Supports Any Hardware CODEC • Dramatically Improves VoIP Quality and ASR System Performance • Enables Louder Playback

Product Overview

Conexant's Smart Source Pickup (SSP) voice and speech processing software for tablets and PCs is designed to work with any hardware CODEC. Conexant's stand-alone AudioSmart™ software provides clear voice quality, eliminates background noise from the microphone input signal during VoIP calls, and dramatically improves Automatic Speech Recognition (ASR) system performance.

From conducting a call using Skype at a noisy café to giving verbal commands to a tablet in an airport terminal, Conexant's AudioSmart software enables a better user experience and makes challenges with background noise and competing sounds (e.g., keystroke noise) a thing of the past. Conexant's AudioSmart software is based on its proprietary SSP noise suppression algorithm. The SSP software is a blind source separation technology that uses spatial representation of target speech and noise sources to reduce interference. Unlike competing technologies, speech and noise can arrive at any angle relative to the microphones—SSP even removes noise when it comes from the same direction as desired speech, and when the speaker is up to five meters away from the target device. The SSP software is also extremely effective at reducing keystroke clicking and virtual keyboard tapping noise distractions during conference calls.

The AudioSmart software solutions make it possible to harness the power of human speech for a dramatically improved user experience when making VoIP calls or using speech recognition to control a device. Tablets and PCs are obvious applications for Conexant's software, but there are many other applications that can benefit from its audio processing—including handsets, automotive, wearable computing, headsets, and more.

Conexant's lineup of AudioSmart software solutions for Windows, Android, and Linux includes:

- **PRO** = Designed for the modern corporate workforce. Includes keystroke/tap noise elimination, along with the most advanced far-field VoIP experience and high performance speech recognition.
- **MAX** = Optimized for multimedia and gaming enthusiasts. Features improved VoIP for gaming, advanced noise-reduced speech input, and high performance speaker correction.
- **Classic** = Designed for cost-sensitive markets and near-field use cases. Features clear quality for VoIP, noise-reduced speech input, and basic speaker correction for playback.

Conexant's AudioSmart software has passed stringent testing with the PRO and MAX packages, and both have proven to dramatically exceed performance requirements for Intel and Google ASR. All of Conexant's AudioSmart software solutions are optimized for use with only two-microphone elements, but can also support a more costly three+ microphone solution (as required by competitors).

Each package offers:

- Flexible microphone placement options for lower system cost and innovative industrial design
- Support for any tablet orientation (landscape, portrait, lying flat on the desk, etc.) using only two microphones
- High hit-rate speech recognition in challenging scenarios
- Excellent voice clarity in noisy environments, independent of device orientation or the user's position (angle) relative to the device

Applications

- Tablets and PCs running Windows, Android, or Linux
- Smart phones and TVs
- Automotive
- Wearable computing
- Headsets
- STBs

AudioSmart Software Package	Target Market	Key Benefits		Catalog

AudioSmart *Classic*	For cost-sensitive and near-field input applications	• Clear quality for VoIP
		  – Skype calls sound good with noisy background
		• Noise-reduced speech input
		  – Improved speech engine accuracy with noisy background
		• Basic speaker correction and playback enhancement
		  – Playback is free of distortion and sounds balanced
				• Windows: CX3800
				• Android and Linux: CX3801
				• Windows, Android, and Linux: CX3802

AudioSmart MAX	Optimized for multimedia and gaming enthusiasts	• Improved VoIP for gaming
		  – Full-duplex
		  – Party mode with social background noise removal
		• Advanced noise-reduced speech input (mid-field)
		  – Meets Intel ASR requirements
		• Vocal-removal for karaoke
		• Voice morphing for gaming and karaoke
		• Advanced speaker correction with bass/treble enhancement for small form-factors
				• Windows: CX3806
				• Android and Linux: CX3807
				• Windows, Android, and Linux: CX3808

AudioSmart PRO	Optimized for the modern corporate workforce	• Keystroke and fan noise elimination
		  – Removes annoying keyboard clicking and virtual keyboard tapping noise during voice communications
		• Most advanced VoIP experience with Conexant 5M far-field technology
		  – Conference speakerphone mode with mid-field and far-field interaction
		  – Commuter mode with train and road noise removal
		• Most advanced noise-reduced speech input with Conexant 5M far-field technology
		  – Exceeds Intel ASR requirements
		  – Allows speech command and control from across a noisy conference room
		• Most advanced playback enhancement
		  – AudioSmart BOOST ensures listening experience is loud and clear, and enables high SPL playback
		• Most advanced speaker correction with bass/treble enhancement for small form-factors
				• Windows: CX3803
				• Android and Linux: CX3804
				• Windows, Android, and Linux: CX3805

www.conexant.com

Headquarters: 1901 Main Street, Suite 300 Irvine, CA, 92614
General Information: U.S. and Canada: 888-855-4562 | International: 1 + 949-483-3000

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