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 Stereo Dev Kit for Amazon AVS

Who is the development kit for? The *VocalFusion Stereo Dev Kit for Amazon AVS* is designed for developers working in the growing Alexa-enabled smart TV, soundbar, set-top box, digital media adapter, and other stereo audio and visual consumer electronics market segments, all of which require true stereo-AEC support to deliver compelling "across the room" voice-interface solutions. Increasingly, these linear implementations will be fully integrated and invisible in devices at the edges of our living and working spaces.

What can you do with the dev kit? Built around XMOS' XVF3500 voice processor, the *VocalFusion Stereo Dev Kit for Amazon AVS* provides embedded far-field voice capture and processing, including true stereo acoustic echo cancellation, 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 stereo 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 stereo 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, enables high quality voice capture and audio playback.

Firsts and unique features:
- first *stereo-AEC* development kit *with linear mic array for far-field* voice capture qualified for Alexa Voice Service, by Amazon.

What is the difference between this kit, and the VocalFusion 4-Mic Kit for Amazon AVS?

	VocalFusion Stereo Dev Kit for Amazon AVS	**VocalFusion 4-Mic Kit for Amazon AVS**
Designed for developers and OEMs working on Alexa-enabled…..	…stereo electronics: smart TVs, soundbars, set-top boxes, digital media adapters, audio and visual equipment.	…smart panels, kitchen appliances, and other commercial and industrial electronics.
Voice Processer	xCORE XVF3500	xCORE XVF3000
Acoustic Echo Cancellation	True-stereo: full duplex stereo-AEC	full duplex AEC
Launched	26th February 2018	5th October 2017

Images

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

Useful links

XMOS Press Release	Another world first for XMOS: stereo-AEC far-field linear development kit for AVS, qualified by Amazon
XMOS Product Details	VocalFusion Stereo Dev Kit for Amazon AVS
Amazon content	**Blog** New XMOS Development Kit for Integrating Alexa into Slim Profile and Wall-Mounted Devices
	Developer Page XMOS VocalFusion Stereo Development Kit
	A linear reference solution with stereo AEC for AVS