



Cisco

C1-N7004-S2E

Datasheet

Product Overview

- Cisco Nexus 7000 Series switches are data center-class platforms delivering high scalability and operational flexibility.
- Designed for modern data centers, service providers, and enterprise core networks, they serve both mid-sized and large organizations.
- With support for modular 1/10/40/100 Gigabit Ethernet, the platform provides over 17 Tbps of switching fabric, NX-OS, and nonstop operations.
- Hardware redundancy, real-time system upgrades, and intelligent manageability ensure exceptional reliability for business-critical services.
- Simple deployment, seamless management tools, and high adaptability add ongoing operational value for integrators, distributors, and IT teams.
- The Nexus 7000 Series brings future-proof networking by combining investment protection with resilient, scalable, and manageable end-to-end connectivity.

Product Highlights

- **High Port Density:** Supports up to 96 x 1G/10G ports, 12 x 40G ports, and 4 x 100G ports, ideal for diverse data center scales.
- **Full Redundancy Design:** Features two dedicated supervisor slots ensuring active-standby system redundancy and continuous high availability.
- **Optimized Airflow and Density:** Side-to-rear airflow within a 7RU chassis allows stacking up to six units in a standard 42RU rack.
- **Easy Maintenance:** All modules including the power supplies and fan trays are accessible from the front, simplifying service and upgrades.

Detailed Features



C1-N7004-S2E

 Quote | [Help](#)

Component	Specification
Usable Rack Space	7RU
Chassis Slots	4 (2 supervisor, 2 I/O modules)
Power Supply Slots	4 slots



Flexible Chassis Options

The Cisco Nexus 7000 Series offers multiple chassis including 18-slot, 10-slot, 9-slot, and 4-slot models. This flexibility lets users choose the right configuration for varying capacity, port density, and data center layout needs. Each chassis has distinct airflow and cable management designs, optimizing performance in different environments.

Passive Midplane Architecture

All Nexus 7000 chassis utilize a passive mid-plane that interconnects I/O and fabric modules directly. This design reduces signal loss and increases bandwidth efficiency by bypassing unnecessary components. The result is lower latency and higher reliability for demanding multi-layer switching.

Advanced Forwarding Fabric

With scalable distributed architecture, up to five fabric modules and a robust chassis midplane, the system delivers up to 550 Gbps per slot and aggregate throughput up to 18.7 Tbps. For the 4-slot chassis, built-in fabrics provide up to 1.92 Tbps, ensuring responsive packet forwarding under heavy loads.

Redundant and Resilient Switching

Cisco Nexus 7004 delivers fabric redundancy even without separate fabric modules. If an I/O modules local fabric fails, the chassis automatically takes the module offline, maintaining system integrity. N+1 and 1+1 redundancy for power and supervisor ensure uninterrupted operations.

Integrated Cable Management

Purpose-built cable management in all chassis minimizes signal crosstalk and simplifies field deployment. It supports both vertical and horizontal cable layouts, accommodating custom data center topologies and reducing install and maintenance time.

Hot-Swappable Modules and Fans

All supervisor, I/O, power supply, and fan modules can be replaced without powering down the chassis. This feature enhances serviceability and uptime, allowing network changes and repairs during business hours.

Flexible Airflow Options

Chassis designs cater for different rack orientations with airflow patterns including side-to-side, front-to-back, and side-to-rear. This adaptability helps manage temperature, reduces energy costs, and ensures steady performance in dense rack configurations.

Future-Ready Investment Protection

The midplane and backplane schemes allow technology upgrades and feature additions as networking demands evolve. Customers benefit from prolonged hardware use with minimal disruption, effectively safeguarding capital investments over multiple lifecycle phases.

Technical Specifications

Product Specifications

Feature	Value
Chassis Type	4-slot modular (7RU)
Included Components	1 × N7004 chassis, 2 × SUP2E supervisor modules (for redundancy)
Power Supplies	Not included (must be purchased separately)
Form Factor	7 rack units (7RU)
Slot Capacity	4 slots total (2 slots for SUP2E, 2 slots for I/O modules)
Fabric Architecture	8.8 Tbps crossbar switching fabric
Port Density	Up to 32 × 10G ports per line card
Supported Port Modules	Supports 40G/100G modules with appropriate line cards
Network Processor	Broadcom StrataXGS



Feature	Value
Switching Capacity	2.2 Tbps per slot (max aggregate)
Forwarding Rate	720 Mpps
Buffer Memory	16MB shared per slot
Supervisor Redundancy	1+1 active/standby
Fabric Redundancy	N+1 with additional fabric modules
Power Redundancy	N+1 or N+N (with additional PSUs)
Cooling	Front-to-back airflow with hot-swappable fans
Operating System	Cisco NX-OS
Management Interfaces	CLI (NX-OS style), Web UI (HTTP/HTTPS), SNMPv3, XML API
Supported Protocols	IPv4/IPv6, MPLS, VXLAN, BGP, OSPF, EIGRP, PIM, IGMP
Dimensions (W × D × H)	17.3 in × 24.9 in × 7 in (43.9 cm × 63.2 cm × 17.8 cm)
Rack Mounting	Standard 19" rack compatible
Operating Temperature	32°F to 104°F (0°C to 40°C)
Min Operating Temperature	32°F (0°C)
Max Operating Temperature	104°F (40°C)
Storage Temperature	-40°F to 158°F (-40°C to 70°C)
Min Storage Temperature	-40°F (-40°C)
Max Storage Temperature	158°F (70°C)
Humidity	5% to 95% non-condensing
Altitude	-60 m to 3,000 m
Power Supply Options	N7K-AC-6.0KW (AC), N7K-DC-6.0KW (DC)
Typical Power Consumption	1500W-3000W (depends on configuration)
Compliance	RoHS, CE, FCC

Product Comparison

Feature	C1-N7004-S2E	C1-N7009-B2S2-R	C1-N7010-B2S2E
Chassis Slots	4 (2 supervisor, 2 I/O)	9 (modular slots)	10 (modular slots)
Switching Capacity	2.2 Tbps per slot (max aggregate)	1.44 Tbps per slot	1.5 Tbps per slot



Feature	C1-N7004-S2E	C1-N7009-B2S2-R	C1-N7010-B2S2E
Port Density	Up to 96 × 10G, 12 × 40G, 4 × 100G	Up to 336 × 10G, 84 × 40G, 28 × 100G	Up to 384 × 10G, 96 × 40G, 36 × 100G
Supervisor Redundancy	1+1 active/standby	1+1 active/standby	1+1 active/standby
Airflow Design	Side-to-rear	Side-to-side	Front-to-back
Power Supply Slots	4	4	4
Hot-Swappable Modules	Yes	Yes	Yes
Management Interfaces	CLI, Web UI, SNMP, XML	CLI, Web UI, SNMP, XML	CLI, Web UI, SNMP, XML
Best Fit For	Small/medium core, access, and aggregation	Large data center core, aggregation	Very large data centers, aggregation/core

Accessories

Category	Accessories
Included Accessories	- Chassis mainframe - Supervisor modules (2× SUP2E) - Rack mounting kit
Optional Accessories	- N7K-AC-6.0KW Power Supply - N7K-DC-6.0KW Power Supply - High-speed 40G/100G line cards



Support & Warranty



24/7 Online
Service



3-Year Premium
Warranty



Professional
Technical Support



100% Low Price
Guarantee



100% Quality
Assurance



100% Money
Back Guarantee

About Us



Router-switch.com, headquartered in Hong Kong since 2002, has been a trusted global leader in ICT distribution for 23 years. We provide cutting-edge networking, cybersecurity, data center, and AI solutions to meet evolving business needs. Our wide range includes products from top brands like Cisco, Arista, Aruba, Fortinet, Mellanox, and Huawei, ensuring access to the latest technology and innovations.

18,000+

global customers

600,000+

end-users

200+

countries & regions

23

years experience

500+

global vendors

100,000+

SKUs available

700+

local sales experts

50-98%

off global list prices

Contact Us

Email

High Connectivity: sales@router-switch.com

Expert Technical Support: ccie-support@router-switch.com

Cooperative Partnerships: ccie-support@router-switch.com

Phone

USA: +1-626-655-0998

Hong Kong: +852-25925389 / +852-25925411

Follow Us

Facebook: [@Routerswitchdotcom](https://www.facebook.com/Routerswitchdotcom)

LinkedIn: [Router-switch.com](https://www.linkedin.com/company/router-switch.com)

X: [@routerswitchcom](https://twitter.com/routerswitchcom)

Instagram: [@routerswitchdotcom](https://www.instagram.com/routerswitchdotcom)

Global Footprint

Global Warehouses & Service Centers Across Continents.



Global Branches

Headquarters (Hong Kong)

Rm 605, 6/F, Fa Yuen Comm Bldg, 75-77 Fa Yuen St, Mongkok, Kowloon, Hong Kong, China

USA Branch

3592 Rosemead Blvd, B #220, Rosemead, CA 91770, USA

Shenzhen Branch

Jingfeng Building, 1001 Shangbu South Road, Futian District, Shenzhen, China

UK Branch

Third Floor, 207 Regent Street, London W1B 3HH, UK



References

[1] Cisco. (2023). Cisco Nexus 7000 Series Switches Data Sheet (C78-437762). Retrieved from https://www.cisco.com/c/en/us/products/collateral/switches/nexus-7000-series-switches/Data_Sheet_C78-437762.html