



# Cisco

# C1-N9K-C93180EXB24

## Datasheet



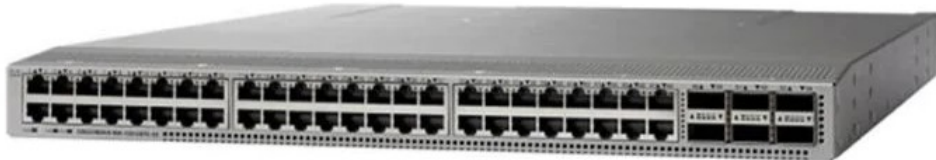
## Product Overview

- The Cisco Nexus 9300-EX Series is part of Cisco's advanced data center switch platform, designed for high performance computing and cloud-scale networks.
- Ideal for enterprise data centers and campus cores, these switches target growing networks needing flexible, scalable and efficient solutions.
- With 48 × 10/25G SFP28 ports, 6 × 40/100G QSFP28 ports, and up to 3.6 Tbps switching capacity, it ensures fast and future-ready network deployments.
- Flexible operation modes like NX-OS and ACI provide seamless integration, supporting both classic and policy-driven architectures.
- Easy centralized management reduces operational complexity, while advanced virtualization and automation boost day-to-day management efficiency.
- Designed for cloud, virtualization, and enterprise needs, the C1-N9K-C93180EXB24 enables reliable, secure, and agile networks for business growth.

## Product Highlights

- **Flexible System Architecture:** Built on Cisco Cloud Scale technology, supports seamless migration to 25G/100G and high-density networks for scalable growth.
- **Intelligent Buffer Management:** Advanced buffer features like Approximate Fair Dropping (AFD) and Dynamic Packet Prioritization (DPP) ensure efficient bandwidth allocation and congestion handling.
- **Comprehensive Automation APIs:** Simplifies provisioning and monitoring with RESTCONF/NETCONF, Ansible, Chef, and other devops tools for efficient management.
- **Resilient High Availability:** Hot-swappable power/fan units, vPC, 64-way ECMP, and robust NX-OS ensure system and service stability in mission-critical environments.

## Detailed Features



C1-N9K-C93180EXB24

Quote | Help

| Component          | Specification                         |
|--------------------|---------------------------------------|
| Port Configuration | 48 × 10/25G SFP28, 6 × 40/100G QSFP28 |
| Switching Capacity | 3.6 Tbps                              |
| Forwarding Rate    | 2.68 Bpps                             |
| Buffer             | 16 MB shared                          |
| Form Factor        | 1RU                                   |



## High-Density, Scalable Connectivity

Designed with 48 × 10/25G SFP28 ports and 6 × 40/100G QSFP28 ports, the Cisco C1-N9K-C93180EXB24 delivers exceptional density for server and aggregation connections. This allows seamless scaling in cloud data centers, high-performance campus backbones, and large enterprise networks, supporting rapid traffic growth and flexible expansion.

## Leading Cloud-Scale Architecture

Utilizing Cisco Cloud Scale ASIC technology, this model achieves industry-leading forwarding performance and advanced feature support. The result is high throughput with low latency under heavy east-west traffic, ensuring strong support for virtualized applications and evolving digital infrastructures.

## Programmable and Automated Operation

Extensive API support, integration with configuration automation tools such as Ansible, Chef, and Puppet, and native YANG/OpenConfig models simplify provisioning, monitoring, and ongoing change. This results in faster deployment, standardized operations, and lower management overhead.

## Advanced Buffer Intelligence

Innovative buffer management, including Approximate Fair Dropping (AFD) and Elephant Trap (ETRAP), distinguishes elephant from mice flows. It prevents congestion and packet loss in high-traffic and bursty environments, optimizing throughput and application performance for both latency- and bandwidth-sensitive scenarios.

## Dual Operating Modes for Versatility

Supports both NX-OS mode for traditional networking and Cisco ACI mode for policy-driven, automated network environments. This flexibility allows organizations to gradually transition to cloud-native operations while safeguarding existing investments and expertise.

## Resilient High Availability Design

Fully redundant and hot-swappable power supplies and fans, vPC for Layer 2 multipathing, 64-way ECMP, and advanced reboot options are built in for continuous uptime and fast recovery from failures, meeting demanding enterprise resilience needs.

## Comprehensive Layer 2/3 Protocol Support

The device supports a wide array of unicast and multicast routing protocols, including BGP, OSPF, EIGRP, RIPv2, PIM-SM, and SSM. This ensures robust interoperability and traffic engineering across complex, multi-site environments with IPv4 and IPv6.

## Integrated Analytics and Assurance

Built-in support for Cisco Tetration Analytics and Network Assurance Engine provides real-time telemetry, deep application insights, and policy compliance. Operators benefit from proactive visibility, root-cause analysis, and reduced risk in large, dynamic networks.

# Technical Specifications

## Product Specifications

| Feature                        | Value                    |
|--------------------------------|--------------------------|
| Model                          | C1-N9K-C93180EXB24       |
| Brand                          | Cisco                    |
| Form Factor                    | 1RU                      |
| Port Configuration             | 48 × 10/25G SFP28 ports  |
| Port Configuration (continued) | 6 × 40/100G QSFP28 ports |
| Switching Capacity             | 3.6 Tbps                 |
| Forwarding Rate                | 2.68 Bpps                |
| Latency                        | <1 microsecond           |
| Buffer                         | 16 MB shared             |
| RAM                            | 16 GB                    |



| Feature                           | Value                          |
|-----------------------------------|--------------------------------|
| Flash Storage                     | 32 GB                          |
| Power Supply                      | Dual, hot-swappable            |
| Airflow                           | Front-to-back                  |
| Airflow (alternative)             | Back-to-front                  |
| Fans                              | Dual, redundant, hot-swappable |
| Management Interfaces             | CLI                            |
| Management Interfaces (continued) | Web UI                         |
| Management Interfaces (continued) | SNMP                           |
| Management Interfaces (continued) | Syslog                         |
| Management Interfaces (continued) | Telnet                         |
| Management Interfaces (continued) | SSH                            |
| VLAN IDs                          | 4,096                          |
| MAC Address Table                 | 256,000 entries                |
| Forwarding Mode                   | Store-and-Forward              |
| Operating Temperature             | 0°C to 45°C (32°F to 113°F)    |
| Transceiver Support               | SFP+                           |
| Transceiver Support (continued)   | QSFP+                          |
| Transceiver Support (continued)   | QSFP28                         |

## Product Comparison

| Feature               | C1-N9K-C93180EXB24                     | C1-N9KC93180FX-B24                    | C1-N9K-C9372PX-E               |
|-----------------------|----------------------------------------|---------------------------------------|--------------------------------|
| Port Configuration    | 48 × 10/25G SFP28, 6 × 40/100G QSFP28  | 48 × 10/25G SFP28, 6 × 40/100G QSFP28 | 48 × 10G SFP+, 6 × 40G QSFP+   |
| Switching Capacity    | 3.6 Tbps                               | 3.6 Tbps                              | 2.56 Tbps                      |
| Forwarding Rate       | 2.68 Bpps                              | 2.68 Bpps                             | 1.44 Bpps                      |
| Latency               | <1 microsecond                         | <1 microsecond                        | <1 microsecond                 |
| Redundant Power       | Yes, dual hot-swappable                | Yes, dual hot-swappable               | Yes, dual hot-swappable        |
| Management Interfaces | CLI, Web UI, SNMP, Syslog, Telnet, SSH | CLI, Web UI, SNMP, Telnet, SSH        | CLI, Web UI, SNMP, Telnet, SSH |



| Feature                    | C1-N9K-C93180EXB24 | C1-N9KC93180FX-B24 | C1-N9K-C9372PX-E |
|----------------------------|--------------------|--------------------|------------------|
| Hardware Platform          | Cloud Scale ASIC   | Cloud Scale ASIC   | n/a              |
| MAC Address Table          | 256,000            | 256,000            | 128,000          |
| Advanced Buffer Management | Yes                | Yes                | No               |
| Operation Mode             | NX-OS, ACI         | NX-OS, ACI         | NX-OS            |

## Accessories

| Category             | Accessories                                                                                                                                     |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Included Accessories | <ul style="list-style-type: none"> <li>- Power Supply Unit (dual, hot-swappable)</li> <li>- Rack Mount Kit</li> <li>- Console Cable</li> </ul>  |
| Optional Accessories | <ul style="list-style-type: none"> <li>- SFP28 Transceiver Module</li> <li>- QSFP28 Transceiver Module</li> <li>- Redundant Fan Unit</li> </ul> |



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### Shenzhen Branch

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### UK Branch

Third Floor, 207 Regent Street, London W1B 3HH, UK



### References

[1] Cisco. (2023). 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>