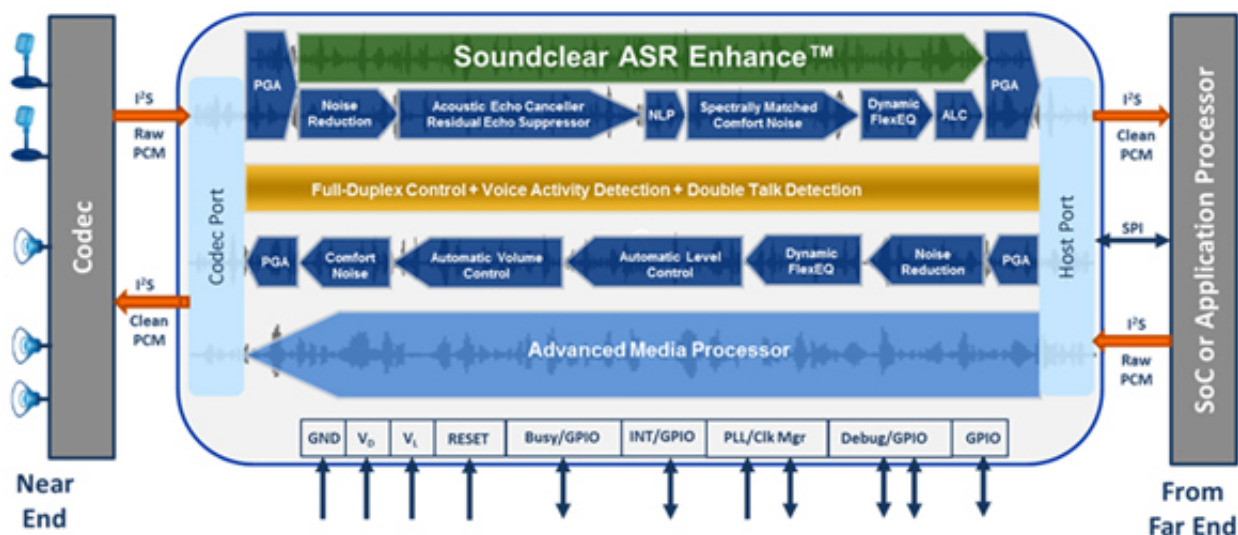


Sound Processors Deliver Clear Audio In Noisy Environments

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Audio and video conferencing and Automatic Speech Recognition (ASR) are demanding applications for sound processors. [Cirrus Logic's](#) CS48LV12/13 voice processors deliver SoundClear technology to smartphones, tablets and wearables providing improved voice recognition and noise suppression. SoundClear's noise suppression technology is optimized for ASR. The CS48LV12 is the low cost, fixed function version while the CS48LV13 ([Fig. 1](#)) is customizable and includes ASR Enhance technology. It can handle dual microphone noise suppression. Its non-linear residual echo suppression technology is designed to handle full-duplex, echo free support for speakerphone applications.



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SoundClear provides noise reduction, automatic volume control and automatic level control. The comfort noise feature allows a designer to control the amount of background noise. A silent background is not considered optimal for voice calls. The Dynamic FlexEQ is an automatic equalizer. The CS48LV13 supports third party playback algorithms such as Dolby and DTS.

The systems are implemented using a low power, 32-bit DSP. The core runs at 1.0 to 1.2 V while I/O operates at 1.8 to 3.3 V. The chips are supported by the SoundClear RAPID2 development toolkit. RAPID2 allows real-time adjustments of system parameters.

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