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ClearSea

Create your **video domain**: connect any video conferencing equipment to your **Desktop** and now also to your **Mobile phone**

Video Conferencing Made Easy

ClearSea is a comprehensive network appliance for **professional desktop and mobile video conferencing** built to offer a **turn-key solution** for enterprises and organizations in the **education and healthcare** markets.

Built on a client/server architecture, ClearSea Server is available both as physical appliance or Virtual Appliance (VMware based) and includes state-of-the-art HD desktop client for PC and Mac and for mobile **Android™** devices and **iPhone®** with the ability to seamlessly connect any standards based H.323 or SIP devices (including meeting room systems, MCUs or gateways).



Highlights

- ➔ Standards based, endpoint agnostic, natively connects any H.323/SIP equipment
- ➔ **Turn-key**: no need for additional equipment such as H.323/SIP Gateways or Firewall/NAT traversal appliances
- ➔ Available as both Virtual Appliance (VMware) or physical appliance
- ➔ Full remote configuration and upgrade of ClearSea desktop Client
- ➔ Supports user groups and authentication with external user database (LDAP)
- ➔ Centralized contact list
- ➔ Handles **Firewall/NAT traversal**
- ➔ Bandwidth shaping
- ➔ H.239, Presentation, Far End Camera Control
- ➔ **Multiconference**: 1080p up to 30fps connecting any SIP or H.323 endpoint, supports participants video and content sharing (H.329)
 - continuous presence up to 3 participants (client embedded MCU capability)
 - up to 26 participants in voice activated mode without any limit in concurrent rooms
- ➔ **Video IVR** for dialing endpoint extensions if needed
- ➔ ClearSea HD **desktop client for PC and Mac** included
- ➔ Client for **Android™** and **iOS** available on request
- ➔ Administrator can easily add **company logo** to the ClearSea client interface

Features and Benefits

Turn-key and cost-effective desktop and mobile video conferencing solution, easy to deploy and manage	Includes client, Firewall/NAT traversal, H.323/SIP, Centralized Directory and Multiconference
Endpoint agnostic, H.323/SIP standards based	Make the most out of your existing video conferencing infrastructure
Licensing based on ports	No worries about unused accounts

Thanks to the Virtual Appliance version, ClearSea is able to provide the flexibility of a software-based approach, as well as the plug-and-play benefits usually associated with stand-alone hardware appliances.

ClearSea Specifications

ClearSea Server features

- ➔ Form Factory: Virtual Appliance (VMware) or physical appliance
- ➔ Endpoint Agnostic
 - H.323: 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, draft-ietf-sipping-cc-transfer-12, draft-roach-mmusic-sip-provisional-media-00, draft-ietf-sip-183-00, draft-rosenberg-imp-00
- ➔ 1080p, 720p, 4CIF, CIF, QCIF, SQCIF resolutions; up to 2Mbps
- ➔ H.239 presentation
- ➔ H.224, H.281 (FECC)
- ➔ Multiconference (v.a.): 1080p and 30fps, 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
- ➔ H.323/SIP encryption with AES
- ➔ Associate physical H.323/SIP endpoint to ClearSea accounts
- ➔ ClearSea desktop client one-step installation via HTTP browser
- ➔ Handles automatic update of new client releases
- ➔ Automatic provisioning, configuration and secure authentication of ClearSea client based on user credentials
- ➔ Support user authentication with external databases / LDAP
- ➔ User Groups management
- ➔ Centralized Contacts Directory
- ➔ Video IVR for dialing endpoint extensions
- ➔ Ajax-powered web-based administration console

Physical Appliance

1U standard 19" rackmountable

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

Virtual Appliance

- ➔ ClearSea Virtual Appliance 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 2GHz+, RAM 3GB+
- ➔ Virtual Machine requirements: RAM 2GB, HDD: 10GB, 2 Virtual Network Cards

ClearSea Client features - PC and Mac OS X

- ➔ H.239 presentation (up to 1280x1024), VideoSharing
- ➔ 2 independent lines / 3-party continuous presence multiconference without external equipment (embedded transcoding MCU capabilities)
- ➔ Far End Camera Control (H.224, H.281)
- ➔ Video: H.263, H.263+, H.264
- ➔ 1080p, 720p, 4CIF, CIF, QCIF, SQCIF res (self-adapting depending on available CPU cores)
- ➔ HD 720p and 1080p encoding and decoding
- ➔ H.323/SIP encryption*
- ➔ Call recording, playback and export in Windows Media Video (WMV) or Quicktime (MOV)
- ➔ Framerate: up to 30 fps
- ➔ Automatic "quality vs. CPU load" dynamic adjustment
- ➔ Support for: standard USB webcams, High-Definition webcams and HDMI capture boards at resolutions up to 1920x1080, PAL/NTSC DV cameras over Firewire IEEE-1394 (on Windows XP or better only)
- ➔ Audio: G.711 µ-law, A-law, G.722.1 Annex-C (Polycom® Siren14™)
- ➔ Full-duplex Acoustic Echo Canceller and Audio Denoise Filter with VAD
- ➔ 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 ClearSea Server administrator)
- ➔ Minimum 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 videocalls); Core 2 Quad class, 2.66 GHz (H.264, 1080p videocalls); 1GB RAM and 30MB hard-disk space

ClearSea Client features - Mobile devices**

- ➔ Address Book, Calls History, Privacy mode switch
- ➔ Send DTMF in-band or out-of-band
- ➔ H.224, H.281 (FECC)
- ➔ Video: Support for H.264 720p 15fps and qHD (930x540) up to 30fps on iPad 2 / Support for qHD (960x540) on selected Android devices. *
- ➔ ITU-T H.263+ simultaneous encode/decode, up to CIF resolution (352x288), 15fps, 384Kbps
- ➔ Audio: G.711 µ-law, A-law
- ➔ Supports in-band dynamic resolution changes

** Certified Devices

Android™: HTC EVO™, Desire™, HD, Incredible, myTouch™ 4G, Sensation / Samsung Epic™ 4G, Galaxy S, Galaxy S II, Galaxy Tab, Galaxy Tab 10.1, Captivate™, Fascinate™, Vibrant™ / Google Nexus One, Nexus S / Dell Streak 5-inch and 7-inch / Motorola Atrix™ 4G, Xoom™ / Acer Iconia Tab A500

*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).

System Capacity

Model	Ports	Form Factory	Description
CS100	6/16	Virtual Appliance	ClearSea Server as VMware image. Up to HD 720p; bandwidth up to 1Mbps per call. 100 accounts. Unlimited ClearSea Client download.
CS150	26/50/100	Virtual Appliance	ClearSea Server as VMware image. Up to HD 720p; bandwidth up to 1Mbps per call. 2500 accounts. Unlimited ClearSea Client download.
CS300	26/50/100	Hardware Appliance	ClearSea Server as Physical Appliance. Up to HD 720p; bandwidth up to 1Mbps per call. 2500 accounts. Unlimited ClearSea Client download.
CSxxxAND	-	(option)	Client for Android devices
CSxxxIOS	-	(option)	Client for iOS devices

Sample ClearSea deployment

*coming soon

