



# Cisco

# C1-N9K-C93108EXB24

## Datasheet



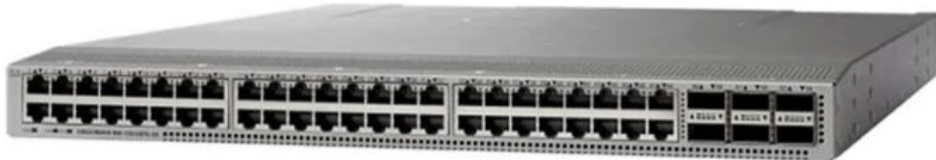
## Product Overview

- The Cisco Nexus 9300-EX Series is part of Cisco's leading fixed data center switch family, built on advanced Cloud Scale technology.
- Ideal for cloud service providers, large enterprises, and growing data centers that require easy scalability and robust performance.
- This switch delivers 48 × 10GBASE-T and 6 × 100G QSFP28 uplinks, 3.6 Tbps switching capacity, and latency under 1 microsecond.
- Key differentiators include seamless speed migration from legacy to high-speed networks and comprehensive L2/L3 flexibility.
- With support for both NX-OS and Cisco ACI, it delivers future-ready policy-based management and automation advantages.
- Perfect for organizations that value investment protection, scalability, and simplified operations in virtual and automated data center environments.

## Product Highlights

- **Architectural Flexibility:** Support for Cisco ACI™, VXLAN EVPN fabrics, and BGP architectures enables modern, scalable network designs for today's data centers.
- **Extensive Programmability:** Day zero automation, integration with leading DevOps tools, and native YANG/ OpenConfig APIs streamline deployment and management.
- **Intelligent Buffer Management:** Dynamic buffer allocation handles mixed workloads efficiently, supporting high-performance cloud and enterprise applications.
- **High Availability & NX-OS:** Redundant hot-swappable PSUs and fans, vPC, robust NX-OS restart features, and modular software architecture ensure reliable continuous operations.

## Detailed Features



C1-N9K-C93108EXB24

Quote | Help

| Component          | Specification                                 |
|--------------------|-----------------------------------------------|
| Switching Capacity | 3.6 Tbps                                      |
| Forwarding Rate    | 2.6 Bpps                                      |
| Ports              | 48 × 10GBASE-T (RJ45), 6 × 100G QSFP28 uplink |
| Form Factor        | 1RU                                           |
| Power Supply       | Dual redundant, hot-swappable                 |



High-Density 10G/100G Connectivity

C1-N9K-C93108EXB24 delivers 48 × 10GBASE-T (RJ45) ports for high-density access and 6 × 100G QSFP28 uplinks, supporting seamless aggregation and core connections in large data centers. This balanced design enables rapid upgrades and flexible migration between legacy and next-generation network rates.

Cloud Scale Performance

This switch leverages Cisco's innovative Cloud Scale technology, offering a 3.6 Tbps switching capacity and 2.6 Bpps forwarding rate. The hardware architecture is optimized for scalable, high-performance environments, delivering sub-1 microsecond latency, which is essential for mission-critical workloads.

Advanced Buffer Management Intelligence

The integrated intelligent buffer management differentiates between mice and elephant flows. With powerful algorithms like Approximate Fair Dropping (AFD) and Dynamic Packet Prioritization (DPP), it ensures efficient utilization of network resources and mitigates congestion without starving smaller transactions.

Layer 2/3 Scalability and Protocol Flexibility

The platform supports advanced Layer 2/3 protocols, including BGP, OSPF, EIGRP, and extensive multicast capabilities. Flexible forwarding tables accommodate up to 1 million entries, allowing for custom ACL templates and large-scale segmentation in complex network topologies.

Modular, Resilient System Architecture

C1-N9K-C93108EXB24 features a purpose-built NX-OS with a single binary image and modular process design. This architecture detects and isolates faults, ensuring high availability and rapid recovery through hot and cold patching, minimizing downtime.

Comprehensive Management and Automation

The switch supports both traditional CLI-based management and API-driven automation, with deep integration for Ansible, Chef, Puppet, and SALT. Day zero automation and DCNM reduce provisioning time, automate compliance, and provide real-time operational visualization.

Enhanced Telemetry and Analytics

Integrated telemetry exports high-frequency flow and context data directly from the ASIC. Compatibility with Cisco Tetration Analytics enables deep, real-time visibility for application insights, anomaly detection, and security enforcement in zero-trust environments.

Investment Protection and Energy Efficiency

Front-to-back airflow, dual redundant hot-swappable power supplies, and low typical power consumption (500W) make the switch suitable for modern energy-conscious data centers. It is compliant with RoHS, UL, CE, and FCC for global deployments while ensuring long-term infrastructure investment security.

Technical Specifications

Product Specifications

| Feature                  | Value                                         |
|--------------------------|-----------------------------------------------|
| Model                    | C1-N9K-C93108EXB24                            |
| Brand                    | Cisco                                         |
| Port Configuration       | 48 × 10GBASE-T (RJ45), 6 × 100G QSFP28 uplink |
| 10GBASE-T (RJ45) Ports   | 48                                            |
| 100G QSFP28 Uplink Ports | 6                                             |
| Switching Capacity       | 3.6 Tbps                                      |
| Forwarding Rate          | 2.6 Bpps                                      |
| Latency                  | Sub-1 microsecond                             |
| Form Factor              | 1RU                                           |
| Power Supply             | Dual redundant, hot-swappable                 |



| Feature                   | Value                          |
|---------------------------|--------------------------------|
| Power Consumption         | 500W typical                   |
| Airflow                   | Front-to-back                  |
| Operating Temperature     | 0°C to 40°C (32°F to 104°F)    |
| Operating Temperature Min | 0°C (32°F)                     |
| Operating Temperature Max | 40°C (104°F)                   |
| Storage Temperature       | -40°C to 70°C (-40°F to 158°F) |
| Storage Temperature Min   | -40°C (-40°F)                  |
| Storage Temperature Max   | 70°C (158°F)                   |
| Humidity                  | 5% to 95% non-condensing       |
| Height                    | 1.72 in (4.37 cm)              |
| Width                     | 17.3 in (43.94 cm)             |
| Depth                     | 18 in (45.72 cm)               |
| MTBF                      | 490,000 hours                  |
| Management                | Cloud-based or on-premise      |
| Software                  | Cisco NX-OS                    |
| Compliance Standards      | RoHS                           |
| Compliance Standards      | UL                             |
| Compliance Standards      | CE                             |
| Compliance Standards      | FCC                            |

## Product Comparison

| Feature            | C1-N9K-C93108EXB24                      | C1-N9KC93180FX-B24               | Arista DCS-7170-64C-R |
|--------------------|-----------------------------------------|----------------------------------|-----------------------|
| Fixed Ports        | 48 × 10GBASE-T (RJ45) + 6 × 100G QSFP28 | 48 × 25G SFP28 + 6 × 100G QSFP28 | 64 × 100G QSFP28      |
| Switching Capacity | 3.6 Tbps                                | 7.2 Tbps                         | 12.8 Tbps             |
| Forwarding Rate    | 2.6 Bpps                                | 5.0 Bpps                         | 9.5 Bpps              |
| Form Factor        | 1RU                                     | 1RU                              | 2RU                   |
| Power Supply       | Dual redundant, hot-swappable           | Dual redundant, hot-swappable    | Dual hot-swappable    |
| Latency            | Sub-1 microsecond                       | Sub-1 microsecond                | <800 ns               |



| Feature              | C1-N9K-C93108EXB24                    | C1-N9KC93180FX-B24          | Arista DCS-7170-64C-R           |
|----------------------|---------------------------------------|-----------------------------|---------------------------------|
| Management           | Cloud-based or on-premise             | On-premise, DCNM support    | CloudVision, on-premise         |
| Layer 3 Protocols    | BGP, OSPF, EIGRP, RIPv2               | BGP, OSPF, IS-IS            | BGP, OSPF, IS-IS, RIP           |
| Compliance           | RoHS, UL, CE, FCC                     | RoHS, UL, CE, FCC           | RoHS, UL, CE, FCC               |
| Application Scenario | Migration, hybrid DC aggregation/core | Web scale, high-density 25G | Tier-1 cloud/large DC core 100G |

## Accessories

| Category             | Accessories                                                                                                                              |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Included Accessories | <ul style="list-style-type: none"> <li>- Dual Power Supplies</li> <li>- Rack Mount Kit</li> <li>- Console Cable</li> </ul>               |
| Optional Accessories | <ul style="list-style-type: none"> <li>- 100G QSFP28 Transceiver</li> <li>- Spare Fan Module</li> <li>- Advanced License Pack</li> </ul> |



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### Shenzhen Branch

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### UK Branch

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## References

[1] Cisco Systems. (2024). Cisco Nexus 9300-EX Series Switches Datasheet. Retrieved from <https://www.cisco.com/c/en/us/products/collateral/switches/nexus-9000-series-switches/datasheet-c78-742283.html>