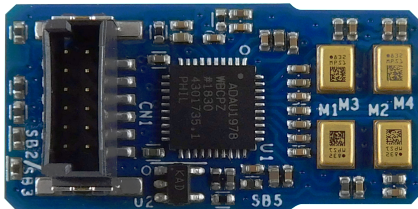


## Analog microphone array expansion for the SensorTile Wireless Industrial Node (STWIN) kit



### Features

- Analog microphone array expansion for STEVAL-STWINKT1B (and 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-STWINKT1B (and 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	STEVAL-STWINMAV1
MEMS analog bottom-port microphone	MP23ABS1
STWIN SensorTile Wireless Industrial Node development kit and reference design for industrial IoT applications	STEVAL-STWINKT1B
Firmware for STEVAL-STWINKT1B evaluation kit	STSW-STWINKT01
Applications	Factory Automation Sound Sensing

# 1 Schematic diagrams

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

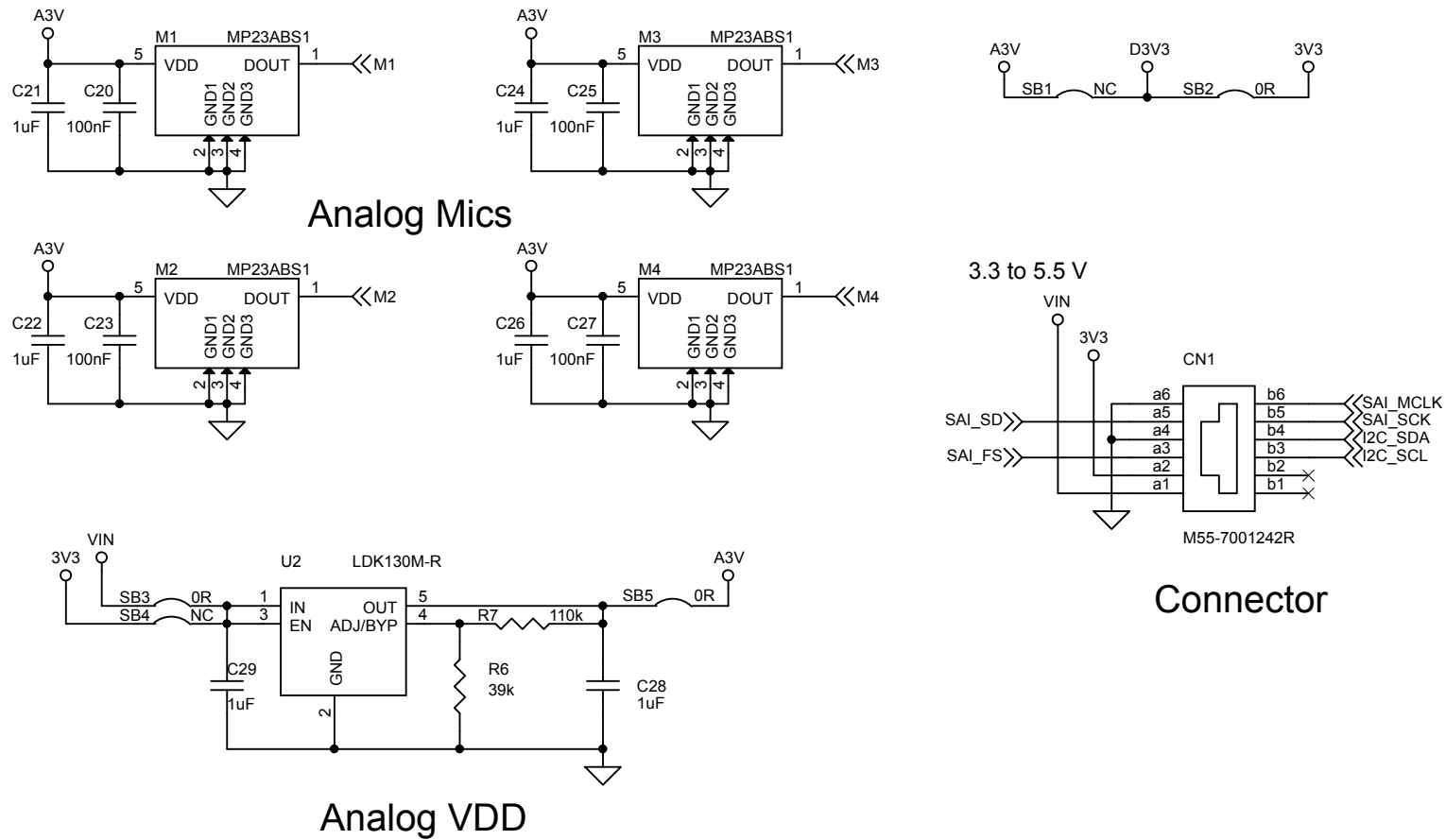
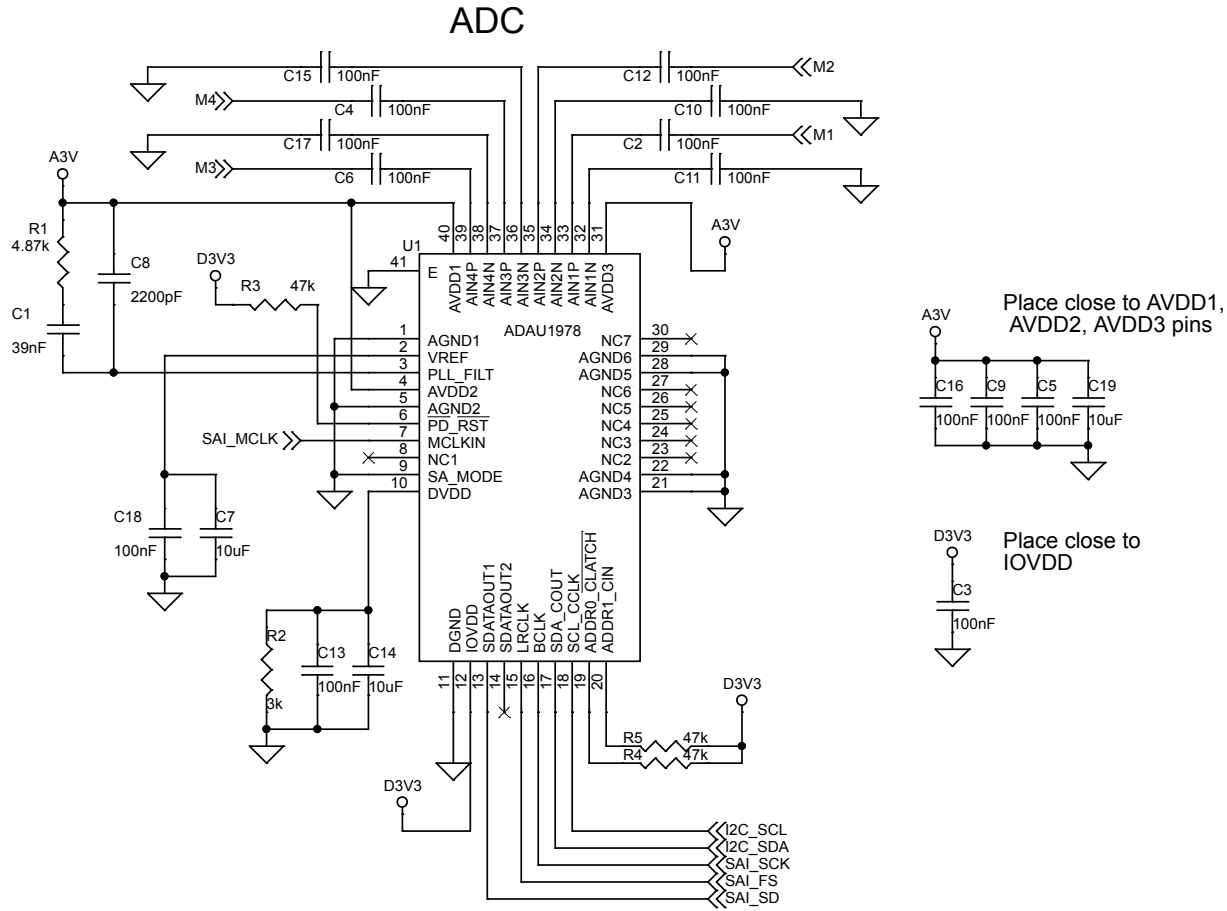


Figure 2. STEVAL-STWINMAV1 schematic - ADC



## Revision history

**Table 1. Document revision history**

Date	Version	Changes
08-Jul-2019	1	Initial release.
16-Dec-2020	2	Updated cover page features, description and product summary table.