

Cisco TelePresence Multipoint Switch Datasheet

Product Overview

The Cisco TelePresence® Multipoint Switch (Multipoint Switch) allows geographically dispersed organizations to hold Cisco TelePresence meetings across multiple locations reliably and easily. With support for up to 440 telepresence ports in a single meeting across a mix of endpoints, the Multipoint Switch allows all participants to be seen in life-like, high-definition video and heard in CD-quality, spatial audio combined with the industry's lowest latency.

The industry-leading design of the Cisco TelePresence Multipoint Switch delivers voice-activated switching either site-by-site (site switching) or by individual table segment (segment switching). This affordable appliance is also easy to install and manage.

True to the user-friendly Cisco TelePresence design, multipoint meetings are scheduled using enterprise groupware (such as Microsoft Outlook or Lotus Notes), and they start with just a push of a button on the meeting-room endpoint. It is simple—there is no need for support personnel to set up meetings for you. Organizations can connect participants quickly and easily with multiple locations in the same meeting, empowering you to communicate and collaborate like never before (Figure 1).

Figure 1. Cisco TelePresence Meeting



Features and Benefits

The Cisco TelePresence Multipoint Switch offers the following important features and benefits:

- **48 video screens per single Multipoint Switch:** A single system supports conferences with up to 48 total screens (also referred to as telepresence ports).
- **440 video screens with Cisco TelePresence Multipoint Switch Network Multipoint:** Allows for large town hall or lecture meetings with up to 11 Multipoint Switches networked together for supporting up to 440 Cisco TelePresence ports in a single meeting.
- Any combination of the following endpoints is supported:
 - Cisco TelePresence System 3000 Series (three screens)
 - Cisco TelePresence System TX 9000 Series (three screens)
 - Cisco TelePresence System 1300 Series (single screen)
 - Cisco TelePresence System Profile Series (single screen)
 - Cisco TelePresence System EX Series (single screen)
 - Cisco TelePresence System MX Series (single screen)
 - Cisco TelePresence System 500 Series (single screen)
 - Cisco Unified IP Phone 9900 Series Advanced Media (single screen)
 - Cisco Unified IP Phone 7900 Series (voice only)
 - External voice-only participants
- **Spatial, interactive audio:** Multichannel, discrete audio means sound comes from the direction of the speaker, allowing voice tracking as audio is switched between locations.
- **Cisco TelePresence WebEx® One Touch:** When combined with Cisco TelePresence Manager, audio and data collaboration can be shared with the Cisco WebEx® application, also allowing sharing of participant lists and viewing of Cisco TelePresence video for the current speaker.
- **Affordable and easy to install and manage:** Web-based administration with role-based profiles is easy for administrators at both group and department levels. Three roles are available: system administrator for access to all functions, conference management for control over meetings, and diagnostics-only for technical access to system processes.
- **Cisco Prime™ Collaboration Manager support:** As an end-to-end monitoring and troubleshooting system for Cisco TelePresence meetings, Cisco Prime Collaboration Manager monitors the status of all Cisco TelePresence Multipoint Switches discovered within the network. For more information about Cisco Prime Collaboration Manager, please visit <http://www.cisco.com/go/cpcm>.

Table 1 summarizes the features and benefits of the Cisco TelePresence Multipoint Switch.

Table 1. Features and Benefits of Cisco TelePresence Multipoint Switch

Feature	Benefit
Scalability	The Cisco TelePresence Multipoint Switch is designed for any sized workgroup to deliver multipoint meetings among Cisco TelePresence endpoints, with support for up to 48 screens on a single server. Additionally, Network Multipoint allows for large meetings with up to 440 Cisco TelePresence ports. Note: The optional Cisco TelePresence System 3000 Series optional HD presentation codec for the auto-collaborate data channel counts as a screen or telepresence port during a meeting.
Impromptu calling	During an active meeting, the conference manager can add another party from the web interface and the participant is automatically connected to the meeting. Additionally, Automated-Attendant capabilities on the Multipoint Switch allow any Cisco TelePresence endpoint to dial into a scheduled meeting. After you enter the conference ID that the Automated-Attendant requests, you are joined into the appropriate meeting.
High performance and low latency	The high-performance Cisco TelePresence Multipoint Switch server supports very low latency, allowing natural conversation and quick multipoint switching between Cisco TelePresence meeting endpoints.
Audio add-on	Remote, audio-only participants can join a meeting by using the in-room conferencing feature or dialing directly to the meeting using the Automated-Attendant.
Director controls	For special events, custom video controls and audio mixing are available using web-based controls available within the Cisco TelePresence Multipoint Switch web-based application.
Encryption	The Cisco TelePresence solution supports full media and signaling encryption with no discernable latency to the Cisco TelePresence call. Administrators can designate meetings to be nonsecure, secure best effort, and always secure. Meeting encryption status is indicated on screen at the start of a call or when it changes, and on the endpoint control device at all times.
Video announce	This configurable option allows new participants joining a meeting to briefly be shown to all participants already in the meeting so they know a new party has joined.
Bandwidth management	Automatic camera transmission control significantly reduces network traffic by eliminating the data feeds of nonspeaking meeting participants. Each meeting can be assigned a maximum quality (rate). If a Cisco TelePresence endpoint that has been assigned a lower bandwidth rate joins, the bandwidth rate of the conference automatically decreases.
Comprehensive diagnostics	Diagnostics features include system status information, alarms, downloadable logs (syslog messages), and Simple Network Management Protocol (SNMP) support.
Call detail records (CDRs)	Call records provide meeting start and stop data and participant details. You can export records to a third-party application for manipulation and data sorting.
Meeting controls	The Cisco TelePresence Multipoint Switch provides the following meeting control features for administrators: <ul style="list-style-type: none"> • Participant list: Allows you to view a list of all the endpoints in the meeting • View control: Displays the active speaker or the active room • Meeting access: Enables or disables other endpoints from joining the current meeting

Table 2 lists the specifications of the Cisco TelePresence Multipoint Switch (Version 1.9).

Table 2. Product Specifications

Cisco TelePresence Attribute	Specification
Call signaling	Session Initiation Protocol (SIP) trunk with Cisco® Unified Communications Manager Version 8.6.2 or later and IP Version 4 (IPv4)
Media protocol	Real-Time Control Protocol (RTCP) and Real-Time Transport Protocol (RTP), User Datagram Protocol (UDP), and IP Unicast
Video protocol	H.264 baseline high-definition television (HDTV) 16:9 aspect ratio
Video resolution	1080p (1920 x 1080 pixels at 30 frames per second [fps]) 720p (1280 x 720 pixels at 30 fps) 360p (640 x 480/360 at 30 fps) CIF
Auto-collaboration video	1024 x 768 pixels presentation video at 1, 5, or 30 fps
Audio	Advanced audio coding with low delay (AAC-LD/HBR) 22-MHz (CD-quality) audio; 4-channel audio stream; IP Phones and voice-only support with G.711 ulaw
Maximum meeting size	Ability for a single multipoint meeting on a single Multipoint Switch to accommodate up to the total capacity of the Multipoint Switch, which supports 48 video ports Support for network multipoint up to 11 servers (consuming 3 ports each on the centralized Multipoint Switch acting as a rendezvous point, or 4 ports each when an optional presentation codec is in use for Cisco TelePresence Auto Collaborate) to support a meeting with up to 440 screens
Concurrent meetings	Ability for capacity of Multipoint Switch to be divided into any number of meetings; for example, with three Cisco TelePresence System 1000 systems per meeting, the switch supports 16 concurrent meetings per server; the maximum number of concurrent meetings (with at least two Cisco TelePresence System 500 or 1000 systems) is 24
Latency (Added by Cisco TelePresence Multipoint Switch)	Less than 10 milliseconds (ms)
Jitter (Added by Cisco TelePresence Multipoint Switch)	Less than 0.05%
SNMP MIBs	RFC 1213, ENTITY, IF, ENTITY-FRU-CONTROL, HOSTRESOURCES, UMSEVENT, and UMSLMSENSOR
CDR data	CDR ASCII format
Administrative interface	HTTP and Secure HTTP (HTTPS), Secure Shell (SSH) Protocol, role-based access control (RBAC), and password protection.
Application Programming Interface (API)	Simple Object Access Protocol (SOAP) or XML for real-time (active meeting) conference and participant management
Quality of service (QoS)	Support for Differentiated Services (DiffServ) markings

Product Compatibility

For latest product compatibility matrix visit this page;

http://www.cisco.com/en/US/products/ps8332/products_device_support_tables_list.html

System Hardware Specifications

- Cisco UCS® C220 M3, part of the Cisco Unified Computing System™ portfolio

Cisco UCS requires VMware ESXi 4.1 or 5.0, which you can purchase from Cisco or VMware directly.

The Cisco TelePresence Multipoint Switch software is sold with software only for Cisco UCS deployments. Cisco TelePresence Multipoint Switch software is provided on a DVD with new systems and is available for download from Cisco.com/go/software with a valid support contract. The application installer includes the underlying Linux-based operating system.

Ordering Information

To place an order, visit the [Cisco Ordering Home Page](#) and refer to Table 4.

Table 3. Ordering Information

Product Name	Part Number
One Cisco Computing Server (UCS) is required for Cisco TelePresence Multipoint Switch implementation.	
UCS C220 server with VMWare supports up to two instances of Multipoint Switch with 48 TelePresence ports each.	
UCS C220 M3 with dual CPU E5-2650, Minimum 16GB RAM, and four 300GB hard drives, (Order as spare)	UCS-SP5-C220E N2XX-ABPCI03-M3 UCS-CPU-E5-2650 UCS-MR-1X082RY-A UCSC-RAID-11-C220 UCS-HDD300GI2F105=
VMware ESXi/VSphere Standard for 1 processor, 1 year support (ESXi 4.1 or 5.0 required for UCS, purchase from Cisco or VMware directly).	VMW-VS5-ST-1A=
Cisco TelePresence Multipoint Switch Software only for UCS install.	CTS-CTMS-K9
Choose Cisco TelePresence Multipoint Switch Software and License	LIC-CTS-CTMS-1.9

Service and Support

Critical to delivering the innovative Cisco TelePresence experience in your organization are integrated lifecycle services. Designed specifically for multisite organizations, these services deliver the Cisco TelePresence experience and accelerate the successful deployment of a high-quality, reliable "in-person" meeting experience. Initial prepare, planning, and design services prepare your network and organization to deliver the expected consistent quality level of the Cisco TelePresence meeting application. Operate services provide peace of mind for your IT staff and reduce risk of downtime by providing critical day-2 maintenance support. These services use the proven Cisco Lifecycle Services approach to deliver a Cisco TelePresence experience. For more information, please visit <http://www.cisco.com/go/services>.

For More Information

For more information about the Cisco TelePresence Multipoint Switch, please visit <http://www.cisco.com/go/telepresencemultipoint> or contact your local Cisco account representative or authorized Cisco partner. To locate an authorized partner, please visit http://tools.cisco.com/WWChannels/LOCATR/jsp/partner_locator.jsp.



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