Cisco Catalyst 3750 Series Switches

Cisco Catalyst 3750

The Cisco® Catalyst® 3750 Series Switches (Figures 1 through 4) are innovative switches that improve LAN operating efficiency by combining industry-leading ease of use and high resiliency for stackable switches. This product series features Cisco StackWise™ technology, a 32-Gbps stack interconnect that allows customers to build a unified, highly resilient switching system, one switch at a time.

Figure 1. Cisco Catalyst 3750 Series Switches for 10/100 and 10/100/1000 Access and Aggregation





Figure 2. Cisco Catalyst 3750-24PS and Cisco Catalyst 3750-48PS Switches with IEEE 802.3af Power



Figure 3. Cisco Catalyst 3750G-16TD Switch



Figure 4. Cisco Catalyst 3750G-48TS Switch, Cisco Catalyst 3750G-48PS Switch with IEEE 802.3af Power, Cisco Catalyst 3750G-24TS-1U Switch, and Cisco Catalyst 3750G-24PS Switch with IEEE 802.3af Power



Product Overview

For midsized organizations and enterprise branch offices, the Cisco Catalyst 3750 Series eases deployment of converged applications and adapts to changing business needs by providing configuration flexibility, support for converged network patterns, and automation of intelligent network services configurations. In addition, the Cisco Catalyst 3750 Series is optimized for high-density Gigabit Ethernet deployments and includes a diverse range of switches that meet access, aggregation, or small-network backbone-connectivity requirements.

Configurations

The Cisco Catalyst 3750 Series includes the following configurations:

- Cisco Catalyst 3750G-24TS-24 Ethernet 10/100/1000 ports and four Small Form-Factor Pluggable (SFP) uplinks
- Cisco Catalyst 3750G-24T-24 Ethernet 10/100/1000 ports
- Cisco Catalyst 3750G-12S-12 Gigabit Ethernet SFP ports
- Cisco Catalyst 3750-48TS-48 Ethernet 10/100 ports and four SFP uplinks
- Cisco Catalyst 3750-24TS-24 Ethernet 10/100 ports and two SFP uplinks
- Cisco Catalyst 3750-48PS-48 Ethernet 10/100 ports with IEEE 802.3af and Cisco prestandard Power over Ethernet (PoE) and four SFP uplinks
- Cisco Catalyst 3750-24PS-24 Ethernet 10/100 ports with IEEE 802.3af and Cisco prestandard PoE and two SFP uplinks
- Cisco Catalyst 3750-24FS-24 100BASE-FX Ethernet ports and two SFP uplinks
- Cisco Catalyst 3750G-24TS-1U-24 Ethernet 10/100/1000 ports and four SFP uplinks, 1-rack unit (RU) height
- Cisco Catalyst 3750G-24PS-24 Ethernet 10/100/1000 ports with IEEE 802.3af and Cisco prestandard PoE and four SFP uplinks
- Cisco Catalyst 3750G-48TS-48 Ethernet 10/100/1000 ports and four SFP uplinks
- Cisco Catalyst 3750G-48PS-48 Ethernet 10/100/1000 ports with IEEE 802.3af and Cisco prestandard PoE and four SFP uplinks
- Cisco Catalyst 3750G-24WS-24 Ethernet 10/100/1000 ports with IEEE 802.3af, Cisco prestandard PoE and two SFP

uplinks and an integrated wireless LAN controller

The Cisco Catalyst 3750 Series is available with either the IP Base image or the IP Services image. The IP Base image feature set includes advanced quality of service (QoS), rate-limiting, access control lists (ACLs), static routing, Routing Information Protocol (RIP) and EIGRP stub routing, capabilities. The IP Services image provides a richer set of enterprise-class features, including advanced hardware-based IPv6 and multicast routing.

Management Options

The Cisco Catalyst 3750 Series (Figure 5) offers both a superior command-line interface (CLI) for detailed configuration and Cisco Network Assistant Software, a Web-based tool for quick configuration based on preset templates. In addition, CiscoWorks supports the Cisco Catalyst 3750 Series for networkwide management. Table 1 lists the features and benefits of the Cisco Catalyst 3750 Series.

Figure 5. Cisco Catalyst 3750 Series Switches



Table 1. Features and Benefits

Description Specification

Performance - 32-Gbps switching fabric

- Stack-forwarding rate of 38.7 mpps for 64-byte packets
- Forwarding rate: 6.5 mpps (Cisco Catalyst 3750-24TS, 3750-24FS, and 3750-24PS), 13.1 mpps (Cisco Catalyst 3750-48TS and 3750-48PS), 17.8 mpps (Cisco Catalyst 3750G-12S), 35.7 mpps (Cisco Catalyst 3750G-24T), 38.7 mpps (Cisco Catalyst 3750G-24TS and 3750G-24WS), 35.7 mpps (Cisco Catalyst 3750G-16TD), 38.7 mpps (Cisco Catalyst 3750G-24TS-1U), 38.7 mpps (Cisco Catalyst 3750G-24PS), 38.7 mpps (Cisco Catalyst 3750G-48TS), 38.7 mpps (Cisco Catalyst 3750G-48PS)
- 128 MB DRAM and 16 MB Flash memory (Cisco Catalyst 3750G-24TS, 3750G-24WS, 3750G-24T, 3750G-12S, 3750-24TS, 3750-24PS, 3750-48TS, 3750-48PS, and 3750G-16TD)
- 128 MB DRAM and 32 MB Flash memory (Cisco Catalyst 3750G-24TS-1U, 3750G-24WS, 3750G-24PS, 3750G-48TS, 3750G-48PS, and 3750-24FS)
- Configurable up to 12,000 MAC addresses (Cisco Catalyst 3750G-24TS, 3750G-24WS, 3750G-24T, 3750G-12S, 3750-24TS, 3750-24FS, 3750-24PS, 3750-48TS, 3750-48PS, 3750G-24TS-1U, 3750G-24PS, 3750G-48TS, 3750G-48PS, and 3750G-16TD)
- Configurable up to 20,000 unicast routes (Cisco Catalyst 3750G-12S) and up to 11,000 unicast routes (Catalyst 3750G-

24TS, 3750G-24WS, 3750G-24T, 3750-24TS, 3750-24FS, 3750-24PS, 3750-48TS, 3750-48PS, 3750G-24TS-1U, 3750G-24PS, 3750G-48TS, 3750G-48PS, and 3750G-16TD)
- Configurable up to 1000 IGMP groups and multicast routes (Cisco Catalyst 3750G-24TS, 3750G-24WS, 3750G-24T, 3750G-12S, 3750-24TS, 3750-24FS, 3750-24PS, 3750-48TS, 3750-48PS, 3750G-24TS-1U, 3750G-24PS, 3750G-48TS, 3750G-48PS, and 3750G-16TD)
- Configurable maximum transmission unit (MTU) of up to 9000 bytes, with a maximum Ethernet frame size of 9018 bytes (jumbo frames) for bridging on Gigabit Ethernet ports, and up to 1546 bytes for bridging and routing on Fast Ethernet ports

Connectors and Cabling - 10BASE-T ports: RJ-45 connectors, 2-pair Category 3 (Cat-3), 4, or 5 unshielded twisted-pair (UTP) cabling
- 100BASE-TX ports: RJ-45 connectors, 2-pair Cat-5 UTP cabling
- 100BASE-FX ports: MT-RJ connectors, 50/125 or 62.5/125 micron multimode fiber
- 1000BASE-T ports: RJ-45 connectors, 2-pair Cat-5 UTP cabling
- 1000BASE-T SFP-based ports: RJ-45 connectors, 2-pair Cat-5 UTP cabling
- 1000BASE-SX, -LX/LH, -ZX, and CWDM SFP-based ports: LC fiber connectors (single-mode, or multimode fiber)
- 10GBASE-ER XENPAK-based port (single-mode)
- 10GBASE-LR XENPAK-based port (single-mode)
- Cisco StackWise stacking ports: copper-based Cisco StackWise cabling that is also compatible with the StackWise Plus technology in the Cisco Catalyst 3750-E Series Switches.
- Management console port: RJ-45-to-DB9 cable for PC connections

Power Connectors - Customers can provide power to a switch by using either the internal power supply or a redundant power system (Cisco RPS 2300 or the Cisco RPS 675). The connectors are located at the back of the switch.
- Internal power supply connector
- The internal power supply is an autoranging unit.
- The internal power supply supports input voltages between 100 and 240VAC.
- Use the supplied AC power cord to connect the AC power connector to an AC power outlet.
- Cisco RPS Connector
- The connector offers connection for an optional Cisco RPS 2300 or RPS 675 that uses AC input and supplies DC output to the switch.
- 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.
- Only the Cisco RPS 2300 (model PWR-RPS2300) or the Cisco RPS 675 (PWR675-AC-RPS-N1=) should be attached to the redundant-power-supply receptacle.

Indicators - Per-port status LEDs: link integrity, disabled, activity, speed, and full-duplex indications
- System-status LEDs: system, RPS, and bandwidth-utilization indications