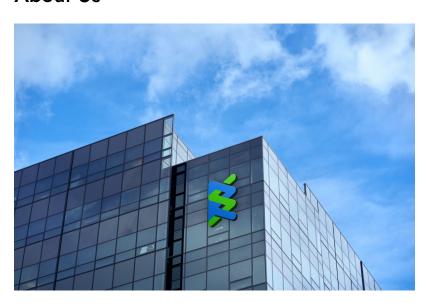
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References

[1] Cisco. (2024). Catalyst 9300 Series Switches Data Sheet. Retrieved from https://www.cisco.com/c/en/us/products/collateral/switches/catalyst-9300-series-switches/nb-06-cat9300-ser-data-sheet-cte-en.html