

We develop technology and solutions that are changing how people interact with their homes, cars and work environments. Our expertise is focussed on developing interfaces that enable people to control electronic devices in the most natural way possible, with their voice.

Please see our separate [Company Backgrounder in our Press Kit](#) for further details.

Solution: VocalFusion 4-Mic Kit for Amazon AVS

Who is the development kit for? The xCORE VocalFusion 4-Mic Kit for Amazon AVS enables developers of smart panels, kitchen appliances, and other commercial and industrial electronics to evaluate and prototype far-field (“across the room”) voice interfaces using the Amazon Alexa Voice Service.

What can you do with the dev kit? Built around XMOS’ [XVF3000 voice processor](#), the VocalFusion 4-Mic Kit for Amazon AVS provides embedded far-field voice capture and processing using a linear array of four digital microphones. The kit interfaces with a Raspberry Pi that runs the Alexa client and connection to Alexa Voice Services.

What functionality does the dev kit have? The kit provides direct interfacing to an array of four PDM microphones; an adaptive beamformer that can locate the targeted speech source and track it as the source moves around a room; full duplex Acoustic Echo Cancellation that isolates voice commands from any audio the device is playing (e.g. can isolate the voice, even if the same device is playing music); dereverberation, noise suppression and gain control that makes sure the signal delivered to the Alexa Voice Services is crystal clear without distortion; connectivity to the RPi system processor using an I2S audio interface with I2C control, enabling high quality voice capture and audio playback.

Firsts and unique features:

- first Amazon Alexa Voice Service development kit *with linear mic array for far-field* voice capture
- first AVS development kit to feature a reference client built using the recently released AVS Device SDK
- first XMOS development kit to use [Infineon MEMs microphones](#) IM69D130

Images

We are happy to provide high resolution images to the press, please contact us marketing@xmos.com



Useful links

XMOS Press Release	XMOS delivers first Amazon Alexa Voice Service development kit with linear mic array for far-field voice capture
XMOS Product Details	VocalFusion 4-Mic Kit for Amazon AVS
Infineon Market News	Infineon high SNR MEMS microphones complement the Amazon AVS far-field development kit from XMOS
Amazon content	Blog New XMOS Dev Kit for AVS Brings Far-Field Voice Capture to a Linear Mic Array Developer Page XMOS VocalFusion 4-Mic Dev Kit for Amazon AVS, A Far-Field Reference Solution for the Alexa Voice Service

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