



Cisco

C1-N5672UP-6FEX-1G

Datasheet



Product Overview

- Cisco delivers industry-leading data center networking with the Nexus 5600 series, engineered for high-performance server access at scale.
- Designed for large enterprises, service providers, and cloud environments, this switch excels in modern data centers requiring agile compute and storage.
- Key hardware strengths include 1RU compact design, 1.44 Tbps switching capacity, and support for 48 × 10G SFP+ ports, ensuring robust throughput.
- Integrated support for LAN and SAN convergence, advanced VXLAN/NVGRE virtualization, and flexible buffer management set it apart in dense deployments.
- NX-OS operating system, with central CLI and Python automation, offers unified management, enhanced security, and consistent network monitoring.
- Ideal for both ToR and MoR deployments, this Nexus switch streamlines connectivity, scales for virtualized/cloud tasks, and empowers efficient infrastructure growth.

Product Highlights

- **Optimized for Virtualization:** Scalable architecture supports dense server and cloud deployments, helping businesses expand efficiently amid dynamic workloads.
- **High Port Density and Flexibility:** Offers 48 × 10G SFP+ ports, 6 × 1G FEX uplinks, SFP+, QSFP, and 1G RJ45, covering broad connectivity requirements.
- **Energy Efficient, Low Latency Design:** Delivers power efficiency and ~1µs port-to-port latency, ideal for responsive, sustainable data centers.
- **Advanced Troubleshooting Features:** Supports Cisco's SPAN and ERSPAN for robust, non-disruptive traffic monitoring and efficient network analysis.

Detailed Features



C1-N5672UP-6FEX-1G

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Component	Specification
Switching Capacity	1.44 Tbps
Forwarding Rate	720 Mpps
Ports	48 × SFP+ (10G), 6 × 1G FEX uplinks, SFP+, QSFP, 1G RJ45
Power Supply	Dual redundant, hot-swappable
Form Factor	1RU



Advanced Data Center Scalability

The Nexus 5600 platform delivers high-density 10G and 40G Ethernet switching to handle virtualization and expanding cloud workloads. With support for dense port configurations and line-rate Layer 2/3 features, it easily handles demanding enterprise applications, ensuring performance stability for evolving data center needs.

Unified LAN and SAN Convergence

Seamless integration of Ethernet and Fibre Channel over Ethernet (FCoE) via unified ports allows both LAN and SAN traffic on a single device. This reduces infrastructure complexity, streamlines workflows, and enables efficient resource utilization, proving invaluable for organizations blending traditional and storage networking tasks.

Intelligent Buffer and Traffic Management

The platform includes a flexible 25-MB buffer shared across high-bandwidth ports, supporting dynamic allocation during network congestion. Enhanced by flow-based hashing for multicast and optimized replication, these switches deliver smooth data flows, critical for latency-sensitive cloud workloads and next-gen applications.

Enhanced Energy Efficiency

Innovative power management achieves 90% efficiency even at low utilization levels, lowering operating expenses and supporting sustainability initiatives. Hot-swappable, redundant power and fan modules keep networks online with minimal interruption while supporting modern green data center designs.

Programmability and Advanced Virtualization

Cisco NX-OS enables deep programmability and automation, supporting VXLAN and NVGRE. These virtualization features simplify deployment of scalable Layer 2 and 3 domains, facilitating seamless migration to private, hybrid, or public clouds without complex overlay networks.

Comprehensive Monitoring and Troubleshooting

With industry-leading SPAN and ERSPAN support, IT staff can conduct real-time, in-depth traffic analysis without interrupting production traffic. This increases visibility for fault detection and performance management, making troubleshooting more effective and proactive.

Low Latency Architecture

Designed for performance, the Nexus 5600 platform employs cut-through switching, achieving ~1 microsecond of latency. This ensures rapid delivery of data for mission-critical and time-sensitive business applications across diverse network environments.

Robust Redundancy and Resilience

Every switch features redundant, hot-swappable power supplies and fans, guaranteeing high availability and easy maintenance. Front-to-back or back-to-front airflow options match diverse hot-/cold-aisle setups, reinforcing physical and operational resilience for continuous data center uptime.

Technical Specifications

Product Specifications

Feature	Value
Description	Cisco ONE N5672UP Chassis with 6 × 1G FEX (including FETs)
Form Factor	1RU
Total Port Capacity	72 ports
Port Types	48 × SFP+ (10G), 6 × 1G FEX uplinks (with FETs), SFP+, QSFP, 1G RJ45
Switching Capacity	1.44 Tbps
Forwarding Rate	720 Mpps
Power Supply	Dual redundant, hot-swappable
Power Consumption	600W (typical)
Cooling System	Front-to-back airflow with hot-swappable fans



Feature	Value
Management	CLI, Cisco Prime Infrastructure, On-box Python
VLAN Support	4,096 VLAN IDs
MAC Address Table	128,000 entries
Jumbo Frames	Supported (up to 9,216 bytes)
Dimensions (H × W × D)	1.72 × 17.30 × 18.0 in (4.37 × 43.94 × 45.72 cm)
Rack Units	1RU
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)
Redundancy Features	Hot-swappable power supplies, Hot-swappable fan trays

Product Comparison

Feature	C1-N5672UP-6FEX-1G	C1-N5K-C5548UP-FA	C1-N5672UP-4FEX-1G
Switching Capacity	1.44 Tbps	960 Gbps	1.44 Tbps
Port Types	48 × SFP+ (10G), 6 × 1G FEX uplinks	32 × SFP+ (10G)	48 × SFP+ (10G), 4 × 1G FEX uplinks
Forwarding Rate	720 Mpps	720 Mpps	720 Mpps
Redundancy	Dual redundant, hot-swappable	Dual redundant, hot-swappable	Dual redundant, hot-swappable
Management	CLI, Cisco Prime, Python	CLI, Cisco Prime	CLI, Cisco Prime, Python
Airflow	Front-to-back	Front-to-back	Front-to-back
VLAN Support	4,096 VLAN IDs	4,096 VLAN IDs	4,096 VLAN IDs
Dimensions (H × W × D)	1.72 × 17.30 × 18.0 in	1.72 × 17.3 × 18.0 in	1.72 × 17.30 × 18.0 in



Accessories

Category	Accessories
Included Accessories	- Power cords - Rack mounting kit - Quick Start Guide
Optional Accessories	- 10G SFP+ modules - QSFP uplink modules - Spare fan unit



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References

[1] Cisco. (2023). Cisco Nexus 5600 Platform Switches Data Sheet. Retrieved from <https://www.cisco.com/c/en/us/products/collateral/switches/nexus-5624q-switch/datasheet-c78-733100.html>