

# Cisco Catalyst 2960-Plus Series Switches

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## Product Overview

**Q.** What is the Cisco Catalyst 2960-Plus Series?

**A.** The Cisco® Catalyst® 2960-Plus Series is a series of enterprise-class fixed-configuration Layer 2 Fast Ethernet access switches, ideal for branch offices, wired workspaces, and infrastructure networks.

**Q.** How is the Cisco Catalyst 2960-Plus different from the Cisco Catalyst 2960?

**A.** The Cisco Catalyst 2960-Plus is based on the Cisco Catalyst 2960 Series of Fast Ethernet switches and uses the same architecture as its predecessor. To enable new software features and releases, the 2960-Plus includes double the RAM (128 MB) and flash memory (64 MB) of the earlier models. In addition, all models of 2960-Plus include both optical (Small Form-Factor Pluggable [SFP]) and copper (1000BASE-T) Gigabit Ethernet uplinks.

**Q.** What are the notable differences between the Cisco Catalyst 2960-S, 2960-SF, and 2960-Plus Series Switches?

**A.** The Cisco Catalyst 2960-S and 2960-SF Series Switches are based on a more advanced hardware platform than the 2960-Plus, which provides a number of advantages, including:

- Cisco FlexStack stacking capabilities
- 10 Gigabit Ethernet uplinks with SFP+ (2960-S only)
- Support for Power over Ethernet Plus (PoE+)
- Cisco Generic Online Diagnostics (GOLD) and onboard failure logging (OBFL)
- USB interfaces for file transfer and management
- 10/100 out-of-band (OOB) management

A complete Cisco Catalyst 2960 Series model selection guide is available here:

[http://www.cisco.com/en/US/products/ps6406/prod\\_models\\_comparison.html](http://www.cisco.com/en/US/products/ps6406/prod_models_comparison.html).

**Q.** What are the notable hardware differences between 2960-Plus LAN Base and LAN Lite models?

**A.** Hardware differences between LAN Base and LAN Lite models include:

- Redundant power system (Cisco RPS 2300) support
- Support for a wider selection of SFP modules. For more information on supported modules, refer to the transceiver matrix:

[http://www.cisco.com/en/US/products/hw/modules/ps5455/products\\_device\\_support\\_tables\\_list.html](http://www.cisco.com/en/US/products/hw/modules/ps5455/products_device_support_tables_list.html).

**Q.** How can I tell the difference between the LAN Base and LAN Lite switches?

**A.** LAN Lite models can be identified based on the text printed on the switch bezel. On the front of the switch, in the top-right corner, LAN Lite switches will read "Catalyst 2960 Plus Series SL." LAN Base switches read "Catalyst 2960-Plus Series."

**Q.** Can a Cisco Catalyst 2960-Plus LAN Lite switch be upgraded to LAN Base?

**A.** No. The feature set is bound to the hardware model. To get the features and capabilities of LAN Base, you must purchase a LAN Base switch.

**Q.** Can Cisco Catalyst 2960-Plus switches support devices that require more than 15.4W?

**A.** No, Cisco Catalyst 2960-Plus switches support only up to 15.4W on PoE ports.

## Software Capabilities

**Q.** What are the notable differences between the Cisco Catalyst 2960-Plus LAN Base and LAN Lite switches?

**A.** Cisco Catalyst 2960 LAN Base switches have several advantages:

- Enhanced security with Layer 2 through 4 access control lists (ACLs), Dynamic Host Configuration Protocol (DHCP) snooping, and more extensive Network Admission Control (NAC) capabilities such as web authentication and 802.1X enhancements
- Additional quality of service (QoS) capabilities: The LAN Base software supports policing, class and policy maps, security ACLs, differentiated services code point (DSCP), AutoQoS, and configurable queue weights, buffers, and thresholds
- Higher network-level availability with features such as FlexLink and link state tracking
- Increased number of VLANs (256) and other enhancements, such as IPv6 host, Multicast Listener Discovery (MLD) snooping, Link Layer Discovery Protocol Media Endpoint Devices (LLDP-MED), Remote SPAN (RSPAN), multicast VLAN registration (MVR), DHCP option 82, and IP SLA (responder)

**Q.** Can I upgrade or downgrade a Cisco Catalyst 2960-Plus Series Switch between the LAN Base and LAN Lite images?

**A.** No. Cisco Catalyst 2960-Plus Series Switches cannot be upgraded from LAN Lite to LAN Base and cannot be downgraded from LAN Base to LAN Lite.

**Q.** Do the Cisco Catalyst 2960-Plus Series Switches support IPv6?

**A.** Cisco Catalyst 2960-Plus Series Switches support IPv6 management. A more advanced IPv6 feature set, including first-hop security features, is available on the Cisco Catalyst 2960-SF Series.

**Q.** Can I obtain a Cisco IOS® Software update for the Cisco Catalyst 2960-Plus at no additional cost?

**A.** Yes. Cisco offers ongoing Cisco IOS Software updates for certain fixed-configuration and stackable Cisco Catalyst switches at no additional cost. For the life of the product, updates within the Cisco IOS Software package purchased (LAN Lite and LAN Base) will be made available.

**Q.** How do I get an update for the Cisco IOS Software for the Cisco Catalyst 2960-Plus Series at no additional cost?

**A.** Visit <http://www.cisco.com>, click "Downloads," and select "Switch Software." Downloading software requires a Cisco.com username and password. If you do not have a Cisco.com username, you can obtain one by clicking "Register" at the top of any page on Cisco.com.

## Network Security

**Q.** How do Cisco Catalyst 2960-Plus switches manage the security needs of a network?

**A.** With the rise in internal threats to a network, Cisco Catalyst switches enhance data security through a wide range of features, including Secure Shell (SSH) Protocol, Simple Network Management Protocol (SNMP) v3, ACLs, 802.1X, port security, Private VLAN Edge, DHCP Interface Tracker, MAC address notification, and RADIUS/TACACS+. The Cisco Catalyst 2960-Plus Series complements devices such as firewalls, VPNs, and intrusion detection systems (IDSs).

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- Q.** How can I keep unauthorized users from accessing my network?
- A.** The Cisco Catalyst 2960-Plus Series supports the IEEE 802.1x standard, which works in conjunction with a RADIUS server to authenticate users as they access a network. Additionally, portions of the network can be restricted by using ACLs. Access can be denied based on MAC addresses, IP addresses, or TCP/User Datagram Protocol (UDP) ports. ACL lookups are done in hardware and do not compromise forwarding and routing performance. An additional protection method is to use port security, which helps ensure that the appropriate user is on the network by limiting access to the port based on MAC addresses.
- Q.** How can I monitor or track activities in my network?
- A.** The Cisco Catalyst 2960-Plus Series can complement an IDS or firewall with features such as MAC address notification, which sends an alert to a management station so that network administrators know when and where users come onto the network and can take appropriate action. The DHCP Interface Tracker (option 82) feature tracks where a user is physically connected on a network by providing both switch and port ID to a DHCP server. DHCP snooping enables the administrator to keep track of both dynamic and static IP/MAC mapping tables.
- Q.** How can I protect administration passwords and traffic going to the switch during configuration or troubleshooting?
- A.** To protect administration traffic during the configuration or troubleshooting of a switch (such as passwords or device configuration settings), the best approach is to encrypt the data using both SSH and SNMP v3 to provide encryption of data during Telnet sessions and SNMP sessions.

## Network Management

- Q.** What network management applications support Cisco Catalyst 2960-Plus Series Switches?
- A.** The following Cisco network management applications can be used to manage the Cisco Catalyst 2960-Plus Series Switches:
- Cisco Prime™ infrastructure: Cisco Prime network management solutions provide comprehensive network lifecycle management. For more information about Cisco Prime, visit <http://www.cisco.com/go/prime>.
  - Cisco Network Assistant: An application from Cisco used for managing small networks. This application can be downloaded from Cisco.com. For more information about Cisco Network Assistant, visit <http://www.cisco.com/go/can>.
  - Device manager: An HTML-based application that is located on the switch.

## Applications and Use Cases

- Q.** What are some common applications for the Cisco Catalyst 2960-Plus?
- A.** Cisco Catalyst 2960-Plus switches deliver secure and reliable access switching for branch offices, wired workspaces, and infrastructure networks requiring cost-effective connectivity. They are ideal for:
- Single-switch branch offices and retail locations
  - Conventional wired workspaces with PC, phones, and printers
  - Building infrastructure networks to connect physical security, sensors, and control systems
  - Any application requiring Fast Ethernet connectivity and a low total cost of ownership

## Warranty and Service

**Q.** What is the hardware warranty and return policy on the Cisco Catalyst 2960-Plus Series Switches?

**A.** The Cisco Catalyst 2960-Plus Series Switches come with an enhanced limited lifetime warranty (E-LLW). The warranty for the Cisco Catalyst 2960-Plus Series Switches has the same terms as our standard limited lifetime warranty (LLW) plus the addition of next-business-day delivery of replacement hardware where available and 90 days of 8x5 Cisco Technical Assistance Center (TAC) support (Table 1).

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 about warranty terms, visit <http://www.cisco.com/go/warranty>.

**Table 1.** Limited Lifetime Warranty Terms

	Cisco Limited Lifetime Hardware Warranty	Cisco Enhanced Limited Lifetime Hardware Warranty
<b>Devices covered</b>	Applies to Cisco Catalyst 2960 Series Switches sold on or after May 1, 2009.	Applies to Cisco Catalyst 2960-Plus Series Switches.
<b>Warranty duration</b>	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.
<b>End-of-life policy</b>	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.
<b>Hardware replacement</b>	Cisco or its service center will use commercially reasonable efforts to ship a replacement part within ten (10) working days after receipt of the return materials authorization (RMA) request. Actual delivery times might vary depending on customer location.	Cisco or its service center will use commercially reasonable efforts to ship a replacement for next-business-day delivery, where available. Otherwise, a replacement will be shipped within ten (10) working days after receipt of the RMA request. Actual delivery times might vary depending on customer location.
<b>Effective date</b>	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).
<b>TAC support</b>	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 a 90-day period from the date of shipment of the originally purchased Cisco Catalyst 2960-S product. This support does not include solution- or network-level support beyond the specific device under consideration.
<b>Cisco.com access</b>	Warranty allows guest access only to Cisco.com.	Warranty allows guest access only to Cisco.com.

**Q.** What is the software update policy for Cisco Catalyst 2960-Plus Series Switches with LAN Base software?

**A.** 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 compliance 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<sup>®</sup> Service to download updates.

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

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## Technical Support Services

- Q.** Why should I purchase a technical service contract for these switches when they include an enhanced limited lifetime warranty (E-LLW)?
- A.** Cisco service and support has received numerous industry recognitions and awards for excellence in technology service and support.

Adding a Cisco Technical Services contract to warranty coverage provides access to the Cisco TAC beyond the 90-day period allowed by the E-LLW. It also can provide a variety of hardware replacement options to meet critical business needs, as well as updates for licensed premium Cisco IOS Software and registered access to the extensive Cisco.com knowledge base and support tools.

For information about Cisco Technical Services, visit <http://www.cisco.com/go/ts>.

For information about the Cisco E-LLW, visit <http://www.cisco.com/go/warranty>.

- Q.** What types of services and support are available for the Cisco Catalyst 2960-Plus Series?
- A.** A full complement of lifecycle services and support is available for the Cisco Catalyst 2960-Plus Series Switches. From implementation to operation and optimization, Cisco offers technical support service delivered either directly or through a Cisco partner.

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.

For more information, visit <http://www.cisco.com/go/services>.

## Other Questions

- Q.** Does the Cisco Catalyst 2960-Plus offer field-replaceable power supplies?
- A.** No. All power supplies are fixed.
- Q.** Does the Cisco Catalyst 2960-Plus support field-replaceable fans?
- A.** No. All fans are fixed inside the chassis of the switch.
- Q.** What is the airflow on the Cisco Catalyst 2960-Plus switches?
- A.** Airflow is side to back. There is a central blower in the rear of the Cisco Catalyst 2960-Plus switches that pulls the air inside the switch and blows it out the back.
- Q.** How many fans do the Cisco Catalyst 2960-Plus switches have?
- A.** The Cisco Catalyst 2960-Plus switches have one blower in the center rear.
- Q.** How can I manage the Cisco Catalyst 2960-Plus Series Switch with IPv6?
- A.** The Cisco Catalyst 2960-Plus supports the IPv6 host feature. An IPv6 address can be assigned to a VLAN interface either statically or using DHCP.

The following IPv6 management protocols are supported:

- HTTP, HTTP(s) over IPv6
- SNMP over IPv6

- Syslog over IPv6
- DHCP-based auto config (Auto Install) and image download
- Telnet and SSH

**Q.** What multicast protocols do the Cisco Catalyst 2960-Plus Series Switches support?

**A.** All Cisco Catalyst 2960-Plus switches running the LAN Base software support the following multicast protocols:

- IGMP v1, v2, and v3 snooping
- IGMP v1 and v2 filtering
- IGMP snooping timer
- IGMP throttle
- IGMP querier
- Configurable IGMP leave timer
- MVR

**Q.** Do the Cisco Catalyst 2960-Plus Series Switches support MACsec (802.1ae)?

**A.** No. MACsec is supported on other Cisco Catalyst switches, including the Cisco Catalyst 3750-X and Cisco Catalyst 3850.

**Q.** Do the Cisco Catalyst 2960-Plus Series Switches support Cisco EnergyWise™?

**A.** Yes.

**Q.** Do the Cisco Catalyst 2960-Plus Series Switches support Smart Install?

**A.** Only in client mode. A Cisco Catalyst 2960-Plus switch cannot act as a Smart Install director.



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