

# Cisco TelePresence System Codec 6000 MXP

The Cisco TelePresence™ portfolio creates an immersive, face-to-face experience over the network - empowering you to collaborate with others like never before. Through a powerful combination of technologies and design that allows you and remote participants to feel as if you are all in the same room, the Cisco TelePresence portfolio has the potential to provide great productivity benefits and transform your business. Many organizations are already using it to control costs, make decisions faster, improve customer intimacy, scale scarce resources, and speed products to market.

## Product Overview

The Cisco TelePresence System Codec 6000 MXP (Codec 6000 MXP) is the integrator's codec of choice. Its standard rack-mountable dimensions combined with superior performance makes it ideal for customized integrations and specialized rooms.

**Figure 1.** Cisco TelePresence System Integrator Package 6000 MXP is also available and provides all of the necessary components needed to simplify integration



A 6000 MXP Integrator Package is available and provides all the necessary components needed to simplify integration

## Cisco TelePresence System Codec 6000 MXP Features

Table 1 summarizes the key features for the Cisco TelePresence System Codec 6000 MXP.

**Table 1.** Cisco TelePresence System Codec 6000 MXP Feature Summary

Feature Summary	
<b>Design Features</b>	<ul style="list-style-type: none"> <li>• Designed for custom integrations</li> <li>• 19" rack-mountable codec</li> <li>• Expandability for future applications</li> <li>• Dual DVI/XGA with VESA Power Management</li> <li>• Total management via serial port, embedded web server, SNMP, Telnet, SSH, XML, HTTP/HTTPS, FTP and on-screen menu</li> <li>• Integrator Package available that includes: Cisco TelePresence System Codec 6000 MXP, Cisco TelePresence PrecisionHD Camera, microphones, trackers and cables</li> </ul>

Feature Summary	
<b>Application Features</b>	<ul style="list-style-type: none"> <li>• Join up to six video and five audio sites with optional embedded MultiSite and bandwidth capabilities</li> <li>• Best possible call for each MultiSite participant with rate matching and transcoding</li> <li>• Multiway intuitively and instantly integrates multipleparty video calls utilizing a Cisco TelePresence MCU and Cisco TelePresence Video Communication Server (Cisco VCS).</li> <li>• Powerful live presentations through one-step PC plug-in or LAN connection</li> <li>• View presentations and presenter simultaneously with DuoVideo and H.239 Dual Stream</li> <li>• Cisco TelePresence Expressway™ technology</li> <li>• URI Dialing</li> </ul>
<b>Performance Features</b>	<ul style="list-style-type: none"> <li>• Choice of network: up to 2 Mbps ISDN or external network (H.320)/4 Mbps IP (H.323 or SIP)/6 Mbps in MultiSite</li> <li>• Superior video quality incorporating the H.264 standard</li> <li>• True CD-quality audio</li> <li>• Highest level of embedded encryption as well as IEEE 802.1x and H.235 authentication for security</li> <li>• Protection against network interruptions in point-to-point and multipoint calls with automatic downspeeding and IPLR</li> </ul>

## Product Capabilities

Table 2 provides a listing of the product capability specifications for the Cisco TelePresence System Codec 6000 MXP.

**Table 2.** Product Specifications

Specification	Description
<b>Unit Delivered Complete with</b>	<ul style="list-style-type: none"> <li>• Videoconferencing codec, wireless remote control</li> </ul>
<b>Bandwidth</b>	<ul style="list-style-type: none"> <li>• H.320 up to 2 Mbps</li> <li>• H.323 up to 4 Mbps point-to-point</li> <li>• SIP up to 4 Mbps</li> <li>• Up to 6 Mbps total MultiSite bandwidth</li> </ul>
<b>Firewall Traversal</b>	<ul style="list-style-type: none"> <li>• Cisco Expressway™ Technology</li> <li>• Auto NAT</li> <li>• H.460.18, H.460.19 Firewall Traversal</li> <li>• SIP ICE</li> </ul>
<b>Video Standards</b>	<ul style="list-style-type: none"> <li>• H.261, H.263, H.263+, H.263++ (Natural Video), H.264</li> </ul>
<b>Video Features</b>	<ul style="list-style-type: none"> <li>• Native 16:9 Widescreen</li> <li>• Advanced Screen Layouts</li> <li>• Picture in Picture (PIP)</li> <li>• Picture outside Picture &amp; Large POP</li> <li>• Side by Side</li> <li>• PC Zoom</li> <li>• Intelligent Video Management</li> <li>• Simultaneous videoconference &amp; local PC mode</li> <li>• Local Auto Layout</li> </ul>
<b>Video Inputs (6 Inputs)</b>	<ul style="list-style-type: none"> <li>• 1 x HD Main Camera or 1 x MiniDin, S-video: main camera</li> <li>• 1 x MiniDin, S-video: auxiliary/document camera</li> <li>• 1 x RCA/Phono, composite: document camera/aux</li> <li>• 1 x RCA/Phono, composite: VCR</li> <li>• 1 x DVI-I: PC</li> <li>• Input: 800 x 600 (@ 60, 72, 75, 85 Hz), 1024 x 768 (@ 60, 70, 75 Hz), 1280 x 720 (HD720P) (@ 50, 60 Hz), 1280 x 1024 @ 60 Hz, 1280x768, 1280x800, 1360x768, 1366x768 (@60 Hz)</li> <li>• Extended Display Identification Data (EDID)</li> </ul>

Specification	Description
<b>Video Outputs (6 Outputs)</b>	<ul style="list-style-type: none"> <li>• 1 x MiniDin, S-video: main monitor</li> <li>• 1 x MiniDin, S-video: dual monitor</li> <li>• 1 x RCA/Phono, composite: main monitor or VCR</li> <li>• 1 x RCA/Phono, composite: dual monitor or VCR</li> <li>• 2 x DVI-I/XGA: main and dual monitor</li> <li>• XGA Output</li> <li>• 800 x 600 @ 75 Hz, 1024 x 768 @ 60 Hz, 1280 x 768 (WXGA) @ 60 Hz, 1280 x 720 (HD720p) @ 60 Hz, 1280x800 @ 60 Hz</li> <li>• VESA Monitor Power Management</li> </ul>
<b>Video Format</b>	<ul style="list-style-type: none"> <li>• NTSC, PAL, VGA, SVGA, XGA, WXGA, SXGA and HD720p</li> </ul>
<b>Live Video Resolutions</b>	<p>Native NTSC:</p> <ul style="list-style-type: none"> <li>• 400p (528 x 400 pixels)</li> <li>• 4SIF (704 x 480 pixels), Digital Clarity</li> <li>• Interlaced SIF (iSIF 352 x 480 pixels), Natural Video</li> <li>• SIF (352 x 240 pixels)</li> </ul> <p>Native PAL:</p> <ul style="list-style-type: none"> <li>• 448p (576 x 448 pixels)</li> <li>• 4CIF (704 x 576 pixels), Digital Clarity</li> <li>• Interlaced CIF (iCIF 352 x 576 pixels), Natural Video</li> <li>• CIF (352 x 288 pixels)</li> <li>• QCIF (176 x 144 pixels)</li> <li>• SQCIF (128 x 96 pixels) decode only</li> </ul> <p>Native PC Resolutions:</p> <ul style="list-style-type: none"> <li>• XGA (1024 x 768)</li> <li>• SVGA (800 x 600 pixels)</li> <li>• VGA (640 x 480 pixels)</li> <li>• WXGA (1280x768)</li> </ul> <p>Wide Resolutions:</p> <ul style="list-style-type: none"> <li>• w288p (512 x 288 pixels)</li> <li>• w448p (768 x 448 pixels)</li> <li>• w576p (1024 x 576 pixels)</li> <li>• w720p (1280 x 720 pixels)</li> </ul>
<b>Still Image Transfer</b>	<ul style="list-style-type: none"> <li>• CIF, SIF, 4CIF (H.261 Annex D), 4SIF, VGA, SVGA, XGA, WXGA</li> </ul>
<b>Audio Standards</b>	<ul style="list-style-type: none"> <li>• G.711, G.722, G.722.1, G.728, 64 bit &amp; 128 bit MPEG4 AAC-LD</li> </ul>
<b>Audio Features</b>	<ul style="list-style-type: none"> <li>• CD-Quality 20KHz Mono and Stereo</li> <li>• Telephone add-on via MultiSite</li> <li>• Four separate acoustic echo cancellers</li> <li>• Audio mixer</li> <li>• Automatic Gain Control (AGC)</li> <li>• Automatic Noise Reduction</li> <li>• Audio level meters</li> <li>• VCR ducking</li> <li>• Optional Stereo Package</li> <li>• Packet loss management</li> <li>• Active lip synchronization</li> <li>• GSM/Blackberry interference audio feature</li> <li>• ALD (Assistive Listening Devices) support with acoustic echo cancellation</li> </ul>
<b>Audio Inputs (4 Inputs)</b>	<ul style="list-style-type: none"> <li>• 3 x microphone, 24V phantom powered, XLR connector, each with separate echo cancellers, the third microphone can be set for line level</li> <li>• 1 x RCA/Phono, Line Level: separate echo canceller</li> <li>• 1 x RCA/Phono, Line Level: auxiliary (or VCR/DVD Stereo L)</li> <li>• 1 x RCA/Phono, Line Level: VCR/DVD (Stereo R)</li> </ul>

Specification	Description
<b>Audio Outputs (3 Outputs)</b>	<ul style="list-style-type: none"> <li>• 1 x RCA/Phono, S/PDIF (mono/stereo) or Analogue Line Level: main audio or Analogue Stereo L</li> <li>• 1 x RCA/Phono, Line Level: auxiliary (or Analogue Stereo R or VCR Stereo L)</li> <li>• 1 x RCA/Phono, Line Level: VCR (mono or Stereo R)</li> </ul>
<b>Frame Rates</b>	<ul style="list-style-type: none"> <li>• 30 frames per second @ 168 kbps and above</li> <li>• 60 fields per second @ 336 kbps and above (point-to-point)</li> </ul>
<b>Dual Stream</b>	<ul style="list-style-type: none"> <li>• DuoVideo</li> <li>• H.239 dual stream</li> <li>• Dynamic bandwidth adjustment (H.323)</li> <li>• Available on H.323 &amp; H.320</li> <li>• Available in MultiSite from any site</li> </ul>
<b>Network Features</b>	<ul style="list-style-type: none"> <li>• Auto H.320/H.323 dialing</li> <li>• SIP</li> <li>• Downspeeding</li> <li>• Programmable network profiles</li> <li>• Intelligent Call Management</li> <li>• HO on ISDN-PRI Facility</li> <li>• Maximum call length timer</li> <li>• Automatic SPID and line number configuration (National ISDN, GR-2941-CORE)</li> <li>• SoftMux</li> <li>• NATO standard KG194/KIV-7 encryptor support</li> <li>• H.331 Broadcast Mode</li> <li>• URI Dialing</li> <li>• Direct DNS dialing</li> </ul>
<b>Multisite Features</b>	<ul style="list-style-type: none"> <li>• H.323/H.320/SIP/Telephony/VoIP in the same conference</li> <li>• Audio and Video Transcoding</li> <li>• Video rate matching from 56 kbps - maximum conference rate</li> <li>• CP4, CP 5 + 1 and Voice Switched</li> <li>• Best Impression (Automatic CP Layouts)</li> <li>• H.264, Encryption, Digital Clarity</li> <li>• Dual Stream from any site</li> <li>• ISDN &amp; IP Downspeeding and IPLR</li> <li>• MultiSite (H.243) Cascading on H.320 &amp; H.323</li> <li>• Unicode H.243 Terminal Names</li> <li>• Dial-in/Dial-out</li> <li>• Chair control for host system</li> <li>• Snapshot of ongoing conference (JPEG)</li> <li>• Snapshot of ongoing DuoVideo/H.239 presentation (JPEG)</li> <li>• Separate welcome page for encrypted conferences</li> <li>• Conference rates up to 6 Mbps</li> <li>• Up to 6 video and 5 audio sites</li> <li>• 4 sites @ 2 Mbps, 6 sites @ 768 kbps (+telephone calls)</li> <li>• Mix ISDN (BRI or PRI), or Serial Inter face (V.35) with IP up to maximum conference rate</li> </ul>
<b>Embedded Encryption</b>	<ul style="list-style-type: none"> <li>• H.320 and H.323 point-to-point and multipoint calls</li> <li>• Standards-based: H.233, H.234, H.235 v2&amp;v3, DES and AES</li> <li>• NIST-validated AES</li> <li>• NIST-validated DES</li> <li>• Automatic key generation and exchange</li> <li>• Supported in Dual Stream &amp; MultiSite</li> </ul>

Specification	Description
<b>IP Network Features</b>	<ul style="list-style-type: none"> <li>• IEEE 802.1x/EAP Network Authentication</li> <li>• H.235 Gatekeeper Authentication</li> <li>• DNS lookup for service configuration</li> <li>• Differentiated Services (DiffServ)</li> <li>• Resource Reservation Protocol (RSVP)</li> <li>• IP precedence</li> <li>• IP Type of Service (ToS)</li> <li>• IP adaptive bandwidth management (including flow control)</li> <li>• Auto gatekeeper discovery</li> <li>• Dynamic playout and lip-sync buffering</li> <li>• Intelligent Packet Loss Recovery (IPLR)</li> <li>• H.245 DTMF tones in H.323</li> <li>• Cisco CallManager integration using ECS</li> <li>• IP Address Conflict Warning</li> <li>• Date and Time support via NTP</li> <li>• Call Services</li> </ul>
<b>IPv6 Network Support</b>	<ul style="list-style-type: none"> <li>• Dual Stack IPv4 and IPv6 simultaneous support</li> <li>• Net service support on IPv6: Telnet, SSH, HTTP, HTTPS, FTP, SNMP, DNS, NTP, DHCP</li> <li>• Media support on IPv6: H.323, SIP, Streaming</li> </ul>
<b>Security Features</b>	<ul style="list-style-type: none"> <li>• Management via HTTPS and SSH</li> <li>• IP Administration Password</li> <li>• Menu Administration Password</li> <li>• Dialing Access code</li> <li>• Streaming password</li> <li>• H.243 MCU Password</li> <li>• VNC password</li> <li>• SNMP security alerts</li> <li>• Disable IP services</li> <li>• MD-5 Challenge</li> <li>• Network Settings protection</li> <li>• SIP Authentication via NTLM</li> <li>• SIP Authentication via Digest</li> </ul>
<b>Network Interfaces</b>	<ul style="list-style-type: none"> <li>• 6 x ISDN BRI (RJ-45), S-inter face</li> <li>• 1 x E1/T1 G.703 (RJ-45) for ISDN PRI or Leased E1/T1 mode: Manual or Auto (Data Triggered)</li> <li>• 1 x E1/T1 G.703 (RJ-45) for future usage</li> <li>• 1 x LAN/Ethernet (RJ-45) 10/100 Mbit (LAN/DSL/cable modem)</li> <li>• 1 x X.21/V.35/RS-449 with RS-366 dialing, RS-366 Adtran IMUX, Leased Line, Data Triggered, and Manual</li> <li>• 1 x USB for future usage</li> </ul>
<b>Ethernet/Internet/Intranet Connectivity</b>	<ul style="list-style-type: none"> <li>• TCP/IP, DHCP, ARP, FTP, Telnet, HTTP, HTTPS, SOAP and XML, MD-5 Challenge</li> <li>• SNMP Enterprise Management</li> <li>• Internal web server</li> <li>• Internal streaming server</li> </ul>
<b>Other Major Standards Supported</b>	<ul style="list-style-type: none"> <li>• H.231, H.233, H.234, H.235 v2&amp;v3, H.239, H.241, H.243, H.281, BONDING (ISO 13871), H.320, H.323, H.331</li> <li>• RFC 3261, RFC 2237, RFC 3264, RC 3311, RFC 3550, RFC 2032, RFC 2190, RFC 2429, RFC 3407</li> </ul>

Specification	Description
<b>Precision HD Camera</b>	<ul style="list-style-type: none"> <li>• 7 x zoom 1/3" CMOS +10°/-20° tilt +/- 90° pan</li> <li>• 42° vertical field of view</li> <li>• 72° total vertical field of view</li> <li>• 70° horizontal field of view</li> <li>• 250° total horizontal field of view</li> <li>• Focus distance 0.3m–infinity</li> <li>• 1280 x 720 pixels progressive @ 30fps</li> <li>• Automatic or manual focus/brightness/whitebalance</li> <li>• Far-end camera control</li> <li>• 15 near and far-end camera presets</li> <li>• Voice-activated camera positioning</li> <li>• Daisy-chain support (Visca protocol camera)</li> </ul>
<b>Closed Captioning/Text Chat</b>	<ul style="list-style-type: none"> <li>• T.140 text chat available from RS-232, Telnet, Web and User Inter face</li> </ul>
<b>Presentations and Collaboration</b>	<ul style="list-style-type: none"> <li>• Natural Presenter Package including: <ul style="list-style-type: none"> <li>• PC Presenter (DVI-I, SXGA In)</li> <li>• PC SoftPresenter</li> <li>• Digital Clarity &amp; Native Formats</li> <li>• Advanced Video Layouts</li> <li>• Streaming compatible with Cisco IP/TV, Apple QuickTime®, RealPlayer® v8 etc.</li> </ul> </li> </ul>
<b>System Management</b>	<ul style="list-style-type: none"> <li>• Support for the Cisco TelePresence Management Suite (Cisco TMS)</li> <li>• Total management via embedded web server, SNMP, Telnet, SSH, XML, SOAP and FTP</li> <li>• Remote software upload: via web server, ftp server or ISDN</li> <li>• 1 x RS-232 local control and diagnostics</li> <li>• Remote control and on-screen menu system</li> <li>• External services from Cisco TMS</li> </ul>
<b>Directory Services</b>	<ul style="list-style-type: none"> <li>• Support for Local Directories (My Contacts), Corporate Directory and Global Directory</li> <li>• Unlimited entries using Server directory supporting LDAP and H.350</li> <li>• Unlimited number for Corporate directory (through TMS)</li> <li>• 400 number global directory</li> <li>• 200 number local directory</li> <li>• 16 dedicated MultiSite entries</li> <li>• Directories in Local Languages</li> <li>• Received Calls with Date and Time</li> <li>• Placed Calls with Date and Time</li> <li>• Missed Calls with Date and Time</li> </ul>
<b>17 Selectable Menu Languages</b>	<ul style="list-style-type: none"> <li>• Arabic, Simplified Chinese, Traditional Chinese, Danish, English, French, German, Italian, Japanese, Korean, Norwegian, Portuguese, Russian, Spanish, Suomi, Swedish and Thai</li> <li>• Chinese, Korean and Japanese Input Method Editor</li> <li>• Import Custom Language through TMS</li> </ul>
<b>Customized Welcome Screen and Company Logo</b>	<ul style="list-style-type: none"> <li>• Picture JPEG (logo.jpg): Recommended maximum size is 704x576 for Welcome Screen and 352x288 for Encryption Required Screen</li> </ul>
<b>Power</b>	<ul style="list-style-type: none"> <li>• Auto-sensing power supply</li> <li>• 100-250 VAC, 50-60 Hz</li> <li>• 65 watts max. for codec and main camera</li> </ul>
<b>Operating Temperature and Humidity</b>	<ul style="list-style-type: none"> <li>• 0°C to 35°C (32°F to 95°F) ambient temperature</li> <li>• 10% to 90% Relative Humidity (RH)</li> </ul>
<b>Storage and Transport Temperature</b>	<ul style="list-style-type: none"> <li>• -20°C to 60°C (-4°F to 140°F) at RH 10-90% (non -condensing)</li> </ul>

Specification	Description
<b>Directory Services</b>	<ul style="list-style-type: none"> <li>• Directive 73/23/EEC (Low-Voltage Directive) <ul style="list-style-type: none"> <li>◦ Standard EN 60950</li> </ul> </li> <li>• Directive 89/336/EEC (EMC Directive) <ul style="list-style-type: none"> <li>◦ Standard EN 55022, Class B</li> <li>◦ Standard EN 55024</li> <li>◦ Standard EN 61000-3-2/-3-3</li> </ul> </li> <li>• Directive 1999/5/EEC (R&amp;TTE Directive) <ul style="list-style-type: none"> <li>◦ Standard TBR3</li> <li>◦ Standard TBR4</li> </ul> </li> <li>• Approved according to UL 60950 and CAN/CSA C22.2 No.60950</li> <li>• Complies with FCC15B Class B</li> </ul>
<b>Dimensions</b>	<ul style="list-style-type: none"> <li>• Length: 20"/52 cm</li> <li>• Height: 1.8"/4.4 cm</li> <li>• Depth: 18"/45 cm</li> <li>• Weight: 8.8 lbs/4 kg</li> </ul>

\* Requires Cisco Management Suite 9.0 or newer.

## Ordering Information

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

**Table 3.** Ordering Information

Product Name	Part Number	Compliance Model Number
<b>Cisco TelePresence System Integrator Package 6000 MXP</b>	<b>CTS-INTP6000-K9</b>	<b>TTC6-08 (Codec 6000 MXP)</b> <b>TTC8-01 (Camera)</b>
Comes with: Cisco TelePresence System Codec 6000 MXP, PrecisionHD Camera, camera trackers, 2 microphones, remote control, 6000 MXP 2M/4M/6M bandwidth		
<b>Software Feature Options for Integrator Package 6000 MXP</b>		
<b>Multi Site option for Integrator Package 6000 MXP</b>	LIC-INTP6000-MS	
<b>Natural Presenter Package (NPP) Option for Integrator Package 6000 MXP</b>	LIC-INTP6000-NPP	
<b>Video Standard Options</b>		
<b>NTSC Option for MXP</b>	CTS-NTSC	
<b>PAL Option for MXP</b>	CTS-PAL	

## Service and Support

Cisco and our partners provide a broad portfolio of intelligent, personalized services and support that can help you realize 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, anytime. For more information about these services, visit: <http://www.cisco.com/go/telepresenceservices>.

## For More Information

For more information about the Cisco TelePresence System Codec 6000 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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