

# Cisco TelePresence Server



### **Product Overview**

The Cisco TelePresence<sup>®</sup> Server is an innovative software solution enabling high-quality standards-based conferencing for the mobile or desktop user and the immersive room meeting participant. Compatible with a range of hardware platforms, the Cisco TelePresence Server is a versatile, highly scalable solution for mid market and larger enterprise customers.

The Cisco TelePresence Server is a key component of the Cisco<sup>®</sup> Pervasive Conferencing architecture, and is deployed with Cisco TelePresence Conductor in order to provide full flexibility and scale.

WebEx enabled TelePresence, with the Cisco TelePresence Server, allows you to enjoy fully integrated, scalable conferences involving WebEx users and telepresence endpoints.

The Cisco TelePresence Server provides high-quality, flexible, 360p to full high-definition (FullHD) multiparty conferencing and collaboration. Specifically engineered to deliver the best user experience for any device, the Cisco TelePresence Server provides predictable, reliable, high-quality video and content-sharing capabilities.

With views optimized for meeting rooms and desktop and mobile devices using Cisco Jabber<sup>™</sup> the Cisco TelePresence Server delivers any-to-any multiparty conferencing. To enhance the experience, conference attendees can gain the full benefit of screen layouts designed specifically to meet their needs.

The Cisco ActivePresence<sup>®</sup> capability of Cisco TelePresence Server, a leading patent-pending feature, enables the delivery of next-generation multiparty conferencing, offering a view of all attendees in a meeting while giving prominence to the active speaker. While the active speaker occupies most of the screen, an overlay of others in the call appears in the lower third of the screen, giving participants a natural view of everyone sitting around the virtual table (Figure 1).

Figure 1. Examples of Cisco TelePresence Server Supported Modes



A critical requirement for all customers is ensuring a high return on investment (ROI). The Cisco TelePresence Server has a software upgrade path that enables customers to deploy new features as required, and with a cost-effective licensing model, they can closely manage their investment while reaping the rewards of lower travel expenses and increased employee productivity.

Designed to meet the needs of organizations from small businesses to global multinationals, the Cisco TelePresence Server has a scalable architecture, enabling customers to start small and increase the scale of their solutions as their businesses grow.

It is compatible with a range of hardware platforms, enabling you to select the solution most suited to your needs:

- The Cisco TelePresence Server on virtual machine, which runs on the Cisco Unified Computing System
   <sup>™</sup>
   (Cisco UCS<sup>®</sup>) or third party specification-based server platforms, offers a virtualized solution.
- The Cisco TelePresence Server on the Cisco Multiparty Media 310 and Cisco Multiparty Media 320 entry level appliance solutions which can be stacked to grow with your business video usage over the long term.
- The Cisco TelePresence Server on the Cisco TelePresence Server MSE 8710 (Cisco MSE 8710) is a
  chassis-based platform that is ideal for large enterprises and service providers requiring a high-availability
  and highly scalable solution. Scalability is achieved through clustering up to four Cisco MSE 8710 blades
  as a single unit.
- The Cisco TelePresence Server can also run on the Cisco MSE 8510 and Cisco TelePresence MCU 5300 (MCU 5300) platforms.

### Benefits of Cisco TelePresence Server

- WebEx enabled telepresence allows you to join a conference from WebEx or telepresence endpoints highly scalable conferencing from any location using any device.
- Cisco TelePresence Server works in conjunction with Cisco TelePresence Conductor (v2.2 or later) or CTX (v1.3 or later), providing scalable ad-hoc conferencing and enabling increased efficiency.
  - Dynamic optimization: Make full use of the conferencing capacity of Cisco TelePresence Server through the dynamic allocation of resources.
  - Conference service levels range from 360p video with composited content through to FullHD video with FullHD content.
  - Mixed conference types (ad hoc and rendezvous) and mixed resolutions (360p to FullHD) are supported.
- Improved productivity: All users enjoy a high-quality experience, accessible from mobile devices running Jabber® through to desktop or immersive systems. Thus remote and home workers can collaborate more effectively and decrease travel costs.
- Best in class experience for the user device: Highly scalable conferencing is available to users with mobile, meeting room or immersive endpoints.
- Maximized reach: Optimized views and standards-based interoperability allow any-to-any conferencing, helping ensure conferences are effective and support a wide range of participant endpoints.

### **Features**

Table 1 lists the features of Cisco TelePresence Server.

 Table 1.
 Cisco TelePresence Server Features

Feature	Description
Design features	The server is standards-based and compatible with major vendors' videoconferencing endpoints.
	It is highly scalable to meet current and future organizational needs.
	It provides participants with the best possible view for their endpoint.
	The server provides an easy-to-use and versatile management interface.
	It is designed to carrier-class levels of reliability and availability.
	The server is compatible with a range of dedicated hardware platforms or Cisco UCS servers.
Application features	<ul> <li>Cisco TelePresence ActivePresence capability supports a full-screen immersive view of the primary speakers with an overlay of others in the call; it is designed to maximize the large-scale immersive experience and is available on all ports.</li> </ul>
	Cisco TelePresence ActiveControl allows you to see the participant lists and control conferences and layouts.
	It supports single and multiscreen standards-based telepresence systems.
	<ul> <li>The server interworks with Polycom RPX and TPX telepresence systems while preserving the full Cisco ActivePresence view (requires feature key).</li> </ul>
	<ul> <li>It integrates with Cisco TelePresence Management Suite (Cisco TMS), Cisco TelePresence Conductor (v2.0 or later), or CTX (1.3 or later).</li> </ul>
	The TelePresence Server on Cisco MSE 8710 or Cisco TS 7010 can be locally managed or remotely managed (by Cisco TelePresence Conductor or CTX). All other versions can be run only in remotely managed mode.
	<ul> <li>Four layout families are provided for single-screen endpoints including panel-switched Cisco ActivePresence capability.</li> </ul>
	Participants can dial in or can be called from the web interface.
Performance features	Automatic Gain Control (AGC) is supported to adjust audio controls to help ensure a consistent experience.
	Cisco ClearPath is supported, providing improved media resilience with lossy networks.
	Up to FullHD transcoding for both video and content is supported for every participant.
	Cisco TelePresence Universal Port technology is supported.
	<ul> <li>360p to FullHD video resolutions are supported (up to 1080p30 or 720p60 frames per second [fps] at up to 6 Mbps per screen including content with H.264).</li> </ul>
	Comprehensive HD audio is supported.
	Additional wideband audio ports are available.
	Advanced Encryption Standard (AES) encryption is supported.
	<ul> <li>Integrated Cisco TelePresence ClearVision<sup>®</sup> technology provides resolution enhancement.</li> </ul>
	OneTable and Room-Switched configurations are supported.

# **Product Specifications**

Tables 2 through 4 list the technical, video, network, and audio, and network, management and security specifications, respectively, of Cisco TelePresence Server.

 Table 2.
 Technical Specifications

Feature	Description		
Product compatibility	The server is standards-based and compatible with major vendors' endpoints.		
Universal transcoding and transrating	<ul> <li>The server can combine immersive, high-definition (HD), Standard-definition (SD), and 360p endpoints with the same virtual meeting.</li> </ul>		
	The server provides automatic audio and video transcoding along with transrating on all calls.		
	Each endpoint has its own decode and encode.		

Feature	Description		
Content features	Automatic content handover is supported.		
	• It supports standard (4:3) and widescreen (16:9) content.		
	<ul> <li>Dual Video is supported with H.239, Binary Floor Control Protocol (BFCP), or Auto Collaborate.</li> </ul>		
	Picture in Picture: Video and content are composed into the video stream.		
	<ul> <li>Participants can have their own content transcoded at up to 1080p30 or WUXGA (1920 x 1200) @ 27frames per second (fps).</li> </ul>		
Built-in web server	Complete configuration, control, and monitoring of the system and conferences are supported.		
Language support	English is the standard language.		

 Table 3.
 Video, Network, and Audio Specifications

Bandwidth	<ul> <li>Up to 6 Mbps with both H.263 and H.264, for each screen in all conference modes</li> </ul>		
Video standards	<ul> <li>H.261</li> <li>H.263</li> <li>H.263+</li> <li>H.264</li> </ul>		
Video resolution	<ul> <li>From QCIF up to 1080p (1920 x 1080) including interlaced iCIF and iSIF</li> <li>Aspect ratios: 4:3 and 16:9</li> </ul>		
Frame rates	Up to 60 fps		
Audio standards	<ul> <li>G.711</li> <li>G.722</li> <li>G.722.1</li> <li>G.723.1 (supported only on Cisco MSE 8710 and Cisco TS 7010 platforms)</li> <li>G.728</li> <li>G.729</li> <li>MPEG-4 AAC-LC</li> <li>MPEG-4 AAC-LD</li> <li>Polycom Siren14/G.722.1 Annex C</li> </ul>		
Audio features	<ul><li>Wideband audio mixing</li><li>Ability to adjust endpoint audio gain through web interface</li></ul>		

 Table 4.
 Network, Management and Security Specifications

Protocols	• H.323 <sup>*</sup>
	• BFCP
	Network Time Protocol (NTP)
	• SIP
	Telepresence Interoperability Protocol Version 8 (TIPv8)
	• H.235 (AES)*
	• H.239 (dual video)
	• FTP <sup>*</sup>
	Real-Time Transfer Protocol (RTP)
	• HTTP
	Secure HTTP (HTTPS)
	<ul> <li>Dynamic Host Configuration Protocol (DHCP) (supported only on Cisco MSE 871, Multiparty Media 310 and 320, and Cisco TS 7010 platforms)</li> </ul>
	*Supported only on Cisco MSE 8710 and Cisco TS 7010 platforms
Security features	Personal Identification Number (PIN)-protected conferences
	Conference locking
	Secure non-PC hardware and operating system
	Transport Layer Security (TLS)
	Secure Real-Time Transport Protocol (SRTP)
	AES encryption, 128-bit key, and H.235 (H.235 only on Cisco MSE 8710 and Cisco TS 7010 platforms)

System management	XML management application programming interface (API).
	<ul> <li>Cisco TelePresence Server 7010 (Cisco TS 7010) and Cisco TS 8710 can be managed through an embedded web server or remotely managed using TelePresence Conductor 2.0 or later, or CTX 1.3 or later. All other platforms can only be managed remotely, using Cisco TelePresence Conductor 2.2 or later or CTX 1.3 or later.</li> </ul>
	<ul> <li>The server offers full H.323 (supported directly on Cisco MSE 8710 and Cisco TS 7010 platforms - other TelePresence Server platforms require Cisco TelePresence VCS to interwork H.323) and SIP decoding, which is supported on all platforms.</li> </ul>
	The server offers configurable event logs.
	The server offers configuration backup to network.
	The server offers the ability to perform secure upgrades through Ethernet.
Quality of service (QoS)	The server provides configurable differentiated services code point (DSCP) or type of service (ToS)/IP Precedence.
Network resilience	<ul> <li>Cisco TelePresence PacketSafe technology provides intelligent down speeding, packet pacing, and packet-los concealment to help ensure optimum video and audio quality.</li> </ul>
	The server supports dynamic jitter buffering.

Table 5 gives physical specifications of Cisco TelePresence Server platforms.

 Table 5.
 Physical Specifications of Cisco TelePresence Server Platforms

	Cisco TelePresence MSE 8710			
Physical dimensions	<ul> <li>(H x W x D): 33.25 x 17.2 x 20.5 in. (842 x 437 x 520 mm) (19 rack units [19RUs])</li> <li>19-inch rack-mountable (kit supplied)</li> </ul>			
Weight	• 14.6 lb (6.6 kg)			
Power	<ul> <li>Power: -48 VDC</li> <li>100-240 VAC, 50-60 Hz</li> </ul>			
Environmental data	<ul> <li>Ambient operating temperature: 32 to 95 F (0 to 35° C)</li> <li>Relative humidity: Below 95% (noncondensing)</li> </ul>			
Approvals and compliance	<ul> <li>European safety: EN 60950-1</li> <li>USA/Canada Safety: UL 60950-1</li> <li>CB Scheme Safety, IEC 60950-1</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 CISPR 22, CCC: GB4943, GB9254, YD/T993EN61000-3-3, EN55024: EN61000-4-2,-3,-4,-5,-6,-11</li> <li>RoHS compliant, WEEE: <a href="http://cisco-returns.com">http://cisco-returns.com</a></li> </ul>			

	Cisco Multiparty Media 310 and Cisco Multiparty Media 320			
Physical dimensions	<ul> <li>(H x W x D): 1.75 x 17.4 x 16.7 in. (44.5 x 442 x 423 mm) (1RU)</li> <li>19-in. rack-mountable (kit supplied) or standalone</li> </ul>			
Weight	• 17.6 lb (8 kg)			
Power	<ul> <li>100-240 VAC, 50-60 Hz</li> <li>1177 BTU/hr (345W) maximum heat dissipation</li> </ul>			
Environmental data	Ambient operating temperature: 32 to 95年 (0 to 35° C) ambient     Relative humidity below 95% (noncondensing)			
Approvals and compliance	<ul> <li>European Safety: EN 60950-1</li> <li>USA/Canada Safety: UL 60950-1</li> <li>CB Scheme Safety: IEC 60950-1</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 CISPR 22, CCC: GB4943, GB9254, YD/T993</li> <li>RoHS compliant, WEEE: <a href="http://cisco-returns.com">http://cisco-returns.com</a></li> <li>Regulatory Approval Certification completed under Compliance Model Number: AD1A</li> </ul>			

<sup>&</sup>lt;sup>1</sup>Cisco TelePresence Server on the Media 310, Media 320, and Virtual Editions only support remotely managed mode, which requires an additional external application such as the Cisco TelePresence Conductor (v2.0 or later) or the CTX (v1.3 or later).

	Cisco TelePresence TS 7010			
Chassis physical dimensions (H x W x D)	<ul> <li>(H x W x D): 3.43 x 17.25 x 19.1 in. (87 x 436 x 511 mm) (2RU)</li> <li>19-in. rack-mountable (kit supplied) or standalone</li> </ul>			
Weight	• 33 lb (15kg)			
Power	• 100-240 VAC, 50/60 Hz; maximum power consumption 650W			
Environmental data	<ul> <li>Ambient operating temperature: 32 to 95°F (0 to 35°C)</li> <li>Relative humidity: Below 95% (noncondensing)</li> </ul>			
Approvals and compliance	<ul> <li>European safety: EN 60950-1</li> <li>USA/Canada safety: UL 60950-1</li> <li>CB Scheme Safety, IEC 60950-1</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 CISPR 22, CCC: GB4943, GB9254, YD/T993</li> <li>RoHS compliant, WEEE: <a href="http://cisco-returns.com">http://cisco-returns.com</a></li> <li>Regulatory Approval Certification completed under Compliance Model Number: TR1A</li> </ul>			

Figure 2 shows a graphic of the Cisco TelePresence Server interoperability solution.

Figure 2. Cisco TelePresence Server Interoperability

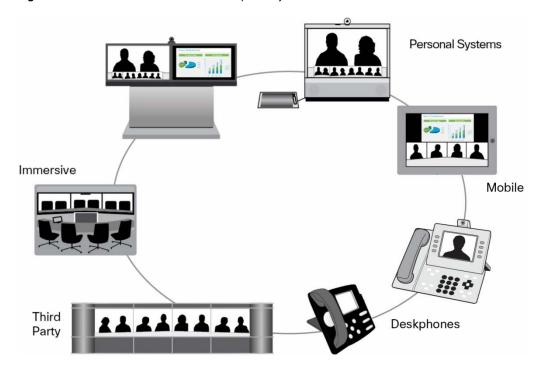


Table 6 gives the scale parameters of Cisco TelePresence Server.

 Table 6.
 Cisco TelePresence Server Platform Scale

Platform	Scale Parameters		
Cisco TelePresence Server MSE 8710	<ul> <li>The Cisco TelePresence Server on the Cisco MSE 8710 supports up to 48 FullHD (1080p30) or 96 HD (720p30) screens per conference when four blades are clustered.</li> </ul>		
	<ul> <li>In locally managed mode the maximum capacity is achieved with 12 screen licenses per blade, giving 12 X FullHD (1080p30) or 24 x HD (720p30) screens.</li> </ul>		
	<ul> <li>In remotely managed mode the maximum capacity per blade is still achieved with 12 screen licenses giving 12 x FullHD or 24 x HD or 48 x SD (w448p/480p30) or 96 x 360p resources, although the resources can be used more flexibly; please refer to Table 8 for further details.</li> </ul>		
	Up to 104 calls are supported in one cluster of blades.		
Cisco Multiparty Media 310	<ul> <li>The Cisco TelePresence Server on the Media 310 supports up to 5 x FullHD (1080p30) or 10 x HD (720p30), or 20 x SD, or 40 x 360p screens per unit. Although the resources can be used more flexibly; please refer to Table 8 for further details.</li> </ul>		
	Maximum capacity is achieved with five screen licenses per unit.		
	Up to two units of the Media 310 can be stacked together to increase capacity (optional stacking cable is required).		
	Up to 80 calls are supported in a stack of 2 appliances.		
Cisco Multiparty Media 320	<ul> <li>The Cisco TelePresence Server on the Media 320 supports up to 10 x Full HD (1080p30) or 20 x HD (720p30), or 40 x SD, or 80 x 360 screens per unit. Although the resources can be used more flexibly; please refer to Table 8 for further details.</li> </ul>		
	Maximum capacity is achieved with 10 screen licenses per unit.		
	Up to two units of the Media 320 can be stacked together to increase capacity (optional stacking cable is required). Maximum capacity of two Media 320 platforms is 20 x Full HD screen licenses.		
	Up to 104 calls are supported in a stack of 2 appliances.		
Cisco TelePresence Server 7010	<ul> <li>The Cisco TelePresence Server on the Cisco TS 7010 supports up to 12 x FullHD (1080p30), 24 x HD (720p30), 48 x SD, or 96 x 360p screens per appliance.</li> </ul>		
	• In locally managed mode the maximum capacity is achieved with 12 screen licenses per appliance, giving 12 x FullHD (1080p30) or 24 x HD (720p30) screens.		
	<ul> <li>In remotely managed mode the maximum capacity per appliance is still achieved with 12 screen licenses giving 12 x FullHD or 24 x HD or 48 x SD (w448p/480p30) or 96 x 360p resources, although the resources can be used more flexibly; please refer to Table 8 for further details.</li> </ul>		
Cisco UCS platform	The Cisco TelePresence Server (Virtual Edition) can run on a Cisco UCS C-Series Rack Server or on other UC on UCS specification-based hardware.		
	<ul> <li>A 10-core virtual machine supports up to 6 x FullHD, 12 x HD, 24 x SD, or 48 x 360p screens. Although the resources can be used more flexibly; please refer to Table 8 for further details.</li> </ul>		
	Maximum capacity is achieved with 6 screen licenses per virtual machine.		

**Note:** Capacity figures represent capabilities of Cisco TelePresence Server 3.1 when used with Cisco TelePresence Conductor 2.2.

## **Ordering Information**

To order Cisco TelePresence Server, visit the <u>Cisco Ordering Home Page</u> and refer to Table 7.

 Table 7.
 Ordering Information

Cisco TelePresence Server	Part Number
Cisco TelePresence Server software for UCS and standard based server based platforms	R-VTS-K9
Cisco TelePresence Server running on MSE 8710	CTI-8710-TS-K9
Cisco TelePresence Server running on Cisco Multiparty Media 310	CTI-310-TS-K9
Cisco TelePresence Server running on Cisco Multiparty Media 320	CTI-320-TS-K9
Cisco TelePresence Server running on TS 7010	CTI-7010-TPSMK2-K9

<sup>\*</sup>Cisco TelePresence Server software (R-VTS-K9) requires UCS or standard based server based platforms, for information on tested/recommended hardware, please see Cisco Virtualization <a href="http://www.cisco.com/en/US/docs/telepresence/infrastructure/ts/install\_quide/vts\_install\_pdf">http://www.cisco.com/en/US/docs/telepresence/infrastructure/ts/install\_quide/vts\_install\_pdf</a>.

### Cisco TelePresence Server bundles with Cisco TelePresence Conductor:

	Organization Profile	Cisco TelePresence Server Configuration	PID
Bundle 1	Up to 5,000 HD users	MSE 8000 Chassis with  • 8 8710 blades  • 96 screen licenses	CTI-8710-8BFLIC-K9
Bundle 2	Up to 2,500 HD users	MSE 8000 Chassis with  • 4* 8710 blades  • 48 screen licenses	CTI-8710-4BFLIC-K9
Bundle 3	Up to 500 HD users	TS 7010 Appliance • 12 screen licenses	CTI-7010-FLIC-K9
Upgrade from Bundle 2 to Bundle 1		<ul><li>4 8710 blades</li><li>48 screen licenses</li></ul>	CTI-8710-4BUPFL-K9

Configuration options for Cisco TelePresence MSE 8710	Part Number	
Cisco TelePresence Server MSE 8710 Screen License-initial purchase	LIC-8710-1SL	
Cisco TelePresence Server MSE 8710 3 <sup>rd</sup> Party multi-screen interop key-initial purchase	LIC-8710-TPI	
Cisco TelePresence Server PAK (Product Authorization Key) for post sale upgrades	L-8000-CHLIC-PAK	
Start with L-8000-BLADE-PAK in order to view the options listed below:		
Cisco TelePresence Server MSE 8710 3 <sup>rd</sup> Party multi-screen interop key-upgrade	L-8710-TPI	
Start with L-8000-CHLIC-PAK in order to view the options listed below:		
Cisco TelePresence Server MSE 8710 Screen License-upgrade	L-8710-1SL	
Cisco TelePresence Screen Migration Option to run TelePresence Server software on MSE 8510 platform	L-8000_TSMO	

Configuration options for Cisco TelePresence Server running on UCS or standard based server platforms	Part Number
Cisco TelePresence Server license PAK (Product Authorization Key) for post sale upgrades	L-VTS-PAK
Start with L-VTS-PAK in order to view the options listed below:	
Cisco TelePresence Server Screen License-upgrade	L-VTS-1SL
Cisco TelePresence Server 3 <sup>rd</sup> Party multi-screen interop key-upgrade	L-VTS-TSINTOP

Configuration options for Cisco Multiparty Media 310 and 320	Part Number					
Cisco Multiparty Media Screen License	LIC-300-1SL					
Cisco TelePresence Server 3 <sup>rd</sup> Party multi-screen interop key	LIC-300-TPI					
Cisco TelePresence MCU 5300 Series Stacking Cable	CTI-5300-CAB2MCU					
Start with L-TS300-UPG-PAK in order to obtain post sales upgrades for the options listed below:						
Cisco Multiparty Media Screen License-upgrade	L-300-1SL					
Cisco TelePresence Server 3 <sup>rd</sup> Party multi-screen interop key-upgrade	L-300-TPI					
Cisco TelePresence MCU 5300 Series 1RU accessory kit spare. Comes with: spare DB9-RJ45 serial cable, rack mount ears and screws	CTI-KM1U-ACC-KIT=					
Cisco TelePresence MCU 5300 Series Stacking Cable spare	CTI-5300-CAB2MCU =					

Configuration options for Cisco TelePresence Server TS 7010	Part Number
Cisco TelePresence Server TS 7010 Screen License	LIC-TPSRV-1SL
Cisco TelePresence Server TS 7010 3 <sup>rd</sup> Party Multi-Screen Interop Key	LIC-7010-TPSINTOP
Start with L-TS7000-UPG-PAK to view the options below:	
Cisco TelePresence Server TS 7010 Screen License-post sales upgrade	L-TPSRV-1SL
Cisco TelePresence Server TS 7010 3 <sup>rd</sup> Party Multi-Screen Interop Key-post sales upgrade	L-7010-TPSINTOP

Table 8 lists the maximum number of calls supported for each Cisco TelePresence Server hardware platform.

**Table 8.** Maximum Number of Calls Supported for each Hardware Platform (Applies only to the Cisco TelePresence Server working in remotely managed mode, which requires an additional external application such as Cisco TelePresence Conductor (v2.2 or later)

Call Type Description			Screen Licenses Required per Call		Maximum Calls by Hardware Type (with licenses to provide 100-percent of capacity)					/ide
Main video	Audio	Content		7010	TS on Virtual Machine	Media 310 or MCU 5310	Media 320 or MCU 5320	MSE 8710 or MCU MSE 8510	Largest appliance cluster (two appliances)	Largest blade cluster (four blades)
				12 screen licenses	6 screen licenses	5 screen licenses	10 screen licenses	12 screen licenses	20 screen licenses	48 screen licenses
None	Mono	None	1/52	104 <sup>*</sup>	104	104 <sup>*</sup>	104 <sup>*</sup>	104 <sup>*</sup>	104 <sup>*</sup>	104 <sup>*</sup>
360p30 <sup>†</sup>	Mono	In main video	1/8	97	49	41	81	97	104 <sup>*</sup>	104 <sup>*</sup>
480p30	Mono	In main video	1/4	48	24	20	40	48	80	104 <sup>*</sup>
480p30	Stereo	720p5	1/3	36	18	15	30	36	60	104 <sup>*</sup>
720p30	Stereo	720p5	1/2	24	12	10	20	24	40	96
Three Screen <sup>‡</sup> 720p30	Multichannel	720p5	1 1/2	8	4	3	6	8	13	32
720p30	Stereo	720p30	1	12	6	5	10	12	20	48
Three Screen <sup>‡</sup> 720p30	Multichannel	720p30	2	6	3	2	5	6	10	24
720p60	Stereo	720p15	1	12	6	5	10	12	20	48
1080p30	Stereo	720p15	1	12	6	5	10	12	20	48
1080p30	Stereo	720p30	1 1/2	8	4	3	6	8	13	32
1080p30	Stereo	1080p30	2	6	3	2	5	6	10	24
Dual- screen <sup>‡</sup> 1080p30	Stereo	720p30	2	6	3	2	5	6	10	24
Three- screen <sup>‡</sup> 1080p	Multichannel	720p30	3	4	2	1	3	4	6	16
Three- screen <sup>‡</sup> 1080p	Multichannel	1080p30	4	3	1	1	2	3	5	12
Four- screen <sup>‡</sup> 1080p	Stereo	1080p30	4	3	1	1	2	3	5	12

<sup>\*104</sup> is the maximum number of calls that is possible on a TelePresence Server.

<sup>‡</sup>The TelePresence Server needs the Third Party Interop feature key to host conferences with multi-screen endpoints that are not third party interoperable. This includes all multi-screen endpoints except the Cisco TelePresence System T3 and TIP-compatible endpoints.

### Service and Support

Cisco offers a wide range of services programs to accelerate customer success. These innovative services programs are delivered through a unique combination of people, processes, tools, and partners, resulting in high levels of customer satisfaction. Cisco Services help you to protect your network investment, optimize network operations, and prepare your network for new applications to extend network intelligence and the power of your business. For more information about Cisco Services, visit <u>Cisco Technical Support Services</u> or <u>Cisco TelePresence Services</u> online.

#### For More Information

For more information about the Cisco TelePresence Server, please visit the <u>TelePresence Server</u> product page 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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<sup>&</sup>lt;sup>†</sup> Requires TelePresence Conductor XC2.2 or later.