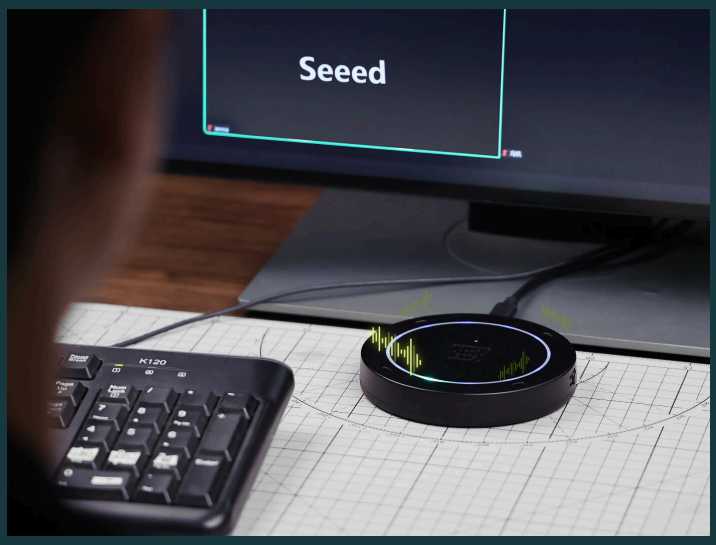
seeed studio

INDUSTRIAL PRODUCT DATASHEET

reSpeaker XMOS XVF3800 with Case – AI-powered 4-Mic Array for Clear Voice Even in Noise

AI-powered 4-mic array for clear far-field voice capture and 360° voice direction detection, ideal for smart home, robotics, and voice AI applications.

SKU	UPDATED	PRICE
114993701	2026-11-07 01:03:45	$59.90(Excl. VAT)



Overview



The reSpeaker XMOS XVF3800 with Case is an AI-powered 4-microphone array built on the XMOS XVF3800 that delivers clear far-field voice capture up to 5 meters with 360° voice direction detection and noise suppression. It addresses echo, noisy environments, and varying voice input levels, and supports integration with smart home voice control, robotics, voice AI agents, and conference or meeting solutions.

Key Features

01 **Professional AI Voice Capture**

Powered by XMOS XVF3800

02 **5mFar-field Voice CaptureCapture clear voice from up to 5 meters away, enabling reliable interaction in smart homes, robots, and conference environments.**

360°Voice Direction DetectionA circular 4-microphone array detects voice direction accurately from any angle with advanced DoA technology.

03 **Struggling with these voice interaction challenges?**

04 **Voice recognition becomes unreliable in noisy environments?**

05 **Audio playback causes echo and disrupts voice interaction?**

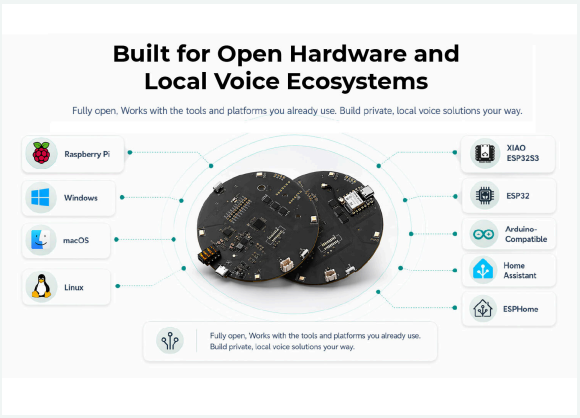
06 **Voice input levels vary when users speak from longer or different distances?**

07 **reSpeaker XVF3800 is designed to solve these challenges with professional-grade voice front-end processing.**

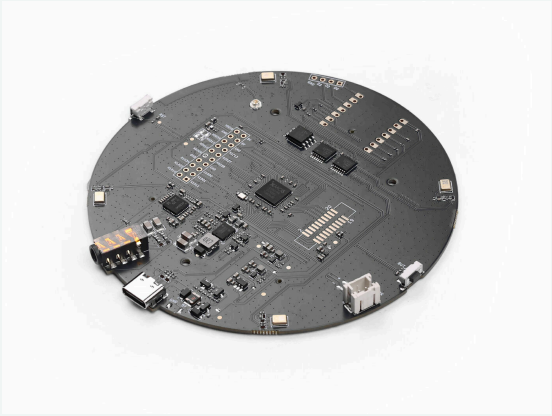
Product Gallery









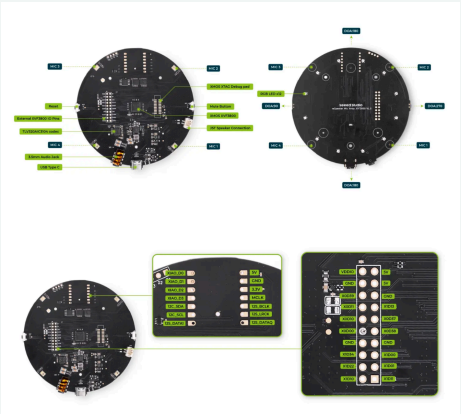




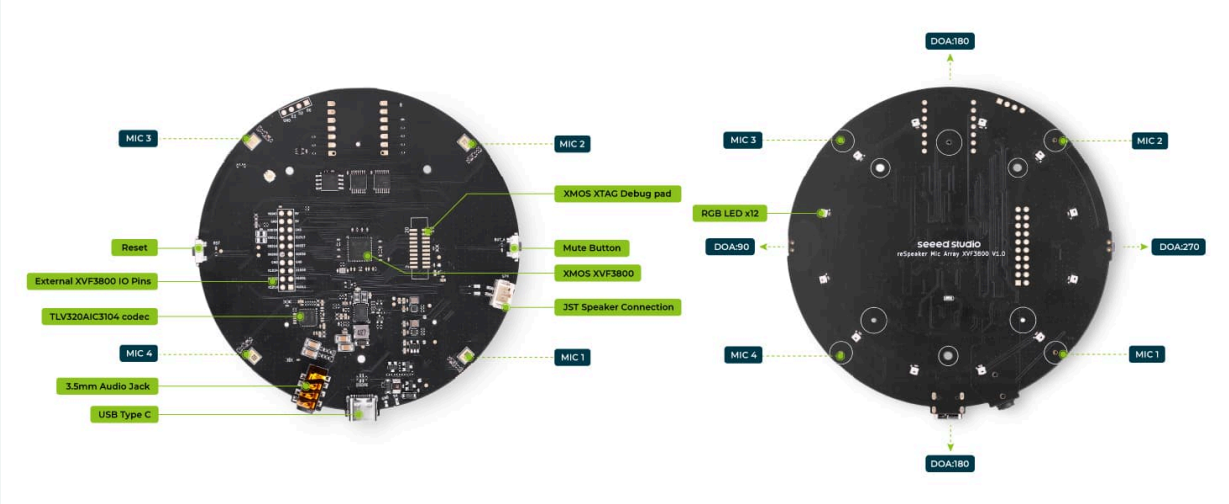


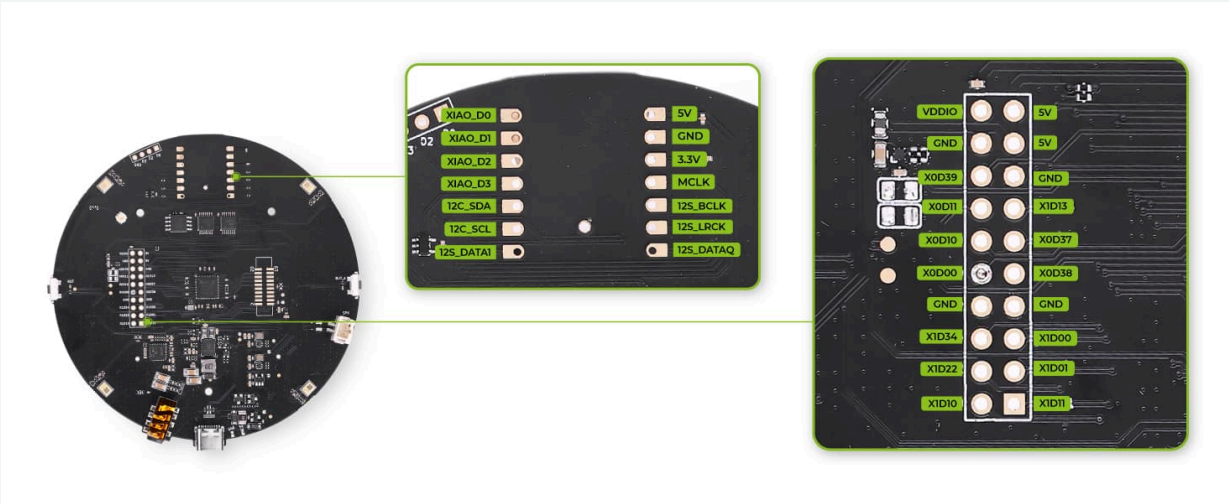

seeed studio
18 mm
108 mm





Hardware Overview





Applications

- **Smart Home Voice Control Using reSpeaker XVF3800 Microphone Array:** The reSpeaker XVF3800 4-mic array with XIAO ESP32S3 can be seamlessly integrated into Home Assistant voice systems, serving as dedicated Home Assistant voice hardware for localized control and smart home automation.
- **Robotics Integration with reSpeaker XVF3800 for Embedded Applications:** The compact design supports smooth integration into robotic platforms, with support for ROS2 to streamline system-level communication and development. 4-mic array enables 360° voice localization, voice command recognition, and noise suppression for interactive robotics, smart toys, and voice-controlled machines. Ideal choice for reliable voice interaction and human-machine communication across service, education, and industrial robotics applications.
- **Build Physical AI Voice Agent with reSpeaker XVF3800:** Through SDK and platform compatibility, reSpeaker XVF3800 supports rapid integration with voice AI frameworks and cloud-based services, allowing devices to be quickly transformed into scalable voice agent solutions.
- **Running Agora TEN Framework on reSpeaker XVF3800:** Use reSpeaker XVF3800 with XIAO ESP32S3 (https://www.seeedstudio.com/ReSpeaker-XVF3800-4-Mic-Array-With-XIAO-ESP32S3-p-6489.html) for audio capture and playback, and use Agora RTC to complete the real-time audio connection. The project provides a standardized configuration method (.env / property.json), supports one-click Docker deployment, dynamic token authentication, and pluggable providers (ASR/LLM/TTS can be replaced as needed). https://wiki.seeedstudio.com/respeaker_xvf3800_agora_ten_framework_client/
- **Running Agora Conversational AI on reSpeaker XVF3800:** Use reSpeaker XVF3800 with XIAO ESP32S3 (https://www.seeedstudio.com/ReSpeaker-XVF3800-4-Mic-Array-With-XIAO-ESP32S3-p-6489.html) as an edge voice AI device to establish a stable, low-latency, bidirectional audio link via Agora RTC, and directly call Agora Conversational AI Agent API v2 on the device to complete the conversational loop of ASR → LLM → TTS: the microphone array captures audio and sends it uplink; the cloud AI generates spoken replies and sends them downlink—delivering a “phone-call-like” voice conversation experience. https://wiki.seeedstudio.com/respeaker_xvf3800_agora_convo_client/
- **On-Edge AI Voice Agent Using reSpeaker XVF3800 and Jetson AGX Orin:** After the microphone array detects a custom wake word, reSpeaker captures a 5-second voice query and uses a local STT engine. A local Llama 3 model then processes the query, enhanced by a RAG architecture for accurate knowledge retrieval and reasoning. The final answer is generated through a local TTS engine. The solution supports deployment across multiple local environments, including NVIDIA Jetson, Raspberry Pi, x86 servers, and Linux / Windows systems. https://wiki.seeedstudio.com/respeaker_voice_assistant/
- **Build Xiaozhi AI Voice Assistant with reSpeaker XVF3800:** Using reSpeaker XVF3800 to build a compact, cloud-connected Xiaozhi voice assistant powered by large language models. With professional far-field audio capture and robust noise suppression, it transforms lightweight edge hardware into a scalable Voice Assistant. https://wiki.seeedstudio.com/respeaker_xvf_3800_xiaozhi/
- **Build Your Own OpenClaw Voice AI Agent with reSpeaker XVF3800:** With reSpeaker's powerful audio capture, combined with OpenClaw's flexible AI agent framework, you can easily create a voice-controlled smart assistant that can automatically understand and respond to your commands. (e.g. locate Lark groups and send interactive meeting invitation cards/Voice-based summarization and automated email delivery) https://wiki.seeedstudio.com/respeaker_xvf_3800_openclaw/

- **Build Your AI Assistant Voice Interface with MimiClaw & reSpeaker XVF3800:** MimicLaw is a lightweight implementation inspired by OpenClaw. It explores how similar agent logic can run in extremely resource-constrained environments. By using reSpeaker XVF3800 as the voice interface, we can turn MimicLaw into something more tangible: a physical AI companion that lives on your desk and interacts naturally through voice. https://github.com/Wkstr/mimiclaw
- **Build Smart Voice Assistants Using reSpeaker XVF3800:** Seamlessly integrates with Amazon Alexa, Google Assistant, Home Assistant, and other mainstream voice AI platforms for far-field voice control, smart home automation, and interactive voice applications.
- **Smart Conference Solutions Using reSpeaker XVF3800:** Compatible with Microsoft Teams, Zoom, and other popular conferencing software via USB. 4-mic array supports beamforming and DoA detection to deliver clear multi-person audio pickup and real-time status feedback.
- **Smart Meeting Solutions Using reSpeaker and reRouter:** reSpeaker 4-mic array transforms meetings into structured, actionable insights. Designed for conference rooms, reSpeaker can clearly capture voices from a distance(up to 5 meters), handle multiple speakers, and continuously record discussions. By running local recording, STT, and AI-powered summarization, the entire process happens on-device. This ensures privacy, reduces deployment complexity, and makes it ideal for long-term use in offices, meeting rooms, and interview spaces.

Resource Links

- https://www.seeedstudio.com/ReSpeaker-XVF3800-USB-4-Mic-Array-With-Case-p-6490.html
- XMOS XVF3800 v3.2.1
- reSpeaker XVF3800 Flyer
- reSpeaker XVF3800 Flyer(Chinese)
- reSpeaker Series Flyer
- reSpeaker XVF3800 3D File - Board
- reSpeaker XVF3800 3D-Enclosure-Up File
- reSpeaker XVF3800 3D-Enclosure-Down File

Seeed Technology Co.,Ltd.
9F, Building G3, International E City,
Zhongshanyuan Road, Nanshan, Shenzhen, China

Tel: +86 0755-80695676
Web: www.seeed.cc
Shop: www.seeedstudio.com