



Cisco

C1-N5548UP-B-S32

Datasheet

Product Overview

- Cisco's Nexus 5000 Series brings next-generation data center switching designed for unified fabric and high-performance computing.
- It is ideal for enterprises, cloud service providers, and data centers deploying dense rack-mount and blade servers across Asia, Europe, Africa, or North America.
- The C1-N5548UP-B-S32 model features 32 unified ports, 1.28 Tbps switching capacity, and supports line-rate 10G Ethernet on all ports.
- Native support for Fibre Channel over Ethernet (FCoE), Data Center Bridging (DCB), and flexible port configuration sets it apart from conventional switches.
- Dual hot-swappable power supplies, N+1 fan redundancy, and Cisco NX-OS software simplify maintenance and enable seamless network management.
- Whether scaling virtualization workloads or consolidating LAN and SAN, the Nexus 5000 Series delivers reliable, scalable connectivity for evolving data center needs.

Product Highlights

- **Unified Ports:** 32 ports configurable as either 10G Ethernet or 8G/16G Fibre Channel for maximum flexibility.
- **High Throughput:** 1.28 Tbps switching capacity enables support for large data flows and high-density environments.
- **Enterprise-Class Reliability:** Redundant, hot-swappable power supplies and N+1 fan modules improve uptime.
- **Advanced Network Technologies:** Supports DCB, FCoE, and robust security with ACLs and network segmentation features.

Detailed Features



C1-N5548UP-B-S32

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Component	Specification
Total Ports	32 × Unified Ports
Port Configuration	10G Ethernet or 8G/16G Fibre Channel
Switching Capacity	1.28 Tbps
Forwarding Rate	960 Mpps
Redundancy	Dual hot-swappable power supplies, N+1 fan



Flexible Unified Port Design

The switch provides 32 unified ports that can function as either 10-Gigabit Ethernet or 8/16-Gigabit Fibre Channel. This allows seamless integration of LAN and SAN traffic, reducing hardware investments while enabling phased network upgrades or consolidation as required.

Advanced Data Center Bridging

Support for a comprehensive set of Data Center Bridging (DCB) technologies ensures reliable, lossless Ethernet. It eliminates traditional network bottlenecks, ensures guaranteed delivery of storage traffic, and simplifies multi-class traffic handling within high-density data center racks.

Line-Rate Performance

Cut-through switching architecture enables 100% line-rate transmission of all packets, regardless of size or enabled services. This ensures minimal and predictable latency, a critical factor for modern cloud, virtualization, and storage applications in demanding compute environments.

High Switching and Forwarding Capacity

With a switching capacity of 1.28 Tbps and a forwarding rate of 960 Mpps, the C1-N5548UP-B-S32 can easily handle heavy east-west traffic workloads, offering future-proof bandwidth for virtualized or clustered environments.

Integrated FCoE Support

Support for native Fibre Channel over Ethernet (FCoE) and direct Fibre Channel connects existing SAN investments to converged infrastructures. This reduces cabling complexity, streamlines management, and supports seamless migration to unified fabrics without disrupting critical storage resources.

Redundant Power and Cooling

Dual hot-swappable power supplies and N+1 fan redundancy deliver superior reliability. Operators can replace defective units during operation, keeping mission-critical data center workloads online and minimizing maintenance windows.

Robust Layer 2/3 Protocols

Support for advanced Layer 2 and Layer 3 features, including multicast, VXLAN, OTV, and full hardware forwarding for both IPv4/IPv6, makes the switch adaptable for various network architectures and scalable campus or data center designs.

Enhanced Security and Management

Comprehensive security options with 32,000-entry ACLs, port security, DHCP snooping, and integration with Cisco DCNM offer strong policy controls. Flexible management interfaces simplify deployment, configuration, and network monitoring for IT teams.

Technical Specifications

Product Specifications

Feature	Value
Form Factor	1RU Rack-mountable Switch
Primary Use	Unified Fabric (LAN/SAN) Data Center Switching
Total Ports	32 × Unified Ports (configurable as 10G Ethernet or 8G/16G Fibre Channel)
Port Configuration Option 1	10G Ethernet
Port Configuration Option 2	8G/16G Fibre Channel
Switching Capacity	1.28 Tbps
Forwarding Rate	960 Mpps
Power Supplies	Dual, Hot-Swappable (NXA-PAC-1100W or NXA-PDC-1100W)
Cooling Redundancy	N+1 Fan Redundancy
Layer Support	Layer 2 & Layer 3
Maximum VLANs	4,094
Multicast Support	IGMP Snooping, PIM, MSDP



Feature	Value
Supported Protocols	IPv4/IPv6 (Full Hardware Forwarding), VXLAN (Hardware-accelerated), OTV (Overlay Transport Virtualization)
Quality of Service (QoS)	8 Priority Queues per Port, DSCP/CoS-Based Classification
Security Features	ACLs (32,000 entries), Port Security, DHCP Snooping
Management Interfaces	CLI (SSH, Telnet), SNMPv3, RMON, Syslog
Additional Management Tools	Cisco DCNM (Data Center Network Manager)
Dimensions	1.72 × 17.3 × 22.5 in (4.37 × 43.94 × 57.15 cm)
Operating Temperature	32°F to 104°F (0°C to 40°C)
Operating Temperature Min	32°F (0°C)
Operating Temperature Max	104°F (40°C)
Humidity	5% to 95% (non-condensing)

Product Comparison

Feature	C1-N5548UP-B-S32	C1-N5K-C5548UP-FA	C1-N9K-C9236C
Fixed Ports	32 × Unified Ports (10G Ethernet/8G/16G FC)	32 × Unified Ports	36 × 100G QSFP28
Switching Capacity	1.28 Tbps	960 Gbps	7.2 Tbps
Forwarding Rate	960 Mpps	720 Mpps	2.8 Bpps
Redundant PSU	Dual Hot-Swappable	Dual Hot-Swappable	Dual Hot-Swappable
Layer Support	Layer 2 & Layer 3	Layer 2 & Layer 3	Layer 2 & Layer 3
DCB/FCoE Support	Yes	Yes	No
Management	CLI, SNMPv3, Syslog, DCNM	CLI, SNMPv3, Syslog, DCNM	CLI, SNMP, NX-API, DCNM
Form Factor	1RU Rack-mountable	1RU Rack-mountable	1RU Rack-mountable



Accessories

Category	Accessories
Included Accessories	- Dual Power Supply Modules - Rack Mount Kit - Console Cable
Optional Accessories	- 10GBASE-SR SFP+ Transceiver - Twinax Direct Attach Cable - Expansion Management Module



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References

[1] Cisco. (2023). Cisco Nexus 5000 Series Switches Data Sheet. Retrieved from https://www.cisco.com/c/en/us/products/collateral/switches/nexus-5000-series-switches/data_sheet_c78-618603.html