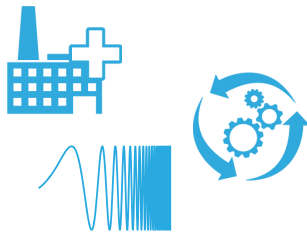
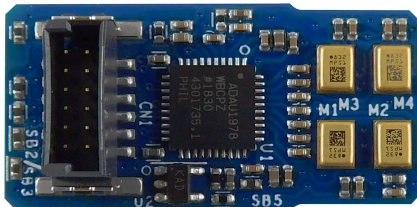


## Analog microphone array expansion for the SensorTile Wireless Industrial Node (STWIN) kit



### Features

- Analog microphone array expansion for STWIN (STEVAL-STWINKT1)
- Connects to STWIN core system board through dedicated 12-pin connector
- 3 V to 5.5 V power supply input
- 4 mm square-shaped differential microphone array
- 4x MP23ABS1 high-performance, single-ended, analog, bottom-port MEMS microphones
- LDK130 300 mA low quiescent current very low noise LDO
- On-board audio-grade quad ADC
- Serial Audio Interface (SAI) digital output

### Description

The [STEVAL-STWINMAV1](#) microphone array expansion adds advanced audio sensing capabilities to the [STEVAL-STWINKT1](#) SensorTile Wireless Industrial Node (STWIN) kit for high frequency vibration monitoring applications.

The board includes four low-power, high signal-to-noise ratio (SNR) [MP23ABS1](#) capacitive sensing microphones, supported by a very low drop voltage, low quiescent current and low-noise voltage regulator ideal for batter-powered applications such as STWIN.

The expansion board is connected via a dedicated 12-pin connector to the core system board, which runs the [STSW-STWINKT01](#) firmware with dedicated BSP drivers and application examples for you to test and develop vibration monitoring in the ultrasound frequency ranges.

Product summary	
Analog microphone array expansion for STWIN kit	<a href="#">STEVAL-STWINMAV1</a>
MEMS analog bottom-port microphone	<a href="#">MP23ABS1</a>
STWIN SensorTile Wireless Industrial Node development kit	<a href="#">STEVAL-STWINKT1</a>
Firmware for STEVAL-STWINKT1 evaluation kit	<a href="#">STSW-STWINKT01</a>

# 1 Schematic diagrams

Figure 1. STEVAL-STWINMAV1 schematic - Mics, VDD and connector

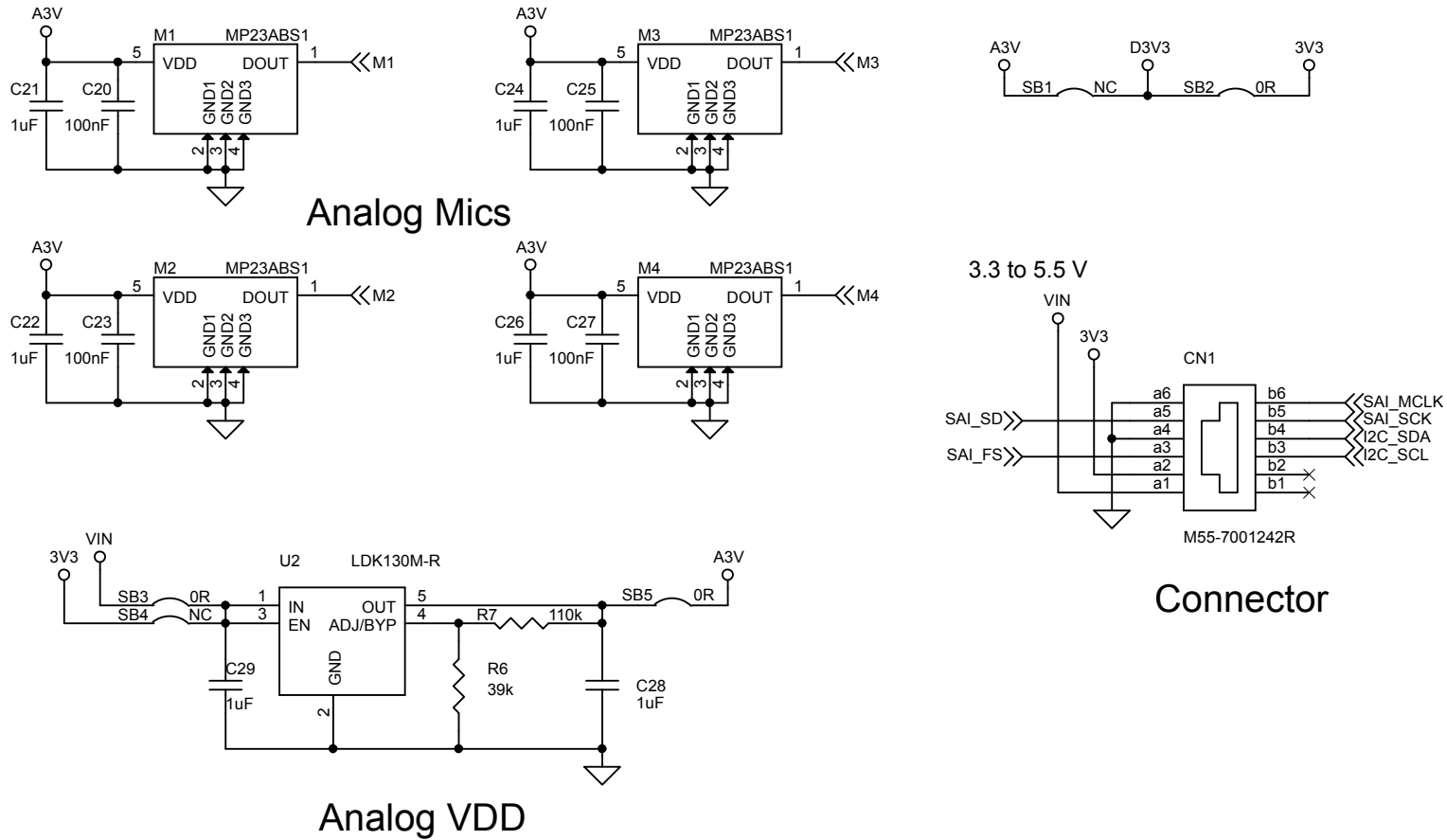
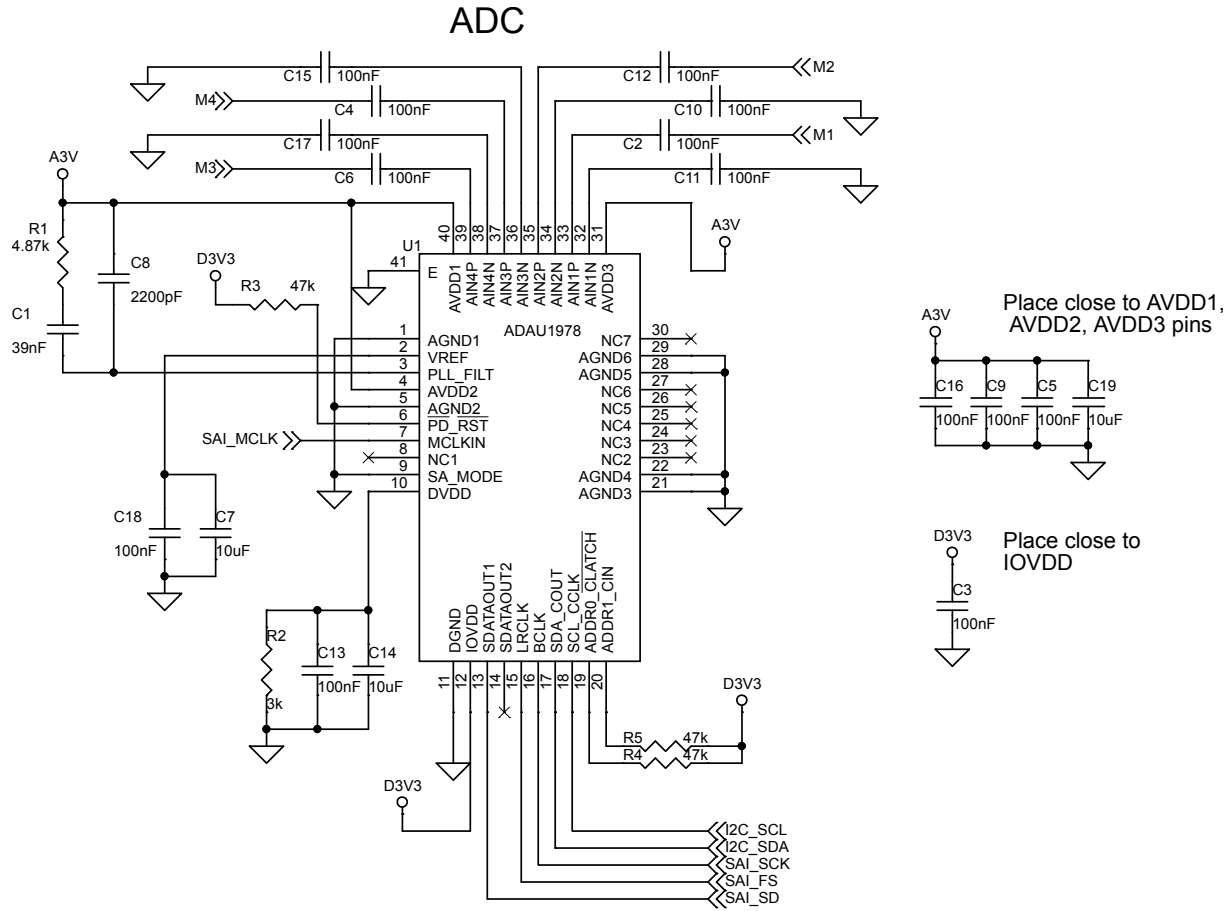


Figure 2. STEVAL-STWINMAV1 schematic - ADC



## Revision history

**Table 1. Document revision history**

Date	Version	Changes
08-Jul-2019	1	Initial release.

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