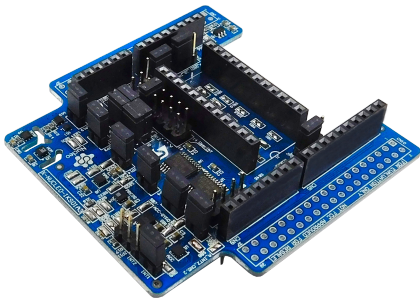


## Motion MEMS and environmental sensor expansion board for STM32 Nucleo



### Features

- LSM6DSO: MEMS 3D accelerometer ( $\pm 2/\pm 4/\pm 8/\pm 16$  g) + 3D gyroscope ( $\pm 125/\pm 250/\pm 500/\pm 1000/\pm 2000$  dps)
- LIS2MDL: MEMS 3D magnetometer ( $\pm 50$  gauss)
- LIS2DW12: MEMS 3D accelerometer ( $\pm 2/\pm 4/\pm 8/\pm 16$  g)
- LPS22HH: MEMS pressure sensor, 260-1260 hPa absolute digital output barometer
- HTS221: capacitive digital relative humidity and temperature
- STTS751: Temperature sensor ( $-40$  °C to  $+125$  °C)
- DIL 24-pin socket available for additional MEMS adapters and other sensors
- Free comprehensive development firmware library and example for all sensors compatible with STM32Cube firmware
- I<sup>2</sup>C sensor hub features on LSM6DSO available
- Compatible with STM32 Nucleo boards
- Equipped with Arduino UNO R3 connector
- RoHS compliant
- WEEE compliant

### Description

The X-NUCLEO-IKS01A3 is a motion MEMS and environmental sensor evaluation board system.

It is compatible with the Arduino UNO R3 connector layout and features the [LSM6DSO](#) 3-axis accelerometer + 3-axis gyroscope, the [LIS2MDL](#) 3-axis magnetometer, the [LIS2DW12](#) 3-axis accelerometer, the [HTS221](#) humidity and temperature sensor, the [LPS22HH](#) pressure sensor, and the [STTS751](#) temperature sensor.

The X-NUCLEO-IKS01A3 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.

#### Product summary

iNEMO inertial module, 3-axis accelerometer, 3-axis gyroscope, always-on eco power mode [LSM6DSO](#)

digital 3-axis magnetometer [LIS2MDL](#)

3-axis MEMS accelerometer, ultra low power, configurable single/double-tap recognition, free-fall, wakeup, portrait/landscape, 6D/4D orientation detections [LIS2DW12](#)

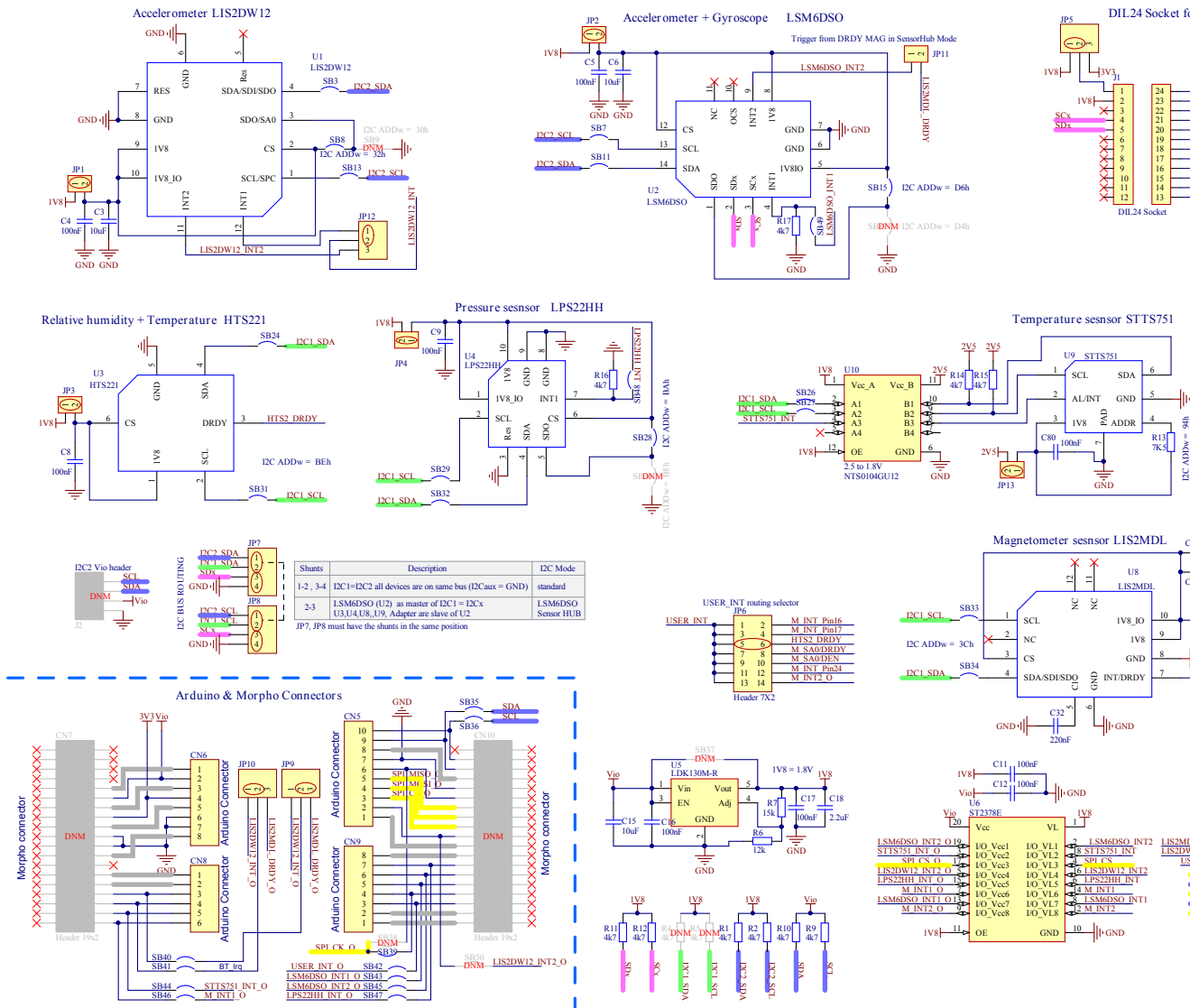
digital nano pressure sensor [LPS22HH](#)

digital sensor for relative humidity and temperature [HTS221](#)

low-voltage local digital temperature sensor [STTS751](#)

# 1 Schematic diagrams

Figure 1. X-NUCLEO-IKS01A3 board schematics



## Revision history

**Table 1. Document revision history**

Date	Version	Changes
13-Feb-2019	1	Initial release.
17-Jun-2019	2	Corrected typo in features.

**IMPORTANT NOTICE – PLEASE READ CAREFULLY**

STMicroelectronics NV and its subsidiaries (“ST”) reserve the right to make changes, corrections, enhancements, modifications, and improvements to ST products and/or to this document at any time without notice. Purchasers should obtain the latest relevant information on ST products before placing orders. ST products are sold pursuant to ST’s terms and conditions of sale in place at the time of order acknowledgement.

Purchasers are solely responsible for the choice, selection, and use of ST products and ST assumes no liability for application assistance or the design of Purchasers’ products.

No license, express or implied, to any intellectual property right is granted by ST herein.

Resale of ST products with provisions different from the information set forth herein shall void any warranty granted by ST for such product.

ST and the ST logo are trademarks of ST. For additional information about ST trademarks, please refer to [www.st.com/trademarks](http://www.st.com/trademarks). All other product or service names are the property of their respective owners.

Information in this document supersedes and replaces information previously supplied in any prior versions of this document.

© 2019 STMicroelectronics – All rights reserved

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Multiple Function Sensor Development Tools](#) category:*

*Click to view products by [STMicroelectronics](#) manufacturer:*

Other Similar products are found below :

[MAXWSNENV#](#) [KT-O2-25%-TB200A-E](#) [KT-TVOC-200-TB200A](#) [KT-NmHc-200-TB200A](#) [SEN0344](#) [PIM520](#) [PIM518](#) [PIM519](#) [PIM502](#)  
[EVAL-AD7746HDZ](#) [AS7022-EVALKIT](#) [ALTEHTG2SMIP](#) [MAX30101WING#](#) [OB1203SD-U-EVK](#) [MIKROE-4265](#) [A000070](#) [EV\\_ICG-](#)  
[20660L](#) [GX-F12A-P](#) [GX-F15A](#) [GX-F6A](#) [GX-F8AI-P](#) [GX-H15AI-P](#) [GX-H6A-P](#) [GX-HL15B-P](#) [1093](#) [MIKROE-2455](#) [MIKROE-2458](#)  
[MIKROE-2507](#) [MIKROE-2508](#) [MIKROE-2516](#) [MIKROE-2529](#) [1458](#) [MIKROE-1628](#) [176](#) [189](#) [1893](#) [2106](#) [ATQT4-XPRO](#) [GP30-DEMO](#)  
[MODULE](#) [GX-F12AI-P](#) [GX-F15A-P](#) [GX-FL15B-P](#) [GX-H12AI-P](#) [GX-H15A-P](#) [GX-H6AI-P](#) [GX-H8A-P](#) [GX-F15AI-P](#) [GX-FL15A-P](#) [AAS-](#)  
[AQS-UNO](#) [DFR0018](#)