HDCLEAR™

Use Your Voice Anywhere

Overview

DSP Group's HDClear™ dramatically improves voice user experience, enabling noise-free conversations and maximizing speech-enabled application accuracy.

Leveraging robust and powerful noise cancellation algorithms, HDClear more effectively isolates voice from surrounding environmental noise. As a result, HDClear delivers unparalleled voice quality and call intelligibility, while dramatically raising the accuracy rate for ASR applications.

Better Voice Communication Quality

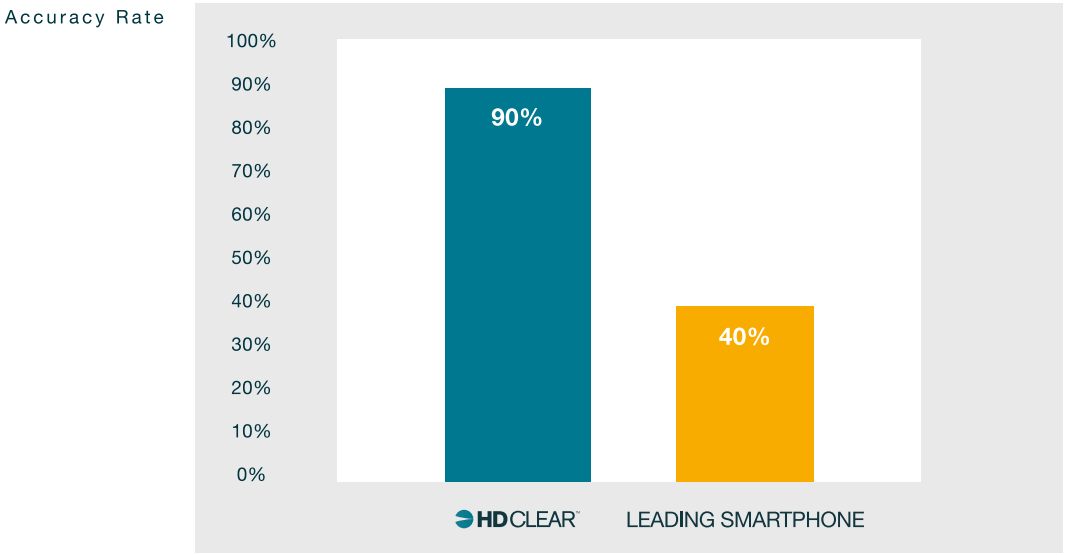
HDClear delivers a competitive edge by enabling noise-free voice communication. By using an additional sensor, beyond the standard two audio microphones, HDClear gathers environmental information during a call. Then, it applies a 3D-vocal algorithm to perform background noise cancellation and multiple voice processing tasks including acoustic echo cancellation, loudness equalization, and more. The result is clearer, more intelligible voice communication on mobile devices, even in high ambient noise environments.

Better Automatic Speech Recognition Accuracy Rate

Noisy environments pose significant performance hurdles for speech recognition engines, which parse and translate voice input into text or control.

By effectively filtering any type or level of ambient noise and delivering "cleaner" sound to the ASR, HDClear significantly enhances overall ASR accuracy rate in any environment - markedly raising accuracy. Easily integrated into mobile and consumer devices, HDClear is simple to operate and measurably outperforms currently-available technologies.

Speech Recognition Accuracy Rate in Noisy Environment
HDClear™ vs. Leading Smartphone with built in Noise Reduction



Source: DSP Group's test results in medium-high ambient noise

HDCLEAR™

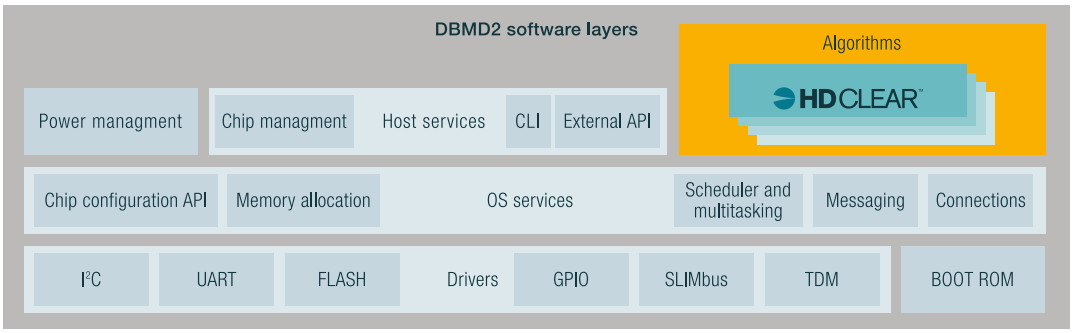
Use Your Voice Anywhere

HDClear Highlights

- Non-stationary and stationary noise elimination for both transmit and receive sides
- Maximize Automatic Speech Recognition (ASR) accuracy rate
- Acoustic Echo Cancellation (AEC)
- Automatic Gain Control (AGC)
- FlexiSpeech™ – User adjustable speech rate
- Flexible Listening Enhancement (FLE)
- Voice Equalizer

HDClear Software Framework

- Comprehensive software framework
- Real-time operating system
- Drivers for all processor peripherals
- Stand-alone master or slave with external master mode option
- "Internal host" for management and communication with external master processor
- Easy connection with external processor running Linux OS
- Linux/Android drivers interface with DBMD2
- Dynamic Power Management



Powered by DBMD2

DBMD2 is DSP Group's high-performance, low-power, small-footprint audio/voice DSP platform, which powers HDClear. DBMD2 is a programmable 32-bit DSP audio-centric processing solution that incorporates rich set of interfaces for smartphones packaged in UFBGA 3.0 x 3.0mm.

DSP Group®, Inc. (NASDAQ: DSPG) is a leading global provider of wireless chipset solutions for converged communications. Delivering semiconductor system solutions with software and reference designs, DSP Group enables OEMs/ODMs, consumer electronics (CE) manufacturers and service providers to cost-effectively develop new revenue-generating products with fast time to market. At the forefront of semiconductor innovation and operational excellence for over two decades, DSP Group provides a broad portfolio of wireless chipsets integrating DECT/CAT-iq, DECT ULE, Wi-Fi, PSTN, HDClear™, video and VoIP technologies. DSP Group enables converged voice, audio, video and data connectivity across diverse mobile, consumer and enterprise products – from mobile devices, connected multimedia screens, and home automation & security to cordless phones, VoIP systems, and home gateways. Leveraging industry-leading experience and expertise, DSP Group partners with CE manufacturers and service providers to shape the future of converged communications at home, office and on the go.

For more information, visit **www.dspg.com**

HDCLEAR™ BY DSP GROUP®