



# Cisco C9300-48S-E Datasheet

## Product Overview

- Cisco Catalyst 9300 Series switches represent the industry's high-performance, stackable enterprise access solution.
- Designed for distributed workforces, they fit hybrid cloud environments, campus networks, and branch sites.
- The C9300-48S-E delivers up to 1TB stacking bandwidth, supports 48 5Gbps UPOE ports, and offers high-density modular uplinks.
- Mixed stacking is supported, ensuring backwards compatibility with Catalyst 9300 and 9300X models for investment protection.
- Flexible management choices include on-premise, virtual, or cloud-based control with Cisco Meraki dashboard migration available.
- This switch empowers secure, scalable connectivity and streamlined operations for businesses seeking reliable, future-ready network access.

## Product Highlights

- **Software-Defined Access Core:** Built for SD-Access, it automates networks, enforces security, and accelerates service rollout with a unified fabric.
- **Flexible Licensing and Management:** Cisco DNA and Meraki subscriptions provide license portability and management, with cloud or on-premise options.
- **Policy-Based Operations:** Enables group policies, network segmentation, and context-based analytics for easier, safer operations.
- **Unified Device Management:** Simplifies wired and wireless deployment and monitoring, reducing complexity across locations.

## Detailed Features



C9300-48S-E

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| Component          | Specification                      |
|--------------------|------------------------------------|
| Downlink Ports     | 48 x 5 Gbps UPOE (100M/1G/2.5G/5G) |
| Switching Capacity | 640 Gbps                           |
| Stacking Bandwidth | 480 Gbps                           |
| Power Supply       | 1100W AC default                   |
| PoE Power Budget   | 645W                               |



## High-Density Multigigabit Access

The C9300-48S-E supports 48 x 5Gbps UPOE ports for extensive device connectivity, meeting the bandwidth demand of modern workspaces and advanced IoT deployments while delivering enhanced power through Cisco UPOE+.

## Industry-Leading Stacking Bandwidth

Featuring up to 1TB stacking bandwidth with Cisco StackWise-1T, the switch sets new benchmarks for scale and uplink flexibility. The modular architecture supports various uplink speeds, adapting to evolving enterprise requirements.

## Robust Security and Encryption

With integrated 100G line-rate IPsec, AES-256 tunnel encryption, and secure connectivity, the switch protects data in distributed and cloud-connected environments, meeting enterprise-grade security standards from edge to core.

## Flexible Network Edge Integration

Mixed stacking with Catalyst 9300X and legacy 9300 devices allows phased upgrade strategies and backward compatibility, enabling efficient investment protection and simplified migration to higher-speed architectures.

## Resilient Power Architecture

Cisco StackPower and redundant power supply options ensure continuous operation by pooling power resources across stack members and supporting seamless recovery from failures or load changes.

## Enhanced Application Hosting

Equipped for Cisco Signed app hosting with increased CPU and RAM, the switch can run performance-intensive applications, facilitate security services, and provide analytics using Intel QAT and dual AppGig ports.

## Advanced Visibility and Assurance

Cisco ThousandEyes integration offers real-time path monitoring from campus to cloud, improving network assurance and user experience without extra hardware or operational complexity.

## Unified Management Experience

Supports centralized control via Cisco DNA Center or migration to the Meraki dashboard, giving organizations flexibility to monitor, automate, and optimize networks based on their unique business needs.

# Technical Specifications

## Product Specifications

| Feature                                          | Value                                                |
|--------------------------------------------------|------------------------------------------------------|
| Product Description                              | Catalyst 9300 48 GE SFP Ports, modular uplink Switch |
| 10/100/1000 or Multigigabit Copper Ports (Total) | 48x 5 Gbps UPOE ports (100M, 1G, 2.5G, 5G)           |
| Uplink Configuration                             | Modular Uplinks                                      |
| Default AC Power Supply                          | 1100W AC                                             |
| Available PoE Power                              | 645W                                                 |
| Dimensions (H x W x D)                           | 1.73 x 17.5 x 17.5 in                                |
| Cisco StackWise-480                              | Yes                                                  |
| Cisco StackPower                                 | Yes                                                  |
| Default Power Supply                             | PWR-C1-715WAC-P/2                                    |
| Switching Capacity                               | 640 Gbps                                             |
| Stacking Bandwidth                               | 480 Gbps                                             |
| Forwarding Rate                                  | 476.19 Mpps                                          |
| Total Number of MAC Addresses                    | 32,000                                               |



| Feature                                           | Value                                                                                                                                                                                                                                                                                                      |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Total IPv4 Routes (ARP plus Learned)              | 32,000 (24,000 direct routes and 8,000 indirect routes)                                                                                                                                                                                                                                                    |
| IPv4 Routing Entries                              | 32,000                                                                                                                                                                                                                                                                                                     |
| IPv6 Routing Entries                              | 16,000                                                                                                                                                                                                                                                                                                     |
| Multicast Routing Scale                           | 8,000                                                                                                                                                                                                                                                                                                      |
| QoS Scale Entries                                 | 5,120                                                                                                                                                                                                                                                                                                      |
| ACL Scale Entries                                 | 5,120                                                                                                                                                                                                                                                                                                      |
| Packet Buffer per SKU                             | 16 MB buffer for 24- or 48-port Gigabit Ethernet models; 32 MB buffer for 24 and 48-port Multigigabit                                                                                                                                                                                                      |
| FNF Entries                                       | 64,000 flow on 24- and 48-port Gigabit Ethernet models; 128,000 flows on 24-port Multigigabit                                                                                                                                                                                                              |
| DRAM                                              | 8 GB                                                                                                                                                                                                                                                                                                       |
| Flash                                             | 16 GB                                                                                                                                                                                                                                                                                                      |
| VLAN IDs                                          | 4,094                                                                                                                                                                                                                                                                                                      |
| Total Switched Virtual Interfaces (SVIs)          | 1,000                                                                                                                                                                                                                                                                                                      |
| Jumbo Frames                                      | 9,198 bytes                                                                                                                                                                                                                                                                                                |
| Total Routed Ports Catalyst per 9300 Series Stack | 448                                                                                                                                                                                                                                                                                                        |
| Wireless Bandwidth per Switch                     | Up to 96 Gbps on 48-port Gigabit Ethernet model                                                                                                                                                                                                                                                            |
| Mean Time Between Failures (MTBF)                 | 198,647 hours                                                                                                                                                                                                                                                                                              |
| Safety Certifications                             | UL 60950-1; CAN/CSA-C222.2 No. 60950-1; EN 60950-1; IEC 60950-1; AS/NZS 60950.1; IEEE 802.3                                                                                                                                                                                                                |
| Electromagnetic Emissions Certifications          | 47 CFR Part 15; CISPR22 Class A; EN 300 386 V1.6.1; EN 55022 Class A; EN 55032 Class A; CISPR 32 Class A; EN61000-3-2; EN61000-3-3; ICES-003 Class A; TCVN 7189 Class A; V-3 Class A; CISPR24; EN 300 386; EN55024; TCVN 7317; V-2/2015.04; V-3/2015.04; CNS13438; KN32; KN35; IEC 61000-6-1; EN 61000-6-1 |
| Environmental                                     | Reduction of Hazardous Substances (ROHS) 5                                                                                                                                                                                                                                                                 |

## Product Comparison

| Feature         | C9300-48S-E     | C9300-24T-A  | C9500-24X-A   |
|-----------------|-----------------|--------------|---------------|
| Downlink Ports  | 48 x 5Gbps UPOE | 24 x 1G RJ45 | 24 x 10G SFP+ |
| Modular Uplinks | Supported       | Supported    | Supported     |



| Feature               | C9300-48S-E                    | C9300-24T-A       | C9500-24X-A              |
|-----------------------|--------------------------------|-------------------|--------------------------|
| Switching Capacity    | 640 Gbps                       | 160 Gbps          | 960 Gbps                 |
| Stacking Bandwidth    | 480 Gbps                       | 480 Gbps          | 480 Gbps                 |
| PoE Power Budget      | 645W                           | PoE not available | Not supported            |
| Max MAC Address Table | 32,000                         | 32,000            | 32,000                   |
| Layer 3 Routing       | Yes                            | Yes               | Yes                      |
| Management            | Cisco DNA, Meraki, CLI         | Cisco DNA, CLI    | Cisco DNA, CLI           |
| Redundant Power       | Yes                            | Yes               | Yes                      |
| Ideal for             | High-density, multi-gig access | Mid-size access   | Aggregation/core routing |

## Accessories

| Category             | Accessories                                                                                                                                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Included Accessories | <ul style="list-style-type: none"> <li>- Power Supply</li> <li>- Rack Mount Kit</li> <li>- Console Cable</li> </ul>                          |
| Optional Accessories | <ul style="list-style-type: none"> <li>- SFP Transceiver Modules</li> <li>- Redundant Power Supply</li> <li>- StackWise-480 Cable</li> </ul> |



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### Shenzhen Branch

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### UK Branch

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## References

[1] Cisco. (2024). Catalyst 9300 Series Switches Datasheet. Retrieved from <https://www.cisco.com/c/en/us/products/collateral/switches/catalyst-9300-series-switches/nb-06-cat9315-ser-data-sheet-cte-en.html>