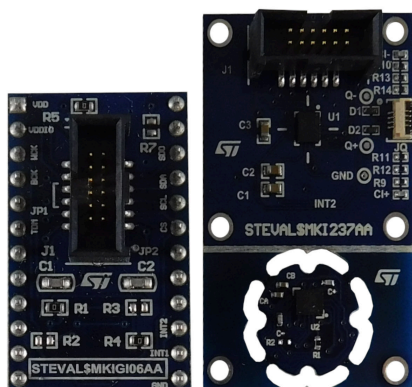


LSM6DSV16BX adapter kit for standard DIL24 socket with Qvar and bone conduction functionalities



Features

- User friendly [LSM6DSV16BX](#) board
- Complete [LSM6DSV16BX](#) pinout for a standard DIL24 socket
- Fully compatible with the [STEVAL-MKI109V3](#) motherboard
- RoHS compliant

Description

The [STEVAL-MKI237KA](#) evaluation kit is based on a specific PCB mounting the [LSM6DSV16BX](#) IMU (inertial measurement unit). The kit provides the complete [LSM6DSV16BX](#) pinout and comes ready to use with the required decoupling capacitors on the VDD power supply line.

There are two different boards inside the [STEVAL-MKI237KA](#). 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. This small electrode flex connector can be used as the concept of the application. Both boards can be connected with the [STEVAL-MKI109V3](#) using the [STEVAL-MKIGI06A](#) interface board.

This adapter is supported by the [STEVAL-MKI109V3](#) motherboard, which includes a high-performance 32-bit microcontroller functioning as a bridge between the sensor and a PC.

It is also possible to plug the board into an [X-NUCLEO-IKS01A3](#) expansion board.

[MEMS-Studio](#) is a complete software solution for the evaluation and programming of all MEMS sensors and it is available for [Linux](#), [macOS](#), and [Windows](#) operating systems.

You can also use the downloadable graphical user interface ([Unico-GUI](#)) or dedicated software routines for customized applications.

Product summary	
LSM6DSV16BX adapter kit for standard DIL24 socket with Qvar and bone conduction functionalities	STEVAL-MKI237KA
6-axis IMU with sensor fusion, AI, Qvar, hearable features for TWS	LSM6DSV16BXTR
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)

Schematic diagrams

Figure 1. STEVAL-MKIGI06A circuit schematic

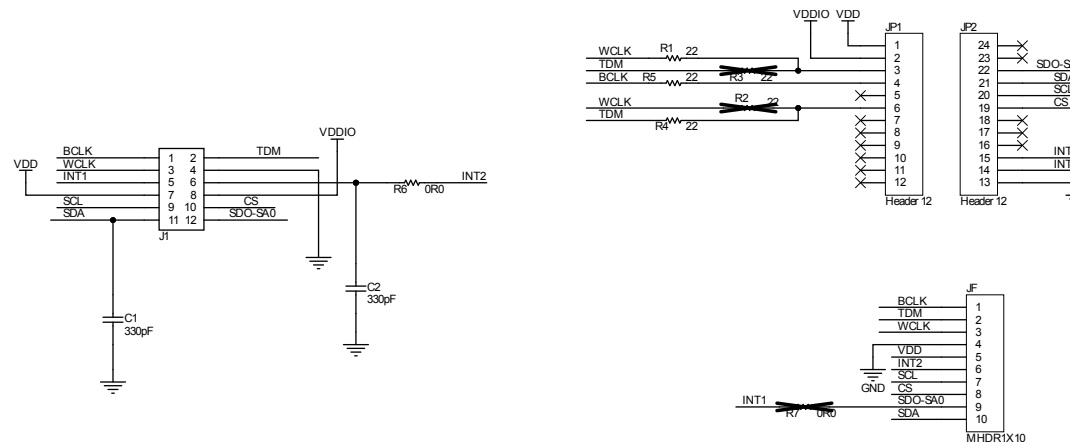
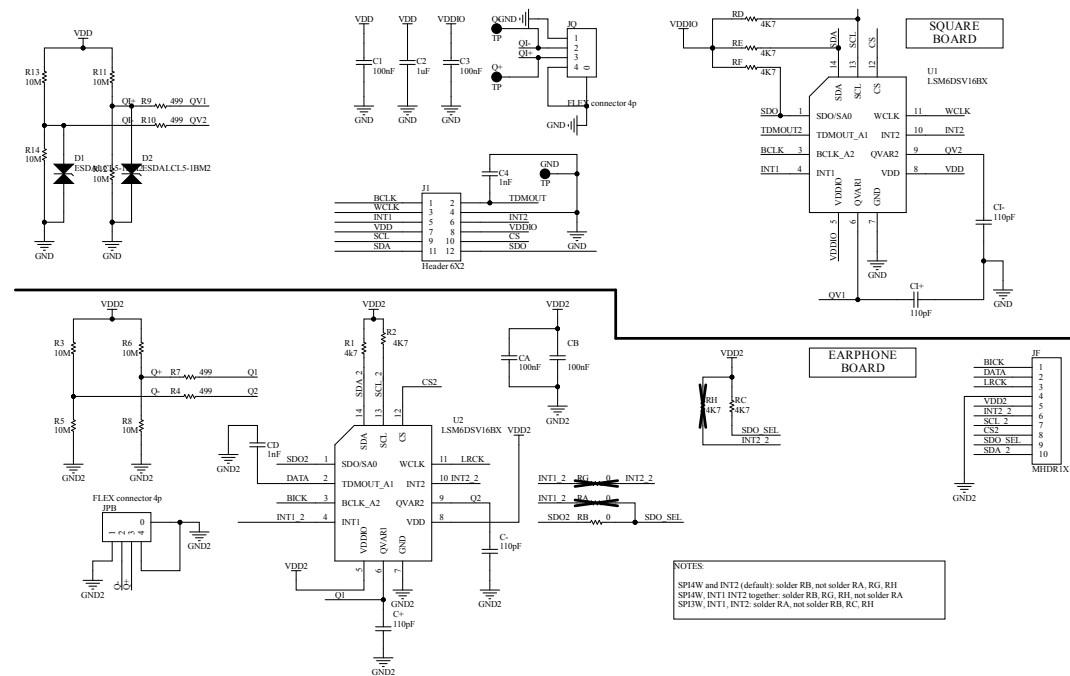


Figure 2. STEVAL-MKI237A circuit schematic



NOTES:
 SP14W and INT2 (default): solder RB, not solder RA, RG, RH
 SP14W, INT1 INT2 together: solder RB, RG, RH, not solder RA
 SP14W, INT1, INT2, solder RA, not solder RB, RC, RH

2 Kit versions

Table 1. STEVAL-MKI237KA versions

PCB version	Schematic diagrams	Bill of materials
STEVAL\$MKI237KAA ⁽¹⁾	STEVAL\$MKI237KAA schematic diagrams	STEVAL\$MKI237KAA bill of materials

1. This code identifies the STEVAL-MKI237KA evaluation kit first version. The kit consists of a STEVAL-MKI237A whose version is identified by the code STEVAL\$MKI237AA and a STEVAL-MKIGI06A whose version is identified by the code STEVAL\$MKIGI06AA.

Revision history

Table 2. Document revision history

Date	Revision	Changes
16-Jan-2023	1	Initial release
07-Sep-2023	2	Updated Section 1: Schematic diagrams
09-May-2024	3	Updated Description to include MEMS-Studio software solution Minor textual updates

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