



EveryWord™ Development Kit

ULTRA FAR-FIELD AVS REFERENCE DESIGN KIT
FEATURING CIRRUS LOGIC SOUNDCLEAR® TECHNOLOGY

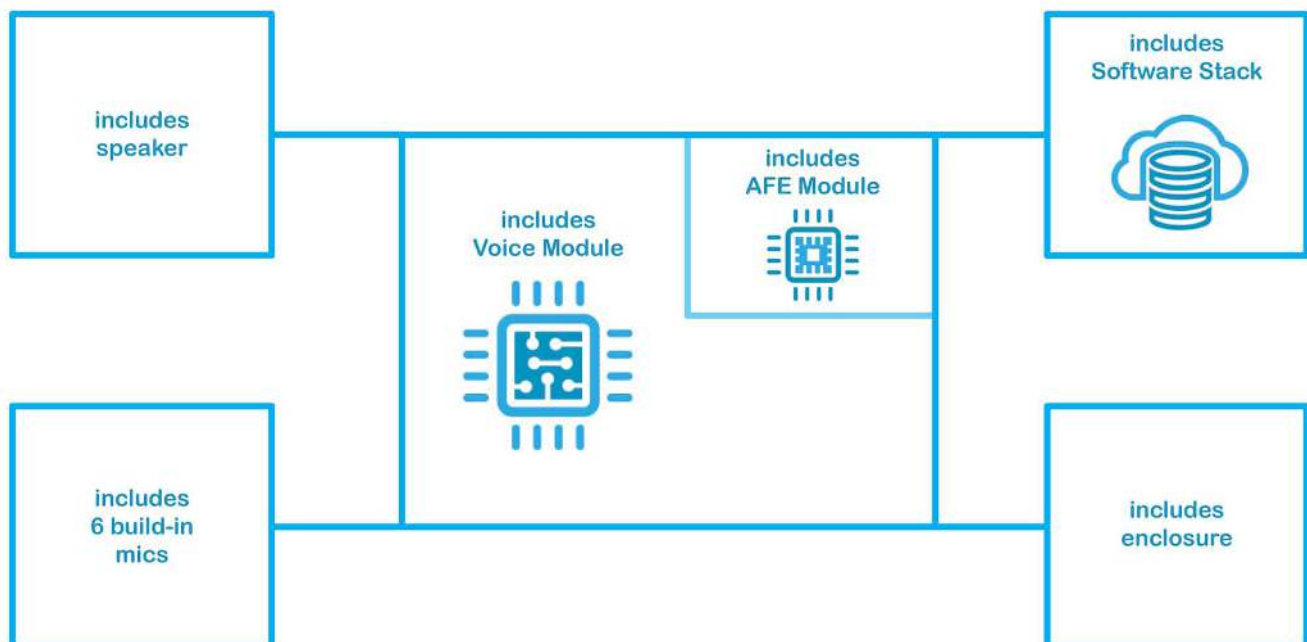
ADVANCED PERFORMANCE & PRODUCTION-READY

ArkX ultra far-field solutions significantly outperform existing OEM far-field technology while reducing your development costs, risks and time-to-market.



EveryWord™ Ultra Far-Field Development Kit

The Development Kit can be used for demonstration, evaluation, prototyping, product development, and training.





Clear Performance Advantages

- Captures voice commands:
 - from across the room (**>9 meters**)
 - in noisy and reverberative environments
 - during loud music/movies
- Unique ability to discriminate and suppress speech from TV
- Flexible placement: wall, in-wall, ceiling, dashboard
- Highly-integrated production-ready module
 - Works with most existing mic array designs
 - **Amazon AVS qualified (2 to 4 mics)**
- Ultra-low power battery operation for wake-on-word

Features Overview

Cirrus Logic's SoundClear FlexArray™ Technology:

- Increases accuracy and reliability of “Alexa” wake-word triggering and command recognition at far-field distances and in noisy environments
- Preloaded with Amazon Pylon Lite Wake-Word-Engine and accepts Sensory Wake-Word-Engine
- Supports 9+ meters far-field operation with 2, 3, or 4 microphones
- Supports arbitrary mic array geometries, including circular, square, triangular, linear or 3D
- AEC is scalable to mono, stereo, 3-channel, and 5-channel (surround movie or music) use cases
- Supports far-field voice call mode and in-call voice triggering
- Suitable for wall-powered devices or portable battery-operated products with low milliwatt consumption
- 6 mics built-in, ready to be configured for testing circular, square, triangular, and line arrays in 4-mic, 3-mic or 2-mic designs

- AVS compliant LED indicators and mic-mute button. Google Voice compliant mic spacing
- Also includes expansion bus for connecting GPIOs, I²S/TDM, SPI, I2C, and PDM mics
- Web-based firmware control console for simplified interactive operation, mic array selection, acoustic tuning and diagnostics

NXP i.MX 8 host processor technology

- Application processing and control
- Production-capable architecture

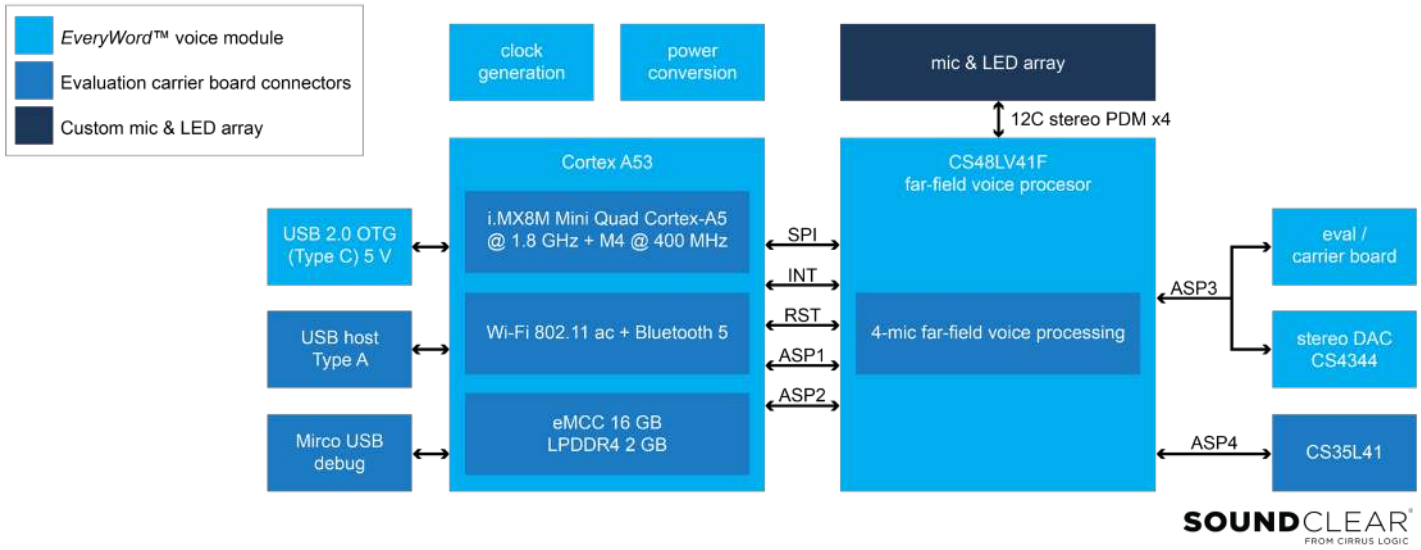
Connectivity includes:

- Wi-Fi 802.11
- Bluetooth 4.1
- Stereo line out
- USB device port
- USB host port for connection to the external USB soundcard

Technical Overview

- Supports linear, Y, square, triangular and 3D mic array geometries
- Proprietary 3D audio processing technology significantly outperforms beam-forming solutions
- Full-duplex far-field voice communication
- Does not require source ducking for reliable interaction
- Concurrent voice service and voice communication
- Multiple user tracking
- 2D & 3D GPU; 4-Lane MIPI DSI and CSI
- 4x bidirectional I²S/TDM audio ports
 - 2x host to AFE
 - 2x available for external connection
- 12 AECs for superior barge-in and multichannel audio
- AEC support from mono to 5.1 channel surround
- USB Host, USB OTG, USB Audio
- GPIO, SPI and I²C connectivity
- Web server-based console

EveryWord™ Architecture



Complete EveryWord™ Ecosystem

