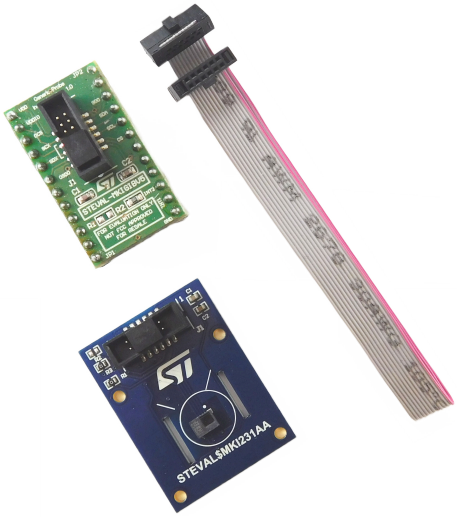
STEVAL-MKI231KA

Data brief

Evaluation kit composed of the STHS34PF80 industrial board and a standard DIL24 adapter



Features

- User-friendly STHS34PF80 board
- Complete STHS34PF80 pinout for a standard DIL24 socket
- Fully compatible with the STEVAL-MKI109V3 motherboard
- RoHS compliant

Description

The STEVAL-MKI231KA demonstration board is a kit consisting of a specific PCB, mounting the STHS34PF80 low-power, high-sensitivity infrared sensor for presence and motion detection, which is connected through a flat cable to a generic adapter board (STEVAL-MKIGIBV5) to make it compatible with the STEVAL-MKI109V3. A plastic holder with a Fresnel lens (TMOS63-10) has been provided in the kit for better performance of the device in terms of data acquisition for some applications.

The STEVAL-MKIGIBV5 can be plugged into a standard DIL24 socket. The kit provides the complete STHS34PF80 pinout and comes ready-to-use with the required decoupling capacitors on the VDD power supply line.

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 X-NUCLEO-IKS01A3, X-NUCLEO-IKS02A1, or X-NUCLEO-IKS4A1. The kit is included in an X-CUBE-MEMS1 expansion software package for STM32.

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	
Evaluation kit composed of STHS34PF80 industrial board and standard DIL24 adapter	STEVAL-MKI231KA
Low-power, high-sensitivity infrared (IR) sensor for presence and motion detection	STHS34PF80
Professional MEMS tool: ST MEMS adapters motherboard based on the STM32F401VE and compatible with all ST MEMS adapters	STEVAL-MKI109V3
Motion MEMS and microphone MEMS expansion board for STM32 Nucleo	X-NUCLEO-IKS02A1/X-NUCLEO-IKS4A1
Expansion software package for STM32Cube that runs on the STM32	X-CUBE-MEMS1
Applications	Presence sensing

1 Schematic diagrams

Figure 1. **STEVAL-MKIGIBV5 circuit schematic**

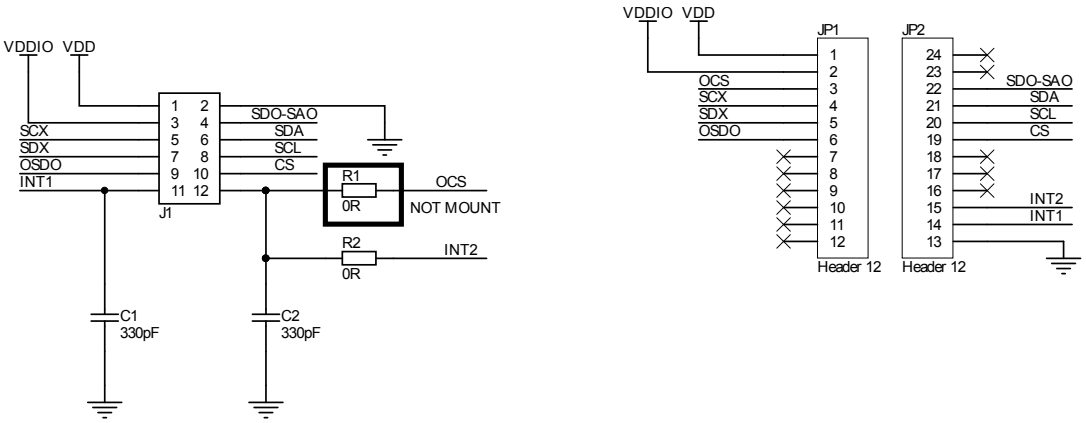
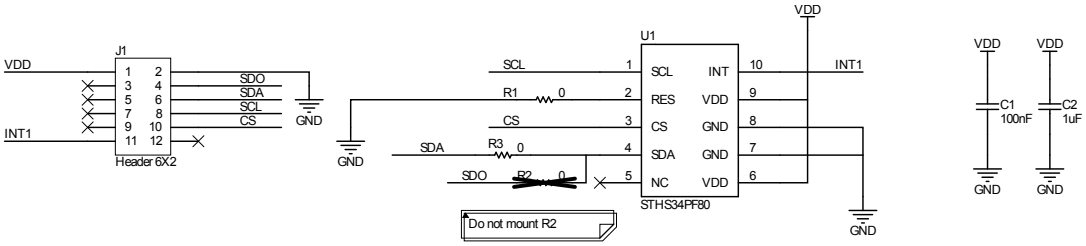


Figure 2. **STEVAL-MKI231A circuit schematic**



2 Kit versions

Table 1. STEVAL-MKI231KA kit versions

Finished good	Schematic diagrams	Bill of materials
STEVAL$MKI231KAA (1)	STEVAL$MKI231KAA schematic diagrams	STEVAL$MKI231KAA bill of materials

1. *This code identifies the STEVAL-MKI231KA evaluation kit first version. The kit consists of a STEVAL-MKI231A whose version is identified by the code STEVAL$MKI231AA and a STEVAL-MKIGIBV5 whose version is identified by the code STEVAL$MKIGIBV5A*

Revision history

Table 2. **Document revision history**

Date	Revision	Changes
15-Jun-2023	1	Initial release
06-Oct-2023	2	Updated Description and Product summary
07-Dec-2023	3	Added references to X-NUCLEO-IKS4A1. Updated Description and Product summary.
13-Jun-2024	4	Updated Description to include MEMS-Studio software solution Minor textual updates