

# Cisco TelePresence MCU MSE 8420

**Figure 1.** Cisco TelePresence MCU MSE 8420



## Product Overview

The Cisco TelePresence<sup>®</sup> MCU MSE 8420 is the industry's leading chassis-based, standard-definition (SD), multimedia conferencing bridge (Figure 1). It delivers high-quality voice and video with an easy-to-use, versatile management interface. Compatible with all major vendors' endpoints, it maintains its capacity and performance in every configuration, delivering an excellent experience for each participant, every time.

## Features and Benefits

Table 1 summarizes more key features for the Cisco TelePresence MCU MSE 8420.

**Table 1.** Cisco TelePresence MCU MSE 8420 Feature Summary

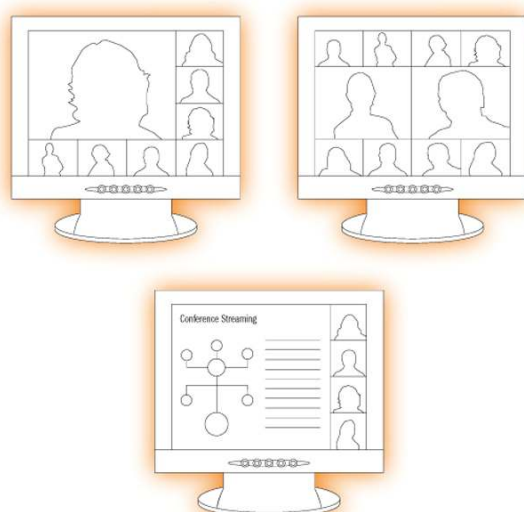
Feature	Benefit
<b>Design Features</b>	<ul style="list-style-type: none"> <li>Standards-based and compatible with all major vendors' endpoints</li> <li>Forty video plus 40 voice ports on a single blade</li> <li>Up to 360 video plus 360 voice ports enabled in a single chassis</li> <li>More than 50 custom layouts</li> <li>Comprehensive wideband audio support</li> <li>Support for both Session Initiation Protocol (SIP) and H.323 endpoints</li> <li>Pay as you grow - buy the capacity you need now and upgrade with a software license in the future</li> </ul>
<b>Application Features</b>	<ul style="list-style-type: none"> <li>Integrated with Cisco Unified Communications Manager (v8.6 or later) for ad-hoc conferencing</li> <li>Integrated with Cisco TelePresence Conductor</li> <li>Offers Cisco TelePresence ConferenceMe for multipoint desktop video</li> <li>Integrated with Cisco TelePresence Management Suite</li> <li>Offers full interoperability with ISDN networks using Cisco TelePresence ISDN Gateways</li> <li>Compatible with Microsoft Office Communications Server</li> <li>Fully integrated, with built-in gatekeeper and streaming server</li> <li>Supports Cisco TelePresence PacketSafe technology, which minimizes effects of network packet loss</li> <li>Supports Cisco TelePresence Multiway technology</li> </ul>

Feature	Benefit
<b>Performance Features</b>	<ul style="list-style-type: none"> <li>• Cisco TelePresence Universal Port technology, which helps ensure each participant receives an excellent experience</li> <li>• Constant high capacity</li> <li>• Bandwidth per site up to 4 Mbps</li> <li>• Video resolutions: 720p at up to 15 fps, 480p at up to 30 fps</li> <li>• Standard-definition continuous presence</li> <li>• Latency as low as 60 ms</li> </ul>

**Figure 2.** Cisco TelePresence MCU MSE 8420 blade



**Figure 3.** Examples of video and data-sharing layout options



## Product Specifications

Table 2 lists the product specifications; Table 3 gives video and audio specifications; and Table 4 gives network, security, and management specifications, Table 5 lists the physical specifications, for the Cisco TelePresence MCU MSE 8420.

**Table 2.** Product Specifications

<b>Product Compatibility</b>	<ul style="list-style-type: none"><li>Standards-based and compatible with all major vendors' endpoints</li></ul>
<b>Software License</b>	<ul style="list-style-type: none"><li>MCU (Media) port licenses required in Cisco TelePresence MSE 8000 chassis to enable SD video ports</li></ul>
<b>High Performance</b>	<ul style="list-style-type: none"><li>720p up to 15 fps H.263 continuous presence; 480p up to 30 fps</li><li>Comprehensive high-definition (HD) audio codecs</li></ul>
<b>Universal Transcoding and Transrating</b>	<ul style="list-style-type: none"><li>All calls are automatically transcoded and transrated for audio and video</li><li>Any bandwidth, any resolution, or any video or audio codec can be used on any video call within the same conference</li><li>All participants have their own personal encodes</li></ul>
<b>Streaming Video</b>	<ul style="list-style-type: none"><li>Built-in streaming server</li><li>Ability to view using Windows Media Player, RealPlayer, or QuickTime</li><li>Streaming of slides (H.239 and Virtual Network Computing [VNC])</li><li>Text chat</li><li>Unicast and multicast</li><li>User Datagram Protocol (UDP), TCP, or HTTP</li><li>Independent choice of bandwidth and codec</li></ul>
<b>Localization and Customization</b>	<ul style="list-style-type: none"><li>Custom interactive voice response (IVR)/auto attendant audio prompts and graphics</li><li>Uploadable multilanguage support</li></ul>
<b>Multipoint-Control-Unit (MCU) Features</b>	<ul style="list-style-type: none"><li>H.323 dial in, or dial out from web server</li><li>Standalone or with gatekeeper/registrar/proxy</li><li>Configurable audio and video auto attendant</li><li>Advanced continuous presence as standard on all ports</li><li>Automatic selection of best layout</li><li>Individual layout selection using remote control or webpages</li><li>More than 50 custom layouts</li><li>Active speaker selection using remote control or voice activation</li><li>Floor assignment through webpage or management application</li><li>Far-end camera control tunneling using remote control or web</li><li>Text identification of sites</li><li>On-screen text messaging to individual or all sites</li><li>Built-in conference scheduling and reservation</li><li>On-demand and ad hoc conferences</li><li>Automatic lecture mode</li><li>On-screen list of participants</li><li>Preview of conference and individual camera on webpages</li><li>Web conferencing - those without endpoints can still interact</li><li>Uploadable bitmaps for audio participants</li><li>Video association for IP and traditional private branch exchanges (PBXs)</li><li>Automatic connection to audio conferences</li><li>Integration with Cisco Unified Communications Manager v8.6 or later ad-hoc conferencing features allows Cisco video IP phones to initiate impromptu multiparty calls with other Cisco TelePresence endpoints.</li><li>Cisco TelePresence Multiway technology, which enables many Cisco® video endpoints to initiate impromptu multiparty calls</li><li>Linked voice and video calls</li><li>Automatic redialing</li></ul>

<b>Content Features</b>	<ul style="list-style-type: none"> <li>• Dual video using H.239 and BFCP content sharing</li> <li>• Presentation mode: You can add slides from your PC using VNC</li> <li>• Automatic content handover</li> <li>• Widescreen (16:9) support</li> <li>• Pass through content option to maximize capacity</li> <li>• Content transcoding for interoperability</li> <li>• Participants with no content support can receive transcoded content in main video</li> </ul>
<b>Cisco TelePresence ConferenceMe</b>	<ul style="list-style-type: none"> <li>• Video, audio, and content sharing: <ul style="list-style-type: none"> <li>◦ Multiple layouts</li> <li>◦ Firewall friendly</li> </ul> </li> <li>• Independent transcode per participant</li> <li>• Up to 12 simultaneous connections</li> </ul>
<b>Built-In Web Server</b>	<ul style="list-style-type: none"> <li>• Complete configuration, control, and monitoring of the system and conferences</li> </ul>
<b>Built-In Gatekeeper</b>	<ul style="list-style-type: none"> <li>• Resolution of E.164 numbers</li> <li>• Registration of conferences, endpoints, and gateways</li> <li>• Ability for up to 25 devices to register</li> </ul>

**Table 3.** Video and Audio Specifications

<b>Bandwidth</b>	<ul style="list-style-type: none"> <li>• H.263 up to 4 Mbps, and H.264 up to 2 Mbps for each site in all conference modes, including advanced (symmetric) continuous presence</li> </ul>
<b>Video Standards</b>	<ul style="list-style-type: none"> <li>• H.261, H.263, H.263+, H.263++, and H.264</li> </ul>
<b>Video Resolution</b>	<ul style="list-style-type: none"> <li>• From QCIF to 480p at up to 30 fps and 720p (1280 x 720) at up to 15 fps, including interlaced iCIF and iSIF</li> <li>• 4:3 and 16:9 aspect ratios</li> </ul>
<b>Frame Rates</b>	<ul style="list-style-type: none"> <li>• Up to 30 frames or 60 fields per second</li> </ul>
<b>Audio Standards</b>	<ul style="list-style-type: none"> <li>• G.711, G.722, G.722.1, G.723.1, G.728, G.729, MPEG-4 AAC-LC, MPEG-4 AAC-LD, and Polycom Siren14/G.722.1 Annex C</li> </ul>
<b>Audio Features</b>	<ul style="list-style-type: none"> <li>• Wideband audio mixing</li> <li>• Built-in and uploadable auto attendant voice prompts</li> <li>• Automatic gain control, adjustable gain, power indication, and individual audio mute using webpages</li> </ul>

**Table 4.** Network, Security, and Management Specifications

<b>Protocols</b>	<ul style="list-style-type: none"> <li>• H.323, SIP, H.235 (Advanced Encryption Standard [AES]), Secure Real-Time Transport Protocol (SRTP), Transport Layer Security (TLS), H.239 (dual video), VNC, Binary Floor Control Protocol (BFCP), H.243 (chair control), FTP, Real-Time Transport Protocol (RTP), (Real-Time Streaming Protocol (RTSP), HTTP, Secure HTTP (HTTPS), Dynamic Host Configuration Protocol (DHCP), Simple Network Management Protocol (SNMP), Network Time Protocol (NTP), IPv4, and IPv6</li> </ul>
<b>Quality of Service (QoS)</b>	<ul style="list-style-type: none"> <li>• Configurable differentiated services code point (DSCP) or type of service (ToS)/IP Precedence</li> </ul>
<b>Security Features</b>	<ul style="list-style-type: none"> <li>• Seven levels of access rights and privileges for users</li> <li>• Password-protected conferences</li> <li>• Secure non-PC hardware and operating system</li> <li>• AES encryption, 128-bit key, H.235</li> <li>• SIP encryption</li> <li>• TLS certificate verification</li> <li>• Second Ethernet port</li> <li>• Static ARP</li> <li>• Certificate-based login with OCSP certificate checking</li> </ul>
<b>Interfaces</b>	<ul style="list-style-type: none"> <li>• Two RJ-45 Ethernet, 10-/100-/1000-Mbps full and half duplex, manual or autosensing</li> <li>• RJ-45 serial port</li> <li>• CompactFlash socket</li> <li>• Thirty-nine status LEDs</li> </ul>

<b>System Management</b>	<ul style="list-style-type: none"> <li>• XML - RPC management application programming interface (API)</li> <li>• Management through built-in web server</li> <li>• RS-232 for local control and diagnostics</li> <li>• Syslog for diagnostics</li> <li>• Configurable event logs and full H.323 and SIP decoding</li> <li>• Configuration backup to network</li> <li>• Secure upgrades through Ethernet or CompactFlash</li> <li>• Call detail records (CDRs)</li> <li>• SNMP</li> </ul>
<b>Network Resilience</b>	<ul style="list-style-type: none"> <li>• Cisco TelePresence PacketSafe technology, which provides intelligent down-speeding, packet pacing, and packet-loss concealment to help ensure optimum video and audio quality</li> <li>• Dynamic jitter buffering</li> <li>• Alternate gatekeepers</li> <li>• DNS SRV failover for SIP</li> </ul>

## Warranty Information

Find warranty information on Cisco.com at the [Product Warranties](#) page.

## Ordering Information

To place an order, visit the [Cisco Ordering Home Page](#) and refer to Table 6 or contact your local Cisco representative. To download software, visit the [Cisco Software Center](#).

**Table 5.** Physical Specification

<b>Language</b>	<ul style="list-style-type: none"> <li>• English as standard, but alternative language packs can be loaded onto the system</li> </ul>
<b>Chassis Physical Dimensions (H x W x D)</b>	<ul style="list-style-type: none"> <li>• Physical dimensions: 33.25 x 17.2 x 20.5 in. (842 x 437 x 520 mm)</li> <li>• 19-in. rack-mountable (kit supplied)</li> </ul>
<b>Weight</b>	<ul style="list-style-type: none"> <li>• 9.7 lbs (4.40 kg)</li> </ul>
<b>Power</b>	<ul style="list-style-type: none"> <li>• 48 VDC, 100-240 VAC 50/60 Hz</li> </ul>
<b>Environmental Data</b>	<ul style="list-style-type: none"> <li>• Operating temperature: 32 to 95°F (0 to 35°C) ambient</li> <li>• Relative humidity below 95% (noncondensing)</li> </ul>
<b>Approvals and Compliance</b>	<ul style="list-style-type: none"> <li>• European safety: EN 60950-1</li> <li>• USA/Canada safety: UL 60950-1</li> <li>• CB, CE</li> <li>• EMC: EN55022 class A, EN61000-3-2, EN61000-3-3, EN55024: EN61000-4-2,-3,-4,-5,-6,-11, FCC Part 15 class A, VCCI class A, AS/NZS 3548, CCC: GB4943, GB9254, YD/T993</li> <li>• NAL Certificate (China)</li> <li>• RoHS compliant</li> </ul>

**Table 6.** Ordering Information

Product Name	Part Number
<b>Cisco TelePresence MSE 8000</b>	<b>CTI-8000-MSECH-K9</b>
<b>Start with CTI-8000-MSECH-K9 in order to view the options listed below:</b>	
Cisco TelePresence MCU MSE 8420 blade	CTI-8420-MED-K9
Conference Director Option for MSE 8420 blade	LIC-8420-CCD
AES and HTTPS Encryption Option for MSE 8420 blade	LIC-AESCDN7-K9
2 SD port licenses for use with MCU MSE 8420	LIC-8420-2PL
<b>Cisco TelePresence MCU MSE 8420 blade for post sales upgrade</b>	<b>CTI-8420-MED-K9=</b>
<b>Start with CTI-8420-MED-K9= in order to view the options listed below:</b>	
Conference Director Option for MSE 8420 blade	LIC-8420-CCD
AES and HTTPS Encryption Option for MSE 8420 blade	LIC-AESCDN7-K9

Product Name	Part Number
<b>Cisco TelePresence MSE 8000 chassis port license PAK (Product Authorization Key) for post sale upgrades</b>	<b>L-8000-CHLIC-PAK</b>
<b>Start with L-8000-CHLIC-PAK in order to view the options listed below:</b>	
2 SD port licenses for use with MCU MSE 8420	L-8420-2PL
<b>Cisco TelePresence MSE 8000 blade license PAK (Product Authorization Key) for post sale upgrades</b>	<b>L-8000-BLADE-PAK</b>
<b>Start with L-8000-BLADE-PAK in order to view the option listed below:</b>	
Conference Director Option for MSE 8420 blade	L-8420-CCD
<b>AES and HTTPS Encryption Option for MSE 8420 blade for post sales upgrade</b>	<b>L-AESCDN7-K9=</b>

## Cisco Services

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, please visit: <http://www.cisco.com/go/telepresenceservices>.

## For More Information

For more information about the Cisco TelePresence MCU MSE 8420, please 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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