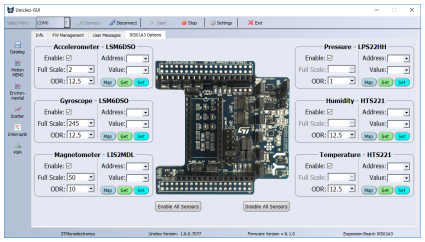
Unicleo-GUI

Data brief

GUI for X-CUBE-MEMS1, motion MEMS and environmental sensor software expansion for STM32Cube





Product summary	
GUI for X-CUBE-MEMS1, motion MEMS and environmental sensor software expansion for STM32Cube	Unicleo-GUI
Sensor and motion algorithm software expansion for STM32Cube	X-CUBE-MEMS1
Sensor and DSP algorithm software expansion for STM32Cube	X-CUBE-MEMS-XT1
Motion MEMS and environmental sensor expansion board for STM32 Nucleo	X-NUCLEO-IKS01A1 X-NUCLEO-IKS01A2 X-NUCLEO-IKS01A3 X-NUCLEO-IKS02A1

Features

- Displays data from connected sensors in various views (time plot, scatter plot, 3D plot)
- Saves data to tab separated (TSV) or comma separated (CSV) files
- Configurable output data rate and full scale
- Directly reads from and writes to sensor registers
- Demonstrate sensor Finite State Machine (FSM) and Machine Learning Core (MLC) embedded features
- Performs Fast Fourier Transform (FFT) analysis of the accelerometer data
- Works with X-CUBE-MEMS1 and X-CUBE-MEMS-XT1 sensor sample applications (Datalog, DatalogExtended, FFT Demo, DatalogLite)
- Works with sample applications for algorithms (Activity Recognition, Carry Position, Gesture Recognition, Sensor Fusion, Pedometer, Magnetometer Calibration, Accelerometer Calibration, Gyroscope Calibration, Activity Recognition for Wrist, Pose Estimation, Motion Intensity Detection, Fitness Activity, eCompass, Active Time, Fall Detection, Pedometer for Wrist, Standing vs Sitting Desk Detection, Tilt Sensing, Vertical Context)
- Works with firmware created by AlgoBuilder
- Windows®-based application

Description

Unicleo-GUI is a graphical user interface (GUI) for the X-CUBE-MEMS1 and X-CUBE-MEMS-XT1 software expansions and STM32 Nucleo expansion boards (X-NUCLEO-IKS01A1, X-NUCLEO-IKS01A2, X-NUCLEO-IKS01A3 and X-NUCLEO-IKS02A1).

The main objective of this application is to demonstrate the functionality of ST sensors and algorithms.

Unicleo-GUI is able to cooperate with firmware created by AlgoBuilder application and display data coming from the running firmware.

The application is also able to establish Bluetooth connection with BLE connectivity-equipped devices such as SensorTile (STEVAL-STLKT01V1), BlueCoin (STEVAL-BCNKT01V1), and STM32 Nucleo with X-NUCLEO-IDB05A1 expansion board, BlueTile (STEVAL-BCN002V1B) or WESU1 (STEVAL-WESU1) and read data from various device characteristics.

The supported firmware for these devices can be found at FP-SNS-ALLMEMS1, FP-SNS-ALLMEMS2, FP-SNS-MOTENV1, FP-SNS-MOTENVWB1, STSW-BLUETILE-DK and STSW-WESU1.

Revision history

Table 1. **Document revision history**

Date	Version	Changes
18-Oct-2016	1	Initial release.
02-May-2017	2	Updated features and description on the cover page.
02-May-2018	3	Updated cover page features and description.
14-May-2019	4	Updated cover page features. Added X-NUCLEO-IKS01A3, STEVAL-BCN002V1B and STSW-BLUETILE-DK compatibility information.
28-Oct-2019	5	Updated cover page features and description. Added X-NUCLEO-IKS02A1 compatibility information.

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