DATA SHEET

CISCO CATALYST EXPRESS 500 SERIES SWITCHES

Cisco® Catalyst® Express 500 Series switches deliver Cisco class networking tailored for businesses with up to 250 employees. Powered by Cisco Systems® technology, this family of Layer 2-managed Fast Ethernet and Gigabit Ethernet switches offers nonblocking, wire-speed performance that provides a secure network foundation optimized for data, wireless, and voice. Built-in advanced security features help ensure that your devices and network are protected.

The intuitive GUI simplifies setting up, running, and troubleshooting a network. Embedded Cisco Smartports with preset Cisco recommended network configurations, quality of service (QoS), security, and multicast settings allow for transparent integration of data, video, IP Communications, and wireless LAN applications. With Cisco Smartports technology, mission-critical traffic is prioritized; voice conversations are clear; bandwidth-intensive video traffic does not impact other applications on the network—and your wireless network is secure. Integrated intelligence within the switch helps you detect device and network problems before they impact your business.

You can manage each switch with the embedded GUI device manager, or manage your network with Cisco Network Assistant, an advanced PC-based network management application. Cisco Network Assistant offers centralized management and configuration of Cisco switches and other Cisco devices such as routers and wireless access points. With Cisco Network Assistant, in addition to configuring multiple switches at a time, you can configure Cisco wireless access points, and invoke the device manager on Cisco routers and access points. Software upgrades on Cisco switches, routers, and wireless access points are as easy as a drag-and-drop process. You can download Cisco Network Assistant (available at no cost) from the Cisco website http://www.cisco.com/go/cna.

The Cisco Catalyst Express 500 Series switches also offer Power over Ethernet (PoE), reducing the cost and complexity of IP Communications and wireless LAN deployments. PoE is an advanced technology that allows a switch to supply power and provide Ethernet connectivity at the same time over Category 5 cable to inline power devices, such as wireless access points, closed-circuit TV cameras, and IP phones. The PoE ports eliminate the cost and complexity of running additional power outlets or cables to inline power devices.

The Cisco Catalyst Express 500 Series has four models (Figure 1 and Table 1).

Figure 1. Cisco Catalyst Express 500 Series

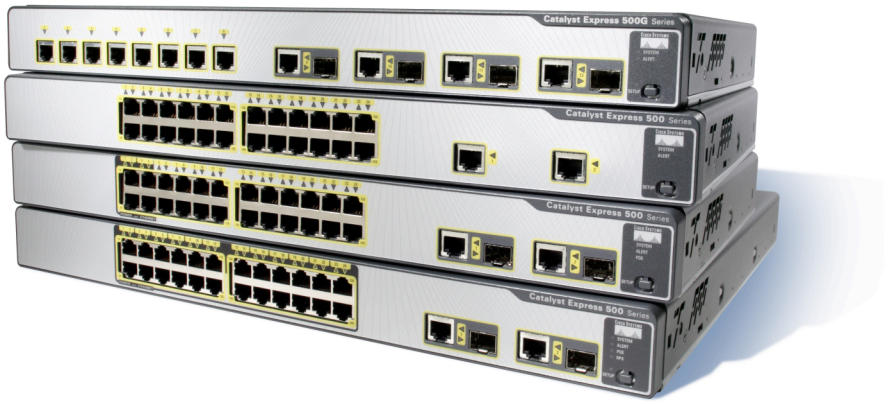
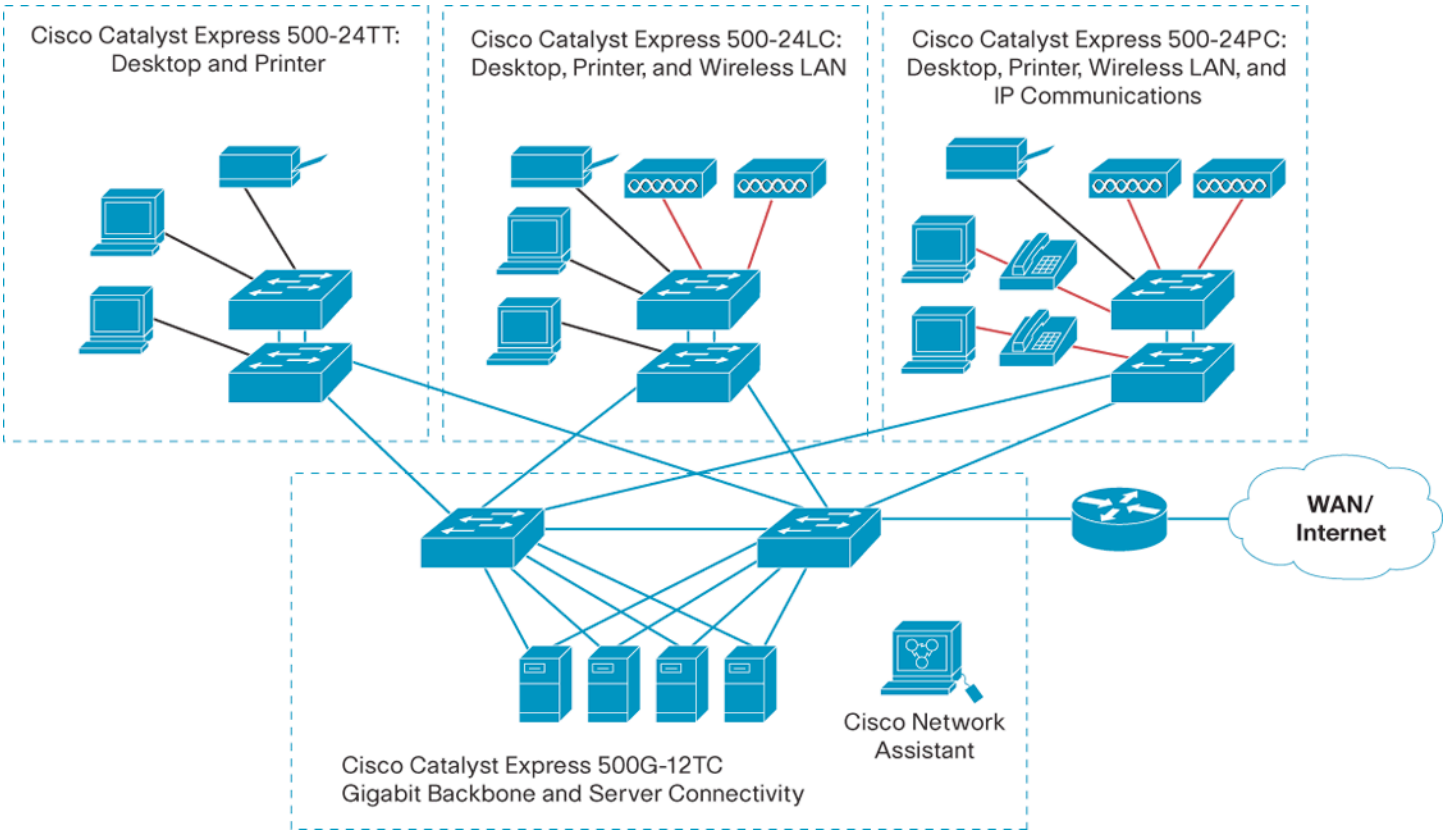


Table 1. Cisco Catalyst Express 500 Series Models

Product Name / (SKUs)	Description
Cisco Catalyst Express 500-24TT (WS-CE500-24TT)	• Twenty-four 10/100 ports for desktop connectivity • Two 10/100/1000BASE-T ports for uplink or server connectivity
Cisco Catalyst Express 500-24LC (WS-CE500-24LC)	• Twenty 10/100 ports for desktop connectivity • Four 10/100 PoE ports for desktop, wireless access point, IP telephony, or closed-circuit TV camera connectivity • Two 10/100/1000BASE-T or Small Form-Factor Pluggable (SFP) ports for uplink or server connectivity
Cisco Catalyst Express 500-24PC (WS-CE500-24PC)	• Twenty-four 10/100 PoE ports for desktop, wireless, IP telephony, or closed-circuit TV camera connectivity • Two 10/100/1000BASE-T or SFP ports for uplink or server connectivity
Cisco Catalyst Express 500G-12TC (WS-CE500G-12TC)	• Eight 10/100/1000BASE-T and four 10/100/1000BASE-T or SFP ports for switch aggregation or server connectivity

Figure 2 shows a typical deployment scenario with Cisco Catalyst Express 500 Series switches.

Figure 2. Typical Cisco Catalyst Express 500 Series Switch Deployment Scenario



KEY BENEFITS

Performance

With nonblocking, wire-speed switching on all ports, the Cisco Catalyst Express 500 Series offers 10-/100-Mbps ports for desktop, wireless access point, printer, and IP phone connectivity, and 10/100/1000BASE-T or SFP ports for server or backbone connectivity. With head-of-line blocking prevention, a heavily congested port will not affect performance on other ports on the switch.

Easy to Use

The Cisco Catalyst Express 500 Series switches are designed for ease of use. The switch is initialized through the GUI device manager—no console cable or terminal emulation application is needed. Integrated intelligence optimizes the switch at the system level. Optimal configuration for each port can be applied by choosing from 10 preset Cisco Smartports roles. And, all PoE ports can supply up to the IEEE standard maximum of 15.4W simultaneously. There is no need to do creative power budgeting or worry about exceeding the power limit or adding an external power shelf. And all ports support autonegotiation of port speed and duplex. With automatic medium-dependent interface crossover (Auto-MDIX) detection support, you do not have to worry about incorrect cable types.

Smart

Deploying and running an end-to-end Cisco network for up to 250 employees has never been easier. With Cisco Smartports Advisor, the Cisco Catalyst Express 500 Series switches automatically discover connected Cisco devices and suggest appropriate Smartport roles. With the Smartports phone and desktop role, voice quality is guaranteed. Telephone conversations are not affected by employees sending or downloading large files. The switches also can autodetect misconfigurations and suggest corrections.

Secure

The Cisco Catalyst Express 500 Series switches offer you layers of security to protect your business. To secure the device, management traffic to and from the GUI device manager can be encrypted with Secure Sockets Layer (SSL) and Simple Network Management Protocol Version 3 (SNMPv3). For network security, you can choose from three business-optimized security levels. Tight integration with Cisco Aironet wireless access points allows you to quickly and easily deploy a secure wireless LAN network. With the Cisco Self-Defending Network and Cisco Clean Access solutions, the Cisco Catalyst Express 500 Series helps protect your network against viruses, and raises the overall security protection of your network to the next level.

Easy Monitoring and Troubleshooting

Troubleshooting is easy with the Cisco One-Click troubleshooting tool, which identifies cabling problems such as wiring opens and shorts, common configuration errors, and other potential problems in your network. Graphical trend charts and an Alert LED help you identify problems before they cause network outages.

Limited Lifetime Warranty

The Cisco Catalyst Express 500 Series comes with limited lifetime warranty. More details are available at http://www.cisco.com.

PRODUCT SPECIFICATIONS

Table 2 gives specifications of the Cisco Catalyst Express 500 Series switches.

Table 2. Specifications of Cisco Catalyst Express 500 Series Switches

Feature	Description
Performance	
Switching Capacity	• 8.8 Gbps for Cisco Catalyst Express 500-24TT, Catalyst Express 500-24LC, and Catalyst Express 500-24PC • 24 Gbps for Cisco Catalyst Express 500G-12TC
Forwarding Rate	• 6.6-Mpps wire-speed performance for Cisco Catalyst Express 500-24TT, Catalyst Express 500-24LC, and Catalyst Express 500-24PC • 18-Mpps wire-speed performance for Cisco Catalyst Express 500G-12TC
Layer 2 Switching	
MAC Addresses	8000 MAC addresses
Number of VLANs	32 VLANs (1000 range)
Number and Type of Queues	• 4 queues per port • Shaped Round Robin (SRR) queuing
Smartports (Preset Cisco Recommended Network Enhancements, QoS, and Security)	
Desktop	The port is configured for optimal desktop performance.
Phone and Desktop	Voice traffic is prioritized to ensure clear voice conversation.
Router	The port is configured for optimal connection to a router or firewall for WAN connectivity.
Switch	The port is configured as an uplink port to a backbone switch for fast convergence.
Access Point	The port is configured for optimal connection to a wireless access point.
Server	Servers can be prioritized as trusted, critical, business, or standard.
Printer	The port is optimized so that printer traffic does not affect mission-critical and voice traffic.
Guest	Guests are allowed access to the Internet, but not to the company network.
Diagnostic	Customers can connect diagnostics devices to monitor traffic on other switches (configurable via Cisco Network Assistant only)
Other	Customers can configure the VLAN.
Security	
Levels	Three security levels: low, medium, and high (configurable via Cisco Network Assistant only) • **Low**—For business environments where there is limited guest access • **Medium**—For business environments where security is important; only authorized devices are allowed on the company network • **High**—For business environments where security is critical; only authorized devices and authenticated users are allowed on the company network
Multicast	High-bandwidth video traffic is optimized so that it does not impact other applications on the network.
Inline Power (PoE)	All 24 PoE ports on the Cisco Catalyst Express 500-24PC can supply up to 15.4W (IEEE 802.3af standard maximum) of power over Category 5 cable, for a total of 370W of inline power. All 4 PoE ports on Cisco Catalyst Express 500-24LC switches can supply up to 15.4W of power over Category 5 cable, for a total of 62W of inline power. Both the IEEE 802.3af PoE standard and Cisco Prestandard Inline Power are supported.

Feature	Description
Product Specifications	
Standards Supported	• IEEE 802.1d Spanning Tree Protocol • IEEE 802.1p Class of service (CoS) classification • IEEE 802.1q VLAN • IEEE 802.1w Rapid Convergence Spanning Tree Protocol • IEEE 802.1x Port Access Authentication • IEEE 802.3ad Link Aggregation Control Protocol (LACP) • IEEE 802.3af Power over Ethernet • IEEE 802.3x full duplex on 10BASE-T, 100BASE-TX, and 1000BASE-T ports • IEEE 802.3u 100BASE-T • IEEE 802.3ab 1000BASE-T • IEEE 802.3z 1000BASE-X • IGMP (v1, v2, and v3) snooping • Secure Sockets Layer (SSL) • SNMPv3 (read-only)
Management (for Monitoring Only)	• BRIDGE-MIB • ENTITY-MIB • ETHERNET-MIB • IF-MIB • RFC1213-MIB (MIB II) • RMON-MIB (statistics, history, alarms, and events groups only) • CISCO-PRODUCTS-MIB • CISCO-SYSLOG-MIB • CISCO-ENVMON-MIB
Connectors and Cabling	• 10/100BASE-TX ports: RJ-45 connectors; 2-pair Category 5 unshielded twisted pair (UTP) cabling • 10/100/1000BASE-T ports: RJ-45 connectors; 4-pair Category 5 UTP cabling • 1000BASE-SX, 1000BASE-LX/LH, 100BASE-FX, 100BASE-LX, and 100BASE-BX-based ports: LC fiber connectors (single-mode or multimode fiber)
Physical Specifications	**Dimensions** (H x W x D): • 1.73 x 17.5 x 9.9 in. (4.39 x 44.45 x 25.15 cm) for Cisco Catalyst Express 500-24TT, Catalyst Express 500-24LC, and Catalyst Express 500G-12TC • 1.73 x 17.5 x 14.4 in. (4.39 x 44.45 x 36.58 cm) for Cisco Catalyst Express 500-24PC **Weight**: • 8 lb (3.7 kg) for Cisco Catalyst Express 500-24TT, Catalyst Express 500-24LC, and Catalyst Express 500G-12TC • 12 lb (5.5 kg) for Cisco Catalyst Express 500-24PC

Feature	Description		
Power Requirements	*Switch Model*	*Power Consumption (maximum)*	*Power Dissipation*
	Cisco Catalyst Express 500-24TT	30W or 102 BTUs per hour	30W
	Cisco Catalyst Express 500-24LC	110W or 375 BTUs per hour	45W
	Cisco Catalyst Express 500-24PC	460W or 1570 BTUs per hour	90W
	Cisco Catalyst Express 500G-12TC	45W or 154 BTUs per hour	45W
	Input Voltage • AC input voltage/frequency: 100-240Vac, 1.3-0.8A, 50-60Hz • DC input voltages for Cisco Redundant Power System 675 (supported by Cisco Catalyst Express 500-24PC only): 12V at 14A, -48V at 7.8A		
Environmental Requirements	*Operating temperature*: 32 to 113ºF (0 to 45ºC) *Storage temperature*: –13 to 158ºF (–25 to 70ºC) *Operating relative humidity*: 10 to 85% (noncondensing) *Operating altitude*: Up to 10,000 ft (3000m) *Storage altitude*: Up to 15,000 ft (4500m)		
Predicted Mean Time Between Failure (MTBF)	308,482 hours or 35 years for Cisco Catalyst Express 500-24TT 282,705 hours or 32 years for Cisco Catalyst Express 500-24LC 211,167 hours or 24 years for Cisco Catalyst Express 500-24PC 289,193 hours or 33 years for Cisco Catalyst Express 500G-12TC		
Acoustic Noise	ISO 7770, bystander position: Operating to an ambient temperature of 30ºC Cisco Catalyst Express 500-24TT, Catalyst Express 500-24LC, Catalyst Express 500G-12TC: 40dBa, Cisco Catalyst Express 500-24PC: 48dBa		
Regulatory Agency Approvals			
Safety Certifications	• UL to UL 60950-1 • CUL to CAN/CSA C22.2 No. 60950-1 • TUV/GS to EN 60950-1 • CB to IEC 60950-1 with all country deviations • NOM to NOM-019-SCFI • CE Marking		
Electromagnetic Emissions Certifications	• FCC Part 15 Class A • EN 55022 Class A (CISPR22) • EN 55024 (CISPR24) • VCCI Class A • AS/NZS CISPR22 Class A • MIC • China EMC requirements • GOST		

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