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LifeSize® ClearSea™

LifeSize ClearSea is an enterprise-class client/server solution for desktop and mobile video collaboration.

Extending HD Video to Mobile Devices

LifeSize ClearSea is open and interoperable; users can seamlessly connect from their desktops or mobile devices to any standards-based video collaboration system or infrastructure solution in seconds. LifeSize ClearSea Server is available as a hardware appliance or virtual machine software and includes a state-of-the-art HD desktop client for PC/Mac and Android/iOS smartphones and tablets.

Experience universal video collaboration with true mobility—anyone, anywhere, now on any device. With the evolution of the mobile landscape, there has never been a better time to bring HD video collaboration to every worker, in every location, on every device to enable increased collaboration and maximize productivity. Enter LifeSize ClearSea—an enterprise-class client/server solution for desktop and mobile video collaboration that's simple to deploy and scale across the enterprise. Designed for organizations that need to broadly deploy HD video communication to hundreds or even thousands of users, LifeSize ClearSea provides a flexible, interoperable solution for instantly connecting any desktop and mobile device to the meeting room.

Collaborate with Anyone, Anywhere, Now on Any Device

LifeSize ClearSea enables professional, Full HD video collaboration at 1080p for an immersive, true-to-life experience. Powerful collaboration tools such as user groups, multiparty calling, presence and text chat, a centralized contact list for easy directory dialing and single number reach ensure that workers can connect faster and easier than ever before. Completely interoperable with all standards-based video systems and infrastructure solutions, the integrated HD desktop client provides flexibility by working with PCs and Macs and also with Android and iOS smartphones and tablets.

Minimize IT Resources and Maximize IT Investment

With a choice of a hardware appliance or virtual machine software, organizations have complete flexiblity. Concurrent licensing plans eliminate hassle, cost and complexity, saving valuable IT budgets and enabling broad deployment throughout the organization. Built-in automatic NAT/firewall traversal and embedded media encryption provide secure video collaboration inside or outside the organization without additional equipment or IT resources.

LifeSize ClearSea Key Features

Feature	Description
HD Video Quality	Full HD (1080p) video with natural, full-motion video
Operating Systems	Windows and Mac OS X
Mobile Support	Android and iOS smartphones and tablets
Open and Interoperable	Standards-based, end-point agnostic; connects to any H.323/SIP device
Licensing Options	Concurrent use licensing per port
Flexible	Hardware appliance or virtual machine software
NAT/Firewall Traversal	Automatic built-in NAT/firewall traversal
Multiparty Calling	Connect up to 26 participants with multiconference support

Product Specifications

LifeSize ClearSea Server
Option for hardware appliance or virtual machine software

Communications
H.323, Compliant with ITU-T H.323v4, H.225v13; Call Control (H.450.2)
SIP, RFC compliancy: RFC-2396, RFC-2543, RFC-2617, RFC-2822, RFC-2833, RFC-2976, RFC-3260, RFC-3261, RFC-3263, RFC-3264, RFC-3265, RFC-3311, RFC-3420, RFC-3428, RFC-3515, RFC-3581, RFC-3550, RFC-3711, RFC-3856, RFC-3859, RFC-3860, RFC-3863, RFC-3891, RFC-3960, RFC-3984, RFC-4347, RFC-4488, RFC-4585, RFC-4961, RFC-5104, RFC-5168, RFC-5506, RFC-5763, RFC-5764

Video Specifications/Video Resolutions
1080p, 720p, 4CIF, CIF, QCIF, SQCIF resolutions; up to 2 Mbps on desktop

Management
Automatic provisioning, configuration and secure authentication of LifeSize ClearSea client based on user credentials
Handles automatic update of new client releases
Ajax-powered, web-based administration console
LifeSize ClearSea desktop client one-step installation via HTTP browser

Directory and Address Book
Support user authentication with external databases/LDAP
User groups management
Centralized contacts directory

Additional Features
H.239 presentation
H.224, H.281 (FECC)
Multiparty (v.a.): 1080p and 30 fps, connects any SIP or H.323 endpoint, up to 26 participants, no limit in concurrent rooms, supports participants' video and content sharing (H.239)
Acts as a session border controller, handles NAT/firewall traversal
H.323/SIP encryption with AES
Associate H.323/SIP endpoints to ClearSea accounts
Video IVR for dialing endpoint extensions

Virtual Machine Software Requirements
LifeSize ClearSea Virtual Machine Software can run on:
 VMware Player 3.0 or higher
 VMware Workstation 7 or higher
 VMware Server 2.0 or higher
 VMware vSphere/ESXi 3.51 or higher
Host suggested configuration: Intel Xeon Nehalem Processor 2 GHz+, RAM 3 GB+
Virtual machine requirements: RAM 2 GB, HDD: 10 GB, 2 virtual network cards

Hardware Appliance
1U standard 19" rack-mountable
Certifications: FCC Class A, EN55022 Class A, EN55024, EN61000-3-2, EN61000-3-3, EN60950, 80 PLUS Gold Certified, USA - UL listed, Canada - CUL listed, CB Report, CCC Certification, EN 60950/IEC 60950-Compliant

LifeSize ClearSea Client: PC and Mac OS X

Video Standards
H.263, H.263+, H.264

Video Specifications/Video Resolutions
HD 720p and 1080p encoding and decoding
Support for the following resolutions: 1080p, 720p, 4CIF, CIF, QCIF, SQCIF res (self-adapting depending on available CPU cores)
Frame rate: up to 30 fps

Audio Standards and Features
G.711 µ-law, A-law, G.722.1 Annex-C (Polycom® Siren14™)
Full-duplex Acoustic Echo Canceller and Audio Denoise Filter with VAD

Additional Features
H.239 presentation (up to 1280x1024), video sharing
2 independent lines/3-party continuous presence multiparty without external equipment (embedded transcoding MCU capabilities)
Far-end camera control (H.224, H.281)
H.323/SIP encryption
Call recording, playback and export in Windows Media Video (WMV) or Quicktime (MOV)
Instant message and presence
Automatic "quality vs. CPU load" dynamic adjustment
Send in-band or out-of-band DTMF
Automatic bandwidth control, adaptive to actual network conditions
Adaptive low-latency packet-loss recovery
Supports asymmetric input/output bandwidths (e.g., ADSL)
Languages supported: English, Spanish, German, Italian
Web integration (start a call by clicking a web link)
Company logo in GUI (managed by LifeSize ClearSea Server administrator)

Recommended Peripherals
Webcams
Logitech HD Pro C910
Logitech HD Pro C510
Headsets
Logitech ClearChat Pro USB
Logitech Premium Notebook Headset
USB Speakerphones
ClearOne CHAT™ 50, 100

Minimum System Requirements
Windows XP/2003/Vista/7 (including 64 bit versions), DirectX 9.0c or higher
Mac OS X 10.5 Leopard or higher
Any x86 CPU with SSE2 instructions (audio/high-res video calls); Core 2 Duo class, 2.33 GHz (H.264, 720p video calls); Core 2 Quad class, 2.66 GHz (H.264, 1080p video calls); 1 GB RAM and 30 MB hard-disk space

LifeSize ClearSea Client: Mobile Devices**
Address book, call history, privacy mode switch
Send DTMF in-band or out-of-band
H.224, H.281 (FECC)
Instant message and presence

Video
Support for H.264 720p 15 fps and qHD (960x540) up to 30 fps on iPad 2
Support for qHD (960x540) on select Android devices.*
ITU-T H.263+ simultaneous encode/decode, up to CIF resolution (352x288), 15 fps, 384 Kbps or better on all other supported devices

Audio
G.711 µ-law, A-law
Supports in-band dynamic resolution changes

** Certified Devices
Android™: HTC EVO™, Desire™ HD, Incredible, myTouch® 4G/ Samsung Epic™, Galaxy S, Galaxy S II, Galaxy Tab, Galaxy Tab 10.1, Captivate™, Fascinate™, Vibrant™/ Google Nexus One, Nexus S/Dell Streak 5, Streak 7/ Motorola Atrix 4G, Xoom/Acer Iconia Tab A500. More coming soon!
* qHD Supported Devices: HTC Sensation™ , Dell Streak 7, Motorola Atrix 4G, Motorola Xoom
iOS: iPhone® 4S, iPhone® 4, iPod touch® 4th generation, iPad™ 2, iPad™ and iPhone® 3GS (iPad™ has no video camera so only remote party video is shown if available; iPhone® 3GS uses the only available back camera).

Available System Configurations

Model	Ports	Form Factor	Description
CS100	6/16	Virtual Machine Software	ClearSea Server as VMware image. Up to HD 720p; bandwidth up to 1 Mbps per call. 100 accounts. Unlimited ClearSea Client download.
CS150	26/50/100	Virtual Machine Software	ClearSea Server as VMware image. Up to Full HD 1080p; bandwidth up to 1 Mbps per call. 2500 accounts. Unlimited ClearSea Client download.
CS300	26/50/100	Hardware Appliance	ClearSea Server as Hardware Appliance. Up to Full HD 1080p; bandwidth up to 1 Mbps per call. 2500 accounts. Unlimited ClearSea Client download.

Available Options
Client for Android devices
Client for iOS devices