

Microsemi AcuEdge™ Development Kit for Amazon AVS ZLK38AVS2 Quickstart Card

Kit Contents

Quantity	Description
1	ZLE38000-004 Evaluation Board
1	Pillar (plastic stand) and hardware
1	Raspberry Pi 3
1	32 GB micro SD Card
1	JBL Clip2 Speaker
1	5 V, 2 A micro USB power supply
1	This quickstart card
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Overview

Microsemi AcuEdge™ Development Kit for Amazon AVS is engineered to help you evaluate voiceenabled front-end audio systems for your Alexa-enabled products. This kit features Microsemi's ZL38063 voice processor powered by Microsemi's proprietary AcuEdge™ technology for front-end audio clean-up and Sensory's TrulyHandsFree™ "Alexa" wake-word engine. Options for one, two, or three microphone configurations allow testing for a variety of applications and environments.

Hardware Assembly Instructions

- 1. Mount Raspberry Pi 3 to the top ring with four nylon screws, two nylon standoffs, and two nylon nuts. The circuit board should align with the 40-pin expansion header toward the front of the ring. The nuts go to either side of the expansion header and the standoffs go opposite to provide stability.
- 2. Using the outermost holes, mount base using four rubber feet, four metal screws, and four short metal standoffs.
- 3. Place center ring (marked JBL Clip 2) on the male threaded ends of the short metal standoffs. Mount the four long metal standoffs.
- 4. Place the JBL Clip2 Speaker facing down in the center ring. The speaker will fit snugly in this position.
- 5. Using remaining four metal screws, mount the top ring to the long metal standoffs.
- 6. Mount the ZLE38000-004 Rev 401 circuit board on to the Raspberry Pi board's 40-pin expansion header, using the remaining two nylon screws to secure.
- 7. Plug the speaker cord into the 3.5 mm audio jack of the ZLE38000-004.
- 8. Follow the below instructions to load the software image onto the SD card. When complete, insert SD card into Raspberry Pi and power the Raspberry Pi from the included 5 V, 2 A supply.

Software Installation

A pre-configured SD card image can be downloaded from the ZLK38AVS GitHub project page: https://github.com/Microsemi/ZLK38AVS#important-considerations

Additional Documentation

Located in the "/ZLK38AVS/docs" directory on the Raspberry Pi 3 after installation is completed:

- Microsemi ZLK38AVS Quickstart.pdf: This Quickstart card
- Microsemi ZLK38AVS ProductBrief.pdf: Kit product brief

Support

To learn more about Microsemi and its development kit, visit: https://www.microsemi.com/products/audio-processing/audio-processing-partners

To learn more about Amazon Alexa Voice Service and access the Amazon AVS API reference guide, visit: https://developer.amazon.com/alexa-voice-service/

Microsemi sales offices, including representatives and distributors, are located worldwide. To find your local representative, go to http://www.microsemi.com/salescontacts.



Microsemi ZL38063 ProductBrief.pdf: Microphone Array ASR-assist Audio Processor description