

Cisco

C1-C4506E-S7L+96V+

Datasheet



Product Overview

- Cisco Catalyst 4500E Series switches are designed to power high-performance, borderless enterprise networks with maximum resiliency and scalability.
- Targeted for enterprises seeking future-ready networking, the platform fits distributed branches, campus LANs, and data center edge deployments.
- Equipped with centralized architecture, it offers up to 10GE uplinks, PoE+/UPOE support, and wide compatibility with various line card generations.
- Key features include built-in virtualizations, integrated hardware/software redundancy, and flexible slot configurations to suit expanding needs.
- Centralized management and simplified operations streamline network scaling, security, and application integration for organizations of any size.
- The 4500E delivers investment protection and reliable uptime, enabling business continuity, secure access, and seamless connectivity in diverse environments.

Product Highlights

- **Borderless Performance:** High-performance Layer 2-4 switching equips enterprises for security, mobility, and efficiency across large-scale networks.
- **Investment Protection:** Backward and forward compatibility secures ROI while supporting evolving infrastructure requirements and service demands.
- **Future-Ready Uplinks:** 10GE uplinks with PoE+/UPOE enable seamless integration of power-hungry devices and next-gen applications.
- **Integrated Resiliency:** Redundant supervisors and hardware/software fault tolerance help minimize downtime and ensure operational continuity.

Detailed Features



C1-C4506E-S7L+96V+

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Component	Specification
Supervisor Uplinks	2 × 10G SFP+
Line Cards Included	2 × WS-X4648-RJ45V+E
Line Card Ports	48 × 10/100/1000BASE-T (RJ45) per card
PoE+ Support	IEEE 802.3at (30W/port)



Intelligent Network Services

The Cisco Catalyst 4500E Series delivers advanced intelligent services such as sophisticated QoS, proactive security, and comprehensive management. Utilizing a robust feature set, it supports seamless mobility, voice, and data traffic handling for business-critical applications. Thorough monitoring and automation reduce manual effort and ensure optimal performance.

High-Capacity TCAM Resources

With up to 384,000 TCAM entries, the 4500E enables high feature capacity without compromising wire-speed switching. This architecture offloads functions like QoS, security ACLs, and policy enforcement from the main CPU, ensuring predictable performance and responsiveness even under heavy network service loads.

Unified and Scalable Architecture

Built on a modular chassis system, the 4500E family offers up to four chassis and supervisor engine choices, supporting up to 388 ports. This common architecture simplifies hardware and software upgrades, making the platform easy to expand and adapt as business needs grow, without costly replacements.

Redundant Supervisor Engine Design

High availability is achieved via 1+1 redundant supervisor engines in supported chassis. Rapid subsecond switchover and full-image In-Service Software Upgrades (ISSUs) prevent service interruptions, supporting business continuity for collaboration and real-time voice services.

Nonstop Forwarding (NSF/SSO)

The 4500E supports NSF and stateful switchover features to maintain uninterrupted packet forwarding during supervisor engine transitions. This capability is critical for mission-critical enterprise networks, where even brief outages can impact productivity and customer experience.

Comprehensive Power and PoE Support

The series incorporates Power over Ethernet Plus (PoE+) and Universal PoE (UPOE) capabilities, delivering up to 30W per port. This ensures reliable support for connected devices such as IP phones, wireless access points, and surveillance cameras, supporting modern office environments.

Advanced Layer 3 Routing

Support for dynamic protocols including OSPF, EIGRP, and BGP (with licensing) provides proven Layer 3 routing capability across complex campus and branch topologies. Hardware-accelerated IPv6 routing enables smooth transition to next-generation networks.

Enterprise-Grade Reliability

Integrated hardware and software resiliency including redundant fans, 1+1 power supplies, and software-based fault tolerance minimizes downtime. This approach ensures workforce productivity, maximizes profitability, and secures ongoing customer satisfaction for organizations of all sizes.

Technical Specifications

Product Specifications

Feature	Value
Model	C1-C4506E-S7L+96V+
Brand	Cisco
Chassis	WS-C4506-E (6-slot)
Form Factor	10RU rack-mountable
Supervisor Engine Model	WS-X45-SUP7L-E
Supervisor Switching Capacity	160 Gbps (per slot)
Supervisor Forwarding Rate	250 Mpps
Supervisor Memory DRAM	4GB
Supervisor Memory Flash	4GB
Supervisor Uplinks	2 × 10G SFP+



Feature	Value
Line Cards Included	2 × WS-X4648-RJ45V+E
Line Card Ports	48 × 10/100/1000BASE-T (RJ45) per card
PoE+ Support	IEEE 802.3at (30W/port)
Line Card Bandwidth	24 Gbps per slot (2:1 oversubscribed)
Power Supply Type	96V DC (1400W)
Power Supply Redundancy	Supports 1+1 configuration
Power Input	Dual -48V DC (15A each)
Total Switching Capacity	928 Gbps (full chassis)
VLAN Support	4,096 VLANs
Layer 3 Routing	OSPF, EIGRP, BGP (Enterprise license required)
IPv6 Support	Hardware-accelerated
Dimensions (H × W × D)	17.5 in × 19.5 in × 12.5 in (44.45 cm × 50.8 cm × 31.75 cm)
Operating Temperature Min	0°C (32°F)
Operating Temperature Max	40°C (104°F)
Humidity	10% to 95% non-condensing
Altitude Range	-60 m to 3,000 m
Base License	LAN Base (Upgradeable to IP Base/Enterprise)
Cisco ONE Benefits	License portability, software updates included
Certifications	FCC Part 15 Class A, UL 60950-1, CE

Product Comparison

Feature	C1-C4506E-S7L+96V+	C1-C4503E-S7L+48V+	C1000-48T-4X-L
Chassis	WS-C4506-E (6-slot)	WS-C4503-E (3-slot)	Fixed
Supervisor Engine	WS-X45-SUP7L-E	WS-X45-SUP7L-E	N/A
Number of Line Cards	2 × WS-X4648-RJ45V+E	1 × WS-X4648-RJ45V+E	N/A
Switching Capacity	928 Gbps (full chassis)	428 Gbps (full chassis)	176 Gbps
Ports per Line Card	48 × 10/100/1000BASE-T (RJ45)	48 × 10/100/1000BASE-T (RJ45)	48 × 10/100/1000BASE-T



Feature	C1-C4506E-S7L+96V+	C1-C4503E-S7L+48V+	C1000-48T-4X-L
Uplinks	2 × 10G SFP+	2 × 10G SFP+	4 × 1G SFP+
PoE+ Support	IEEE 802.3at (30W/port)	IEEE 802.3at (30W/port)	No
Power Supply	96V DC (1400W), 1+1 redundancy	48V DC (1100W), 1+1 redundancy	AC, internal
Layer 3 Routing	OSPF, EIGRP, BGP (license req.)	OSPF, EIGRP, BGP (license req.)	Static, RIP, OSPF
VLAN Support	4,096 VLANs	4,096 VLANs	4,000 VLANs
Management	Centralized, hardware/software redundancy	Centralized, hardware/software redundancy	Web UI, CLI
Form Factor	10RU rack-mountable	7RU rack-mountable	Fixed, 1RU

Accessories

Category	Accessories
Included Accessories	- Power Supply Module - Rack Mount Kit - Console Cable
Optional Accessories	- SFP+ Transceiver - Additional Line Card - Redundant Power Supply



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Contact Us

Email

High Connectivity: sales@router-switch.com

Expert Technical Support: ccie-support@router-switch.com

Cooperative Partnerships: ccie-support@router-switch.com

Phone

USA: +1-626-655-0998

Hong Kong: +852-25925389 / +852-25925411

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Global Branches

Headquarters (Hong Kong)

Rm 605, 6/F, Fa Yuen Comm Bldg, 75-77 Fa Yuen St, Mongkok, Kowloon, Hong Kong, China

USA Branch

3592 Rosemead Blvd, B #220, Rosemead, CA 91770, USA

Shenzhen Branch

Jingfeng Building, 1001 Shangbu South Road, Futian District, Shenzhen, China

UK Branch

Third Floor, 207 Regent Street, London W1B 3HH, UK



References

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