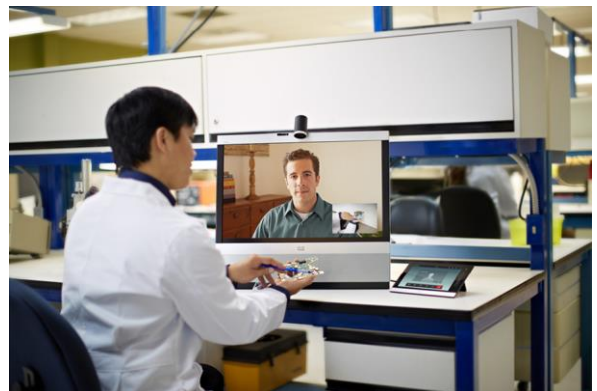


Cisco TelePresence System EX Series

Figure 1. Cisco TelePresence EX90 in Home Office



Figure 2. Cisco TelePresence EX90 in Remote Expert Scenario with Document Camera



Product Overview

The Cisco TelePresence® System EX Series transforms the workplace by combining work, communications, and collaboration all on the desktop with just the touch of a finger.

The EX Series is an all-in-one tool that simplifies the desktop so you can fluidly move from individual work on your laptop, to a quick video call with a colleague, to problem solving over shared spreadsheets. Tight integration with Cisco® Unified Communications Manager also provides EX Series users with powerful video and voice functions.

The EX Series is part of the broad Cisco TelePresence System portfolio offering immersive, multipurpose, and personal endpoints to meet the needs of organizations of all sizes. Cisco TelePresence technology powers the new way of working in which everyone everywhere can be more productive through face-to-face collaboration (Figures 1, 2, and 3).

Figure 3. Cisco TelePresence EX60 in Ad-hoc Conference Call



Features and Benefits

The Cisco TelePresence System EX Series offers these main features:

- A high-quality screen with clear high-definition (HD) resolution enables a transparent, all-in-one device to work, meet, and collaborate (the EX90 has a 24-inch screen and the EX60 has a 21.5-inch screen).
- Video resolutions of 1080p30 and 720p60 bring the Cisco TelePresence experience to the desk.
- Integration with Cisco Unified Communications Manager enables a comprehensive feature set including voicemail indicator, single-number reach, and ad-hoc conferencing.
- The Cisco TelePresence Touch 8 user interface enables simple control.
- Collaboration is natural with transparent one-touch sharing of HB content and a built-in document camera.
- A Cisco TelePresence PrecisionHD camera enables video clarity and an optimal F1.7, 45 to 65° or 50° field of view.
- H.323 and Session Initiation Protocol (SIP) with bandwidth up to 6 Mbps point to point provides the capability to establish calls with very high quality.
- Dual front speakers offer superior audio, including an integrated subwoofer on the EX90.
- A wideband handset is included. You can also add a headset input for privacy (wired or Bluetooth wireless).
- The EX60 is wall mountable with selected VESA brackets. An external wall-mount solution is also available for the EX90 through Milestone (http://cdn.chiefmfg.com/Flyers-Brochures/Chief_Cisco_flyer.pdf).
- The EX90 supports the embedded MultiSite feature, which brings together up to four locations in one call.
- Dual display capability (HDMI out) is also available on the EX90 to enable a second display that can be dedicated to content.
- The system is standards based for immediate connectivity to anyone regardless of system, from a soft client to an immersive telepresence system, to a meeting room anywhere in the world.

Product Specifications

Table 1 lists physical specifications; Table 2 lists video and audio specifications; and Table 3 lists network, security, and management specifications for the Cisco TelePresence EX Series.

Table 1. Product Specifications

Item	Specification
Product compatibility	Fully compatible with standards-compliant telepresence and video systems
Software compatibility	Cisco TelePresence Software Version TC3.1 (EX90) and TC4.0 (EX60) or later, or TE 6.0
Components	Fully integrated unit including: <ul style="list-style-type: none">• Codec• Display• Camera• Microphone and speakers• Cables including VGA-to-DVI-I cable, DVI-D cable, 3.5-mm jack audio cable, LAN cable, power adapter, and power cable

Item	Specification		
Display	<ul style="list-style-type: none"> EX90 <ul style="list-style-type: none"> 24-in. LCD monitor Resolution: 1920 x 1200 (16:10) Contrast ratio: 1000:1 Viewing angle: 160° Response time: 5 ms Brightness: 300cd/m2 5 to 15° tilt 	<ul style="list-style-type: none"> EX60 <ul style="list-style-type: none"> 21.5-in. LCD monitor (with LED backlight) Resolution: 1920 x 1080 (16:9) Contrast ratio: 1000:1 Viewing angle: 170° Response time: 5 ms Brightness: 225cd/m2 5 to 15° tilt 	
PC and second-source video input	DVI-I EX90: HDMI in		
Supported PC input resolutions	EX90: SVGA (800 x 600) to WUXGA (1920 x 1200) EX60: SVGA (800 x 600) to 1080p (1920 x 1080)		
Camera	<ul style="list-style-type: none"> Cisco TelePresence PrecisionHD design Resolutions: 1080p30 and 720p60 Auto focus Integrated privacy shutter Document camera mode Multicoated all-glass optics 1/3-in. 2.1-megapixel CMOS sensor 	EX90 <ul style="list-style-type: none"> Horizontal field of view: 45 to 65° Vertical field of view: 40 to 27° Focus distance 0.3 to infinity Optical, motorized zoom 	EX60 <ul style="list-style-type: none"> Horizontal field of view: 50° Vertical field of view: 29° Focus distance 0.1 to infinity
Audio system	<ul style="list-style-type: none"> Two stereo front speakers Integrated full-range microphone One 3.5-mm line-in jack for PC or other audio source Two 3.5-mm jack for headset Wideband handset 	<ul style="list-style-type: none"> Bluetooth module 2.1 plus EDR Integrated subwoofer (EX90 only) Support for Cisco TelePresence Table Microphone 20 (EX90 only) HDMI audio I/O (EX90 only) 	
User interface	Cisco TelePresence Touch 8 <ul style="list-style-type: none"> 8-inch projected capacitive touch screen Resolution: 800 x 480 		
Language support	English, Chinese-S, Danish, Dutch, Finnish, French, German, Italian, Japanese, Korean, Norwegian, Russian, Spanish, Swedish, Portuguese-Brazilian, Czech, Polish, Chinese-Traditional, and Turkish * Not supported in TE software		
Physical dimensions (H x L x D)	Cisco TelePresence EX90 main unit: 21.4 x 22.3 x 6.8 in. (54.5 x 56.7 x 17.3 cm) Cisco TelePresence EX60 main unit: 20.0 x 20.5 x 5.4 in. (50.8 x 52 x 13.8 cm)	<ul style="list-style-type: none"> Cisco TelePresence Touch 8: 1.7 x 9.0 x 5.7 in. (4.4 x 22.8 x 14.5 cm) Cisco TelePresence Touch 8 with handset: 3.0 x 11.4 x 7.4 in. (7.7 x 29.0 x 18.7 cm) Cable length: 47 in. (120 cm) 	
Weight	Cisco TelePresence EX90 main unit: 24.2 lb (11.0 kg) Cisco TelePresence EX60 main unit: 12.9 lb (5.85 kg)	<ul style="list-style-type: none"> Cisco TelePresence Touch 8: 1.4 lb (0.64 kg). Cisco TelePresence Touch 8 with handset: 2.1 lb (0.94 kg) 	
Power	Autosensing power supply 100-240 VAC, 50/60 Hz EX90: 150 watts (W) maximum EX60: 75W maximum	Power consumption: <ul style="list-style-type: none"> EX90 with Touch 8: In video call: 110W; in standby: 58W EX60 with Touch 8: In video call: 46W; in standby: 31W 	
Temperature range	Operating temperature and humidity: <ul style="list-style-type: none"> Ambient temperature: 32 to 95°F (0 to 35°C) Relative humidity (RH): 10 to 90% Storage and transport temperature at RH 10 to 90% (noncondensing): -4 to 140°F (-20 to 60°C) 		
Approvals and compliance	<ul style="list-style-type: none"> Directive 2006/95/EC (Low-Voltage Directive) - Standard EN 60950-1 Directive 2004/108/EC (EMC Directive) - Standard EN 55022, Class A - Standard EN 55024 - Standard EN 61000 3-2/-3-3 Approved according to UL 60950-1 and CSA 60950-1-07 Complies with FCC15B Class A 		

Table 2. Video and Audio Specifications

Item	Specification		
Bandwidth	H.323 and SIP up to 6 Mbps point to point		
Video standards	<ul style="list-style-type: none"> • H.261 • H.263 • H.263+ • H.264 		
Video features	<ul style="list-style-type: none"> • Widescreen: 16:9 • Advanced screen layouts • Intelligent video management • Local auto layout 		
Live video resolutions (encode and decode)	<table border="0"> <tr> <td style="vertical-align: top;"> <ul style="list-style-type: none"> • 176 x 144@30 frames per second (fps; QCIF) • 352 x 288 at 30 fps (CIF) • 512 x 288@30 fps (w288p) • 576 x 448@30 fps (448p) • 768 x 448@30 fps (w448p) • 704 x 576@30 fps (4CIF) • 1024 x 576@30 fps (w576p) • 640 x 480@30 fps (VGA) • 800 x 600@30 fps (SVGA) • 1024 x 768@30 fps (XGA) • 1280 x 1024@30 fps (SXGA) • 1280 x 720@30 fps (720p30) </td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> • 1280 x 768@30 fps (WXGA) • 1920 x 1080@30 fps (1080p30)[†] • 1440 x 900@30 fps (WXGA+)[†] • 1472 x 1080@30 fps (SXGA+)[†] • 1680 x 1050@30 fps (WSXGA+)[†] • 1600 x 1200@30 fps (UXGA)[†] • 512 x 288@60 fps (w288p60)[†] • 768 x 448@60 fps (w448p60)[†] • 1024x576@60 fps (w576p60)[†] • 1280x720@60 fps (720p60)[†]; requires premium resolution option </td> </tr> </table> <p>Only EX90:</p> <ul style="list-style-type: none"> • 1920x1200@25fps (WUXGA)[†] 	<ul style="list-style-type: none"> • 176 x 144@30 frames per second (fps; QCIF) • 352 x 288 at 30 fps (CIF) • 512 x 288@30 fps (w288p) • 576 x 448@30 fps (448p) • 768 x 448@30 fps (w448p) • 704 x 576@30 fps (4CIF) • 1024 x 576@30 fps (w576p) • 640 x 480@30 fps (VGA) • 800 x 600@30 fps (SVGA) • 1024 x 768@30 fps (XGA) • 1280 x 1024@30 fps (SXGA) • 1280 x 720@30 fps (720p30) 	<ul style="list-style-type: none"> • 1280 x 768@30 fps (WXGA) • 1920 x 1080@30 fps (1080p30)[†] • 1440 x 900@30 fps (WXGA+)[†] • 1472 x 1080@30 fps (SXGA+)[†] • 1680 x 1050@30 fps (WSXGA+)[†] • 1600 x 1200@30 fps (UXGA)[†] • 512 x 288@60 fps (w288p60)[†] • 768 x 448@60 fps (w448p60)[†] • 1024x576@60 fps (w576p60)[†] • 1280x720@60 fps (720p60)[†]; requires premium resolution option
<ul style="list-style-type: none"> • 176 x 144@30 frames per second (fps; QCIF) • 352 x 288 at 30 fps (CIF) • 512 x 288@30 fps (w288p) • 576 x 448@30 fps (448p) • 768 x 448@30 fps (w448p) • 704 x 576@30 fps (4CIF) • 1024 x 576@30 fps (w576p) • 640 x 480@30 fps (VGA) • 800 x 600@30 fps (SVGA) • 1024 x 768@30 fps (XGA) • 1280 x 1024@30 fps (SXGA) • 1280 x 720@30 fps (720p30) 	<ul style="list-style-type: none"> • 1280 x 768@30 fps (WXGA) • 1920 x 1080@30 fps (1080p30)[†] • 1440 x 900@30 fps (WXGA+)[†] • 1472 x 1080@30 fps (SXGA+)[†] • 1680 x 1050@30 fps (WSXGA+)[†] • 1600 x 1200@30 fps (UXGA)[†] • 512 x 288@60 fps (w288p60)[†] • 768 x 448@60 fps (w448p60)[†] • 1024x576@60 fps (w576p60)[†] • 1280x720@60 fps (720p60)[†]; requires premium resolution option 		
Audio standards	<ul style="list-style-type: none"> • G.711 • G.722 • G.722.1 • 64 kbps MPEG4 AAC-LLD (EX60) • 128 kbps MPEG4 AAC-LD (EX90) 		
Audio features	<ul style="list-style-type: none"> • CD-quality 20-kHz stereo • Acoustic echo canceling • Automatic gain control • Automatic noise reduction • Active lip synchronization 		
Main channel frame rate	<table border="0"> <tr> <td style="vertical-align: top;"> <p>EX90</p> <ul style="list-style-type: none"> • Up to 1080p30 • Up to 720p60 </td> <td style="vertical-align: top;"> <p>EX60</p> <ul style="list-style-type: none"> • Up to 1080p30 • Up to 720p60 </td> </tr> </table>	<p>EX90</p> <ul style="list-style-type: none"> • Up to 1080p30 • Up to 720p60 	<p>EX60</p> <ul style="list-style-type: none"> • Up to 1080p30 • Up to 720p60
<p>EX90</p> <ul style="list-style-type: none"> • Up to 1080p30 • Up to 720p60 	<p>EX60</p> <ul style="list-style-type: none"> • Up to 1080p30 • Up to 720p60 		
Content channel frame rate	<table border="0"> <tr> <td style="vertical-align: top;"> <p>EX90</p> <ul style="list-style-type: none"> • Up to UXGAp30 • Up to 1080p30 </td> <td style="vertical-align: top;"> <p>EX60</p> <ul style="list-style-type: none"> • Up to 720p15 </td> </tr> </table>	<p>EX90</p> <ul style="list-style-type: none"> • Up to UXGAp30 • Up to 1080p30 	<p>EX60</p> <ul style="list-style-type: none"> • Up to 720p15
<p>EX90</p> <ul style="list-style-type: none"> • Up to UXGAp30 • Up to 1080p30 	<p>EX60</p> <ul style="list-style-type: none"> • Up to 720p15 		
Dual stream	<ul style="list-style-type: none"> • H.239 (H.323) dual stream • BFCP (SIP) dual stream • EX90 supports resolutions up to 1080p in both main stream and dual stream simultaneously • EX60 supports resolutions up to 720p in both main stream and dual stream simultaneously 		

Table 3. Network, Security, and Management Specifications

Item	Specification
Protocols	<ul style="list-style-type: none"> • H.323 • SIP
Network interfaces	<ul style="list-style-type: none"> • Internal 2-port Ethernet switch • One LAN and Ethernet (RJ-45) 10/100/1000-Mbps interface for PC • One LAN and Ethernet (RJ-45) 10/100/1000-Mbps interface for LAN

Item	Specification
Other interfaces	<ul style="list-style-type: none"> • Bluetooth support • 2 USB devices for future applications (EX90) • 1 USB device for future applications (EX60)
IP network features	<ul style="list-style-type: none"> • Domain Name System (DNS) lookup for service configuration • Differentiated Services (DiffServ) quality of service (QoS) • IP adaptive bandwidth management (including flow control) • Automatic gatekeeper discovery • Dynamic playout and lip-sync buffering • H.245 dual-tone multifrequency (DTMF) tones in H.323 • Date and time support with Network Time Protocol (NTP) • Packet loss-based downspeeding • DNS-based URI dialing • TCP/IP • Dynamic Host Configuration Protocol (DHCP) • IEEE 802.1x network authentication • IEEE 802.1q VLAN • IEEE802.1p QoS and class of service (CoS) • ClearPath
IPv6 network support	<ul style="list-style-type: none"> • Single call stack support for both H323 and SIP • Dual-stack IPv4 and IPv6 for DHCP, SSH, HTTP, HTTPS, DNS, and DiffServ • Support for both static and autoconfiguration (stateless address autoconfiguration)
Firewall traversal	<ul style="list-style-type: none"> • Cisco Expressway Technology • H.460.18 and H.460.19 firewall traversal
Supported infrastructure	<ul style="list-style-type: none"> • Cisco Communications Manager 5.1 and later (Release 8.6.2 and later recommended) • Cisco TelePresence Video Communication Server (VCS) • Cisco WebEx[®] Telepresence server
Embedded encryption	<ul style="list-style-type: none"> • H.323/SIP point to point • Standards-based: H.235v3 and Advanced Encryption Standard (AES) • Automatic key generation and exchange • Supported in dual stream
Security features	<ul style="list-style-type: none"> • Management through Secure HTTP (HTTPS) and Secure Shell (SSH) Protocol • IP administration password • Administrator menu password • Disable IP services • Network settings protection
MultiSite	<p>EX90 only</p> <ul style="list-style-type: none"> • 4-way 720p30 Continuous Presence (CP) MultiSite • Full individual audio and video transcoding • Individual layouts for each participant (CP layout without self-view feature) • H.323, SIP, and voice over IP (VoIP) in the same conference • Best Impression (automatic CP layouts) • H.264, encryption, and dual stream from any site • IP downspeeding • Dial in and dial out
Multipoint support	<ul style="list-style-type: none"> • Cisco TelePresence Multiway support (requires Cisco TelePresence VCS and Cisco TelePresence Multipoint Control Unit [MCU]) • Capability to natively join multipoint conferences hosted on Cisco TelePresence Multipoint Switch • EX90 only: 4-way embedded SIP and H.323 multipoint; reference MultiSite
System management	<ul style="list-style-type: none"> • Support for Cisco TelePresence Management Suite • Total management through embedded Simple Network Management Protocol (SNMP), Telnet, SSH, XML, and Simple Object Access Protocol (SOAP) • Remote software upload: Through web server, Secure Copy Protocol (SCP), HTTP, and HTTPS

Item	Specification
Directory services	<ul style="list-style-type: none"> • Support for local directories (My Contacts) • Corporate directory • Unlimited entries using server directory support • Lightweight Directory Access Protocol (LDAP) and H.350 • Unlimited number of entries for corporate directory (available with Cisco TelePresence Management Suite) • Local directory: 200 numbers • Received calls with date and time • Placed calls with date and time • Missed calls with date and time

Ordering Information

To place an order, please contact your Cisco representative (Table 4).

Table 4. Ordering Information

Product Name	Part Number	Compliance Model Number
Cisco TelePresence EX90	CTS-EX90-K9	TTC7-19
Comes with: EX90 unit and camera, C-series Natural Presenter Package option, Cisco TelePresence Touch 8		
Ordering Options for the Cisco TelePresence EX90		
MultiSite option for Cisco TelePresence EX90	LIC-EX90-MS	
Premium Resolution option for Cisco TelePresence EX90	LIC-EX90-PR	
Dual-display option for Cisco TelePresence EX90	LIC-EX90-DD	
Cisco TelePresence EX60	CTS-EX60-K9	TTC7-20
Comes with: EX60 unit and camera, C-series Natural Presenter Package option, Cisco TelePresence Touch 8		
Ordering Options for the Cisco TelePresence EX60		
Premium resolution option for Cisco TelePresence EX60	LIC-EX60-PR	

Cisco Service and Support

Cisco and our partners provide a broad portfolio of smart, personalized services and support that can help you achieve the full business value of your Cisco TelePresence investment by increasing business agility and network availability. This portfolio of services accelerates business innovation by harnessing the network as a powerful business platform. For more information about these services, visit <http://www.cisco.com/go/telepresenceservices>.

For More Information

Learn more about the Cisco TelePresence EX90 at <http://www.cisco.com/c/en/us/products/collaboration-endpoints/telepresence-system-ex-series/index.html> or contact your local Cisco account representative.

For information about the end of sale of the Cisco TelePresence EX60, visit the end-of-sale announcements page at <http://www.cisco.com/c/en/us/products/collaboration-endpoints/telepresence-system-ex-series/eos-eol-notice-listing.html>.




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