



# Cisco

# C1-N7010-B2S2

## Datasheet



## Product Overview

- Cisco Nexus 7000 Series is Cisco's flagship modular switch line built for modern data centers and core network environments.
- It supports scalable 1/10/40/100 Gigabit Ethernet, modular design, and over 17 Tbps of fabric bandwidth for demanding workloads.
- Features include seamless failover, hot-swappable modules, and virtualization to maximize uptime and operational continuity.
- Full NX-OS management enables real-time upgrades, and centralized configuration control.

## Product Highlights

- **High Port Density & Scalability:** The 10-slot chassis supports up to 384 × 1/10GE, 48 × 40GE, and 16 × 100GE ports, ideal for large data center deployments.
- **Redundant Supervisor Slots:** Two dedicated supervisor slots provide full system redundancy for maximum network uptime and reliability.
- **Efficient Cooling & Redundancy:** Redundant fan trays with variable-speed fans adjust automatically to temperature, support hot swapping, and help save power.
- **Flexible Module Access:** Front-accessible I/O and supervisor modules, plus rear-access power, fabric, and fan trays, speed up maintenance and upgrades.

## Detailed Features



C1-N7010-B2S2

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



## Versatile Chassis Options

Nexus 7000 Series offers multiple chassis: 18-slot, 10-slot, 9-slot, and 4-slot, each tailored to different network scales, with optimized airflow and integrated cable management for various deployment needs in large data centers and enterprises.

## Passive Mid-Plane Architecture

All models use a passive mid-plane that connects fabric and I/O modules. This design allows direct module interconnection with minimal signal loss and increases system reliability by reducing active components in the path.

## High Throughput Distributed Fabric

A fully distributed fabric with up to five fabric modules and a robust chassis midplane supports up to 550 Gbps per slot. The 10-slot chassis achieves 9.9 Tbps forwarding capacity, meeting requirements for high bandwidth and rapid data transfers.

## Flexible Upgrade Paths

The midplane and backplane designs enable seamless technology upgrades and protect investment, allowing for future expansion or modernization as network needs and performance demands grow.

## Energy-Efficient Power Design

Each power supply in the Nexus 7000 can reach up to 90% efficiency. Lower heat generation means reduced cooling needs and cost savings, which leads to environmentally friendly, power-optimized operation.

## Smart Cooling Control

Fan modules auto-adjust for changing heat loads using variable speeds. The 9-slot chassis can switch off unused fan rows, resulting in quieter operation and lower energy consumption across the series.

## High System Consolidation

Extreme port density, virtualization support, and comprehensive reliability features make the series fit for consolidating multiple network layers, minimizing rack footprint and overall energy and maintenance expenses.

## Uncompromised Reliability

Continuous non-stop operation is ensured through redundant supervision, hot-swappable components, and advanced crossbar fabric ASICs, maintaining performance and availability in mission-critical scenarios.

# Technical Specifications

## Product Specifications

| Feature                | Value                                                           |
|------------------------|-----------------------------------------------------------------|
| Series                 | Cisco ONE Nexus 7010                                            |
| Chassis                | Cisco Nexus 7010 Modular Switch Chassis                         |
| Supervisors            | 1 × Supervisor Engine 2 (SUP2)                                  |
| Fabric Modules         | 5 × Fabric-2 Modules (FAB2)                                     |
| Power Supplies         | Not included                                                    |
| Expansion Slots        | Slot-based expansion with Supervisor Engines and Fabric Modules |
| Switching Capacity     | Up to 2.56 Tbps                                                 |
| Forwarding Rate        | Up to 720 Mpps                                                  |
| Redundancy             | Supports supervisor and fabric redundancy                       |
| Management             | Included Cisco NX-OS software                                   |
| Layer Support          | Layer 2 and Layer 3 switching                                   |
| Dimensions (H × W × D) | 17.5 in × 17.5 in × 36.5 in (44.45 cm × 44.45 cm × 92.71 cm)    |



| Feature               | Value                          |
|-----------------------|--------------------------------|
| Height                | 17.5 in (44.45 cm)             |
| Width                 | 17.5 in (44.45 cm)             |
| Depth                 | 36.5 in (92.71 cm)             |
| Cooling               | Front-to-back airflow          |
| 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       |
| Compliance            | FCC, UL, CE, RoHS              |

## Product Comparison

| Feature                  | C1-N7010-B2S2                       | C1-WS3650-48UZ/K9     | C9300-48UXM-A         |
|--------------------------|-------------------------------------|-----------------------|-----------------------|
| Chassis Slot Number      | 10 slots                            | 1RU fixed             | 1RU fixed             |
| Supervisor Redundancy    | Supported (2 slots)                 | Not supported         | Not supported         |
| Max Switching Capacity   | Up to 2.56 Tbps                     | Up to 176 Gbps        | Up to 960 Gbps        |
| Total Ports              | 384 × 1/10GE, 48 × 40GE, 16 × 100GE | 48 × mGig UPOE        | 48 × mGig UPOE        |
| Modularity               | Modular, slot-based                 | Fixed                 | Fixed                 |
| Fabric Modules           | 5 × Fabric-2 Modules                | N/A                   | N/A                   |
| Power Supply             | 3 slots, redundant supported        | Dual redundant        | Dual redundant        |
| Layer 3 Routing          | Supported                           | Advanced              | Advanced              |
| Stacking/ Virtualization | Distributed fabric, VDC             | StackWise             | StackWise Virtual     |
| Management               | Cisco NX-OS                         | IOS-XE                | IOS-XE                |
| Dimensions               | 17.5 × 17.5 × 36.5 in               | 1.73 × 17.5 × 21.5 in | 1.73 × 17.5 × 22.8 in |



## Accessories

| Category             | Accessories                                                                                                                           |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Included Accessories | <ul style="list-style-type: none"><li>- Rack Mount Kit</li><li>- Console Cable</li><li>- Documentation Kit</li></ul>                  |
| Optional Accessories | <ul style="list-style-type: none"><li>- Supervisor Engine Module</li><li>- Additional Power Supply</li><li>- Air Filter Kit</li></ul> |



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## References

[1] Cisco. (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](https://www.cisco.com/c/en/us/products/collateral/switches/nexus-7000-series-switches/Data_Sheet_C78-437762.html)