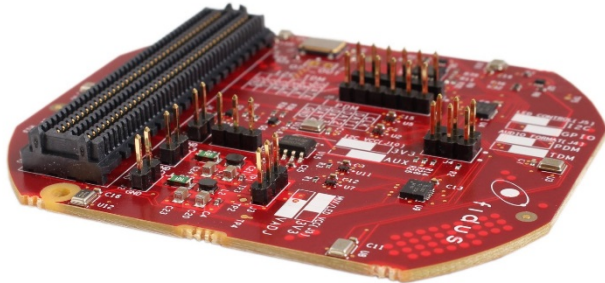


Sound Recognition Development FMC

October, 2016

Now accepting orders

With seven (7) strategically spaced microphones this FMC enables sound directionality and voice recognition developments



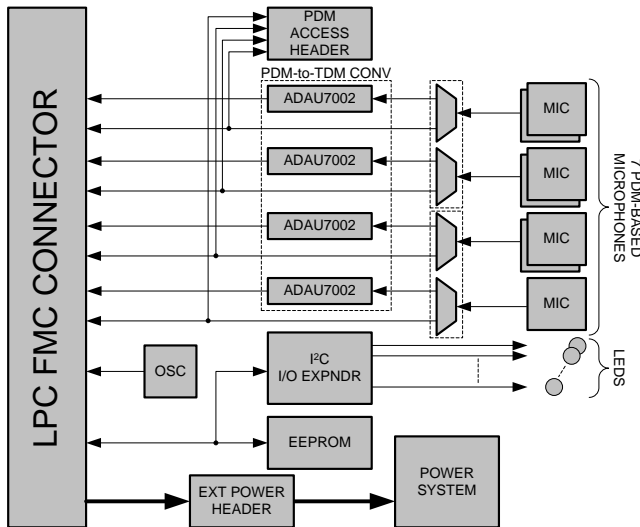
Features

- 7x PDM microphones
 - selectable onboard PDM-to-TDM/I²S conversion
 - 3x microphone end fire array structure
- Supports both FMC and desktop operation¹
- Compatible with FMC Specification (VITA 57.1)
- Designed for electrical compatibility with most carrier cards²

¹ Desktop operation requires cabling of unit to a host system

² Verify your target mainboard with us prior to ordering

Function Block Diagram



Product Outline

Xilinx® Zynq® as well as other Xilinx FPGAs are well suited for completing the processing tasks associated with sound, and by extension voice recognition. Although Zynq is an ideal candidate, this does not preclude use of other development platforms.

The seven (7) microphones are strategically spaced to support directionality applications associated with the human voice.

Microphone System

- Seven (7) PDM Knowles SPH0641LM4H-1 microphones
- Four (4) Analog Devices 4 ADAU7002 support stereo PDM-to-TDM or I²S conversion
- Multiplexer enables PDM data to be directly passed to the FMC connector, bypassing TDM/I²S conversion
- Three (3) microphone end fire array structure
- Strategic spacing for directionality applications
- An LED placed near each microphone can be used to visually indicate source or microphone activity level

Connectors

- LPC FMC connector
- Designed for compatibility with VITA 57.1 specification (wide range of carrier card support)
- Headers for test and debug or desktop access

Power Requirements

- Main rails: 3.3V
- Wide range VADJ support: 1.2 to 3.3V
- FMC as well as Desktop operation supported

Board Dimension

- Similar to Single width, air-cooled, LPC FMC

Available References

Design Package (available under license)

- Schematics, PCB Layout, Artwork, Bill of Materials

FPGA Reference Designs (coming soon)

- Downloadable .bit file examples
- Licensable source (some blocks netlist encrypted)
- Zedboard™ target

For Inquiries or Orders: Email – products@us.inrevium.com

Part Number : TB-FMCL-7MIC