



Cisco

C1-N9K-C92304QC

Datasheet

Product Overview

- The Cisco Nexus 9200 Series is built on Cisco's advanced Cloud Scale technology, bringing high performance to the data center edge.
- Designed for enterprise, commercial, and cloud providers, it fits large data centers and managed hosting, serving customers who demand scale and reliability.
- This switch delivers ultra-high-density fixed configuration, offers flexible 1/10/25/40/50/100-Gbps connectivity, and supports up to 1,792,000 LPM routes.
- The Nexus 9200 features advanced Layer 2 and 3 capabilities, and supports programmable fabric for scalable networks and mobile cloud applications.
- Cisco's NX-OS software enables automation for configuration and management, integrating smoothly with DevOps tools and workflows.
- With compact design, versatile deployment, and trusted Cisco performance, it empowers organizations seeking efficient, automated, and future-ready networking.

Product Highlights

- **Ultra-High Density Design:** Delivers up to 64 high-speed QSFP+ and QSFP28 ports, supporting growing data demands in space-limited racks.
- **Flexible Multi-Speed Ports:** Supports 1/10/25/40/50/100-Gbps combinations for various network upgrade paths and future-proofing.
- **Programmable Network Fabric:** Built for programmable, agile networks, enabling fast service rollouts and automation.
- **NX-OS Powered Management:** Runs on Cisco industry-leading NX-OS for robust automation, reliability, and operational simplicity.

Detailed Features



C1-N9K-C92304QC

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Component	Specification
Platform	Cisco ONE Nexus 9000 Series
Switching Mode	Fixed configuration, 1RU
Port Configuration	56 × 40G QSFP+ & 8 × 100G QSFP28
Operating System	Cisco NX-OS
Power Options	Multiple AC/DC/HVDC/HVAC supplies



Cloud Scale Technology

Cisco's advanced Cloud Scale infrastructure empowers the Nexus 9200 with performance and scalability, meeting the dynamic needs of modern data centers and cloud environments. The switching platform is designed to handle massive data, enabling seamless traffic management and future-proof operations.

Ultra-Dense Fixed Configuration

The C1-N9K-C92304QC integrates up to 64 high-speed ports within a compact 1RU design, maximizing rack usage. This supports high-density deployments vital for large-scale enterprises, service providers, and hosted cloud applications where port density determines scale.

Flexible Multi-Speed Interfaces

Supporting a combination of 1/10/25/40/50/100-Gbps connections, the switch enables organizations to tailor connectivity per workload requirement and infrastructure. This flexibility ensures painless migrations as business needs and technology standards evolve.

Comprehensive L2/L3 Features

Native line-rate Layer 2 and 3 support ensures fast, efficient routing and switching for campus, data center, and hybrid cloud scenarios. Multicast, IGMP, VLANs, and advanced route scaling enable granular policy enforcement and network segmentation without sacrificing speed or reliability.

Robust High-Scale Routing

With up to 1,792,000 LPM routes, 512,000 MAC entries, and 16,000 VRF instances, the platform guarantees extraordinary scalability. This capability is essential for carrier networks, large enterprise cores, and multi-tenant data centers running thousands of concurrent services and virtual machines.

Programmable and Agile Fabric

Built for programmable network environments, the platform supports rapid policy changes, workload migrations, and automated deployments. The fabric's agility simplifies complex application onboarding and supports advanced SDDC, IaaS, and PaaS models.

NX-OS Automation and Management

Cisco NX-OS, the switch's operating system, streamlines day-to-day management with programmable interfaces, scripts, and integrations. It enables advanced DevOps workflows crucial for accelerating deployment, reducing manual errors, and improving uptime.

Reliable Environmental Endurance

Designed for harsh data center conditions, the C1-N9K-C92304QC operates efficiently within 0°C to 40°C and up to 4000 m altitude. A robust hardware design assures around-the-clock operation even in demanding global infrastructures.

Technical Specifications

Product Specifications

Feature	Value
Model	C1-N9K-C92304QC
Brand	Cisco
Chassis Type	Fixed 1RU Switch
Port Configuration	QSFP28-based (exact port count not specified)
Power Supply Options	AC (350W/400W/500W/1200W), DC (350W/400W/500W/1200W), HVDC (350W/1200W), HVAC (350W/1200W)
LPM Routes	Up to 1,792,000
IP Host Entries	Up to 1,792,000
MAC Address Table	512,000 entries
Multicast Routes	128,000
IGMP Groups	32,000



Feature	Value
ACL Capacity	5,000 ingress / 2,000 egress (Single-slice forwarding engine)
VLANs Supported	4,096 (127 reserved)
VRF Instances	Up to 16,000
Port Channels	512 (up to 32 members each)
ECMP Paths	128-way
ECMP Groups	256 max
HSRP Groups	490
MST Instances	64
SPAN Sessions	4 active
RPVST VLANs	3,967
NAT Entries	1,023
Operating Temperature	0°C to 40°C (32°F to 104°F)
Humidity Range	5% to 85% non-condensing
Altitude Operating Range	0 to 4,000 m (0–13,123 ft)
Operating System	Cisco NX-OS (refer to release notes for features)
Scalability Guide	Refer to Cisco Nexus 9000 Verified Scalability Guide for validated numbers

Product Comparison

Feature	C1-N9K-C92304QC	C1-N9K-C93108-B18Q	C9300L-24P-4G-A
Fixed Ports	56 × 40G QSFP+ & 8 × 100G QSFP28	48 × 10G SFP+ & 6 × 40G QSFP+	24 × 1G PoE+ + 4 × 1G SFP
Switching Capacity	Cloud Scale platform, highly scalable	2.6 Tbps	56 Gbps
Port Speed	1/10/25/40/50/100-Gbps	1/10/40-Gbps	1G only
Layer 3 Routing	Advanced, LPM up to 1,792,000	Standard, LPM up to 128,000	Basic routing, static/OSPF only
VRF Instances	Up to 16,000	Up to 1,000	Not supported
OS	Cisco NX-OS	Cisco NX-OS	Cisco IOS XE
Target Scenario	Enterprise, large DC, Cloud	High-density DC/ aggregation	Branch or small enterprise edge



Feature	C1-N9K-C92304QC	C1-N9K-C93108-B18Q	C9300L-24P-4G-A
Advanced Features	Programmable fabric, automation	Flexible fabric, modularity	PoE+, basic security

Accessories

Category	Accessories
Included Accessories	- AC Power Supply (default choice) - Rack Mount Kit - Console Cable
Optional Accessories	- QSFP28 Transceivers - 100G Network Modules - Spare Fan Units



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References

[1] Cisco. (2023). Cisco Nexus 9000 Series Switches Datasheet (C1-N9K-C92304QC). Retrieved from <https://www.cisco.com/c/en/us/products/collateral/switches/nexus-9000-series-switches/datasheet-c78-735989.html>