

### X-NUCLEO-IKS01A1

# Motion MEMS and environmental sensor expansion board for STM32 Nucleo

Data brief



#### **Description**

The X-NUCLEO-IKS01A1 is a motion MEMS and environmental sensor evaluation board system.

It is compatible with the Arduino UNO R3 connector layout, and is designed around STMicroelectronics' LSM6DS0 3-axis accelerometer + 3-axis gyroscope, the LIS3MDL 3-axis magnetometer, the HTS221 humidity and temperature sensor and the LPS25HB\* pressure sensor.

The X-NUCLEO-IKS01A1 interfaces with the STM32 microcontroller via the I<sup>2</sup>C pin, and it is possible to change the default I<sup>2</sup>C port.

#### **Features**

- LSM6DS0: MEMS 3D accelerometer (±2/±4/±8 g) + 3D gyroscope (±245/±500/±2000 dps)
- LIS3MDL: MEMS 3D magnetometer (±4/±8/ ±12/ 16 gauss)
- LPS25HB\*: MEMS pressure sensor, 260-1260
  hPa absolute digital output barometer
- HTS221: capacitive digital relative humidity and temperature
- DIL 24-pin socket available for additional MEMS adapters and other sensors (UV index)
- Free comprehensive development firmware library and example for all sensors compatible with STM32Cube firmware
- Compatible with STM32 Nucleo boards
- Equipped with Arduino UNO R3 connector
- RoHS compliant

Schematic diagram X-NUCLEO-IKS01A1

## 1 Schematic diagram

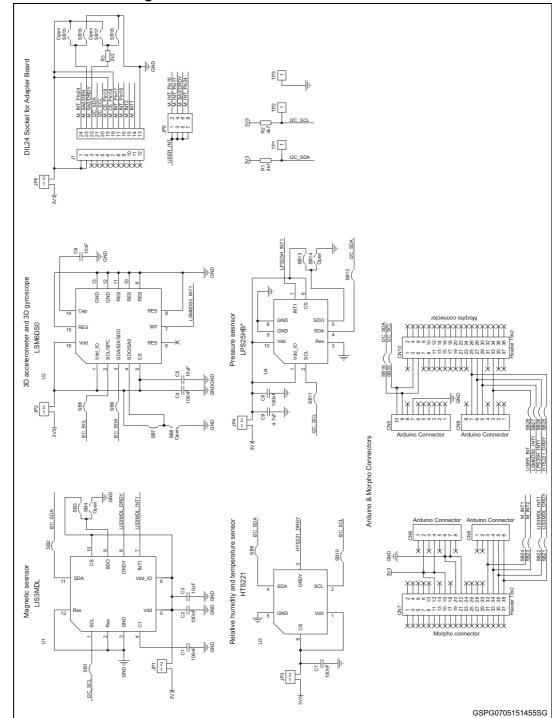


Figure 1. X-NUCLEO-IKS01A1 circuit schematic

Note:

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<sup>\*</sup> it is LPS25H in all the boards indicating 1439 near the CN10 connector.

X-NUCLEO-IKS01A1 Revision history

## 2 Revision history

**Table 1. Document revision history** 

Date	Revision	Changes
20-Oct-2014	1	Initial release.
22-Oct-2014	2	Minor text and formatting updates to Figure 1.
08-May-2015	3	Updated title on the cover page.
29-May-2015	4	Updated board photo on the cover page.

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