



Cisco

C1-N9K-C9372PX-E

Datasheet

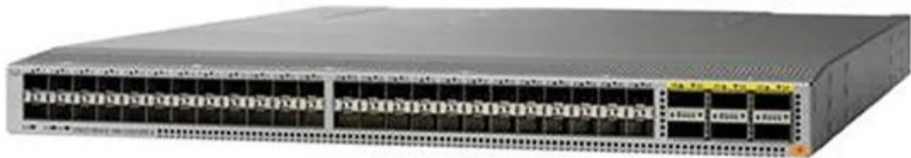
Product Overview

- The Cisco C1-N9K-C9372PX-E is part of the Nexus 9000 series, targeting high-density, low-latency data center switching.
- Engineered for cloud-scale deployments, this switch is ideal for enterprise data centers, service provider networks, and virtualized environments.
- Delivering 48 × 10G SFP+ and 6 × 40G QSFP+ ports, it features 1.44 Tbps switching capacity and a forwarding rate of 1,020 Mpps.
- Advanced features include flexible airflow, rich Layer 2/3 capabilities, and dual hot-swappable power supplies for reliability.
- Management is streamlined through CLI, NX-API, Python scripting, and automation tools like Puppet and Chef for efficient operations.
- The C1-N9K-C9372PX-E enables scalable modernization, efficient management, and investment protection in dynamic data center architectures.

Product Highlights

- **High Port Density:** Offers 48 × 10G SFP+ and 6 × 40G QSFP+ ports, supporting high-bandwidth aggregation and flexibility for expanding data centers.
- **Ultra-Low Latency Performance:** Delivers sub-microsecond latency and 1,020 Mpps forwarding rate, which optimize demanding workloads and real-time applications.
- **Multi-Mode Airflow:** Configurable front-to-back or back-to-front airflow ensures compatibility with different rack types and cooling requirements.
- **Intelligent Management:** Automation via NX-API, Python, Puppet, and Chef streamlines deployment and ongoing administration, reducing operational overhead.

Detailed Features



C1-N9K-C9372PX-E

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Component	Specification
Switching Capacity	1.44 Tbps
Forwarding Rate	1,020 Mpps
Ports	48 × 10G SFP+, 6 × 40G QSFP+
Latency	<1 microsecond
Power Supply	750W AC (dual, hot-swappable)



Seamless 40G Data Center Upgrade

Cisco Nexus 9000 enables easy migration to 40G aggregation or spine with advanced optics and backward compatibility for 10G multimode fibers. This reduces costs by utilizing existing cabling, streamlining the upgrade path and minimizing disruption during data center modernization.

Dual OS Operation Modes

This series supports both Cisco NX-OS for traditional Nexus deployments and hardware readiness for Cisco ACI. Organizations can transition at their pace, leveraging automation and policy-driven network operations with a future-proof strategy for next-generation data center management.

High-Density, Nonblocking Architecture

As part of the Nexus 9300 platform, the switch is designed for dense Top-of-Rack, Middle-of-Row, and End-of-Row deployments. Its architecture delivers consistent, line-rate performance for virtualized and cloud environments with low power consumption, optimizing space and energy use.

Flexible Network Compatibility

The platform provides a choice of copper and fiber port configurations including 1/10GBASE-T and 10G SFP+. This flexibility allows easy adoption in mixed network infrastructures and supports a seamless step-up from previous-generation switches with minimal wiring changes.

Advanced Layer 3 Support

The device supports robust routing protocols (static, OSPF, BGP, etc.) ensuring scalable, resilient network segmentation. Users can implement advanced segmentation, path optimization, and high-availability for diverse workloads and traffic demands across the enterprise.

Extensive Automation and Programmability

Integrations with Python, Puppet, Chef, and NX-API enable automated workflows, reducing manual intervention and fostering error-free operations. These tools help modern IT teams maintain consistent configurations and adapt quickly to dynamic application requirements.

Scalability for Virtualized Environments

With high MAC table entries, VLAN capacity, and multicast support, the C1-N9K-C9372PX-E accommodates large-scale virtualization and multi-tenant deployments. The switch is ready for cloud-era networks requiring flexible resource allocation and rapid workload mobility.

Energy Efficiency and Resilience

Low power consumption, dual hot-swappable power supplies, and flexible airflow design reduce operational costs and provide robust fault tolerance. Data centers benefit from greater uptime and predictable thermal management for mission-critical workloads.

Technical Specifications

Product Specifications

Feature	Value
Form Factor	1RU
Ports	48 × 10G SFP+, 6 × 40G QSFP+
Switching Capacity	1.44 Tbps
Forwarding Rate	1,020 Mpps
Latency	<1 microsecond
MAC Address Table	1,024,000 entries
VLAN IDs	4,096
Multicast Routes	16,000
Jumbo Frames	9,216 bytes
Management	CLI, NX-API, Python, Puppet, Chef
Software	Cisco NX-OS
Power Supply	750W AC (dual, hot-swappable)



Feature	Value
Airflow	Front-to-back or back-to-front (configurable)
Dimensions	1.72 × 17.3 × 22.5 in (4.4 × 43.9 × 57.2 cm)
Chassis	Fixed
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

Product Comparison

Feature	C1-N9K-C9372PX-E	C1-N5696Q	C1-WS3650-48PQ/K9
Switching Capacity	1.44 Tbps	7.68 Tbps	176 Gbps
Forwarding Rate	1,020 Mpps	5,760 Mpps	130.95 Mpps
10G Ports	48 × 10G SFP+	96 × 10G SFP+	48 × 10/100/1000Base-T PoE+
40G Ports	6 × 40G QSFP+	12 × 40G QSFP+	4 × 10G SFP+
Power Supply	750W AC (dual, hot-swappable)	Dual 3000W, hot-swappable	Dual redundant, hot-swappable power
Layer 3 Routing	Yes	Yes	Yes
Management	CLI, NX-API, Python, Puppet, Chef	CLI, DCNM	CLI, SNMP, Web UI
Dimensions (HxWxD)	1.72 × 17.3 × 22.5 in	3.5 × 17.3 × 30 in	1.73 × 17.5 × 17.5 in
PoE Capability	No	No	Yes (PoE+)
Best Use Case	Data center, cloud, aggregation	Core, data center, high bandwidth	Enterprise campus/access, PoE edge

Accessories

Category	Accessories
Included Accessories	- Power Cord - Rack Mount Kit - Console Cable



Category	Accessories
Optional Accessories	- 40G QSFP+ Module - SFP+ Transceiver - Expansion Fan Tray



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References

[1] Cisco Systems. (2023). Cisco Nexus 9000 Series Switches Datasheet. Retrieved from <https://www.cisco.com/c/en/us/products/collateral/switches/nexus-9000-series-switches/datasheet-c78-736967.html>