

Cisco

C1-N5672UP4FEX10GT

Datasheet



Product Overview

- The Cisco Nexus 5600 Series, including the C1-N5672UP4FEX10GT, delivers high-performance switching for modern data centers.
- It is ideal for cloud, enterprise, and hosting environments needing robust, scalable connectivity and seamless virtualization support.
- Core specs include 48 × 1/10G SFP+ ports, 6 × 40G QSFP+ uplinks, and sub-microsecond latency for mission-critical applications.
- Integrated Layer 2/3 features, unified LAN/SAN support, and advanced VXLAN/NVGRE offer versatility beyond standard data center switches.
- Flexibility in cooling and airflow directions, plus hot-swappable modules, simplify deployment and ongoing maintenance for IT staff.
- Designed for top-of-rack and mid-row use, the C1-N5672UP4FEX10GT ensures reliable, consistent performance across both physical and virtual infrastructures.

Product Highlights

- **Cloud and Virtualization Ready:** Optimized for rapid deployment of virtual machines and dynamic workloads in hybrid data center architectures.
- **High Port Density and Resilience:** 48 × 1/10G SFP+ access ports and 6 × 40G uplinks ensure strong server connectivity and easy cable management.
- **Cut-Through Switching and Low Latency:** Delivers sub-microsecond latency to support high-frequency, low-delay applications in finance and cloud.
- **Flexible Buffer Management:** Adjustable 25MB shared buffer enables smooth traffic, even with congestion or bursty workloads in busy data centers.

Detailed Features



C1-N5672UP4FEX10GT

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| Component | Specification |
|--------------------|--------------------------------|
| Switch Ports | 48 × 1/10G SFP+ ports |
| Uplink Ports | 6 × 40G QSFP+ ports |
| FEX Ports | 4 × 10GT FEX ports (with FETs) |
| Switching Capacity | 1.44 Tbps |
| Forwarding Rate | 1080 Mpps |



Virtualization and Cloud Optimization

The Cisco Nexus C1-N5672UP4FEX10GT is built to efficiently handle rapid deployment of virtual servers and dynamic workloads. Its robust fabric and flexible architecture are ideal for data centers evolving toward highly virtualized and automated environments, ensuring scalable and reliable network performance.

Dense, Resilient Design

This switch features a design similar to high-performance servers, with rear-facing ports and power connections that reduce cable clutter. Hot-swappable power and fan modules, accessible from the front panel, enhance serviceability and ensure uninterrupted operation during upgrades or maintenance.

Efficient Energy Utilization

With support for up to 90% power supply efficiency at as low as 25% load, the switch is engineered for energy-conscious facilities. It enables efficient power use without sacrificing performance, helping data centers to meet environmental goals and operate within space and cooling limits.

Ultra-Low Latency

The device supports cut-through switching to achieve about 1 microsecond of port-to-port latency. This ultra-low latency is essential for time-sensitive applications such as financial trading systems, large storage arrays, and real-time data analytics in demanding environments.

Intelligent Traffic Monitoring

Advanced SPAN and ERSPAN capabilities allow robust, non-intrusive traffic analysis and troubleshooting. Up to 31 line-rate monitoring sessions and dynamic bandwidth allocation for traffic capture ensure effective network management without impacting overall performance.

Flexible Buffer Management

A 25-MB packet buffer dynamically shared among ports allows precise adjustment for both congestion and dedicated data traffic. This adaptability improves throughput for bursty or intensive applications and keeps performance consistent during peak demand.

Advanced Multicast Capability

Line-rate Layer 2 and 3 multicast support enables high-performance video streaming and group-data delivery. The system supports up to 32,000 multicast routes, hardware-based IGMP, and optimized multicast replication for efficient, reliable service in multicast-heavy environments.

High-Bandwidth Fibre Channel ISLs

With support for 16-Gbps or 40-Gbps ISLs, this switch streamlines LAN and SAN convergence. It provides up to 240 Gbps with improved buffer-to-buffer credits, supporting large-scale deployments and interconnections across extended distances of up to 16 kilometers.

Technical Specifications

Product Specifications

| Feature | Value |
|--------------------|--|
| Form Factor | 1RU |
| Switch Ports | 48 × 1/10G SFP+ ports |
| Uplink Ports | 6 × 40G QSFP+ ports |
| FEX Ports | 4 × 10GT FEX ports (with FETs) |
| Switching Capacity | 1.44 Tbps |
| Forwarding Rate | 1080 Mpps |
| Latency | <1 µsec (cut-through) |
| RAM | 16 GB DDR3 |
| Flash Memory | 8 GB |
| MAC Address Table | 32,000 entries |
| Power Supplies | Dual 750W (hot-swappable, N+1 redundant) |



| Feature | Value |
|------------------------|---|
| Power Consumption | 450W (typical) |
| Cooling | Front-to-back airflow with hot-swappable fans |
| Management Ports | 1 × RJ-45 console |
| Management Ports | 1 × 10/100/1000 BASE-T management |
| Management Ports | 1 × USB (for software updates) |
| Virtualization | VXLAN support |
| VLAN Support | 4000 VLAN IDs |
| QoS | 8 queues per port |
| Jumbo Frames | Up to 9216 bytes |
| Dimensions (W × D × H) | 17.3 in × 22.5 in × 1.72 in (43.9 cm × 57.2 cm × 4.37 cm) |
| Operating Temperature | 32°F to 104°F (0°C to 40°C) |
| Humidity | 5% to 95% non-condensing |

Product Comparison

| Feature | C1-N5672UP4FEX10GT | C1-N5672UP-6FEX-1G | C1-N5696Q-12FEX-1G |
|------------------------|--|--|---|
| Switch Ports | 48 × 1/10G SFP+ | 48 × 1/10G SFP+ | 48 × 10G SFP+ |
| Uplink Ports | 6 × 40G QSFP+ | 6 × 40G QSFP+ | 12 × 40G QSFP+ |
| FEX Ports | 4 × 10GT FEX (with FETs) | 6 × 1G/10G FEX | 12 × 10G/40G FEX |
| Switching Capacity | 1.44 Tbps | 1.44 Tbps | 2.56 Tbps |
| Forwarding Rate | 1080 Mpps | 1080 Mpps | 1440 Mpps |
| Redundant Power | Dual 750W, hot-swappable | Dual, hot-swappable | Dual, hot-swappable |
| Dimensions (W × D × H) | 17.3 × 22.5 × 1.72 in | 17.3 × 22.5 × 1.72 in | 17.3 × 22.5 × 1.72 in |
| Target Deployment | High-density ToR/MoR virtualized data center | Flexible FEX expansion, medium data center | Expanded 40G/10G, large data center core/edge |



Accessories

| Category | Accessories |
|----------------------|---|
| Included Accessories | <ul style="list-style-type: none">- Dual 750W Power Supplies- Rack Mount Kit- Console Cable |
| Optional Accessories | <ul style="list-style-type: none">- 10G SFP+ Transceivers- 40G QSFP+ Modules- FEX Expansion Cards |



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References

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