



Cisco C1-C4510R+E Datasheet

Product Overview

- Cisco's Catalyst 4500 Series delivers enterprise-class performance and a scalable, secure network foundation for businesses.
- The C1-C4510R+E switch is ideal for distributed enterprises, campus networks, and organizations requiring reliable access for users and devices.
- Offering a 10-slot rack-mount chassis, 10GE uplinks, flexible power, high-performance Layer 2-4 switching, and PoE+/UPOE support.
- Advanced features include 1+1 supervisor engine redundancy, redundant fans, and integrated power supply for high availability.
- Simplified centralized management enhances operational efficiency and supports forward/backward compatibility across Catalyst generations.
- Providing a future-proof backbone, the C1-C4510R+E minimizes downtime and supports secure, mobile, and high-performance connectivity for all business sizes.

Product Highlights

- **Borderless Network Ready:** Enables high-performance, secure, and mobile user experiences across Layer 2-4 switching for enterprise environments.
- **Infrastructure Flexibility:** Backwards and forwards compatible for multiple Catalyst generations, supporting simple upgrades and phased deployments.
- **Integrated High Availability:** Supports 1+1 supervisor engine redundancy, redundant fans, and power for continuous network operation.
- **Enhanced Uplink Options:** 10 Gigabit Ethernet uplinks with PoE+/UPOE deliver flexible, high-speed connectivity for evolving enterprise needs.

Detailed Features



C1-C4510R+E

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Component	Specification
Expansion Slots	10 (total) / 10 (free) x expansion slot
Installed Modules Qty (Max)	0 (installed) / 10 (max)



Intelligent Network Services

The Catalyst 4500E Series extends comprehensive control to the network edge, featuring advanced QoS, security, predictable performance, and device management for scalability across large infrastructures. This allows organizations to manage growing numbers of users and applications efficiently with robust service quality controls.

High TCAM Resource Availability

Equipped with up to 384,000 TCAM entries, the platform delivers full-featured service capacity, ensuring wire-speed routing and switching regardless of active QoS or security policies, crucial for dense and dynamic enterprise environments.

Flexible, Scalable Architecture

Supporting up to four chassis and supervisor options, the common architecture scales to 388 ports. Modular design supports both legacy and next-generation line cards, enabling cost-efficient upgrades and long-term investment protection.

Redundant System Design

R+E chassis models feature high availability with dual redundant supervisor engines, subsecond failover, and In-Service Software Upgrades (ISSUs). This design ensures uninterrupted collaboration, voice, and mission-critical business functions.

Nonstop Forwarding and SSO

Nonstop forwarding with stateful switchover (NSF/SSO) ensures packets are forwarded without interruption during engine switchovers, maintaining service availability for essential applications and VoIP deployments in enterprise networks.

Seamless Software Upgrades

ISSU support allows full software image upgrades without downtime, reducing maintenance window impact. This feature is essential for organizations that demand always-on communication and minimal disruption to end users.

Backward Compatibility

Supports existing Cisco Catalyst 4000 and classic 4500 Series line cards, furthering Cisco's commitment to long-term scalability, easy migration, and reducing hardware refresh costs for IT teams.

Advanced Security and Manageability

Comprehensive policy controls and management features integrate security at every layer, allowing centralized, granular access control, threat mitigation, and simplified administrative tasks without sacrificing network visibility or agility.

Technical Specifications

Product Specifications

Feature	Value
Device Type	Switch
Enclosure Type	Rack-mountable 14U
Expansion Slots	10 (total) / 10 (free) x expansion slot
Installed Modules Qty	0 (installed) / 10 (max)
Power Device	Internal power supply - hot-plug
Installed Power Quantity	0 (installed) / 2 (max)
Power Redundancy	Optional
Power Redundancy Scheme	1+1 (with optional power supply)
Rack Mounting Kit	Included
MTBF	179,714 hours



Feature	Value
Compliant Standards	NEBS level 3, FCC Class A certified, CISPR 22 Class A, EN 60950, EN 61000-3-2, EN55022, IEC 60950, EN 61000-3-3, EN55024, EN55022 Class A, UL 60950, EN50082-1, CSA 22.2 No. 60950, EN 61000-6-1, ACA TS001, AS/NZS 3260, FCC Part 68, AS/NZ 3548 Class A, JATE, ICES-003 Class A, CS-03, FCC CFR47 Part 15, VCCI Class A
Width	17.3 in
Depth	12.5 in
Height	24.3 in
Weight	54.52 lbs
Min Operating Temperature	32 °F
Max Operating Temperature	104 °F
Humidity Range Operating	10 - 90% (non-condensing)
Min Storage Temperature	-40 °F
Max Storage Temperature	167 °F

Product Comparison

Feature	C1-C4510R+E	C1-N9K-C93180YC-EX	Arista DCS-7160-48YC6-F
Chassis Slots	10	1	1
Expansion Slots	10 (total)/10 (free)	NA	NA
Switching Capacity	Up to 848 Gbps (max)	3.6 Tbps	6.4 Tbps
Supervisor Redundancy	1+1 supported	Supported	Supported
PoE Capability	PoE+/UPOE support	No PoE	No PoE
Uplink Type	10 × GE, supports 10GE modules	48 × 25/10G, 6 × 100G	48 × 25/10G, 6 × 100G
Management	CLI, SNMP, Web, ISSU	Cisco NX-OS, SNMP, CLI	Arista EOS, CloudVision
MTBF	179,714 hours	NA	NA
Height/Size	14U rack-mount	1RU	1RU



Accessories

Category	Accessories
Included Accessories	- Power Supply (not included by default) - Rack Mounting Kit - Fan Tray
Optional Accessories	- Supervisor Engine Module - SFP/Transceiver Modules - Redundant Power Supply



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References

[1] Cisco Systems. (2023). Cisco Catalyst 4500 Series Switches Data Sheet. Retrieved from https://www.cisco.com/c/en/us/products/collateral/switches/catalyst-4500-series-switches/product_data_sheet0900aecd801792b1.html