

Cisco Catalyst 2960 Series Switches

Cisco Catalyst 2960 LAN Lite Switches



Cisco Catalyst 2960 Compact Switches

Product Name	Part Number	Description
Cisco Catalyst 2960-8TC-S	WS-C2960-8TC-S	8 Ethernet 10/100 ports and 1 dual-purpose uplink (each dual-purpose uplink port has one 10/100/1000 Ethernet port and one Small Form-Factor Pluggable [SFP]-based Gigabit Ethernet port, one port active). 2960 LAN Lite IOS Software support
Cisco Catalyst 2960PD-8TT-L	WS-C2960PD-8TT-L	8 Ethernet 10/100 ports and 1 10/100/1000 PoE Input port (No power supply required) 2960 LAN Base IOS Software support
Cisco Catalyst 2960-8TC-L	WS-C2960-8TC-L	8 Ethernet 10/100 ports and 1 dual-purpose uplink (each dual-purpose uplink port has one 10/100/1000 Ethernet port and one Small Form-Factor Pluggable [SFP]-based Gigabit Ethernet port, one port active) 2960 LAN Base IOS Software support
Cisco Catalyst 2960G-8TC-L	WS-C2960G-8TC-L	7 Ethernet 10/100/1000 ports and 1 dual-purpose uplink (each dual-purpose uplink port has one 10/100/1000 Ethernet port and one SFP-based Gigabit Ethernet port, one port active) 2960 LAN Base IOS Software support

Switch Configurations

Part Number	Product Description
Cisco Catalyst 2960-8TC-S	8 Ethernet 10/100 ports and 1 dual-purpose uplink port
Cisco Catalyst 2960-24-S	24 Ethernet 10/100 ports
Cisco Catalyst 2960-24TC-S	24 Ethernet 10/100 ports and 2 dual-purpose uplink ports (10/100/1000BASE-T or SFP)
Cisco Catalyst 2960-48TT-S	48 Ethernet 10/100 ports and 2 fixed 10/100/1000 uplink ports
Cisco Catalyst 2960-48TC-S	48 Ethernet 10/100 ports and 2 dual-purpose uplink ports

The SFP-based Gigabit Ethernet ports accommodate Cisco 1000BASE-SX, 1000BASE-LX, and 100BASE-FX SFP transceivers.

Cisco Catalyst 2960 Series Switches with LAN Lite Software

Cisco® Catalyst® 2960 Series Switches with LAN Lite software are fixed-configuration, standalone switches that provide desktop Fast Ethernet connectivity for entry-level wiring closet and small branch-office networks (Figure 1). These switches simplify the migration from nonintelligent hubs and unmanaged switches to a fully scalable managed network. The LAN Lite Cisco IOS® Software provides entry-level security, quality of service (QoS), and availability capabilities while lowering the network total cost of ownership.

The Cisco Catalyst 2960 LAN Lite Switches offer:

- Dual-purpose uplinks for Gigabit Ethernet uplink flexibility, allowing use of either a copper or a fiber uplink; each dual-purpose uplink port has one 10/100/1000 Ethernet port and one Small Form-Factor Pluggable (SFP)-based Gigabit Ethernet port, with one port active at a time
- Scalable and secure network management
- Baseline Network Admission Control based on users, ports, and MAC addresses
- Easy network configuration, Cisco IOS Software updates, and troubleshooting using Cisco Network Assistant software
- QoS for traffic classification and shaping to prioritize various applications
- Single IP address, syslog, and Simple Network Management Protocol (SNMP) management for a stack of up to 16 switches
- Autoconfiguration using Smartports
- Enhanced troubleshooting for link connectivity problems and cable diagnostics
- QoS and support for multicast services
- Limited lifetime hardware warranty
- Software updates at no additional cost

Primary Features and Benefits

Security

The Cisco Catalyst 2960 LAN Lite Switches support security features that can help your business protect important information, keep unauthorized people off the network, guard privacy, and maintain uninterrupted operation.

The Cisco Identity-Based Networking Services (IBNS) solution provides authentication, access control, and security policy administration to secure network connectivity and resources. Cisco IBNS in the Cisco Catalyst 2960 LAN Lite Series prevents unauthorized access and helps ensure that users get only their designated privileges.

With Cisco IBNS you can dynamically administer granular levels of network access. Using the 802.1x standard and the Cisco Secure Access Control Server (ACS), you can assign users a VLAN upon authentication, regardless of where they connect to the network. This setup allows your IT department to enable strong security policies without compromising user mobility, and with minimal administrative overhead.

You can use port security to limit access on an Ethernet port based on the MAC address of the device to which it is connected. You also can use it to limit the total number of

devices plugged into a switch port, thereby protecting the switch from a MAC flooding attack as well as reducing the risks of rogue wireless access points or hubs.

You can use the MAC Address Notification feature to monitor the network and track users by sending an alert to a management station so that your network administrators know when and where users entered the network. Secure Shell Protocol Version 2 (SSHv2) and SNMPv3 encrypt administrative and network-management information, protecting your network from tampering or eavesdropping. TACACS+ or RADIUS authentication enables centralized access control of switches and restricts unauthorized users from altering the configurations. Alternatively, you can configure a local username and password database on the switch itself. Fifteen levels of authorization on the switch console and two levels on the web-based management interface allow you to give different levels of configuration capabilities to different administrators

Ease of Use: Deployment

Ease-of-use features include but are not limited to:

- Smartports enable fast and easy configuration of Cisco recommended best-practice security and QoS features, encapsulating years of Cisco networking expertise.
- Dynamic Host Configuration Protocol (DHCP) autoconfiguration of multiple switches through a boot server eases switch deployment.

The Cisco Catalyst 2960 LAN Lite Switches are equipped with features that allow for network scalability and higher availability through multicast filtering as well as a complete suite of Spanning Tree Protocol enhancements for maximizing availability in a Layer 2 network.

Enhancements to the standard Spanning Tree Protocol, such as Per-VLAN Spanning Tree Plus (PVST+), UplinkFast, and PortFast, help to maximize network uptime. PVST+ allows for Layer 2 load sharing on redundant links to efficiently use the extra capacity inherent in a redundant design. UplinkFast, PortFast, and BackboneFast all greatly reduce the standard 30- to 60-second Spanning Tree Protocol convergence time. The Loopguard and bridge-protocol-data-unit (BPDU) Guard enhancements provide Spanning Tree Protocol loop avoidance.

Quality of Service

The Cisco Catalyst 2960 LAN Lite Switches offer QoS features to help ensure that network traffic is classified and prioritized and that congestion is avoided in the best possible manner. To implement QoS, the Cisco Catalyst 2960 Series Switches first identify traffic flows or packet groups, and then classify or reclassify these groups using the 802.1p Class of Service (CoS) field. The Cisco Catalyst 2960 LAN Lite Switches support four egress queues per port, giving your network administrators more control in assigning priorities for the various applications on the LAN. At egress, the switches

perform congestion control and scheduling, the algorithm or process that determines the order in which queues are processed. The Cisco Catalyst 2960 LAN Lite Switches support Shaped Round Robin (SRR) and Strict Priority Queuing. The SRR algorithm helps ensure differential prioritization.

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