

Cisco Catalyst 2960-S and 2960 Series Switches with LAN Lite Software



Scalable Network Management and Enhanced Security for Growing Small and Medium-Sized Businesses

Cisco offers a family of reliable, high-performance managed switches designed specifically for your small or medium-sized business. The Cisco® Catalyst® 2960-S and 2960 Series Switches with LAN Lite software provide the security and performance that your business applications demand and are scalable to support your continually evolving network environment. By providing these capabilities in your network foundation, you can improve the availability of your critical applications, protect your business information, more easily accommodate expanding services, and optimize your network bandwidth to more effectively deliver information and applications.

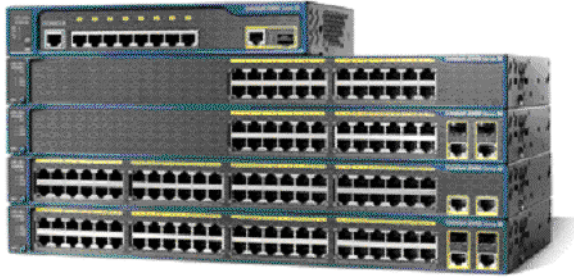
The Cisco Catalyst 2960-S and 2960 Series with LAN Lite software are fixed-configuration, Layer 2 edge switches that provide Fast Ethernet or Gigabit Ethernet connectivity and support essential security, quality of service (QoS), and high availability for growing businesses. These switches deliver the reliability and performance you need to provide a fully scalable managed network environment for your business.

The Cisco Catalyst 2960 Series with LAN Lite software (Figure 1) provides:

- Fast Ethernet or Gigabit Ethernet connectivity to deliver superior application performance
- Power over Ethernet (PoE) of up to 15.4W per port to supply power to network-attached devices
- Robust security capabilities, including identity services, to protect your critical assets and help you comply with regulatory requirements
- QoS intelligence to prioritize traffic from different applications and optimize bandwidth in your network
- Redundancy and resiliency features to protect the availability of your critical applications
- Simple, scalable management
- Scalability to continually accommodate new applications and services as your business evolves
- Long-term investment protection with a limited lifetime hardware warranty and ongoing software updates at no additional cost

The Cisco Catalyst 2960-S (Figure 2) contains the features of the Catalyst 2960 and a number of additional enhancements, such as:

- 24 and 48 ports of Gigabit Ethernet desktop connectivity
- USB storage interface for file backup, distribution, and simplified operations
- Enhanced troubleshooting for problem solving, including link connectivity and cable diagnostics
- Single IP address management for up to 16 switches
- Limited lifetime hardware warranty, including next-business-day replacement with 90-day service and support

Figure 1. Cisco Catalyst 2960 Series Switches with LAN Lite Software**Figure 2.** Cisco Catalyst 2960-S Series Switches with LAN Lite Software

Features and Benefits

The Cisco Catalyst 2960-S and 2960 Series Switches with LAN Lite Software provide:

- **High performance:** Today's workers and business applications place higher demands on networks than ever before. The Cisco Catalyst 2960-S and 2960 Series offer Fast or Gigabit Ethernet connectivity to the desktop and Gigabit Ethernet uplink connectivity, providing the bandwidth you need to meet rigorous application demands, alleviate bottlenecks, and boost application performance—enhancing the productivity of your employees while increasing the return on your existing infrastructure and application investments.
- **Power over Ethernet:** Cisco Catalyst 2960 Series PoE models simplify the deployment of solutions such as wireless LANs, IP telephony systems, and IP video surveillance cameras, as well as any IEEE 802.3af-compliant end devices, by providing up to 15.4W of power per port. This capability eliminates the need for separate power supplies for Ethernet-powered devices, as well as the costs of running additional cable and circuits. The switches also provide intelligent, integrated PoE management features that give you greater visibility into and control over your power usage and streamline interoperability in multivendor networks.

Table 1 lists the PoE capacity of the Cisco Catalyst 2960 Series Switches.

Table 1. Catalyst 2960 Switch PoE Power Capacity

| Switch Model | Maximum Number of PoE Ports* | Available PoE Power |
|-----------------------------|---|---------------------|
| Cisco Catalyst 2960-48PST-S | 24 ports up to 15.4W 48 ports up to 7.7W | 370W |
| Cisco Catalyst 2960-24PC-S | 24 ports up to 15.4W | 370W |
| Cisco Catalyst 2960-24LC-S | 8 ports up to 15.4W | 123W |

*Intelligent power allows flexible power allocation across all ports.

- **Cisco EnergyWise technology:** Cisco EnergyWise is an innovative architecture embedded in the Cisco Catalyst 2960-S and 2960 Series Switches that enables the measurement of power consumption in the network infrastructure and network-attached devices. The network discovers Cisco EnergyWise manageable devices, monitors their power consumption, and takes action based on business rules to reduce power consumption. Cisco EnergyWise helps to manage power consumption, resulting in companywide optimized power delivery and reduced energy costs. Together, Cisco EnergyWise technology and Catalyst switches help reduce greenhouse gas emissions, optimize power consumption, and increase energy cost savings.

- **Ease of operation:** The Cisco Catalyst 2960-S and 2960 Series help reduce operating costs with built-in capabilities that make these switches easy to use. The switches support Cisco Catalyst Smart Operations, a comprehensive set of capabilities that simplify LAN deployment, configuration, and troubleshooting to help reduce operational costs. Cisco Catalyst Smart Operations include Cisco Smart Install and Cisco Auto Smartports. Cisco Smart Install automatically configures the Cisco IOS® Software image without user intervention. Cisco Auto Smartports discovers and configures Cisco devices as they are plugged into the switch.
- **Enhanced security:** Modern businesses face both more serious security threats and more demanding regulatory compliance requirements than ever before. The Cisco Catalyst 2960-S and 2960 Series Switches with LAN Lite Software provide a wide range of security features to protect your important business information, keep unauthorized users off the network, and protect against security breaches. Key features include:
 - Cisco TrustSec™, provides authentication, access control, and security policy administration to secure network connectivity and resources. On the Cisco Catalyst 2960-S and 2960 Series Switches with LAN Lite, the TrustSec solution prevents unauthorized access and helps ensure that users get only their designated privileges. It provides the ability to dynamically administer granular levels of network access, helping prevent unauthorized users from accessing the network.
 - MAC address notification features to allow administrators to monitor the network and track where and when users enter the network.
 - Port-level security features to limit access to identified MAC addresses as well as limit the number of devices plugged into a switch port, thereby reducing the risk of rogue access points.
 - Secure encryption of administrative and network management traffic to protect against eavesdropping and tampering and to comply with regulatory requirements such as the Payment Card Industry (PCI) standard
- **Improved availability and scalability:** The Cisco Catalyst 2960-S and 2960 Series Switches with LAN Lite Software provide the reliability you need to help ensure that your employees stay connected and productive at all times. The switches are also scalable, allowing your network to more easily accommodate new technology deployments and continually deliver optimal performance as your business and applications evolve. Important high-availability and scalability features include Spanning Tree Protocol enhancements that support increased redundancy and improved convergence times in the event of a link outage, as well as the ability to efficiently optimize the extra capacity inherent in a redundant design.
- **QoS intelligence:** The Cisco Catalyst 2960-S and 2960 Series Switches with LAN Lite Software support QoS features that give you the flexibility to classify and prioritize the traffic on your network. For example, you can give traffic from mission-critical applications such as enterprise resource planning (ERP) and point-of-sale (POS) systems a higher priority than less delay-sensitive traffic such as large file downloads and videos, reducing network congestion and helping ensure baseline performance for the most essential applications. The switches dynamically identify and classify groups of traffic, allowing you to assign up to four different priority levels. Once configured, these intelligent QoS capabilities perform scheduling and congestion control functions to preserve bandwidth and improve the performance of critical applications.
- **Superior manageability:** The Cisco Catalyst 2960-S and 2960 Series Switches with LAN Lite Software provide several management options. The Cisco Network Assistant management tool provides intuitive, scalable management features to help you easily deploy and operate your network. Using the Cisco Network Assistant's PC-based simple graphical interface, wizards, and Cisco Smartports tools, you can quickly configure all your Cisco switches, routers, and wireless access points in your network. Cisco Network Assistant includes the Cisco Troubleshooting Advisor, which identifies cabling problems, common configuration errors, and other potential problems in the network and recommends corrective action. Cisco Network Assistant is offered as a free download. Visit www.cisco.com/go/cna for the latest version. For more

extensive management, the switches also support configuration and integration with Simple Network Management Protocol (SNMP)-based network management platforms, such as the CiscoWorks LAN Management Solution (LMS). CiscoWorks LMS provides an extensive library of easy-to-use features to automate the initial and day-to-day management of your Cisco network infrastructure. Using Cisco hardware and software platform knowledge and operational experience, CiscoWorks LMS is a powerful set of workflow-driven configuration, monitoring, troubleshooting, reporting, and administrative tools.

Product Specifications

Table 2 lists the hardware specifications for the Cisco Catalyst 2960-S and 2960 Series Switches with LAN Lite Software. Table 3 lists the power specifications for the switches, and Table 4 gives the power ratings. Table 5 provides the management and standards support, and Table 6 gives information on the switches' safety certifications and compliance.

Table 2. Hardware Specifications

| Performance and Scalability | Description |
|---------------------------------|--|
| Forwarding bandwidth | 16 Gbps (2960), 32 Gbps (2960-S) |
| Flash memory | 32 MB (2960), 64 MB (2960-S) |
| Memory DRAM | 64 MB (2960), 128 MB (2960-S) |
| Max VLANs | 64 |
| VLAN IDs | 4000 |
| Maximum transmission unit (MTU) | Up to 9000 bytes |
| Jumbo frames | 9016 bytes (2960), 9216 bytes (2960-S) |
| Forwarding Rate | |
| Model | Forwarding Rate |
| 2960S-48TS-S | 74.4 mpps |
| 2960S-24TS-S | 38.7 mpps |
| 2960-8TC-S | 2.7 mpps |
| 2960-24-S | 3.6 mpps |
| 2960-24TC-S | 6.5 mpps |
| 2960-24PC-S | 6.5 mpps |
| 2960-24LC-S | 6.5 mpps |
| 2960-48TT-S | 10.1 mpps |
| 2960-48TC-S | 10.1 mpps |
| 2960-48PST-S | 13.3 mpps |

| Resource | Default | QoS | Dual |
|---|---------|------|------|
| Unicast MAC addresses | 8000 | 8000 | 8000 |
| IPv4 Internet Group Management Protocol (IGMP) groups | 256 | 256 | 256 |
| IPv4 MAC QoS access control entries (ACEs) | 128 | 384 | 0 |
| IPv4 MAC security ACEs | 384 | 128 | 256 |

Connectors and Cabling and Indicators

- 10BASE-T ports: RJ-45 connectors, 2-pair Category 3, 4, or 5 unshielded twisted pair (UTP) cabling
- 100BASE-TX ports: RJ-45 connectors, 2-pair Category 5 UTP cabling
- 1000BASE-T ports: RJ-45 connectors, 4-pair Category 5 UTP cabling
- 1000BASE-T SFP-based ports: RJ-45 connectors, 4-pair Category 5 UTP cabling

- 1000BASE-SX, -LX/LH SFP-based ports: LC fiber connectors (single- and multimode fiber)
- 100BASE-FX: LC fiber connectors (single- and multimode fiber)
- Customers can provide power to a switch only by using the internal power supply. The connector is located at the back of the switch. These switches do not have a redundant-power-supply port.
- The internal power supply is an auto-ranging unit.
- The internal power supply supports input voltages of between 100 and 240 VAC.
- Use the supplied AC power cord to connect the AC power connector to an AC power outlet.

LED Indicators

- Per-port status: Link integrity, disabled, activity, speed, and full duplex
- System status: System, link status, link duplex, PoE, and link speed

| Dimensions (HxWxD): Model | Inches | Centimeters |
|---------------------------|--------------------|-------------------|
| 2960S-48TS-S | 1.75 x 17.5 x 11.8 | 4.5 x 44.5 x 29.9 |
| 2960S-24TS-S | 1.75 x 17.5 x 11.8 | 4.5 x 44.5 x 29.9 |
| 2960-8TC-S | 1.73 x 10.6 x 6.4 | 4.4 x 27 x 16.3 |
| 2960-24-S | 1.73 x 17.5 x 9.3 | 4.4 x 44.5 x 23.6 |
| 2960-24TC-S | 1.73 x 17.5 x 9.3 | 4.4 x 44.5 x 23.6 |
| 2960-24PC-S | 1.73 x 17.5 x 13 | 4.4 x 44.5 x 33.2 |
| 2960-24LC-S | 1.73 x 17.5 x 13 | 4.4 x 44.5 x 33.2 |
| 2960-48TT-S | 1.73 x 17.5 x 9.3 | 4.4 x 44.5 x 23.6 |
| 2960-48TC-S | 1.73 x 17.5 x 9.3 | 4.4 x 44.5 x 23.6 |
| 2960-48PST-S | 1.73 x 17.5 x 13 | 4.4 x 44.5 x 33.2 |

| Weight: Model | Pounds | Kilograms |
|---------------|--------|-----------|
| 2960S-48TS-S | 10.5 | 4.8 |
| 2960S-24TS-S | 10 | 4.5 |
| 2960-8TC-S | 3 | 1.4 |
| 2960-24-S | 8 | 3.6 |
| 2960-24TC-S | 8 | 3.6 |
| 2960-24PC-S | 12 | 5.4 |
| 2960-24LC-S | 10 | 4.5 |
| 2960-48TT-S | 8 | 3.6 |
| 2960-48TC-S | 8 | 3.6 |
| 2960-48PST-S | 12 | 5.4 |

| Environmental Ranges | Fahrenheit | Centigrade |
|---|---------------|---------------|
| Operating temperature up to 5000 ft (1500m) | 23° to 113°F | -5° to 45°C |
| Operating temperature up to 10,000 ft (3000m) | 23° to 104°F | -5° to 40°C |
| Short-term exception at sea level* | 23° to 31°F | -5° to +55°C |
| Short-term exception up to 5,000 feet (1500m)* | 23° to 122°F | -5° to +50°C |
| Short-term exception up to 10,000 feet (3000m)* | 23° to 113°F | -5° to +45°C |
| Storage temperature | Same as above | Same as above |
| | Feet | Meters |
| Operating altitude | Up to 10,000 | Up to 3000 |
| Storage altitude | Up to 13,000 | Up to 4000 |

| Environmental Ranges | Fahrenheit | Centigrade |
|-----------------------------|--------------------------|------------|
| 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°C ambient.

| Model | Sound Pressure | | Sound Power | |
|--------------|----------------|----------------|---------------|----------------|
| | LpA (Typical) | LpAD (Maximum) | LwA (Typical) | LwAD (Maximum) |
| 2960S-48TS-S | 44 dB | 47 dB | 5.4 B | 5.7 B |
| 2960S-24TS-S | | | | |
| 2960-24-S | 40 dB | - | - | - |
| 2960-24TC-S | 40 dB | - | - | - |
| 2960-24PC-S | 48 dB | - | - | - |
| 2960-24LC-S | 48 dB | - | - | - |
| 2960-48TT-S | 40 dB | - | - | - |
| 2960-48TC-S | 40 dB | - | - | - |
| 2960-48PST-S | 48 dB | - | - | - |

Typical: Noise emission for a typical configuration and PoE load up to 185W.

Maximum: Statistical maximum to account for production variations

Note: Compact switch 2960-8TC-S (no fan) has 0 dB sound pressure.

| Mean Time Between Failures (MTBF)* | |
|------------------------------------|---------------|
| 2960S-48TS-S | 357,740 hours |
| 2960S-24TS-S | 335,014 hours |
| 2960-8TC-S | 615,549 hours |
| 2960-24-S | 429,847 hours |
| 2960-24TC-S | 403,745 hours |
| 2960-24PC-S | 242,818 hours |
| 2960-24LC-S | 311,007 hours |
| 2960-48TT-S | 339,743 hours |
| 2960-48TC-S | 336,983 hours |
| 2960-48PST-S | 181,979 hours |

* Not more than the following in a 1-year period: 96 consecutive hours, or 360 hours total, or 15 occurrences.

Table 3. Power Specifications

| Description | Specifications | | | | |
|---|----------------|--------------|------------|-------------|---------------------------------------|
| Model | 2960S-48TS-S | 2960S-24TS-S | 2960-8TC-S | 2960-24TC-S | 2960-24PC-S |
| 100 Percent Throughput | | | | | |
| Measured power consumption | 53W | 36W | 12W | 22W | 27W |
| 5 Percent Throughput | | | | | |
| Measured power consumption | 50W | 36W | 11W | 21W | 24W |
| 5 Percent Throughput (with 50 Percent PoE Loads) | | | | | |
| Measured power consumption | - | - | - | - | Switch power: 237W PoE power: 185W |

| Description | Specifications | | | | |
|---|----------------|---|---|---|---------------------------------------|
| 100 Percent Throughput (with Maximum Possible PoE Loads) | | | | | |
| Measured power consumption | - | - | - | - | Switch power: 433W PoE power: 357W |

| Description | Specifications | | | |
|---|---------------------------------------|-------------|-------------|---------------------------------------|
| Models | 2960-24LC-S | 2960-48TT-S | 2960-48TC-S | 2960-48PST-S |
| 100 Percent Throughput | | | | |
| Measured power consumption | 79W | 71W | 55W | 52W |
| 5 Percent Throughput | | | | |
| Measured power consumption | 78W | 70W | 54W | 50W |
| 5 Percent Throughput (with 50 Percent PoE Loads) | | | | |
| Measured power consumption | Switch power: 98W PoE power: 62W | - | - | Switch power: 460W PoE power: 339W |
| 100 Percent Throughput (with Maximum Possible PoE Loads) | | | | |
| Measured power consumption | Switch power: 162W PoE power: 119W | - | - | Switch power: 262W PoE power: 187W |

Table 4. Voltage and Power Ratings

| Model | Voltage (Autoranging) | Current | Frequency |
|--------------|-----------------------|--------------|-------------|
| 2960S-48TS-S | 100 to 240 VAC | 1 to 0.5 A | 50 to 60 Hz |
| 2960S-24TS-S | 100 to 240 VAC | 1 to 0.5 A | 50 to 60 Hz |
| 2960-8TC-S | 100 to 240 VAC | 0.5 to 0.3 A | 50 to 60 Hz |
| 2960-24-S | 100 to 240 VAC | 1.3 to 0.8 A | 50 to 60 Hz |
| 2960-24TC-S | 100 to 240 VAC | 1.3 to 0.8 A | 50 to 60 Hz |
| 2960-24PC-S | 100 to 240 VAC | 8.0 to 4.0 A | 50 to 60 Hz |
| 2960-24LC-S | 100 to 240 VAC | 3.0 to 1.5 A | 50 to 60 Hz |
| 2960-48TT-S | 100 to 240 VAC | 1.3 to 0.8A | 50 to 60 Hz |
| 2960-48TC-S | 100 to 240 VAC | 1.3 to 0.8A | 50 to 60 Hz |
| 2960-48PST-S | 100 to 240 VAC | 5.0 to 2.0 A | 50 to 60 Hz |

| Model | Power Rating |
|--------------|--------------|
| 2960S-48TS-S | 0.13 kVA |
| 2960S-24TS-S | 0.09 kVA |
| 2960-8TC-S | 0.035 kVA |
| 2960-24-S | 0.05 kVA |
| 2960-24TC-S | 0.05 kVA |
| 2960-24PC-S | 0.47 kVA |
| 2960-24LC-S | 0.175 kVA |
| 2960-48TT-S | 0.075 kVA |
| 2960-48TC-S | 0.075 kVA |
| 2960-48PST-S | 0.5 kVA |

PoE

- Maximum power supplied per port: 15.4W
- Total power dedicated to PoE: 370W

Table 5. Management and Standards Support

| Description | Specification | |
|----------------|--|---|
| Management | <ul style="list-style-type: none"> • BRIDGE-MIB • CISCO-CABLE-DIAG-MIB • CISCO-CDP-MIB • CISCO-CLUSTER-MIB • CISCO-CONFIG-COPY-MIB • CISCO-CONFIG-MAN-MIB • CISCO-ENTITY-VENDORTYPE-OID-MIB • CISCO-ENVMON-MIB • CISCO-ERR-DISABLE-MIB • CISCO-FLASH-MIB • CISCO-FTP-CLIENT-MIB • CISCO-IGMP-FILTER-MIB • CISCO-IMAGE-MIB • CISCO-IP-STAT-MIB • CISCO-LAG-MIB • CISCO-MAC-NOTIFICATION-MIB • CISCO-MEMORY-POOL-MIB • CISCO-PAGP-MIB • CISCO-PING-MIB • CISCO-PORT-QOS-MIB • CISCO-PORT-SECURITY-MIB • CISCO-PORT-STORM-CONTROL-MIB • CISCO-POWER-ETHERNET-EXT-MIB • CISCO-PRODUCTS-MIB • CISCO-PROCESS-MIB • CISCO-RTTMON-MIB • CISCO-SMI-MIB • CISCO-STP-EXTENSIONS-MIB • CISCO-SYSLOG-MIB • Cisco-UDLD-MIB | <ul style="list-style-type: none"> • CISCO-TC-MIB • CISCO-TCP-MIB • CISCO-UDLD-MIB • CISCO-VLAN-IFTABLE-RELATIONSHIP-MIB • CISCO-VLAN-MEMBERSHIP-MIB • CISCO-VTP-MIB • ENTITY-MIB • ETHERLIKE-MIB • IEEE8021-PAE-MIB • IEEE8023-LAG-MIB • IF-MIB • INET-ADDRESS-MIB • OLD-CISCO-CHASSIS-MIB • OLD-CISCO-FLASH-MIB • OLD-CISCO-INTERFACES-MIB • OLD-CISCO-IP-MIB • OLD-CISCO-SYS-MIB • OLD-CISCO-TCP-MIB • OLD-CISCO-TS-MIB • RFC1213-MIB • RMON-MIB • RMON2-MIB • SNMP-FRAMEWORK-MIB • SNMP-MPD-MIB • SNMP-NOTIFICATION-MIB • SNMP-TARGET-MIB • SNMPv2-MIB • TCP-MIB • UDP-MIB |
| Standards | <ul style="list-style-type: none"> • IEEE 802.1D Spanning Tree Protocol • IEEE 802.1p Class of service (CoS) Prioritization • IEEE 802.1Q VLAN • IEEE 802.1s • IEEE 802.1w • IEEE 802.1X • IEEE 802.1ab (LLDP) • IEEE 802.3ad • IEEE 802.3ah (100BASE-X single- and multimode fiber only) • IEEE 802.3x full duplex on 10BASE-T, 100BASE-TX, and 1000BASE-T ports • IEEE 802.3 10BASE-T specification • IEEE 802.3u 100BASE-TX specification • IEEE 802.3ab 1000BASE-T specification • IEEE 802.3z 1000BASE-X specification | <ul style="list-style-type: none"> • 100BASE-FX (SFP) • 1000BASE-SX (SFP) • 1000BASE-LX/LH (SFP) • Remote Monitoring (RMON) I and II standards • SNMP v1, v2c, and v3 |
| RFC compliance | <ul style="list-style-type: none"> • RFC 768 – UDP • RFC 783 – TFTP • RFC 791 – IP • RFC 792 – ICMP • RFC 793 – TCP • RFC 826 – Address Resolution Protocol (ARP) • RFC 854 – Telnet • RFC 951 – Bootstrap Protocol (BOOTP) • RFC 959 – FTP • RFC 1112 – IP Multicast and IGMP • RFC 1157 – SNMP v1 • RFC 1166 – IP addresses | <ul style="list-style-type: none"> • RFC 1901 – SNMP v2C • RFC 1902-1907 – SNMP v2 • RFC 2068 – HTTP • RFC 2131 – DHCP • RFC 2138 – RADIUS • RFC 2233 – IF MIB • RFC 2273-2275 – SNMP v3 • RFC 2474 – Differentiated Services (DiffServ) Precedence • RFC 2597 – Assured Forwarding • RFC 2598 – Expedited Forwarding • RFC 2571 – SNMP Management • RFC 3046 – DHCP Relay Agent Information Option |

| Description | Specification |
|-------------|---|
| | <ul style="list-style-type: none"> • RFC 1305 – NTP • RFC 1492 – TACACS+ • RFC 1493 – Bridge MIB • RFC 1542 – BOOTP extensions • RFC 1643 – Ethernet Interface MIB • RFC 1757 – RMON <ul style="list-style-type: none"> • RFC 3376 – IGMP v3 • RFC 3580 – 802.1X RADIUS |

Table 6. Safety and Compliance

| Description | Specification |
|--|---|
| Safety certifications | <ul style="list-style-type: none"> • UL 60950-1, Second Edition • CAN/CSA 22.2 No. 60950-1, Second Edition • TUV/GS to EN 60950-1, Second Edition • CB to IEC 60950-1 Second Edition with all country deviations • CE Marking • NOM (through partners and distributors) |
| Electromagnetic emissions certifications | <ul style="list-style-type: none"> • FCC Part 15 Class A • EN 55022 Class A (CISPR22) • EN 55024 (CISPR24) • AS/NZS CISPR22 Class A • CE • CNS13438 Class A • MIC • GOST • China EMC Certifications |
| Environmental | Reduction of Hazardous Substances (ROHS) 5 |
| Telco | Common Language Equipment Identifier (CLEI) code |
| Warranty | Limited lifetime warranty |

Cisco Limited Lifetime Hardware Warranty

Cisco Catalyst 2960-S and 2960 Series Switches come with a limited lifetime warranty (Table 7). The warranty for the Catalyst 2960-S is enhanced with 90 days of Cisco Technical Assistance Center (TAC) support during normal business hours and next-business-day hardware replacement.

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.

Cisco reserves the right to refund the purchase price as its exclusive warranty remedy.

For further information on warranty terms, visit www.cisco.com/go/warranty.

Table 7. Limited Lifetime Warranty Terms

| | Cisco Limited Lifetime Hardware Warranty | Cisco Enhanced Limited Lifetime Hardware Warranty |
|-----------------------------|---|--|
| Device covered | Applies to Cisco Catalyst 2960 Series Switches sold on or after May 1, 2009 | Applies to Cisco Catalyst 2960-S Series Switches |
| Warranty duration | As long as the original end user continues to own or use the product, provided that: fan and power supply warranty is limited to five (5) years. | As long as the original end user continues to own or use the product, provided that: fan and power supply warranty is limited to five (5) years. |
| 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. | 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 replacement part within ten (10) working days after receipt of the RMA request. Actual delivery times may vary depending on customer location. | Cisco or its service center will use commercially reasonable efforts to ship a Catalyst 2960-S replacement part within the next business day after receipt of the RMA request and confirmation that a replacement part is the appropriate response. Actual delivery times may vary depending on customer location. |

| | Cisco Limited Lifetime Hardware Warranty | Cisco Enhanced Limited Lifetime Hardware Warranty |
|-------------------------|---|--|
| 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). | 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). |
| TAC support | Not included. | 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 Catalyst 2960-S 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. | Warranty allows guest access only to Cisco.com. |

Software Update Policy for Cisco Catalyst 2960-S and 2960 Series Switches with LAN Lite Software

Customers with Cisco Catalyst LAN Lite software licenses will be provided with maintenance updates and bug fixes designed to maintain the compliance of the software with published specifications, release notes, and industry standards as long as the original end user continues to own or use the product or for up to one year from the end-of-sale date for this product, whichever occurs earlier. Customers with licenses for our premium software images, Enterprise Services or IP Services, require a service support contract such as Cisco SMARTnet[®] Service to download updates.

This policy supersedes any previous warranty or software statement and is subject to change without notice.

Cisco and Partner Services for the Catalyst 2960 Switches

Minimize operating costs and reduce power consumption for the Cisco Catalyst 2960-S and 2960 Series Switches, using intelligent, personalized services from Cisco and our partners. Through a discovery process that begins with understanding your business objectives, we help you integrate the Cisco Catalyst switch into your architecture and incorporate network services onto it. Sharing knowledge and leading practices, we support your success every step of the way as you deploy, absorb, manage, and scale new technology. Choose from a flexible suite of support services designed to meet your business needs and help you maintain high-quality network performance while controlling operational costs. Table 8 lists the technical services available for the Cisco Catalyst 2960-S and 2960 Series Switches.

Table 8. Technical Services Available

| Technical Services |
|--|
| <p>Cisco SMARTnet[®] Service</p> <ul style="list-style-type: none"> • Around-the-clock, global access to the Cisco TAC • Unrestricted access to the extensive Cisco.com knowledge base and tools • Next-business-day, 8x5x4, 24x7x4, or 24x7x2 advance hardware replacement and onsite parts replacement and installation available¹ • Ongoing operating system software updates within the licensed feature set² • Proactive diagnostics and real-time alerts on Smart Call Home enabled devices |
| <p>Cisco Smart Foundation Service</p> <ul style="list-style-type: none"> • Next-business-day advance hardware replacement as available • Access to SMB TAC during business hours (access levels vary by region) • Access to Cisco.com SMB knowledge base • Online technical resources through the Smart Foundation Portal • Operating system software bug fixes and patches |
| <p>Cisco Smart Care Service</p> <ul style="list-style-type: none"> • Network-level coverage for the needs of small and medium-sized businesses • Proactive health checks and periodic assessments of Cisco network foundation, voice, and security technologies • Technical support for eligible Cisco hardware and software through the Smart Care Portal • Cisco operating system and application software updates and upgrades² <p>Next-business-day advance hardware replacement as available, 24x7x4 option available¹</p> |

| Technical Services |
|--|
| <p>Cisco SP Base Service</p> <ul style="list-style-type: none"> • Around-the-clock, global access to the Cisco TAC • Registered access to Cisco.com • Next business day, 8x5x4, 24x7x4, and 24x7x2 advance hardware replacement. Return to factory option available¹ • Ongoing operating system software updates² |
| <p>Cisco Focused Technical Support Services</p> <p>Three levels of premium, high-touch services are available:</p> <ul style="list-style-type: none"> • Cisco High-Touch Operations Management Service • Cisco High-Touch Technical Support Service • Cisco High-Touch Engineering Service <p>Valid Cisco SMARTnet or SP Base contracts are required on all network equipment.</p> |

Footnotes:

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; please 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

Table 9 has ordering information for the Cisco Catalyst 2960-S and 2960 Series Switches with LAN Lite Software.

Table 9. Ordering Information

| Part Numbers | Description |
|------------------------------|---|
| WS-2960S-48TS-S | <ul style="list-style-type: none"> • 48 Ethernet 10/100/1000 • 2 Gigabit Ethernet SFP uplink ports • LAN Lite software |
| WS-2960S-24TS-S | <ul style="list-style-type: none"> • 24 Ethernet 10/100/1000 • 2 Gigabit Ethernet SFP uplink ports • LAN Lite software |
| WS-C2960-8TC-S | <ul style="list-style-type: none"> • 8 Ethernet 10/100 ports and 1 dual-purpose uplink (dual-purpose uplink port has 1 10/100/1000 Ethernet port and 1 SFP-based Gigabit Ethernet port, 1 port active) • LAN Lite software • Compact size with no fan; magnet included |
| WS-C2960-24-S | <ul style="list-style-type: none"> • 24 Ethernet 10/100 ports • LAN Lite software |
| WS-C2960-24TC-S | <ul style="list-style-type: none"> • 24 Ethernet 10/100 ports and 2 dual-purpose uplinks (each dual-purpose uplink port has 1 10/100/1000 Ethernet port and 1 SFP-based Gigabit Ethernet port, 1 port active) • LAN Lite software |
| WS-2960-24PC-S | <ul style="list-style-type: none"> • 24 Ethernet 10/100 ports and 2 dual-purpose uplinks (each dual-purpose uplink port has 1 10/100/1000 Ethernet port and 1 SFP-based Gigabit Ethernet port, 1 port active) • LAN Lite software • 24 PoE ports |
| WS-2960-24LC-S | <ul style="list-style-type: none"> • 24 Ethernet 10/100 ports and 2 dual-purpose uplinks (each dual-purpose uplink port has 1 10/100/1000 Ethernet port and 1 SFP-based Gigabit Ethernet port, 1 port active)] • LAN Lite software • 8 PoE ports |
| WS-C2960-48TT-S | <ul style="list-style-type: none"> • 48 Ethernet 10/100 ports and 2 10/100/1000 TX uplinks • LAN Lite software |
| WS-C2960-48TC-S | <ul style="list-style-type: none"> • 48 Ethernet 10/100 ports and 2 dual-purpose uplinks (each dual-purpose uplink port has 1 10/100/1000 Ethernet port and 1 SFP-based Gigabit Ethernet port, 1 port active) • LAN Lite software |
| WS-2960-48PST-S | <ul style="list-style-type: none"> • 48 Ethernet 10/100 ports and 2 10/100/1000 uplinks and 2 SFP uplinks • LAN Lite software • 48 PoE ports |
| Spare Rack-Mount Kits | |
| RCKMNT-1RU= | <ul style="list-style-type: none"> • Spare rack-mount kit for the Cisco Catalyst 2960 and 2960-S Series |

| Part Numbers | Description |
|-----------------------------|---|
| RCKMNT-REC-1RU= | • 1 RU recessed rack-mount kit for the Cisco Catalyst 2960 and 2960-S Series |
| Power Cords | |
| CAB-16AWG-AC | AC power cord, 16AWG |
| CAB-ACE | AC power cord (Europe), C13, CEE 7, 1.5m |
| CAB-L620P-C13-US | Power cord, 250VAC, 15A, NEMA L6-20 to C13, US |
| 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 | Power cord (China), 10A,IEC 320,C13(APN=CS-PWR-CH) |
| CAB-JPN-12A | CABASY, power cord (Japan), 2P, PSE, 12A @125VAC |
| CAB-L620P-C13-JPN | Power cord, 250VAC, 15A, NEMA L6-20 to C13, Japan |
| CAB-IND | Power cord (India) |
| CAB-AC15A-90L-US | AC power cord, left angle (United States), 15A |
| CAB-ACE-RA | Power cord, right angle (Europe) |
| CAB-ACI-RA | Power cord, right angle (Italy) |
| CAB-ACU-RA | Power cord, right angle (UK) |
| CAB-ACC-RA | Power cord, right angle (China) |
| CAB-ACA-RA | Power cord, right angle (Australia) |
| CAB-ACS-RA | Power cord, right angle (Switzerland) |
| CAB-ACR-RA | Power cord, right angle (Argentina) |
| CAB-JPN-RA | Power cord, right angle (Japan) |
| Optical Transceivers | |
| GLC-LH-SM= | 1000BASE-LX/LH SFP transceiver module for MMF and SMF, 1300-nm wavelength |
| GLC-SX-MM= | 1000BASE-SX SFP transceiver module for MMF, 850-nm wavelength |
| GLC-T= | 1000BASE-T SFP transceiver module for Category 5 copper wire |
| GLC-GE-100FX= | 100BASE-FX SFP module for Gigabit Ethernet ports, 1310-nm wavelength, 2 km over MMF |
| GLC-FE-100FX= | 100BASE-FX SFP module for 100-Mb ports, 1310-nm wavelength, 2 km over MMF |
| CAB-SM-LCSC-1M | 1m fiber single-mode LC-to-SC connectors |
| CAB-SM-LCSC-5M | 5m fiber single-mode LC-to-SC connectors |

A Scalable Foundation for Your Business Network

With your employees, your customers, and your overall business profitability increasingly depending on your network applications, you need a high-performance network foundation that can meet continually evolving demands. The Cisco Catalyst 2960-S and 2960 Series Switches with LAN Lite Software provide the security, availability, and scalable manageability to support your growing business, both today and in the future.

For more information about Cisco products, contact:

- United States and Canada: (toll free) 800 553-NETS (6387)
- Europe: 32 2 778 4242
- Australia: 612 9935 4107
- Other: 408 526-7209
- Website: www.cisco.com/go/smallbiz2960



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