



Voice Rx ANC 1.0

Ambient Noise Cancelation for Mobile Audio

Today's mobile voice calls are conducted in a wide variety of environments. Many of these contain a considerable amount of background noise which can overwhelm conversation making it difficult to comprehend the voice of the speaker at both ends of the call. This noise is not just comprised of environmental sounds such as traffic or music, the echo of the speaker's voice can also provide a troubling distraction. SoundClear[®] Voice Rx ANC 1.0 software provides industry-leading receive-path (Rx) ambient noise cancelation (ANC) for "on ear" mobile applications. This ANC software detects background noise and creates an equal and opposite signal through the earpiece to neutralize the offending noise. The result is less near-end ambient noise so that the voice quality of the far-end speaker is clearer to the near-end listener. The application of ANC also reduces the risk that a call may be terminated because the presence of unwanted noise makes the call difficult to conduct.



Features

- Improves the signal-to-noise ratio of the downlink speech for greater speech clarity
- Supports a 16kHz sampling rate for wideband mode and uses single channel earpiece Rx adaptive ANC to improve the call experience
- Automatically adjusts sidetone by reducing the sidetone path when no local transmit-path (Tx) speech is detected, and helps to prevent ambient noise from being picked up by the Tx microphone and fed into the ear as sidetone
- Prevents the speaker from clipping by using an excursion limiter
- Automatic gain adjust is used to dynamically change the ANC calibration gain for optimum performance
- Automatically adjusts ANC gain to ensure consistent ANC performance independent of holding pressure
- Detects the presence of wind and controls the ANC behavior
- Feedback tone detector identifies unstable feedback oscillations and moderates the output to compensate and recover
- Stops unwanted signals from going through to the earpiece driver such as low frequency signals



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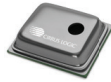
Hardware Platforms

The following platform configurations are recommended:

Smart Codec
WM8281



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MEMS Microphone – Analog
WM7121PE
WM7132PE
WM7138

MEMS Microphone – Digital
WM7236E

APPLICATIONS

SoundClear® Voice Rx ANC 1.0 is best suited to the following applications:



SMARTPHONE

The SoundClear Advantage

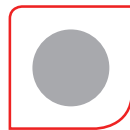
Cirrus Logic's SoundClear software technology utilizes self-adjusting algorithms to deliver industry leading voice quality, speech recognition, audio recording and high-fidelity playback. SoundClear utilizes intelligent speech and noise tracking, as well as adaptive processing, to exploit speech patterns and environmental conditions while providing advanced processing features such as noise suppression, echo cancelation and virtual surround sound. SoundClear software also features low power consumption for prolonged battery life of portable devices.



VOICE



PLAYBACK



RECORD



CONTROL



SENSE



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