Cisco

C1-N5672UP-8FEX-1G

Datasheet

Product Overview

- The Cisco Nexus 5600 Series represents Cisco's third-generation data center switches, leading in server access technology.

- Designed for modern data centers, this switch is ideal for enterprises, cloud providers, and service hosting environments.

- It features 1RU form factor, up to 48 × 1G ports, 8 × 1G FEX support, and integrated line-rate L2/L3 performance.

- Distinctive advantages include support for FCoE, advanced fabric programmability, and VXLAN/NVGRE for flexible network virtualization.

- Simple deployment and management are achieved through Cisco NX-OS, with consistent performance and broad compatibility.

- Bringing robust scalability, high density, and efficient operation, it is well-suited for hybrid, virtualized, and cloud-driven IT infrastructures.

Product Highlights

- **Optimized for Virtualization and Cloud:** Scalable design meets bandwidth needs, supporting advanced virtualization and rapid server deployment in the cloud.

- **High Density and Resilience:** Rear port layout, hot-swappable modules, and flexible airflow align with modern server and data center designs.

- **Energy-Efficient Operation:** 90% power efficiency at low utilization with advanced cooling reduces energy costs and environmental impact.

- **Low Latency Networking:** Cut-through architecture ensures port-to-port latency as low as 1 microsecond for all packet sizes.

Detailed Features

C1-N5672UP-8FEX-1G

Component	Specification
Form Factor	1RU
Fabric Extenders	8 × 1G (with FETs included)
Total Port Capacity	48 × 1G ports
Port Speed	1 Gbps

Virtualization and Cloud Ready

Designed to support advanced virtualized and nonvirtualized environments, this switch enables seamless deployment of high-performance servers. The platform addresses increased workload demands with integrated features tailored for hybrid cloud and bare-metal architectures, ensuring scalable performance and network agility.

High Density, Enterprise-Grade Reliability

Rear-facing ports and power, short cabling, and hot-swappable power and fan modules maximize serviceability. LED-based status indication and flexible airflow options align with rack server designs, streamlining installation and maintenance for high-density data centers.

Energy Efficiency Technology

The platform offers intelligent power management, maintaining up to 90% power supply efficiency at loads as low as 25%. This ensures that both under- and over-utilized systems operate within optimal energy parameters, reducing power waste and improving sustainability.

Wire-Speed Low Latency

With cut-through switching, the platform achieves port-to-port latency near 1 microsecond, regardless of packet size. This ultra-low latency supports real-time applications and high-frequency transactions, which are essential in finance and mission-critical data centers.

Comprehensive Traffic Monitoring

The switch features advanced SPAN and ERSPAN functions for real-time, nondisruptive network traffic analysis. Up to 31 line-rate monitoring sessions are supported, and bandwidth utilization for these sessions is efficiently managed for network optimization.

Flexible Buffer Management

A 25-MB shared packet buffer dynamically allocates resources among 40G and 10G ports, improving performance during network congestion. This adaptive buffer design allows for consistent throughput and minimizes packet loss in bursty traffic scenarios.

Robust Multicast Capabilities

Line-rate Layer 2/3 multicast throughput, flow-based hashing, and support for 32,000 multicast routes ensure effective multicast distribution. Hardware-based IGMP snooping and enhanced protocol support strengthen group communication in large data centers.

Advanced Inter-Switch Links

The switch supports up to six 40-Gbps Fibre Channel ISLs, delivering 240 Gbps total interconnect bandwidth and enhanced buffer credit scaling. This makes it suitable for extended distances and high-throughput, unified SAN deployments.

Technical Specifications

Product Specifications

Feature	Value
Product Type	Network Switch Chassis
Form Factor	1RU
Fabric Extenders (FEX)	8 × 1G (with FETs included)
Total Port Capacity	48 × 1G ports
Port Speed	1 Gbps
Data Rate	Up to 1 Gbps per port
High Availability	Redundant power supply (hot-swappable)
Cooling	Front-to-back cooling
Power Consumption (Max)	450 W
Management Protocols	SNMP v2/v3
Management Protocols Continued	CLI (Command Line Interface)
Security Features	Access Control Lists (ACLs)

Feature	Value
Security Features Continued	Port Security
QoS Support	Yes (Hardware-based)
VLAN Support	Yes (4096 VLAN IDs)
Dimensions (H)	1.72 in (4.37 cm)
Dimensions (W)	17.3 in (43.94 cm)
Dimensions (D)	18.5 in (46.99 cm)
Operating Temperature	0°C to 40°C (32°F to 104°F)
Storage Temperature	min: -40°C (-40°F)
Storage Temperature	max: 70°C (158°F)
Humidity Range	min: 5% (non-condensing)
Humidity Range	max: 95% (non-condensing)

Product Comparison

Feature	C1-N5672UP-8FEX-1G	C9200-48T-A	C9300L-48PF-4G-10A
Form Factor	1RU	1RU	1RU
Port Configuration	48 × 1G + 8 × 1G FEX	48 × 1G	48 × 1G + 4 × 1G/10G SFP+
Port Speed	1 Gbps	1 Gbps	1 Gbps
Fabric Extender Support	Yes (8 × 1G FEX included)	No	No
Redundant Power Supply	Yes (hot-swappable)	Yes	Yes
Maximum Power Consumption	450 W	370 W	475 W
Layer 3 Routing	Supported	Supported	Supported
Advanced Features	NVGRE, VXLAN, FCoE	StackWise, Flexible NetFlow	MACsec, Enhanced StackWise-160

Accessories

Category	Accessories
Included Accessories	- Power Adapter - Mounting Bracket - Quick Installation Guide
Optional Accessories	- SFP Transceiver - Advanced Fabric Extender Module - Additional Fan Module

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References

[1] Cisco Systems. (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