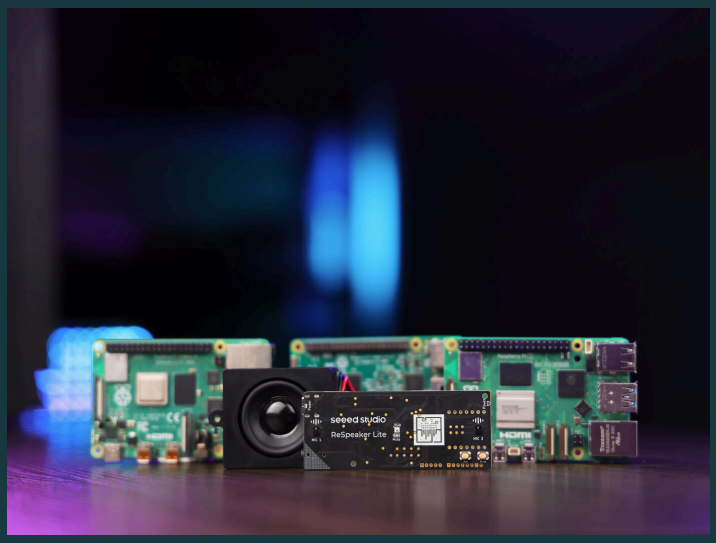
seeed studio

INDUSTRIAL PRODUCT DATASHEET

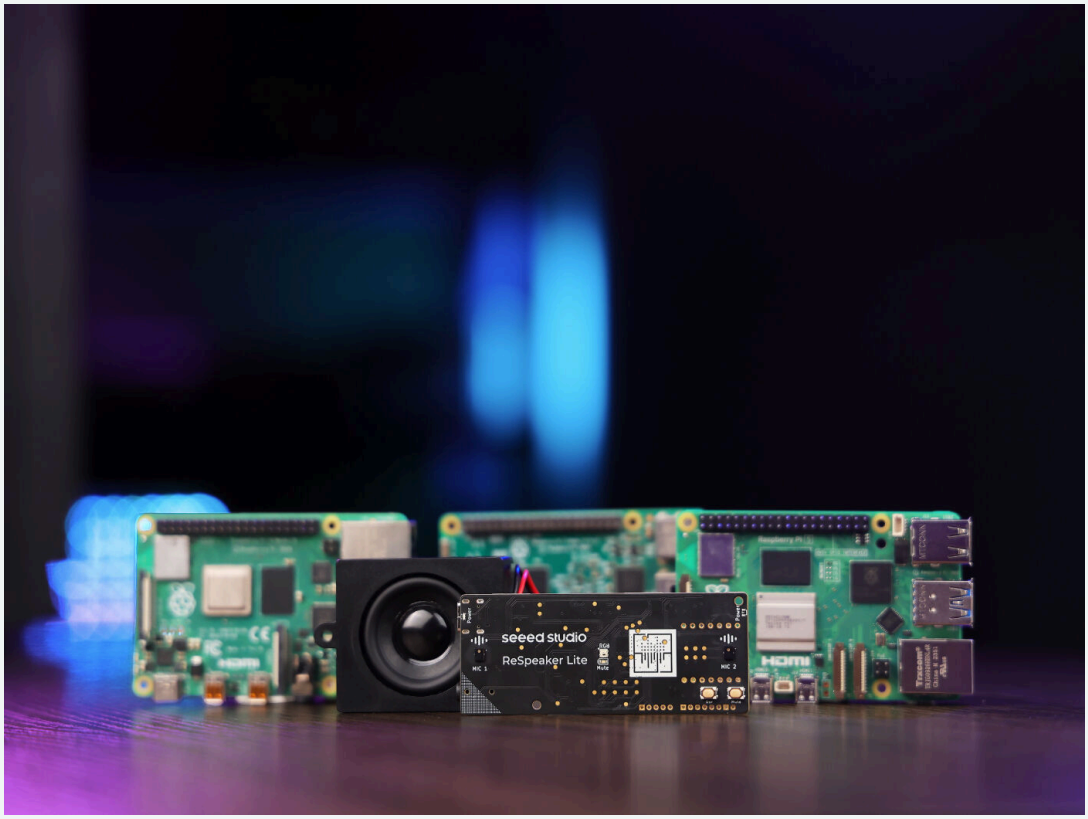
reSpeaker Lite with Raspberry Pi

reSpeaker Lite with Raspberry Pi delivers far-field voice capture, onboard AI ASR, smart home integration, and large language model deployment for advanced voice assistants.

SKU	UPDATED
E2024082601	2026-10-23 03:32:50



Overview



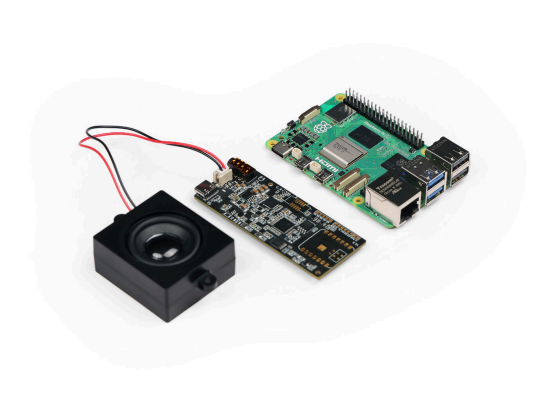
The reSpeaker Lite with Raspberry Pi integrates a dual microphone array for far-field voice capture up to 3 meters and onboard AI ASR algorithms powered by the XMOS XU-316 chip, including interference cancellation, acoustic echo cancellation, noise suppression, VNR, and AGC. It supports smart home integration with Home Assistant, Amazon Alexa, and Google Assistant, and enables deployment of large language models on the Raspberry Pi for advanced voice interactions.

Key Features

Explore the full reSpeaker lineup. Compare specs, find your ideal fit, and catch the latest updates & community news. Check the reSpeaker Series Landing Page

- **Dual Microphone Array for Far-Field Voice Capture**: The 2 high performance digital microphones capture and extract far-field speech and voice (up to 3 meters) even in noisy environments as it cancels point noise using two microphone input.
- **Onboard AI ASR Algorithms**: Powered by **XMOS XU-316** AI sound and audio chip, the kit includes Automatic Speech Recognition algorithms for Interference Cancellation (IC) , Acoustic Echo Cancellation, Noise Suppression, Voice-to-Noise Ratio (VNR), and Automatic Gain Control (AGC), enabling high quality voice capture.
- **Smart Home Integration**: Smart Home Integration: Supports integration with voice assistants like Home Assistant, Amazon Alexa, and Google Assistant, enabling smart home control.
- **Large Language Model Deployment:** Capable of deploying and running large language models on the Raspberry Pi, enabling advanced voice interactions and responses, making it ideal for building sophisticated voice assistants and smart home controllers.

Product Gallery







Specification

General	
Digital Microphones	High-Performance Digital Microphones * 2
Sensitivity	-26 dBFS
Acoustic Overload Point	120 dBL
SNR	64 dBA
Far-Field Voice Capture	Up to 3m
Audio Output	Speaker Connector / 3.5mm Headphone Jack
Power Supply	USB 5V, External 5V
Dimensions	Length: 92mm Width: 42mm Height: 95mm
Weight	200 g
Audio Processing Chip	
Model	XMOS XU316
Maximum Sampling Rate	16Khz
Automatic Speech Recognition Algorithms	NLU, IC, AEC, NS, VNR, AGC

Resource Links

- https://www.seeedstudio.com/ReSpeaker-Lite-with-Raspberry-Pi.html
- Product-Brief of XMOS XU316
- ReSpeaker Lite - CE certifications
- ReSpeaker Lite - FCC certifications

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