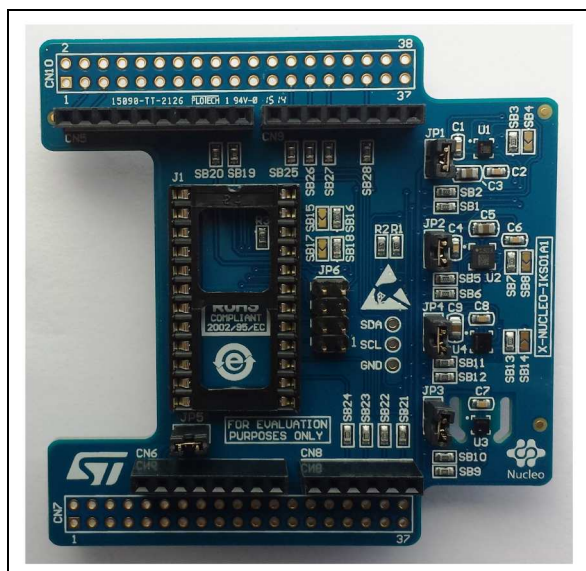


## Motion MEMS and environmental sensor expansion board for STM32 Nucleo

Data brief



### Description

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

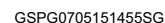
It is compatible with the Arduino UNO R3 connector layout, and is designed around STMicroelectronics' LSM6DS0 3-axis accelerometer + 3-axis gyroscope, the LIS3MDL 3-axis magnetometer, the HTS221 humidity and temperature sensor and the LPS25HB\* pressure sensor.

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 ( $\pm 2/\pm 4/\pm 8$  g) + 3D gyroscope ( $\pm 245/\pm 500/\pm 2000$  dps)
- LIS3MDL: MEMS 3D magnetometer ( $\pm 4/\pm 8/\pm 12/\pm 16$  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

**Figure 1. X-NUCLEO-IKS01A1 circuit schematic**



\* it is LPS25H in all the boards indicating 1439 near the CN10 connector.

## 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 <a href="#">Figure 1</a> .
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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