

Cisco C1-C4506-E

Datasheet



Product Overview

- Cisco Catalyst 4500 Series is designed to deliver consistent, high-performance, and secure networking for evolving enterprise environments.
- The C1-C4506-E targets a wide range of users, making it ideal for mid-sized enterprises, branch offices, education, and hospitality networks.
- The chassis features 6 slots, with 5 dedicated line-card slots and 1 supervisor engine slot, providing scalable bandwidth up to 48 Gbps per slot.
- It offers backward compatibility across multiple generations, supports up to 10 Gigabit Ethernet uplinks, PoE+ and UPOE, and ensures flexible deployments.
- Advanced resiliency features such as redundant fans, software-based fault tolerance, and 1 + 1 power supply decrease downtime and simplify operations.
- Organizations benefit from a future-proof infrastructure that boosts productivity, optimizes performance, and ensures long-term value.

Product Highlights

- **Borderless Network Performance:** Supports secure, mobile, and high-performance Layer 2-4 switching for a seamless user experience across enterprise environments.
- **Future-Proof Uplink and PoE:** 10GE uplinks and support for PoE+/UPOE provide high bandwidth and flexible power delivery for growing network demands.
- **Centralized Forwarding Architecture:** Simplifies virtualization, collaboration, and manageability with robust and consistent forwarding.
- **Integrated Resiliency:** Redundant fans and power, plus software-based fault tolerance, ensure business continuity and minimize operational risks.

Detailed Features



C1-C4506-E

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Component	Specification
Total Slots	6
Line-Card Slots	5
Supervisor Engine Slots	1



Intelligent Edge Services

The Catalyst 4500E series extends intelligent network services such as advanced QoS, robust security, predictable performance, and unified management to the edge. This empowers organizations to support diverse business applications while maintaining strict control and visibility.

High-Capacity TCAM Resources

To deliver high feature capacity, the switch integrates ample TCAM with up to 384,000 entries. This enables simultaneous wire-speed routing, switching, and the deployment of advanced features like QoS and security without compromising overall network throughput.

Flexible Chassis Architecture

Supporting four chassis and four supervisor engine options, the Catalyst 4500E offers flexible scalability up to 388 ports. The modular design adapts to dynamic organizational requirements, streamlining expansion and future upgrades at minimal additional investment.

Service Continuity Technologies

Features such as nonstop forwarding (NSF/SSO) and In-Service Software Upgrades (ISSU) minimize traffic interruption. These technologies promote uninterrupted packet forwarding, ensuring high availability for mission-critical applications such as collaboration and VoIP.

Resilient Redundancy Design

Redundant supervisor engines (R+E chassis) and power provide subsecond failover and seamless switchover. This ensures uninterrupted services and strengthens the network against unexpected outages, mitigating business disruption.

Backward Compatibility

The 4500E series supports legacy Catalyst 4000/4500 line cards, protecting investments for customers with existing deployments. This compatibility reduces the costs of technology upgrades and lowers the total cost of ownership across enterprise lifecycles.

Comprehensive Security

The platform integrates advanced security features supporting dynamic threat defense, identity management, and granular traffic control. These safeguards help ensure compliance and protect data against modern threats, essential for sensitive enterprise environments.

Enterprise and Branch Scalability

Designed for both headquarter and branch deployments, the 4500E allows organizations to standardize on one platform, reducing complexity in large-scale networks and supporting future business expansion effortlessly.

Technical Specifications

Product Specifications

Feature	Value
Total number of slots	6
Line-card slots	5
Supervisor engine slots	1
Dedicated supervisor engine slot numbers	1
Supervisor engine redundancy	No
Supervisor engines supported	Supervisor Engines 8-E, 8L-E, 7-E, 7L-, 6-E, and 6L-E
Maximum PoE per slot	1500W
Bandwidth scalability per line-card slot	Up to 48 Gbps on all slots
Number of power supply bays	2
AC input power	1000W AC, 1400W AC, 1300W ACV, 2800W ACV, 4200W ACV, 6000W ACV, 9000W ACV
DC input power	1400W DC (triple input), 1400W-DC-P



Feature	Value
Integrated PoE	Yes
Minimum number of power supplies	1
Power supplies supported	Yes
Number of fan-tray bays	1
Location of 19-inch rack-mount	Front
Location of 23-inch rack-mount	Front (option)
Dimensions (H x W x D)	17.38 x 17.31 x 12.50 in. (44.13 x 43.97 x 31.70 cm)
Rack units (RU)	10RU
Chassis weight (with fan tray)	40.50 lb (18.37 kg)
Mounting	19- and 23-in. rack compatible (19-in. rack and cable guide hardware included)
Physical Specifications	See above

Product Comparison

Feature	C1-C4506-E	C1-C4510R+E	C1-C4503E-S7L+48V+
Total Slots	6	10	3
Line-card Slots	5	8	2
Supervisor Engine Slots	1	2	1
Maximum Bandwidth per Slot	Up to 48 Gbps	Up to 48 Gbps	Up to 48 Gbps
Supervisor Redundancy	No	Yes (1+1 Redundancy)	No
Maximum Power Supply	9000W ACV	9000W ACV	4200W ACV
PoE/UPOE Support	PoE+/UPOE	PoE+/UPOE	PoE+/UPOE
Physical Dimensions (HxWxD)	17.38 x 17.31 x 12.50 in	24.47 x 17.31 x 18.30 in	12.37 x 17.31 x 12.50 in
Rack Units (RU)	10RU	13RU	7RU



Feature	C1-C4506-E	C1-C4510R+E	C1-C4503E-S7L+48V+
Chassis Weight (with fan tray)	40.50 lb (18.37 kg)	80.6 lb (36.56 kg)	26.8 lb (12.2 kg)
Application Scenario	Mid-sized/branch networks	Large campus/core	Compact branch/edge

Accessories

Category	Accessories
Included Accessories	<ul style="list-style-type: none">- Power Supply Unit- Fan Tray Module- Basic Mounting Kit
Optional Accessories	<ul style="list-style-type: none">- Supervisor Engine Module- Additional Line Cards- SFP Transceiver Modules



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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