



Cisco

C1-N7010-B2S2E

Datasheet



Product Overview

- Cisco Nexus 7000 Series switches are a flagship solution from Cisco, built for scalable and flexible data center networks.
- These switches serve large enterprises, service providers, and organizations needing robust unified fabric infrastructure.
- Distinct features include a resilient system design, hot-swappable modules, and seamless integration with Cisco NX-OS software.
- Centralized management tools allow operators to reduce downtime, streamline maintenance, and support live system upgrades.

Product Highlights

- **High Port Density:** Supports up to 384 × 1/10GE, 48 × 40GE, and 16 × 100GE ports for massive data center scalability.
- **Redundant Supervisors:** Two dedicated supervisor slots deliver maximum system availability and core network reliability.
- **Smart Cooling Architecture:** Dual hot-swappable fan trays with auto-adjust fans maintain cooling efficiency and system uptime.
- **Component Accessibility:** Front-access for supervisor/I/O modules and rear-access for fabric modules, fans, and power supplies enhance serviceability.

Detailed Features



C1-N7010-B2S2E

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Component	Specification
Chassis Slots	10 (2 supervisor, 8 I/O)



Flexible Chassis Options

Cisco Nexus 7000 Series supports four chassis sizes, allowing tailored configurations for varying data center footprints and growth expectations. Each form factor, from 4-slot to 18-slot models, uses proven design principles for cable management and airflow optimization.

Passive Mid-Plane Architecture

All chassis utilize a passive mid-plane architecture, ensuring high-speed data transfer with robust physical and electrical connectivity. This design minimizes electromagnetic interference, supports reliable inter-module communication, and enhances chassis resilience under heavy workloads.

Distributed Fabric Scalability

A modular fabric with up to five independent fabric modules provides slot-level throughput up to 550 Gbps. The architecture scales to deliver up to 18.7 Tbps in 18-slot models, supporting data-intensive enterprise workloads and virtualization at wire speed.

Future-Proof Upgrade Design

Flexible mid-plane and backplane designs enable seamless integration of newer technologies, safeguarding investments. As hardware or bandwidth requirements evolve, organizations can upgrade without a complete system replacement or extended downtime.

Power-Efficient Systems

Power supplies reach up to 90% efficiency, transforming more energy into useful system operation and minimizing excess heat output. This results in reduced energy costs and a smaller environmental footprint for the data center.

Intelligent Cooling Management

Port speed- and load-adaptive fan modules conserve energy and maintain optimal operating conditions. In 9-slot models, the system can disable fan rows for unused slots, further lowering power usage and extending fan life.

Operational Consolidation

High port density, device virtualization support, and nonstop service features allow operators to consolidate multiple switches. This approach improves power efficiency, simplifies management, and reduces the complexity of large network deployments.

Reliability and Uptime

Redundant components and crossbar fabric ASICs maximize module and system availability. Even during hardware failures or upgrades, the distributed architecture ensures traffic forwarding continues, making the platform ideal for always-on environments.

Technical Specifications

Product Specifications

Feature	Value
Bundle Components	1 × Nexus 7010 chassis, 1 × SUP2E supervisor engine, 5 × FAB2 fabric modules
Power Supplies	Not included
Supported Line Cards	N7K-F248XP-25, N7K-M148GT-11L, N7K-M132XP-12, N7K-F132XP-15
Control Plane	Active/Standby
Management Ports	1 × Console, 1 × Ethernet
Cooling System	Hot-swappable fan trays
Rack Units	21 RU
Switching Capacity	15.36 Tbps
Forwarding Rate	720 Mpps per slot
Power Consumption	1300W (typical)
Operating Temperature	0°C to 40°C (32°F to 104°F)



Feature	Value
Min Operating Temperature	0°C (32°F)
Max Operating Temperature	40°C (104°F)
Storage Temperature	-40°C to 70°C (-40°F to 158°F)
Min Storage Temperature	-40°C (-40°F)
Max Storage Temperature	70°C (158°F)
Relative Humidity	5% to 95% (non-condensing)
Compliance	RoHS, UL, CE

Product Comparison

Feature	C1-N7010-B2S2E	C1-N7706-B26S2E-R	C1-N7004-S2E
Chassis Slots	10 (2 supervisor, 8 I/O)	6 (2 supervisor, 4 I/O)	4 (2 supervisor, 2 I/O)
Switching Capacity	15.36 Tbps	7.2 Tbps	2.56 Tbps
Forwarding Rate	720 Mpps per slot	420 Mpps per slot	240 Mpps per slot
Max 1/10GE Ports	384	192	96
Max 40/100GE Ports	48/16	24/8	12/4
Power Supplies Slots	3	2	2
Hot-Swappable Fans	Yes	Yes	Yes
Management Ports	1 × Console, 1 × Ethernet	1 × Console, 1 × Ethernet	1 × Console, 1 × Ethernet
Airflow	Front-to-back	Front-to-back	Side-to-back
System Redundancy	Full supervisor and fan redundancy	Supervisor redundancy	Supervisor redundancy
Application Scenario	Large enterprise/data center aggregation	Medium/large data center core	Compact core/datacenter edge



Accessories

Category	Accessories
Included Accessories	- Chassis Frame - Supervisor Engine - Fabric Module
Optional Accessories	- Supported Line Cards (N7K-F248XP-25, N7K-M148GT-11L, N7K-M132XP-12, N7K-F132XP-15) - Power Supply Module - Optional Air Filter



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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