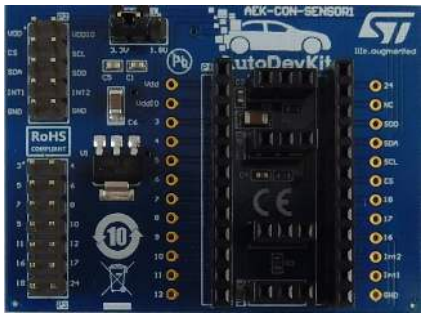
AEK-CON-SENSOR1

Data brief

Connector board for SPC5 MCU discovery boards and MEMS sensor boards in DIL 24 socket



Features

- Connects the AEK-MCU-C4MLIT1 MCU discovery board to the MEMS sensor boards in DIL 24 socket
- Supports several sensors: digital microphones, 2D and 3D accelerometers, inclinometers
- Hosts a 1.8 V LDO voltage regulator for MEMS board supply
- Compact size: 56 mm x 41 mm
- WEEE and RoHS compliant
- Included in the AutoDevKit initiative

Description

The AEK-CON-SENSOR1 connector board is designed to interface MEMS sensor boards in DIL 24 socket to an SPC5 MCU discovery board like the AEK-MCU-C4MLIT1 hosting a SPC58EC80E5 Chorus family automotive MCU with 4 MB flash.

The connector board includes a 1.8 V LDO voltage regulator to supply MEMS boards.

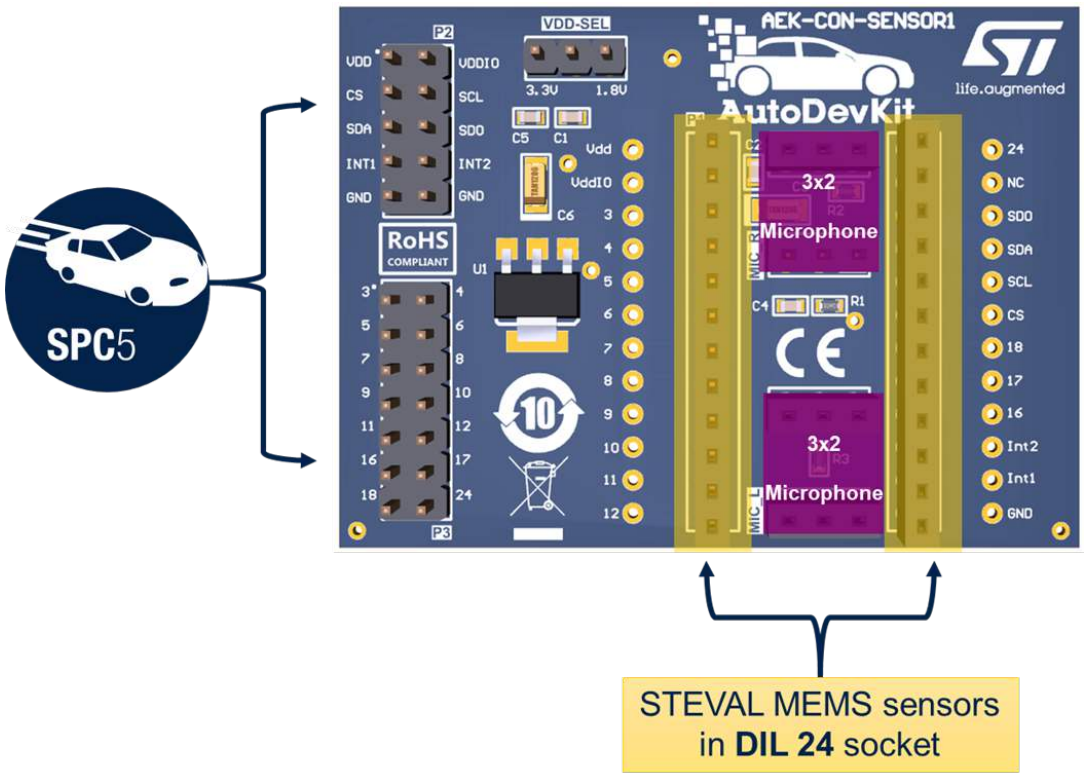
Two male strip connectors allow connecting the AEK-MCU-C4MLIT1: the main one (5x2) is used for power supply, SPI interface and signal interrupt, whereas the second one (7x2) is used for optional GPIO connections depending on the plugged MEMS sensor board.

For the MEMS sensor board connection, three female strip connectors are used: the main one (12x2) hosts the MEMS sensors in DIL 24 socket, whereas the other two (3x2) host digital microphones.

Product summary	
Connector board for AEK-MCU-C4MLIT1 MCU discovery board and MEMS sensor boards in DIL 24 socket	AEK-CON-SENSOR1
MCU discovery board for SPC5 Chorus 4M automotive microcontroller with CAN transceivers	AEK-MCU-C4MLIT1
MEMS sensor boards in DIL 24 socket	STEVAL-MKI193V1/ STEVAL-MKI206V1/ STEVAL-MKI208V1K/ STEVAL-MKI209V1K/ STEVAL-MKI211V1K/ STEVAL-MKI212V1/ STEVAL-MIC006V1
AutoDevKit library plugin for SPC5-STUDIO	STSW-AUTODEVKIT
Applications	In-Vehicle Infotainment/Electro-Mobility/Telematics Box

1 Block diagram

Figure 1. **AEK-CON-SENSOR1 block diagram**



2 Schematic diagram

Figure 2. AEK-CON-SENSOR1 circuit schematic

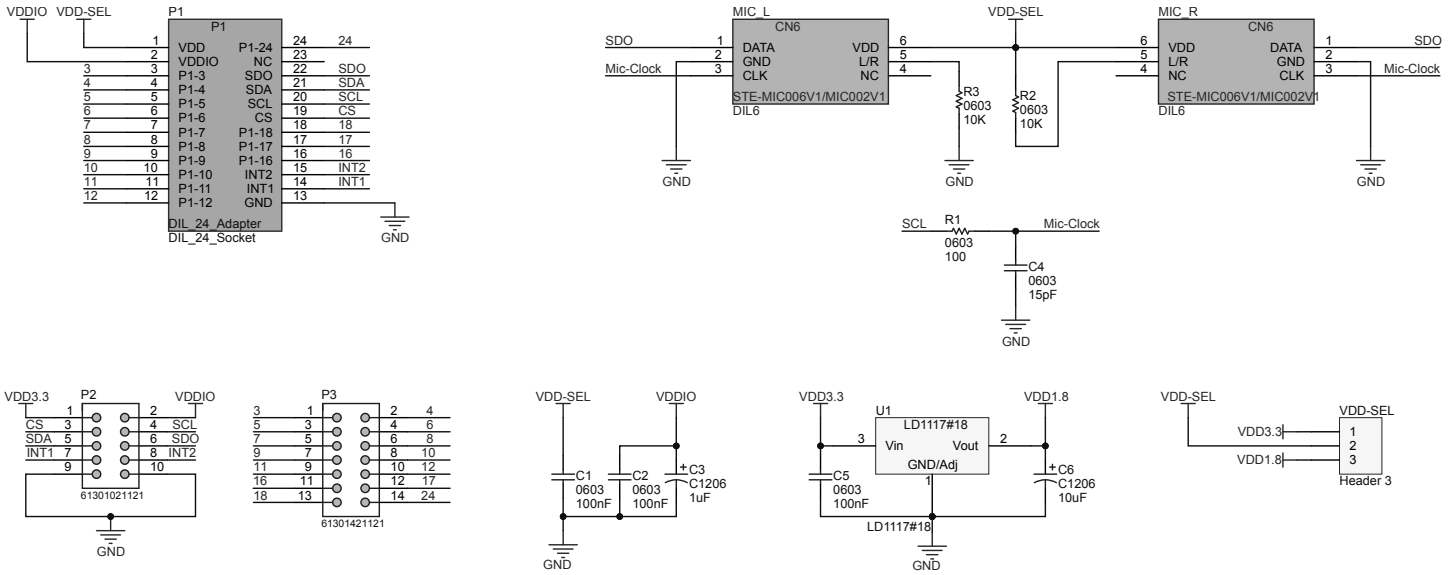
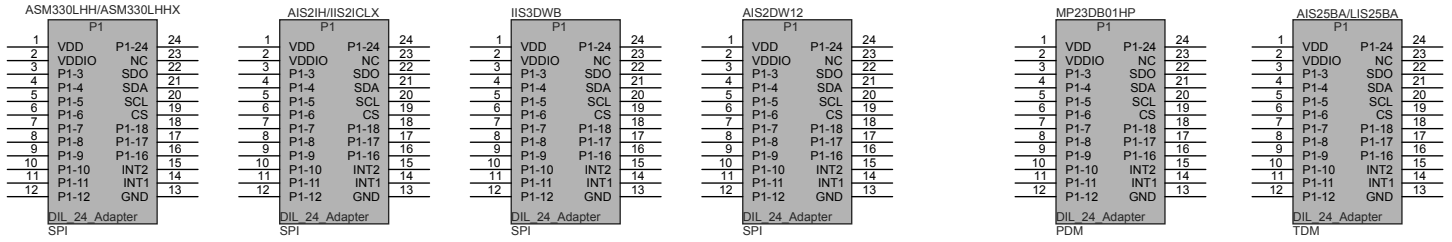


Figure 3. Additional MEMS sensors in DIL 24 circuit schematic



Revision history

Table 1. Document revision history

Date	Version	Changes
10-Feb-2021	1	Initial release.
29-Sep-2022	2	Updated product summary table and Section 2 Schematic diagram. Added references to STEVAL-MKI212V1 and ASM330LHHX.