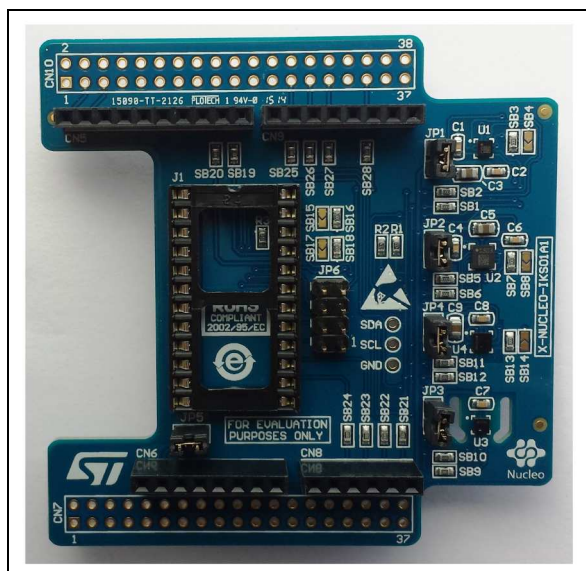


Motion MEMS and environmental sensor expansion board for STM32 Nucleo

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.

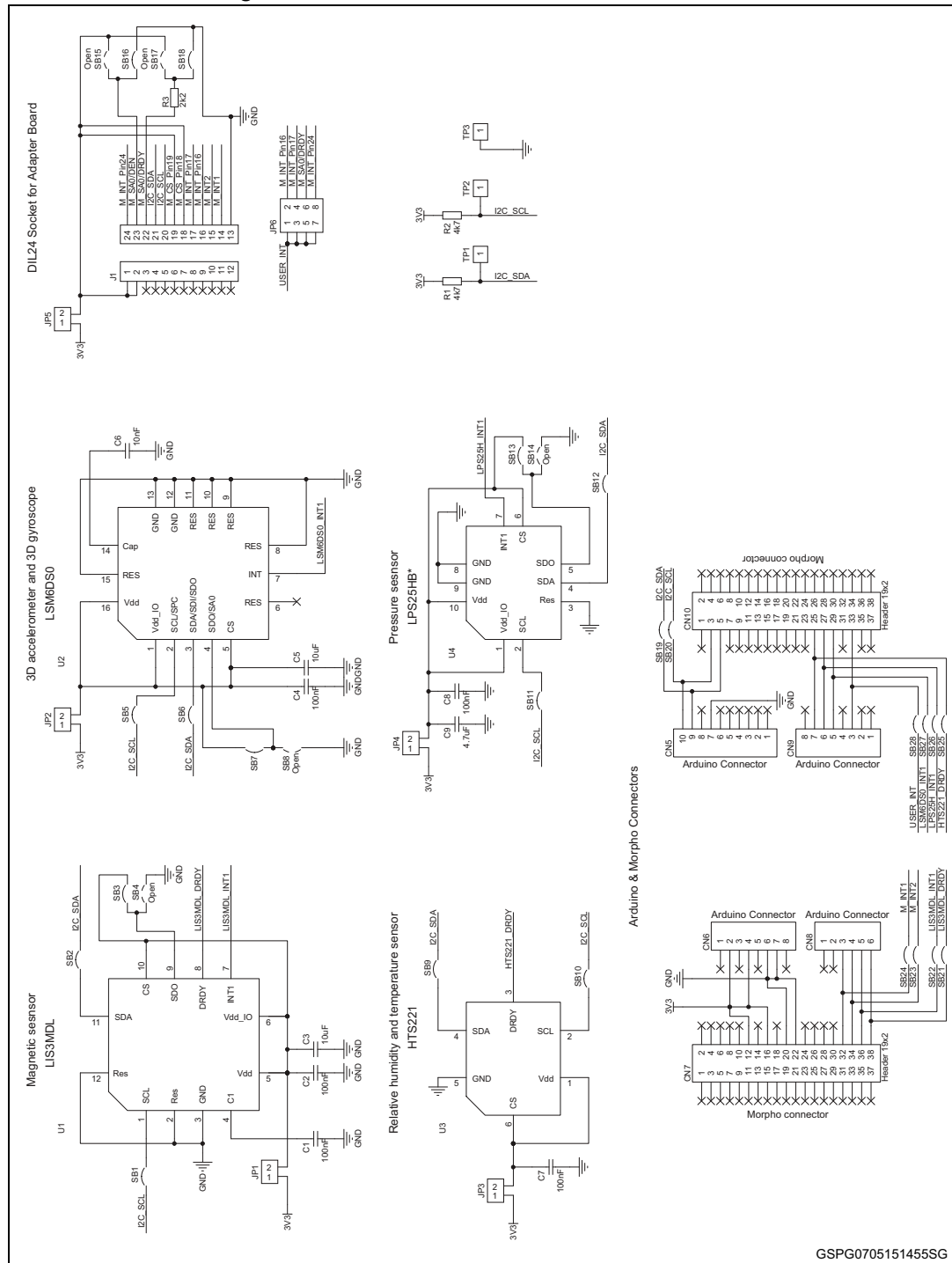
The X-NUCLEO-IKS01A1 interfaces with the STM32 microcontroller via the I²C pin, and it is possible to change the default I²C port.

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

1 Schematic diagram

Figure 1. X-NUCLEO-IKS01A1 circuit schematic



Note: * 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 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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