



Cisco

C1-C2960X-48TD-L

Datasheet



Product Overview

- Cisco Catalyst 2960-X Series switches deliver reliable and secure enterprise-class access switching for campus and branch networks.
- Engineered for business, education, and government users, these switches are ideal for secure local area network deployments and network modernization.
- Featuring up to 48 Gigabit Ethernet ports, 2 x 10G SFP+ uplinks, and robust stacking options, they support growing connectivity and bandwidth demands.
- Advanced Layer 2 and Layer 3 features, PoE+ support, and enhanced visibility set the 2960-X Series apart from basic access switches.
- Centralized Cisco IOS management tools simplify device onboarding, monitoring, and troubleshooting, minimizing operational effort.
- Whether for distributed branches or large campuses, the 2960-X provides scalable, secure, and energy-efficient network operations built on proven Cisco innovation.

Product Highlights

- **High-Density Gigabit Ports:** Choose from 24 or 48 Gigabit Ethernet ports to handle high user/device densities with line-rate forwarding.
- **Flexible Uplink Options:** Supports 4 x 1GE SFP or 2 x 10GE SFP+ uplinks, providing resilient and fast backbone connections.
- **Comprehensive Management:** Manage switches with web UI, CLI, SNMP, Bluetooth, RJ-45 & USB console, plus integration with Cisco DNA Center.
- **Enhanced Stacking and Security:** FlexStack-Plus/ Extended stacking, advanced Layer 3, OSPF routing, NetFlow analytics, and advanced network security features.

Detailed Features



C1-C2960X-48TD-L

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Component	Specification
Uplink Interfaces	2 x 10G SFP+ Ports
Downlink Ports	48 x Ethernet 10/100/1000 Gigabit ports
Switching Capacity	216 Gbps
Forwarding Rate	130.9 Mpps
Maximum VLANs	1023



Advanced Network Security

MAC-based VLANs, Cisco TrustSec with SXP, comprehensive 802.1X, and robust IPv6 FHS secure the network against a variety of internal and external threats. This multi-layered approach ensures adaptive protection for users, devices, and evolving security policies in modern enterprises.

Comprehensive Device Classification

Device sensor and classifier enable seamless device onboarding, including BYOD, and work with Cisco ISE for identity-based policies. This integration delivers precise access control and management for diverse device profiles, ensuring secure network segmentation.

Trusted Image Integrity

Trust Anchor Technology verifies the authenticity of Cisco IOS Software images during boot, ensuring software integrity and preventing unauthorized code execution. This builds a chain of trust from hardware to running applications, crucial for critical business networks.

Intelligent QoS Management

The 2960-X Series enables precise traffic control with up to eight egress queues per port, strict priority queuing, SRR, WTD, and granular policers. This supports consistent performance for voice, video, and data applications across demanding business environments.

Flexible TCAM and SDM Templates

Switching Database Manager (SDM) automatically optimizes TCAM allocation based on selected features, maximizing MAC, routing, security, and QoS scalability for varied deployment needs in access, distribution, or specialized roles.

Resiliency and Redundancy

Cross-stack EtherChannel, fast Flex Links, and ELLW improve uptime and network availability. The stackable design with dual-redundant power supply options ensures high availability for critical business services.

Reduced Operational Complexity

Cisco SmartOperations tools streamline LAN planning, deployment, and troubleshooting, minimizing required manual intervention and lowering total cost of ownership for businesses of any size.

Automated Deployment and Updates

Cisco AutoSecure, DHCP auto-config, and centralized stack management with automatic software version updates ease initial rollout and ongoing maintenance, speeding deployments and ensuring consistent security baselines.

Technical Specifications

Product Specifications

Feature	Value
enclosure type	Rack-mountable - 1U
Ports	48 x 10/100/1000 + 2 x 10G SFP+
Network management Interface	10/100 Mbps Ethernet (RJ-45)
Available PoE Power	None
Forwarding bandwidth(Gbps)	108Gbps
Maximum stacking number	8
Stack Bandwidth	80G
Forwarding Performance	130.9Mpps
Switching bandwidth	216Gbps
Maximum active VLANs	1023
MAC Address Table Size	16K (default)
CPU	APM86392 600MHz dual core



Feature	Value
RAM	512 MB
Flash Memory	128 MB
Status Indicators	Per-port status: Link integrity, disabled, activity, speed, and full duplex
System status	System, RPS, Stack link status, link duplex, and link speed
Expansion / Connectivity	Console ports USB (Type-B), Ethernet (RJ-45)
Stacking cable	Optional
Power Redundancy Option	(PWR-RPS2300)
Voltage range (Auto)	110V-240V
Power Consumption Operational	0.049KVA
Miscellaneous Width	17.5 Inches (44.5 cm)
Depth	11 Inches (27.9 Cm)
Height	1.75 Inches (4.5 cm)
Package Weight	20.26 Pounds (9.19Kg)
Weight	9.6 Pounds (4.3Kg)
Rack Mounting Kit	optional
MTBF in hours	445,460
Operating temperature up to 5000 ft (1500 m)	23°F to 113°F
Operating temperature up to 10,000 ft (3000 m)	23°F to 104°F
Short-term exception at sea level*	23°F to 131°F
Short-term exception up to 5000 feet (1500 m)*	23°F to 122°F
Short-term exception up to 10,000 feet (3000 m)*	23°F to 113°F
Short-term exception up to 13,000 feet (4000 m)*	23° to 104°F
Storage temperature up to 15,000 feet (4573 m)	-13° to 158°F
Operating altitude	Up to 10,000 feet
Storage altitude	Up to 13,000 feet
Operating relative humidity	10% to 95% noncondensing
Storage relative humidity	10% to 95% noncondensing



Product Comparison

Feature	C1-C2960X-48TD-L	C1000-24P-4X-L	C6880-X
Switching Capacity	216Gbps	56Gbps	2.56Tbps
Downlink Ports	48 x 10/100/1000Base-T	24 x 10/100/1000Base-T	80 x 1/10G SFP+
Uplink Ports	2 x 10G SFP+	4 x 1G SFP	8 x 40G QSFP+
Stacking Capacity	80G, up to 8 units	Not supported	Up to 8 units
PoE Support	None	370W PoE	Not supported (modular)
Layer 3 Features	Static Routing, OSPF, RIP	Static Routing optional	Full Layer 3, MPLS
MAC Address Table	16K	8K	128K
Management Options	Web UI, CLI, SNMP, Bluetooth	Web UI, CLI	Web UI, CLI, SNMP
Application Scenario	Campus/Branch Access	SMB/Branch Access	Core/Aggregation Switch

Accessories

Category	Accessories
Included Accessories	- Power Cord - Rack Mount Kit - Console Cable
Optional Accessories	- SFP+ Transceiver Module - Stack Module - Redundant Power Supply



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References

[1] Cisco. (2023). Cisco Catalyst 2960-X Series Switches Datasheet. Retrieved from https://www.cisco.com/c/en/us/products/collateral/switches/catalyst-2960-x-series-switches/datasheet_c78-728232.html#SwitchModelsandConfigurations