Seeed Studio reSpeaker Flex XVF3800 Circular-4 without XIAO ESP32S3 (Pre-order, back in 6-8 weeks)



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$67.99

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Seeed Studio reSpeaker Flex XVF3800 Circular-4 without XIAO ESP32S3 is a split-type 4-microphone voice front end built for robotics, embedded systems, kiosks, and other voice-enabled devices. This version includes the core board and circular 4-mic array board, but **does not include a XIAO ESP32S3**. According to the official Seeed product page, the no-XIAO version ships with **factory-installed USB audio firmware**, making it well suited for direct use with hosts such as Raspberry Pi, NVIDIA Jetson, Windows, Linux, and macOS systems.

Powered by the **XMOS XVF3800**, the module integrates advanced audio algorithms including **AEC**, **AGC**, **beamforming**, **DoA**, **VAD**, **noise suppression**, and **de-reverberation**. The modular split design separates the processing core from the microphone array by a flexible FPC cable, which helps place the mic board closer to the user while reducing interference from internal motors, fans, or enclosure noise in compact embedded products.

Features

- **Split core-and-array design:** Separates the processing board and mic array board for easier mechanical integration in robots and embedded systems.
- **XMOS XVF3800 audio processor:** Handles far-field voice capture and onboard acoustic processing for clearer speech input.
- **Factory USB firmware on no-XIAO version:** Ready for plug-and-play USB audio workflows without requiring a pre-soldered XIAO ESP32S3.
- **4-mic circular array:** Supports 360 degree omnidirectional pickup and accurate direction-of-arrival detection.
- **Far-field voice capture:** Designed for pickup distances of up to 5 meters in suitable environments.
- **Integrated audio algorithms:** Includes AEC, AGC, beamforming, VAD, noise

- **Compact embedded form factor:** Circular mic array uses 44 mm spacing and approximately 73 mm array diameter for space-constrained designs.
- **Flexible power and audio output:** Supports USB Type-C or JST power input plus 3.5 mm audio jack and 2-pin speaker connector output.

Specifications

Parameter	Value
Product	reSpeaker Flex XVF3800 Circular-4 without XIAO ESP32S3
Audio Processor	XMOS XVF3800
Microphones	4 x high-performance PDM MEMS microphones
Array Topology	Circular 4-mic array, 44 mm spacing
Pickup Pattern	360 degree omnidirectional capture
Pickup Range	Up to 5 meters
Supported Algorithms	AEC, AGC, DoA, beamforming, VAD, noise suppression, de-reverberation
USB Interfaces	1 x USB Type-C, 1 x USB JST connector
Other Interfaces	XIAO compatible pads, XMOS XVF3800 XTAG debug pads, XMOS XVF3800 IO pads

Parameter	Value
Power Input	5V via USB Type-C or 5V JST connector; 12V via 2-pin terminal connector
Mic Array Interface	1 x 24-pin FPC connector
Buttons	Reset button, boot button
Maximum Sampling Rate	16 kHz
Mounting	3 x M3 mounting holes
Firmware	Factory-installed USB audio firmware on no-XIAO version

Applications

- Voice interfaces for desktop, humanoid, companion, and service robots
- Embedded voice capture for kiosks, digital signage, and smart terminals
- Smart conference and multi-person voice pickup via USB audio
- Voice-enabled educational devices, interactive toys, and assistants
- Industrial voice control in noisy commercial or factory environments

Hardware Highlights

- **USB host friendliness:** Suits Linux SBCs, PCs, and edge platforms that need a ready-to-use USB audio frontend.
- **DoA and beamforming support:** Helps with voice localization and more robust interaction in 360 degree use cases.
- **Speaker-ready design:** Integrates a 10 W-capable amplifier stage based on TI TPA3139D2.

Packing List

- reSpeaker Flex Core Board x1
- reSpeaker Flex Circular Mic Array Board x1
- 20 cm FPC cable x1
- Pin connectors x1

FAQ

Does this version include a XIAO ESP32S3?

No. This listing is the version without a pre-installed XIAO ESP32S3.

What firmware is installed by default?

Seeed states that the no-XIAO versions ship with factory-installed USB audio firmware.

What platforms can it connect to?

It is positioned for USB connection to Raspberry Pi, NVIDIA Jetson, Windows, Linux, and macOS hosts.