# Cisco TelePresence MCU 4500 Series
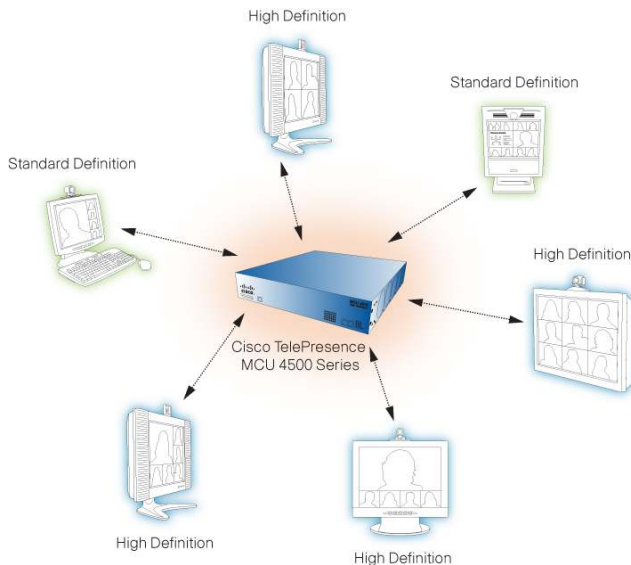
**Figure 1.**   Cisco TelePresence MCU 4500 Series



## Product Overview

The Cisco TelePresence® MCU 4500 Series is the industry's leading full high-definition multimedia conferencing bridge (Figures 1 and 2). It delivers superior video and voice with an easy-to-use, versatile management interface. Compatible with all major vendors' endpoints, each model maintains its capacity and performance in every configuration, delivering the best experience for each participant, every time.

**Figure 2.**   Example of endpoints supported by the Cisco TelePresence MCU 4500 Series



## Features and Benefits

Table 1 summarizes the key features of the Cisco TelePresence MCU 4500 Series, and Table 2 gives information about the models in the series.

**Table 1.**   Cisco TelePresence MCU 4500 Series Feature Summary

| Feature | Benefit |
| --- | --- |
| **Design features** | • Standards-based and compatible with all major vendors' endpoints<br>• Up to 40 video plus 40 voice ports<br>• More than 50 custom layouts<br>• Comprehensive wideband audio support<br>• Support for both Session Initiation Protocol (SIP) and H.323 endpoints |

| Feature | Benefit |
|---|---|
| | • Support for Cisco TelePresence PacketSafe technology, which minimizes effects of network packet loss |
| | • Compact size: Two rack units (2RU) tall and 19-in. rack-mountable |
| Application features | • Offers Cisco TelePresence ConferenceMe for multipoint desktop video |
| | • Enables transition from standard definition (SD) to high definition (HD) using Cisco TelePresence ClearVision technology |
| | • Integrated with Cisco TelePresence Management Suite |
| | • Offers full interoperability with ISDN networks using standalone Cisco TelePresence ISDN Gateways |
| | • Compatible with Microsoft Office Communications Server |
| | • Fully integrated, with built-in gatekeeper and streaming server |
| | • Supports Cisco TelePresence Multiway technology |
| Performance features | • High-definition continuous presence on every port |
| | • Cisco TelePresence Universal Port technology, ensures each participant receives the best possible experience |
| | • Constant high capacity |
| | • Bandwidth per site up to 4 Mbps |
| | • Video resolutions up to 1080p 30 fps and 720p 60fps |

**Table 2.**    Cisco TelePresence MCU 4500 Series Models

| Model | Continuous Presence Video Participants (Symmetric) | With 1080p30 Capacity Upgrade Option (Asymmetric) | Additional Voice Participants | Video Streaming Unicast*/Multicast |
|---|---|---|---|---|
| MCU 4505 | 12 x 720p30<br>6 x 1080p30 or 720p60 | 12 x 1080p30 | 12 | 24/unlimited |
| MCU 4510 | 20 x 720p30<br>10 x 1080p30 or 720p60 | 20 x 1080p30 | 20 | 40/unlimited |
| MCU 4515 | 30 x 720p30<br>15 x 1080p30 or 720p60 | 30 x 1080p30 | 30 | 60/unlimited |
| MCU 4520 | 40 x 720p30<br>20 x 1080p30 or 720p60 | 40 x 1080p30 | 40 | 80/unlimited |

| VFO-4500 | Video firewall option - enables second Ethernet connection to additional networks (for example, the Internet) |
|---|---|
| WCO-4505/WCO-4510/WCO-4515/WCO-4520 | Web conferencing option - includes Cisco TelePresence ConferenceMe for multipoint desktop video; alternatively provides content streaming, annotation, and chat capabilities |
| MHD-4505/MHD-4510/MHD-4515/MHD-4520 | 1080p30 capacity upgrade option - enables maximum HD port count for 1080p30 transmission with 720p30 reception |

*Maximum number of unicast streams depends on network topology. When using the web conferencing option feature, the maximum number of unicast streams supported by the Cisco TelePresence MCU 4515 and Cisco TelePresence MCU 4520 is 50.*

## Product Specifications

Table 3 lists the product specifications; Table 4 gives video and audio specifications; Table 5 gives network, security, and management specifications; and Table 6 lists the product physical specification for the Cisco TelePresence MCU 4500 Series.

**Table 3.**    Product Specifications

| Product compatibility | • Standards-based and compatible with all major vendors' endpoints |
|---|---|
| Universal transcoding and transrating | • HD and SD can be combined within the same conference. |
| | • All calls are automatically audio and video transcoded and transrated. |
| | • Any bandwidth, any resolution, any video or audio codec can be used on any video call within the same conference. |
| | • All participants have their own personal encodes. |
| Streaming video | • Built-in streaming server |
| | • Ability to view using Windows Media Player, RealPlayer, or QuickTime |
| | • Streaming of slides (H.239 and Virtual Network Computing [VNC]) |
| | • Text chat |

| | |
|---|---|
| | • Unicast and multicast<br>• User Datagram Protocol (UDP), TCP, or HTTP<br>• Independent choice of bandwidth and codec |
| **Localization and customization** | • Custom interactive voice response (IVR)/auto attendant audio prompts and graphics<br>• Uploadable multilanguage support<br>• Unicode conference and site names |
| **Built-in gatekeeper** | • Resolution of E.164 numbers<br>• Registration of conferences, endpoints, and gateways<br>• Ability to register up to 25 devices |
| **Built-in web server** | • Complete configuration, control, and monitoring of the system and conferences |
| **Multipoint-control-unit (MCU) features** | • Dial in or dial out through web server<br>• Standalone or with gatekeeper<br>• Configurable audio and video auto attendant<br>• Advanced continuous presence as standard on all ports<br>• Automatic selection of best layout<br>• Individual layout selection using remote control or webpages<br>• More than 50 custom layouts<br>• Active speaker selection using remote control or voice activated<br>• Floor assignment through webpage or management application<br>• Far-end camera control tunneling using remote control or web<br>• Text identification of sites<br>• On-screen text messaging to individual or all sites<br>• Built-in conference scheduling and reservation<br>• On-demand and ad hoc conferences<br>• Automatic lecture mode<br>• Preview of conference and individual camera on webpages<br>• Web conferencing option - those without endpoints can still interact<br>• Uploadable bitmaps for voice participants<br>• Video association for IP and traditional private branch exchanges (PBXs)<br>• Automatic connection to audio conferences<br>• Cisco TelePresence Multiway technology, which enables Cisco® video endpoints to initiate ad hoc multiparty calls |
| **Content features** | • Presentation mode: You can add slides from your PC using VNC.<br>• Dual video using H.239<br>• Automatic content handover<br>• Widescreen (16:9) support |
| **Cisco TelePresence ConferenceMe** | • Video, audio, and content sharing<br>  ◦ Multiple layouts<br>  ◦ Firewall friendly<br>• Independent transcode per participant<br>• Up to 12 simultaneous connections<br>• Client computer requirements: Refer to the system requirements of your PC and the list of verified webcams under the support section of the Cisco website. |
| **High-definition performance** | • Up to 1080p 30 fps and 720p 60 fps H.264 4-Mbps continuous presence<br>• Comprehensive HD audio<br>• Dual video H.239 |
| **Language** | • English as standard, but alternative language packs can be loaded onto the system |

**Table 4.**　　Video and Audio Specifications

| | |
|---|---|
| **Bandwidth** | • Up to 4 Mbps with both H.263 and H.264, for each site in all conference modes, including advanced continuous presence |
| **Video standards** | • H.261, H.263, H.263+, H.263++, and H.264 |
| **Video resolution** | • From QCIF up to 1080p (1920 x 1080), including interlaced iCIF and iSIF<br>• 4:3 and 16:9 aspect ratios |
| **Frame rates** | • Up to 60 frames per second |
| **Audio standards** | • 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 |

| Audio features | • Wideband audio mixing |
|---|---|
| | • Built-in and uploadable auto attendant voice prompts |
| | • Automatic gain control, adjustable gain, power indication, and individual audio mute using webpages |

**Table 5.**     Network, Security, and Management Specifications

| Protocols | • 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), NT LAN Manager (NTLM) (authentication), IPv4, and IPv6 |
|---|---|
| Quality of service (QoS) | • Configurable differentiated services code point (DSCP) or type of service (ToS)/IP Precedence |
| Security features | • Seven levels of access rights and privileges for users |
| | • Strong password policy |
| | • Personal identification number (PIN)-protected conferences |
| | • Conference locking |
| | • Secure non-PC hardware and operating system |
| | • AES encryption, 128-bit key, H.235 |
| | • SIP encryption |
| | • TLS certificate verification |
| | • Video firewall option -  second Ethernet port |
| | • Audit log |
| Interfaces | • RJ-45 Ethernet, 10-/100-/1000-Mbps full / half duplex, manual or autosensing |
| | • RJ-45 serial port |
| | • CompactFlash socket |
| | • Thirty-nine status LEDs |
| System management | • XML management application programming interface (API) |
| | • Management through embedded web server |
| | • RS-232 for local control and diagnostics |
| | • Syslog for diagnostics |
| | • Configurable event logs and full H.323 and SIP decoding |
| | • Configuration backup to network |
| | • Secure upgrades through Ethernet or CompactFlash |
| | • Call detail records (CDRs) |
| | • SNMP |
| Network resilience | • Cisco TelePresence Packet Safe technology, which provides intelligent down-speeding, packet pacing, and packet-loss concealment to help ensure optimum video and audio quality |
| | • Dynamic jitter buffering |
| | • Alternate gatekeepers |

**Table 6.**     Physical Specifications

| Physical dimensions (H x W x D) | • Physical dimensions: 3.43 x 17.4 x 19.25 in. (87 x 442 x 489 mm) (2RU) |
|---|---|
| | • 19-in. rack-mountable (kit supplied) or standalone |
| Weight | • 33 lb (15 kg) |
| Power | • 100-240 VAC, 50/60 Hz |
| | • 600W maximum power consumption |
| Environmental data | • Operating temperature 32 to 95°F (0 to 35°C) ambien t |
| | • Relative humidity below 95% (noncondensing) |
| Approvals and compliance | • European safety: EN 60950-1 |
| | • USA/Canada safety: UL 60950-1 |
| | • CB, CE |
| | • 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 |
| | • NAL Certificate (China) |
| | • RoHS compliant |

## 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 7 or contact your local Cisco representative. To download software, visit the Cisco Software Center.

**Table 7.**     Ordering Information

| Product Name | Part Number |
|---|---|
| **Cisco TelePresence MCU 4505** | CTI-4505-MCU-K9 |
| **Cisco TelePresence MCU 4510** | CTI-4510-MCU-K9 |
| **Cisco TelePresence MCU 4515** | CTI-4515-MCU-K9 |
| **Cisco TelePresence MCU 4520** | CTI-4520-MCU-K9 |

## 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 4500 Series, 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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