ReSpeaker Mic Array v2.0 – Far-field w/ 4 PDM Microphones

Product Overview

Seeed's ReSpeaker Mic Array v2.0 is an upgraded version of ReSpeaker Mic Array v1 which based on XVSM-2000. The v2.0 developed based on XVF-3000 from XMOS. It can be stacked (connected) right onto the top of ReSpeaker Core to significantly improve the voice interaction experience. The board integrates 4 PDM microphones to help enhance ReSpeaker's acoustic DSP performance to a much higher level.

ReSpeaker Mic Array v2.0 supports USB Audio Class 1.0(UAC 1.0) directly. All major Operating System, like Windows, macOS, Linux are compatible with UAC 1.0, so it can be runs as a sound card without ReSpeaker Core, but has speech algorithm, like far-field on those systems.

ReSpeaker Mic Array v2.0 has both firmware, one includes speech algorithms, another is just capture raw voice data for specially purpose.

Key Benefits

- Far-field voice capture
- Support USB Audio Class 1.0 (UAC 1.0)
- Four microphones array
- 12 programmable RGB LED indicators
- Speech algorithms and features
    - Voice Activity Detection
    - Direction of Arrival
    - Beamforming
    - Noise Suppression
    - De-reverberation
    - Acoustic Echo Cancellation

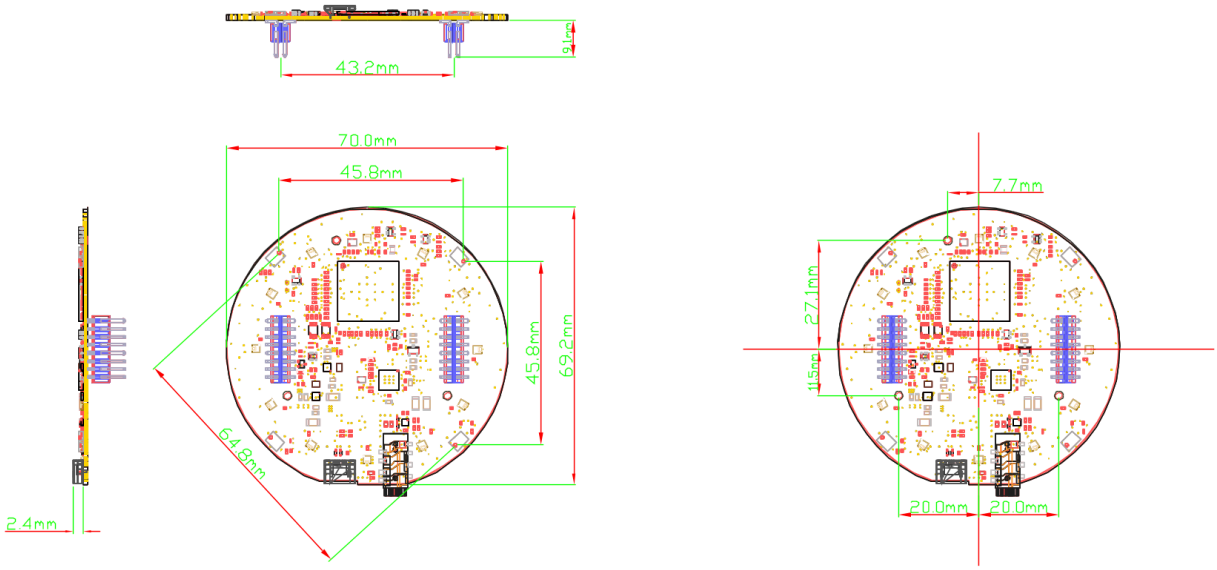
Hardware Features

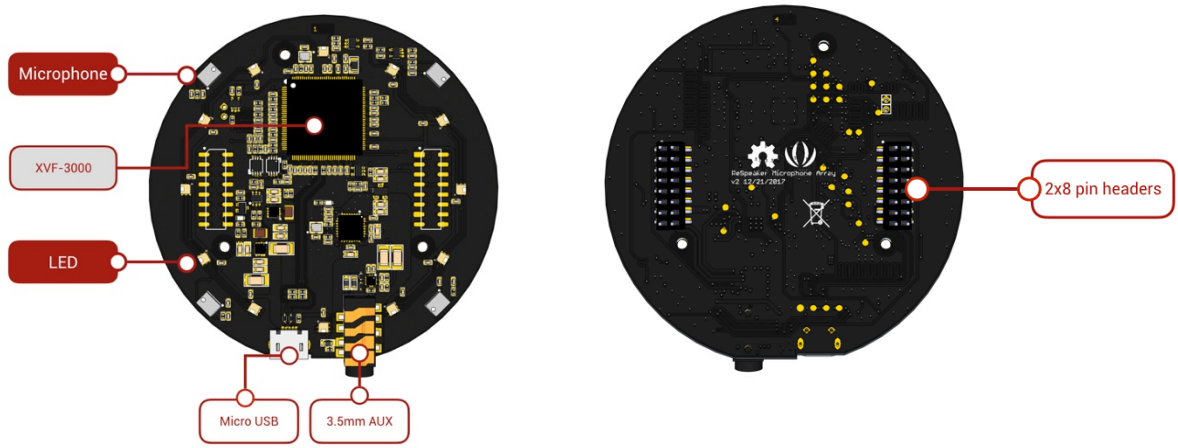
- XVF-3000 from XMOS
- 4 high performance digital microphones
- Supports Far-field Voice Capture
- Speech algorithm on-chip
- 12 programmable RGB LED indicators
- Microphones: ST MP34DT01TR-M
- Sensitivity: -26 dBFS (Omnidirectional)
- Acoustic overload point: 120 dBSPL
- SNR: 63 dB
- Power Supply: 5V DC from Micro USB or expansion header
- Dimensions: 70mm (Diameter)
- 3.5mm Audio jack output socket

Applications

- USB voice capture
- Smart speaker
- Intelligent voice assistant systems
- Voice recorders
- Voice conferencing system
- Meeting communicating equipment
- Voice interacting robot
- Car voice assistant
- Other scenarios need voice command

Hardware Overview





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