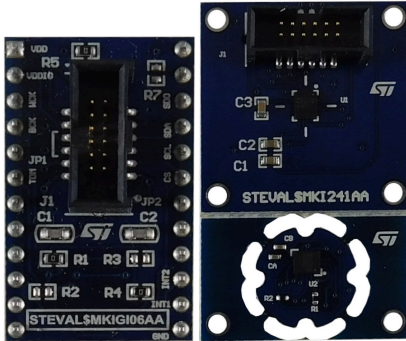


## LSM6DSV16B adapter kit for standard DIL24 socket with bone conduction functionality



### Features

- User friendly LSM6DSV16B board
- Complete LSM6DSV16B pinout for a standard DIL 24 socket
- Fully compatible with the STEVAL-MKI109V3 motherboard
- RoHS compliant

### Description

The STEVAL-MKI241KA evaluation kit is based on an ad hoc PCB, mounting the LSM6DSV16B inertial module.

There are two different boards inside 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 with the STEVAL-MKI109V3 via 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-MKI109V3 mother board, 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 graphical user interface (Unico-GUI), or dedicated software routines for customized applications.

It is also possible to plug the board into an X-NUCLEO-IKS01A3 expansion board.

| Product summary   |                    |
|---|--------------------|
| LSM6DSV16B adapter kit for standard DIL24 socket with bone conduction functionality | STEVAL-MKI241KA    |
| iNEMO inertial module: 3D accelerometer and 3D gyroscope                            | LSM6DSV16BTR       |
| MEMS adapter motherboard based on the STM32F401VE                                   | STEVAL-MKI109V3    |
| Motion MEMS and microphone MEMS expansion board for STM32 Nucleo                    | X-NUCLEO-IKS01A3   |
| Applications  | Smart Glasses (AR) |

# 1 Schematic diagrams

Figure 1. STEVAL-MKIGI06A circuit schematic

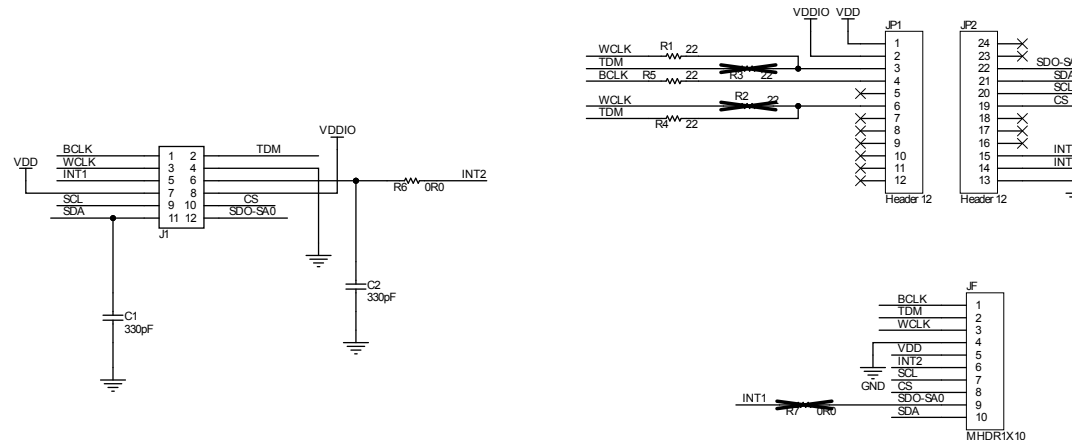
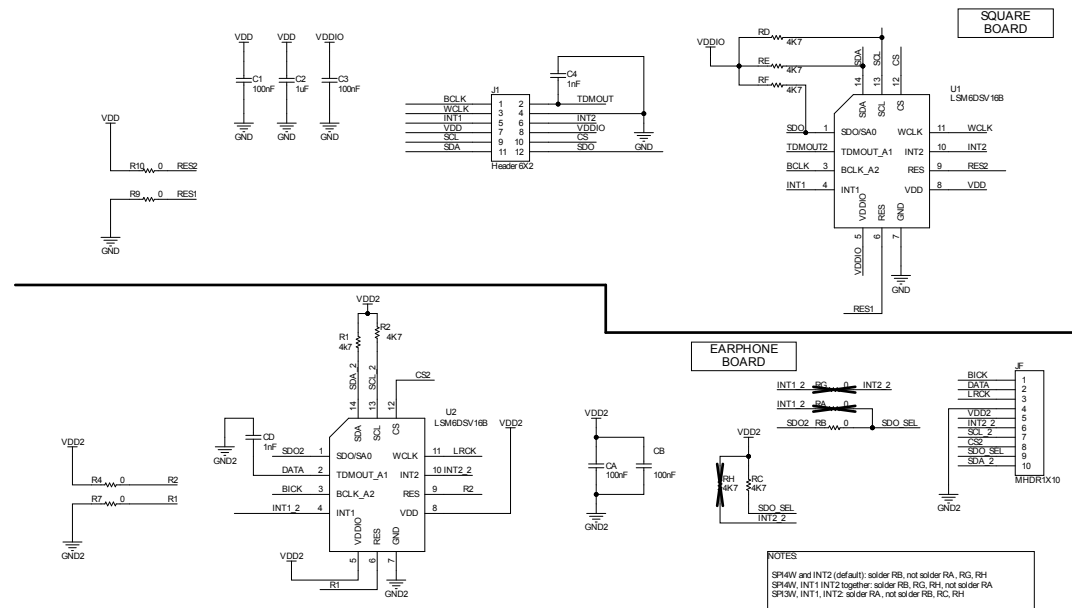


Figure 2. STEVAL-MKI241A circuit schematic



## 2 Kit versions

**Table 1. STEVAL-MKI241KA versions**

| PCB version                      | Schematic diagrams                   | Bill of materials                   |
|----------------------------------|--------------------------------------|-------------------------------------|
| STEVAL\$MKI241KAA <sup>(1)</sup> | STEVAL\$MKI241KAA schematic diagrams | STEVAL\$MKI241KAA bill of materials |
| STEVAL\$MKI241KAB <sup>(2)</sup> | STEVAL\$MKI241KAB schematic diagrams | STEVAL\$MKI241KAB bill of materials |

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

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