

Cisco TelePresence System Educator MXP



The Cisco TelePresence® education portfolio creates an immersive, face-to-face experience, empowering you to collaborate with others in a new way. By combining the Cisco® collaboration application technologies with education-specific designs, you and remote classroom participants feel as if you are all in the same room. The Cisco TelePresence education portfolio is designed to transform the way students learn and the way instructors present information in a collaborative distributed environment. Schools are using these education solutions to access scarce expertise, extend the reach of subject-matter experts, control costs, make decisions more quickly, reduce travel costs, and increase student retention.

Product Overview

The Cisco TelePresence System Educator MXP (Educator MXP) is a modular solution ideal for classrooms, higher education, and corporate training. At its core is the Cisco TelePresence System Codec 6000 MXP (Codec 6000 MXP). Going beyond traditional distance education, the Educator MXP meets the unique education collaboration requirements of both instructors and students. With transparent technology, it promotes an interactive learning experience. Instructors are not required to change the way they teach.

Cisco TelePresence System Educator MXP Product Summary

The Educator MXP is designed to allow customers and integrators to build custom rooms designed to meet their education needs. The main components of the solution are:

- The applications module which consists of two components:
 - A powerful and flexible control processor that manages multiple audio and video inputs and outputs for a variety of peripheral devices such as cameras, microphones, displays, and DVR/VCRs; this processor also includes support for an intuitive, color touch screen interface that is optimized for ease of use
 - An embedded Cisco TelePresence System Codec 6000 MXP that supports up to 1280 x 720 (720p) high-definition (HD) video and CD-quality audio that supports a variety of network configurations
- Cisco TelePresence PrecisionHD Camera (PrecisionHD Camera) and optional Cisco TelePresence Ceiling Microphone (Ceiling Microphone) to easily see and hear students and instructors anywhere in the room.

Cisco TelePresence System Educator MXP Detailed Features

Table 1 summarizes the main features for the Educator MXP.

Table 1. Cisco TelePresence System Educator MXP Feature Summary

Feature	Description
Design features	<ul style="list-style-type: none"> • Industry's most intuitive 12-inch color video touch panel enables instructors to control video calls and multiple peripheral devices, including cameras, PCs, and DVDs • Industry-leading HD or wide-angle view camera with extensive zoom, pan, and tilt • Optional components include locator mats, interactive whiteboard integration (with Cisco TelePresence Synch (Synch)), and Ceiling Microphone
Application features	<ul style="list-style-type: none"> • Join up to 6 video and 5 audio sites with optional embedded Cisco TelePresence MultiSite (MultiSite) capability • View presentations and the presenter simultaneously with optional Duo Video or H.239 on single- or dual-monitor setup • Display images from PCs, DVDs, VCRs, document cameras, and other input devices • XGA auto switching for better quality with higher resolution • Cisco TelePresence Expressway (Expressway) technology
Performance features	<ul style="list-style-type: none"> • Superior video quality incorporating the H.264 standard • True CD-quality audio • Standards-based embedded encryption (Advanced Encryption Standard [AES] and Data Encryption Standard [DES]) • Protection against network interruptions in point-to-point and multipoint calls with automatic downspeeding and Intelligent Packet Loss Recovery (IPLR) • Please reference Cisco TelePresence System Codec 6000 MXP data sheet for complete list of performance features

Product Capabilities

Table 2 provides a listing of the product capability specifications for the Educator MXP.

Table 2. Cisco TelePresence System Educator MXP Product Capabilities Summary

Specification	Description
Parts included	<ul style="list-style-type: none"> • 12-inch color video touch panel, Codec 6000 MXP, cameras, Ceiling Microphone, optional podium, and cables
Bandwidth	<ul style="list-style-type: none"> • H.320 up to 2 Mbps • H.323 up to 3 Mbps • SIP up to 4 Mbps • Up to 6 Mbps total MultiSite bandwidth
Firewall traversal	<ul style="list-style-type: none"> • Cisco TelePresence Expressway technology and automatic Network Address Translation (auto-NAT)
Video standards	<ul style="list-style-type: none"> • H.261, H.263, H.263+, H.263++ (Natural Video), and H.264
Video features	<ul style="list-style-type: none"> • Voice switching for VCR recording • Intelligent video management • Secondary and instructor camera autotracking with more than 40 presets • Supports up to 3 Cisco cameras with up to 40 presets • Support for ParkerVision and Sony cameras • Support for Sony and Panasonic audiovisual equipment

Specification	Description
Video inputs (11 inputs)	<ul style="list-style-type: none"> • Up to 3 HD cameras can be supported • 1 S-Video primary camera (Cisco TelePresence Wide Angle View Camera [Wide Angle View Camera]) in standard-definition [SD] mode) • 6 composite: document camera, DVD, and Aux inputs • 3 SXGA: PC (1 through codec or 3 through external switch) • 1 virtual network computing (VNC) connection • Input: 800 x 600 (at 60, 72, 75, and 85 Hz), 1024 x 768 (at 60, 70, and 75 Hz), and 1280 x 1024 at 60 Hz)
Video outputs (10 outputs)	<ul style="list-style-type: none"> • 2 RCA/phono) outputs, composite: primary display • 2 RCA/phono) outputs, composite: secondary or dual monitor • 1 RCA/phono) output, composite: VCR • 1 RCA/phono) output, composite: touch panel • 2 DVI: primary or secondary • 2 DVI-I • XGA output • 800 x 600 at 75 Hz, 1024 x 768 at 60 Hz, and 1280 x 768 (WXGA) at 60 Hz • VESA monitor power management • 1 MiniDin, S-Video: main monitor • 1 MiniDin, S-Video: dual monitor
Video format	<ul style="list-style-type: none"> • NTSC, PAL, VGA, SVGA, XGA, W-XGA, and SXGA 720p
Live video resolution	<p>HD resolutions:</p> <ul style="list-style-type: none"> • HD 448p (576 x 448) • HD 720p (1280 x 720) <p>Native NTSC:</p> <ul style="list-style-type: none"> • 4SIF (704 x 480 pixels), Digital Clarity • Interlaced SIF (352 x 480 pixels), natural video • SIF (352 x 240 pixels) <p>Native PAL:</p> <ul style="list-style-type: none"> • 4CIF (704 x 576 pixels), Digital Clarity • Interlaced CIF (352 x 576 pixels), natural video • CIF (352 x 288 pixels) • QCIF (176 x 144 pixels) • SQCIF (128 x 96 pixels) <p>Native PC resolutions:</p> <ul style="list-style-type: none"> • XGA (1024 x 768) • SVGA (800 x 600 pixels) • VGA (640 x 480 pixels)
Audio standards	<ul style="list-style-type: none"> • G.711, G.722, G.722.1, G.728, and 64- and 128-bit MPEG4 AAC-LD
Audio features	<ul style="list-style-type: none"> • CD-quality 20-kHz mono and stereo • Telephone add-on through MultiSite • 4 separate acoustic echo cancellers • Audio mixer • Automatic gain control • Automatic noise reduction • Audio-level meters • VCR ducking • Custom microphone mute • Optional stereo package • Packet-loss management • Active lip synchronization • Analog telephone add-on through Comrex DH20 telephone add-on device

Specification	Description
Audio inputs (4 inputs)	<ul style="list-style-type: none"> • 3 microphones, 24V phantom powered, and XLR connector, each with separate echo cancellers • 2 RCA/phono, line level: stereo Aux 1 • 2 RCA/phono, line level: stereo Aux 2 • 2 RCA/phono, line level: stereo VCR/DVD • 3.5 Min stereo for PC
Audio outputs (5 outputs)	<ul style="list-style-type: none"> • 1 RCA/phono, S/PDIF (mono and stereo) or 2 analog line level: main audio or analog stereo L • 1 RCA/phono, line level: auxiliary (or analog stereo R or VCR stereo L) • 1 RCA/phono, line level: VCR (mono or stereo R) • 1 RCA/phono, line level for telephone add-on device
Frame rates	<ul style="list-style-type: none"> • 30 frames per second (fps) at 168 Kbps or greater • 60 fps at 336 Kbps or greater (point to point)
Dual stream	<ul style="list-style-type: none"> • Duo Video and H.239 • Available on H.323 and H.320 • Available in MultiSite from any site
Network features	<ul style="list-style-type: none"> • Auto H.320/H.323 dialing • Session Initiation Protocol (SIP) • Downspeeding • Intelligent Call Management • Maximum call length timer
Multisite features	<ul style="list-style-type: none"> • H.323, H.320, SIP, telephony and voice over IP (VoIP) in the same conference • Audio and video transcoding • Video rate matching from 56 Kbps: maximum conference rate • Best impression (automatic continuous presence layouts) • H.264, encryption, Digital Clarity • Dual stream from any site • ISDN and IP downspeeding and IPLR • MultiSite (H.243) cascading on H.320 and H.323 • Dial in and dial out • Chair control for host system • Snapshot of ongoing conference (JPEG) • Snapshot of ongoing Duo Video or H.239 presentation (JPEG) • Separate welcome page for encrypted conferences • Conference rates up to 6 Mbps • Up to 6 video and 5 audio sites • sites at 2 Mbps and 6 sites at 768 (plus telephone calls) • Mixed ISDN (Basic Rate Interface [BRI] or PRI), or serial interface (V.35) with IP up to the maximum conference rate
Embedded encryption	<ul style="list-style-type: none"> • H.320 and H.323 point-to-point and multipoint calls • Standards-based: H.233, H.234, H.235 v2 and v3, DES, and AES • NIST-validated AES • NIST-validated DES • Automatic key generation and exchange • Supported in dual stream and MultiSite
IP network features	<ul style="list-style-type: none"> • H.235 authentication • Differentiated services (DiffServ) • Resource Reservation Protocol (RSVP) • IP precedence • IP type of service (ToS) • IP adaptive bandwidth management (including flow control) • Auto gatekeeper discovery • Dynamic playout and lip-sync buffering • IPLR • H.245 dual-tone multifrequency (DTMF) tones in H.323

Specification	Description
	<ul style="list-style-type: none"> • Cisco Unified Communications Manager integration using the Empty Capabilities Set (ECS) • IP address conflict warning
Security features	<ul style="list-style-type: none"> • Management using HTTPS • IP administration password • Menu administration password • H.243 MCU password • VNC password • Simple Network Management Protocol (SNMP) security alerts • Disable IP services • MD5 Challenge Authentication Protocol (CHAP) • Network settings protection • SIP authentication through Microsoft NT LAN Manager (NTLM) • Security-level access to touch-panel features • FIPS 140-2 level 1 certification • Touch panel has configurable security and features access
Network interfaces	<ul style="list-style-type: none"> • 6 ISDN BRI (RJ-45), S-interface • 1 E1/T1 G.703 (RJ-45) for ISDN PRI or leased E1/T1 • 1 E1/T1 G.703 (RJ-45) for future use • 1 LAN and Ethernet (RJ-45) 10/100 Mbps (LAN, DSL, and cable modem) • 1 X.21, V.35, and RS-449 with RS-366 dialing, leased line, or data-triggered mode • 1 USB
Ethernet, Internet and intranet connectivity	<ul style="list-style-type: none"> • TCP/IP, Dynamic Host Configuration Protocol (DHCP), Address Resolution Protocol (ARP), FTP, Telnet, HTTP, HTTPS, Simple Object Access Protocol (SOAP) and XML, and MD5-CHAP • SNMP enterprise management • Internal web server • Internal streaming server
Other major standards supported	<ul style="list-style-type: none"> • H.231, H.233, H.234, H.235 v2 and v3, H.239, H.241, H.243, H.281, BONDING (ISO 13871), H.320, H.323, and H.331 • RFC 3261, RFC 2237, RFC 3264, RC 3311, RFC 3550, RFC 2032, RFC 2190, RFC 2429, RFC 3407
Wide Angle View Camera	<ul style="list-style-type: none"> • 10X zoom ¼-inch CCD plus 15 to -20° tilt • +/-95° pan • 61° vertical field of view • 96° total vertical field of view • 77° horizontal field of view • 267° total horizontal field of view • 460 (PAL) and 470 (NTSC) TV lines • Minimum illumination 2 Lux (F1.8) • Automatic or manual focus, brightness, and white balance • Far-end camera control <ul style="list-style-type: none"> ◦ Remote-source switching with source labels ◦ Camera-control and presets
Cisco TelePresence PrecisionHD Camera	<ul style="list-style-type: none"> • 1280 x 720 pixels progressive at 30 fps • 7X zoom 1/3-inch CMOS, 10 to -20° tilt, and +/-95° pan • 42° vertical field of view
Touch-panel interface	<ul style="list-style-type: none"> • 12-inch 24-bit color video with microphone connection • Configurable easy-to-use human interface • Built-in speakers that provide audio cues for local operation • Full control of a wide variety of audiovisual devices
Presentations	<p>Cisco TelePresence Natural Presenter Package including:</p> <ul style="list-style-type: none"> • PC Presenter (DVI-I, SXGA in) • PC SoftPresenter • Digital Clarity and native formats • Advanced video layouts • Streaming compatible with Cisco IPTV, Apple QuickTime, RealPlayer v8, etc.

Specification	Description
System management	<ul style="list-style-type: none"> • Support for the Cisco TelePresence Management Suite® • Total management through embedded web server, SNMP, Telnet, XML, SOAP, and FTP • Remote software upload through web server or FTP server • 1 RS-232 local control and diagnostics • Remote control and on-screen menu system • Web access to user interface available
Directory services	<ul style="list-style-type: none"> • Support for local and global directories Lightweight Directory Access Protocol (LDAP) and H.350 • 200-number global directory • 200-number local directory • Call history
Language	<ul style="list-style-type: none"> • English
Customized welcome screen and company logo	<ul style="list-style-type: none"> • You can change from the standard opening page touch-panel logo to a custom one loaded into the controller by the user
Power	<ul style="list-style-type: none"> • For applications module 100 to 240 VAC, 50 to 60 Hz, 150 watts • 6000 MXP codec 100 to 240 VAC, 50 to 60 Hz, 65 watts (W) for codec and camera • D-NAM 100-120 or 220-240 VAC, 50-60 Hz, 250W • Total power dependent on display type
Operating temperature and humidity	<ul style="list-style-type: none"> • 32 to 95°F (0 to 35°C) ambient temperature • 10 to 90% relative humidity
Storage and transport temperature	<ul style="list-style-type: none"> • -4 to 140°F (-20 to 60°C at relative humidity 10 to 90% (noncondensing))
Dimensions	<ul style="list-style-type: none"> • TAM MXP 3 rack units (3RU) high, 19-inch rack mount, and 12 inches deep • 6000 MXP codec 1RU high, 19-inch rack mount, and 11 inches deep
Footprint of optional slim-line podium	<ul style="list-style-type: none"> • W x L x H: 55 x 29.5 x 38.5 in

Ordering Information

To place an order, visit the [Cisco Ordering homepage](#).

Table 3. Ordering Information

Product Name	Part Number
Cisco TelePresence System Educator MXP	CTS-EDU-INTP-K9
Ordering Options	
Optional slim line podium	CTS-EDU-POD

Service and Support

Cisco and our partners provide a broad portfolio of intelligent, personalized services and support that can help you achieve the full value of your Cisco TelePresence investment by increasing business agility and network availability. This portfolio of services accelerates business innovation through a network-based collaboration platform that enables businesses to collaborate anywhere and any time. For more information about these services, visit <http://www.cisco.com/go/telepresenceservices>.

For More Information

For more information about the Educator MXP, visit <http://www.cisco.com/go/telepresence> or contact your local Cisco account representative or authorized Cisco partner. Product specifications are estimates and subject to change without notice.



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