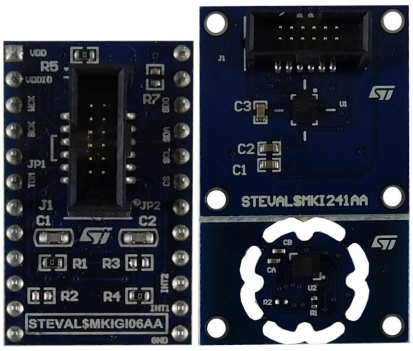
STEVAL-MKI241KA

Data brief

LSM6DSV16B adapter kit for a standard DIL24 socket with bone conduction functionality



Product summary	
LSM6DSV16B adapter kit for a standard DIL24 socket with bone conduction functionality	STEVAL-MKI241KA
6-axis IMU (inertial measurement unit) with sensor fusion and hearable features for TWS	LSM6DSV16B
Professional MEMS tool: evaluation board for all ST MEMS sensors	STEVAL-MKI109D
Motion MEMS and environmental sensor expansion board for STM32 Nucleo	X-NUCLEO-IKS4A1
Applications	Hearables

Features

- User-friendly LSM6DSV16B board
- Complete LSM6DSV16B pinout for a standard DIL24 socket
- Fully compatible with the STEVAL-MKI109D evaluation platform
- RoHS compliant

Description

The STEVAL-MKI241KA evaluation kit is based on a specific PCB mounting the LSM6DSV16B 6-axis IMU (inertial measurement unit).

There are two different boards inside the STEVAL-MKI241KA. One can be used as a standard application board and a small adapter can be put inside the earphone to verify the bone conduction feature.

Both boards can be connected to the STEVAL-MKI109D via the STEVAL-MKIGI06A interface board.

The kit provides the complete LSM6DSV16B pinout and comes ready to use with the required decoupling capacitors on the V_{DD} and V_{DDIO} power supply line.

This adapter is supported by the STEVAL-MKI109D evaluation platform, which includes a high-performance 32-bit microcontroller functioning as a bridge between the sensor and a PC, on which it is possible to use the downloadable MEMS Studio graphical user interface or dedicated software routines for customized applications.

It is also possible to plug the board into the X-NUCLEO-IKS4A1 expansion board.

1 Schematic diagrams

Figure 1. STEVAL-MKIGI06A circuit schematic

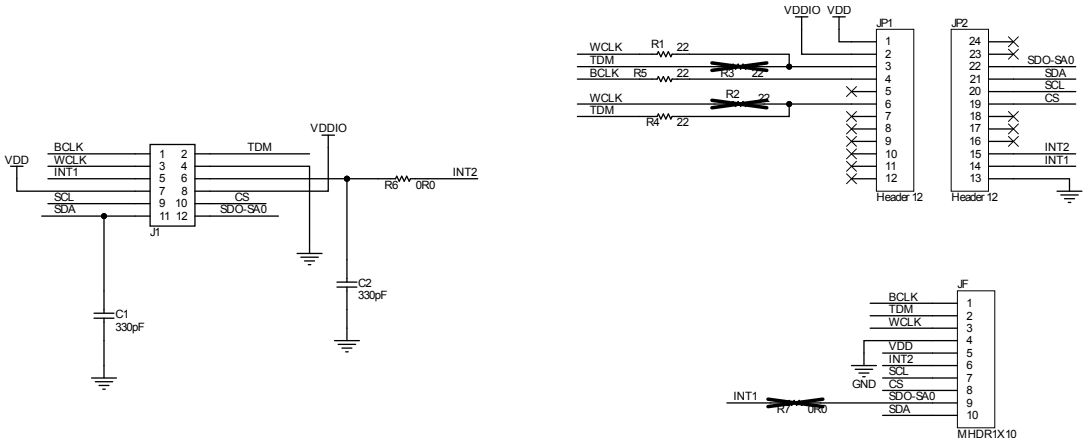
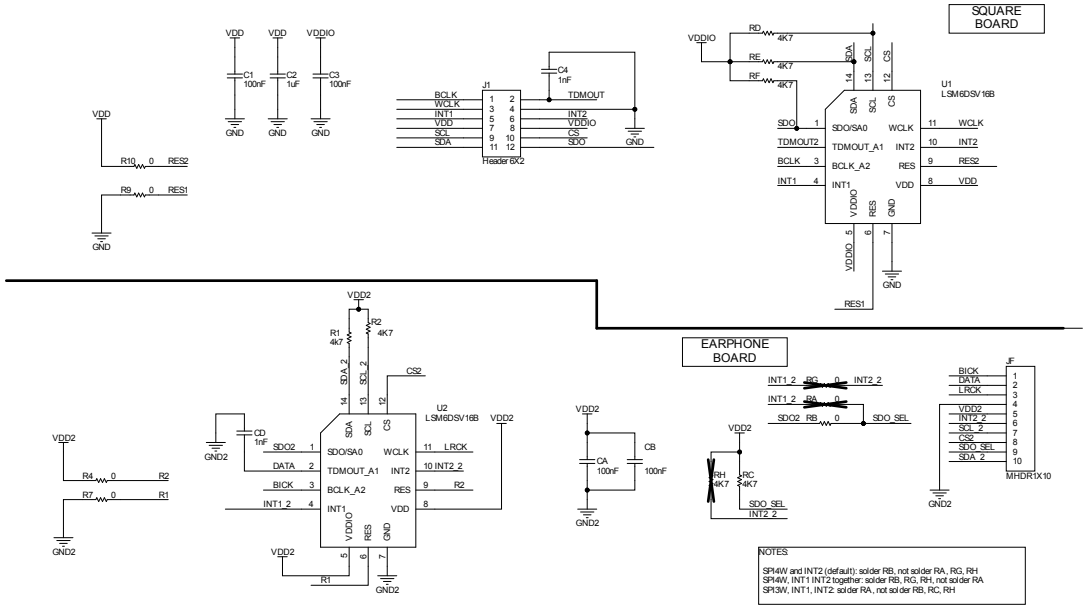


Figure 2. STEVAL-MKI241A circuit schematic



2 Kit versions

Table 1. STEVAL-MKI241KA versions

PCB version	Schematic diagrams	Bill of materials
STEVAL$MKI241KAA(1)	STEVAL$MKI241KAA schematic diagrams	STEVAL$MKI241KAA bill of materials
STEVAL$MKI241KAB(2)	STEVAL$MKI241KAB schematic diagrams	STEVAL$MKI241KAB bill of materials

1. *This code identifies the first version of the STEVAL-MKI241KA evaluation kit. The kit consists of STEVAL-MKI241A whose version is identified by the code STEVAL$MKI241AA and STEVAL-MKIGI06A whose version is identified by the code STEVAL$MKIGI06AA.*
2. *This code identifies the second version of the STEVAL-MKI241KA evaluation kit. The kit consists of STEVAL-MKI241A whose version is identified by the code STEVAL$MKI241AB and STEVAL-MKIGI06A whose version is identified by the code STEVAL$MKIGI06AB.*

Revision history

Table 2. **Document revision history**

Date	Revision	Changes
13-Mar-2023	1	Initial release.
17-Apr-2023	2	Updated Title, Features, Description, Product summary and Schematic diagrams. Replaced LSM6DSV16BX with LSM6DSV16B.
08-Sep-2023	3	Updated Schematic diagrams.
31-Jul-2025	4	Added MEMS Studio software solution, STEVAL-MKI109D evaluation platform, and X-NUCLEO-IKS4A1 expansion board

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