

Introduction

The objective of the Kionix Android logger is to collect sensor data over Bluetooth low energy connection.

Installation A

Download the Android logger alpha version from Google play store:
<https://play.google.com/store/apps/details?id=com.kionix.datalogger>

Installation B

The Android logger can be found in <https://github.com/RohmSemiconductor/Kionix-IoT-Evaluation-Kit/raw/master/Kionix-IoT-Logger/Android/kionix-logger-latest-release.apk> . The ADB tool and the Google USB driver need to be installed before setting up the logger application.

Install USB driver and ADB tool

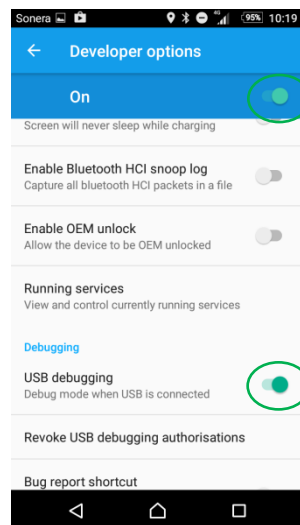
Install [ADB tool](#) to PC

Install [Google USB driver](#) to PC
Connect the Android phone to the PC via USB.

Enable developer mode from Android device

On Android 4.2 and higher, the Developer options screen is hidden by default. To make it visible, go to **Settings > About phone** and tap **Build number** seven times. Return to the previous screen to find the **Developer options** at the bottom. On some devices, the Developer options screen may be located or named differently.

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



Set adb.exe to system path

Control panel -> system -> advanced system settings:

- Open environmental variables
- Highlight the **Path** variable in the "System variables" section and click the **Edit** button. Complete the path line with the paths you want the computer to access.

Test connection

After running the "adb devices" command the device should be found

```
adb.exe devices
```

```
List of devices attached  
TA10408MVK      device
```

Set-up the Android data logger

The Data logger can be installed using the following command

```
adb.exe install "apk name"
```

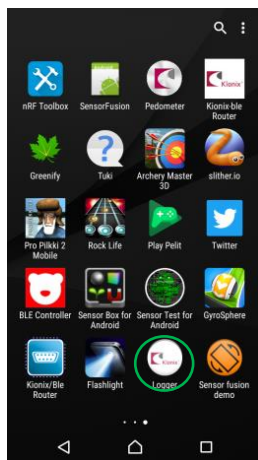
The CSV log files are written to the phone's internal storage under the "download/KionixLogs" folder.

The Logger configuration files can be found in the phone's internal storage under the "kionix" folder. Files can be manually edited and copied to the kionix folder.

Using the Android data logger

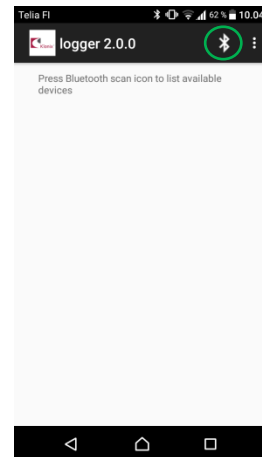
Android application

1. Launch the Kionix logger by pressing the logger icon. When the application is started for the first time, the configuration files are downloaded and extracted to the phone's internal storage (to the kionix folder).

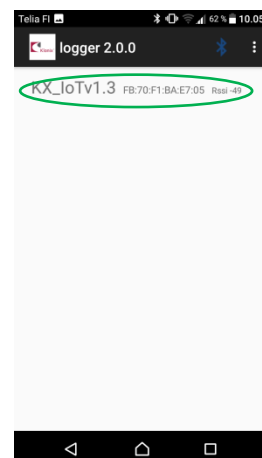


The license agreement, access rights and the battery optimization permission are requested from the user and must be accepted to guarantee the correct functionality of the logger software.

2. Press the Bluetooth "scan" icon to detect Kionix IoT devices. Make sure that the Kionix IoT device(s) is powered on.

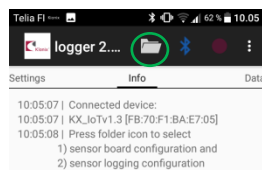


3. The Kionix IoT device(s) should appear on the list. Select the device from the list to make the BLE connection.



- When the device is successfully connected; the Bluetooth connection icon changes to blue and the list view shows the "connected device" text.

Press the folder icon to select configuration files to initialize the device for logging.



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



- Select the proper board and logging configuration files according to the IoT node hardware characteristics. Press the "set configure" button to start the IoT board initialization phase.

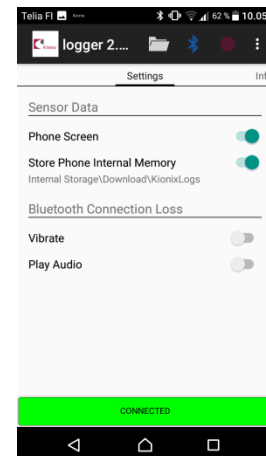


- By pressing the “record” icon, logging can be either started or stopped. When the icon is pressed for starting, the stream activation messages are sent to the Kionix IoT device and the logging has started. The status of the activation messages can be seen in the list view. The status bar at the bottom of the screen indicates the active channel(s), ODR and the total number of packets received via the BLE connection. If the Stream is not activated, a protocol error is seen in the list view.



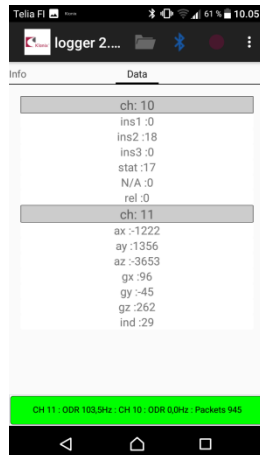
The log file is stored into “download/KionixLogs” folder in the Phone’s internal storage.

- By swiping the screen the user can navigate through the different views. The main view is the “Logger Main”. Swipe to the right from the main view to see the settings view. The raw data view can be enabled by toggling the Phone screen switch. Logging into the file can be disabled by toggling the internal memory switch.



The user can set an alert notification for the Bluetooth connection losses to vibrate or to play an audio tone.

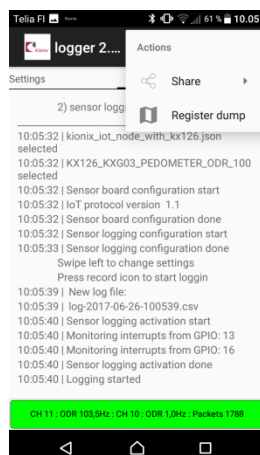
9. Swipe to the left at the “main view” to see the raw data view.



Through the share action, the log files can be shared via different media options e.g. email or cloud. When the share action is used, a default file browser of some kind needs to be installed in the phone.

Note! On the first time the user must navigate to the download directory to pick up the log file. Later on the share action should automatically point to the download folder.

10. Press the three dot menu to select register dump or share actions. The register dump action can be seen if the register item(s) is/are defined in the stream configuration file (register dump section).



Download log files to the PC

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\KionixLogs folder. Copy the log file(s) to the PC.