

Sense-free Local Amplifier Solution

7-MIC directional voice pickup, 15ms ultra low latency, 32KHz sample rate

In the speech, meeting and classroom, to make the speaker can speak freely and comfortably, the listener can clearly and comfortably listen to the content, is now the local amplifier solutions for the search of the experience effect

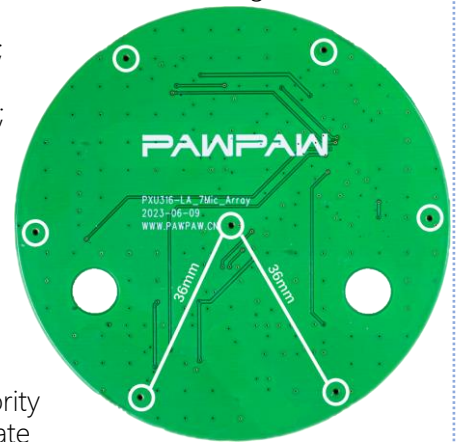
Microphone array local amplifier solutions will become the optimal solution for the next generation of technological to upgrade, and bring a new way of experience:

- It needs to support strong directional pickup, and reduce noise;
- It needs to support far-field pickup to make speaker more free;
- It needs to support very low latency to make speaker sense-free;
- It needs to have a high frequency response of human voice, to make listener more clear and enhance listening enjoyment.

The PXU316-LA-7MIC, with 7-mic array technology, will be a high performance local amplifier solution. Its beamforming technology can set the beam by your needs, and reduce non-section Interference voice, creating up to 30dB sound isolation.

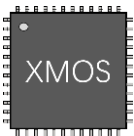
Enhancement of voice to make more clear playback is the high priority direction of this solution. The algorithm uses 32KHz/24bit sample rate microphone input to ensure high fidelity output of 0~10kHz frequency response. The 15ms system latency enables a premium, instantaneous experience that allows voice of the speakers to amplify >10dB loudness without sensation.

PXU316-LA-7MIC uses XMOS processor, which provide strong computing that can intergrade BF AFC, NS, AGC, EQ DSP algorithmic modules inside, making speech more clear and more natural.



Features

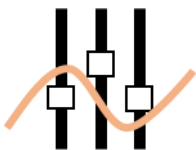
XMOS processor Using the latest XMOS XCORE.AI processor, with high-flexibility, high-computing



XMOS XU316 multi-core processor with 800MHz/3200MIPS computing and 1MB SRAM DSP resources.

- Flexibility of audio interfaces with up to 8 PDM microphones and multiple I2S inputs and outputs
- Zero-latency of audio interfaces for a lower latency experience for local amplifier
- Integrated DSP Float point/hardware VPU acceleration for more algorithmic modules

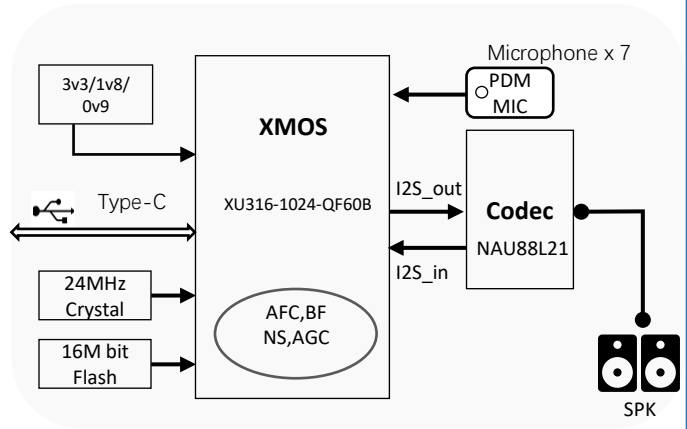
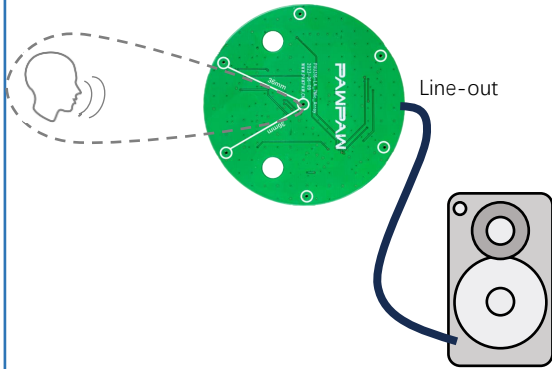
DSP processing Integrated multiple algorithmic modules for the best local amplifier application experience



XMOS processor with built-in DSP multiple algorithmic for local amplifier application

- 6+1 MIC array beamforming for 10 degrees of DOA and up to 30dB isolation directional pickup
- 15ms of system latency from Microphone Input to line-out output
- Algorithmic processing in up to 32KHz@24bit sample rate, output voice frequency up to 10KHz
- Support NS noise reduction and AFC algorithms for up to 10dB of loudness enhancement.

Applications



Datasheet

Audio

- Input frequency response : 0~16KHz
- Output frequency response: 0~10KHz

Hardware

- 72mm diameter circular 6+1 microphone array
- Power consumption : 5V@130mA
- System delay 15ms

DSP module

- BF beam adjustable 10~180 degree pickup
- DOA angle accuracy is ± 10 degrees
- High side flap rejection up to 30dB

Connector

- USB Type-C connector (UAC & 5V power)
- 3.5 mm phone-jack stereo out output

Ordering information

The PXU316-LA-7MIC is a 7 MICs local amplifier solution for conference application, ideal for evaluation and testing by business users such as manufacturers of production local amplifier equipment.

This solution can be supplied by PCBAs or OPEN BOM, PAWPAW provide pre-sales and post-sales technical support services. For more information: www.pawpaw.cn .

Product Name	Board number	Main processor
XMOS 7-MIC local amplifier solution	PXU316-LA-7MIC	XU316-1024-QF60B-C32