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Glossary of Industry Terms and ClearOne Products

A/V Term Glossary

Product Types

- Speakerphone – Speakerphone is the name ClearOne uses for peripherals for a computer that have a built-in speaker and one or more microphones in a common housing. They allow a user with a laptop or mobile phone to connect to one or more speakerphone peripheral devices in a conferencing space. Speakerphones can generate louder audio output and capture audio from a larger area in a conferencing space than a single computing device. Speakerphones are typically connected to a computing device via USB or Bluetooth. Some companies have started calling these devices “SpeakerMics.”
- Conference Phone – Conference phone is the name ClearOne uses for a device that can operate as a stand-alone phone instead of working only as a peripheral to another device. Conference phones have a built-in speaker, one or more microphones, a keypad, and a display that can be used for dialing and showing the status of a call. They are connected to a POTS or VoIP telephone line. Conference phones may also be able to connect to another conference phone, and/or a laptop via USB or Bluetooth. A tabletop microphone is just a mic without a speaker.
- Pan-Tilt-Zoom (PTZ) Camera – A camera that can zoom in and out to change its focus from a point close to the camera to a point farther away. These cameras can also pivot up, down, left, and right. As they specialize in capturing wide open areas, they can be used for video conferencing or event livestreaming.
 - *Note: The “PTZ” designation indicates that the camera has hardware that facilitates its zooming and horizontal/vertical movement capabilities. An “ePTZ” designation (Electronic Pan-Tilt-Zoom) indicates that the camera has software to simulate these movements.*
- Microphone Array – A set of multiple microphones that operate together.
- Mixer – A device that can combine audio from two or more sources, as well as improve the quality of the sound from each source.
- Controller – Controls a room’s audio and dialing capabilities.

Features

- Digital Signal Processor (DSP) – A chip that mathematically processes digitized audio and video, enabling features such as equalization, surround sound, voice recognition, and similar effects. DSPs are typically included in modern audio

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processing equipment. DSP chips may help conserve the battery life of portable devices with audio processing functions. In the professional audio industry, mixers are also called “DSPs,” “DSP mixers,” or “automixers.”

- [HDConference®](#) – ClearOne’s audio technology that enables fatigue-free and natural-sounding audio by leveraging, among other things, audio beamforming, acoustic echo cancellation, equalization, automatic gain and level controls, and Bluetooth connectivity.
- [Dynamic Automatic Resonance Eliminator \(DARE™\)](#) – Technology that eliminates feedback in sound reinforcement applications.
- [Distributed Echo Cancellation®](#) – A method of performing acoustic echo cancellation AEC by applying a dedicated AEC to each microphone signal or to each beam in a beamformer. Distributed Echo Cancellation provides improved performance in most multi-mic or multi-beam configurations when compared to an alternative setup that mixes all microphone signals or all beams into a single channel and then applies a single AEC.

Technologies

- [StreamNET™](#) – Patented technology that facilitates and optimizes the distribution of high quality audio and video over an IP network.
- [Dante™](#) – Technology developed by Audinate that replaces complex physical cable connections between devices with a computer network, allowing audio and video channels to be transmitted via Ethernet cables.

Functions

- [Transmission Control Protocol/Internet Protocol \(TCP/IP\)](#) – A communication protocol used to facilitate communication between devices on a network. The TCP/IP protocol ensures that data packets are delivered successfully by resending packets that are lost or corrupted during transmission.
- [Bring-Your-Own-Device \(BYOD\)](#) – A system that allows a company’s employees to connect to meetings, make group audio and/or video calls, and share content with a group of participants from a company-assigned or personally-owned mobile device rather than being restricted to using only dedicated in-room equipment.
- [Beamforming](#) – A signal processing technique that uses multiple sensors in an array to form an array pattern that may be different from the pattern of any individual sensor. In the audio domain, beamforming can be used on signals from a microphone array to form a pickup pattern (or “beam”) that can have attenuation in spatial directions that are different from the “direction of look” of the beam.
- [Gating](#) – A technique used to minimize background noise and extraneous audio without sacrificing the quality of the main audio signals. Gating can be used in multi-microphone settings to ensure a microphone only picks up its intended audio source.

Product Library

For ClearOne's full Concise Product Catalog, please click [here](#).

Commercial Solutions

ClearOne offers professional audio solutions, video solutions, and cloud-based collaboration services for small- and medium-sized business through Fortune 500 companies.

Audio Conferencing

- Installed DSP-Based Professional Audio Conferencing
 - *Use Cases:*
 - Professionally installed, DSP-based audio conferencing and sound reinforcement products are commonly used in enterprise, healthcare, education and distance learning, government, legal and finance organizations.
 - Mid-tier premium conferencing products are typically used in smaller rooms and SMBs, for the purpose of interfacing with video and web conferencing systems.
 - *Products:*
 - For Professional Installed Audio Conferencing and Sound Reinforcement
 - [CONVERGE Pro[®] 2](#): A full lineup of DSP Mixers, Expanders, Controllers, and management software that excels in any room or audio environment.
 - [Convergence AV Manager](#): A unified software platform to monitor, control, and audit ClearOne Pro Audio products from any location worldwide – available as a Cloud AV Manager or an Enterprise AV Manager.
 - The CONVERGENCE AV Cloud significantly expands recurring revenue opportunities for AV managers' remote, real-time Management-as-a-Service offerings.
 - For Mid-Tier Premium Conferencing
 - [CONVERGE Huddle](#): A professional audio DSP mixer designed for huddle rooms and similarly-sized meeting spaces.
 - [INTERACT[®]](#): A professional audio DSP mixer line. INTERACT Pro supports stereo AEC. INTERACT AT has a built-in two channel amplifier for direct connection to passive speakers.
 - USB-Based Speakerphones
 - *Use Cases:* Can be used with PCs, laptops, tablets, smartphones, and other portable devices.
 - Powered by ClearOne's HDConference™ audio.
 - Tabletop Audio Conferencing
 - *Use Cases:* Used in conference rooms and offices.

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- Comprises various MAX brand product families of wired and wireless phones. Of note, [MAXAttach Wireless](#) was the industry's first dual-phone, completely wireless solution.

Professional Microphones

- [Patented Beamforming Microphones](#)
 - BMA Series: The BMA2 Beamforming Microphone Array works with the CONVERGE Pro 2 series of DSP mixers. It can be mounted on a table, wall, or on a ceiling. The BMA CT is a beamforming microphone array in the form of a ceiling tile that is also compatible with the CONVERGE Pro 2 series of DSP mixers. The [BMA 360](#) is the industry's only ultra-wideband, frequency invariant beamforming microphone array ceiling tile with uniform gain response across all frequency bands. BMA 360 includes Voice Lift and Camera Tracking technology. BMA 360 works with CONVERGE Pro 2 DSP mixers. The BMA 360D includes the same frequency invariant deep sidelobe technology as the BMA 360 but incorporates a Dante interface that allows it to connect to any Dante-enabled DSP mixer.
 - COLLABORATE® Versa®: Conferencing systems that feature USB audio-enabled Beamforming Ceiling Tile Microphone Arrays. The Versa Lite CT includes the BMA CT and a Versa USB interface peripheral. The Versa Pro CT includes the BMA CT and the CONVERGE Huddle DSP mixer.
 - [Ceiling Microphones](#): Three-microphone arrays that enable room-wide audio coverage.
- [Wireless Microphones](#)

Video and Visual Collaboration Products

- *Use Cases*: Conferencing, cloud collaboration, wireless/streaming presentation, interactive whiteboarding, recording and streaming
- *Products*:
 - [COLLABORATE® Live](#) – Versatile video collaboration room systems that include CHAT® 150 speakerphones and a UNITE® Pro 4K Ultra HD Camera
 - [COLLABORATE® Versa Pro CT](#) – Includes a Huddle audio DSP and the Huddle-compatible and patented BMA CT
 - [UNITE® Cameras](#)
 - [COLLABORATE® Space](#) – A cloud collaboration solution that allows users to work together one-on-one, or in groups of hundreds, with integrated file sharing, searchable archives, and user presence information, along with a full suite of collaboration features.

AV Networking

- *Products*
 - [VIEW® Pro](#): Enables multimedia streaming on an existing IP network, with an economical counterpart in [VIEW® Lite](#)
 - The [PANORAMA™ Video Wall](#) integrates with VIEW® Pro and facilitates the combination of multiple video streams for viewing on one or more displays in various layout combinations.

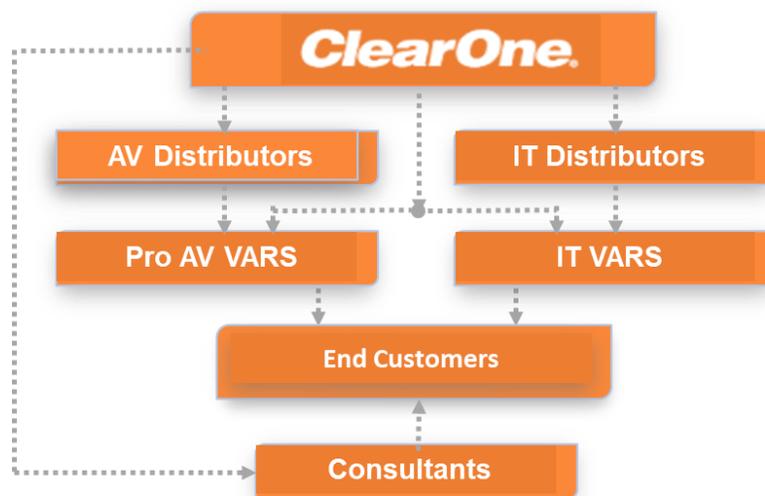
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- [CONVERGE® Matrix](#) – A DSP audio mixer for Dante audio distribution; works with all other CONVERGE® products, as well as third-party Dante products.

Sales and Customer Infrastructure

Sales

Channel Sales Structure



- ClearOne uses a two-tier channel model through which we sell our commercial products to a worldwide network of independent professional audio-visual, information technology and telecommunications distributors.
 - Our distributors then sell our products to independent systems integrators, dealers, and value-added resellers, who in turn work directly with the end-users of our products for product fulfillment and installation, if needed.
 - We also sell our commercial products directly to certain dealers, systems integrators, value-added resellers, and end-users.
- Our products are also specified and recommended by professional audio-visual consultants.
- Channel partners assist with ClearOne marketing efforts, as they provide leverage in reaching existing and prospective customers globally.
- In 2022, we sold our products directly to approximately 300 distributors and direct resellers around the world.

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Distribution Participants:

Distribution Participant	Description/Role	Sell CLRO Products Directly to End Users	Purchase Products from Distributors; Can Bundle CLRO Products w/ Other Products for Resale	Help Maintain Relationships w/ Existing Integrators, Dealers, and Other VARs
Distributors	<p>Purchase ClearOne products at a discount from list price and resell them worldwide to hundreds of independent systems integrators, telephony value-added resellers, IT value-added resellers, and PC dealers on a non-exclusive basis.</p> <p><i>Maintain own inventory and A/R, provide tech and non-tech support to next level of distribution participants</i></p>			X
Value-Added Resellers (VARs)	<p>Purchase ClearOne products at a discount from list price and resell them worldwide to hundreds of independent systems integrators, telephony value-added resellers, IT value-added resellers, and PC dealers on a non-exclusive basis.</p>	X	X	X
System Integrators	<p>Add significant value to each sale by combining our products with products from other manufacturers as part of an integrated system solution.</p>	X	X	X
PC Dealers	<p>Specializes in computer and accessory sales; authorized for selling CLRO products</p>	X	X	
End Users	<p>Enterprise customers range from SMBs to large and prestigious blue-chip companies across various industries, including higher education, government, finance, media/telecom, and more.</p> <p>Individual customers purchase products for home office and WFH use.</p>			

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Distribution Non-Participants (Other Relevant Parties):

Role	Description
A/V Consultants	Independent specialists who work directly with end users to identify the products/design they need for their specific A/V needs. Consultants have in-depth knowledge of (and connections with) specific product lines, systems integrators and manufacturers.
Manufacturer's Representatives	Firms or individuals that act as a liaison between manufacturers and their prospective customers.