# Cisco Catalyst 2960-Plus Series Switches

The Cisco® Catalyst® 2960-Plus Series Switches are fixed-configuration Fast Ethernet switches (Figure 1) that provide enterprise-class Layer 2 switching for branch offices, conventional workspaces, and infrastructure applications. They enable reliable and secure operations with lower total cost of ownership through a range of Cisco IOS® software features, including Cisco Catalyst SmartOperations.

**Figure 1.** Cisco Catalyst 2960-Plus Series Switches

## Product Highlights

Cisco Catalyst 2960-Plus switches feature:

- 24 or 48 Fast Ethernet ports
- Small Form-Factor Pluggable (SFP) and 1000BASE-T Gigabit Ethernet uplinks
- IEEE 802.3af-compliant Power over Ethernet (PoE)
- LAN Base or LAN Lite Cisco IOS® Software feature set
- SmartOperations tools that simplify deployment and reduce the cost of network administration
- Cisco EnergyWise technology to manage energy consumed by connected devices
- An enhanced limited lifetime hardware warranty (E-LLW), providing next-business-day replacement

## Applications and Benefits

The Cisco Catalyst 2960-Plus Series provides cost-effective, enterprise class Ethernet switching for:

- Branch offices, remote sites, and retail locations
- Conventional desktop workspaces
- Building infrastructure, physical security, and other nontraditional access applications

Benefits of the 2960-Plus include:

- Robust quality of service (QoS) that prioritizes voice and critical business applications
- Flexible security features that can limit access to the network and mitigate threats
- Tools that reduce total cost of ownership through simplified operations and automation

## Switch Configurations

Table 1 shows Cisco Catalyst 2960-Plus Series configurations.

**Table 1.** Cisco Catalyst 2960-Plus Series Configurations

| Model | 10/100 Ethernet Interfaces | Uplink Interfaces | Cisco IOS Software Feature Set | Available PoE Power |
|---|---|---|---|---|
| **Cisco Catalyst 2960-Plus 48PST-L** | 48 | 2 SFP and 2 1000BASE-T | LAN Base | 370W |
| **Cisco Catalyst 2960-Plus 24PC-L** | 24 | 2 (SFP or 1000BASE-T) | LAN Base | 370W |
| **Cisco Catalyst 2960-Plus 24LC-L** | 24 | 2 (SFP or 1000BASE-T) | LAN Base | 123W |
| **Cisco Catalyst 2960-Plus 48TC-L** | 48 | 2 (SFP or 1000BASE-T) | LAN Base | - |
| **Cisco Catalyst 2960-Plus 24TC-L** | 24 | 2 (SFP or 1000BASE-T) | LAN Base | - |
| **Cisco Catalyst 2960-Plus 48PST-S** | 48 | 2 SFP and 2 1000BASE-T | LAN Lite | 370W |
| **Cisco Catalyst 2960-Plus 24PC-S** | 24 | 2 (SFP or 1000BASE-T) | LAN Lite | 370W |
| **Cisco Catalyst 2960-Plus 24LC-S** | 24 | 2 (SFP or 1000BASE-T) | LAN Lite | 123W |
| **Cisco Catalyst 2960-Plus 48TC-S** | 48 | 2 (SFP or 1000BASE-T) | LAN Lite | - |
| **Cisco Catalyst 2960-Plus 24TC-S** | 24 | 2 (SFP or 1000BASE-T) | LAN Lite | - |

## Robust Security

The Cisco Catalyst 2960-Plus Series Switches provide a range of security features to limit access to the network and mitigate threats, including:

- Features to control access to the network, including Flexible Authentication, 802.1x Monitor Mode, and RADIUS Change of Authorization
- Threat defense features including Port Security, Dynamic ARP Inspection, and IP Source Guard
- Private VLAN Edge to provide isolation between switch ports

## Enterprise-Class Quality of Service

The Cisco 2960-Plus Series Switches offer intelligent traffic management that keeps everything flowing smoothly. Flexible mechanisms for marking, classification, and scheduling deliver superior performance for data, voice, and video traffic, all at wire speed. Primary QoS features include:

- Four egress queues per port and strict priority queuing so that the highest priority packets are serviced ahead of all other traffic
- Shaped Round Robin (SRR) scheduling and Weighted Tail Drop (WTD) congestion avoidance
- Flow-based rate limiting and up to 64 aggregate or individual policers per port
- 802.1p class of service (CoS) and differentiated services code point (DSCP) field classification, with marking and reclassification on a per-packet basis by source and destination IP address, MAC address, or Layer 4 TCP/UDP port number

## Cisco Catalyst SmartOperations

Cisco Catalyst SmartOperations is a comprehensive set of capabilities that simplify LAN planning, deployment, monitoring, and troubleshooting. Deploying SmartOperations tools reduces the time and effort required to operate the network and lowers total cost of ownership (TCO).

- **Cisco Smart Install** enables zero-touch deployment by providing automated Cisco IOS Software image installation and configuration when new switches are connected to the network.
- **Cisco Auto Smartports** enables automatic configuration of switch ports as devices connect to the switch, with settings optimized for the device type.
- **Cisco Smart Troubleshooting** is an extensive array of diagnostic commands and system health checks within the switch, including Smart Call Home.

## Cisco EnergyWise

Cisco EnergyWise™ empowers IT teams to measure and manage the power consumed by devices connected to the network, providing measurable energy savings and reduced greenhouse gas emissions. EnergyWise policies can be used to control the power consumed by PoE-powered endpoints, desktop and data-center IT equipment, and a wide range of building infrastructure. EnergyWise technology is included on all Cisco Catalyst 2960-Plus Series Switches.

## Power over Ethernet

Cisco Catalyst 2960-Plus switches support IEEE 802.3af Power over Ethernet (PoE) to deliver lower total cost of ownership for deployments that incorporate Cisco IP phones, Cisco Aironet® wireless access points, or other standards-compliant PoE end devices. PoE removes the need to supply wall power to PoE-enabled devices and eliminates the cost of adding electrical cabling and circuits that would otherwise be necessary in IP phone and WLAN deployments. Table 2 shows the total PoE power available with each 2960-Plus model.

**Table 2.** Switch PoE Power Capacity

| Switch Model | Maximum Number of PoE (IEEE 802.3af) Ports* | Available PoE Power |
|---|---|---|
| **Cisco Catalyst 2960-Plus 48PST-L** | 24 ports up to 15.4W | 370W |
| **Cisco Catalyst 2960-Plus 24PC-L** | 24 ports up to 15.4W | 370W |
| **Cisco Catalyst 2960-Plus 24LC-L** | 8 ports up to 15.4W | 123W |
| **Cisco Catalyst 2960-Plus 48PST-S** | 24 ports up to 15.4W | 370W |
| **Cisco Catalyst 2960-Plus 24PC-S** | 24 ports up to 15.4W | 370W |
| **Cisco Catalyst 2960-Plus 24LC-S** | 8 ports up to 15.4W | 123W |

* Intelligent power management allows flexible power allocation across all ports.

## Network Management

The Cisco Catalyst 2960-Plus Series Switches offer a superior CLI for detailed configuration and administration. 2960-Plus switches are also supported in the full range of Cisco network management solutions.

### Cisco Prime Infrastructure

Cisco Prime™ network management solutions provide comprehensive network lifecycle management. Cisco Prime Infrastructure provides an extensive library of easy-to-use features to automate the initial and day-to-day management of your Cisco network. Cisco Prime integrates hardware and software platform expertise and operational experience into a powerful set of workflow-driven configuration, monitoring, troubleshooting, reporting, and administrative tools.

### Cisco Network Assistant

A PC-based network management application designed for small and medium-sized business (SMB) networks with up to 250 users, Cisco Network Assistant offers centralized network management and configuration capabilities. This application also features an intuitive GUI where users can easily apply common services across Cisco switches, routers, and access points.

## Cisco IOS Software

Cisco Catalyst 2960-Plus Series Switches are available with the LAN Base and LAN Lite feature sets. LAN Lite models provide reduced functionality and scalability for small deployments with basic requirements.

Note that each switch model is tied to a specific feature level; LAN Lite models cannot be upgraded to the LAN Base feature set.

## Technical Specifications

Tables 3 through 10 list information about hardware, performance, forwarding performance, mechanical and environmental specifications, connectors and interfaces, management and standards support, voltage and power ratings, and power consumption, respectively.

**Table 3.** Cisco Catalyst 2960-Plus Series Hardware

| Hardware Specifications | |
|---|---|
| **Flash memory** | 64 MB |
| **DRAM** | 128 MB |

**Table 4.** Cisco Catalyst 2960-Plus Series Performance

| Performance and Scalability | | |
|---|---|---|
| | **LAN Base (-L) Models** | **LAN Lite (-S) Models** |
| **Forwarding bandwidth** | 16 Gbps | 16 Gbps |
| **Maximum active VLANs** | 255 | 64 |
| **VLAN IDs available** | 4K | 4K |
| **Maximum transmission unit (MTU) - L3 packet** | 9000 bytes | 9000 bytes |
| **Jumbo frame - Ethernet frame** | 9018 bytes | 9018 bytes |

* Switching bandwidth is full-duplex capacity.

**Table 5.** Cisco Catalyst 2960-Plus Series Forwarding Performance

| Forwarding Rate: 64-Byte L3 Packets, Millions of packets per second | |
|---|---|
| **Cisco Catalyst 2960-Plus 48PST-L** | 13.1 |
| **Cisco Catalyst 2960-Plus 24PC-L** | 6.5 |
| **Cisco Catalyst 2960-Plus 24LC-L** | 6.5 |
| **Cisco Catalyst 2960-Plus 48TC-L** | 10.1 |
| **Cisco Catalyst 2960-Plus 24TC-L** | 6.5 |
| **Cisco Catalyst 2960-Plus 48PST-S** | 13.1 |
| **Cisco Catalyst 2960-Plus 24PC-S** | 6.5 |
| **Cisco Catalyst 2960-Plus 24LC-S** | 6.5 |
| **Cisco Catalyst 2960-Plus 48TC-S** | 10.1 |
| **Cisco Catalyst 2960-Plus 24TC-S** | 6.5 |

**Table 6.** Cisco Catalyst 2960-Plus Mechanical and Environmental Specifications

| Dimensions (H x W x D) | | |
|---|---|---|
| **Model** | **Inches** | **Centimeters** |
| **Cisco Catalyst 2960-Plus 48PST-L** | 1.73 x 17.70 x 13.07 | 4.4 x 45.0 x 33.2 |
| **Cisco Catalyst 2960-Plus 24PC-L** | | |
| **Cisco Catalyst 2960-Plus 24LC-L** | | |
| **Cisco Catalyst 2960-Plus 48TC-L** | 1.73 x 17.70 x 9.52 | 4.4 x 45.0 x 24.2 |
| **Cisco Catalyst 2960-Plus 24TC-L** | | |
| **Cisco Catalyst 2960-Plus 48PST-S** | 1.73 x 17.70 x 13.07 | 4.4 x 45.0 x 33.2 |
| **Cisco Catalyst 2960-Plus 24PC-S** | | |
| **Cisco Catalyst 2960-Plus 24LC-S** | | |
| **Cisco Catalyst 2960-Plus 48TC-S** | 1.73 x 17.70 x 9.52 | 4.4 x 45.0 x 24.2 |
| **Cisco Catalyst 2960-Plus 24TC-S** | | |
| **Weight** | | |
| **Model** | **Pounds** | **Kilograms** |
| **Cisco Catalyst 2960-Plus 48PST-L** | 12 | 5.4 |
| **Cisco Catalyst 2960-Plus 24PC-L** | 12 | 5.4 |
| **Cisco Catalyst 2960-Plus 24LC-L** | 10 | 4.5 |
| **Cisco Catalyst 2960-Plus 48TC-L** | 8 | 3.6 |
| **Cisco Catalyst 2960-Plus 24TC-L** | 8 | 3.6 |
| **Cisco Catalyst 2960-Plus 48PST-S** | 12 | 5.4 |
| **Cisco Catalyst 2960-Plus 24PC-S** | 12 | 5.4 |
| **Cisco Catalyst 2960-Plus 24LC-S** | 10 | 4.5 |
| **Cisco Catalyst 2960-Plus 48TC-S** | 8 | 3.6 |
| **Cisco Catalyst 2960-Plus 24TC-S** | 8 | 3.6 |
| **Environmental Ranges** | | |
| | **Fahrenheit** | **Centigrade** |
| **Operating temperature up to 5000 ft (1500 m)** | 23º to 113ºF | -5º to 45ºC |
| **Operating temperature up to 10,000 ft (3000 m)** | 23º to 104ºF | -5º to 40ºC |
| **Short-term exception at sea level*** | 23º to 131ºF | -5º to 55ºC |

| | | |
|---|---|---|
| **Short-term exception up to 5000 feet (1500 m)*** | 23º to 122ºF | -5º to 50ºC |
| **Short-term exception up to 10,000 feet (3000 m)*** | 23º to 113ºF | -5º to 45ºC |
| **Short-term exception up to 13,000 feet (4000 m)*** | 23º to 104ºF | -5º to 40ºC |
| **Storage temperature up to 15,000 feet (4573 m)** | 23º to 158ºF | -25º to 70ºC |
| | **Feet** | **Meters** |
| **Operating altitude** | Up to 10,000 | Up to 3,000 |
| **Storage altitude** | Up to 13,000 | Up to 4,000 |
| **Operating relative humidity** | 10% to 95% noncondensing | |
| **Storage relative humidity** | 10% to 95% noncondensing | |

| **Acoustic Noise** | | | | |
|---|---|---|---|---|
| **Measured per ISO 7779 and declared per ISO 9296.** | | | | |
| **Bystander positions operating mode at 25℃ ambient.** | | | | |
| | **Sound Pressure, dBA** | | **Sound Power, dbA** | |
| **Model** | **Typical, LpAm** | **Maximum, LpAD** | **Typical, LwA** | **Maximum, LwAD** |
| **Cisco Catalyst 2960-Plus 48PST-L** | 41 | 44 | 51 | 54 |
| **Cisco Catalyst 2960-Plus 24PC-L** | 43 | 46 | 53 | 56 |
| **Cisco Catalyst 2960-Plus 24LC-L** | 43 | 46 | 53 | 56 |
| **Cisco Catalyst 2960-Plus 48TC-L** | 33 | 36 | 43 | 46 |
| **Cisco Catalyst 2960-Plus 24TC-L** | 33 | 36 | 43 | 46 |
| **Cisco Catalyst 2960-Plus 48PST-S** | 41 | 44 | 51 | 54 |
| **Cisco Catalyst 2960-Plus 24PC-S** | 43 | 46 | 53 | 56 |
| **Cisco Catalyst 2960-Plus 24LC-S** | 43 | 46 | 53 | 56 |
| **Cisco Catalyst 2960-Plus 48TC-S** | 33 | 36 | 43 | 46 |
| **Cisco Catalyst 2960-Plus 24TC-S** | 33 | 36 | 43 | 46 |

| **Predicted Reliability** | |
|---|---|
| **Model** | **MTBF in thousands of hours**** |
| **Cisco Catalyst 2960-Plus 48PST-L** | 312 |
| **Cisco Catalyst 2960-Plus 24PC-L** | 382 |
| **Cisco Catalyst 2960-Plus 24LC-L** | 498 |
| **Cisco Catalyst 2960-Plus 48TC-L** | 623 |
| **Cisco Catalyst 2960-Plus 24TC-L** | 667 |
| **Cisco Catalyst 2960-Plus 48PST-S** | 312 |
| **Cisco Catalyst 2960-Plus 24PC-S** | 381 |
| **Cisco Catalyst 2960-Plus 24LC-S** | 498 |
| **Cisco Catalyst 2960-Plus 48TC-S** | 623 |
| **Cisco Catalyst 2960-Plus 24TC-S** | 667 |

* Not more than the following in a 1-year period: 96 consecutive hours, or 360 hours total, or 15 occurrences.
** Based on Telcordia SR-332 Issue 3 methodology.

**Table 7.** Connectors and Interfaces

| **Ethernet Interfaces** |
|---|
| • 10BASE-T ports: RJ-45 connectors, 2-pair Category 3, 4, or 5 unshielded twisted-pair (UTP) cabling<br>• 100BASE-TX ports: RJ-45 connectors, 2-pair Category 5 UTP cabling<br>• 1000BASE-T ports: RJ-45 connectors, 4-pair Category 5 UTP cabling<br>• 1000BASE-T SFP-based ports: RJ-45 connectors, 4-pair Category 5 UTP cabling |

| SFP and SFP+ Interfaces |
|---|
| For information about supported SFP/SFP+ modules, refer to the Transceiver Compatibility matrix tables at cisco.com/en/US/products/hw/modules/ps5455/products_device_support_tables_list.html. |
| **Indicator LEDs** |
| • Per-port status: Link integrity, disabled, activity, speed, and full duplex<br>• System status, Port Status, RPS, link duplex, PoE, and link speed |
| **Console** |
| Cisco Catalyst console cables:<br>• CAB-CONSOLE-RJ45 Console cable 6 ft. with RJ-45 |
| **Power** |
| • The internal power supply is an auto-ranging unit and supports input voltages between 100 and 240V AC.<br>• Use the supplied AC power cord to connect the AC power connector to an AC power outlet.<br>• The Cisco RPS connector offers connection for an optional Cisco RPS 2300 that uses AC input and supplies DC output to the switch.<br>• Only the Cisco RPS 2300 (model PWR-RPS2300) should be attached to the redundant-power-system receptacle. |

**Table 8.** Management and Standards Support

| Category | Specification | |
|---|---|---|
| **Management** | • BRIDGE-MIB<br>• CISCO-CABLE-DIAG-MIB<br>• CISCO-CDP-MIB<br>• CISCO-CLUSTER-MIB<br>• CISCO-CONFIG-COPY-MIB<br>• CISCO-CONFIG-MAN-MIB<br>• CISCO-DHCP-SNOOPING-MIB<br>• CISCO-ENTITY-VENDORTYPE-OID-MIB<br>• CISCO-ENVMON-MIB<br>• CISCO-ERR-DISABLE-MIB<br>• CISCO-FLASH-MIB<br>• CISCO-FTP-CLIENT-MIB<br>• CISCO-IGMP-FILTER-MIB<br>• CISCO-IMAGE-MIB<br>• CISCO-IP-STAT-MIB<br>• CISCO-LAG-MIB<br>• CISCO-MAC-NOTIFICATION-MIB<br>• CISCO-MEMORY-POOL-MIB<br>• CISCO-PAGP-MIB<br>• CISCO-PING-MIB<br>• CISCO-POE-EXTENSIONS-MIB<br>• CISCO-PORT-QOS-MIB<br>• CISCO-PORT-SECURITY-MIB<br>• CISCO-PORT-STORM-CONTROL-MIB<br>• CISCO-PRODUCTS-MIB<br>• CISCO-PROCESS-MIB<br>• CISCO-RTTMON-MIB<br>• CISCO-SMI-MIB<br>• CISCO-STP-EXTENSIONS-MIB<br>• CISCO-SYSLOG-MIB | • CISCO-TC-MIB<br>• CICSO-TCP-MIB<br>• CISCO-UDLDP-MIB<br>• CISCO-VLAN-IFTABLE<br>• RELATIONSHIP-MIB<br>• CISCO-VLAN-MEMBERSHIP-MIB<br>• CISCO-VTP-MIB<br>• ENTITY-MIB<br>• ETHERLIKE-MIB<br>• IEEE8021-PAE-MIB<br>• IEEE8023-LAG-MIB<br>• IF-MIB<br>• INET-ADDRESS-MIB<br>• OLD-CISCO-CHASSIS-MIB<br>• OLD-CISCO-FLASH-MIB<br>• OLD-CISCO-INTERFACES-MIB<br>• OLD-CISCO-IP-MIB<br>• OLD-CISCO-SYS-MIB<br>• OLD-CISCO-TCP-MIB<br>• OLD-CISCO-TS-MIB<br>• RFC1213-MIB<br>• RMON-MIB<br>• RMON2-MIB<br>• SNMP-FRAMEWORK-MIB<br>• SNMP-MPD-MIB<br>• SNMP-NOTIFICATION-MIB<br>• SNMP-TARGET-MIB<br>• SNMPv2-MIB<br>• TCP-MIB<br>• UDP-MIB<br>• ePM MIB |
| | | |

| Category | Specification | |
|---|---|---|
| **Standards** | • IEEE 802.1D Spanning Tree Protocol<br>• IEEE 802.1p CoS Prioritization<br>• IEEE 802.1Q VLAN<br>• IEEE 802.1s<br>• IEEE 802.1w<br>• IEEE 802.1X<br>• IEEE 802.1ab (LLDP)<br>• IEEE 802.3ad<br>• IEEE 802.3af<br>• IEEE 802.3ah (100BASE-X single/multimode fiber only)<br>• IEEE 802.3x full duplex on 10BASE-T, 100BASE-TX, and 1000BASE-T ports | • IEEE 802.3 10BASE-T<br>• IEEE 802.3u 100BASE-TX<br>• IEEE 802.3ab 1000BASE-T<br>• IEEE 802.3z 1000BASE-X<br>• RMON I and II standards<br>• SNMP v1, v2c, and v3 |
| **RFC compliance** | • RFC 768 - UDP<br>• RFC 783 - TFTP<br>• RFC 791 - IP<br>• RFC 792 - ICMP<br>• RFC 793 - TCP<br>• RFC 826 - ARP<br>• RFC 854 - Telnet<br>• RFC 951 - Bootstrap Protocol (BOOTP)<br>• RFC 959 - FTP<br>• RFC 1112 - IP Multicast and IGMP<br>• RFC 1157 - SNMP v1<br>• RFC 1166 - IP Addresses<br>• RFC 1256 - Internet Control Message Protocol (ICMP) Router Discovery<br>• RFC 1305 - NTP<br>• RFC 1492 - TACACS+<br>• RFC 1493 - Bridge MIB<br>• RFC 1542 - BOOTP extensions<br>• RFC 1643 - Ethernet Interface MIB<br>• RFC 1757 - RMON | • RFC 1901 - SNMP v2C<br>• RFC 1902-1907 - SNMP v2<br>• RFC 1981 - Path MTU Discovery for IPv6<br>• FRC 2068 - HTTP<br>• RFC 2131 - DHCP<br>• RFC 2138 - RADIUS<br>• RFC 2233 - IF MIB v3<br>• RFC 2373 - IPv6 Aggregatable Addrs<br>• RFC 2460 - IPv6<br>• RFC 2461 - IPv6 Neighbor Discovery<br>• RFC 2462 - IPv6 Autoconfiguration<br>• RFC 2463 - ICMP IPv6<br>• RFC 2474 - Differentiated Services (DiffServ) Precedence<br>• RFC 2597 - Assured Forwarding<br>• RFC 2598 - Expedited Forwarding<br>• RFC 2571 - SNMP Management<br>• RFC 3046 - DHCP Relay Agent Information Option<br>• RFC 3376 - IGMP v3<br>• RFC 3580 - 802.1X RADIUS |

**Table 9.** Voltage and Power Ratings

| Input Voltage and Current | | | |
|---|---|---|---|
| **Model** | **Voltage (Autoranging)** | **Current (Amperes)** | **Frequency** |
| **Cisco Catalyst 2960-Plus 48PST-L** | 100 to 240 VAC | 4.0 - 2.0 | 50 to 60Hz |
| **Cisco Catalyst 2960-Plus 24PC-L** | | 4.0 - 2.0 | |
| **Cisco Catalyst 2960-Plus 24LC-L** | | 1.4 - 0.8 | |
| **Cisco Catalyst 2960-Plus 48TC-L** | | 0.6 - 0.3 | |
| **Cisco Catalyst 2960-Plus 24TC-L** | | 0.4 - 0.2 | |
| **Cisco Catalyst 2960-Plus 48PST-S** | | 4.0 - 2.0 | |
| **Cisco Catalyst 2960-Plus 24PC-S** | | 4.0 - 2.0 | |
| **Cisco Catalyst 2960-Plus 24LC-S** | | 1.4 - 0.8 | |
| **Cisco Catalyst 2960-Plus 48TC-S** | | 0.6 - 0.3 | |
| **Cisco Catalyst 2960-Plus 24TC-S** | | 0.4 - 0.2 | |
| **Power Rating (kVA)** | | | |
| **Cisco Catalyst 2960-Plus 48PST-L** | 0.46 | | |
| **Cisco Catalyst 2960-Plus 24PC-L** | 0.43 | | |
| **Cisco Catalyst 2960-Plus 24LC-L** | 0.16 | | |

| | | |
|---|---|---|
| **Cisco Catalyst 2960-Plus 48TC-L** | 0.04 | |
| **Cisco Catalyst 2960-Plus 24TC-L** | 0.03 | |
| **Cisco Catalyst 2960-Plus 48PST-S** | 0.46 | |
| **Cisco Catalyst 2960-Plus 24PC-S** | 0.43 | |
| **Cisco Catalyst 2960-Plus 24LC-S** | 0.16 | |
| **Cisco Catalyst 2960-Plus 48TC-S** | 0.04 | |
| **Cisco Catalyst 2960-Plus 24TC-S** | 0.02 | |
| **DC Input Voltages (RPS Input)** | | |
| **Cisco Catalyst 2960-Plus 48PST-L** | 3A at 12V | 7A at -52V |
| **Cisco Catalyst 2960-Plus 24PC-L** | 2A at 12V | 7A at -52V |
| **Cisco Catalyst 2960-Plus 24LC-L** | 2A at 12V | 3A at -52V |
| **Cisco Catalyst 2960-Plus 48TC-L** | 3A at 12V | - |
| **Cisco Catalyst 2960-Plus 24TC-L** | 2A at 12V | - |
| **Cisco Catalyst 2960-Plus 48PST-S** | 3A at 12V | 7A at -52V |
| **Cisco Catalyst 2960-Plus 24PC-S** | 2A at 12V | 7A at -52V |
| **Cisco Catalyst 2960-Plus 24LC-S** | 2A at 12V | 3A at -52V |
| **Cisco Catalyst 2960-Plus 48TC-S** | 3A at 12V | - |
| **Cisco Catalyst 2960-Plus 24TC-S** | 2A at 12V | - |

**Table 10.** Power Consumption

| **Measured Power Consumption, Watts** | | | | |
|---|---|---|---|---|
| **Model** | **0% traffic** | **10% traffic** | **100% traffic** | **ATIS weighted average** |
| **Cisco Catalyst 2960-Plus 48PST-L** | 51.1 | 50.8 | 51.4 | 50.9 |
| **Cisco Catalyst 2960-Plus 24PC-L** | 35.4 | 35.3 | 35.6 | 35.3 |
| **Cisco Catalyst 2960-Plus 24LC-L** | 25.9 | 25.7 | 26.1 | 25.8 |
| **Cisco Catalyst 2960-Plus 48TC-L** | 30.4 | 30.2 | 30.6 | 30.2 |
| **Cisco Catalyst 2960-Plus 24TC-L** | 18.4 | 18.3 | 18.6 | 18.3 |
| **Cisco Catalyst 2960-Plus 48PST-S** | 50.8 | 50.3 | 51.1 | 50.5 |
| **Cisco Catalyst 2960-Plus 24PC-S** | 35.0 | 34.8 | 35.2 | 34.9 |
| **Cisco Catalyst 2960-Plus 24LC-S** | 25.9 | 25.7 | 26.1 | 25.8 |
| **Cisco Catalyst 2960-Plus 48TC-S** | 29.9 | 29.7 | 30.2 | 29.8 |
| **Cisco Catalyst 2960-Plus 24TC-S** | 18.8 | 18.7 | 19.1 | 18.8 |

* Using ATIS-0600015.03.2009 methodology.

**Disclaimer:** All power consumption numbers were measured under controlled laboratory conditions and are provided as an estimate.

**Note:** The wattage rating on the power supply does not represent actual power draw. It indicates the maximum power draw possible by the power supply. This rating can be used for facility capacity planning. For PoE switches, cooling requirements are smaller than total power draw because a significant portion of the load is dissipated in the endpoints.

Table 11 provides safety and compliance information.

**Table 11.** Safety and Compliance

| Category | Certifications |
|---|---|
| **Regulatory Compliance** | Products should comply with CE Marking per directives 2004/108/EC and 2006/95/EC |
| **Safety** | UL 60950-1 Second Edition<br>CAN/CSA-C22.2 No. 60950-1 Second Edition<br>EN 60950-1 Second Edition<br>IEC 60950-1 Second Edition<br>AS/NZS 60950-1 |
| **EMC - Emissions** | 47CFR Part 15 (CFR 47) Class A<br>AS/NZS CISPR22 Class A<br>CISPR22 Class A<br>EN55022 Class A<br>ICES003 Class A<br>VCCI Class A<br>EN61000-3-2<br>EN61000-3-3<br>KN22 Class A<br>CNS13438 Class A |
| **EMC - Immunity** | EN55024<br>CISPR24<br>EN300386<br>KN24 |
| **Environmental** | Reduction of Hazardous Substances (RoHS) including Directive 2011/65/EU |
| **Telco** | |

## Cisco Enhanced Limited Lifetime Hardware Warranty

Cisco Catalyst 2960-Plus Series Switches come with an enhanced limited lifetime warranty (E-LLW). The E-LLW provides the same terms as Cisco's standard limited lifetime warranty but adds next-business-day delivery of replacement hardware, where available, and 90 days of 8X5 Cisco Technical Assistance Center (TAC) support.

Your formal warranty statement, including the warranty applicable to Cisco software, appears in the Cisco information packet that accompanies your Cisco product. We encourage you to review carefully the warranty statement shipped with your specific product before use.

**Table 12.** Warranty Terms

| Cisco Enhanced Limited Lifetime Hardware Warranty | |
|---|---|
| **Device covered** | Applies to all Cisco Catalyst 2960-Plus Series Switches. |
| **Warranty duration** | As long as the original end user continues to own or use the product. |
| **End-of-life policy** | In the event of discontinuance of product manufacture, Cisco warranty support is limited to five (5) years from the announcement of discontinuance. |
| **Hardware replacement** | Cisco or its service center will use commercially reasonable efforts to ship a Cisco Catalyst 2960-Plus replacement part for next business day delivery, where available. Otherwise, a replacement will be shipped within ten (10) working days after the receipt of the RMA request. Actual delivery times may vary depending on customer location. |
| **Effective date** | Hardware warranty commences from the date of shipment to customer (and in case of resale by a Cisco reseller, not more than ninety [90] days after original shipment by Cisco). |

| Cisco Enhanced Limited Lifetime Hardware Warranty | |
|---|---|
| **TAC support** | Cisco will provide during customer's local business hours, 8 hours per day, 5 days per week basic configuration, diagnosis, and troubleshooting of device-level problems for up to 90 days from the date of shipment of the originally purchased Cisco Catalyst 2960-Plus product. This support does not include solution or network-level support beyond the specific device under consideration. |
| **Cisco.com access** | Warranty allows guest access only to Cisco.com. |

| Technical Services |
|---|
| **Cisco SMARTnet Service**<br>• Around-the-clock, global access to the Cisco TAC<br>• Unrestricted access to the extensive Cisco.com knowledge base and tools<br>• Next-business-day, 8x5x4, 24x7x4, or 24x7x2 advance hardware replacement and onsite parts replacement and installation available[1]<br>• Ongoing operating system software updates within the licensed feature set |
| **Cisco Smart Foundation Service**<br>• Next-business-day advance hardware replacement as available<br>• Access to SMB TAC during business hours (access levels vary by region)<br>• Access to Cisco.com SMB knowledge base<br>• Online technical resources through Smart Foundation Portal<br>• Operating system software bug fixes and patches |
| **Cisco Smart Care Service**<br>• Network-level coverage for the needs of small and medium-sized businesses<br>• Proactive health checks and periodic assessments of Cisco network foundation, voice, and security technologies<br>• Technical support for eligible Cisco hardware and software through Smart Care Portal<br>• Cisco operating system and application software updates and upgrades[2]<br>• Next-business-day advance hardware replacement as available, 24x7x4 option available[1] |
| **Cisco SP Base Service**<br>• Around-the-clock, global access to the Cisco TAC<br>• Registered access to Cisco.com<br>• Next-business-day, 8x5x4, 24x7x4, and 24x7x2 advance hardware replacement. Return to factory option available[1]<br>• Ongoing operating system software updates[2] |
| **Cisco Focused Technical Support Services**<br>Three levels of premium, high-touch services are available:<br>• Cisco High-Touch Operations Management Service<br>• Cisco High-Touch Technical Support Service<br>• Cisco High-Touch Engineering Service<br>Valid Cisco SMARTnet® or SP Base contracts are required on all network equipment. |

[1] Advance hardware replacement is available in various service-level combinations. For example, 8x5xNBD indicates that shipment will be initiated during the standard 8-hour business day, 5 days a week (the generally accepted business days within

the relevant region), with next-business-day (NBD) delivery. Where NBD is not available, same day shipping is provided. Restrictions apply; review the appropriate service descriptions for details.

[2] Cisco operating system updates include the following: maintenance releases, minor updates, and major updates within the licensed feature set.

## Ordering Information

Tables 14 through 18 provide information about ordering, accessories, redundant power supplies, SFP modules, and power cords, respectively.

**Table 14.** Cisco Catalyst 2960-Plus Series Switches Ordering Information

| Part Number | 10/100 Ethernet Interfaces | Uplink Interfaces | Cisco IOS Software Feature Set | Available PoE Power |
|---|---|---|---|---|
| **WS-C2960+48PST-L** | 48 | 2 SFP and 2 1000BASE-T | LAN Base | 370W |
| **WS-C2960+24PC-L** | 24 | 2 (SFP or 1000BASE-T) | LAN Base | 370W |
| **WS-C2960+24LC-L** | 24 | 2 (SFP or 1000BASE-T) | LAN Base | 123W |
| **WS-C2960+48TC-L** | 48 | 2 (SFP or 1000BASE-T) | LAN Base | - |
| **WS-C2960+24TC-L** | 24 | 2 (SFP or 1000BASE-T) | LAN Base | - |
| **WS-C2960+48PST-S** | 48 | 2 SFP and 2 1000BASE-T | LAN Lite | 370W |
| **WS-C2960+24PC-S** | 24 | 2 (SFP or 1000BASE-T) | LAN Lite | 370W |
| **WS-C2960+24LC-S** | 24 | 2 (SFP or 1000BASE-T) | LAN Lite | 123W |
| **WS-C2960+48TC-S** | 48 | 2 (SFP or 1000BASE-T) | LAN Lite | - |
| **WS-C2960+24TC-S** | 24 | 2 (SFP or 1000BASE-T) | LAN Lite | - |

**Table 15.** Cisco Catalyst 2960-Plus Accessories

| Part Numbers | Description |
|---|---|
| **CAB-CONSOLE-RJ45** | Console cable 6 ft with RJ45 |
| **RCKMNT-1RU=** | Spare rack-mount kit for Cisco Catalyst 2960 and 2960-Plus Series for 19- and 24-inch racks |
| **RCKMNT-REC-1RU=** | 1 RU recessed rack-mount kit for Cisco Catalyst 2960 and 2960-Plus Series |
| **PWR-CLP** | Power cable restraining clip |

**Table 16.** Cisco Catalyst 2960-Plus Redundant Power Supply Options

| Part Numbers | Description |
|---|---|
| **PWR-RPS2300** | Cisco Redundant Power System 2300 and blower, no power supply |
| **BLNK-RPS2300=** | Spare bay insert for Cisco Redundant Power System 2300 |
| **CAB-RPS2300=** | Spare RPS2300 cable for Cisco Catalyst 2960 switches |
| **BLWR-RPS2300=** | Spare 45 CFM blower for RPS 2300 |
| **C3K-PWR-750WAC=** | RPS 2300 750W AC power supply spare for Cisco Catalyst 2960 switches |
| **ACC-RPS2300=** | Spare accessory kit for Cisco Redundant Power System 2300 |

**Table 18.** Power Cords for Cisco Catalyst 2960-Plus Series

| Part Numbers | Description |
|---|---|
| **CAB-AC** | AC Power Cord (US, Canada), C13, NEMA 5-15P, 2.5m |
| **CAB-ACE** | AC Power Cord (Europe), C13, CEE 7, 1.5m |
| **CAB-ACI** | AC Power Cord (Italy), C13, CEI 23-16, 2.5m |
| **CAB-ACU** | AC Power Cord (UK), C13, BS 1363, 2.5m |
| **CAB-ACA** | AC Power Cord (China/Australia), C13, AS 3112, 2.5m |
| **CAB-ACS** | AC Power Cord (Switzerland), C13, IEC 60884-1, 2.5m |
| **CAB-ACR** | AC Power Cord (Argentina), C13, EL 219 (IRAM 2073), 2.5m |
| **CAB-ACC** | AC Power Cord (China), C13, PRC/3 GB2099/GB1002 |
| **CAB-JPN** | AC Power Cord (Japan), C13, Japan 2-prong, 1.8m |
| **CAB-IND-10A** | AC Power Cord (India), C13, IS1293, 2.5m |
| **CAB-ACBZ-10A** | AC Power Cord (Brazil), C13,BR-3-20, 10A |
| **CAB-ACSA** | AC Power Cord (South Africa), C15, SABS 164-1, 1.8m |

## Contact Cisco

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