



LAN Switching

LAN Switching Products at a Glance

Fixed Configuration Products

Product	Features	Page
Catalyst Express 500 Series	<ul style="list-style-type: none"> Standalone Layer 2 switches Fast Ethernet and Gigabit Ethernet connectivity Up to 24 10/100 ports with optional Power-over-Ethernet (PoE) or 12 10/100/1000 ports 	2-3
Catalyst 2950 Series	<ul style="list-style-type: none"> Layer 2/3/4 based services: Advanced QoS, Security, High availability and STP enhancements Wire-speed performance GBIC based uplink ports for media flexibility 	2-5
Catalyst 2960 Series	<ul style="list-style-type: none"> Layer 2 switches with intelligent Layer 2 through 4 services for the network edge Fast Ethernet and Gigabit Ethernet connectivity Up to 48 10/100 ports or 10/100/1000 ports 	2-8
Catalyst 3560 Series	<ul style="list-style-type: none"> Layer 2-4 switching and intelligent services with dynamic IP routing and IPv6 Fast Ethernet and Gigabit Ethernet connectivity Up to 48 10/100/1000 ports plus 4 small form-factor pluggable (SFP) ports 	2-10
Catalyst 3560-E Series	<ul style="list-style-type: none"> Layer 2-4 switching and intelligent services with dynamic IP routing and IPv6 Fast Ethernet and Gigabit Ethernet connectivity Up to 48 10/100/1000 ports plus 2 upgradeable 1 GbE to 10 GbE ports per stackable switch Field replaceable and upgradable power supplies and fan tray Configurations with up to 15.4 watts (Class 3) of PoE on all 48 ports 	2-13
Catalyst 3750 Series	<ul style="list-style-type: none"> Stackable, fixed-configuration switches with Cisco StackWise™ technology and a 32-Gbps 2-16 interconnect for a unified, resilient system of up to nine switches Layer 2-4 switching and intelligent services with dynamic IP routing and IPv6 Fast Ethernet, Gigabit Ethernet, and 10 Gigabit Ethernet connectivity Up to 48 10/100/1000 ports plus 4 SFP ports per stackable switch Integrated wireless LAN controller supporting 25 or 50 access points per switch and up to 4 switches per stack for a total of 200 access points 	2-19
Catalyst 3750-E Series	<ul style="list-style-type: none"> Stackable, fixed-configuration switches with Cisco StackWise™ Plus technology and a 64-Gbps interconnect for a unified, resilient system of up to nine switches Layer 2-4 switching and intelligent services with dynamic IP routing and IPv6 Fast Ethernet, Gigabit Ethernet, and 10 Gigabit Ethernet connectivity Up to 48 10/100/1000 ports plus 2 upgradeable 1 GbE to 10 GbE ports per stackable switch Field replaceable and upgradable power supplies and fan tray Full backward compatibility with the Catalyst 3750 Series 	2-19
Catalyst 4948 Series	<ul style="list-style-type: none"> Layer 2 - 4 switching and intelligent services with dynamic IP routing Up to 48 10/100/1000 ports with 4 SFP ports or 48 10/100/1000 ports with two 10GbE ports Dual, hot-swappable internal AC or DC power supplies Hot-swappable fan trays 	2-22

Modular Switching Products

Product	Features	Page
Catalyst 4500 Series	<ul style="list-style-type: none"> Integrated intelligent Layer 2-Layer 4 services for converged networks in enterprise LAN Access, Layer2/Layer3 distribution, SMB and branch office Up to 384 ports of Fast Ethernet or Gigabit Ethernet over Fiber or Copper with wire-speed 10 Gigabit Ethernet Uplinks High performance, Layer 2/3/4 switching up to 136 Gbps and 102 Mpps Advanced network control with predictable performance, granular QoS, advanced security and web-based network management 	2-23
Catalyst 6500 Series	<ul style="list-style-type: none"> Highest levels of Layer 2 - Layer 7 services scalability included integrated deep packet inspection Highest port density for 10 Gb, 1 Gb, and fast Ethernet and PoE ports Scalable up to 720 Gbps of switching capacity with packet throughput scalable to 425 Mpps IPv4 (200 Mpps IPv6) Multi-gigabit service modules for integrated security, network management, and layer 4-7 switching Integrated wireless LAN controller supporting up to 300 access points per module and up to 5 modules for a total of 1500 access points 	2-29

Helpful Resources

Cisco Catalyst Switching Competitive Reference Guide Download the latest edition:
<http://www.cisco.com/web/partners/sell/technology/switching/advantage.html>

Product Ordering Web site To place an order, visit the Cisco Ordering Web site:
<http://www.cisco.com/en/US/ordering/index.shtml>

Cisco LAN and MAN Products Port Matrix

	Fixed Switches								Modular Switches	
	Catalyst Express 500	Catalyst 2950	Catalyst 2960	Catalyst 3560	Catalyst 3560-E	Catalyst 3750	Catalyst 3750-E	Catalyst 4948	Catalyst 4500	Catalyst 6500
Fixed Ports Only	X	X	X	X				X		
Fixed and Modular Ports					X	X	X		X	
Modular Ports Only										X
10BASE-T Switched	X	X	X	X	X	X	X	X	X	X
10BASE-FL Switched										X
100BASE-T Switched	X	X	X	X	X	X	X	X	X	X
100BASE-FX Switched		X	X	X	X	X	X		X	X
10/100 Autosensing Switched	X	X	X	X	X	X	X	X	X	X
10/100/1000BaseT	X	X	X	X	X	X	X	X	X	X
Gigabit Ethernet	X	X	X	X	X	X	X	X	X	X
10 Gigabit Ethernet					X	X	X	X	X	X
Integrated PoE	X			X	X	X	X		X	X
Integrated Service Modules: Firewall, IDS, Network Analysis (NAM), Wireless (WiSM), Voice Gateway (CMM), Content Switching/SSL, Anomaly Detection, IPSec VPN, SSL VPN, AON)										X
WAN Modules: SIP/SPA, OSM, Enhanced FlexWAN										X

Cisco Catalyst Express 500 Series



The Cisco Catalyst Express 500 Series switches are custom-built for growing small- and medium-sized businesses (SMBs), providing an easy-to-manage, secure network foundation optimized for data, wireless, and IP Communications for organizations with up to 250 employees.

When to Sell

Sell This Product

Catalyst Express 500 Series

When a Customer Needs These Features

- Deploying switching solutions in networks with less than 250 users
- Deploying wireless networks or IP Communications
- Power-over-Ethernet (PoE) ports

Key Features

- Power over Ethernet (PoE)—4-port and 24-port PoE configurations provide full 15.4W simultaneously on all ports and can power connected IP phones, wireless access points, IP video cameras, and other devices directly over the Ethernet connection, simplifying deployment and eliminating the need and cost of installing separate power supplies for connected end points.
- Robust Network Security—provide security at the device level with Secure Socket Layer (SSL) and Simple Network Management Protocol (SNMP) encryption, and at the network level with the Cisco Network Assistant security slider, which offers three pre-configured security levels.
- Optimized QoS with Cisco Smartports—Cisco Smartports technology match the appropriate class-of-service (CoS) and differentiated services code point (DSCP) values to the specific Cisco device connected to the Cisco Catalyst Express switch. This simplifies the deployment of IP communications and wireless LAN solutions by automatically detecting these applications and optimizing network QoS and security settings to support them.
- Easy Installation and Configuration—The embedded Device Manager and the freely downloadable Cisco Network Assistant provide easy-to-use GUIs and Cisco Smartports technology to eliminate the complexity that typically accompanies configuration and simplify the management, troubleshooting, and ongoing optimization of the solutions.
- Central management of Cisco foundation, IP telephony and WLAN solutions—Allows centralized management of a SMB network, including Cisco Catalyst switches, integrated services routers (ISRs) and Cisco Unified IP Phones, using a single IP address. Management can be done locally or remotely, using a secure SSL connection
- High Performance—The solutions provide non-blocking, wire-speed switching on all ports to increase network availability and bandwidth, as well as features to manage port congestion and preserve performance
- Limited lifetime hardware warranty

Competitive Products

- 3Com—SuperStack, 2200-PWR, 2800, 4200, 4500, 5500, 5500G,
- ProCurve—2400, 2500, 2600, 2600-PWR, 2800, 3400, 4000M, 6100, 6400,
- Netgear—FS7xxx, GS7xxx FSM7xxx, GSM7xxx
- D-Link—DESxxxx, DGSxxxx, DXSxxx
- Nortel—ES 325, BPS 2000, BayStack Models: 325, 350, 380, 420, 425, 450, 460T, 470, 3510, 5500,
- Huawei—Quidway 2000
- Dell—PowerConnect

Specifications

Feature	CE500-24TT	CE500-24LC	CE500-24PC	CE500G-12TC
Forwarding bandwidth (Gbps)	8.8	8.8	8.8	24
Packets per second (Mpps)	6.6	6.6	6.6	18
MAC addresses supported	8,000	8,000	8,000	8,000
Onboard memory (DRAM MB)	32	32	32	32
Gigabit Ethernet GBIC/SFP density	0	2	2	4
10/100/1000 density	2	2	2	12
10/100 density	24	24	24	0
Max. watt power consumption	30	110	460	45
PoE: Max. 802.3af Class 3 devices (15.4W)	0	4	24	0
PoE: Max. 802.3af Class 2 devices (7.3W)	0	4	24	0
AC/DC support	AC only	AC only	AC only	AC only
Dimensions (H x W x D)	1.73 x 17.5 x 9.9 in. (4.39 x 44.45 x 25.15 cm.)	1.73 x 17.5 x 9.9 in. (4.39 x 44.45 x 25.15 cm.)	1.73 x 17.5 x 14.4 in. (4.39 x 44.45 x 36.58 cm.)	1.73 x 17.5 x 9.9 in. (4.39 x 44.45 x 25.15 cm.)
Unit weight	8 lbs. (3.7 kgs.)	8 lbs. (3.7 kgs.)	12 lbs. (5.5 kgs.)	8 lbs (3.7 kgs.)

Selected Part Numbers and Ordering Information¹

Catalyst Express 500 Series

WS-CE500-24TT-K9	24 10/100 and 2 10/100/1000BT uplinks, GUI software
WS-CE500-24LC-K9	24 10/100 (4 PoE) and 2 10/100/1000BT or SFP uplinks, GUI
WS-CE500-24PC-K9	24 10/100 (24PoE) and 2 10/100/1000BT or SFP uplinks, GUI sw
WS-CE500G-12TC-K9	8 10/100/1000BT and 4 10/100/1000BT or SFPs, GUI software

SFPs

GLC-GE-100FX=	100FX SFP on GE SFP ports
GLC-FE-100FX	100BASE-FX SFP for FE port
GLC-LH-SM=	GE SFP/LC connector LX/LH transceiver
GLC-SX-MM=	GE SFP, LC connector SX transceiver
GLC-FE-100LX	100BASE-LX SFP for FE port
GLC-FE-100BX-U	100BASE-BX10-U SFP
GLC-FE-100BX-D	100BASE-BX10-D SFP

RPS

PWR675-AC-RPS-N1=	675W Redundant Power Supply with 1 connector cable
CAB-RPS-1614=	1 RPS 675 connector cable 16/14

1. This is only a small subset of all parts available via URL listed under "For More Information." Some parts have restricted access or are not available through distribution channels. Resellers: For latest part number and pricing info, see the *Distribution Product Reference Guide* at: <http://www.cisco.com/dprg> (limited country availability).

For More Information

See the Catalyst Express 500 Web site: <http://www.cisco.com/go/catalystexpress500>

Cisco Catalyst 2950 Series Intelligent Ethernet Switches



The Catalyst 2950 Series with Intelligent Ethernet Switches are fixed-configuration, standalone and stackable models that provide wire-speed Fast Ethernet and Gigabit Ethernet connectivity for small, mid-sized, service provider and industrial networks. When a Catalyst 2950 Switch is combined with a Catalyst 3550 Series Switch, the solution is capable of enabling IP routing from the edge to the core of the network. These Intelligent Ethernet Switches come with Enhanced Image (EI) software configuration only.

In addition to the range of Intelligent Ethernet switches, the Catalyst 2950 Series also includes switches with Standard Image (SI) software configuration only and are standalone, fixed-configuration, managed 10/100 switches with Gigabit uplinks (2950SX-48, 2950T-48, and 2950SX-24 only) providing user connectivity for small to mid-sized networks. These wire-speed desktop switches come with Standard Image (SI) software features and offer Cisco IOS functionality for basic data, video and voice services at the edge of the network.

When to Sell

Sell This Product	When a Customer Needs These Features
Catalyst 2950 Series Intelligent Ethernet Switches with Enhanced Image (EI)	Layer 2/3/4 based services: Advanced QoS, Security, High availability and STP enhancements Wire-speed performance Advanced QoS, Security, High availability and STP enhancements CNA Stackable GBIC based uplink ports for media flexibility
Catalyst 2950G-48-EI	Ideal for desktop connectivity High Port Density
Catalyst 2950G-24-EI	Ideal for desktop connectivity Medium Port Density
Catalyst 2950G-24-EI-DC	Ideal for Telco/DCN environments NEBS compliant Medium Port Density
Catalyst 2950G-12-EI	Ideal for desktop connectivity Low Port density
Catalyst 2950T-48	High port density High speed uplink connectivity with 2 fixed 10/100/1000BASE-T ports
Catalyst 2950T-24	High speed uplink connectivity with 2 fixed 10/100/1000BASE-T ports Low price per port
Catalyst 2950C-24	High speed uplink connectivity over extended distances with 2 fixed 100BASE-FX connections using MT-RJ connectors Low price per port
Catalyst 2950 Series with Standard Image (SI)	Wire speed, high performance switches for delivering 10/100 Mbps speed connectivity to desktop PCs, servers and other systems Layer 2-based QoS and Security features CNA Ideal for desktop connectivity-
Catalyst 2950-12	Low Port density
Catalyst 2950-24	Medium port density
Catalyst 2950SX-48	High port density High speed uplink connectivity with 2 fixed 1000BASE-SX ports
Catalyst 2950SX-24	High speed uplink connectivity with 2 fixed 1000BASE-SX ports Medium port density
Catalyst 2950SX-24	High speed uplink connectivity with 2 fixed 1000BASE-SX ports Medium port density

Key Features

- Network Management—CNA offers centralized management and configuration of Cisco networks to simplify deployment and ongoing maintenance by leveraging Cisco Smartports technology. CNA is a PC-based network management application optimized for networks with 20 devices or less.
- Wire-speed performance in connecting end-stations to the LAN
- Provides intelligent services such as advanced quality of service, rate-limiting, security filters, and multicast management, to the network edge-while maintaining the simplicity of traditional LAN switching
- Ideal for small- and mid-sized networks
- Sophisticated Multicast Management via IGMP Snooping
- Scalability and high availability features
- Support for Cisco Redundant Power System 675 (RPS 675)

Competitive Products

- Hewlett Packard—Procurve 2500 /2650
- Nortel—BPS 2000/450T/420T
- 3 Com—Superstack 3300/4300/4400/4400SE/4200 series
- Extreme—Summit 24 e2e3
- Dell—Powerconnect 3024/3048/3248
- Hirshchmann
- GarretCom
- Sixnet

Specifications

Feature	2950G-48-EI	2950G-24-EI	2950G-24-EI-DC	2950G-12-EI	2950T-24
Fixed Ports	48 port 10/100 autosensing & 2 GBIC-based Gigabit Ethernet ports	24 port 10/100 autosensing & 2 GBIC ports	24 port 10/100 autosensing & 2 GBIC ports and DC Power	12 port 10/100 autosensing & 2 GBIC ports	26-port (24 10/100 autosensing & 2 ports 1000BaseT)
Forwarding Bandwidth	13.6 Gbps	8.8 Gbps	8.8Gbps	6.4Gbps	8.8 Gbps
Forwarding Rate	10.1 Mpps	6.6 Mpps	6.6 Mpps	4.8 Mpps	6.6 Mpps
Full-Duplex Capabilities	All Ports	All Ports	All Ports	All Ports	All Ports
VLAN Maximum	250-port-based VLANs	Same as 2950G-48-EI	Same as 2950G-48-EI	Same as 2950G-48-EI	Same as 2950G-48-EI
FEC	Yes	Yes	Yes	Yes	Yes
802.1Q	Yes	Yes	Yes	Yes	Yes
Security	Port Security, with MAC aging, Private VLAN Edge, ACL, 802.11x, IBNS, SSH, RADIUS, TACACS+, SNMPv3 (crypto), BPDU Guard, BPDU Scheduling, SPAN for Intrusion Detection, Spanning Tree Root Guard	Same as 2950G-48-EI	Same as 2950G-48-EI	Same as 2950G-48-EI	Same as 2950G-48-EI
Multicast	IGMP Snooping, IGMP filtering, Multicast VLAN Registration	Same as 2950G-48-EI	Same as 2950G-48-EI	Same as 2950G-48-EI	Same as 2950G-48-EI
QoS	802.1P, 4 egress queues, Weighted Round Robin, Strict Priority Scheduling, Expedite Queuing, Policing, Marking, Layer 3 and 4 Services, Auto QoS	Same as 2950G-48-EI	Same as 2950G-48-EI	Same as 2950G-48-EI	Same as 2950G-48-EI
Management Capabilities	Express Setup, SPAN for Intrusion Detection, L2 Trace Route, VLAN 1 minimization, Auto configuration, SNMP, Telnet, RMON, CWSI, (CLI)-based out-of-band, embedded CMS, RSPAN	Same as 2950G-48-EI	Same as 2950G-48-EI	Same as 2950G-48-EI	Same as 2950G-48-EI
Software Image	Enhanced Image (EI)	Enhanced Image (EI)	Enhanced Image (EI)	Enhanced Image (EI)	Enhanced Image (EI)
Flash Memory	8 MB	8 MB	8 MB	8 MB	8 MB
CPU DRAM	16 MB	16 MB	16 MB	16 MB	16 MB
Embedded RMON	History, Events, Alarms, Statistics	Same as 2950G-48-EI	Same as 2950G-48-EI	Same as 2950G-48-EI	Same as 2950G-48-EI
Dimensions (H x W x D)	1.72 x 17.5 x 13 in.	1.72 x 17.5 x 9.52 in.	1.72 x 17.5 x 9.52 in.	1.72 x 17.5 x 9.52 in.	1.75 x 17.5 x 16 in.

Chapter 2

Feature	2950T-48	2950-24	2950-12	2950SX-12	2950SX-48
Fixed Ports	50-port (48 10/100 autosensing & 2 ports 10/100/1000BASE-T) T-12: 2 fixed 10/100/1000BASE-T uplink ports	24-port 10/100 autosensing	12-port 10/100 autosensing	26-port (24 10/100 autosensing & 2 ports 1000BaseSX) C-12: 2 fixed 100BASE-FX multimode uplink ports; S-12: 2 fixed 100BASE-LX single-mode uplink ports	50-port (48 10/100 autosensing & 2 ports 1000BASE-SX) 12 10/100 ports
Forwarding Bandwidth	13.6 Gbps	4.8 Gbps	2.4 Gbps	8.8 Gbps	13.6 Gbps
Forwarding Rate	13.6 Mpps	3.6 Mpps	1.8 Mpps	6.6 Mpps	13.6 Mpps
Full-Duplex Capabilities	All Ports	All Ports	All Ports	All Ports	All Ports
VLAN Maximum	64-port-based VLANs	64-port-based VLANs	64-port-based VLANs	64-port-based VLANs	64-port-based VLANs
FEC	Yes	Yes	Yes	Yes	Yes
802.1Q	Yes	Yes	Yes	Yes	Yes
Security	Port Security, with MAC aging, Private VLAN Edge, 802.11x, RADIUS, TACACS+, BPDU Guard, BPDU Scheduling, SPAN for Intrusion Detection, Spanning Tree Root Guard	Same as 2950T-48	Same as 2950T-48	Same as 2950T-48	Same as 2950T-48
Multicast	Same as 2950G-48-EI	Same as 2950G-48-EI	Same as 2950G-48-EI	Same as 2950G-48-EI	Same as 2950G-48-EI
QoS	802.1P, 4 egress queues, WRR, Strict Priority Scheduling	Same as 2950T-48	Same as 2950T-48	Same as 2950T-48	Same as 2950T-48
Management Capabilities	Express Setup, SPAN for Intrusion Detection, L2 Trace Route, VLAN 1 minimization, Auto configuration, SNMP, Telnet, RMON, CWSI, (CLI)-based out-of-band, embedded CMS	SNMP, Telnet, RMON, CWSI, (CLI)-based out-of-band, embedded CMS	Same as 2950-24	Same as 2950-24	Same as 2950-24
Software Image	Standard Image (SI)	Standard Image (SI)	Standard Image (SI)	Standard Image (SI)	Standard Image (SI)
Flash Memory	8 MB	8 MB	8 MB	8 MB	8 MB
CPU DRAM	16 MB	16 MB	16 MB	16 MB	16 MB
Embedded RMON	Same as 2950G-48-EI	Same as 2950G-48-EI	Same as 2950G-48-EI	Same as 2950G-48-EI	Same as 2950G-48-EI
Dimensions (H x W x D)	1.75 x 17.5 x 13 in.	1.75 x 17.5 x 11.8 in.	1.75 x 17.5 x 9.52 in.	1.75 x 17.5 x 9.52 in.	1.75 x 17.5 x 13 in.

Feature	2950C-24
Fixed Ports	26-port (24 10/100 autosensing & 2 ports 100BaseFX)
Forwarding Bandwidth	5.2 Gbps
Forwarding Rate	3.9 Mpps
Full-Duplex Capabilities	All Ports
VLAN Maximum	250-port-based VLANs
FEC	Yes
802.1Q	Yes
Security	Port Security, with MAC aging, Private VLAN Edge, ACL, 802.11x, IBNS, SSH, RADIUS, TACACS+, SNMPv3 (crypto), BPDU Guard, BPDU Scheduling, SPAN for Intrusion Detection, Spanning Tree Root Guard
Multicast	Same as 2950G-48-EI
QoS	802.1P, 4 egress queues, Weighted Round Robin, Strict Priority Scheduling,
Management Capabilities	Express Setup, SPAN for Intrusion Detection, L2 Trace Route, VLAN 1 minimization, Auto configuration, SNMP, Telnet, RMON, CWSI, (CLI)-based out-of-band, embedded CMS, RPSAN
Software Image	Enhanced Image (EI)
Flash Memory	8 MB
CPU DRAM	16 MB
Embedded RMON	Same as Catalyst 2950G-48-EI
Dimensions (H x W x D)	1.75 x 17.5 x 11.8 in.

Selected Part Numbers and Ordering Information¹

Catalyst 2950 Series Switches¹

WS-C2950G-48-EI	Catalyst 2950G-48 switch with 48 10/100 ports and 2 Gigabit Interface Converter (GBIC)-based GE ports, Enhanced Image
WS-C2950G-24-EI	Catalyst 2950G-24 switch with 24 10/100 ports and 2 GBIC ports, Enhanced Image
WS-C2950G-24-EI-DC	Catalyst 2950G-24-DC switch with 24 10/100 ports, 2 GBIC ports and DC Power, Enhanced Image
WS-C2950G-12-EI	Catalyst 2950G-12 switch with 12 10/100 ports and 2 GBIC ports, Enhanced Image
WS-C2950T-24	Catalyst 2950C-24T switch with 24 10/100 ports and two fixed 1000BaseT Uplink ports, Enhanced Image
WS-C2950C-24	Catalyst 2950C-24 switch with 24 10/100 ports and two fixed 100BaseFX Uplink ports, Enhanced Image
WS-C2950SX-48-SI	Catalyst 2950SX-48 switch with 48 10/100 ports and two fixed 1000BASE-SX Uplink ports, Standard Image
WS-C2950T-48-SI	Catalyst 2950T-48 switch with 48 10/100 ports and two fixed 10/100/1000BASE-T Uplink ports, Standard Image
WS-C2950SX-24	Catalyst 2950SX-24 switch with 24 10/100 ports and two fixed 1000BaseSX Uplink ports, Standard Image
WS-C2950-24	Catalyst 2950-24 switch with 24 10/100 ports, Standard Image
WS-C2950-12	Catalyst 2950-12 switch with 12 10/100 ports, Standard Image

Gigabit Interface Converters (GBICs)

WS-X3500-XL	GigaStack GBIC Gigabit Ethernet stacking GBIC and 50 cm cable
WS-G5484=	1000BaseSX GBIC short wavelength GBIC (multimode fiber only)
WS-G5486=	1000BaseLX/LH GBIC long wavelength/long haul GBIC (single or multimode fiber)
WS-G5487=	1000BaseZX GBIC extended-reach GBIC (single mode fiber only)
WS-G5483=	1000BaseT GBIC- Gigabit-Ethernet-over-copper GBIC

Redundant Power System (RPS)

PWR675-AC-RPS-N1=	675W Redundant Power Supply with 1 connector cable
VAB-RPS-1414=	1.2 meter cable for Cisco RPS 300 to external device connection

Cables/Accessories

CAB-RPS-1614=	1 RPS 675 connector cable 16/14
CAB-GS-50CM	50 centimeter cable for GigaStack GBIC
STK-RACKMOUNT-1RU=	Rack mount kit for 1 RU versions of Catalyst 2950, 3500 XL, 2900 XL, 1900, and FastHub 400 switches

Packaged SMARTnet 8x5xNBD Maintenance Contract

CON-SNT-PKG3	Packaged SMARTnet 8x5xNBD Maintenance for the Catalyst 2950G-12, 2950-24 and 2950-12
CON-SNT-PKG4	Packaged SMARTnet 8x5xNBD Maintenance for the Catalyst 2950G-24 and 2850G-24-DC
CON-SNT-PKG6	Packaged SMARTnet 8x5xNBD Maintenance for the Catalyst 2950G-48

1. This is only a small subset of all parts available via URL listed under "For More Information." Some parts have restricted access or are not available through distribution channels. Resellers: For latest part number and pricing info, see the *Distribution Product Reference Guide* at: <http://www.cisco.com/dprg> (limited country availability).

For More Information

See the Catalyst 2950 Series Web site: <http://www.cisco.com/go/catalyst2950>

Cisco Catalyst 2960 Series



The Cisco Catalyst 2960 Series Switches are fixed-configuration switches offering Fast Ethernet and Gigabit Ethernet connectivity with enhanced LAN services for mid-market wiring closet and small branch office networks.

Two compact models offer small footprint and silent operation yet deliver the complete LAN-based feature set and are ideal for applications outside the wiring closet such as office workspaces, classrooms, and micro branch offices where space is a premium.

When to Sell

Sell This Product

Catalyst 2960 Series

When a Customer Needs These Features

- Deploy intelligent services at entry-level functionality
- Deploy QoS, enhanced security, and availability
- Deploy and easily manage their networks
- Deploy where space is a constraint

Key Features

- Security—Network security is enabled through a wide range of authentication methods, data encryption technologies, and NAC based on users, ports, and MAC addresses
- Availability—802.1S/W enables standards-based fault tolerance, load balancing, and rapid recovery; Flexlink provides sub 100msec convergence; Per VLAN Spanning Tree Plus (PVST+) increases available bandwidth by allowing traffic on redundant links
- QoS—Network control and bandwidth optimization through advanced QoS, granular rate limiting, access control lists (ACLs), and multicast services
- Management—Cisco Network Assistant is a GUI-based management tool for configuration management, and troubleshooting; Smartports automatically detects connected Cisco devices and recommends preset configurations for the switch port connected to the device
- Limited Lifetime Hardware Warranty
- Software updates at no additional charge
- Supports enhanced L2+ security
- Simplify migration from non-intelligent hubs and unmanaged switches to a fully scalable managed network with the LAN Lite software image,

Competitive Products

- 3Com—3200, 3800, 4200, SS3 4400, 4500
- ProCurve—2500, 2600, 2800
- Huawei—H3C S5100, H3C 3100
- Extreme—Summit 200, 300
- Nortel—ES325, ES 425, ES470, ERS2500
- Foundry—EdgeIron, FastIron Workgroup Edge X

Specifications

Features	WS-C2960-8TC-L	WS-C2960-24TC-L	WS-C2960-24TT-L	WS-C2960-48TC-L
Forwarding bandwidth (Gbps)	16	16	16	32
Packets per second (Mpps)	2.7	6.6	6.6	10.1
MAC addresses supported	8,000	8,000	8,000	8,000
Onboard memory (DRAM)	64 MB	64 MB	64 MB	64 MB
Gigabit Ethernet GBIC/SFP density	1	2	0	2
10/100/1000 density	1	2	2	2
10/100 density	8	24	24	48
100BASE-FX density	0	0	0	0
Max. watt power consumption	20	30	30	45
AC/DC support	AC only	AC only	AC only	AC only
Dimensions (H x W x D)	1.73 x 10.6 x 6.4 in. (4.4 x 27 x 16.3 cm)	1.73 x 17.5 x 9.3 in. (4.4 x 44.5 x 23.6 cm.)	1.73 x 17.5 x 9.3 in. (4.4 x 44.5 x 23.6 cm.)	1.73 x 17.5 x 9.3 in. (4.4 x 44.5 x 23.6 cm.)
Unit weight	3 lbs. (1.4 kgs.)	8 lbs. (3.6 kgs.)	8 lbs. (3.6 kgs.)	8 lbs. (3.6 kgs.)

Features	WS-C2960-48TT-L	WS-C2960G-8TC-L	WS-C2960-48TT-L	WS-C2960G-24TC-L	WS-C2960G-48TC-L
Forwarding bandwidth (Gbps)	16	32	32	32	32
Packets per second (Mpps)	10.1	11.9	10.1	35.7	39
MAC addresses supported	8,000	8,000	8,000	8,000	8,000
Onboard memory (DRAM)	64 MB	64 MB	64 MB	64 MB	64 MB
Gigabit Ethernet GBIC/SFP density	0	1	0	4	4
10/100/1000 density	2	8	2	24	48
10/100 density	48	0	48	0	0
100BASE-FX density	0	0	0	0	0
Max. watt power consumption	45	30	45	75	140
AC/DC support	AC only	AC only	AC only	AC only	AC only

Features	WS-C2960-48TT-L	WS-C2960G-8TC-L	WS-C2960-48TT-L	WS-C2960G-24TC-L	WS-C2960G-48TC-L
Dimensions (H x W x D)	1.73 x 17.5 x 9.3 in. (4.4 x 44.5 x 23.6 cm.)	1.73 x 10.6 x 8.1 in. (4.4 x 27 x 20.5 cm.)	1.73 x 17.5 x 9.3 in. (4.4 x 44.5 x 23.6 cm.)	1.73 x 17.5 x 12.9 in. (4.4 x 44.5 x 32.8 cm.)	1.73 x 17.5 x 12.9 in. (4.4 x 44.5 x 32.8 cm.)
Unit weight	8 lbs. (3.6 kgs.)	3 lbs. (1.4 kgs.)	8 lbs. (3.6 kgs.)	10 lbs. (4.5 kgs.)	12 lbs. (5.4 kgs.)

Features	WS-C2960-24-S	WS-C2960-24TC-S	WS-C2960-48TC-S
Forwarding bandwidth (Gbps)	16	16	16
Packets per second (Mpps)	3.6	6.5	10.1
MAC addresses supported	8,000	8,000	8,000
Onboard memory (DRAM)	64 MB	64 MB	64 MB
Gigabit Ethernet GBIC/SFP density	0	2	2
10/100/1000 density	0	2	2
10/100 density	24	24	48
100BASE-FX density	0	0	0
Max. watt power consumption	30	30	45
AC/DC support	AC only	AC only	AC only
Dimensions (H x W x D)	1.73 x 17.5 x 9.3 in. (4.4 x 44.5 x 23.6 cm.)	1.73 x 17.5 x 9.3 in. (4.4 x 44.5 x 23.6 cm.)	1.73 x 17.5 x 9.3 in. (4.4 x 44.5 x 23.6 cm.)
Unit weight	8 lbs. (3.6 kgs.)	8 lbs. (3.6 kgs.)	8 lbs. (3.6 kgs.)

Selected Part Numbers and Ordering Information¹

Catalyst 2960 Series Workgroup Switches

WS-C2960-24-S	24 10/100 LAN Lite Image
WS-C2960-24TC-S	24 10/100 + 2T/SFP LAN Lite Image
WS-C2960-48TC-S	48 10/100 + 2T/SFP LAN Lite Image
WS-C2960-8TC-L	8 10/100 + 1T/SFP Compact form-factor LAN Base Image
WS-C2960-24TT-L	24 10/100 + 2 1000BT LAN Base Image
WS-C2960-24TC-L	24 10/100 + 2T/SFP LAN Base Image
WS-C2960-48TT-L	48 10/100 + 2 1000BT LAN Base Image
WS-C2960-48TC-L	48 10/100 + 2 T/SFP LAN Base Image
WS-C2960G-8TC-L	7 10/100/1000 + 1 T/SFP Compact form-factor LAN Base Image
WS-C2960G-24TC-L	20 10/100/1000 + 4 T/SFP LAN Base Image
WS-C2960G-48TC-L	44 10/100/1000 + 4 T/SFP LAN Base Image

SFPs

GLC-BX-D=	1000BASE-BX SFP, 1490NM
GLC-BX-U=	1000BASE-BX SFP, 1310NM
GLC-FE-100BX-D=	100BASE-BX10-D SFP
GLC-FE-100BX-U=	100BASE-BX10-U SFP
GLC-FE-100FX=	100BASE-FX SFP for FE port
GLC-FE-100LX=	100BASE-LX SFP for FE port
GLC-GE-100FX=	100FX SFP on GE SFP ports
GLC-LH-SM=	GE SFP, LC connector LX/LH transceiver
GLC-SX-MM=	GE SFP, LC connector SX transceiver
GLC-ZX-SM=	1000BASE-ZX SFP
CWDM-SFP-1470=	CWDM 1470 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1490=	CWDM 1490 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1510=	CWDM 1510 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1530=	CWDM 1530 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1550=	CWDM 1550 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1570=	CWDM 1570 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1590=	CWDM 1590 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1610=	CWDM 1610 NM SFP Gigabit Ethernet and 1G/2G FC

1. This is only a small subset of all parts available via URL listed under "For More Information." Some parts have restricted access or are not available through distribution channels.

For More Information

See the Catalyst 2960 Series Web site: <http://www.cisco.com/go/catalyst2960>

Cisco Catalyst 3560 Series



Chapter 2

The Cisco Catalyst 3560 Series switches are fixed-configuration switches combining Gigabit Ethernet connectivity and PoE for small enterprise LAN access and branch office deployments.

When to Sell

Sell This Product

Catalyst 3560 Series

When a Customer Needs These Features

- Enhance business productivity, resiliency, security, and scalability
- Quickly deploy and easily manage their networks
- Deploy IP telephony, wireless, or Gigabit-to-the-Desktop (GTTD)

Catalyst 3560-24TS

Low-density access, Layer 2+ or L3 features, and one or more fiber uplinks

Catalyst 3560-48TS

Medium-density access, Layer 2+ or L3 features, and one or more fiber uplinks

Catalyst 3560-8PC

Compact switch with magnet and no fan, PoE, Layer 2+ or L3 features, and one dual-purpose 10/100/1000 or SFP uplink

Catalyst 3560-24PS

Low-density access, PoE, Layer 2+ or L3 features, and one or more fiber uplinks

Catalyst 3560-48PS

Medium-density access, PoE, Layer 2+ or L3 features, and one or more fiber uplinks

Catalyst 3560G-24TS

Low-density 10/100/1000 access, Layer 2+ or L3 features, and one or more fiber uplinks

Catalyst 3560G-24PS

Low-density 10/100/1000 access, PoE, Layer 2+ or L3 features, and one or more fiber uplinks

Catalyst 3560G-48TS

Medium-density 10/100/1000 access, Layer 2+ or L3 features, and one or more fiber uplinks

Catalyst 3560G-48PS

Medium-density 10/100/1000 access, PoE, Layer 2+ or L3 features, and one or more fiber uplinks

Key Features

- Availability—Fault tolerance, load balancing, and rapid recovery; Increased available bandwidth with PVST+ by allowing traffic on redundant link; Sub-100-millisecond convergence with Flexlink
- PoE—370W PoE simplifies IP telephony, wireless, and video surveillance deployments; intelligent power management features; PoE combined with Fast Ethernet or Gigabit Ethernet
- Layer 3—Advanced routing protocols such as Open Shortest Path First (OSPF), Enhanced Interior Gateway Routing Protocol (EIGRP), and Policy Based Routing (PBR) increase network scale; equal cost routing as well as multicast routing such as Protocol Independent Multicast (PIM); Virtual Route Forwarding Lite (VRFLite) secures traffic; IPv6
- QoS—Traffic Shaping smooths a sudden traffic flow outburst without dropping packets; shaped Round Robin guarantees bandwidth to mission critical applications; Scavenger Queuing protects against worms overloading resources
- Management—Cisco Smartports quicken and simplify configuration of advanced Cisco Catalyst intelligent capabilities; express setup enables quick and easy setup through a Web interface; resource templates help tailor switch resources for the application
- Security—Dynamic Host Configuration Protocol (DHCP) snooping allows only trusted ports to relay DHCP messages, eliminating rogue DHCP servers; Network Access Control (NAC) prevents the propagation of costly worms and viruses; Dynamic ARP inspection and IP Source Guard prevent against man-in-the-middle attacks; 802.1x and Identity-based Network Services allow only authorized persons on the network; port security prevents MAC address flooding attacks

Competitive Products

- 3Com—4500G, 55xx 10/100, 55xxG 10/100/1000, 55xx FX, 55xxG SFP
- Extreme—Summit, 400, x450
- Foundry—EdgIron 24GS and 48GS
- Huawei—Quidway 3900, 5000
- Nortel—ERS 5000
- ProCurve—2900, 3400c, 3500

Specifications

Features	WS-C3560-24TS	WS-C3560-48TS	WS-C3560-8PC	WS-C3560-24PS	WS-C3560-48PS
Forwarding bandwidth (Gbps)	32	32	32	32	32
Packets per second (Mpps)	6.5	13.1	2.7	6.5	13.1
MAC addresses supported	12,000	12,000	12,000	12,000	12,000
Routes supported	11,000	11,000	11,000	11,000	11,000
Onboard memory (DRAM/Flash)	128/32 MB	128/32 MB	128/32 MB	128/16 MB	128/16 MB
Gigabit Ethernet GBIC/SFP 2 density		4	1	2	4
10/100/1000 density	0	0	1	0	0
10/100 density	24	48	8	24	48
PoE: Max. 802.3af Class 3 devices (15.4W)	0	0	8	24	24
PoE: Max. 802.3af Class 2 devices (7.3W)	0	0	8	24	48
AC/DC support	AC only	AC only	AC only	AC only	AC only
Dimensions (H x W x D)	1.73 x 17.5 x 11.8 in. (4.4 x 44.5 x 30.1 cm.)	1.73 x 17.5 x 11.8 in. (4.4 x 44.5 x 30.1 cm.)	1.73 x 10.6 x 9.1 in. (4.4 x 27 x 23 cm)	1.73 x 17.5 x 11.8 in. (4.4 x 44.5 x 30.1 cm.)	1.73 x 17.5 x 14.9 in. (4.4 x 44.5 x 37.8 cm.)
Unit weight	8.5 lbs. (3.9 kgs.)	9.1 lbs. (4.1 kgs.)	5 lbs. (2.3 kgs.)	11.3 lbs. (5.1 kgs.)	13.2 lbs. (6.0 kgs.)

Features	WS-C3560G-24TS	WS-C3560G-48TS	WS-C3560G-24PS	WS-C3560G-48PS
Forwarding bandwidth (Gbps)	32	32	32	32
Packets per second (Mpps)	38.7	38.7	38.7	38.7
MAC addresses supported	12,000	12,000	12,000	12,000
Routes supported	11,000	11,000	11,000	11,000
Onboard memory (DRAM/Flash)	128/32 MB	128/32 MB	128/32 MB	128/32 MB
Gigabit Ethernet GBIC/SFP density	4	4	4	4
10/100/1000 density	24	48	24	48
10/100 density	0	0	0	0
PoE: Max. 802.3af Class 3 devices (15.4W)	0	0	24	24
PoE: Max. 802.3af Class 2 devices (7.3W)	0	0	24	48
Dimensions (H x W x D)	1.73 x 17.5 x 14.9 in. (4.4 x 44.5 x 37.8 cm.)	1.73 x 17.5 x 16.1 in. (4.4 x 44.5 x 40.9 cm.)	1.73 x 17.5 x 14.9 in. (4.4 x 44.5 x 37.8 cm.)	1.73 x 17.5 x 16.1 in. (4.4 x 44.5 x 40.9 cm.)
Unit weight	12 lbs. (5.4 kgs.)	13.5 lbs. (6.1 kgs.)	14 lbs. (6.4 kgs.)	15.5 lbs. (7.0 kgs.)

Selected Part Numbers and Ordering Information¹

Catalyst 3560 Series 10/100/1000 Workgroup Switches²

WS-C3560G-48PS-S	48 10/100/1000T PoE + 4 SFP Standard Image
WS-C3560G-48PS-E	48 10/100/1000T PoE + 4 SFP Enhanced Image
WS-C3560G-24PS-S	24 10/100/1000T PoE + 4 SFP Standard Image
WS-C3560G-24PS-E	24 10/100/1000T PoE + 4 SFP Enhanced Image
WS-C3560-8PC-S	8 10/100 PoE + 1 T/SFP Compact form-factor Standard Image
WS-C3560G-48TS-S	48 10/100/1000T + 4 SFP Standard Image
WS-C3560G-48TS-E	48 10/100/1000T + 4 SFP Enhanced Image
WS-C3560G-24TS-S	24 10/100/1000T + 4 SFP Standard Image
WS-C3560G-24TS-E	24 10/100/1000T + 4 SFP Enhanced Image

Catalyst 3560 Series 10/100 Workgroup Switches

WS-C3560-48PS-S	48 10/100 PoE + 4 SFP Standard Image
WS-C3560-48PS-E	48 10/100 PoE + 4 SFP Enhanced Image
WS-C3560-24PS-S	24 10/100 PoE + 2 SFP Standard Image
WS-C3560-24PS-E	24 10/100 PoE + 2 SFP Enhanced Image
WS-C3560-48TS-S	48 10/100 + 4 SFP Standard Image
WS-C3560-48TS-E	48 10/100 + 4 SFP Enhanced Image
WS-C3560-24TS-S	24 10/100 + 2 SFP Standard Image

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WS-C3560-24TS-E	24 10/100 + 2 SFP Enhanced Image
IOS Upgrades	
CD-3560-EMI=	Enhanced Multilayer Image upgrade for 3560 10/100 models
CD-3560G-EMI=	Enhanced Multilayer Image upgrade for 3560 GE models
3560-AISK9-LIC-B=	Advanced IP Services for 3560 FE models running SMI
3560-AISK9-LIC-S=	Advanced IP Services upgrade for 3560 FE models running EMI
3560G-AISK9-LIC-B=	Advanced IP Services upgrade for 3560 GE models running SMI
3560G-AISK9-LIC-S=	Advanced IP Services upgrade for 3560 GE models running EMI
SFPs	
GLC-GE-100FX=	100FX SFP on GE SFP ports
GLC-LH-SM=	GE SFP, LC connector LX/LH transceiver
GLC-SX-MM=	GE SFP, LC connector SX transceiver
GLC-T=	1000BASE-T SFP
GLC-ZX-SM=	1000BASE-ZX SFP
CWDM-SFP-1470=	CWDM 1470 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1490=	CWDM 1490 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1510=	CWDM 1510 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1530=	CWDM 1530 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1550=	CWDM 1550 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1570=	CWDM 1570 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1590=	CWDM 1590 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1610=	CWDM 1610 NM SFP Gigabit Ethernet and 1G/2G FC
CAB-SFP-50CM=	Catalyst 3560 SFP Interconnect Cable, 50cm
RPS 2300	
PWR-RPS2300	Cisco Redundant Power System 2300 and Blower, No Power Supply 3
C3K-PWR-1150WAC	Catalyst 3750-E / 3560-E / RPS 2300 1150WAC power supply
C3K-PWR-750WAC	Catalyst 3750-E / 3560-E / RPS 2300 750WAC power supply
ACC-RPS2300=	Spare Accessory Kit for Cisco Redundant Power System 2300
BLNK-RPS2300=	Spare Bay Insert for Cisco Redundant Power System 2300
CAB-RPS2300=	Spare RPS Cable for Cisco Redundant Power System 2300
CAB-RPS2300-E=	Spare RPS Cable RPS 2300 Cat 3750E/3560E Switches
BLWR-RPS2300=	Spare 45CFM Blower for Cisco Redundant Power System 2300

1. Some parts have restricted access. For latest part number and pricing info: <http://www.cisco.com/dprg>
2. S=IP Base; E=IP Services

For More Information

See the Catalyst 3560 Series Web site: <http://www.cisco.com/go/catalyst3560>

Cisco Catalyst 3560-E Series



The Cisco Catalyst 3560-E Series is an enterprise-class line of standalone wiring closet switches that ease the deployment of secure converged applications. Combining 10/100/1000 and Power over Ethernet (PoE) configurations with uplinks that easily upgrade from 1 Gigabit Ethernet to 10 Gigabit Ethernet, these switches enhance worker productivity by enabling applications such as IP telephony, wireless, and video.

When to Sell

Sell This Product

Catalyst 3560-E Series

When a Customer Needs These Features

- Enhance business productivity, resiliency, security, and scalability
- Quickly deploy and easily manage their networks
- Deploy IP telephony, wireless, or Gigabit-to-the-Desktop (GTTD)
- 1GbE to 10 GbE upgradeable uplinks

Catalyst 3560E-24TD

Low-density access, Layer 2+ or L3 features, and one or more 10 GbE fiber uplinks

Catalyst 3560E-48TD

Medium-density access, Layer 2+ or L3 features, and one or more 10 GbE fiber uplinks

Catalyst 3560E-24PD

Low-density access, PoE, Layer 2+ or L3 features, and one or more 10 GbE fiber uplinks

Catalyst 3560E-48PD

Medium-density access, PoE, Layer 2+ or L3 features, and one or more 10 GbE fiber uplinks

Catalyst 3560E-48PD Full Power

Medium-density 10/100/1000 access, Full 15.4W of PoE on every port, Layer 2+ or L3 features, PoE, and 1 or more 10 GbE fiber uplinks

Catalyst 3560E-48TD

Medium-density access, Layer 2+ or L3 features, and one or more 10 GbE fiber uplinks

Catalyst 3560E-24PD	Low-density access, PoE, Layer 2+ or L3 features, and one or more 10 GbE fiber uplinks
Catalyst 3560E-48PD	Medium-density access, PoE, Layer 2+ or L3 features, and one or more 10 GbE fiber uplinks

Key Features

- Availability—Fault tolerance, load balancing, and rapid recovery; Increased available bandwidth with PVST+ by allowing traffic on redundant link; Sub-100-millisecond convergence with Flexlink
- PoE—1150W PoE simplifies IP telephony, wireless, and video surveillance deployments; intelligent power management features; PoE combined with Fast Ethernet or Gigabit Ethernet
- Layer 3—Advanced routing protocols such as Open Shortest Path First (OSPF), Enhanced Interior Gateway Routing Protocol (EIGRP), and Policy Based Routing (PBR) increase network scale; equal cost routing as well as multicast routing such as Protocol Independent Multicast (PIM); Virtual Route Forwarding Lite (VRFLite) secures traffic; IPv6
- QoS—Traffic Shaping smooths a sudden traffic flow outburst without dropping packets; shaped Round Robin guarantees bandwidth to mission critical applications; Scavenger Queuing protects against worms overloading resources
- Management—Cisco Smartports quicken and simplify configuration of advanced Cisco Catalyst intelligent capabilities; express setup enables quick and easy setup through a Web interface; resource templates help tailor switch resources for the application
- Security—Dynamic Host Configuration Protocol (DHCP) snooping allows only trusted ports to relay DHCP messages, eliminating rogue DHCP servers; Network Access Control (NAC) prevents the propagation of costly worms and viruses; Dynamic ARP inspection and IP Source Guard prevent against man-in-the-middle attacks; 802.1x and Identity-based Network Services allow only authorized persons on the network; port security prevents MAC address flooding attacks
- Field replaceable and upgradable power supplies and fan
- TwinGig converter module for migrating uplinks from 1 Gigabit Ethernet (SFP) to 10 Gigabit Ethernet (X2)

Competitive Products

- 3Com: 4500G, , 55xxG 10/100/1000, , 55xxG SFP
- Extreme: 400, 450 series
- Foundry: FastIron Edge X, Fast Iron Workgroup X
- Huawei: Quidway, 5000, 5600
- Nortel: 5xxx
- ProCurve: 2900, 3400, 3500

Specifications

Features	WS-C3560E-24TD	WS-C3560E-48TD	WS-C3560E-24PD	WS-C3560E-48PD	WS-C3560-48PD Full Power
Forwarding bandwidth (Gbps)	64	64	64	64	64
Packets per second (Mpps)	6.5	13.1	6.5	13.1	13.1
MAC addresses supported	12,000	12,000	12,000	12,000	12,000
Routes supported	11,000	11,000	11,000	11,000	11,000
Onboard memory (DRAM/Flash)	128/32 MB	128/32 MB	128/16 MB	128/16 MB	128/16 MB
10/100/1000 density	24	48	24	48	48
10/100 density	24	48	24	48	48
PoE: Max. 802.3af Class 3 devices (15.4W)	24	48	24	48	48
PoE: Max. 802.3af Class 2 devices (7.3W)	24	48	24	48	48
AC/DC support	AC and DC	AC and DC	AC and DC	AC and DC	AC and DC

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Dimensions (H x W x D)	1.73 x 17.5 x 18.1 in. (4.45 x 44.5 x 46.0 cm.)	1.73 x 17.5 x 18.1 in. (4.5 x 44.5 x 46.0 cm.)	1.73 x 17.5 x 18.1 in. (4.45 x 44.5 x 46.0 cm.)	1.73 x 17.5 x 18.1 in. (4.45 x 44.5 x 46.0 cm.)	1.73 x 17.5 x 21.7 in. (4.45 x 44.5 x 55.2 cm.)
Unit weight	17.9 lbs. (8.1 kgs.)	18.8lbs. (8.6kgs.)	18.3 lbs. (8.3kgs.)	19.2 lbs. 8.75kgs.)	20.9 lbs. (9.5 kgs.)

Selected Part Numbers and Ordering Information¹

Catalyst 3560-E Series 10/100/1000 Workgroup Switches²

WS-C3560E-24TD-S	Catalyst 3560E 24 10/100/1000+2*10GE(X2),265W,IPB s/w
WS-C3560E-24TD-S	Catalyst 3560E 24 10/100/1000+2*10GE(X2),265W,IPB s/w
WS-C3560E-24TD-E	Catalyst 3560E 24 10/100/1000+2*10GE(X2),265W,IPS s/w
WS-C3560E-48TD-S	Catalyst 3560E 48 10/100/1000+2*10GE(X2),265W,IPB s/w
WS-C3560E-48TD-E	Catalyst 3560E 48 10/100/1000+2*10GE(X2),265W,IPS s/w
WS-C3560E-24PD-S	Catalyst 3560E 24 10/100/1000 PoE+2*10GE(X2),750W,IPB s/w
WS-C3560E-24PD-E	Catalyst 3560E 24 10/100/1000 PoE+2*10GE(X2),750W,IPS s/w
WS-C3560E-48PD-S	Catalyst 3560E 48 10/100/1000 PoE+2*10GE(X2),750W,IPB s/w
WS-C3560E-48PD-E	Catalyst 3560E 48 10/100/1000 PoE+2*10GE(X2),750W,IPS s/w
WS-C3560E-48PD-SF	Catalyst 3560E 48 10/100/1000 PoE+2*10GE(X2),1150W,IPB s/w
WS-C3560E-48PD-EF	Catalyst 3560E 48 10/100/1000 PoE+2*10GE(X2),1150W,IPS s/w

Power Supplies

C3K-PWR-265WAC=	Catalyst 3750-E/3560-E 265WAC power supply
C3K-PWR-265WDC=	Catalyst 3750-E/3560-E 265WDC power supply
C3K-PWR-750WAC=	Catalyst 3750-E/3560-E/RPS 2300 750WAC power supply
C3K-PWR-1150WAC=	Catalyst 3750-E/3560-E/RPS 2300 1150WAC power supply
C3K-BLWR-60CFM=	Fan Module for the Catalyst 3750-E/3560-E

RPS 2300

PWR-RPS2300	Cisco Redundant Power System 2300 and Blower, No Power Supply ³
C3K-PWR-1150WAC	Catalyst 3750-E / 3560-E / RPS 2300 1150WAC power supply
C3K-PWR-750WAC	Catalyst 3750-E / 3560-E / RPS 2300 750WAC power supply
ACC-RPS2300=	Spare Accessory Kit for Cisco Redundant Power System 2300
BLNK-RPS2300=	Spare Bay Insert for Cisco Redundant Power System 2300
CAB-RPS2300=	Spare RPS Cable for Cisco Redundant Power System 2300
CAB-RPS2300-E=	Spare RPS Cable RPS 2300 Cat 3750E/3560E Switches
BLWR-RPS2300=	Spare 45CFM Blower for Cisco Redundant Power System 2300

TwinGig Converter Module

CVR-X2-SFP=	TwinGig Converter Module
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SFPs

GLC-GE-100FX=	100FX SFP on GE SFP ports
GLC-LH-SM=	GE SFP, LC connector LX/LH transceiver
GLC-SX-MM=	GE SFP, LC connector SX transceiver
GLC-T=	1000BASE-T SFP
GLC-ZX-SM=	1000BASE-ZX SFP
GLC-BX-D=	1000BASE-BX SFP, 1490NM
GLC-BX-U=	1000BASE-BX SFP, 1310NM
CWDM-SFP-1470=	CWDM 1470 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1490=	CWDM 1490 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1510=	CWDM 1510 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1530=	CWDM 1530 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1550=	CWDM 1550 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1570=	CWDM 1570 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1590=	CWDM 1590 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1610=	CWDM 1610 NM SFP Gigabit Ethernet and 1G/2G FC

X2

X2-10GB-ER=	10GBASE-ER X2 Module
X2-10GB-LR=	10GBASE-LR X2 Module
X2-10GB-SR=	10GBASE-SR X2 Module

LC to SC Cables

CSS5-CABLX-LCSC=	CSS11500 10-Meter Fiber Single Mode LX LC-to-SC Connectors
CSS5-CABSX-LC=	CSS11500 10-Meter Fiber Multimode SX LC Connectors
CSS5-CABSX-LCSC=	CSS11500 10-Meter Fiber Multimode SX LC-to-SC Connectors

1. Some parts have restricted access. For latest part number and pricing info: <http://www.cisco.com/dprg>

2. S=IP Base; E=IP Services

For More Information

See the Catalyst 3560-E Series Web site: <http://www.cisco.com/go/catalyst3560E>

Cisco Catalyst 3750 Series

The Cisco Catalyst 3750 Series Switch is an innovative product for midsize organizations and enterprise branch offices. Featuring Cisco StackWise technology, the switch improves LAN operating efficiency by combining ease of use and the highest resiliency available for stackable switches.



When to Sell

Sell This Product

Catalyst 3570 Series

Catalyst 3750-24TS

Catalyst 3750-24PS

Catalyst 3750-48TS

Catalyst 3750G-48PS

Catalyst 3750G-24T

Catalyst 3750G-24TS-1U

Catalyst 3750G-24TS

Catalyst 3750G-24PS

Catalyst 3750G-48TS

Catalyst 3750G-48PS

Catalyst 3750G-16TD

Catalyst 3750G-12S/SD

Catalyst 3750-24FS

Catalyst

WS-C3750G-24WS-S25

When a Customer Needs These Features

- Enhance business productivity, resiliency, security, and scalability
- Quickly deploy and easily manage their networks
- Deploy IP telephony, wireless, or GTTD

Low-density access with switch stacking capability, Layer 2+ or L3 features, and 1 or more fiber uplinks

Low-density access with switch stacking capability, Layer 2+ or L3 features, PoE, and 1 or more fiber uplinks

Medium-density access with switch stacking, Layer 2+ or L3 features, and 1 or more fiber uplinks

Medium-density access with switch stacking capability, Layer 2+ or L3 features, PoE, and 1 or more fiber uplinks

Low-density Layer 2+ or L3 GTTD or Ethernet aggregation with stacking capability without any uplinks

Low-density Layer 2+ or L3 GTTD or Ethernet aggregation with stacking capability and fiber uplinks in a 1RU form factor

Low-density Layer 2+ or L3 GTTD or Ethernet aggregation with stacking capability and fiber uplinks in a 1.5RU form factor

Low-density Layer 2+ or L3 GTTD or Ethernet aggregation with stacking capability, PoE, and fiber uplinks

Medium-density Layer 2+ or L3 GTTD or Ethernet aggregation with stacking capability and fiber uplinks

Medium-density Layer 2+ or L3 GTTD or Ethernet aggregation with stacking capability, PoE, and fiber uplinks

Low-density L2+ or L3 GTTD or Ethernet aggregation with stacking capability and a 10 GE uplink

For aggregation of wiring closet switches with optical connectivity and stacking

Low-density access using 100BASE-FX fiber connections with switch stacking capability, basic Layer 3 features, and one or more fiber uplinks

Integrated wireless LAN controller functions into Cisco Catalyst 3750G series. Supports 25 access points

Key Features

The same features as the Cisco Catalyst 3560 plus,

- Cisco StackWise™ Technology—One IP address and one command-line interface (CLI) simplify management; a 32-Gbps resilient architecture speeds convergence; 1:N stack master redundancy and Layer 3 uplink resilience as well as cross-stack Cisco EtherChannel® technology and QoS increase availability; auto configuration and Cisco IOS® Software version check and update accelerate deployment; hot add and delete of switches keep the stack running
- Wireless—Integrated wireless LAN controller delivers centralized security policies, intrusion protection, RF management, QoS and Layer 3 fast secure roaming for Wireless LANs (WLANs) and is part of the Cisco Unified Wireless Network

Competitive Products

- 3Com—55xx 10/100, 55xxG 10/100/1000, 55xx FX, 55xxG SFP, 7700
- Extreme—Summit 400, x450
- Foundry—Edge Iron 24GS and 48GS
- Huawei—Quidway 5600
- Nortel—ERS 5500
- ProCurve—2900, 3400, 3500

Chapter 2

Specifications

Features	WS-C3750-24TS	WS-C3750-48TS	WS-C3750-24PS	WS-C3750-48PS	WS-C3750-24FS
Forwarding bandwidth (Gbps)	32	32	32	32	32
Maximum stack members	9	9	9	9	9
Total stack bandwidth (Gbps)	32	32	32	32	32
Packets per second (Mpps)	6.5	13.1	6.5	13.1	6.5
MAC addresses supported	12,000	12,000	12,000	12,000	12,000
Routes supported	11,000	11,000	11,000	11,000	11,000
10 GbE density	0	0	0	0	0
Gigabit Ethernet GBIC/SFP density	2	4	2	4	2
10 GbE XENPAK/X2 port density	0	0	0	0	0
10/100/1000 density	0	0	0	0	0
10/100 density	24	48	24	48	0
100BASE-FX density	0	0	0	0	24
Max. watt power consumption	50	75	495	540	125
PoE: Max. 802.3af Class 3 devices (15.4W)	0	0	24	24	0
PoE: Max. 802.3af Class 2 devices (7.3W)	0	0	24	48	0
AC/DC support	AC only	AC only	AC only	AC only	AC only
Dimensions (H x W x D)	1.73 x 17.5 x 11.8 in. (4.4 x 44.5 x 30.1 cm.)	1.73 x 17.5 x 11.8 in. (4.4 x 44.5 x 30.1 cm.)	1.73 x 17.5 x 11.8 in. (4.4 x 44.5 x 30.1 cm.)	1.73 x 17.5 x 14.9 in. (4.4 x 44.5 x 37.8 cm.)	1.73 x 17.5 x 11.8 in. (4.4 x 44.5 x 30.1 cm.)
Unit weight	8 lbs. (3.6 kgs.)	9.1 lbs. (4.1 kgs.)	11.3 lbs. (5.1 kgs.)	13.2 lbs. (6.0 kgs.)	9.15 lbs. (4.15 kgs.)

Features	WS-C3750G-24T	WS-C3750G-24TS-1U	WS-C3750G-48TS	WS-C3750G-24PS	WS-C3750G-48PS
Forwarding bandwidth (Gbps)	32	32	32	32	32
Maximum stack members	9	9	9	9	9
Total stack bandwidth (Gbps)	32	32	32	32	32
Packets per second (Mpps)	35.7	38.7	38.7	38.7	38.7
MAC addresses supported	12,000	12,000	12,000	12,000	12,000
Routes supported	11,000	11,000	11,000	11,000	11,000
10 GbE density	0	0	0	0	0
Gigabit Ethernet GBIC/SFP density	0	4	4	4	4
10 GbE XENPAK/X2 port density	0	0	0	0	0
10/100/1000 density	24	24	48	24	48
10/100 density	0	0	0	0	0
100BASE-FX density	0	0	0	0	0
PoE: Max. 802.3af Class 3 devices (15.4W)	0	0	0	24	24
PoE: Max. 802.3af Class 2 devices (7.3W)	0	0	0	24	48
AC/DC support	AC only	AC only	AC only	AC only	AC only
Dimensions (H x W x D)	1.73 x 17.5 x 12.8 in. (4.4 x 44.5 x 32.6 cm.)	1.73 x 17.5 x 14.9 in. (4.4 x 44.5 x 37.8 cm.)	1.73 x 17.5 x 16.1 in. (4.4 x 44.5 x 40.9 cm.)	1.73 x 17.5 x 14.9 in. (4.4 x 44.5 x 37.8 cm.)	1.73 x 17.5 x 16.1 in. (4.4 x 44.5 x 40.9 cm.)
Unit weight	10 lbs. (4.6 kgs.)	12 lbs. (5.5 kgs.)	14 lbs. (6.4 kgs.)	13.5 lbs. (6.1 kgs.)	15.5 lbs. (7.0 kgs.)

	WS-C3750G -12S	WS-C3750G -12S-SD	WS-C3750G -16TD	WS-C3750G -24WS-S25	WS-C3750G -24WS-S50
Features					
Forwarding bandwidth (Gbps)	32	32	32	32	32
Maximum stack members	9	9	9	9	9
Total stack bandwidth (Gbps)	32	32	32	32	32
Packets per second (Mpps)	17.8	17.8	35.7	38.7	38.7
MAC addresses supported	12,000	12,000	12,000	12,000	12,000
Routes supported	20,000	20,000	11,000	11,000	11,000
Onboard memory (DRAM)	128 MB	128 MB	128 MB	128 MB	128 MB
10 GbE density	0	0	1	0	0
Gigabit Ethernet GBIC/SFP density	12	12	0	2	2
10 GbE XENPAK/X2 port density	0	0	1	0	0
10/100/1000 density	0	0	16	24	24
10/100 density	0	0	0	0	0
Max. watt power consumption	120	72	180	255	255
AC/DC support	AC only	DC only	AC only	AC only	AC only
Dimensions (H x W x D)	1.73 x 17.5 x 12.8 in. (4.4 x 44.5 x 32.6 cm.)	1.73 x 17.5 x 12.8 in. (4.4 x 44.5 x 32.6 cm.)	1.73 x 17.5 x 16.1 in. (4.4 x 44.5 x 40.9 cm.)	2.59 x 17.5 x 11.6 in. (6.6 x 44.5 x 29.5 cm)	2.59 x 17.5 x 11.6 in. (6.6 x 44.5 x 29.5 cm)
Unit weight	10 lbs. (4.6 kgs.)	9 lbs. (4.08 kgs.)	12.5 lbs. (5.7 kgs.)	21 lbs. (9.5 kgs.)	21 lbs. (9.5 kgs.)

Selected Part Numbers and Ordering Information¹

Catalyst 3750 Series Ethernet Switches

WS-C3750G-24T-S	24 10/100/1000T Standard Multilayer Image
WS-C3750G-24T-E	24 10/100/1000T Enhanced Multilayer Image
WS-C3750G-24TS-S	24 10/100/1000 + 4 SFP Std Multilayer; 1.5RU
WS-C3750G-24TS-E	24 10/100/1000 + 4 SFP Enhcd Multilayer;1.5RU
WS-C3750G-24TS-S1U	24 10/100/1000 + 4 SFP Std Multilayer;1RU
WS-C3750G-24TS-E1U	24 10/100/1000 + 4 SFP Enh Multilayer;1RU
WS-C3750G-24PS-S	24 10/100/1000T PoE + 4 SFP Standard Image
WS-C3750G-24PS-E	24 10/100/1000T PoE + 4 SFP Enhanced Image
SWLC3750-25-K9	IP BASE W/O CRYPTO WITH WEB BASED DEV MGR

Wireless LAN

WS-C3750G-24WS-S25	24 Ethernet 10/100/1000 ports with Power over Ethernet (PoE) and 2 SFP ports with support for up to 25 access points
WS-C3750G-24WS-S50	24 Ethernet 10/100/1000 ports with Power over Ethernet (PoE) and 2 SFP ports with support for up to 50 access points

Ethernet Switches

WS-C3750G-48TS-S	48 10/100/1000T + 4 SFP Standard Multilayer
WS-C3750G-48TS-E	48 10/100/1000T + 4 SFP Enhanced Multilayer
WS-C3750G-48PS-S	48 10/100/1000T PoE + 4 SFP Standard Image
WS-C3750G-48PS-E	48 10/100/1000T PoE + 4 SFP Enhanced Image
WS-C3750G-16TD-S	16 10/100/1000BT+ 10GbE (req XENPAK) Std Image
WS-C3750G-16TD-E	16 10/100/1000BT+ 10GbE (req XENPAK) Enh Image
WS-C3750G-12S-S	12 SFP Standard Multilayer Image

Catalyst 3750 Series 10/100 Workgroup Switches

WS-C3750-24FS-S	24 100BaseFX + 2 SFP Standard Multilayer Image
WS-C3750-24PS-S	24 10/100 PoE + 2 SFP Standard Image
WS-C3750-24PS-E	24 10/100 PoE + 2 SFP Enhanced Image
WS-C3750-24TS-S	24 10/100 + 2 SFP Standard Multilayer Image
WS-C3750-24TS-E	24 10/100 + 2 SFP Enhanced Multilayer Image
WS-C3750-48PS-S	48 10/100 PoE + 4 SFP Standard Image
WS-C3750-48PS-E	48 10/100 PoE + 4 SFP Enhanced Image
WS-C3750-48TS-S	48 10/100 + 4 SFP Standard Multilayer Image
WS-C3750-48TS-E	48 10/100 + 4 SFP Enhanced Multilayer Image

Catalyst 3750 Series OADM Modules

CWDM-OADM1-1470=	Dual single channel OADM Module (1470nm)
CWDM-OADM1-1490=	Dual single channel OADM Module (1490nm)
CWDM-OADM1-1510=	Dual single channel OADM Module (1510nm)
CWDM-OADM1-1530=	Dual single channel OADM Module (1530nm)

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CWDM-0ADM1-1550=	Dual single channel OADM Module (1550nm)
CWDM-0ADM1-1570=	Dual single channel OADM Module (1570nm)
CWDM-0ADM1-1590=	Dual single channel OADM Module (1590nm)
CWDM-0ADM1-1610=	Dual single channel OADM Module (1610nm)
CWDM-0ADM4-1=	4-channels CWDM OADM Module (1470, 1490, 1510, 1530)
CWDM-0ADM4-2=	4-channels CWDM OADM Module (1550, 1570, 1590, 16100)
WDM-1300-1550-S=	1300nm/1550nm WDM splitter cable

IOS Upgrades

CD-3750-EMI=	Enhanced Multilayer Image upgrade for 3750 FE models
CD-3750G-EMI=	Enhanced Multilayer Image upgrade for 24-port 3750 GE models
CD-3750G-48EMI=	Enhanced Multilayer Image upgrade for 48-port 3750 GE models
3750-AISK9-LIC-B=	Advanced IP Services upgrade for 3750 FE models running SMI
3750-AISK9-LIC-S=	Advanced IP Services upgrade for 3750 FE models running EMI
3750G-AISK9-LIC-B=	Advanced IP Services upgrade for 3750 GE models running SMI
3750G-AISK9-LIC-S=	Advanced IP Services upgrade for 3750 GE models running EMI
3750G48-AISK9LC-B=	Advanced IP Services upgrade for 3750G-48 running SMI
3750G48-AISK9LC-S=	Advanced IP Services upgrade for 3750G-48 running EMI

SFPs

GLC-GE-100FX=	100FX SFP on GE SFP ports
GLC-LH-SM=	GE SFP,LC connector LX/LH transceiver
GLC-SX-MM=	GE SFP, LC connector SX transceiver
GLC-T=	1000BASE-T SFP
GLC-ZX-SM=	1000BASE-ZX SFP
CWDM-SFP-1470=	CWDM 1470 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1490=	CWDM 1490 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1510=	CWDM 1510 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1530=	CWDM 1530 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1550=	CWDM 1550 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1570=	CWDM 1570 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1590=	CWDM 1590 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1610=	CWDM 1610 NM SFP Gigabit Ethernet and 1G/2G FC

XENPAKs

XENPAK-10GB-ER	10GBASE-ER XENPAK Module
XENPAK-10GB-ER=	10GBASE-ER XENPAK Module
C3-XENPAK10GB-LR=	10GBASE-LR XENPAK Module for Catalyst 3750

RPS 2300

PWR-RPS2300	Cisco Redundant Power System 2300 and Blower, No Power Supply 3
C3K-PWR-1150WAC	Catalyst 3750-E / 3560-E / RPS 2300 1150WAC power supply
C3K-PWR-750WAC	Catalyst 3750-E / 3560-E / RPS 2300 750WAC power supply
ACC-RPS2300=	Spare Accessory Kit for Cisco Redundant Power System 2300
BLNK-RPS2300=	Spare Bay Insert for Cisco Redundant Power System 2300
CAB-RPS2300=	Spare RPS Cable for Cisco Redundant Power System 2300
CAB-RPS2300-E=	Spare RPS Cable RPS 2300 Cat 3750E/3560E Switches
BLWR-RPS2300=	Spare 45CFM Blower for Cisco Redundant Power System 2300

1. This is only a small subset of all parts available via URL listed under "For More Information." Some parts have restricted access or are not available through distribution channels. Resellers: For latest part number and pricing info, see the *Distribution Product Reference Guide* at: <http://www.cisco.com/dprg> (limited country availability).

For More Information

See the Catalyst 3750 Series Web site: www.cisco.com/go/catalyst3750

Cisco Catalyst 3750-E Series

The Cisco Catalyst 3750-E Series with StackWise Plus is an enterprise-class line of stackable wiring closet switches. Combining 10/100/1000 and PoE configurations with upgradeable 1 Gigabit Ethernet to 10 Gigabit Ethernet uplinks, Catalyst 3750-E switches help enhance worker productivity by enabling applications such as IP telephony, wireless, and video.



When to Sell

Sell This Product

Catalyst 3570-E Series

When a Customer Needs These Features

- Enhance business productivity, resiliency, security, and scalability
- Quickly deploy and easily manage their networks
- 1GbE to 10 GbE upgradeable uplinks
- Deploy IP telephony, wireless, or GTTD

Catalyst 3750E-24TD

Low-density access with switch stacking capability, Layer 2+ or L3 features, and 1 or more 10 GbE fiber uplinks

Catalyst 3750E-24PD

Low-density access with switch stacking capability, Layer 2+ or L3 features, PoE, and 1 or more 10 GbE fiber uplinks

Catalyst 3750-48TD

Medium-density access with switch stacking, Layer 2+ or L3 features, and 1 or more 10 GbE fiber uplinks

Catalyst 3750-48PD

Medium-density access with switch stacking capability, Layer 2+ or L3 features, PoE, and 1 or more 10 GbE fiber uplinks

Catalyst 3750G-48PD Full Power

Medium-density access with switch stacking capability, Full 15.4W of PoE on every port, Layer 2+ or L3 features, PoE, and 1 or more 10 GbE fiber uplinks

Key Features

The same features as the Cisco Catalyst 3560 plus,

- Cisco StackWise™ Plus Technology—One IP address and one command-line interface (CLI) simplify management; a 64-Gbps resilient architecture speeds convergence; 1:N stack master redundancy and Layer 3 uplink resiliency as well as cross-stack Cisco EtherChannel® technology and QoS increase availability; auto configuration and Cisco IOS® Software version check and update accelerate deployment; hot add and delete of switches keep the stack running
- TwinGig converter module for migrating uplinks from 1 Gigabit Ethernet (SFP) to 10 Gigabit Ethernet (X2)Field replaceable and upgradable power supplies and fan tray
- Full backward compatibility with the Catalyst 3750 Series

Competitive Products

- 3Com—55xx 10/100, 55xxG 10/100/1000, 55xx FX, 55xxG SFP, 7700
- Extreme—400, 450
- Foundry—FastIron Edge, FastIron Edge X, Fast Iron Workgroup X
- Huawei—Quidway 5600
- Nortel—ERS 1600, ERS 3510, ERS 5500
- ProCurve—3400, 3500, 5300, 5400

Specifications

Features	WS-C3750E-24 TD	WS-C3750E-48 TD	WS-C3750E-24 PD	WS-C3750E-48 PD	WS-C3750E-48 PD Full Power
Forwarding bandwidth (Gbps)	68	68	68	68	68
Maximum stack members	9	9	9	9	9
Total stack bandwidth (Gbps)	64	64	64	64	64
Packets per second (Mpps)	6.5	13.1	6.5	13.1	6.5
MAC addresses supported	12,000	12,000	12,000	12,000	12,000
Routes supported	11,000	11,000	11,000	11,000	11,000
10 GbE density	2	2	2	2	2
10 GbE XFP	2	2	2	2	2
10/100/1000 density	24	48	24	48	48
10/100 density	24	48	24	48	48
100BASE-FX density	0	0	0	0	24
Max. watt power consumption	50	75	495	540	125
PoE: Max. 802.3af Class 3 devices (15.4W)	24	48	24	48	48
PoE: Max. 802.3af Class 2 devices (7.3W)	24	48	24	48	48
AC/DC support	AC and DC	AC and DC	AC and DC	AC and DC	AC and DC

Chapter 2

Dimensions (H x W x D)	1.75 x 17.5 x 18.1 in. (4.45 x 44.5 x 46.0 cm.)	1.75 x 17.5 x 18.1 in. (4.45 x 44.5 x 46.0 cm.)	1.75 x 17.5 x 18.1 in. (4.45 x 44.5 x 46.0 cm.)	1.75 x 17.5 x 18.1 in. (4.45 x 44.5 x 46.0 cm.)	1.75 x 17.5 x 18.1 in. (4.45 x 44.5 x 46.0 cm.)
Unit weight	17.9 lbs. (8.1 kgs.)	18.3 lbs. (8.3 kgs.)	18.8 lbs. (8.6 kgs.)	19.2 lbs. (8.75 kgs.)	20.9 lbs. (9.5 kgs.)

Selected Part Numbers and Ordering Information¹

Catalyst 3750-E Series Ethernet Switches

WS-C3750E-24TD-S	Catalyst 3750E 24 10/100/1000+2*10GE(X2),265W,IPB s/w
WS-C3750E-24TD-E	Catalyst 3750E 24 10/100/1000+2*10GE(X2),265W,IPS s/w
WS-C3750E-48TD-S	Catalyst 3750E 48 10/100/1000+2*10GE(X2),265W,IPB s/w
WS-C3750E-48TD-E	Catalyst 3750E 48 10/100/1000+2*10GE(X2),265W,IPS s/w
WS-C3750E-24PD-S	Catalyst 3750E 24 10/100/1000 PoE+2*10GE(X2),750W,IPB s/w
WS-C3750E-24PD-E	Catalyst 3750E 24 10/100/1000 PoE+2*10GE(X2),750W,IPS s/w
WS-C3750E-48PD-S	Catalyst 3750E 48 10/100/1000 PoE+2*10GE(X2),750W,IPB s/w
WS-C3750E-48PD-E	Catalyst 3750E 48 10/100/1000 PoE+2*10GE(X2),750W,IPS s/w
WS-C3750E-48PD-SF	Catalyst 3750E 48 10/100/1000 PoE+2*10GE(X2),1150W,IPB s/w
WS-C3750E-48PD-EF	Catalyst 3750E 48 10/100/1000 PoE+2*10GE(X2),1150W,IPS s/w

TwinGig Converter Module

CVR-X2-SFP=	TwinGig Converter Module
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Power Supplies

C3K-PWR-265WAC=	Catalyst 3750-E/3560-E 265WAC power supply
C3K-PWR-265WDC=	Catalyst 3750-E/3560-E 265WDC power supply
C3K-PWR-750WAC=	Catalyst 3750-E/3560-E/RPS 2300 750WAC power supply
C3K-PWR-1150WAC=	Catalyst 3750-E/3560-E/RPS 2300 1150WAC power supply
C3K-BLWR-60CFM=	Fan Module for the Catalyst 3750-E/3560-E

RPS 2300

PWR-RPS2300	Cisco Redundant Power System 2300 and Blower, No Power Supply 3
C3K-PWR-1150WAC	Catalyst 3750-E / 3560-E / RPS 2300 1150WAC power supply
C3K-PWR-750WAC	Catalyst 3750-E / 3560-E / RPS 2300 750WAC power supply
ACC-RPS2300=	Spare Accessory Kit for Cisco Redundant Power System 2300
BLNK-RPS2300=	Spare Bay Insert for Cisco Redundant Power System 2300
CAB-RPS2300=	Spare RPS Cable for Cisco Redundant Power System 2300
CAB-RPS2300-E=	Spare RPS Cable RPS 2300 Cat 3750E/3560E Switches
BLWR-RPS2300=	Spare 45CFM Blower for Cisco Redundant Power System 2300

SFPs

GLC-GE-100FX=	100FX SFP on GE SFP ports for DSBU switches
GLC-LH-SM=	GE SFP, LC connector LX/LH transceiver
GLC-SX-MM=	GE SFP, LC connector SX transceiver
GLC-T=	1000BASE-T SFP
GLC-ZX-SM=	1000BASE-ZX SFP
GLC-BX-D=	1000BASE-BX SFP, 1490NM
GLC-BX-U=	1000BASE-BX SFP, 1310NM
CWDM-SFP-1470=	CWDM 1470 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1490=	CWDM 1490 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1510=	CWDM 1510 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1530=	CWDM 1530 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1550=	CWDM 1550 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1570=	CWDM 1570 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1590=	CWDM 1590 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1610=	CWDM 1610 NM SFP Gigabit Ethernet and 1G/2G FC

X2

X2-10GB-ER=	10GBASE-ER X2 Module
X2-10GB-LR=	10GBASE-LR X2 Module
X2-10GB-SR=	10GBASE-SR X2 Module

LC to SC Cables

CSS5-CABLX-LCSC=	CSS11500 10-Meter Fiber Single Mode LX LC-to-SC Connectors
CSS5-CABSX-LC=	CSS11500 10-Meter Fiber Multimode SX LC Connectors
CSS5-CABSX-LCSC=	CSS11500 10-Meter Fiber Multimode SX LC-to-SC Connectors

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For More Information

See the Catalyst 3750-E Series Web site: www.cisco.com/go/catalyst3750E

Cisco Catalyst 4948 Series



The Cisco Catalyst 4900 Series are Layer 2-4 fixed-configuration switches offering high-performance, rack-optimized server switching for data centers of all sizes. The Cisco Catalyst 4900 Series is based on the proven hardware and software architecture of Cisco's Catalyst 4500 Series modular switches, but are distinguished by a 1-RU design that is ideal for top-of-rack server aggregation.

When to Sell

Sell This Product When a Customer Needs These Features

- | | |
|---------------------------|--|
| Catalyst 4948 | <ul style="list-style-type: none"> • 48-Ports of Gigabit Ethernet switching in 1RU with dual power supplies • Non-blocking Layer 2/3/4 10/100/1000 Gigabit Ethernet performance |
| Catalyst 4948-10GE | <ul style="list-style-type: none"> • 48-Ports of Gigabit Ethernet switching in 1RU with dual power supplies • Non-blocking Layer 2/3/4 10/100/1000 Gigabit Ethernet performance with 10 Gigabit Ethernet uplinks |

Key Features

- Low-latency and wire-speed switching
- Up to 48 10/100/1000 ports with 4 Small Form-Factor Pluggable (SFP) ports or 48 10/100/1000 ports with two 10 Gigabit Ethernet ports
- Redundant internal AC or DC power supplies with hot swappable fan tray
- SFP or X2 flexibility on fiber port interfaces covering a wide range of cabling distances

Competitive Products

- Force10—S50
- Foundry—FastIron Edge, FastIron Edge X

Specifications

Feature	WS-C4948	WS-C4948-10GE
Forwarding bandwidth (Gbps)	96	136
Maximum stack members	0	0
Total stack bandwidth (Gbps)	0	0
Packets per second (Mpps)	72	102
MAC addresses supported	32,768	55,000
Routes supported	32,000	32,000
Onboard memory (DRAM)	256 MB	256 MB
10 GbE density	0	2
Gigabit Ethernet GBIC/SFP density	4	0
10 GbE XENPAK/X2 port density	0	2
10/100/1000 density	48	48
10/100 density	0	0
Max. watt power consumption	300	300
AC/DC support	AC/DC	AC/DC
Dimensions (H x W x D)	1.75 x 17.3 x 16.1 in. (4.45 x 43.91 x 40.99 cm.)	1.75 x 17.3 x 16.1 in. (4.45 x 43.91 x 40.99 cm.)
Unit weight	16.5 (7.48 kgs.)	16.5 (7.48 kgs.)

Selected Part Numbers and Ordering Information¹

Catalyst 4900 Switch Series

WS-C4948-S	Catalyst 4948, IPB s/w, 48-Port 10/100/1000+4 SFP, 1 AC p/s
WS-C4948-E	Catalyst 4948, ES s/w, 48-Port 10/100/1000+4 SFP, 1 AC p/s
WS-C4948	Catalyst 4948, optnl sw, 48-Port 10/100/1000+4 SFP, no p/s
WS-C4948-10GE	Catalyst 4948, optnl sw, 48*10/100/1000+2*10GE(X2), no p/s
WS-C4948-10GE-S	Catalyst 4948, IPB s/w, 48*10/100/1000+2*10GE(X2), 1 AC p/s
WS-C4948-10GE-E	Catalyst 4948, ES Image, 48*10/100/1000+2*10GE(X2), 1 AC p/s

Chapter 2

Transceiver Modules

GLC-T	1000BASE-T SFP
GLC-SX-MM	GE SFP, LC connector SX transceiver
GLC-LH-SM	GE SFP, LC connector LX/LH transceiver
GLC-BX-D	1000BASE-BX SFP, 1490NM
GLC-BX-U	1000BASE-BX SFP, 1310NM
GLC-ZX-SM	1000BASE-ZX SFP
CWDM-SFP-1470=	CWDM 1470 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1490=	CWDM 1490 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1510=	CWDM 1510 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1530=	CWDM 1530 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1550=	CWDM 1550 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1570=	CWDM 1570 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1590=	CWDM 1590 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1610=	CWDM 1610 NM SFP Gigabit Ethernet and 1G/2G FC
X2-10GB-CX4	10GBASE-CX4 X2 Module
X2-10GB-ER=	10GBASE-ER X2 Module
X2-10GB-SR	10GBASE-SR X2 Module
X2-10GB-LX4	10GBASE-LX4 X2 Module
X2-10GB-LR	10GBASE-LR X2 Module

Accessories

PWR-C49-300AC=	Catalyst 4948 300-Watt AC Power Supply (Spare)
PWR-C49-300AC/2	Catalyst 4948 300-Watt AC Power Supply Redundant
PWR-C49-300DC=	Catalyst 4900 300-Watt DC Power Supply (Spare)
PWR-C49-300DC/2	Catalyst 4900 300-Watt DC Power Supply Redundant
WS-X4991=	Catalyst 4948 Fan Tray (Spare)
C4948-ACC-KIT=	49xx spare accessory kit
C4948-BKT-KIT=	C49xx front and rear mount brackets

1. This is only a small subset of all parts available via URL listed under "For More Information." Some parts have restricted access or are not available through distribution channels. Resellers: For latest part number and pricing info, see the *Distribution Product Reference Guide* at: <http://www.cisco.com/dprg> (limited country availability).

For More Information

See the Catalyst 4900 series Web site: <http://www.cisco.com/go/catalyst4900>

Cisco Catalyst 4500 Series

The Catalyst 4500 Series switches are mid-range, medium-density modular chassis delivering robust Layer 2-4 intelligent services. The modular centralized architecture, media flexibility, and expandability of the Cisco Catalyst 4500 Series extends deployment life, while reducing the cost of ownership by minimizing recurring operational expenses and improving return on investment.



The Supervisor Engine V-10GE delivers nonblocking, robust Layer 2-4 switching with the addition of wire-speed 10-Gigabit Ethernet uplinks and 4 1-GE ports on the supervisor. This supervisor offers 136-Gbps capacity and 102-mpps throughput with additional features to further enhance resilient control of converged data, voice, and video networks with high availability. The Supervisor Engine IV integrates non-blocking Layers 2-4 switching with integrated resiliency, further enhancing control of converged networks. The Supervisor Engine II-Plus-10GE, a layer 2 and basic L3 supervisor, is equipped with both Gigabit (SFP) and line rate 10-Gigabit (X2) ports on the supervisor, allowing for 10-Gigabit future proofing and an easy and cost-efficient migration to 10 Gigabit.

When to Sell

Sell This Product

Catalyst 4510R

When a Customer Needs These Features

- When high performance, port density, and network resiliency is crucial to customer success
- Port density up to 384-10/100, 100-FX, 1000BASE-X or 10/100/1000BASE-T and 2 ports 10 GbE
- Layer 2 and Layer 3 Cisco Express Forwarding (CEF)-based switching up to 136 Gbps, 102 Mpps

Catalyst 4507R

- When network resiliency via redundant Supervisor Engines is crucial to customer success
- Port density up to 240-10/100, 100-FX, 1000BASE-X or 10/100/1000BASE-T and 2 ports 10 GbE
- Layer 2 and Layer 3 Cisco Express Forwarding (CEF)-based switching up to 100 Gbps, 72 Mpps

Catalyst 4506

- Port density up to 240-10/100, 100-FX, 1000BASE-X or 10/100/1000BASE-T and 2 ports 10 GbE
- Layer 2 and Layer 3 Cisco Express Forwarding (CEF)-based switching up to 100 Gbps, 75 Mpps

Catalyst 4503

- Port density up to 116-10/100, 100-FX, 1000BASE-X or 10/100/1000BASE-T and 2 ports 10 GbE
- Layer 2 and Layer 3 Cisco Express Forwarding (CEF)-based switching up to 64 Gbps, 48 Mpps

Note: Compatible sparring between Catalyst 4510R, 4507R, 4506, and 4503 chassis provides investment protection with common Supervisor Engines, power supplies and switching line cards.

Key Features

- Investment Protection—Evolutionary centralized modular architecture with functionally transparent line cards allow for easy upgrade of all system ports to higher level functions with a Supervisor upgrade
- Flexible Options—Modular 3- and 6-slot single supervisor chassis and 7- and 10-slot redundant supervisor chassis supporting numerous connectivity and service configurations
- Highest Availability—Redundant supervisor engines with In Service Software Upgrade (ISSU), Non-stop Forwarding/Stateful Switchover (NSF/SSO) offering 50ms failover; redundant power supplies with power circuit redundancy; hot-swappable fan trays with redundant fans
- Comprehensive Security—Integrated Network Admission Control (NAC) and 802.1x, H/W-based Control Plane Policing (CoPP); integrated man-in-the-middle and DoS attack mitigation; NetFlow; access control lists and SSH
- Comprehensive Management—CiscoWorks; CNA; RSPAN; TDR and NetFlow
- High Port Density—Up to 384 Fast Ethernet or Gigabit Ethernet ports available in copper or fiber with 10 Gigabit uplinks; PoE (Cisco pre-standard and IEEE 802.3af

Competitive Products

- 3Com—7750
- Extreme—Alpine 3800
- Nortel—ERS 8300
- ProCurve—5300, 5400, 8100
- Foundry—BigIron RX, BigIron MG8, FastIron Super X
- Huawei—Quidway 6500

Specifications

Features	WS-C4503	WS-C4506	WS-C4507R	WS-C4510R
Slots	3	6	7	10
Redundant Supervisor Option	No	No	Yes	Yes
Gigabit Ethernet GBIC/SFP density	104	240	240	384
10 GbE X2 port density	2	2	2	2
10/100/1000 density	108	240	240	384
10/100 density	108	240	240	384
100BASE-FX, LX-10, BX-D density	96	240	240	384
Rack Unit (RU)	7	10	11	14
Backplane Capacity	64 Gbps	100 Gbps	100 Gbps	136 Gbps
Stackable	No	No	No	No
Power Over Ethernet (PoE) Support	Up to 15.4W of PoE on every port	Up to 15.4W of PoE on every port	Up to 15.4W of PoE on every port	Up to 15.4W of PoE on every port
1+1 Power Supply Protection	Yes	Yes	Yes	Yes

Chapter 2

Features	WS-C4503	WS-C4506	WS-C4507R	WS-C4510R
Hot-Swappable Power Supplies	Yes	Yes	Yes	Yes
Max. watt power consumption¹				
AC Internal¹	4,200	4,200	4,200	4,200
AC External with power shelf¹	1,400 + power shelf = 7,500	1,400 + power shelf = 7,500	1,400 + power shelf = 7,500	1,400 + power shelf = 7,500
DC Internal¹	1,400 + UPS = 7,500	1,400 + UPS = 7,500	1,400 + UPS = 7,500	1,400 + UPS = 7,500
Max. number of Class 3 devices (15.4W) Max. power supplies				
AC Internal¹	108	240	240	270
AC External with power shelf¹	108	240	240	364
DC Internal¹	108	240	240	384
Unit weight (chassis only)	31.25 lbs. (14.18 kgs.)	40.5 lbs. (18.37 kgs)	44.25 lbs. (20.07 kgs)	51.50 lbs. (23.36 kgs)
Dimensions (H x W x D)	12.25 x 17.31 x 12.50 in (31.12 x 43.97 x 31.70 cm)	17.38 x 17.31 x 12.50 in (44.13 x 43.97 x 31.70 cm)	19.19 x 17.31 x 12.50 in (48.74 x 43.97 x 31.70 cm)	24.35 x 17.31 x 12.50 in (61.84 x 43.97 x 31.70 cm)

1. Redundant Mode

Features	Supervisor V -10GbE		Supervisor II -Plus (WS-X4013+)	Supervisor II	Supervisor II
	(WS-X4516 -10GE)	Supervisor V (WS-X4516)		Supervisor IV (WS-X4515)	-Plus-TS (WS-X4013 +TS)
Chassis supported	All	All	4503, 4506, 4507R	4503, 4506, 4507R	4503
Enhanced Layer 3 option	yes	yes	yes	no	no
Total bandwidth (Gbps)	136	96	64	64	64
Packets per second (Mpps)	102	72	48	48	48
CPU Mhz	800	400	333	266	266
NetFlow	included	option	option	no	no
Onboard memory (DRAM)	512 MB	512 MB	512 MB	256 MB	256 MB
On-Board Flash	64 MB	64 MB	64 MB	32 MB	32 MB
Compact Flash Support	Yes	Yes	Yes	Yes	Yes
Switching Capacity & Throughput	136 Gbps, 102 Mpps	96 Gbps, 72 Mpps	64 Gbps, 48 Mpps	64 Gbps, 48 Mpps	64 Gbps, 48 Mpps
Multilayer Switching	Enhanced L2/3/4 Services & Routing	Enhanced L2/3/4 Services & Routing	Enhanced L2/3/4 Services & Routing	Basic L2/3/4 Services	Basic L2/3/4 Services
(E)IGRP, OSPF, IS-IS, BGP	Yes	Yes	Yes	EIGRP Stub	EIGRP Stub
Supervisor Redundancy	4507R and 4510R Only	4507R and 4510R Only	4507R Only	4507R Only	No
QoS	40/Port, policing, shaping, congestion avoidance	40/Port, policing, shaping, congestion avoidance	40/Port, policing, shaping, congestion avoidance	40/Port, policing, shaping, congestion avoidance	40/Port, policing, shaping, congestion avoidance
CPU	800 MHz	400 MHz	333 MHz	266 MHz	266 MHz
NetFlow Support	Yes (Built-in functionality; no Daughter Card Required)	Yes (Optional Daughter Card)	Yes (Optional Daughter Card)	No	No
ISL	Yes	Yes	Yes	Yes	Yes
ACLs	Yes	Yes	Yes	Yes	Yes
IP FIB entries	128K	128K	128K	32K	32K
MAC Addresses	32K Unicast, 16K Multicast	32K Unicast, 16K Multicast	32K Unicast 16K Multicast	32K Unicast, 16K Multicast	32K Unicast, 16K Multicast
Non-Blocking Supervisor Ports	2x10GE and 4xGE	2xGE ports	2xGE ports	2xGE ports	12x10/100/1000 BASET, PoE, 8xSFP

Selected Part Numbers and Ordering Information¹

Catalyst 4500 Series Switches

WS-C4510R	Catalyst 4500 Chassis (10-Slot), fan, no p/s, Red Sup Capable
WS-C4507R	Catalyst 4500 Chassis (7-Slot), fan, no p/s, Red Sup Capable
WS-C4506	Catalyst 4500 Chassis (6-Slot), fan, no p/s

WS-C4503	Catalyst 4500 Chassis (3-Slot),fan, no p/s
WS-C4506-S2+96	Cat4506 Bundle, 1x 1000AC, 1x S2+, 2x WS-X4148-RJ
WS-C4503-S2+48	Cat4503 Bundle, 1x 1000AC, 1x S2+, 1x WS-X4148-RJ
WS-C4506-S4-AP25	Cat4506 Bundle, 2x 1000AC, 1x S4, 1x WS-X4306-GB, 1x4402-25
WS-C4506-S4-AP50	Cat4506 Bundle, 2x 1000AC, 1x S4, 1x WS-X4306-GB, 1x4402-50
PoE-Enabled Power Supplies	
PWR-C45-4200ACV/2	Catalyst 4500 4200W AC dual input Power Supply (Data + PoE)
PWR-C45-4200ACV=	Catalyst 4500 4200W AC dual input Power Supply (Data + PoE)
PWR-C45-2800ACV=	Catalyst 4500 2800W AC Power Supply (Data and PoE)
PWR-C45-2800ACV/2	Catalyst 4500 2800W AC Power Supply (Data and PoE)
PWR-C45-1300ACV/2	Catalyst 4500 1300W AC Power Supply (Data and PoE)
PWR-C45-1300ACV=	Catalyst 4500 1300W AC Power Supply (Data and PoE)
PWR-C45-1400DC-P=	Catalyst 4500 1400W DC Power Supply w/Int PEM (Spare)
PWR-C45-1400DC-P/2	Catalyst 4500 1400W DC Power Supply Redundant w/Int PEM
WS-P4502-1PSU	Catalyst 4500 Aux. Power Shelf (2 slot), incl. one PWR-4502
PWR-4502	Catalyst 4500 Aux. Power Shelf Redundant Power Supply
Non-PoE Power Supplies	
PWR-C45-1400AC/2	Catalyst 4500 1400W AC Power Supply Redundant(Data Only)
PWR-C45-1400AC=	Catalyst 4500 1400W AC Power Supply (Data Only)(Spare)
PWR-C45-1000AC=	Catalyst 4500 1000W AC Power Supply (Data Only) Spare
PWR-C45-1000AC/2	Catalyst 4500 1000W AC Power Supply Redundant(Data Only)
PWR-C45-1400DC=	C4500 1400W DC Triple Input SP Power Supply-data only
PWR-C45-1400DC/2	C4500 1400W DC Triple Input SP Power Supply-data only
Supervisor Engines	
WS-X4516-10GE=	Catalyst 4500 Supervisor V-10GE, 2x10GE (X2) and 4x1GE (SFP)
WS-X4516-10GE/2	Catalyst 45xxR Supervisor V-10GE, 2x10GE (X2) or 4x1GE (SFP)
WS-X4516=	Catalyst 4500 Supervisor V (2 GE),Console(RJ-45)(Spare)
WS-X4516/2	Catalyst 45xxR Redundant Supervisor V (2 GE),Console(RJ-45)
WS-X4515=	Catalyst 4500 Supervisor IV, 2 GE, Console(RJ-45)(Spare)
WS-X4515/2	Catalyst 4507R Redundant Supervisor IV,(2 GE),Console(RJ-45)
WS-X4013+10GE=	Catalyst 4500 Sup II+10GE, 2x10GE (X2) and 4x1GE (SFP)
WS-X4013+10GE/2	Catalyst 4507R Sup II+10GE, 2x10GE(X2) and 4x1GE (SFP)
WS-X4013+=	Catalyst 4500 Supervisor II-Plus (I0S), 2GE,Console(RJ-45)
WS-X4013+/2	Catalyst 4507R Redundant Sup II-Plus,(2GE),Console(RJ-45)
WS-X4013+TS=	Catalyst 4503 SupII-Plus-TS, 12 10/100/1000 PoE+8 SFP slots
WS-F4531=	Catalyst 4500 NetFlow Services Card (Sup IV/V)(Spare)
10/100 Linecards	
WS-X4148-RJ=	Catalyst 4500 10/100 Auto Module, 48-Ports (RJ-45) (Spare)
WS-X4124-RJ45=	Catalyst 4500 10/100 Module, 24-Ports(RJ45)
WS-X4148-RJ21=	Catalyst 4500 10/100 Module, 48-Ports Telco (4xRJ21)(Spare)
WS-X4148-RJ45V=	[EOS, See PB 4052] C4500 prestd PoE 10/100 48-Ports RJ45
WS-X4248-RJ21V=	Catalyst 4500 PoE 802.3af 10/100, 48-Ports (RJ21)
WS-X4248-RJ45V=	Catalyst 4500 PoE 802.3af 10/100, 48-Ports (RJ45)
WS-X4224-RJ45V=	Catalyst 4500 PoE 802.3af 10/100 24-ports (RJ45)
WS-X4232-GB-RJ=	Catalyst 4500 32-10/100 (RJ-45),2-GE(GBIC)
WS-X4232-RJ-XX=	Catalyst 4500 10/100 Module,32-ports(RJ45)+Modular uplinks
10/100/1000 Linecards	
WS-X4548-GB-RJ45=	Catalyst 4500 Enhanced 48-Port 10/100/1000 Base-T (RJ-45)
WS-X4548-GB-RJ45V=	Catalyst 4500 PoE 802.3af 10/100/1000, 48-Ports (RJ45)
WS-X4524-GB-RJ45V=	Catalyst 4500 PoE 802.3af 10/ 100/1000 24-ports (RJ45)
WS-X4506-GB-T=	Catalyst 4500 6-Port 10/100/1000 PoE or SFP (Optional)
WS-X4448-GB-RJ45=	Catalyst 4500 48-Port 10/100/1000 Module (RJ45)
WS-X4424-GB-RJ45=	Catalyst 4500 24-port 10/100/1000 Module (RJ45) (Spare)
100 Base-X FE Linecards	
WS-X4248-FE-SFP=	Catalyst 4500 48-Port 100BASE-X (SFPs Optional)
WS-X4124-FX-MT=	Catalyst 4500 FE Switching Module, 24- 100FX (MTRJ)(Spare)
WS-X4148-FE-BD-LC=	Catalyst 4500 FE Module, 48-Port BX-D (LC) (1550) (Spare)
WS-X4148-FE-LX-MT=	Catalyst 4500 FE module, 48-port 100LX SMF (MTRJ)
WS-X4148-FX-MT=	Catalyst 4500 FE Switching Module, 48-100FX MMF(MTRJ)(Spare)
WS-U4504-FX-MT=	Catalyst 4500 4-port 100FX(MTRJ) Uplink for WS-X4232-RJ-XX
1000 Base-X GE Linecards	
WS-X4306-GB=	Catalyst 4500 Gigabit Ethernet Module, 6-Ports(GBIC) (Spare)
WS-X4506-GB-T=	Catalyst 4500 6-Port 10/100/1000 PoE or SFP (Optional)
WS-X4302-GB=	Catalyst 4500 Gigabit Ethernet Module, 2-Ports (GBIC)

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WS-X4418-GB=	Catalyst 4500 GE Module, Server Switching 18-Ports (GBIC)
WS-X4448-GB-SFP=	Catalyst 4500 48-Port 1000Base-X (SFPs Optional)
Transceiver Modules	
WS-G5483=	1000BASE-T GBIC
WS-G5484	1000BASE-SX Short Wavelength GBIC (Multimode only)
WS-G5486	1000BASE-LX/LH long haul GBIC (singlemode or multimode)
WS-G5487	1000Base-ZX extended reach GBIC(singlemode)
GLC-T	1000BASE-T SFP
GLC-T24	24 GLC-T SFP
GLC-SX-MM	GE SFP, LC connector SX transceiver
GLC-LH-SM	GE SFP, LC connector LX/LH transceiver
GLC-FE-100BX-D48	48 units of GLC-FE-100BX-D
GLC-FE-100BX-D	100BASE-BX10-D SFP
GLC-FE-100BX-U	100BASE-BX10-U SFP
GLC-FE-100FX	100BASE-FX SFP for FE port
GLC-FE-100FX24	24 units of GLC-FE-100FX
GLC-FE-100FX48	48 units of GLC-FE-100FX
GLC-FE-100LX	100BASE-LX SFP for FE port
GLC-FE-100LX48	48 units of GLC-FE-100LX
GLC-BX-D	1000BASE-BX SFP, 1490NM
GLC-BX-U	1000BASE-BX SFP, 1310NM
GLC-ZX-SM=	1000BASE-ZX SFP
X2-10GB-CX4	10GBASE-CX4 X2 Module
X2-10GB-SR	10GBASE-SR X2 Module
X2-10GB-ER=	10GBASE-ER X2 Module
X2-10GB-LX4	10GBASE-LX4 X2 Module
X2-10GB-LR	10GBASE-LR X2 Module
Memory Options	
MEM-C4K-FLD64M=	Cat 4500 IOS-based Supervisor, Compact Flash, 64MB Spare
MEM-C4K-FLD128M=	Cat 4500 IOS-based Supervisor, Compact Flash, 128MB Spare
MEM-C4K-256-SDRAM=	256 DIMM DRAM for Supervisor II-Plus-10GE
MEMC4K-U512D-SDRAM	512 DIM DRAM Factory Upgrade for Supervisor II-Plus-10GE
MEMC4K-512D-SDRAM=	512 DIMM DRAM for Supervisor II-Plus-10GE and V-10GE
Accessories	
WS-X4593=	Catalyst 4503 Fan Tray (Spare)
WS-X4596=	Catalyst 4506 Fan Tray (Spare)
WS-X4597=	Catalyst 4507R Fan Tray (Spare)
WS-X4598=	Catalyst 4510R 23 inch Rackmount
WS-X4581=	Catalyst 4510R 19 inch Rackmount
WS-X4582=	Catalyst 4510R Fan Tray (Spare)
WS-X4583=	Catalyst 4503 19 Inch Rackmount
WS-X4584=	Catalyst 4503 23 Inch Rackmount
WS-X4585=	Catalyst 4506 19 Inch Rackmount
WS-X4586=	Catalyst 4506 23 Inch Rackmount
WS-X4587=	Catalyst 4507R 19 Inch Rackmount
WS-X4588=	Catalyst 4507R 23 Inch Rackmount
WS-X4K-CLOCK=	Catalyst 4507R/4510R Clock Module (Spare)
WS-X4590=	Catalyst 4507R/4510R Fabric Redundancy Module
WS-X4503-23CNTR=	C4503 Center Mount 23 Inch Rack Kit L/R
WS-X4503-FILTER=	C4503 Center Mount 23 Inch Filter (1 Set)
WS-X4506-23CNTR=	C4506 Center Mount 23 Inch Rack Kit L/R
WS-X4506-FILTER=	C4506 Center Mount 23 Inch Filter (1 Set)
WS-X4507-23CNTR=	C4507R Center Mount 23 Inch Rack Kit L/R
WS-X4507-FILTER=	C4507R Center Mount 23 Inch Filter (1 Set)
WS-X4510-23CNTR=	C4510R Center Mount 23 Inch Rack Kit L/R
WS-X4510-FILTER=	C4510R Center Mount 23 Inch Filter (1 Set)
C4K-SLOT-CVR=	Catalyst 4000 Family Slot Cover (Spare)
C4K-UPLINK-CVR=	Catalyst 4000 UPLINK COVER (SPARE)
CAB-AC-2800W-EU=	Europe Power Cord
CAB-AC-2800W-INT=	International Power Cord
CAB-AC-2800W-TWLK=	U.S. Power Cord, Twist Lock, NEMA 6-20 Plug
CAB-AC-2800W-6-20=	Non-Locking NEMA Cord For The 2800WAC PS
CAB-US515P-C19-US=	NEMA 5-15 to IEC-C19 13ft US
CAB-L520P-C19-US=	NEMA L5-20 to IEC-C19 6ft US

CAB-L620P-C19-US=	NEMA L6-20 to IEC-C19 14ft US
CAB-US620P-C19-US=	NEMA 6-20 to IEC-C19 13ft US
CAB-CEE77-C19-EU=	CEE 7/7 to IEC-C19 13ft Europe
CAB-I309-C19-INT=	IEC-309 to IEC-C19 13ft Int
CAB-A3112-C19-AUS=	AS-3112 to IEC-C19 14ft Aus
CAB-C2316-C19-IT=	CEI 23-16 to IEC-C19 14ft Italy
CAB-BS1363-C19-UK	BS-1363 to IEC-C19 14ft UK
BLANK-PWR-4502=	Catalyst 4500 Blank p/s Cover for Aux. Power Shelf
CAB-BS1363-C19-UK=	BS-1363 to IEC-C19 14ft UK
CAB-4502-DC-2M=	Catalyst 4500 2 meter DC Cable set for Aux Power Shelf
CAB-4502-DC-60CM=	Catalyst 4500 60cm DC Cable set for Aux Power Shelf
CAB-4502AC-EU=	AC Power cord for PWR-4502 (Europe)
CAB-4502AC-UK=	AC Power cord for PWR-4502 (UK)
CAB-4502AC-US=	AC Power cord for PWR-4502 (North America)
WS-X4571=	Catalyst 4500 Connection Strap for Aux. Power Shelf
CAB-ACS-10=	AC Power Cord (Swiss) 10A
CAB-ACS-16=	AC Power Cord (Swiss) 16A
CAB-S132-C19-ISRL=	S132 to IEC-C19 14ft Israeli
BLANK-PWR-4502	Catalyst 4500 Blank p/s Cover for Aux. Power Shelf
WS-X4500-PS01=	Plastic cover for Cat4500 power shelf (WS-P4502-1)

CWDM GBIC Solution

CWDM-GBIC-1470=	1000BASE-CWDM 1470 nm GBIC (single mode only)
CWDM-GBIC-1490=	1000BASE-CWDM 1490 nm GBIC (single mode only)
CWDM-GBIC-1510=	1000BASE-CWDM 1510 nm GBIC (single mode only)
CWDM-GBIC-1530=	1000BASE-CWDM 1530 nm GBIC (single mode only)
CWDM-GBIC-1550=	1000BASE-CWDM 1550 nm GBIC (single mode only)
CWDM-GBIC-1570=	1000BASE-CWDM 1570 nm GBIC (single mode only)
CWDM-GBIC-1590=	1000BASE-CWDM 1590 nm GBIC (single mode only)
CWDM-GBIC-1610=	1000BASE-CWDM 1610 nm GBIC (single mode only)
CWDM-MUX8A=	8-channels CWDM MUX/DEMUX Module
CWDM-OADM1-1470=	Dual single channel OADM Module (1470nm)
CWDM-OADM1-1490=	Dual single channel OADM Module (1490nm)
CWDM-OADM1-1510=	Dual single channel OADM Module (1510nm)
CWDM-OADM1-1530=	Dual single channel OADM Module (1530nm)
CWDM-OADM1-1550=	Dual single channel OADM Module (1550nm)
CWDM-OADM1-1570=	Dual single channel OADM Module (1570nm)
CWDM-OADM1-1590=	Dual single channel OADM Module (1590nm)
CWDM-OADM1-1610=	Dual single channel OADM Module (1610nm)
CWDM-OADM4-1=	4-channels CWDM OADM Module (1470, 1490, 1510, 1530)
CWDM-OADM4-2=	4-channels CWDM OADM Module (1550, 1570, 1590, 16100)
WDM-1300-1550-S=	1300nm/1550nm WDM splitter cable
CWDM-CHASSIS-2=	2 Slot Chassis for CWDM Mux Plug in Modules
CWDM-MUX-4-SF1=	Single Fiber 4-Channel Mux/Demux
CWDM-MUX-4-SF2=	Single Fiber 4-Channel Mux/Demux

1. This is only a small subset of all parts available via URL listed under "For More Information." Some parts have restricted access or are not available through distribution channels. Resellers: For latest part number and pricing info, see the *Distribution Product Reference Guide* at: <http://www.cisco.com/dprg> (limited country availability).

For More Information

See the Catalyst 4500 series Web site: <http://www.cisco.com/go/catalyst4500>

Cisco Catalyst 6500 Series

The Cisco Catalyst 6500 Series continues to be the industry's most innovative switching platform, delivering the highest levels of application intelligence, unified network services, and integrated security. The feature-richness, flexibility, density, and scalability of this product line sets the standard for converged data, voice, and video networks, and enables maximum operational efficiency and investment protection.



When to Sell

Sell This Product

Catalyst 6509-E

When a Customer Needs These Features

- Most commonly deployed chassis
- 9 slots
- Front access power supplies
- Ideal for use in the wiring closet, distribution, core, data center, and WAN edge

Catalyst 6506-E

- 6 slots
- Front access power supplies
- Medium form factor chassis for the wiring closet, distribution and core, data center, and WAN edge

Catalyst 6504-E

- 4 slots
- Rear power supplies
- Small form factor, high performance, chassis sharing interface modules and supervisor engines with larger chassis for common sparing
- Suitable for small/medium enterprise core/distribution; Metro edge and enterprise wan edge

Catalyst 6503-E

- 3 slots
- Rear power supplies
- Low-density, wiring-closet chassis sharing interface modules and supervisor engines with larger chassis for common sparing

Catalyst 6513

- 13 slots
- Front access power
- High capacity chassis for Ethernet connectivity, with slots to spare for services modules providing network security and management

Supervisor Engine 720

- Integrated switching fabric capable of 720 Gbps
- Optimal in all high bandwidth deployments: core, distribution, aggregation, and data center access
- Compatible with all chassis

Supervisor Engine 32-PISA

- Programmable Intelligent Services Accelerator (PISA)
- Embedded deep packet inspection for accelerating layer 4-7 services in wiring closets and WAN routing
- Compatible with all chassis

Supervisor Engine 32

- 32 Gbps shared bus switching architecture
- Optimized for wiring closet access
- Compatible with all chassis

Key Features

- Programmable Intelligent Services Accelerator (PISA)—Delivers multi-gigabit application intelligence and integrated security services for Wiring Closets and Enterprise WAN routing. With this innovation, customers can now control recreational applications and provide protection against notable worms/viruses and Day Zero attacks at the network edge. PISA is available as additional Supervisor Engine 32 SKUs.
- Cisco IOS Software Modularity—reduces planned and unplanned downtime while boosting operational efficiency; modular subsystems run as independent processes enabling In-Service Software Upgrades (ISSU); faults within modular subsystems are isolated from all other processes and be restarted without losing state (stateful process restarts)
- Embedded Event Manager (EEM)—Automates proactive administrative tasks and network reactions to unexpected events to further drive operational efficiency.
- Maximum PoE Scalability—supports up to 288 Class 3 devices; leads the industry in PoE port density, accelerates deployment of PoE-enabled devices such as IP telephones and wireless access points; Cisco Intelligent Power Management allocates the optimal amount of power per device.
- Supervisor Engine 720—Optimized for high bandwidth needs of enterprise core, distribution, and data centers; delivers up to 720 Gbps Switch Fabric Connection and up to 400 Mpps of switching performance; throughput is increased with support for line

cards with Cisco Express Forwarding (CEF720) and distributed Cisco Express Forwarding (dCEF720); IPv6 and MPLS supported in hardware; supports Layer 3 routing protocols

- Supervisor Engine 32—Optimized for oversubscribed wiring closet deployments; incorporates a 32-Gbps shared bus architecture with support for up to 15 Mpps of switching performance; centralizes Layer 2 and Layer 3 forwarding; available in four models: with and without PISA technology, with 8 gigabit Ethernet uplinks, with two 10 gigabit Ethernet uplinks

Competitive Products

- 3Com—8800
- Extreme—BlackDiamond 6800, 8800, 10800, 12800
- Force10—E300, E600 Chassis, E1200 Chassis
- Foundry—BigIron RX, BigIron MG8, Fastron Super X, Netron MLX, Netron XMR, XMR 640
- Huawei—Quidway 8500
- Nortel—ERS 8600
- ProCurve—8100, 9300, 9400

Specifications

Feature	WS-C6509					
	WS-C6503-E	WS-C6504-E	WS-C6506-E	WS-C6509-E	-NEB-A	WS-C6513
Modular Slots	3	4	6	9	9	13
Gigabit Ethernet GBIC/SFP density	98	144	242	386	384	410
10 GbE XENPAK/X2 port density	16	24	40	64	64	40
10/100/1000 density	97	144	241	385	385	577
10/100 density	192	288	480	768	768	1152
100BASE-FX density	96	144	240	384	384	576
Max. watt power consumption (redundant mode)						
AC Internal ¹	1,400	2,700	8,700	8,700	6,000	6,000
DC Internal ¹	950	2,700	4,000	4,000	4,000	4,000
Max. number of Class 3 devices (15.4W)Max. power supplies						
AC Internal ¹	48	110	420	420	215	288
DC Internal ¹	31	110	173	184	206	176
WAN Interfaces	DS0 to OC-48	DS0 to OC-48	DS0 to OC-48	DS0 to OC-48	DS0 to OC-48	DS0 to OC-48
Available Bandwidth	Scalable to 240 Gbps	Scalable to 320 Gbps	Scalable to 480 Gbps	Scalable to 720 Gbps	Scalable to 720 Gbps	Scalable to 720 Gbps
Throughput	Scalable to 99 Mpps	Scalable to 147 Mpps	Scalable to 243 Mpps	Scalable to 387 Mpps	Scalable to 387 Mpps	Scalable to 425 Mpps
Redundant Supervisor	Yes	Yes	Yes	Yes	Yes	Yes
Hot-Swappable Power Supplies	Yes	Yes	Yes	Yes	Yes	Yes
VLAN Maximum	4096	4096	4096	4096	4096	4096
FEC/GEC	Yes	Yes	Yes	Yes	Yes	Yes
Management Capabilities	CiscoWorks 2000, RMON, Enhanced Switched Port Analyzer (ESPA), SNMP, Telnet, BOOTP, and Trivial File Transfer Protocol (TFTP)					
Rack Unit (RU)	4	5	12	15	21	20
Dimensions (H x W x D)	7 x 17.5 x 21.7 in. (17.8 x 44.1 x 55.2 cm.)	8.7 x 17.5 x 21.6 in. (22.2 x 44.5 x 55.2 cm.)	19.2 x 17.5 x 18.2 in. (48.8 x 44.5 x 46.0 cm.)	24.5 x 17.5 x 18.2 in. (62.2 x 44.5 x 46.0 cm.)	33.3 x 17.3 x 18.1 in. (84.6 x 43.7 x 46.0 cm.)	33.3 x 17.3 x 18.1 in. (84.6 x 43.7 x 46.0 cm.)
Unit weight (chassis only)	33 lbs. (15.0 kgs.)	40 lbs. (18.1 kgs.)	50 lbs. (22.7 kgs.)	60 lbs. (27.3 kgs.)	55 lbs. (24.9 kgs.)	98 lbs. (45.0 kgs.)

1. Redundant Mode

Supervisor Engines	Supervisor 32	
	Supervisor 720 (WS-SUP720-3BXL) (WS-SUP720-3B)	(WS-SUP32-10GE-3B) (WS-SUP32-GE-3B) (WS-S32-GE-PISA) (WS-S32-10G-PISA)
Chassis supported	All	All
Bandwidth per slot (Gbps)	40GB	32GB shared
Total bandwidth (Gbps)	720	32
Packets per second (Mpps)	407	15

Supervisor Engines	Supervisor 720 (WS-SUP720-3BXL) (WS-SUP720-3B)	Supervisor 32 (WS-SUP32-10GE-3B) (WS-SUP32-GE-3B) (WS-S32-GE-PISA) (WS-S32-10G-PISA)
MAC addresses supported	64K Max./32K effective	64K Max./32K effective
Routes supported	1,000,000 (3BXL), 256,000 (3B)	256,000
Onboard memory (DRAM)	Up to 1GB	Up to 1GB

Selected Part Numbers and Ordering Information¹

Catalyst 6500 Chassis

WS-C6503-E	Catalyst 6500 Enhanced 3-slot chassis,4RU,no PS,no Fan Tray
WS-C6504-E	Catalyst 6500 Enhanced 4-slot chassis,5RU,no PS,no Fan Tray
WS-C6506-E	Catalyst 6500 Enhanced 6-slot chassis,12RU,no PS,no Fan Tray
WS-C6509-E	Catalyst 6500 Enhanced 9-slot chassis,15RU,no PS,no Fan Tray
WS-C6509-NEB-A	Catalyst 6500 9-slot chassis(NEBS),21RU,no PS,no Fan Tray
WS-C6513	Catalyst 6500 13-slot chassis,20RU,no PS,no Fan Tray
WS-C6503	Cat 6503 Chassis, 3slot, 4RU, No Pow Supply, No Fan Tray
WS-C6506	Cat 6506 Chassis, 6slot, 12RU, No Pow Supply, No Fan Tray
WS-C6509	Cat 6509 Chassis, 9slot, 15RU, No Pow Supply, No Fan Tray

Sup32-GE Bundles

WS-C6503E-S32-GE	Cisco Catalyst 6503E, WS-SUP32-GE-3B, Fan Tray (req. P/S)
WS-C6504E-S32-GE	6504-E Chassis + Fan Tray + Sup32-GE
WS-C6506E-S32-GE	Cisco Catalyst 6506E, WS-SUP32-GE-3B, Fan Tray (req. P/S)
WS-C6509E-S32-GE	Cisco Catalyst 6509E, WS-SUP32-GE-3B, Fan Tray (req. P/S)
WS-C6513-S32-GE	Cisco Catalyst 6513, WS-SUP32-GE-3B, Fan Tray (req. P/S)
WS-C6509E-S720-10G	Cat 6509E, Sup 7203b,Flash 256Mb, DFC 3B,6704-10GE,4000W AC
WS-C6503E-S32-10GE	Cat6503E chassis, WS-SUP32-10GE-3B, Fan Tray (req.P/S)
WS-C6504E-S32-10GE	6504-E Chassis + Fan Tray + Sup32-10GE
WS-C6506E-S32-10GE	Cat6506E chassis, WS-SUP32-10GE-3B, Fan Tray (req.P/S)
WS-C6509E-S32-10GE	Cat6509E chassis, WS-SUP32-10GE-3B, Fan Tray (req.P/S)
WS-C6513-S32-10GE	Cat6513 chassis, WS-SUP32-10GE-3B, Fan Tray (req. P/S)

Advanced Technology Bundles

WS-C6504-E-VPN+-K9	Cisco Catalyst 6504E IPSec VPN SPA Security System
WS-C6506-E-VPN+-K9	Cisco Catalyst 6506E IPSec VPN SPA Security System
WS-C6509-E-VPN+-K9	Cisco Catalyst 6509E IPSec VPN SPA Security System
WS-C6513-VPN+-K9	Cisco Catalyst 6513 IPSec VPN SPA Security System
WS-C6503-E-FWM-K9	Cisco Catalyst 6503E Firewall Security System
WS-C6506-E-FWM-K9	Cisco Catalyst 6506E Firewall Security System
WS-C6509-E-FWM-K9	Cisco Catalyst 6509E Firewall Security System
WS-C6513-FWM-K9	Cisco Catalyst 6513 Firewall Security System
WS-C6504-E-ACE-K9	ACE 4G 6504 Bundle
WS-C6509-E-ACE-K9	ACE 8G 6509 Bundle
WS-C6503-E-WLSM	Catalyst 6503 With WLSM Bundle
WS-C6506-E-WLSM	Catalyst 6506 With WLSM Bundle
WS-C6504-E-WISM	Cat 6504-E WiSM bundle(SUP720-3B,WiSM, Fan Tray, (2) P/S)
WS-C6509-E-WISM	Cat 6509-E WiSM bundle(SUP720-3B,WiSM, Fan Tray, no P/S)
WS-C6503E-CSM	CSM, 6503, Sup720 Bundle
WS-C6503E-CSMS-K9	CSM-S, 6503, Sup720 Bundle
WS-C6509E-CSM	CSM, 6509, Sup720 Bundle
WS-C6509E-CSMS-K9	CSM-S, 6509, Sup720 Bundle
WS-C6513-CSM	CSM, 6513, Sup720 Bundle
WS-C6513-CSMS-K9	CSM-S, 6513, Sup720 Bundle
WS-SVC-SSL-CSM-K9=	Catalyst 6500 SSL and CSM Bundle

Bundles

WS-C6506-E-PFC2	Cisco Catalyst 6506E, Sup2-PFC2, Fan Tray, No PwrSup
WS-C6509-E-PFC2	6509-E with E- FAN TRAY, Sup2-PFC2 no PwrSup
WS-C6509-S720-6724	Cisco Catalyst 6509,2x3000WAC,SUP720,FanTray,6724-SFP,noSFPs

Supervisor Engines and Switch Fabric Modules

WS-S32-10G-PISA=	Cat 6500 Supervisor 32 with PISA, 2 ports 10GbE uplinks, and PFC3B
WS-S32-GE-PISA=	Catalyst 6500 Supervisor 32 with PISA, 8 GbE uplinks, and PFC3B
WS-SUP32-10GE-3B=	Cat 6500 Supervisor 32 with 2 ports 10GbE and PFC3B
WS-SUP32-GE-3B=	Catalyst 6500 Supervisor 32 with 8 GE uplinks and PFC3B
WS-SUP720-3BXL=	Catalyst 6500/Cisco 7600 Supervisor 720 Fabric MSFC3 PFC3BXL
WS-SUP720-3B=	Catalyst 6500/Cisco 7600 Supervisor 720 Fabric MSFC3 PFC3B

WS-SUP720	Catalyst 6500/Cisco 7600 Supervisor 720 Fabric MSFC3 PFC3A
WS-SUP720=	Catalyst 6500/Cisco 7600 Supervisor 720 Fabric MSFC3 PFC3A
WS-X6K-S2U-MSFC2	Catalyst 6500 Supervisor 2U, 256MB Supervisor, 512MB MSFC2
WS-X6K-S2U-MSFC2=	Catalyst 6500 Supervisor 2U, 256MB Supervisor, 512MB MSFC2
WS-X6K-S2-MSFC2	Catalyst 6500 Supervisor Engine-2, 2GE, plus MSFC-2 / PFC-2
WS-X6K-S2-MSFC2=	Catalyst 6500 Supervisor Engine-2, 2GE, plus MSFC-2 / PFC-2
WS-X6K-S2-PFC2	Catalyst 6500 Supervisor Engine-2, 2GE, plus PFC-2
WS-X6K-S2-PFC2=	Catalyst 6500 Supervisor Engine-2, 2GE, plus PFC-2
WS-X6500-SFM2	Catalyst 6500 Switch Fabric Module 2
WS-X6500-SFM2=	Catalyst 6500 Switch Fabric Module 2, Spare
10 Gigabit Ethernet	
WS-X6708-10G	Cat6500, 1x6704-10GE, 1xWS-F6700-DFC3B, 2xXENPAK-10GB-SR=
WS-X6704-10GE=	Cat6500 4-port 10 Gigabit Ethernet Module (req. XENPAKs)
S-67-10GE-C2	Cat6500, 1x6704-10GE, 1xWS-F6700-DFC3B, 2xXENPAK-10GB-SR=
Gigabit Ethernet	
WS-X6408A-GBIC=	Catalyst 6000 8-port GE, Enhanced QoS (Req. GBICs)
WS-X6516A-GBIC=	Catalyst 6500 16-port GigE Mod, fabric-enabled (Req. GBICs)
WS-X6724-SFP=	Catalyst 6500 24-port GigE Mod: fabric-enabled (Req. SFPs)
WS-X6748-SFP=	Catalyst 6500 48-port CEF720 GigE Module (Req. SFPs)
WS-X6816-GBIC=	Cat6500 16-port GigE mod, 2 fab I/F, (Req GBICs, DFC/DFC3)
10/100/1000 Ethernet	
WS-X6148A-GE-TX=	Catalyst 6500 48-port 10/100/1000 w/Jumbo Frame, RJ-45
WS-X6148A-GE-45AF=	Catalyst 6500 48-Port PoE 802.3af 10/100/1000, w/Jumbo Frame
WS-X6548-GE-TX=	Catalyst 6500 48-port fabric-enabled 10/100/1000 Module
WS-X6548-GE-45AF=	Cat 6500 PoE 802.3af 10/100/1000 48-port(RJ45)/CEF256 card
WS-X6748-GE-TX=	Cat6500 48-port 10/100/1000 GE Mod: fabric enabled, RJ-45
WS-X6148-GE-TX=	Catalyst 6500 48-port 10/100/1000 GE Mod., RJ-45
WS-X6148-GE-45AF=	Cat6500 PoE 802.3af 10/100/1000, 48 port (RJ45) line card
WS-X6148V-GE-TX=	Catalyst 6500 48-port 10/100/1000 Inline Power Module, RJ-45
WS-X6516-GE-TX=	Catalyst 6500 16-port 10/100/1000 GE Module, Cross-Bar, spare
WS-X6548V-GE-TX=	Catalyst 6500 48-port fab-enabled 10/100/1000 inline pwr mod
10/100 Ethernet	
WS-X6148A-RJ-45=	Catalyst 6500 48-Port 10/100 w/TDR, Upgradable - PoE 802.3af
WS-X6148A-45AF=	Catalyst 6500 48-Port PoE 802.3af 10/100, card w/TDR
WS-X6148-RJ-21=	Catalyst 6500 48-Port 10/100 Upgradable to Voice, RJ-21
WS-X6148-21AF=	Cat6500 PoE 802.3af 10/100, 48 port (RJ21) line card
WS-X6148X2-RJ-45=	Cat6500 96-Port 10/100 (RJ45), Upgradable to PoE 802.3af
WS-X6148X2-45AF=	Cat6500 PoE 802.3af 10/100, 96-Port (RJ-45) line card
WS-X6196-RJ-21=	Catalyst 6500 96-Port 10/100 Upgradable - PoE 802.3af
WS-X6196-21AF=	Cat6500 96-Port, PoE 802.3af 10/100 - RJ-21
WS-X6148-RJ21V=	Catalyst 6500 48-port 10/100 Inline Power Module, RJ-21
WS-X6148-RJ-45=	Catalyst 6500 48-Port 10/100, Upgradable to Voice, RJ-45
WS-X6148-45AF=	Catalyst 6500 PoE 802.3af 10/100, 48 port(RJ45) line card
WS-X6148-RJ45V=	Catalyst 6500 48-port 10/100 Inline Power, RJ-45
WS-X6548-RJ-21=	Catalyst 6500 48-port 10/100, RJ-21, fabric-enabled
WS-X6548-RJ-45=	Catalyst 6500 48-port 10/100, RJ-45, x-bar
10FL/100FX Ethernet	
WS-X6324-100FX-SM=	EOS/6/1/06 C 6500 24-port 100FX, Enh QoS, MT-RJ, SMF, Spare
WS-X6524-100FX-MM=	Catalyst 6500 24-port 100FX, MT-RJ, fabric-enabled
Service Modules	
WS-SVC-FWM-1-K9	Firewall blade for 6500 and 7600, VFW License Separate
WS-SVC-IDS2-BUN-K9	600M IDSM-2 Mod for Cat
7600-SSC-400	Cisco 7600 / Catalyst 6500 Services SPA Carrier Card
SPA-IPSEC-2G	Cisco 7600 / Catalyst 6500 IPSec VPN SPA - DES/3DES/AES
SPA-IPSEC-SSC400-1	Cisco 6500/7600 IPSec VPN SPA Bundle 1 (system only)
SPA-IPSEC-SSC400-2	Cisco 6500/7600 IPSec VPN SPA Bundle 2 (system only)
WS-SVC-ADM-1-K9	Catalyst 6500 Cisco Anomaly Detection Module
WS-SVC-AGM-1-K9	Catalyst 6500 Cisco Anomaly Guard Module
WS-SVC-WISM-1-K9=	CISCO WIRELESS SERVICES MODULE (WISM)
WS-X6066-SLB-S-K9	Content Switching Module with SSL daughter card
WS-X6066-SLB-APC	Catalyst 6000 Content Switching Module
WS-SVC-SSL-1-K9	SSL Module for Catalyst 6500
WS-SVC-NAM-1	Catalyst 6500 Network Analysis Module-1
WS-SVC-NAM-2	Catalyst 6500 Network Analysis Module-2
WS-SVC-CMM	COMMUNICATION MEDIA MODULE
WS-SVC-CMM-6E1	6-PORT E1 INTERFACE PORT ADAPTER
WS-SVC-CMM-6T1	6-PORT T1 INTERFACE PORT ADAPTER
WS-SVC-CMM-BLANK=	CMM module Blank Panel Cover

Chapter 2

WS-SVC-CMM-ACT	Adhoc Conferencing and Transcoding PA
WS-SVC-CMM-24FXS	24-Port FXS Interface Port Adapter
WS-SVC-CSG-1	Content Services Gateway
WS-SVC-MWAM-1	Multi-Processor WAN Application Module
WS-SVC-PSD-1	Persistent Storage Device
WS-SVC-FWM-1-K9=	Firewall blade for 6500 and 7600, VFW License Separate
WS-SVC-ID52BUNK9=	IDSM-2 600M mod spare
WS-SVC-WEBVPN-K9=	SSL VPN Module for Catalyst 6500
7600-SSC-400=	Cisco 7600 / Catalyst 6500 Services SPA Carrier Card
SPA-IPSEC-2G=	Cisco 7600 / Catalyst 6500 IPsec VPN SPA - DES/3DES/AES
WS-SVC-ADM-1-K9=	Catalyst 6500 Cisco Anomaly Detection Module
WS-SVC-AGM-1-K9=	Catalyst 6500 Cisco Anomaly Guard Module
WS-X6066-SLB-S-K9=	Content Switching Module with SSL daughter card
WS-X6066-SLB-APC=	Catalyst 6500/7600 Content Switching Module
WS-SVC-SSL-1-K9=	SSL Module for Catalyst 6500
WS-SVC-NAM-1=	Catalyst 6500 Network Analysis Module-1
WS-SVC-NAM-2=	Catalyst 6500 Network Analysis Module
WS-SVC-WLAN-1-K9	Wireless LAN Services Module, CEF256
WS-SVC-WLAN-1-K9=	Wireless LAN Services Module, CEF256
WS-SVC-CMM=	COMMUNICATION MEDIA MODULE
WS-SVC-CMM-6E1=	6-PORT E1 INTERFACE PORT ADAPTER
WS-SVC-CMM-6T1=	6-PORT T1 INTERFACE PORT ADAPTER
WS-SVC-CMM-ACT=	Adhoc Conferencing and Transcoding PA
WS-SVC-CMM-24FXS=	24-Port FXS Interface Port Adapter
WS-SVC-CSG-1=	Content Services Gateway
WS-SVC-MWAM-1=	Multi-Processor WAN Application Module
WS-SVC-PSD-1=	Persistent Storage Device
WS-SVC-IPSEC-1=	IPsec VPN Security Module for 6500 and 7600 series
WS-X6608-E1=	Catalyst 6000 8 port Voice E1 and Services Module
WS-X6608-T1=	Catalyst 6000 8 port Voice T1 and Services Module
SC-ADM-4,0-K9	Cisco Traffic Anomaly Detector Module MVP-OS R4.0 Software
SF-PIX-PDM-2.1	PIX Device Manager for FW Module for Catalyst 6500
Wireless LAN Module	
WS-SVC-WISM-1-K9	CISCO WIRELESS SERVICES MODULE (WISM)
802.3af Upgrades	
WS-F6K-GE48-AF=	Cat 6500 802.3af PoE daughter card for WS-X6x48-GE-TX
WS-F6K-FE48X2-AF=	Cat6500 PoE 802.3af Voice Card (WS-X6148X2-RJ-45 and -RJ-21)
WS-X6148-45AF-UG=	C6500 802.3af upgrade for 6148-RJ-45 (trade-in order only)
WS-X6148-21AF-UG=	Cat6500 - PoE 802.3af upgrade - 6148-RJ-21
WAN Interface Modules	
WS-X6582-2PA=	Cisco7600/Catalyst6500 Enhanced FlexWAN, Fabric-enabled
7600-SIP-200=	Cisco 7600 Series SPA Interface Processor-200
7600-SIP-400=	Cisco 7600 Series SPA Interface Processor-400
WS-X6582-2PA=	Cisco7600/Catalyst6500 Enhanced FlexWAN, Fabric-enabled
OSM-1CHOC12/T1-SI=	1-port CHOC-12/CHSTM-4 OSM IR, to DS0 and T1/E1, w/4GE
OSM-12CT3/T1=	12-port Channelized DS-3 to DS-1/DS-0
OSM-1CHOC12/T3-SI=	1-port CHOC-12/CHSTM-4 OSM, to T3/E3, SM-IR, with 4 GE
OSM-20C12-ATM-MM+=	Enhanced 2-port OC12/STM4 ATM OSM+, MM, with 4 GE
OSM-20C12-ATM-SI+=	Enhanced 2-port OC12/STM4 ATM OSM+, SI, with 4 GE
OSM-20C48/1DPT-SS=	2-port OC-48/STM-16 POS/DPT OSM, SM-SR, with 4 GE
OSM-20C48/1DPT-SI=	2-port OC-48/STM-16 POS/DPT OSM, SM-IR, with 4 GE
OSM-20C48/1DPT-SL=	2-port OC-48/STM-16 POS/DPT OSM, SM-LR, with 4 GE
OSM-10C48-POS-SS+=	Enhanced 1-port OC-48/STM-16 SONET/SDH OSM, SM-SR, w/ 4 GE
OSM-10C48-POS-SI+=	Enhanced 1-port OC-48/STM-16 SONET/SDH OSM, SM-IR, w/ 4 GE
OSM-10C48-POS-SL+=	Enhanced 1-port OC-48/STM-16 SONET/SDH OSM, SM-LR, w/ 4 GE
OSM-2+4GE-WAN+=	Enhanced OSM with 4 GE WAN ports and 2 GE LAN ports, Spare
OSM-2+4GE-5PACK+	5 Pack of OSM-2+4GE-WAN+
Optics	
GLC-FE-100FX=	100BASE-FX SFP for FE port
GLC-FE-100LX=	100BASE-LX SFP for FE port
GLC-FE-100BX-U=	100BASE-BX10-U SFP
GLC-FE-100BX-D=	100BASE-BX10-D SFP
GLC-FE-100EX=	100BASE-EX SFP (40km)
GLC-FE-100ZX=	100BASE-ZX SFP (80km)
GLC-LH-SM=	GE SFP,LC connector LX/LH transceiver
GLC-SX-MM=	GE SFP, LC connector SX transceiver
GLC-ZX-SM=	1000BASE-ZX SFP
GLC-T=	1000BASE-T SFP

WS-G5483=	1000BASE-T GBIC
WS-G5484=	1000BASE-SX Short Wavelength GBIC (Multimode only)
WS-G5486=	1000BASE-LX/LH long haul GBIC (singlemode or multimode)
WS-G5487=	1000Base-ZX extended reach GBIC(singlemode)
XENPAK-10GB-CX4=	Cisco 10GBASE-CX4 XENPAK Module
XENPAK-10GB-ER=	10GBASE-ER XENPAK Module
XENPAK-10GB-LR=	10GBASE-LR XENPAK module
XENPAK-10GB-LX4=	10GBASE-LX4 XENPAK Module
XENPAK-10GB-SR=	10GBASE-SR XENPAK Module
XENPAK-10GB-ZR	10GBASE-ZR XENPAK Module
XENPAK-10GB-ZR=	10GBASE-ZR XENPAK Module
XENPAK-10GB-LW=	10GBASE-LW XENPAK Module
X2-10GB-SR=	10GBASE-SR X2 Module
X2-10GB-LR=	10GBASE-LR X2 Module
X2-10GB-ER=	10GBASE-ER X2 Module
X2-10GB-LX4=	10GBASE-LX4 X2 Module
X2-10GB-CX4=	10GBASE-CX4 X2 Module

Rack Mount Kits

KIT-MNTG-CG-3=	Mounting Kit and Cable Guide For CISC07603/Cat6503 chassis
KIT-MNTG-CG-4=	Mounting Kit and Cable Guide For CISC0 7604 and 6504-E
WS-C6X06-RACK=	Catalyst 6x06 Rack Mount Kit and Cable Organizer, Spare
WS-C6X09-RACK=	Catalyst 6x09 Rack Mount Kit and Cable Organizer, Spare
WS-C6509-E-RACK=	Catalyst 6509-E Rack Mount Kit
WS-C6513-RACK=	Catalyst 6513 Rack Mount Kit and Cable Organizer, Spare
WS-C6597=	Catalyst C6506/9 23in Center Rack Mount Kit
WS-6513-RACK-MNT=	23in Rack Mount Kit for 6513
KIT-MNTG-09=	Mounting Kit For CISC07609/Cat6509-NEB-A chassis
CABLETRAY-09=	Cable Tray Assembly for CISC07609/Cat6509-NEB-A

Accessories

WS-F6K-48-AF=	C6500 802.3af PoE daughter card - 6x48x-GE-TX,6148A-RJ-45
WS-F6K-48X2-SPLTR=	Spare - Y-Type Splitter Bar for WS-X6148X2-RJ-45

Power Supplies

PWR-1400-AC=	1400W AC pwr/sup for CISC07603 and Catalyst WS-C6503 chassis
PEM-20A-AC+=	PwrEntryMod use w/1400W AC P/S for CISC07603, WS-C6503
PWR-2700-AC/4=	2700W AC Power Supply for Cisco 7604/6504-E
WS-CAC-3000W=	Catalyst 6500 3000W AC power supply (spare)
WS-CAC-6000W=	Cat6500 6000W AC Power Supply
WS-CAC-8000W-E=	Catalyst 6500 8700W Enhanced AC Power Supply
WS-CAC-4000W-INT=	4000W AC Power Supply, International (cable included)
WS-CAC-4000W-US=	4000Watt AC Power Supply for US (cable attached)
WS-CDC-2500W	Catalyst 6000 2500W DC Power Supply
PWR-950-DC=	Spare 950W DC P/S for CISC07603/Cat 6503
PEM-DC/3=	Spare DC Power Entry Mod for CISC07603/Cat 6503
PWR-2700-DC/4=	2700W DC Power Supply for Cisco 7604/6504-E
WS-CDC-2500W=	Catalyst 6000 2500W DC Power Supply, Spare
PWR-4000-DC=	4000W DC Pwr Supply for CISC07609/13 and Cat 6509/13
WS-CDC-1300W=	Catalyst 6000 1300W DC Power Supply, Spare

1. This is only a small subset of all parts available via URL listed under "For More Information." Some parts have restricted access or are not available through distribution channels.

For More Information

See the Catalyst 6500 Family Web site: <http://www.cisco.com/go/6000>