

BRAND NEW &amp; VERIFIED



## VERIFIED PRODUCT DATASHEET

# N9K-C9504

Cisco Network Hardware Specification, Availability and Quote Reference

<b>Product Model</b>	<b>N9K-C9504</b>
<b>Document Type</b>	<b>Product Datasheet</b>
<b>Condition</b>	<b>Brand New, Original and Verified</b>
<b>Supplier</b>	<b>Layer23-Switch.com</b>

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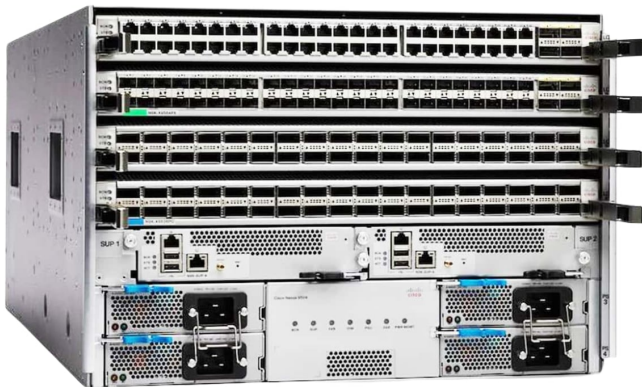
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## N9K-C9504 Datasheet



The Cisco N9K-C9504 datasheet provides verified specifications, key features, and application scenarios. This document helps engineers and IT buyers quickly evaluate the N9K-C9504 and integrate it into enterprise or service provider networks with confidence.

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### Key Features

## Modular Scalability for High-Density Networks

The 4-slot chassis supports a variety of line cards, enabling **flexible port density** from 1G to 400G and allowing future upgrades without replacing the core infrastructure.

## Resilient, Carrier-Grade Architecture

Redundant supervisors, system controllers, power supplies, and fan trays ensure **non-stop operation** in mission-critical enterprise, service provider, and cloud environments.

## Multi-Speed Ethernet & Flexible Fabric Design

Supports **1/10/25/40/50/100/200/400 Gigabit Ethernet** based on line card capability, with centralized fabric modules delivering **non-blocking throughput** and ultra-low latency ( $\leq 5 \mu\text{s}$ ).

## ACI or NX-OS Operating Modes

ASIC-level **real-time telemetry** with microsecond granularity helps detect microbursts, monitor latency, and proactively troubleshoot network performance.

## Advanced Network Virtualization & Segmentation

Enables **VXLAN EVPN**, Segment Routing, and MPLS for scalable multi-tenant designs, secure segmentation, and optimized traffic engineering.

## Future-Proof Investment

With support for the latest optics standards (QSFP, QSFP-DD) and **MACsec encryption** on capable line cards, the N9K-C9504 is built to handle evolving bandwidth and security requirements for the next decade.

## Specification

Parameter	Value	Parameter	Value
<b>Model</b>	N9K-C9504	<b>Product Family</b>	Cisco Nexus 9500 Series modular switches
<b>Chassis Type</b>	4-slot modular	<b>Rack Units</b>	7 RU
<b>Line Card Slots</b>	4	<b>Supervisor Module Slots</b>	2 (redundant)
<b>System Controller Slots</b>	2 (redundant)	<b>Fabric Module Slots</b>	6 (same type)
<b>Max Ethernet Speeds</b>	1/10/25/40/50/100/200/400G (per line card capability)	<b>Switching Capacity</b>	Up to multi-Tbps, non-blocking
<b>Latency</b>	≤ 5 μs	<b>Throughput Mode</b>	Dependent on installed line cards
<b>Dimensions (H×W×D)</b>	12.25 × 17.5 × 33.15 in (31.1 × 44.5 × 84.2 cm)	<b>Weight</b>	84 lb (38.2 kg)
<b>Power Supply Slots</b>	4	<b>Supported Power Modules</b>	3000W AC, 3000W DC, 3000W HVDC, 3150W HV AC/DC
<b>Cooling</b>	3 hot-swappable fan trays	<b>Airflow</b>	Front-to-back
<b>Operating Temperature</b>	0 to 40 °C	<b>Storage Temperature</b>	-40 to 70 °C
<b>Humidity</b>	5–95% non-condensing	<b>Altitude</b>	0–4000 m
<b>MTBF</b>	1,038,080 hours	<b>Compliance</b>	RoHS-6 (with exceptions)
<b>Management Ports</b>	Dependent on supervisor module	<b>Console Port</b>	RJ-45 serial + USB console
<b>MACsec</b>	Supported on capable line cards	<b>Software Options</b>	NX-OS mode or Cisco ACI mode
<b>Virtualization</b>	VXLAN EVPN, Segment Routing, MPLS (per license)	<b>High Availability</b>	Redundant supervisors, controllers, PSUs, fans

Parameter	Value	Parameter	Value
<b>Fabric Architecture</b>	Centralized fabric modules for all ports	<b>Max VLANs</b>	4096
<b>VRF Instances</b>	Up to 16,000 (with appropriate license)	<b>Optics Support</b>	QSFP/QSFP-DD/Cisco-certified modules

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