

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

For
Small
Business



Enhanced Network Security, Availability, and Manageability for Small and Medium-Sized Businesses

The Cisco[®] Catalyst[®] 2960-S and 2960 Series Switches with LAN Base Software are fixed-configuration, Layer 2 Ethernet switches that support enhanced switching services, IP communications, and wireless networking for small and medium-sized businesses. These switches provide the performance, availability, and manageability that modern office environments demand, as well as the intelligence to support state-of-the-art business applications and security services.

The Cisco Catalyst 2960 Series with LAN Base software (Figure 1) can provide:

- Fast Ethernet and Gigabit Ethernet connectivity to the desktop to deliver superior application performance
- Power over Ethernet (PoE) to provide 15.4W simultaneously on all PoE ports
- Advanced security capabilities, including identity services and sophisticated access control to protect your critical assets
- Quality of service (QoS) intelligence to support delay-sensitive IP voice and video applications and optimize bandwidth in your network
- Redundancy and resiliency features to protect the availability of your critical applications at all times
- Simple, scalable management with the option to use a command-line interface (CLI) or the GUI-based Cisco Network Assistant with Cisco Smartports interface
- Scalability to continually accommodate new applications and services as your business evolves
- Limited lifetime warranty and free Cisco IOS[®] Software updates

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

- 10 Gigabit and Gigabit Ethernet uplink flexibility with Small Form-Factor Pluggable Plus (SFP+), providing business continuity and fast transition to 10 Gigabit Ethernet
- 24 or 48 ports of Gigabit Ethernet desktop connectivity
- Cisco FlexStack stacking module with 40 Gbps of throughput, allowing ease of operation with single configuration and simplified switch upgrade
- PoE+ with up to 30W per port, allowing you to support the latest PoE+ capable devices.
- Power supply options, with 740W or 370W fixed power supplies for PoE+ switches
- USB storage for file backup, distribution, and simplified operations
- Limited lifetime hardware warranty, including next-business-day replacement with 90-day service and support

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

Features and Benefits

Cisco Catalyst 2960-S and 2960 Series Switches with LAN Base software provide:

- Exceptional performance:** Today's workers run multiple resource-intensive applications, placing higher demands on networks than ever before. Within the space of just a few minutes, for example, a single worker might join an online multimedia conference, send a 10-MB spreadsheet to meeting participants, broadcast a marketing video for the team to evaluate, and query a sales application for the latest real-time data. The Cisco Catalyst 2960-S and 2960 Series support speeds of up to 1000 Mbps to the desktop, 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.
- Cisco FlexStack stacking:** Cisco FlexStack stacking, available on the Catalyst 2960-S switches, provides true stacking. With a hot-swappable module and Cisco IOS Software, all switches in a stack act as a single switch unit. The Cisco FlexStack provides a unified data plane, unified configuration, and single IP address management for a group of switches. The advantages of true stacking are lower total cost of ownership through simplified management and higher availability. You can manage the entire stack as a single unit and preserve the availability of your network. If any switch fails, the rest of the network continues to operate. A stack module can be added to any Catalyst 2960-S switch with LAN Base software to quickly upgrade the switch to make it stack capable. The switch added to the stack will upgrade to the correct Cisco IOS Software version and transparently become a stack member. Figure 3 shows the FlexStack stacking module for the Catalyst 2960-S.

Figure 3. Cisco Catalyst 2960-S Switches with Cisco FlexStack Modules and Stack Cabling

- Power over Ethernet Plus (PoE+):** In addition to PoE 802.3af, the Cisco Catalyst 2960-S Series Switches support PoE+ (IEEE 802.3at standard), which provides up to 30W of power per port. The Cisco Catalyst 2960-S and 2960 Series Switches simplify the deployment of solutions such as wireless LANs, IP telephony systems, and IP video surveillance cameras. 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 shows the power supply combinations required for different PoE needs.

Table 1. Switch PoE and PoE+ Power Capacity

Switch Model	Maximum Number of PoE+ (IEEE 802.3at) Ports*	Maximum Number of PoE (IEEE 802.3af) Ports*	Available PoE Power
10 Gigabit Uplinks with 10/100/1000 Ethernet Connectivity			
Cisco Catalyst 2960S-48FPD-L	24 ports up to 30W	48 ports up to 15.4W	740W
Cisco Catalyst 2960S-48LPD-L	12 ports up to 30W	24 ports up to 15.4W 48 ports up to 7.7W	370W
Cisco Catalyst 2960S-24PD-L	12 ports up to 30W	24 ports up to 15.4W	370W
Gigabit Uplinks with 10/100/1000 Ethernet Connectivity			
Cisco Catalyst 2960S-48FPS-L	24 ports up to 30W	48 ports up to 15.4W	740W
Cisco Catalyst 2960S-48LPS-L	12 ports up to 30W	24 ports up to 15.4W 48 ports up to 7.7W	370W
Cisco Catalyst 2960S-24PS-L	12 ports up to 30W	24 ports up to 15.4W	370W
Cisco Catalyst 2960-48PST-L	N/A	24 ports up to 15.4W	370W
Cisco Catalyst 2960-24PC-L	N/A	24 ports up to 15.4W	370W
Cisco Catalyst 2960-24LT-L	N/A	8 ports up to 15.4W	123W

*Intelligent power management 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.
- 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 Base software provide a wide range of security features to protect your business's important information, keep unauthorized users off the network, guard privacy, and protect against network downtime due to 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 Base Software, 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.
 - Port-level security features, to limit access to designated addresses as well as limit the number of devices plugged into a switch port.
 - Dynamic Host Configuration Protocol (DHCP) snooping to identify and block spoofing from untrusted sources.

- Dynamic Address Resolution Protocol (ARP) Inspection (DAI), helping ensure user integrity by preventing malicious users from exploiting the insecure nature of ARP.
- IP source guard, which prevents a malicious user from spoofing or taking over another user's IP address by creating a binding table between the client's IP and MAC address, port, and VLAN.
- MAC address notification features to monitor the network and allow administrators to track where and when users enter the network.
- Highly secure encryption of administrative and network management traffic to protect against eavesdropping and tampering and comply with regulatory requirements such as the Payment Card Industry (PCI) standard.
- Private VLANs to restrict traffic between hosts in a common segment by segregating traffic at Layer 2.
- Access control lists (ACLs) to restrict sensitive portions of the network and guard against network attacks by keep unauthorized users off the network.
- **Improved availability and scalability:** The Cisco Catalyst 2960-S and 2960 Series Switches with LAN Base Software provide the redundancy you need to help ensure that your employees stay connected and productive at all times. This intelligence allows your network to more easily accommodate new technology deployments and continually deliver optimal performance, even 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 efficiently optimizing the extra capacity inherent in a redundant design.
 - Support for the Cisco Redundant Power System (RPS) 2300 solution to provide transparent power backup of redundant switches.
 - Cross-stack EtherChannel, providing the ability to configure Cisco EtherChannel technology across different members of the Cisco FlexStack for high resiliency.
 - Flexlink, providing link redundancy with convergence time of less than 100 ms.
 - Automatic reactivation of a link that is disabled because of a network error.
- **Advanced QoS intelligence:** The Cisco Catalyst 2960-S and 2960 Series Switches with LAN Base Software support advanced QoS traffic shaping and policing features that give you optimal flexibility in classifying and prioritizing the traffic on your network. For example, you can prioritize traffic from mission-critical applications such as enterprise resource planning (ERP) and voice systems over less delay-sensitive traffic, helping reduce network congestion and ensuring baseline performance for the most essential applications. The switches also support rate-limiting features that allow you to allocate guaranteed bandwidth to specific applications and users in increments as small as 1 Mbps. Administrators can easily configure these features through tools such as automatic QoS (Auto QoS), which detects Cisco IP phones and automatically configures the switch for the appropriate QoS. Cross-stack QoS allows QoS to be configured across the entire Cisco Catalyst 2960-S FlexStack.
- **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, Cisco Auto Smartports, Cisco Smart Configuration, and Cisco Smart Troubleshooting.
 - Cisco Smart Install is a transparent technology that 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.

- Cisco Smart Configuration provides a single point of management for a group of switches. In addition, it adds the ability to archive and back up configuration files to a file server or switch, allowing transparent zero-touch switch replacement.
- Cisco Smart Troubleshooting is an extensive array of debugging diagnostic commands and system health checks within the switch, including Generic Online Diagnostics (GOLD) and Onboard Failure Logging (OBFL).
- **Superior manageability:** The Cisco Catalyst 2960-S and 2960 Series with LAN Base 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

Tables 2, 3, 4, 5, 6, 7, and 8 list the hardware specifications, power specifications, management and standards, support and safety, and compliance information for the Cisco Catalyst 2960-S and 2960 Series Switches with LAN Base Software.

Table 2. Performance and Scalability

	Catalyst 2960-S	Catalyst 2960
Forwarding bandwidth	32 Gbps	16 Gbps 32 Gbps (2960G)
Switching bandwidth*	176 Gbps	32Gbps 32 Gbps (2960G)
Flash memory	64 MB	32 MB
Memory DRAM	128 MB	64 MB
Max VLANs	255	255
VLAN IDs	4000	4000
Maximum transmission unit (MTU)	Up to 9000 bytes	Up to 9000 bytes
Jumbo frames	9216 bytes	9018 bytes (2960G only)
Forwarding Rate: 64-Byte Packet – Cisco Catalyst 2960-S		
Cisco Catalyst 2960S-48FPD-L	101.2 mpps	
Cisco Catalyst 2960S-48LPD-L	101.2 mpps	
Cisco Catalyst 2960S-24PD-L	65.5 mpps	
Cisco Catalyst 2960S-48TD-L	101.2 mpps	
Cisco Catalyst 2960S-24TD-L	65.5 mpps	
Cisco Catalyst 2960S-48FPS-L	77.4 mpps	
Cisco Catalyst 2960S-48LPS-L	77.4 mpps	
Cisco Catalyst 2960S-24PS-L	41.7 mpps	

	Catalyst 2960-S	Catalyst 2960
Cisco Catalyst 2960XS-48TS-L	77.4 mpps	
Cisco Catalyst 2960S-24TS-L	41.7 mpps	
Forwarding Rate: 64-Byte Packet – Cisco Catalyst 2960		
Cisco Catalyst 2960PD-8TT-L	2.7 mpps	
Cisco Catalyst 2960-8TC-L	2.7 mpps	
Cisco Catalyst 2960-24TT-L	6.5 mpps	
Cisco Catalyst 2960-24TC-L	6.5 mpps	
Cisco Catalyst 2960-24LT-L	6.5 mpps	
Cisco Catalyst 2960-24PC-L	6.5 mpps	
Cisco Catalyst 2960-48TT-L	10.1 mpps	
Cisco Catalyst 2960-48TC-L	10.1 mpps	
Cisco Catalyst 2960-48PST-L	13.3 mpps	
Cisco Catalyst 2960G-8TC-L	11.9 mpps	
Cisco Catalyst 2960G-24TC-L	35.7 mpps	
Cisco Catalyst 2960G-48TC-L	39.0 mpps	

*Switching bandwidth is full-duplex capacity.

Resource	Default	QoS	Dual
Unicast MAC addresses	8000	8000	8000
IPv4 Internet Group Management Protocol (IGMP) groups	255	255	255
IPv4 MAC QoS access control entries (ACEs)	128	384	0
IPv4 MAC security ACEs	384	128	256

Table 3. Dimensions, Environmental and Acoustic Specifications, and Mean Time Between Failures

Cisco Catalyst 2960-S Dimensions	Inches	Centimeters
Cisco Catalyst 2960S-48FPD-L	1.75 x 17.5 x 15.2	4.5 x 44.5 x 38.6
Cisco Catalyst 2960S-48LPD-L		
Cisco Catalyst 2960S-24PD-L		
Cisco Catalyst 2960S-48TD-L	1.75 x 17.5 x 11.8	4.5 x 44.5 x 29.9
Cisco Catalyst 2960S-24TD-L		
Cisco Catalyst 2960S-48FPS-L	1.75 x 17.5 x 15.2	4.5 x 44.5 x 38.6
Cisco Catalyst 2960S-48LPS-L		
Cisco Catalyst 2960S-24PS-L		
Cisco Catalyst 2960S-48TS-L	1.75 x 17.5 x 11.8	4.5 x 44.5 x 29.9
Cisco Catalyst 2960S-24TS-L		

Cisco Catalyst 2960 Dimensions	Inches	Centimeters
Cisco Catalyst 2960PD-8TT-L	1.73 x 10.6 x 6.2	4.4 x 27 x 15.7
Cisco Catalyst 2960-8TC-L	1.73 x 10.6 x 6.4	4.4 x 27 x 16.3
Cisco Catalyst 2960-24TT-L	1.73 x 17.5 x 9.3	4.4 x 44.5 x 23.6
Cisco Catalyst 2960-24TC-L		
Cisco Catalyst 2960-24LT-L		
Cisco Catalyst 2960-24PC-L	1.73 x 17.5 x 13	4.4 x 44.5 x 33.2
Cisco Catalyst 2960-48TT-L		
Cisco Catalyst 2960-48TC-L		

Cisco Catalyst 2960 Dimensions	Inches	Centimeters
Cisco Catalyst 2960-48PST-L	1.73 x 17.5 x 9.3	4.4 x 44.5 x 23.6
Cisco Catalyst 2960G-8TC-L	1.73 x 10.6 x 8.1	4.4 x 27 x 20.5
Cisco Catalyst 2960G-24TC-L	1.73 x 17.5 x 12.9	4.4 x 44.5 x 32.8
Cisco Catalyst 2960G-48TC-L		

Cisco Catalyst 2960-S Weight	Pounds	Kilograms
Cisco Catalyst 2960S-48FPD-L	13	5.9
Cisco Catalyst 2960S-48LPD-L	12.5	5.7
Cisco Catalyst 2960S-24PD-L	12.5	5.7
Cisco Catalyst 2960S-48TD-L	9.5	4.3
Cisco Catalyst 2960S-24TD-L	9.5	4.3
Cisco Catalyst 2960S-48FPS-L	13	5.9
Cisco Catalyst 2960S-48LPS-L	12.5	5.7
Cisco Catalyst 2960S-24PS-L	12.5	5.7
Cisco Catalyst 2960S-48TS-L	10.5	4.8
Cisco Catalyst 2960S-24TS-L	10	4.5

Catalyst 2960 Weight	Pounds	Kilograms
Cisco Catalyst 2960PD-8TT-L	3	1.4
Cisco Catalyst 2960-8TC-L	3	1.4
Cisco Catalyst 2960-24TT-L	8	3.6
Cisco Catalyst 2960-24TC-L	8	3.6
Cisco Catalyst 2960-24LT-L	8	3.6
Cisco Catalyst 2960-24PC-L	10	4.5
Cisco Catalyst 2960-48TT-L	12	5.4
Cisco Catalyst 2960-48TC-L	12	5.4
Cisco Catalyst 2960-48PST-L	8	3.6
Cisco Catalyst 2960G-8TC-L	3	1.4
Cisco Catalyst 2960G-24TC-L	10	4.5
Cisco Catalyst 2960G-48TC-L	12	5.4

Environmental Ranges	Cisco Catalyst 2960-S		Cisco Catalyst 2960	
	Fahrenheit	Centigrade	Fahrenheit	Centigrade
Operating temperature up to 5000 ft (1500m)	0° to 113°F	-5° to 45°C	23° to 113°F	-5° to 45°C
Operating temperature up to 10,000 ft (3000m)	23° to 104°F	-5° to 40°C	23° to 104°F	-5° to 40°C
Short-term exception at sea level*	23° to 31°F	-5° to 55°C	23° to 31°F	-5° to 55°C
Short-term exception up to 5000 feet (1500m)*	23° to 122°F	-5° to 50°C	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	23° to 113°F	-5° to 45°C
Short-term exception up to 13,000 feet (4000m)*	23° to 104°F	-5° to +40°C	23° to 104°F	-5° to 40°C
Storage temperature up to 15,000 feet (4573m)	-13° to 158°F	-25° to 70°C	-13° to 158°F	-25° to 70°C

Environmental Ranges	Cisco Catalyst 2960-S		Cisco Catalyst 2960	
	Feet	Meters	Feet	Meters
Operating altitude	Up to 10,000	Up to 3000	Up to 10,000	Up to 3000
Storage altitude	Up to 13,000	Up to 4000	Up to 13,000	Up to 4000
Operating relative humidity	10% to 95% noncondensing		10% to 95% noncondensing	
Storage relative humidity	10% to 95% noncondensing		10% to 95% noncondensing	

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

Note: For Catalyst 2960G-8TC-L, reduce the high range temperature by 5°C.

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)
Cisco Catalyst 2960S-48FPD-L	42 dB	45 dB	5.2 B	
Cisco Catalyst 2960S-48LPD-L				5.5 B
Cisco Catalyst 2960S-24PD-L				
Cisco Catalyst 2960S-48TD-L	44 dB	47 dB	5.4 B	
Cisco Catalyst 2960S-24TD-L				5.7 B
Cisco Catalyst 2960S-48FPS-L	42 dB	45 dB	5.2 B	
Cisco Catalyst 2960S-48LPS-L				5.5 B
Cisco Catalyst 2960S-24PS-L				
Cisco Catalyst 2960S-48TS-L	44 dB	47 dB	5.4 B	5.7 B
Cisco Catalyst 2960S-24TS-L				

Mean Time Between Failures (MTBF)			
Cisco Catalyst 2960-S		Cisco Catalyst 2960	
Model	MTBF in hours	Model	MTBF in hours
Cisco Catalyst 2960S-48FPD-L	183,498	Cisco Catalyst 2960PD-8TT-L	737,065
Cisco Catalyst 2960S-48LPD-L	198,300	Cisco Catalyst 2960-8TC-L	615,549
Cisco Catalyst 2960S-24PD-L	237,016	Cisco Catalyst 2960-24TT-L	407,707
Cisco Catalyst 2960S-48TD-L	311,291	Cisco Catalyst 2960-24TC-L	339,743
Cisco Catalyst 2960S-24TD-L	332,958	Cisco Catalyst 2960-24LT-L	402,926
Cisco Catalyst 2960S-48FPS-L	189,242	Cisco Catalyst 2960-24PC-L	311,781
Cisco Catalyst 2960S-48LPS-L	205,052	Cisco Catalyst 2960-48TT-L	243,277
Cisco Catalyst 2960S-24PS-L	245,604	Cisco Catalyst 2960-48TC-L	336,409
Cisco Catalyst 2960S-48TS-L	328,058	Cisco Catalyst 2960-48PST-L	180,427
Cisco Catalyst 2960S-24TS-L	349,824	Cisco Catalyst 2960G-8TC-L	485,576
Cisco Catalyst 2960S-STACK	25,743,890	Cisco Catalyst 2960G-24TC-L	313,828
		Cisco Catalyst 2960G-48TC-L	221,432

Table 4. Connectors and LED Indicators

Connectors											
<p>Cisco Catalyst 2960-S with SFP+ based ports:</p> <ul style="list-style-type: none"> • 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, -ZX, -BX, -T,* -FX,* and coarse wavelength-division multiplexing (CWDM) SFP-based ports: LC fiber connectors (single/multimode fiber) • 10GBASE-LR, SR, LRM, CX1 SFP+ based ports <p>*The Catalyst 2960-S with SFP+ does not support the GLC-FE-100BX, GLC-FE-100FX, or GLC-FE-100LX.</p>											
<p>Cisco Catalyst 2960-S and 2960 with SFP-based ports:</p> <ul style="list-style-type: none"> • 10BASE-T ports: RJ-45 connectors, 2-pair Category 3, 4, or 5 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, -ZX, -BX, -T,* -FX,* and CWDM SFP-based ports: LC fiber connectors (single/multimode fiber) • 100BASE-LX, -BX, -FX SFP-based ports: LC fiber connectors (single/multimode fiber) <p>*GLC-T and GLC-GE-100FX are not supported on the Catalyst 2960-8TC-S, 2960-8TC-L, or 2960G-8TC-L switches.</p>											
<p>Cisco Catalyst 2960-S FlexStack stacking cables:</p> <table border="0"> <tr> <td>CAB-STK-E-0.5M</td> <td>FlexStack stacking cable with a 0.5m length</td> </tr> <tr> <td>CAB-STK-E-1M</td> <td>FlexStack stacking cable with a 1.0m length</td> </tr> <tr> <td>CAB-STK-E-3M</td> <td>FlexStack stacking cable with a 3.0m length</td> </tr> </table> <p>Cisco Catalyst 2960-S console cables:</p> <table border="0"> <tr> <td>CAB-CONSOLE-RJ45</td> <td>Console cable 6 ft with RJ-45</td> </tr> <tr> <td>CAB-CONSOLE-USB</td> <td>Console cable 6 ft with USB type A and mini-B connectors</td> </tr> </table>		CAB-STK-E-0.5M	FlexStack stacking cable with a 0.5m length	CAB-STK-E-1M	FlexStack stacking cable with a 1.0m length	CAB-STK-E-3M	FlexStack stacking cable with a 3.0m length	CAB-CONSOLE-RJ45	Console cable 6 ft with RJ-45	CAB-CONSOLE-USB	Console cable 6 ft with USB type A and mini-B connectors
CAB-STK-E-0.5M	FlexStack stacking cable with a 0.5m length										
CAB-STK-E-1M	FlexStack stacking cable with a 1.0m length										
CAB-STK-E-3M	FlexStack stacking cable with a 3.0m length										
CAB-CONSOLE-RJ45	Console cable 6 ft with RJ-45										
CAB-CONSOLE-USB	Console cable 6 ft with USB type A and mini-B connectors										
<ul style="list-style-type: none"> • Customers can provide power to a switch 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. • Cisco RPS connector: <p>The Cisco RPS connector offers connection for an optional Cisco RPS 2300 that uses AC input and supplies DC output to the switch. The connector offers a 2300W redundant power system that supports up to 6 external network devices and provides power to 2 failed devices at a time.</p> <p>The connector automatically senses when the internal power supply of a connected device fails and provides power to the failed device, preventing loss of network traffic.</p> <p>Only the Cisco RPS 2300 (model PWR-RPS2300) should be attached to the redundant-power-system receptacle.</p> <p>Note: The Cisco Catalyst 2960-8TC-L and 2960G-8TC-L do not have RPS ports.</p>											
<p>LED Indicators</p> <ul style="list-style-type: none"> • Per-port status: Link integrity, disabled, activity, speed, and full duplex • System status: System, RPS, link status, link duplex, PoE, and link speed 											

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-DHCP-SNOOPING-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-POE-EXTENSIONS-MIB • CISCO-PORT-QOS-MIB • CISCO-PORT-SECURITY-MIB • CISCO-PORT-STORM-CONTROL-MIB • CISCO-PRODUCTS-MIB • CISCO-PROCESS-MIB • CISCO-RTTMON-MIB • CISCO-SMI-MIB • CISCO-STP-EXTENSIONS-MIB • CISCO-SYSLOG-MIB 	<ul style="list-style-type: none"> • CISCO-TC-MIB • CISCO-TCP-MIB • CISCO-UDLD-MIB • CISCO-VLAN-IPTABLE • 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 • ePM MIB • CISCO-STACKWISE-MIB (2960-S)
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 802.3af • IEEE 802.3ah (100BASE-X single/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-BX (SFP) • 100BASE-FX (SFP) • 100BASE-LX (SFP) • 1000BASE-BX (SFP) • 1000BASE-SX (SFP) • 1000BASE-LX/LH (SFP) • 1000BASE-ZX (SFP) • 1000BASE-CWDM SFP 1470 nm • 1000BASE-CWDM SFP 1490 nm • 1000BASE-CWDM SFP 1510 nm • 1000BASE-CWDM SFP 1530 nm • 1000BASE-CWDM SFP 1550 nm • 1000BASE-CWDM SFP 1570 nm • 1000BASE-CWDM SFP 1590 nm • 1000BASE-CWDM SFP 1610 nm • 10GBASE-LR (SFP+) • 10GBASE-SR (SFP+) • 10GBASE-LRM (SFP+) • 10GBASE-CX1 (SFP+) • RMON I and II standards • SNMP v1, v2c, and v3

Description	Specification
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 – 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 • RFC 1256 – Internet Control Message Protocol (ICMP) Router Discovery • 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 1901 – SNMP v2C • RFC 1902-1907 – SNMP v2 • RFC 1981 – Maximum Transmission Unit (MTU) Path Discovery IPv6 • RFC 2068 – HTTP • RFC 2131 – DHCP • RFC 2138 – RADIUS • RFC 2233 – IF MIB v3 • RFC 2373 – IPv6 Aggregatable Addr • RFC 2460 – IPv6 • RFC 2461 – IPv6 Neighbor Discovery • RFC 2462 – IPv6 Autoconfiguration • RFC 2463 – ICMP IPv6 • 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 • RFC 3376 – IGMP v3 • RFC 3580 – 802.1X RADIUS

Table 6. Voltage and Power Information

AC/DC Input Voltage and Current

Cisco Catalyst 2960-S	Voltage (Auranging)	Current	Frequency
2960S-48FPD-L	100 to 240 VAC	9 to 4 A	50 to 60 Hz
2960S-48LPD-L		5 to 2 A	
2960S-24PD-L		5 to 2 A	
2960S-48TD-L		1 to 0.5 A	
2960S-24TD-L		1 to 0.5 A	
2960S-48FPS-L		9 to 4 A	
2960S-48LPS-L		5 to 2 A	
2960S-24PS-L		5 to 2 A	
2960S-48TS-L		1 to 0.5 A	
2960S-24TS-L		1 to 0.5 A	

Cisco Catalyst 2960	Voltage (Auranging)	Current	Frequency
2960-8TC-L	100 to 240 VAC	0.5 to 0.25 A	50 to 60 Hz
2960G-8TC-L		0.8 to 0.4 A	
2960-24LT-L		3.0 to 1.5 A	
2960-24PC-L		8.0 to 4.0 A	
2960-48PST-L		5.0 to 2.0 A	
2960-24TT-L		1.3 to 0.8 A	
2960-24TC-L			
2960-48TT-L			
2960-48TC-L			
2960G-24TC-L		3.0 to 1.5 A	
2960G-48TC-L			
2960PD-8TT-L	DC input 48 VDC (for AC use PWR-A= sold separately)	0.3 A	

Cisco Catalyst 2960-S		Cisco Catalyst 2960	
Model	Power Rating	Model	Power Rating
2960S-48FPD-L	0.89 kVA	2960PD-8TT-L	11W
2960S-48LPD-L	0.48 kVA	2960-8TC-L	0.035 kVA
2960S-24PD-L	0.46 kVA	2960-24TT-L	0.05 kVA
2960S-48TD-L	0.09 kVA	2960-48TT-L	0.075 kVA
2960S-24TD-L	0.09 kVA	2960-24TC-L	0.05 kVA
2960S-48FPS-L	0.89 kVA	2960-24LT-L	0.175 kVA
2960S-48LPS-L	0.48 kVA	2960-24PC-L	0.470 kVA
2960S-24PS-L	0.46 kVA	2960-48PST-L	0.5 kVA
2960S-48TS-L	0.13 kVA	2960-48TC-L	0.075 kVA
2960S-24TS-L	0.09 kVA	2960G-8TC-L	0.05 kVA
		2960G-24TC-L	0.075 kVA
		2960G-48TC-L	0.140 kVA

DC Input Voltages (RPS input)

Cisco Catalyst 2960-S		
2960S-48FPD-L	12V at 4 A	-52 V at 15 A
2960S-48LPD-L	12V at 4 A	-52 V at 8 A
2960S-24PD-L	12V at 3 A	-52 V at 8 A
2960S-48TD-L	12V at 4 A	N/A
2960S-24TD-L	12V at 3 A	N/A
2960S-48FPS-L	12V at 4 A	-52 V at 15A
2960S-48LPS-L	12V at 4 A	-52 V at 8 A
2960S-24PS-L	12V at 3 A	-52 V at 8 A
2960S-48TS-L	12V at 4 A	N/A
2960S-24TS-L	12V at 4 A	N/A

Cisco Catalyst 2960		
2960-24TT-L	12V at 5 A	5 A
2960-48TT-L		
2960-24TC-L		
2960-24LT-L	12 V at 8.3 A	-48 V at 2.7 A
2960-24PC-L	12 V at 11.25 A	-48 V at 7.8 A
2960-48PST-L	12 V at 4 A	-48 V at 7.8 A
2960-48TC-L	12 V at 5 A	
2960G-24TC-L	12 V at 10.5 A	
2960G-48TC-L		

No RPS input for Cisco Catalyst 2960PD-8TT-L, Catalyst 2960-8TC-L, or Catalyst 2960G-8TC-L.

PoE and PoE+

- Maximum power supplied per port for PoE+ is 30W.
- Maximum power supplied per port for PoE is 15.4W.
- Total power dedicated to PoE or PoE+ is 370W or 740W.

Table 7. Power Specifications

Description	Cisco Catalyst 2960-S Specifications				
Model	2960S-48FPD-L	2960S-48LPD-L	2960S-24PD-L	2960S-48TD-L	2960S-24TD-L
100 Percent Throughput					
Measured power consumption	81W	71W	55W	55W	39W
5 Percent Throughput					
Measured power consumption	80W	70W	54W	53W	38W
5 Percent Throughput (with 50 Percent PoE Loads)					
Measured power consumption	Switch power: 464W PoE power: 386W	Switch power: 266W PoE power: 195W	Switch power: 249W PoE power: 195W	–	–
100 Percent Throughput (with Maximum Possible PoE Loads)					
Measured power consumption	Switch power: 870W PoE power: 744W	Switch power: 466W PoE power: 375W	Switch power: 451W PoE power: 375W	–	–

Description	Cisco Catalyst 2960-S Specifications				
Model	2960S-48FPS-L	2960S-48LPS-L	2960S-24PS-L	2960S-48TS-L	2960S-24TS-L
100 Percent Throughput					
Measured power consumption	79W	71W	55W	52W	40W
5 Percent Throughput					
Measured power consumption	78W	70W	54W	50W	39W
5 Percent Throughput (with 50 Percent PoE Loads)					
Measured power consumption	Switch power: 463W PoE power: 744W	Switch power: 266W PoE power: 375W	Switch power: 249W PoE power: 375W	–	–
100 Percent Throughput (with Maximum Possible PoE Loads)					
Measured power consumption	Switch power: 870W PoE power: 744W	Switch power: 466W PoE power: 375W	Switch power: 449W PoE power: 375W	–	–

Description	Cisco Catalyst 2960 Specifications				
Model	2960-48PST-L	2960-24PC-L	2960-24LT-L	2960-48TC-L	2960-24TC-L
100 Percent Throughput					
Measured power consumption	67W	45W	36W	39W	27W
5 Percent Throughput					
Measured power consumption	63W	43W	34W	36W	24W
5 Percent Throughput (with 50 Percent PoE Loads)					
Measured power consumption	Switch power: 262W PoE power: 187W	Switch power: 237W PoE power: 185W	Switch power: 98W PoE power: 62W	–	–
100 Percent Throughput (with Maximum Possible PoE Loads)					
Measured power consumption	Switch power: 460W PoE power: 339W	Switch power: 433W PoE power: 357W	Switch power: 162W PoE power: 119W	–	–

Description	Cisco Catalyst 2960 Specifications				
Model	2960-48TT-L	2960-24TT-L	2960G-48TC-L	2960G-24TC-L	2960-24T-L
100 Percent Throughput					
Measured power consumption	42W	28W	123W	72W	22W
5 Percent Throughput					
Measured power consumption	38W	26W	114W	65W	21W
5 Percent Throughput (with 50 Percent PoE Loads)					
Measured power consumption	–	–	–	–	–
100 Percent Throughput (with Maximum Possible PoE Loads)					
Measured power consumption	–	–	–	–	–

Description	Compact Switch Specifications		
Model	2960-8TC-L	2960PD-8TT-L	2960G-8TC-L
100 Percent Throughput			
Measured power consumption	12W	11W	22W
5 Percent Throughput			
Measured power consumption	11W	N/A	20W
5 Percent Throughput (with 50 Percent PoE Loads)			
Measured power consumption	–	–	–
100 Percent Throughput (with Maximum Possible PoE Loads)			
Measured power consumption	–	–	–

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

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 the actual power consumption, as a significant portion of PoE loads is dissipated in the endpoints.

Non-PoE Power Consumption

100 Percent Throughput Switch Power Consumption

These numbers indicate the power consumed by a typical switch under normal conditions. Normal conditions signify a temperature of 25 degrees Celsius, atmospheric pressure in the range of 860 to 1060 mbar, and relative humidity of between 30 and 75 percent. Typically, such power draws are seen only when encountering a 100 percent traffic load made up entirely of 64-byte packets on the switch and the uplinks.

5 Percent Throughput Switch Power Consumption

These numbers indicate the power consumed by a typical switch under normal conditions. Normal conditions signify a temperature of 25 degrees Celsius, atmospheric pressure in the range of 860 to 1060 mbar, and relative humidity of between 30 and 75 percent. The numbers reflect a 5 percent traffic load on the switch and its uplinks.

PoE Power Consumption

100 Percent Throughput Switch Power Consumption (No PoE Loads)

The numbers indicate the power consumed by a typical switch under normal conditions. Normal conditions signify a temperature of 25 degrees Celsius, atmospheric pressure in the range of 860 to 1060 mbar, and relative humidity of between 30 and 75 percent. Typically, such power draws are seen only when encountering a 100 percent traffic load made up entirely of 64-byte packets with no PoE loads on the switch and uplinks.

Measured 5 Percent Throughput Switch Power Consumption (No PoE Loads)

The numbers indicate the power consumed by a typical switch under normal conditions. Normal conditions signify a temperature of 25 degrees Celsius, atmospheric pressure in the range of 860 to 1060 mbar, and relative humidity of between 30 and 75 percent. The numbers reflect a 5 percent traffic load on the switch and its uplinks

100 Percent Throughput Switch Power Consumption (with Maximum PoE Loads)

The numbers indicate the power consumed by a typical system (the switch and the corresponding PoE loads) under normal conditions. Normal conditions signify a temperature of 25 degrees Celsius, atmospheric pressure in the range of 860 to 1060 mbar, and relative humidity of between 30 and 75 percent. Typically, such power draws are seen only when encountering a 100 percent traffic load made up entirely of 64-byte packets on the switch and its uplinks and also drawing 100 percent PoE load.

5 Percent Throughput Switch Power Consumption (with 50 Percent PoE Loads)

The numbers indicate the power consumed by a typical system (the switch and the corresponding PoE loads) under normal conditions. Normal conditions signify a temperature of 25 degrees Celsius, atmospheric pressure in the range of 860 to 1060 mbar, and relative humidity of between 30 to 75 percent. The numbers reflect a 5 percent traffic load and 50 percent PoE load on the switch and its uplinks.

Table 8. 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 9). 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 9. 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.
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 Base Software

Customers with Cisco Catalyst LAN Base 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 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 Cisco Catalyst 2960-S and 2960 Series Switches

Minimize operating costs and reduce power consumption with 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 2960-S and 2960 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 10 lists the technical services available for the Cisco Catalyst 2960-S and 2960 Series Switches.

Table 10. 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 • Next-business-day advance hardware replacement as available; 24x7x4 option available¹
<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

Tables 11, 12, and 13 give ordering information for the Cisco Catalyst 2960-S and 2960 Series Switches with LAN Base Software.

Table 11. Ordering Information for Cisco Catalyst 2960-S Series Switches with LAN Base Software

Part Numbers	Description
10 Gigabit Uplinks with 10/100/1000 Ethernet Connectivity	
WS-C2960S-48FPD-L	<ul style="list-style-type: none"> • 48 Ethernet 10/100/1000 PoE+ ports • 740W PoE capacity • 2 10 Gigabit Ethernet or 2 Gigabit Ethernet SFP+ uplink ports • Optional Cisco FlexStack stacking support • LAN Base image
WS-C2960S-48LPD-L	<ul style="list-style-type: none"> • 48 Ethernet 10/100/1000 PoE+ ports • 370W PoE capacity • 2 10 Gigabit Ethernet or 2 Gigabit Ethernet SFP+ uplink ports • Optional Cisco FlexStack stacking support • LAN Base image
WS-C2960S-24PD-L	<ul style="list-style-type: none"> • 24 Ethernet 10/100/1000 PoE+ ports • 370W PoE capacity • 2 10 Gigabit Ethernet or 2 Gigabit Ethernet SFP+ uplink ports • Optional Cisco FlexStack stacking support • LAN Base image
WS-C2960S-48TD-L	<ul style="list-style-type: none"> • 48 Ethernet 10/100/1000 ports • 2 10 Gigabit Ethernet or 2 Gigabit Ethernet SFP+ uplink ports • Optional Cisco FlexStack stacking support • LAN Base image
WS-C2960S-24TD-L	<ul style="list-style-type: none"> • 24 Ethernet 10/100/1000 ports • 2 10 Gigabit Ethernet or 2 Gigabit Ethernet SFP+ uplink ports • Optional Cisco FlexStack stacking support • LAN Base image
Gigabit Uplinks with 10/100/1000 Ethernet Connectivity	
WS-C2960S-48FPS-L	<ul style="list-style-type: none"> • 48 Ethernet 10/100/1000 PoE+ ports • 740W PoE capacity • 4 Gigabit Ethernet SFP uplink ports • Optional Cisco FlexStack stacking support • LAN Base image
WS-C2960S-48LPS-L	<ul style="list-style-type: none"> • 48 Ethernet 10/100/1000 PoE+ ports • 370W PoE capacity • 4 Gigabit Ethernet SFP uplink ports • Optional Cisco FlexStack stacking support • LAN Base image
WS-C2960S-24PS-L	<ul style="list-style-type: none"> • 24 Ethernet 10/100/1000 PoE+ ports • 370W PoE capacity • 4 Gigabit Ethernet SFP uplink ports • Optional Cisco FlexStack stacking support • LAN Base image
WS-C2960S-48TS-L	<ul style="list-style-type: none"> • 48 Ethernet 10/100/1000 ports • 4 Gigabit Ethernet SFP uplink ports • Optional Cisco FlexStack stacking support • LAN Base image
WS-C2960S-24TS-L	<ul style="list-style-type: none"> • 24 Ethernet 10/100/1000 ports • 4 Gigabit Ethernet SFP uplink ports • Optional Cisco FlexStack stacking support • LAN Base image
WS-C2960S-STACK	FlexStack hot-swappable stacking module

Table 12. Ordering Information for Cisco Catalyst 2960 Series Switches with LAN Base Software

Part Numbers	Description
WS-C2960PD-8TT-L	<ul style="list-style-type: none"> • 8 Ethernet 10/100 ports and 1 10/100/1000 PoE input port • Power adaptor (PWR-A=) and power cord sold separately • Compact size with no fan; magnet included • LAN Base image
WS-C2960-8TC-L	<ul style="list-style-type: none"> • 8 Ethernet 10/100 ports • 1 dual-purpose uplink (dual-purpose uplink port has 1 10/100/1000 Ethernet port, 1 SFP-based Gigabit Ethernet port, 1 port active) • Compact size with no fan; magnet included • LAN Base image
WS-C2960-24TT-L	<ul style="list-style-type: none"> • 24 Ethernet 10/100 ports and 2 10/100/1000 TX uplinks • 1 RU fixed configuration • LAN Base image
WS-C2960-48TT-L	<ul style="list-style-type: none"> • 48 Ethernet 10/100 ports and 2 10/100/1000 TX uplinks • 1 RU fixed configuration • LAN Base image
WS-C2960-24LT-L	<ul style="list-style-type: none"> • 24 Ethernet 10/100 ports with 8 PoE ports and 2 10/100/1000 TX uplinks • 1 RU fixed configuration • LAN Base image
WS-C2960-24PC-L	<ul style="list-style-type: none"> • 24 Ethernet 10/100 PoE ports and 2 dual-purpose uplinks • 1 RU fixed configuration • LAN Base image
WS-C2960-48PST-L	<ul style="list-style-type: none"> • 48 Ethernet 10/100 PoE ports and 2 10/100/1000 uplinks and 2 SFP uplinks • 1 RU fixed configuration • LAN Base image
WS-C2960-48TC-L	<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) • 1 RU fixed configuration • LAN Base image
WS-C2960G-8TC-L	<ul style="list-style-type: none"> • 7 Ethernet 10/100/1000 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) • Compact size with no fan; magnet included • LAN Base image
WS-C2960G-24TC-L	<ul style="list-style-type: none"> • 20 Ethernet 10/100/1000 ports and 4 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) • 1 RU fixed configuration • LAN Base image
WS-C2960G-48TC-L	<ul style="list-style-type: none"> • 44 Ethernet 10/100/1000 ports and 4 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) • 1 RU fixed configuration • LAN Base image

Table 13. Ordering Information for Accessories

Part Numbers	Description
CAB-STK-E-0.5M	FlexStack stacking cable with a 0.5m length
CAB-STK-E-1M	FlexStack stacking cable with a 1.0m length
CAB-STK-E-3M	FlexStack stacking cable with a 3.0m length
CAB-CONSOLE-RJ45	Console cable 6 ft with RJ-45
CAB-CONSOLE-USB	Console cable 6 ft with USB Type A and mini-B connectors
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

Part Numbers	Description
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 (Japan) 250VAC, 15A, NEMA L6-20 to C13, Japan
CAB-IND	Power cord (India)
PWR-RPS2300	Cisco Redundant Power System 2300 and blower, no power supply
BLNK-RPS2300=	Spare bay insert for Cisco Redundant Power System 2300 for Cisco Catalyst 2960 and Catalyst 2960-S switches
CAB-RPS2300-E=	Spare RPS2300 cable for Cisco Catalyst 2960-48PST-L, 2960-24PC-L, and 2960-24LT-L switches and Catalyst 2960-S switches
CAB-RPS2300=	Spare RPS2300 cable for Cisco Catalyst 2960, except as noted with CAB-RPS2300-E above
BLWR-RPS2300=	Spare 45 CFM blower for Cisco Redundant Power System 2300
C3K-PWR-750WAC=	Catalyst 2960 and Catalyst 2960-S RPS 2300 750W AC power supply spare
PWR-A=	Power adapter for Cisco Catalyst 2960PD-8TT-L compact switch
CBLGRD-C2960-8TC=	Cable guard for Cisco Catalyst 2960-8TC compact switch
CBLGRD-C2960G-8TC=	Cable guard for Cisco Catalyst 2960G-8TC compact switch
RCKMNT-19-CMPCT=	Rack mount for Cisco Catalyst 2960-8TC and Catalyst 2960G-8TC compact switches
RCKMNT-1RU=	Spare rack-mount kit for Cisco Catalyst 2960 and 2960-S Series for 19- and 24-inch racks
RCKMNT-REC-1RU=	1 RU recessed rack-mount kit for Cisco Catalyst 2960 and 2960-S Series
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-ZX-SM=	1000BASE-ZX SFP transceiver module for SMF, 1550-nm wavelength
GLC-T=	1000BASE-T SFP transceiver module for Category 5 copper wire Not supported on the Cisco Catalyst 2960-8TC and Catalyst 2960G-8TC compact switches
GLC-BX-D=	1000BASE-BX10 SFP transceiver module for single-strand SMF, 1490-nm TX / 1310-nm RX wavelength
GLC-BX-U=	1000BASE-BX10 SFP transceiver module for single-strand SMF, 1310-nm TX / 1490-nm RX wavelength
GLC-GE-100FX=	100BASE-FX SFP module for Gigabit Ethernet ports, 1310-nm wavelength, 2 km over MMF Not supported on the Cisco Catalyst 2960-8TC and Catalyst 2960G-8TC compact switches
GLC-FE-100FX=	100BASE-FX SFP module for 100-Mb ports, 1310-nm wavelength, 2 km over MMF
GLC-FE-100LX=	100BASE-LX10 SFP module for 100-Mb ports, 1310-nm wavelength, 10 km over SMF
GLC-FE-100BX-D=	100BASE-BX10-D SFP module for 100-Mb ports, 1550-nm TX /1310-nm RX wavelength, 10 km over single-strand SMF
GLC-FE-100BX-U=	100BASE-BX10-U SFP module for 100-Mb ports, 1310-nm TX/1550-nm RX wavelength, 10 km over single-strand SMF
CWDM-SFP-1470=	Cisco CWDM SFP 1470 nm; Gigabit Ethernet and 1G/2G Fibre Channel (FC) (gray)
CWDM-SFP-1490=	Cisco CWDM SFP, 1490 nm; Gigabit Ethernet and 1G/2G FC (violet)
CWDM-SFP-1510=	Cisco CWDM SFP, 1510 nm; Gigabit Ethernet and 1G/2G FC (blue)
CWDM-SFP-1530=	Cisco CWDM SFP, 1530 nm; Gigabit Ethernet and 1G/2G FC (green)
CWDM-SFP-1550=	Cisco CWDM SFP, 1550 nm; Gigabit Ethernet and 1G/2G FC (yellow)
CWDM-SFP-1570=	Cisco CWDM SFP, 1570 nm; Gigabit Ethernet and 1G/2G FC (orange)
CWDM-SFP-1590=	Cisco CWDM SFP, 1590 nm; Gigabit Ethernet and 1G/2G FC (red)
CWDM-SFP-1610=	Cisco CWDM SFP, 1610 nm; Gigabit Ethernet and 1G/2G FC (brown)
CAB-SM-LCSC-1M	1m fiber single-mode LC-to-SC connectors
CAB-SM-LCSC-5M	5m fiber single-mode LC-to-SC connectors

Part Numbers	Description
SFP-10G-LR=	10GBASE-LR SFP module
SFP-10G-SR=	10GBASE-SR SFP module
SFP-10G-LRM=	10GBASE-LRM SFP module
SFP-10G-CX1=	10GBASE-CX1 SFP module

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