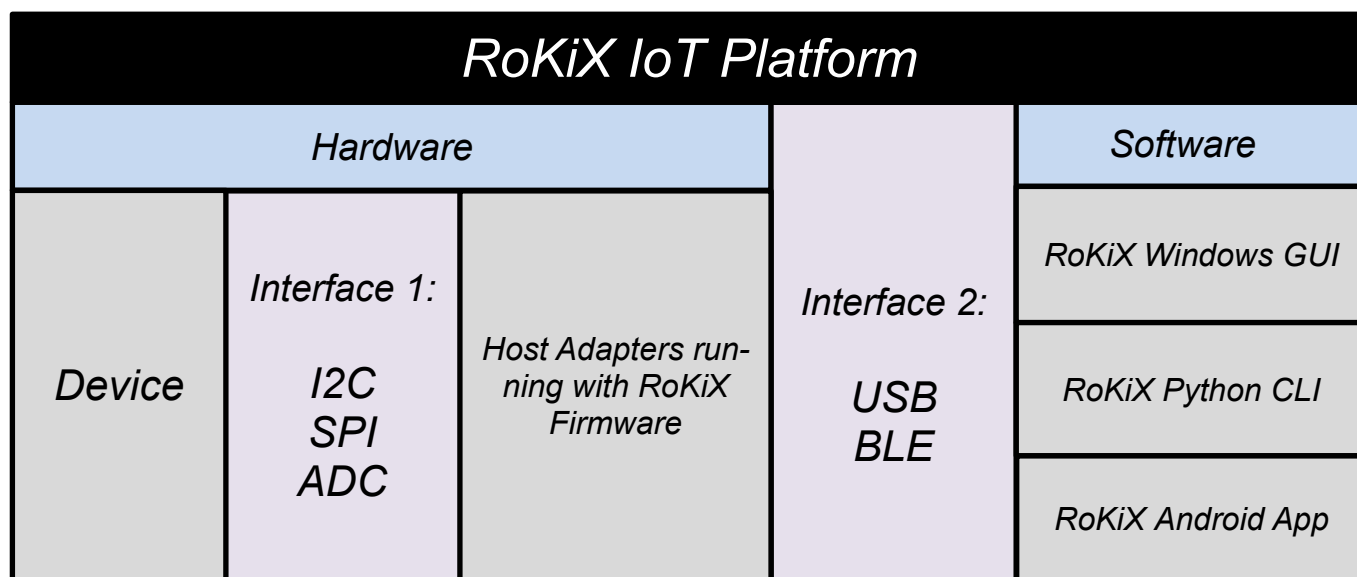


The *RoKiX IoT Platform* is the leading Internet of Things (IoT) technology platform. It enables innovators to rapidly create, deploy and evaluate various IoT applications, ranging from consumer IoT applications such as wearables, health, wellness, games, toys, and smart home to Industrial IoT applications such as smart city sensor networks, asset management and logistics monitoring, factory automation, etc.

The *RoKiX IoT Platform* provides a powerful and easy to use environment to begin the evaluation of ROHM and Kionix products. Multiple hardware options are supported (*RoKiX IoT Platform Hardware*), as well as common, hardware independent SW tools (*RoKiX IoT Platform Software*).

## Features

- Removing complexity from IoT applications development
- Supports both 3<sup>rd</sup> party development kits (e.g. Cypress CY8CKIT-059, Aardvark, Arduino Uno, nRF52840-DK) and ROHM development kits (e.g. *RoKiX Sensor Node*)
- Hardware evaluation environment with Windows GUI and Python CLI
- RoKiX Android App for data logging
- Software development kit for sensor nodes and gateways
- Easy connectivity of sensor nodes and gateways to the cloud platform
- Integrated machine learning for big data analytics



## RoKiX Sensor Node

- Based on the Nordic Semiconductor nRF52840 advanced multiprotocol system-on-chip (SoC)
- External connectivity with USB, BLE 4.1, 4.2, 5.0
- Two system connectors for extended connectivity of additional sensors and functions
- ROHM 5+ connector with 14 pin footprint (12 GPIO lines, 1 ADC line)
- Can be powered by a rechargeable Li-Polymer battery, replaceable coin cell batteries, or via Micro USB
- Low power consumption and long battery life

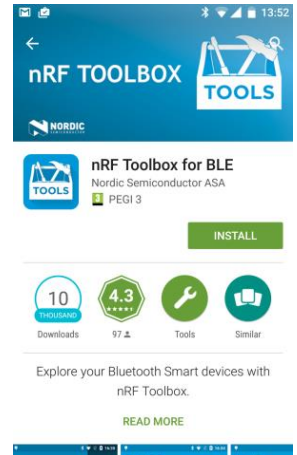


## RoKiX Firmware

The *RoKiX Sensor Node* contains a pre-installed bootloader and *RoKiX Firmware*. Both can be updated with an iPhone or Android using the “DFU” functionality of the “nRF Toolbox”, which is available in the application store (e.g. in [Google Play](#)).

Currently, ROHM offers firmware for the following microcontroller based platforms supporting communication with *RoKiX IoT Platform Software*:

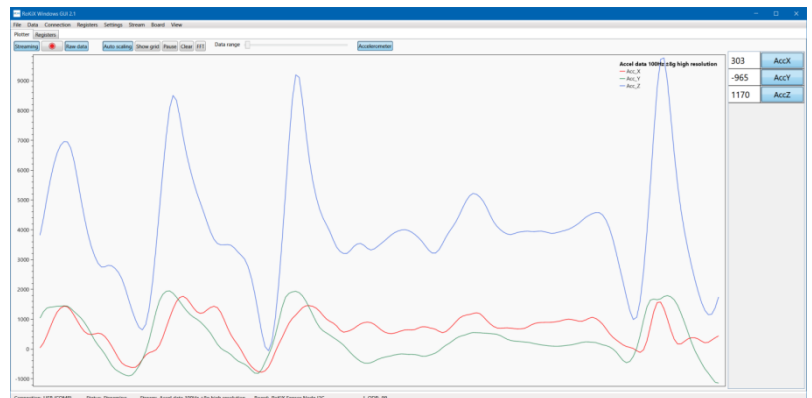
- RoKiX Sensor Node
- Cypress CY8CKIT-059
- Kionix IoT Sensor Node
- Arduino Uno R3
- Nordic Semiconductor nRF52840-DK



## RoKiX Windows GUI

*RoKiX Windows GUI* comes up with an intuitive graphical user interface demonstrating high level device offerings and features:

- Visual display of real-time device data
- Ability to record device data to a file
- Data acquisition rate up to 25.6 kHz
- Device registry editor
- Demonstration of RoKiX Software offerings (Sensor Fusion algorithm, Air mouse)



## RoKiX Python CLI

*RoKiX Python CLI* provides an advanced interface for demonstrating low level device features:

- Independent of Operating System
- Reference implementation for creating device driver software
- Flexible tool for recording device data
- Reference implementation for usage of device ASIC level features
- Framework for quick modification and testing of device functionality

```
# Log File Format Version = 1.0
# Stream Configuration File = kx022_data_logger.py
# Start time = 2019-05-17 13:30:54:000
# timestamp; ch; ax; ay; az
0.004858; 48; -4586; 17795; -22909
0.032338; 48; -8338; 14736; -28171
0.072752; 48; -5609; 16263; -26090
0.112976; 48; -1227; 16673; -16750
0.153179; 48; 1091; 7708; -7403
0.185394; 48; 1393; -1186; -2936
0.226848; 48; -6; 689; -5417
0.271864; 48; -2904; 6204; -13788
0.312083; 48; -5478; 8928; -22655
0.352290; 48; -4416; 10788; -23590
0.392667; 48; -1287; 7438; -12797
0.424968; 48; 31; -735; -3756
0.465120; 48; -1494; -3231; -8201
0.511567; 48; -3805; -903; -17036
0.551828; 48; -4459; 392; -20016
0.592192; 48; -3736; -640; -16824
0.632210; 48; -3372; -2846; -13388
0.664579; 48; -3918; -3465; -13776
# End time = 2019-05-17 13:30:55:000
```

## RoKiX Android App

*RoKiX Android App* is a tool for collecting device data over the Bluetooth Low Energy (BLE) connection. Currently this application is available for Android devices in the [Play store](#) or [GitHub](#).

