

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

**LifeSize® ClearSea™**

## 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 flexibility. 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

### 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

## 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  $\mu$ -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  $\mu$ -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



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