

Cisco

C1-C4503E-S7L+48V+

Datasheet



Product Overview

- The Cisco Catalyst 4500 Series combines reliable switching and rich services for high performance and secure network operations.
- Designed for business campuses, large enterprises, and organizations seeking scalable edge and core connectivity.
- Key features include 48 x 10/100/1000 Mbps Ethernet ports, dual 10-Gigabit uplinks, and Power over Ethernet (PoE) support.
- Advanced redundancies and a centralized architecture ensure smooth operation and fast failover.
- IT staff benefit from simplified deployment, backward compatibility for legacy investment, and flexible management options.
- This switch is ideal for those needing a robust, future-ready backbone that supports growing bandwidth, virtualization, and network resilience.

Product Highlights

- **Borderless Performance:** Delivers seamless networking with high throughput and low latency for consistently high user experience.
- **Integrated Security & Mobility:** Supports robust access controls and flexible deployment for mobile users and secure data sharing.
- **PoE+ and UPOE Support:** Enables simple connection and power delivery for Wi-Fi APs, IP phones, and cameras, reducing cabling needs.
- **Resilient Architecture:** Offers redundant fans, PSUs, and supervisor engines, helping to minimize downtime and ensuring business continuity.

Detailed Features



C1-C4503E-S7L+48V+

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Component	Specification
Enclosure Type	Rack-mountable 7U
Gigabit Ports	48 x 10/100/1000 + 2 x X2
PoE Support	PoE
Slot Options	3 total / 1 free expansion slot
Chassis Type	Modular design



Intelligent Network Services

The Cisco Catalyst 4500E Series delivers advanced QoS, predictable performance, and comprehensive management. Sophisticated security, proper traffic prioritization, and granular resource control support rich multimedia and data networks. These features enable safe, efficient operation even under heavy loads or advanced application usage.

Dedicated TCAM Resources

With ternary content-addressable memory (TCAM) supporting up to 384,000 entries, the switch empowers high feature capacity for wire-speed switching and routing. Critical services such as QoS policies and security remain active with no drop in performance, allowing consistent application delivery across all ports.

Modular Scalability & Chassis Options

Supporting up to 388 ports through four chassis choices, the C4500E architecture adapts quickly to network expansions. Enterprises can choose the right configuration, adapting bandwidth and supervisor engines without forklift upgrades or major downtime, thus protecting network investment.

High Availability Architecture

R+E chassis designs ensure maximum uptime with 1+1 redundant supervisor engines and subsecond failover. Full-image In-Service Software Upgrades (ISSU) and Nonstop Forwarding with Stateful Switchover (NSF/SSO) keep business-critical applications such as VoIP and collaboration running without disruption.

Seamless Feature Upgrades

Thanks to ISSU, software can be updated while maintaining uninterrupted data forwarding. This reduces maintenance windows and minimizes operational risk, letting businesses patch vulnerabilities or enhance functions without user experience degradation.

Forward and Backward Compatibility

Use existing line cards from classic Cisco Catalyst 4000/4500 Series for easy upgrades. This backwards-compatible approach ensures organizations can incrementally enhance capabilities while protecting prior investments.

Enterprise & Branch Versatility

Designed for both central office and branch deployments, the switch brings scale, intelligence, and resilience where its needed most. Flexible management interfaces help IT teams tailor setups for evolving enterprise scenarios, from campus core to remote offices.

Comprehensive Security Framework

Rich access controls, virtual LAN segmentation, and integrated resiliency combine for strong network security. These features help organizations meet strict compliance and protect sensitive operations in demanding business environments.

Technical Specifications

Product Specifications

Feature	Value
Device Type	Switch - 48 ports - managed - with Cisco Catalyst 4500 Supervisor Engine 7L-E, Cisco Line Cards (WS-X4648-RJ45V+E)
Enclosure Type	Rack-mountable 7U
Subtype	Gigabit Ethernet
Ports	48 x 10/100/1000 + 2 x X2
Power Over Ethernet (PoE)	PoE
Performance Bandwidth	48 Gbps
IPv4 switching	225 Mpps
IPv6 switching	110 Mpps
Capacity - QoS hardware entries	64000
Active VLANs	4096



Feature	Value
Switched virtual interfaces (SVIs)	4094
IPv4 routes	64000
IPv6 routes	32000
MAC Address Table Size	55K entries
Jumbo Frame Support	9216 bytes
Routing Protocol	RIP-1, RIP-2, IGMPv2, IGMP, IGMPv3, static IPv4 routing, static IPv6 routing, RIPng
Remote Management Protocol	SNMP 1, RMON 1, RMON 2, RMON 9, Telnet, SNMP 3, SNMP 2c, TFTP, SSH, SSH-2, CLI
Features	Modular design, layer 2 switching, power over Ethernet (PoE), auto-negotiation, trunking, VLAN support, IGMP snooping, traffic shaping, Broadcast Storm Control, IPv6 support, Multicast Storm Control, Spanning Tree Protocol (STP) support, DHCP snooping, Dynamic Trunking Protocol (DTP) support, Port Aggregation Protocol (PAgP) support, Access Control List (ACL) support, Quality of Service (QoS), Jumbo Frames support, MLD snooping, Dynamic ARP Inspection (DAI), Per-VLAN Spanning Tree Plus (PVST+), Cisco EnergyWise technology, Rapid Per-VLAN Spanning Tree Plus (PVRST+), LLDP support
Compliant Standards	IEEE 802.3, IEEE 802.3u, IEEE 802.3z, IEEE 802.1D, IEEE 802.1Q, IEEE 802.3ab, IEEE 802.1p, IEEE 802.3af, IEEE 802.3ad (LACP), IEEE 802.1w, IEEE 802.1x, IEEE 802.3ae, IEEE 802.1s, IEEE 802.1ab (LLDP)
Processor	1.5 GHz
RAM	2 GB SDRAM
Flash Memory	1 GB
Status Indicators	Port status, power, link OK, status of modules, link/activity
Interfaces	1 x console RJ-45 1 x management (Gigabit LAN) RJ-45 48 x 1000Base-T RJ-45 PoE 2 x 10Gbit LAN X2 1 x USB Type A
Expansion Slots	3 (total) / 1 (free) x expansion slot 1 (total) / 1 (free) x CompactFlash Card
Installed Modules Qty (Max)	2 (installed) / 3 (max)
Power Device	Internal power supply - hot-plug
Installed Qty	0 (installed) / 2 (max)
Power Redundancy	Optional
Power Redundancy Scheme	1+1 (with optional power supply)



Feature	Value
Rack Mounting Kit	Included
Compliant Standards (additional)	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

Product Comparison

Feature	C1-C4503E-S7L+48V+	WS-C4948E	C1-N3K-C3548X
Switching Capacity	48 Gbps	136 Gbps	336 Gbps
Forwarding Rate	225 Mpps (IPv4)	102 Mpps	252 Mpps
Fixed Ports	48 x 10/100/1000 + 2 x X2	48 x 10/100/1000 + 4 x 1G SFP	48 x 10G SFP+
PoE Capability	PoE	No	No
Expansion Slot(s)	3 total / 1 free	None	No
Redundant Power	1+1 optional	2 hot-swappable	Redundant (optional)
Supervisor/CPU	7L-E Supervisor, 1.5 GHz CPU	Integrated CPU	High-performance multi-core CPU
Layer 3 Features	Advanced routing & IPv6	Static/OSPF/RIP	Comprehensive L3, VXLAN
Management	CLI, SNMP, SSH	CLI, SNMP, HTTP/HTTPS	CLI, SNMP, RESTful API

Accessories

Category	Accessories
Included Accessories	- Power Adapter - Console Cable - Rack Mounting Kit
Optional Accessories	- Additional Supervisor Engine - X2 Transceiver Modules - Redundant Power Supply



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References

[1] Cisco. (2024). 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