



Cisco

C1-N9K-C93108TC-EX

Datasheet



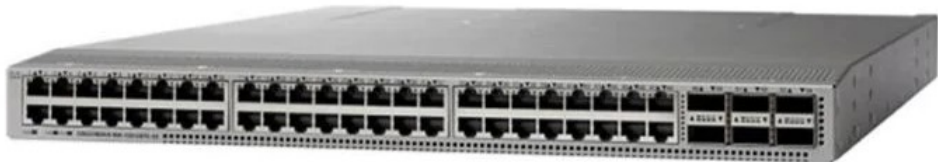
Product Overview

- Cisco Nexus 9300-EX Series switches are part of the industry-leading Cisco Nexus 9000 family, built for advanced data centers.
- These switches are ideal for businesses undergoing data center modernization, targeting enterprises, cloud service providers, and large campus environments.
- The model features 24 × 10GBASE-T RJ45 ports and 6 × 40/100G QSFP28 uplinks, supports up to 256,000 MAC addresses, and delivers flexible Layer 2/Layer 3 scalability.
- It distinguishes itself with advanced buffer management for traffic optimization and seamless migrations from legacy speeds to 25/50/100G connectivity.
- Built-in support for both Cisco NX-OS and Cisco ACI delivers operational flexibility with programmable automation and policy-based management.
- With high throughput, robust automation, and a modular system architecture, the 9300-EX delivers reliable networking for scalable and future-ready data centers.

Product Highlights

- **Flexible Network Architecture:** VXLAN EVPN support and three-tier BGP enable seamless multi-site, scalable IPv6 data center fabrics.
- **Intelligent Automation and Programmability:** Day-zero automation, RESTCONF/NETCONF APIs, and integration with Ansible, Chef, and Puppet simplify network deployment.
- **Advanced Buffer and Traffic Management:** Exclusive Approximate Fair Dropping and DPP ensure granular bandwidth allocation and optimized traffic handling.
- **High Availability and Resilience:** vPC technology, N+1 redundant hot-swappable PSUs/fans, and advanced reboot capabilities secure uninterrupted business continuity.

Detailed Features



C1-N9K-C93108TC-EX

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Component	Specification
Downlink Ports	24 × 10GBASE-T (RJ45)
Uplink Ports	6 × 40/100G QSFP28
MAC Address Table	256,000 entries
VLAN Support	4,096 (127 reserved)
Power Options	500W AC / 930W DC / 1200W HVAC-HVDC



High-Performance Switching

The C1-N9K-C93108TC-EX leverages Cisco Cloud Scale technology to deliver high throughput and low-latency switching for demanding enterprise workloads. This ensures reliable performance even as the number of connected endpoints and cloud-based applications increases in growing data centers.

Investment Protection and Scalability

By supporting seamless migration from legacy network speeds to high-density 25/50/100G connectivity, this model helps organizations future-proof data center infrastructure. Flexible forwarding tables accommodate up to 1 million entries, enabling adaptation to evolving business needs.

Comprehensive Layer 3 Feature Set

With broad support for advanced unicast and multicast routing protocols including BGP, OSPF, EIGRP, RIP, and PIM, the switch enables deployment in sophisticated network architectures and meets multisite, IPv4/IPv6, and multicast requirements for modern environments.

Programmable Automation Ecosystem

The integrated NX-OS operating system supports native and open configuration models, RESTCONF/NETCONF, and direct compatibility with Ansible, Chef, and Puppet. This enables rapid provisioning, automation of complex workflows, and integration into DevOps pipelines for greater operational agility.

Intelligent Buffer Management

Innovative traffic control distinguishes between mice and elephant flows, applying differentiated queue management for each. Advanced features like Approximate Fair Dropping (AFD) and Dynamic Packet Prioritization (DPP) ensure optimal bandwidth allocation and lossless performance during congestion.

Resilient High Availability

Virtual Port Channel (vPC) technology eliminates Spanning Tree Protocol, supporting active-active topology and maximizing available bandwidth. N+1 redundant power supplies and hot-swappable fans further reduce single points of failure, improving system uptime for mission-critical operations.

Granular Telemetry and Analytics

Integrated hardware telemetry streams real-time flow, buffer, and context data to Cisco Tetration Analytics. This provides comprehensive network visibility and deep application insights for improved troubleshooting, security posture, and compliance in large-scale deployments.

Assured Network Compliance

Cisco Network Assurance Engine (NAE) leverages modeling and continuous verification to guarantee policy intent, identify risks, and automate corrective actions. This proactive approach minimizes outages, speeds issue resolution, and ensures secure segmentation across the network lifecycle.

Technical Specifications

Product Specifications

Feature	Value
Ports	24 × 10GBASE-T (RJ45), 6 × 40/100G QSFP28 uplinks
Total Port Count	48
Downlink Speeds	100 Mbps / 1 Gbps / 10 Gbps
LPM Routes	896,000
IP Host Entries	896,000
MAC Addresses	256,000
Multicast Routes	32,000
IGMP Snooping Groups	8,000 (up to 32,000)
ACL Entries	4,000 ingress / 2,000 egress (per slice)
VLANs	4,096 (127 reserved)
VRF Instances	1,000 (up to 16,000)



Feature	Value
Port Channels	512 (32 links max per channel)
ECMP Paths	64
CPU	4 cores
System Memory	24 GB
SSD	64 GB
System Buffer	40 MB
Management Ports	1 × RJ-45, 1 × SFP
USB Ports	1
RS-232 Serial Ports	1
SPAN Sessions	4
Power Supply Options	500W AC, 930W DC, 1200W HVAC/HVDC
Typical Power (AC/DC)	290W
Max Power (AC/DC)	499W
Input Voltage (AC)	100-240V
Input Voltage (DC)	-48V to -60V
Input Voltage (HVDC)	-240V to -380V
Fans	4 (hot-swappable)
Airflow	Port-side intake & exhaust
Dimensions (H×W×D)	1.72 × 17.3 × 22.5 in (4.4 × 43.9 × 57.1 cm)
MTBF	366,130 hours
Operating Temperature	32°F to 104°F (0°C to 40°C)
Storage Temperature	-40°F to 158°F (-40°C to 70°C)
Humidity	5% to 95% non-condensing
Altitude	0-13,123 ft (0-4,000 m)
Minimum NX-OS Version	NXOS-9.3(2)
Minimum ACI Image	ACI-N9KDK9-14.2.1
Regulatory Compliance	RoHS, UL, CE, FCC, NEBS Level 3 (GR-63-CORE, GR-1089-CORE)



Product Comparison

Feature	C1-N9K-C93108TC-EX	C1-N7018	C1-N9K-C9508-B3-E
Fixed Ports	24 × 10GBASE-T (RJ45), 6 × 40/100G QSFP28	18 modular slots	8 slots chassis, modular line cards
Switching Capacity	Not Specified	15.36 Tbps (max)	Up to 172.8 Tbps
MAC Addresses	256,000	288,000	1,000,000+
Max. VLANs	4,096	4,094	4,096
Redundant Power	Supported, N+1 hot-swappable	Fully Supported	Fully Supported
Form Factor	1RU fixed	Chassis, modular	Chassis, modular
Layer 3 Routing	Advanced protocols	Comprehensive, scalable	Comprehensive, high scalability
Automation/Programmability	NX-OS, API, Ansible, etc.	NX-OS, ACI ready	NX-OS, ACI ready
Deployment Scenario	Campus/Edge/Core, fixed	Core/Aggregation, modular	Core, Data Center, modular

Accessories

Category	Accessories
Included Accessories	- AC Power Supply - Mounting Brackets - Quick Installation Guide
Optional Accessories	- QSFP28 Transceiver Modules - Redundant Power Supply - Console Cable



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References

[1] Cisco. (2023). Cisco Nexus 9000 Series Switches Data Sheet. Retrieved from <https://www.cisco.com/c/en/us/products/collateral/switches/nexus-9000-series-switches/datasheet-c78-742283.html>