



Cisco

C1-N7009-B2S2E-R

Datasheet



Product Overview

- The Cisco Nexus 7000 Series is a leading modular switching platform positioned for large enterprise and data center networks.
- With high scalability and flexible configurations, it targets data centers, core networks, and mission-critical enterprise applications.
- This chassis supports up to 336 1/10G ports, 42 40G ports, or 14 100G ports, powered by a robust fabric architecture over 17 Tbps.
- Key features include integrated redundancy, fabric scalability, and advanced NX-OS software for real-time upgrades.
- Centralized management tools streamline multi-site deployment and ongoing operations, enhancing efficiency for IT staff.
- The Nexus 7000 empowers organizations to build resilient, scalable infrastructures for cloud, virtualization, and evolving digital demands.

Product Highlights

- **High Port Density:** Supports up to 336 x 1/10G, 42 x 40G, or 14 x 100G Ethernet ports, ideal for high-demand core and data center roles.
- **Redundant Supervisor Slots:** Two dedicated supervisor module slots enable full system redundancy to minimize downtime in critical deployments.
- **Optimized Rack Layout:** Side-to-side airflow and a 14RU footprint allow stacking three 9-slot chassis in one 42RU rack for space savings.
- **Efficient Cooling & Serviceability:** Removable, redundant fan trays and front-accessible modules ensure easy management and long-term reliability.

Detailed Features



C1-N7009-B2S2E-R

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Component	Specification
Chassis Slot Layout	2 supervisor, 7 I/O modules



Flexible Chassis Form Factors

The Nexus 7000 Series offers 18-slot, 10-slot, 9-slot, and 4-slot chassis, each optimized for different deployment scenarios. This flexibility enables right-sized solutions for distributed, centralized, or scale-out data center designs, assuring that each build-out meets performance, density, and growth needs.

High-Density and Redundancy

With front-accessible modules, cable management, and redundant cooling or supervisor modules, the platform supports large-scale deployments requiring high uptime, uninterrupted traffic flow, and seamless failovercritical in enterprise and service provider backbone networks.

Advanced Passive Mid-Plane Architecture

A central passive mid-plane provides direct fabric and I/O interconnectivity, enabling high-throughput, low-latency communications across all slots. This structure ensures physical isolation of data and control paths, which increases system stability and supports high-bandwidth, latency-sensitive applications.

Distributed Crossbar Switching

All intra-chassis switching is performed by crossbar ASICs on I/O and fabric modules. This approach distributes load, eliminates single points of contention, and enables linear scaling of bandwidth as new modules or ports are added, delivering future-proof performance growth.

Scalable Fabric Design

The series supports up to five fabric modules with the chassis midplane, delivering 550 Gbps per slot and up to 18.7 Tbps total switching capacity in the 18-slot model. These capabilities address massive east-west traffic in modern data centers.

Flexible Backplane and Upgrade Path

Chassis design supports midplane upgrades (9/10/18-slot) and backplane design (4-slot) for evolving network needs and module innovations, maximizing investment protection across several product generations.

Seamless NX-OS Integration

Based on Cisco's NX-OS, the Nexus 7000 Series features advanced automation, reliability, and serviceability, with real-time system upgrades and hot-swapping, ideal for environments with continuous service demands.

Investment Protection and Extended Lifecycle

By supporting flexible module upgrades and backward compatibility, the platform ensures long-term value for network owners facing rapidly changing business, application, and bandwidth requirements.

Technical Specifications

Product Specifications

Feature	Value
Bundle Includes	1 × N7009 chassis, 2 × SUP2E supervisor modules, 5 × FAB2 fabric modules
Power Supplies	Not included
Number of Slots	9 total slots
Supervisor Modules	2 × SUP2E (1 active, 1 standby)
Fabric Modules	5 × FAB2
Data Plane	Non-blocking architecture
Rack Units	14U
Dimensions (W × D × H)	17.3 in × 24.5 in × 32.5 in (43.9 cm × 62.2 cm × 82.6 cm)
Management Interfaces	Console port, Ethernet management port
Redundancy	Yes (supervisor and fabric)



Feature	Value
High Availability	Yes
Cooling System	Front-to-back airflow
Interface Types	Ethernet, Fiber Channel
Software	Cisco NX-OS
Maximum Power Consumption	1950 Watts
Operating Temperature	32°F to 104°F (0°C to 40°C)
Storage Temperature	-40°F to 158°F (-40°C to 70°C)
Relative Humidity	5% to 95% non-condensing

Product Comparison

Feature	C1-N7009-B2S2E-R	C1-N9K-C9504-B2	C1-N7710-B26S2E
Slot Count	9 slots	4 slots	10 slots
Supervisor Redundancy	2 SUP2E (redundant)	2 supervisor modules	Dual supervisor slots
Fabric Module Support	5 FAB2	Available	Available
Maximum Ethernet Ports	336 × 1/10G, 42 × 40G, 14 × 100G	Up to 100 × 10/25G, 20 × 40/100G	Up to 480 × 10G, 30 × 40G
Operating System	Cisco NX-OS	Cisco NX-OS	Cisco NX-OS
Dimensions (W × D × H)	17.3 × 24.5 × 32.5 in	17.4 × 23.0 × 13.9 in	17.5 × 24.6 × 36.0 in
Cooling	Front-to-back, redundant fans	Front-to-back airflow, hot-swappable	Redundant fans, hot-swap
Target Deployment	Campus core, data center	High-density spine/leaf	Large enterprise, aggregation

Accessories

Category	Accessories
Included Accessories	- Mounting Brackets - Console Cable - Documentation Kit



Category	Accessories
Optional Accessories	- SFP+ Transceiver Modules - Additional Power Supplies - Advanced Supervisor Modules



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References

[1] Cisco Systems. (2023). Cisco Nexus 7000 Series Switches Data Sheet. Retrieved from https://www.cisco.com/c/en/us/products/collateral/switches/nexus-7000-series-switches/Data_Sheet_C78-437762.html