



Cisco

C1-N9K-C92160-B18Q

Datasheet



Product Overview

- The Cisco Nexus 9200 platform, part of Cisco's Cloud Scale family, delivers top-tier fixed-configuration data center switching.
- This switch is ideal for data centers, enterprise campuses, service provider hosting, and hybrid cloud infrastructure.
- It features 48 x 10/25G SFP28 ports alongside 6 x 40/100G QSFP28 uplinks, providing high-density, scalable connectivity.
- Flexible port configurations allow for 1/10/25/40/50/100-Gbps operation, supporting dynamic cloud and virtualization use cases.
- Using Cisco NX-OS, this platform supports programmability and automation, streamlining deployment and ongoing management.
- Designed for demanding IT environments, it offers agility, performance, and reliability for modern digital transformation needs.

Product Highlights

- **Ultra-High-Density Switching:** Supports 48 x 10/25G SFP28 and 6 x 40/100G QSFP28 ports for versatile, high-performance networking.
- **Line-Rate Layer 2/3 Features:** Delivers robust Layer 2 and Layer 3 switching at full line rate for enhanced performance.
- **Programmable Network Fabric:** Optimized for DevOps and automation using industry-leading Cisco NX-OS software.
- **Cloud and Service Provider Ready:** Ideal for IaaS, enterprise, and cloud deployments requiring flexible, scalable network solutions.

Detailed Features



C1-N9K-C92160-B18Q

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Component	Specification
Switching Ports	48 x 10/25G SFP28
Uplink Ports	6 x 40/100G QSFP28
Chassis Type	Fixed 1RU
Port Combinations	Flexible 1/10/25/40/50/100-Gbps
Form Factor	Compact design for data centers



High-Density Flexible Port Design

The C1-N9K-C92160-B18Q provides 48 × 10/25G SFP28 and 6 × 40/100G QSFP28 ports, delivering unmatched density. This allows flexible deployments in high-growth data centers where space and port scalability are critical for both present and future needs.

Programmable Fabric Support

With advanced programmable features within the Cisco NX-OS environment, the switch enables automation for configuration and operation. It supports virtualization and programmable fabric, making it well suited for DevOps-centric IT environments and agile data centers.

Line-Rate Layer 2/3 Switching

Every port supports non-blocking line-rate Layer 2 and Layer 3 services. This assures consistent throughput, low latency, and optimal network performance for demanding enterprise, commercial, and service provider workloads.

Advanced Network Scalability

The device supports up to 1,792,000 LPM routes, 1,792,000 IP host entries, and 92,000 MAC addresses, enabling massive scalability. This ensures stability and reliable performance as requirements grow in the most intensive network deployments.

Comprehensive Multicast & VLAN Support

Up to 32,000 multicast routes, 32,000 IGMP groups, and 4,096 VLANs guarantee robust support for multimedia, segmentation, and virtualized applications across large infrastructures.

Power Supply Options for Reliability

Multiple power input options (AC, DC, HVAC, HVDC) with redundancy ensure high uptime and adaptability. This flexibility extends the switch's suitability to a wide range of geographical and regulatory contexts.

Rich Layer 3 & Virtualization Functions

Enhanced with up to 16,000 VRF instances, 512 port channels, and sophisticated load balancing, the switch supports advanced IP, virtualization, and high-availability architectures with robust failover mechanisms.

Environmental Durability

Operates from 0°C to 40°C, supports altitudes up to 4,000 meters, and functions in varied humidity levels. The resilience makes it suitable for global deployment in diverse enterprise, campus, and data center environments.

Technical Specifications

Product Specifications

Feature	Value
Model	C1-N9K-C92160-B18Q
Brand	Cisco
Chassis Type	Fixed 1RU Switch
Port Configuration	48 x 10/25G SFP28 + 6 x 40/100G QSFP28
Power Supplies	AC/DC/HVAC/HVDC (350W/400W/500W/1200W AC/DC, 350W/1200W HVAC/HVDC)
LPM Routes (Default)	6,000
LPM Routes (Max)	Up to 1,792,000
IP Host Entries (Default)	96,000
IP Host Entries (Max)	Up to 1,792,000
MAC Addresses	92,000 entries
Multicast Routes (Default)	8,000
Multicast Routes (Max)	32,000



Feature	Value
IGMP Groups (Default)	8,000
IGMP Groups (Max)	32,000
ACL Capacity (Ingress)	4,000 per forwarding slice
ACL Capacity (Egress)	2,000 per forwarding slice
VLANs	4,096 (127 reserved)
VRF Instances (Default)	1,000
VRF Instances (Max)	Up to 16,000
Port Channels (Max)	512 (32 members each)
ECMP Paths	64-way
ECMP Groups	256 max
HSRP Groups	490
MST Instances	64
SPAN Sessions	4 active
RPVST VLANs	3,967
Dimensions (WxDxH)	17.3 x 22.5 x 1.72 in (43.9 x 57.2 x 4.4 cm)
Operating Temperature (Min)	32°F (0°C)
Operating Temperature (Max)	104°F (40°C)
Humidity	5% to 85% non-condensing
Operating Altitude	0–13,123 ft (0–4,000 m)
Software	NX-OS, supports all standard Nexus 9000 features

Product Comparison

Feature	C1-N9K-C92160-B18Q	C1-N9KC93108FXB18Q	C1-N9K-C9508-B2
Port Configuration	48 x 10/25G SFP28 + 6 x 40/100G QSFP28	108 x 10/25G SFP28 + 18 x 40/100G QSFP28	Modular 8-slot chassis, customizable
Chassis Type	Fixed 1RU	Fixed 1RU	Modular chassis
Switching Capacity	Ultra-high with line-rate L2/L3	Higher port density, line-rate L2/L3	Chassis-based, scalable architecture
Power Supply	AC/DC/HVAC/HVDC options	AC/DC, redundant	AC/DC, hot-swappable modules



Feature	C1-N9K-C92160-B18Q	C1-N9KC93108FXB18Q	C1-N9K-C9508-B2
VLAN Support	4096 (127 reserved)	4096 (127 reserved)	Up to 16,000
Layer 3 Features	Advanced, programmable	Advanced, extended scalability	Full L3, platform dependent
Recommended Deployment	High density top-of-rack	Ultra high-density data center, spine	Core or distribution in large data centers
Management & Automation	NX-OS, rich automation	NX-OS, more scalability tools	Modular NX-OS with full fabric integration

Accessories

Category	Accessories
Included Accessories	- Power Cable - Rack Mount Kit - Quick Start Guide
Optional Accessories	- SFP28/SFP+ Transceivers - QSFP28 Modules - Redundant Power Supply



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References

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