



Cisco

C1000-48FP-4X-L

Datasheet



Product Overview

- Cisco Catalyst 1000 Series Switches deliver reliable Layer 2 access, offering simple, secure, and flexible switching for small businesses and branch offices.
- These switches are ideal for small enterprises, retail branches, and distributed IoT environments seeking stable network connectivity.
- The C1000-48FP-4X-L model features 48 Gigabit SFP ports, 4 × 10G SFP+ uplinks, and a switching capacity of 176 Gbps for high-speed data transfer.
- Enhanced with perpetual PoE+ support, advanced security functions, and intuitive management through both CLI and Web UI, it stands out in its class.
- Device management is seamless with features like on-box web UI, Cisco IOS Software, and out-of-band console access, reducing complexities in setup.
- This switch provides dependable network performance, improved security, and efficient operations, making it a practical choice for fast-growing organizations and integrators.

Product Highlights

- **High-Density Gigabit Fiber Access:** 48 × 100/1000BASE-X SFP fiber ports provide robust, stable connectivity for high-demand enterprise or campus networks.
- **10G Uplink Flexibility:** Four SFP+ uplink ports allow flexible high-speed aggregation, supporting rapid data exchange across core and distribution layers.
- **Comprehensive PoE+ Power:** Perpetual PoE+ with up to 740W power budget ensures uninterrupted operation for IP phones or cameras.
- **Simple, Secure Operation:** Managed by CLI or web UI, with built-in security802.1X, sFlow, and advanced monitoringstreamlining daily networking tasks.

Detailed Features



C1000-48FP-4X-L

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Component	Specification
Switching Capacity	176 Gbps
Forwarding Rate	130.94 Mpps
Ports	48 × 100/1000BASE-X SFP (Fiber), 4 × SFP+ Uplinks (10GBASE-X)
MAC Address Table	16,000 entries



High Port Density and Bandwidth

The C1000-48FP-4X-L delivers 48 SFP fiber ports and four SFP+ 10G uplinks. This configuration ensures seamless integration with fiber-rich enterprise backbones and supports high-density workstation aggregation. Whether deployed in campus edge or distribution locations, it provides reliable high-speed switching for converged services, reducing bottlenecks and supporting growth.

Enterprise-Grade PoE+ and Power Management

With up to 740W perpetual PoE+ capacity, the switch powers critical devices such as VoIP endpoints, wireless APs, and security cameras. Perpetual PoE+ ensures powered devices remain operational during switch reloads, reducing service interruptions in 24/7 environments. Intelligent power distribution maximizes efficiency and extends uptime for business continuity.

Secure Access and Monitoring Suite

Built-in 802.1X, SPAN, and BPDU Guard features safeguard the network from unauthorized access and prevent misconfiguration. The sampled flow (sFlow) provides advanced traffic analytics, supporting proactive threat detection and network health monitoring. These security layers protect business data and enhance compliance with IT policies in regulated industries.

Flexible, Multi-Platform Management

Administrators benefit from a choice of intuitive Web UI or advanced CLI experience. Support for Cisco DNA Center and SNMP further simplifies large-scale operations and device lifecycle management. Bluetooth and RJ-45 console options provide out-of-band access, streamlining deployments and troubleshooting for distributed teams or remote offices.

Enhanced Reliability for Consistent Operation

Designed for business-critical applications, the C1000-48FP-4X-L features robust hardware with higher MTBF metrics. Its 1RU rack-mountable fixed design saves rack space without compromising airflow or serviceability. Low average power consumption and acoustic ratings ensure efficient, quiet operation even in office or education settings where noise is a concern.

Scalable VLAN and Routing Capabilities

Support for up to 256 active VLANs and extensive MAC/ACL entries allows fine-grained traffic segmentation. VLAN IDs reach up to 4,094, enabling flexible network topologies, efficient broadcast control, and secure multi-tenant service delivery ideal for campuses or multi-department organizations.

Advanced Security and Access Control Lists

With robust support for IPv4/MAC/IPv6 ACEs (600 each), the switch allows precise access control policy implementation. These features help in managing device authorization, limiting unwanted traffic, and isolating network threats, ensuring only authorized devices and users access sensitive resources.

Environmental and Regulatory Compliance

The model complies with major international safety and EMC standards, including UL 60950-1 and EN55032. This ensures safe, reliable deployment across global regions, supports investments meeting regulatory needs, and streamlines enterprise rollout processes for multinational business environments.

Technical Specifications

Product Specifications

Feature	Value
Series	Catalyst 1000 Series
Form Factor	Fixed-configuration, rack-mountable (1RU)
Port Configuration	48 × 100/1000BASE-X SFP (Fiber)
Uplink Ports	4 × SFP+ Uplinks (10GBASE-X)
Switching Capacity	176 Gbps
Forwarding Rate	130.94 Mpps (64-byte L3 packets)
MAC Address Table	16,000 entries
VLAN Support	256 active VLANs



Feature	Value
VLAN IDs	Up to 4,094
IPv4 Routing	Direct: 542
IPv4 Routing (Indirect)	256
IPv6 Routing	Direct: 414
IPv6 Routing (Indirect)	128
CPU	ARM v7, 800 MHz
DRAM	512 MB
Flash Memory	256 MB
Dimensions	17.29 in (43.92 cm) × 16.14 in (40.99 cm) × 1.712 in (4.45 cm)
Operating Temperature (Min)	0°C (32°F)
Operating Temperature (Max)	40°C (104°F)
Operating Humidity (Min)	10% (non-condensing)
Operating Humidity (Max)	90% (non-condensing)
Operating Altitude	Up to 10,000 ft (3,000 m)
Power Input	110-220V AC (auto-sensing)
Power Consumption (Idle, 1G)	27.9W
Power Consumption (Idle, 10G)	28.0W
Power Consumption (10% Traffic, 1G)	42.77W
Power Consumption (10% Traffic, 10G)	42.73W
Power Consumption (100% Traffic, 1G)	54.25W
Power Consumption (100% Traffic, 10G)	54.49W
Weighted Power Consumption (1G)	41.64W
Weighted Power Consumption (10G)	41.74W
Acoustic Noise	47.6 dB (typical at 25°C ambient)
Management Interfaces	1 × RJ-45 console port
Management Interfaces (USB-A)	USB-A (storage/Bluetooth console)
SPAN Sessions	4 (ingress/egress)
Security ACLs (IPv4/MAC ACEs)	600
Security ACLs (IPv6 ACEs)	600
Minimum IOS Version	Cisco IOS 15.2(7)E4 or later



Feature	Value
Management Options	Cisco DNA Center, CLI, Web UI
Certifications (Safety)	UL 60950-1, EN 60950-1
Certifications (EMC)	FCC Part 15 Class A, EN55032

Product Comparison

Feature	C1000-48FP-4X-L	C1-WS3650-24PDM/ K9	C9500-32C-EDU
Port Configuration	48 × 100/1000BASE-X SFP (Fiber), 4 × SFP+ (10GBASE-X)	24 × 10/100/1000Base-T PoE+, 2 × 10G SFP+	32 × 100G QSFP28
Switching Capacity	176 Gbps	92 Gbps	6.4 Tbps
Forwarding Rate	130.94 Mpps	68.45 Mpps	4.8 Bpps
PoE+ Support	Up to 740W (Perpetual PoE+)	Up to 370W PoE+	Not supported
Management Options	Web UI, CLI, Cisco DNA Center, SNMP	Web UI, CLI, SNMP	CLI, Cisco DNA Center
MAC Address Table	16,000 entries	24,000 entries	128,000 entries
Dimensions (W × D × H)	17.29 × 16.14 × 1.712 in	17.5 × 11.8 × 1.7 in	1.72 × 17.5 × 21.5 in
Routing Capability	Basic Layer 2, some Layer 3	Layer 2, Static Layer 3	Full Layer 3, advanced routing
Stacking	Not supported	StackWise stacking supported	StackWise Virtual/Stacking supported
Target Scenario	Enterprise, campus edge, high-density fiber	Access for SMB, PoE-rich deployments	Core/distribution in large enterprise and education

Accessories

Category	Accessories
Included Accessories	<ul style="list-style-type: none"> - Power Cable - Rack Mount Kit - Quick Start Guide



Category	Accessories
Optional Accessories	<ul style="list-style-type: none">- SFP Transceiver Module- Extended Power Shelf- Cable Management Arm



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References

[1] Cisco. (2023). Catalyst 1000 Series Switches Data Sheet. Retrieved from <https://www.cisco.com/c/en/us/products/collateral/switches/catalyst-1000-series-switches/nb-06-cat1k-ser-switch-ds-cte-en.html>