

RoKiX Android App

1. Introduction

The objective of the *RoKiX Android App* is to collect sensor data over Bluetooth Low Energy (BLE) connection from one or multiple *RoKiX Sensor Nodes*. Sensor data is stored in a csv file to the phone's internal memory which can then be moved to the PC.

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2. Installation

You can install the *RoKiX Android App* on your mobile device using one of the three methods listed below.

Installation A

Download the application from Google play store:

<https://play.google.com/store/apps/details?id=com.kionix.datalogger>

Installation B



Enable untrusted sources and open the GitHub link with your phone using a QR code reader. Point the QR code reader to the QR code shown above.. Download and open the latest APK.

Installation C

The *RoKiX Android App* can be found <https://github.com/RohmSemiconductor/RoKiX-IoT-Platform/raw/master/RoKiX-Android-App/rokix-android-app-release.apk> . The ADB tool and the Google USB driver need to be installed before setting up the logger application.

Install [ADB tool](#) to PC

Install [Google USB driver](#) to PC

Connect the Android phone to the PC via USB. Download the apk file from GitHub to your PC.

To use the adb socket connection, you must enable **USB debugging** in the device system, under the **Developer option**.

Set adb.exe to system path.

After running the “adb devices” command the device should be found

```
adb.exe devices
```

List of devices attached
TA10408MVK device

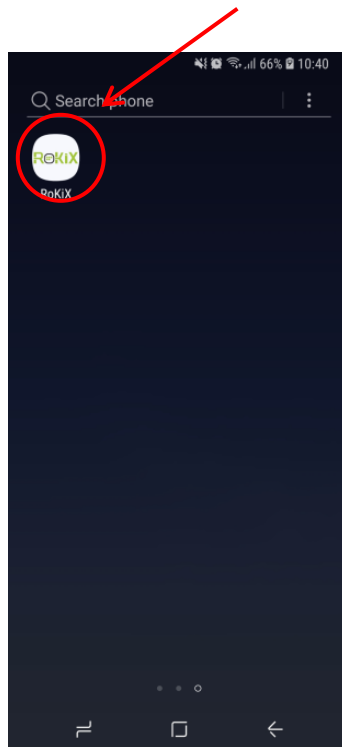
The *RoKiX Android App* can be installed using the following command

```
adb.exe install rokix-logger-latest-release.apk
```

3. Using the RoKiX Android App

3.1. Starting the RoKiX Android App

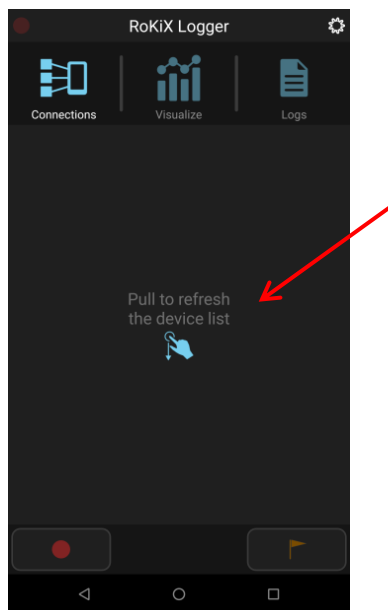
Launch the *RoKiX Android App* by pressing the RoKiX icon. When the application is started for the first time, the configuration files are downloaded and extracted to the phone's internal storage (directory: \RoKiX).



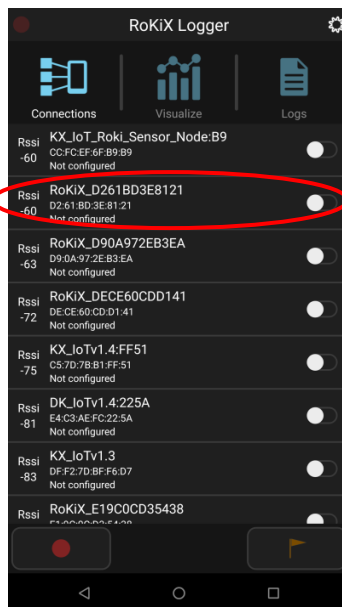
The license agreement, access rights and the battery optimization permission are requested from the user and must be accepted to guarantee the correct functionality of the application.

3.2. Connecting the RoKiX Sensor Node

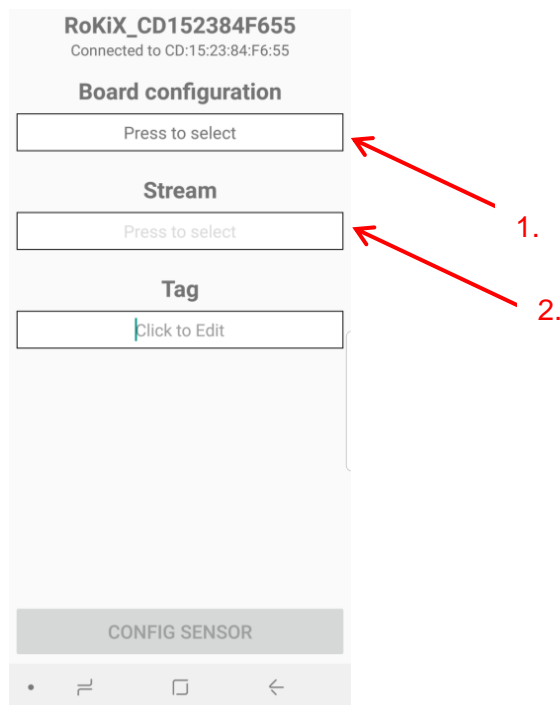
Make sure that the *RoKiX Sensor Node(s)* is powered on. Pull the touch screen to detect *RoKiX Sensor Nodes*.



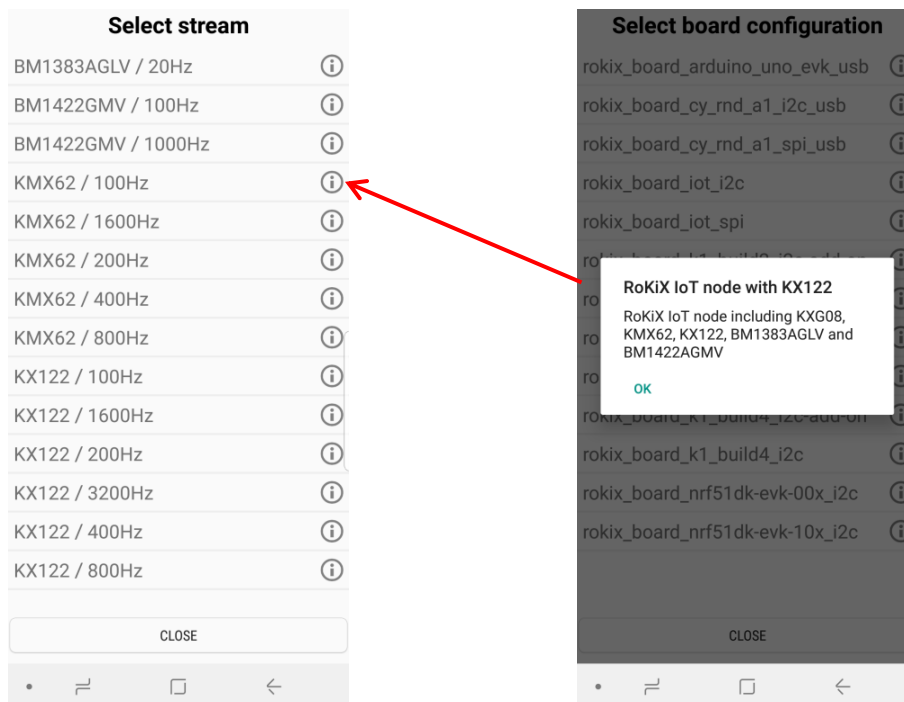
The *RoKiX Sensor Node(s)* should appear on the list. Select the device from the list to establish the BLE connection. The list is sorted with rssi, the closest distance is listed first.



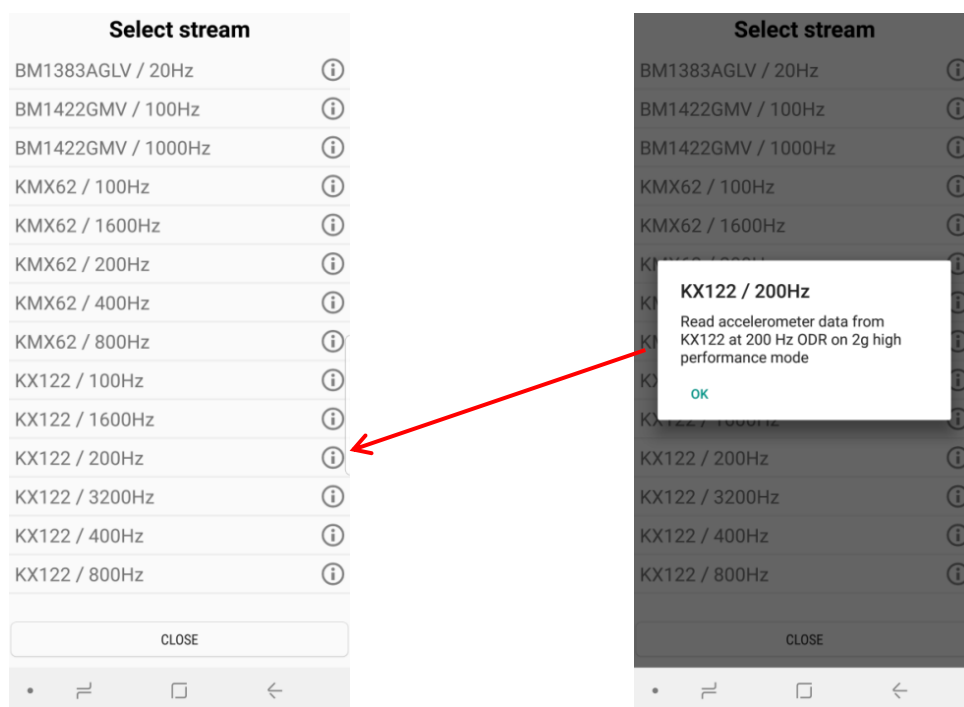
When the device is successfully connected, the configuration view appears as follows:



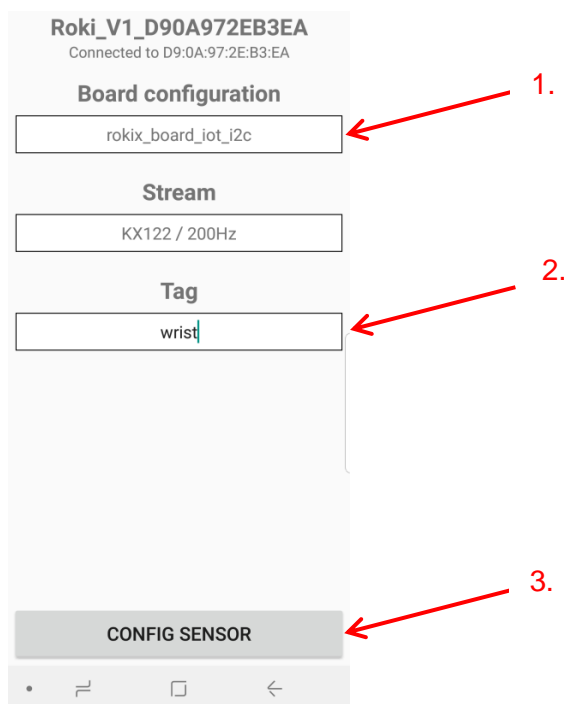
Select the proper board configuration files according to the IoT node hardware characteristics. By tapping the icon you can see more information about the sensor inside the board configuration:



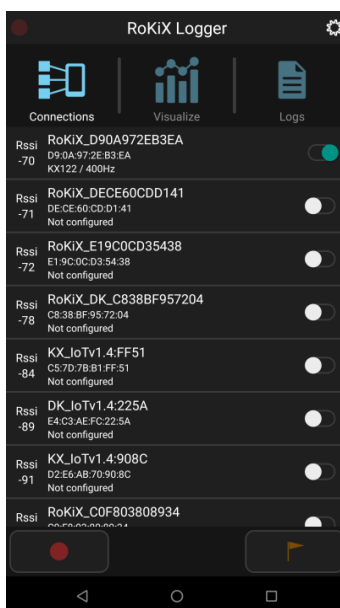
Select one stream configuration file from the list. By tapping the info icon, you can see the details of the selected stream.



After selecting the proper board and stream configuration files according to the IoT node hardware characteristics the user can add an optional note which will be stored in the sensor node's specific log file. Finally, press the "CONFIG SENSOR" button to perform the IoT board initialization.

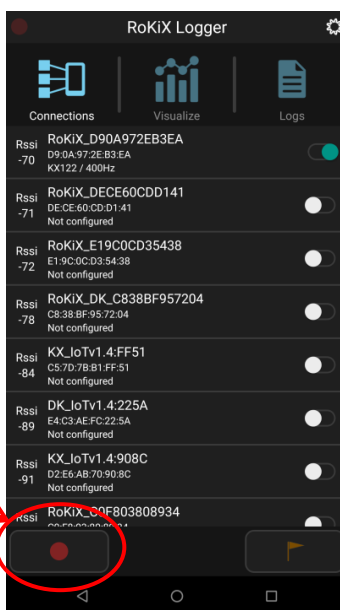


After a successful initialization, an indicator beside the IoT device name is changes from white to a cyan color:

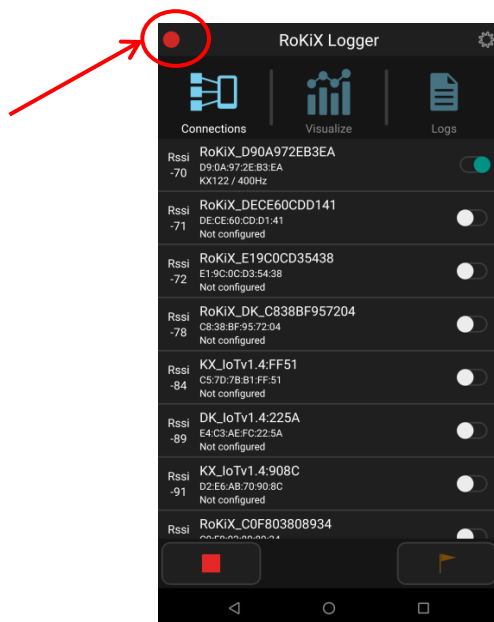


3.3. Logging data

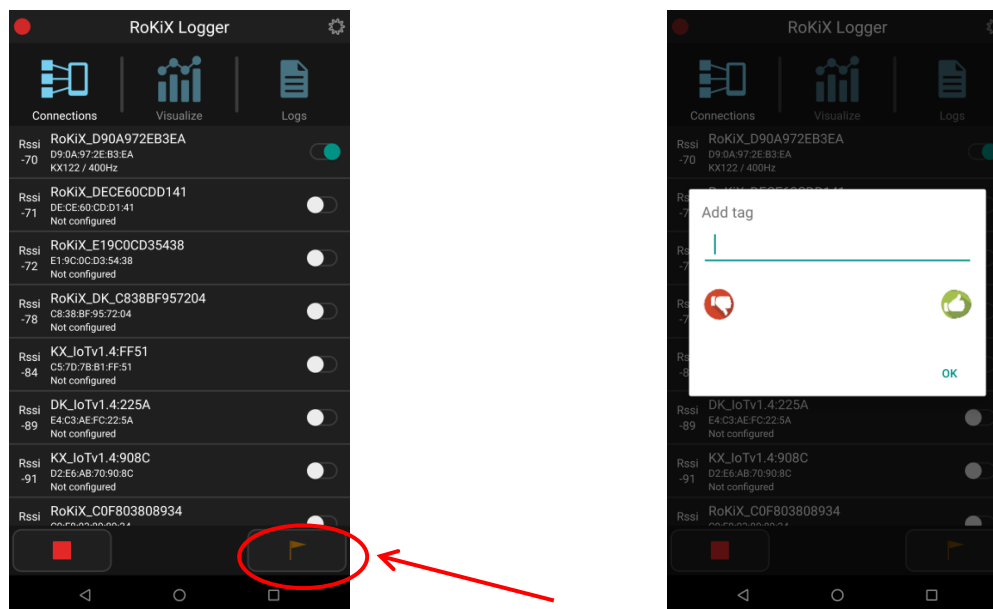
When the board is successfully initialized, the “record” icon will be enabled and the logging can be started by pressing the icon.



By pressing the “record” icon, data logging can be either started or stopped. When the icon is pressed for starting, the stream activation messages are sent to the *RoKiX Sensor Node* and the logging has started. The status icon at the top left corner of the screen blinks for the active data logging. By pressing the record icon again you can stop logging.



During the data logging, informative tags can be attached to the data by pressing the icon at the lower right corner of the screen. This information will be stored in the sensor node specific tag file (tags.txt). In addition the tag goes in the middle of the log file at the time when tag is done.



A tag can be either predefined or written as free text. The predefined tag can be written by pressing one of the thumbs.

The log file is stored into the “\Download\RoKiXLogs” folder in the Phone's internal storage.

3.4. Visualization

The option 'Visualize' allows for viewing the recorded raw data by text or graphical means when there is a successful connection with a node. In the text view, the status bar at the bottom of the screen indicates the active channel(s), ODR and the total number of packets received via the BLE connection. The user can

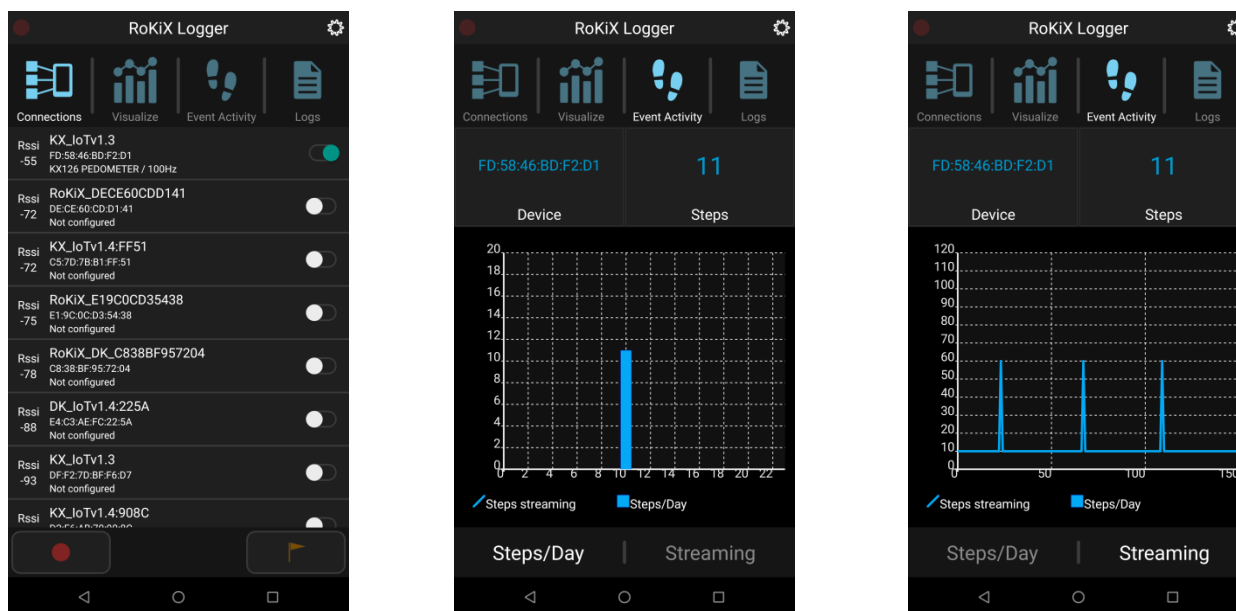
zoom, pan, disable/enable auto-scale and activate/deactivate different active channel(s). The user can connect multiple nodes at the same time and can see the recorded raw data or graphical view by swiping the screen to the left on the 'Visualize' tab.



If the registered item(s) is/are defined in the stream configuration file (register dump section), a selection button for the register dump action ('Registers') can be seen in the text view.

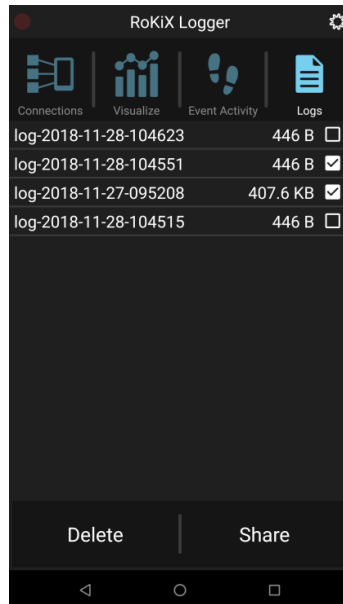
3.5. Event Activity Tab

The option 'Event Activity' is only visible when there is a successful connection with a node that has a pedometer stream. It allows user to see The Device MAC address and the total step count on top of the screen. The user can also see the steps per day or the step streaming on the graph.



3.6. Log files

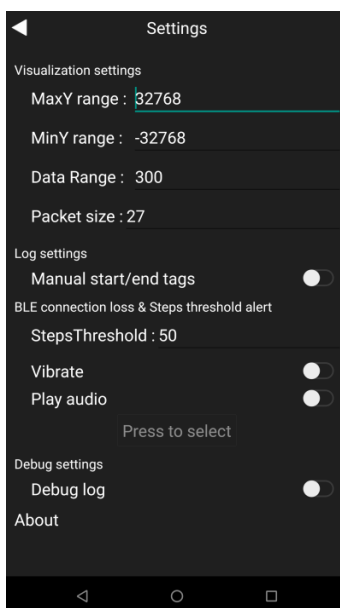
The option 'Logs' shows the stored log files. By selecting files, the user can also delete files or share them via different media options e.g. email. When the share action is used, a default file browser of some kind needs to be installed on the phone. One directory is one logging session that consists of different log files for each sensor node including log data, tags and other files (tags.txt) which solely contains tags.



3.7. Settings

While not recording data, the user can open the Settings menu at the top right corner of the screen, which includes a number of options for

- Visualization settings
- Log settings
- BLE connection loss alert
- Debug settings



Visualization settings can be used to change the maximum/minimum range on the Y axis of the graph. In addition the user can change the number of samples shown on the X axis in the Data Range.

Log settings can be used to enable/disable the application of Manual start/end tags with the log files.

With the BLE connection loss & steps threshold alert settings, the user can set an alert notification for the Bluetooth connection losses and change the step threshold value to vibrate or play an audio tone.

Debug settings can be used to enable/disable the saving of debugging information into a log file. In addition the user can see the debug log by tapping the RoKiX title bar on top of the screen.

4. Download log files to the PC

The csv log files are written to the phone's internal storage under the "\internal storage\Download\RoKiXLogs" folder. The logger configuration files can be found in the phone's internal storage under the "RoKiX" folder. The files can be manually edited and copied to the "RoKiX" folder.

1. Connect Android phone to the PC via USB cable.
2. Select MTP or USB mass storage mode from the phone for a file transfer.
3. Go to the PC file explorer and select your Android device.
Browse \internal storage\Download\RoKiXLogs folder. Copy the log file(s) to the PC.