

Cisco TelePresence Codec C40

The Cisco TelePresence® portfolio creates an immersive, in-person 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 manage costs, make decisions faster, improve customer intimacy, scale scarce resources, and speed products to market (Figure 1).

Figure 1. Cisco TelePresence Codec C40



Product Overview

The Cisco TelePresence Codec C40 provides all the power required to transform any conference room into a high-definition (HD) video collaboration room. Designed for the integrator, the C40 is the ideal solution for everyday, customized telepresence and collaboration projects. Standard 1080p HD video, HD collaboration, and embedded Cisco TelePresence MultiSite features combine to make the C40 ideal for a variety of applications.

Cisco TelePresence Codec C40 Features

Table 1 summarizes the key features for the Cisco TelePresence Codec C40.

Table 1. Cisco TelePresence Codec C40 Feature Summary

Feature Summary	
Design features	<ul style="list-style-type: none"> • One of the most powerful and feature-rich codecs available with the ultimate in video and audio quality • The next-generation HD video collaboration codec for every team room • 1 rack unit (1RU) high, rack-mountable, with rack-mounting solution included • Professional-grade connectors • Unmatched quality and flexibility • Standards-compliant 1080p solution—compatible with standards-based video without losing features
Application features	<ul style="list-style-type: none"> • Individual transcoding embedded MultiSite** • HD collaboration with resolutions up to WXGA at full frame rate • One button to push (OBTP) to start a meeting • Ideal for team-based collaboration and industry applications

Feature Summary	
Performance features	<ul style="list-style-type: none"> • Optimal definition up to 1080p • H.323/SIP up to 6 Mbps point-to-point • Ability to connect up to three HD sources and two microphones directly into the interface • Full-duplex audio with high-quality stereo sound • Full application programming interfaces (APIs) • Ability to take advantage of Cisco® Total Solution Management, transcoded HD multipoint control unit (MCU), recording and streaming, Multiway, and firewall traversal • Cisco TelePresence ClearPath packet loss protection technology for optimal experience • Cisco Unified Communications Manager native support (requires Cisco Unified Communications Manager Version 8.6 or higher) • Can be supported on the Cisco WebEx Telepresence network

Product Capabilities

Table 2 lists the product capability specifications for the Cisco TelePresence Codec C40.

Table 2. Product Specifications

Specification	Description
Unit delivered complete With	<ul style="list-style-type: none"> • Videoconferencing codec, wireless remote control, rack-mounting ears, LAN cable, and power cable
Bandwidth	<ul style="list-style-type: none"> • H.323/SIP up to 6 Mbps point-to-point
Firewall traversal	<ul style="list-style-type: none"> • Cisco Expressway technology • H.460.18 and H.460.19 Firewall Traversal
Video standards	<ul style="list-style-type: none"> • H.261, H.263, H.263+, and H.264
Video features	<ul style="list-style-type: none"> • Native 16:9 widescreen • Advanced screen layouts • Intelligent video management • Local auto layout
Video inputs (four inputs)	<p>Two HDMI Inputs; Supported Formats:</p> <ul style="list-style-type: none"> • 1920 x 1080@60 and 59.94 Hz (1080p60) • 1920 x 1080@50 Hz (1080p50) • 1920 x 1080@30 and 29.97 Hz (1080p30) • 1920 x 1080@25 Hz (1080p25) • 1920 x 1080@24 and 23.97 Hz (1080p24) • 1280 x 720@60 and 59.94 Hz (720p60) • 1280 x 720@50 Hz (720p50) • 720 x 480@60 and 59.94 Hz (480p60) • 640 x 480@60 Hz (480p60) • 1600 x 1200@50 and 60 Hz (UXGA) • 1280 x 1024@60 and 75 Hz (SXGA) • 1024 x 768@60, 70, 75, and 85 Hz (XGA) • 800 x 600@56, 60, 72, 75, and 85 Hz (SVGA) • 1920 x 1200@50 and 60 Hz (WUXGA) • 1680 x 1050@60 Hz (WSXGA+) • 1440 X 900@60 Hz (WXGA+) • 1280 x 768@60 Hz (WXGA) <p>One DVI-I Input; Supported Formats:</p> <p>Analog (VGA):</p> <ul style="list-style-type: none"> • 1920 x 1080@60 Hz (1080p) • 1280 x 720@60 Hz (720p) • 1600 x 1200@60 Hz (UXGA) • 1280 x 1024@60 and 75 Hz (SXGA) • 1280 x 960@60 Hz • 1024 x 768@60, 70, 75, and 85 Hz (XGA) • 1920 x 1200@50 Hz (WUXGA)

Specification	Description
	<ul style="list-style-type: none"> • 1680 x 1050@60 Hz (WSXGA+) • 1440 x 900@60 Hz (WXGA+) • 1280 x 800@60 Hz (WXGA) • 1280 x 768@60 Hz (WXGA) <p>Analog (YPbPr):</p> <ul style="list-style-type: none"> • 1920 x 1080@60 Hz (1080p60) • 1920 x 1080@50 Hz (1080p50) • 1920 x 1080@30 Hz (1080p30) • 1920 x 1080@25 Hz (1080p25) • 1280 x 720@60 Hz (720p60) • 1280 x 720@50 Hz (720p50) • 1280 x 720@30 Hz (720p30) • 720 x 576@50 Hz (576p50) • 720 x 480@60 Hz (w480p60) <p>Digital (DVI-D):</p> <ul style="list-style-type: none"> • Same as HDMI; reference earlier in the table <p>One S-Video/Composite Input (BNC Connectors):</p> <ul style="list-style-type: none"> • PAL/NTSC • Extended Display Identification Data (EDID)
Video outputs (two outputs)	<p>One HDMI Output and One DVI-I Output; Supported Formats:</p> <ul style="list-style-type: none"> • 1920 x 1080@60 Hz (1080p60) • 1920 x 1080@50 Hz (1080p50) • 1280 x 720@60 Hz (720p60) • 1280 x 720@50 Hz (720p50) • 1600 x 1200@60 Hz (UXGA) • 1280 x 1024@60 Hz (SXGA) • 1024 x 768@60 Hz (XGA) • 800 x 600@60 Hz (SVGA) • 640 x 480@60 Hz (VGA) • 1920 x 1200@60Hz (WUXGA) • 1360 x 768@60 Hz • 1366 x 768@60 Hz • 1280 x 768@60 Hz (WXGA) • VESA Monitor Power Management • EDID
Live video resolutions (encode and decode)	<ul style="list-style-type: none"> • 176 x 144@30 frames per second (fps) (QCIF) • 352 x 288@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) • 1280 x 720@30 fps (720p30) • 1920 x 1080@30 fps (1080p30)** • 512 x 288@60 fps (w288p60) • 768 x 448@60 fps (w448p60) • 1024 x 576@60 fps (w576p60) • 1280 x 720@60 fps (720p60)** • 640 x 480@30 fps (VGA) • 800 x 600@30 fps (SVGA) • 1024 x 768@30 fps (XGA) • 1280 x 768@30 fps (WXGA) • 720p30 from 768 kbps • 720p60 from 1152 kbps • 1080p30 from 1472 kbps

Specification	Description
Audio standards	<ul style="list-style-type: none"> • G.711, G.722, G.722.1, 64-bit kbps, and 128-bit kbps MPEG4 • AAC-LD and AAC-LD Stereo
Audio features	<ul style="list-style-type: none"> • CD-quality 20-kHz mono and stereo • Two separate acoustic echo cancellers • 2-port audio mixer • Automatic Gain Control (AGC) • Automatic noise reduction • Active lip synchronization
Audio inputs (five inputs)	<ul style="list-style-type: none"> • Two microphones, 48V phantom powered, XLR connector, each with separate echo cancellers and noise reduction; all microphones can be set for balanced line level • Two RCA/Phono inputs, line level: Stereo PC input, configurable to two RCA/Phono inputs, line level: Mono auxiliary/DVD input • One HDMI, digital: Stereo PC/DVD inputs
Audio outputs (three outputs)	<ul style="list-style-type: none"> • Two RCA/Phono inputs, line level, stereo main audio, configurable to S/PDIF or two RCA/Phono inputs, line level, mono to recording device • One HDMI, digital, stereo main audio
Dual stream	<ul style="list-style-type: none"> • H.239 (H.323) dual stream • BFCP (SIP) dual stream • Support for resolutions up to WXGAp30, independent of the main stream resolution
MultiPoint support	<ul style="list-style-type: none"> • Four-way embedded SIP/H.323 MultiPoint, reference MultiSite • Cisco TelePresence Multiway support (requires Cisco TelePresence Video Communication Server [Cisco VCS] and Cisco TelePresence MCU) • Ability to natively join multipoint conferences hosted on Cisco Telepresence Multipoint Switch (CTMS)
MultiSite features (embedded MultiPoint)	<ul style="list-style-type: none"> • Four-way SIP/H.323 MultiSite; resolution up to w576p30 • Full individual audio and video transcoding • Individual layouts in multisite continuous presence (takes out self view) • H.323, SIP, and voice over IP (VoIP) in the same conference • Support for Presentation (H.239/BFCP) from any participant at resolutions up to WXGAp30 • Best Impression (automatic continuous presence layouts) • H.264, encryption, and dual stream from any site • Dial in and dial out • Additional telephone call (no license required) • Conference rates up to 10 Mbps
Protocols	<ul style="list-style-type: none"> • H.323 • SIP • ISDN (requires Cisco TelePresence ISDN Link)
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
IP network features	<ul style="list-style-type: none"> • DNS lookup for service configuration • Differentiated Services (quality of service [QoS]) • IP adaptive bandwidth management (including flow control) • Auto gatekeeper discovery • Dynamic playout and lip-sync buffering • H.245 DTMF tones in H.323 • Date and time support through Network Time Protocol (NTP) • Packet loss-based downspeeding • URI dialing • TCP/IP • Dynamic Host Configuration Protocol (DHCP) • 802.1x Network Authentication • 802.1Q Virtual LAN

Specification	Description
	<ul style="list-style-type: none"> • 802.1p (QoS and class of service [CoS]) • ClearPath • Medianet: Mediatrace and Metadata
Cisco Unified Communications Manager (requires Cisco Unified Communications Manager Version 8.6 or later)	<ul style="list-style-type: none"> • Native registration with Cisco Unified Communications Manager • Basic Cisco Unified Communications Manager provisioning • Firmware upgrade from Cisco Unified Communications Manager • Cisco Discovery Protocol and DHCP option 150 support • Basic telephony features such as hold, resume, transfer, and Corporate Directory lookup
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, Secure Shell (SSH), HTTP, Secure HTTP (HTTPS), DNS, and Differentiated Services (DiffServ) • Support for both static and autoconfiguration (stateless address auto configuration)
Security features	<ul style="list-style-type: none"> • Management through HTTPS and SSH • IP administration password • Menu administration password • Disable IP services • Network settings protection
Network interfaces	<ul style="list-style-type: none"> • Two LAN/Ethernet (RJ-45) 10/100/1000 Mb
Other Interfaces	<ul style="list-style-type: none"> • USB device for future usage
Cisco TelePresence PrecisionHD Camera (1080p)	<ul style="list-style-type: none"> • 1/3-inch CMOS • 12x zoom and 4x zoom • +15°-25° tilt, +/-90° pan • 43.5° vertical field of view • 72° horizontal field of view • Focus distance 0.3m-infinity • 1920 x 1080 pixels progressive @ 60 fps (12x version) • 1920 x 1080 pixels progressive @ 30 fps (4x version) <p>Other formats supported (configurable through dip-switch):</p> <ul style="list-style-type: none"> • 1920 x 1080@60 fps (HDMI only)* • 1920 x 1080@50 fps (HDMI only)* • 1920 x 1080@30 fps • 1920 x 1080@25 fps • 1280 x 720@60 fps* • 1280 x 720@50 fps* • 1280 x 720@30 fps • 1280 x 720@25 fps • Automatic or manual focus, brightness, and white balance • Far-end camera control • Daisy-chain support (Visca protocol camera)* • Dual HDMI and HD-SDI outputs • Upside-down mounting with automatic flipping of picture
System management	<ul style="list-style-type: none"> • Support for the Cisco TelePresence Management Suite (Cisco TMS) • 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 (SCP), HTTP, and HTTPS • One RS-232 for local control and diagnostics • Remote control and on-screen menu system

Specification	Description
Directory services	<ul style="list-style-type: none"> • Support for local directories (My Contacts) • Corporate Directory • Unlimited entries using server directory supporting LDAP and H.350 (requires Cisco TelePresence Management Suite) • Unlimited number for Corporate Directory (through Cisco TelePresence Management Suite) • 200 number local directory • Received calls • Placed calls • Missed calls with date and time
Power	<ul style="list-style-type: none"> • Auto-sensing power supply • 100-240 VAC, 50-60 Hz • 175 watts maximum for codec and main camera
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 (RH)
Storage and transport temperature	<ul style="list-style-type: none"> • -4 to 140°F (-20 to 60°C) at RH 10-90% (noncondensing)
Dimensions	<ul style="list-style-type: none"> • Length: 17.4 in. (44.2 cm) • Height: 1.7 in. (4.4 cm) • Depth: 10.9 in. (27.8 cm) • Weight: 8.8 lb (4 kg)

* Not supported on 4x zoom camera
 ** Requires option

Regulatory Compliance

- 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

Ordering Information

Table 3 gives ordering information for the Cisco TelePresence Codec C40.

Table 3. Ordering Information

Product Name	Part Number	Compliance Model Number
Cisco TelePresence Codec C40	CTS-C40-K9	TTC6-11
Comes with: Codec C40, Natural Presenter Package, Rack Mount Kit, Remote Control, HDMI and Power Cables, choice of encrypted or non-encrypted software		
Ordering Options for the Cisco TelePresence Codec C40		
Codec C40 Premium Resolution Option	LIC-C40-PR	
Codec C40 Multisite MS Option	LIC-C40-MS	
Codec C40 Dual Display Option	LIC-C40-DD	

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 Codec C40, 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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