

# Guide on how to use the Kineis kit / ATT platform

This guide serves as an addition to the Excel sheet, which describes the process of setting up the Kineis Kit and gaining access to it in more detail.

## Most important links

[Detail installation description on GitHub](#)

[Explanation Video](#)

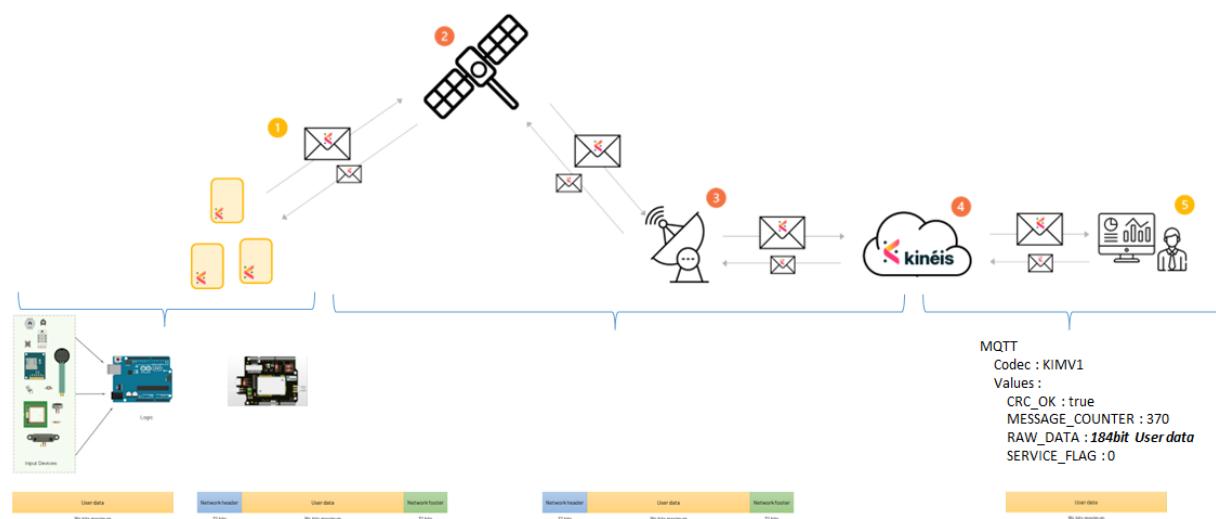
[Step-by-step overview for all parties](#)

[Power-Point: Technical Guide](#)

[Folder with all information](#)

## General Information

The Kineis Kits we send to you are for participants to use the sensors on the Grove Beginner Kit, to send those to one of the Kineis satellites, and then have them displayed at the Verhaert Connect Platform. Doing so, they can implement real-time data into their solution for the challenges. The overall process is furthermore illustrated in this graphic.



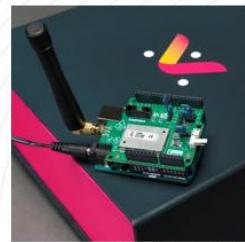
The package you received should include the following item:



[SeeedStudio Grove Beginner Kits  
for Arduino](#)



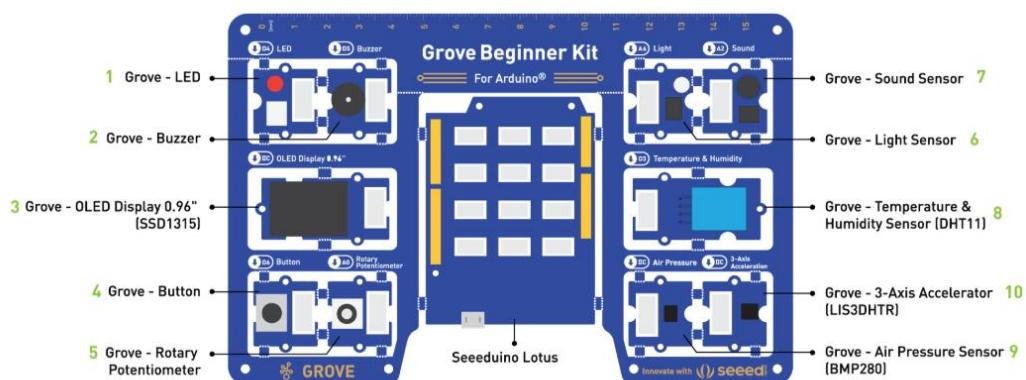
[Arduino Uno Rev3 board](#)



[Kineis KIM1 SPP kit](#)

Important for the hackathon weekend are the SeeedStudio and the Kineis KIM1. The Arduino Uno Rev3 board is an addition for participants, where they can attach more sensors. Team who want to use this additional board normally know how to use it

The SeeedStudio has multiple sensors and looks as followed:



#### **PLEASE DO NOT REMOVE ANY SENSORS FROM THE BOARD**

After the hardware is assembled and plugged into a computer, the set-up should look like this:



Please watch the [video](#) in the SharePoint in case you struggle with the assembly.

## Installing relevant software

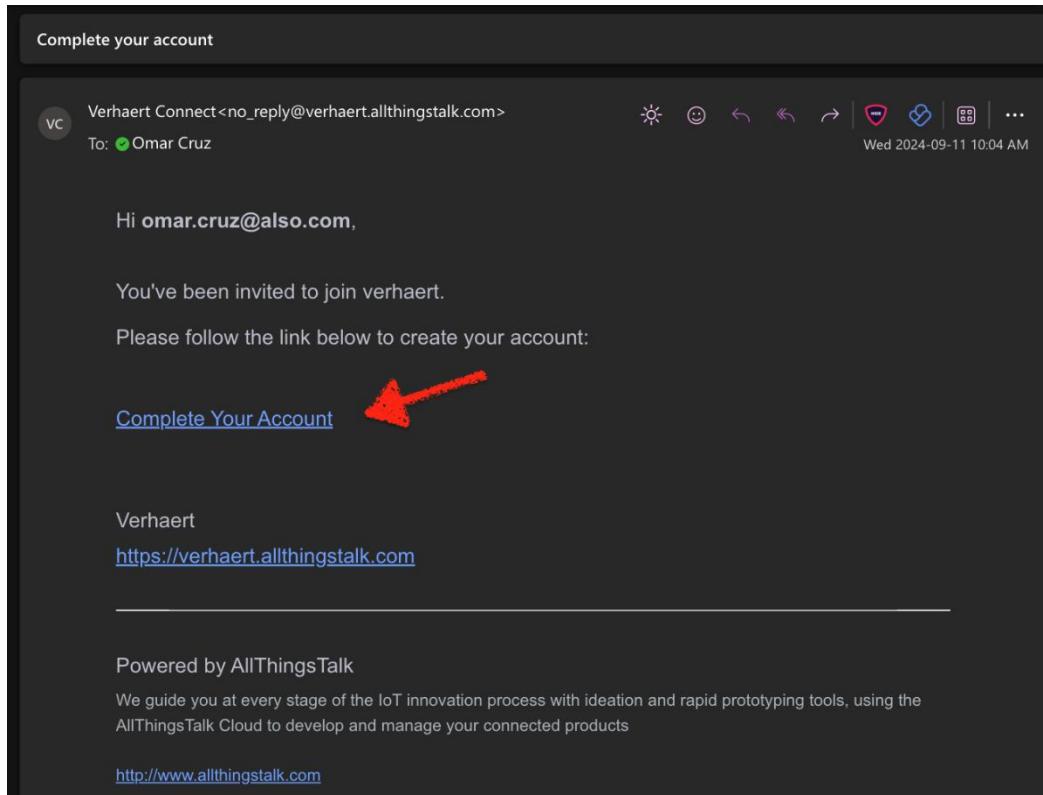
To familiarize the computer with the attached kit, the team needs to install a software and do some adjustments. These steps can be found in the detailed user description on [GitHub](#). Furthermore, they are also described in the [Excel Overview](#).

Once the software is installed, the team needs access to the Verhaert Connect platform where they receive the output from the SeeedStudio board.

## Gaining access

If a team want to work with the kit, they first need access to Verhaert Connect. TO have this access, they should follow these steps:

1. Request access in the *satellite-iot-support* channel on discord
2. Provide the central team with the requested information (team name and e mail addresses of the team members)
3. Participants need to accept the link on the mail they received and create a username, password, and a multifactor authentication



4. After the login, each member will see this screen. Here, the member should go to "Joined Grounds". The the corresponding (where the member was invited) will appear.

The screenshot shows the Verhaert Connect environment page. On the left, there's a sidebar with icons for Device, Pulse, Pinboards, Gateways, Members, Rules, Applications, and Settings. The main area has a green header bar with the Verhaert logo. Below it, there are two sections: "OWNED GROUNDS" and "JOINED GROUNDS". In "OWNED GROUNDS", there are two entries: "omar" (omar001) and "omar" (omar002). In "JOINED GROUNDS", there is one entry: "vanja" (Cassini Hackathon Testing). A red arrow points to the "vanja" entry. To the right of the joined grounds, there is a large green button labeled "+ NEW GROUND".

5. Members need to go to that Joined Ground and add their device. To add (connect) a device click on "Connect a device"

The screenshot shows the "CONNECT" page. On the left is a sidebar with icons for Device, Pulse, Pinboards, Gateways, Members, Rules, Applications, and Settings. The main area features a central circular graphic with three small icons of electronic devices. Below the graphic is the text "Connect your hardware" and "Connect a device and start visualizing your data." At the bottom is a green button labeled "+ CONNECT A DEVICE". A red arrow points to this button.

6. Then select "Arduino"

The screenshot shows the "Explore device catalogue" page. At the top, there's a search bar with the placeholder "Search by name or manufacturer" and a "Search" icon. Below the search bar are two buttons: "All" and "wifi/lan". There are also four device cards: "Arduino" (blue board), "Raspberry Pi" (green board), "Intel Edison" (blue board), and "Your own device" (orange board). Each card has a small image of the device and its name below it.

7. They need to go to “Device Settings” and in connectivity select “Kineis Satellite”

my-device-001

ASSETS DEBUG

Configure device assets

Connect sensors and actuators to start using your device

CREATE ASSET

DEVICE SETTINGS

CONNECTIVITY

NETWORK

Select a network

- Actility ThingPark
- ALSO
- Cibicom LoRaWAN
- Digital Matter
- Kineis Satellite
- Loriot
- LoriotPro
- Orange BE IoT

8. Enter the ID of the KIM1 module which can be found on the device itself

CONNECTIVITY

NETWORK

Kineis Satellite

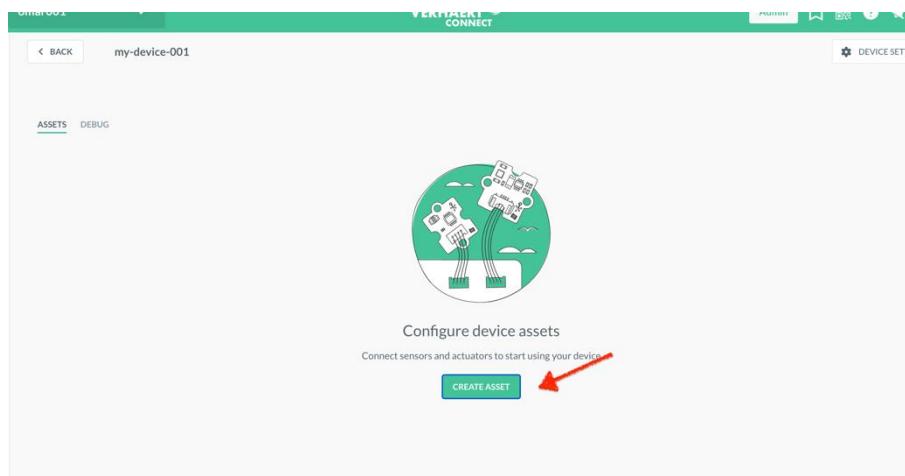
Kineis Device ID

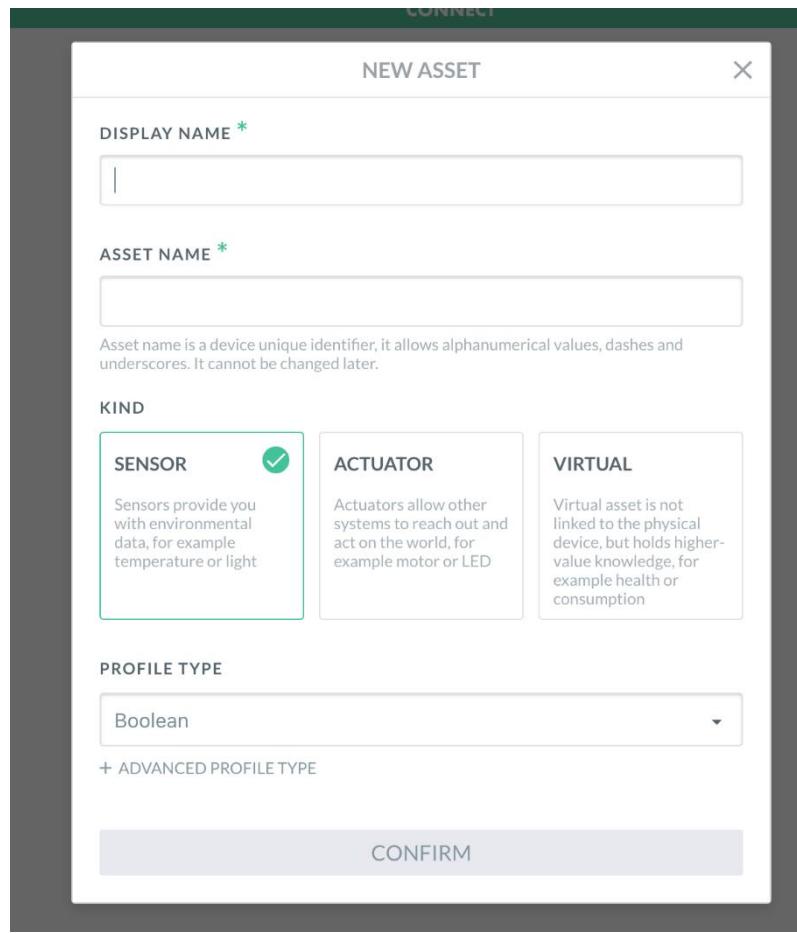
E.g. 86051

CONNECT TO NETWORK



9. Lastly, the team needs to create assets. To do so, they need to follow these steps:





We recommend creating these assets: temperature, humidity and some others. To see the entire list, please check the [GitHub](#)

## 10. That is all!

The messages received on the platform coming from the Kineis device with the ID indicated will land on this ground.

It is important to mention that each Kim1 module can be added only to **ONE ground** at the time. In case it needs to be added a second ground, the Kineis ID needs to be disconnected from the first ground.

The moment a message is received, it will appear on the screen:

Light light	2%	sensor integer	an hour ago	⋮
Pressure pressure	1012Pa	sensor number	an hour ago	⋮
Potentiometer potentiometer	114	sensor integer	an hour ago	⋮
Sound sound	32	sensor integer	an hour ago	⋮
Humidity humidity	55%	sensor integer	an hour ago	⋮
Temperature temperature	20.38°C	sensor number	an hour ago	⋮

Members are invited to use Rules, Pinboards according to their needs. They can also use our rest API and also the MQTT Broker that is offered. All the documentation is here:

<https://docs.allthingstalk.com/cloud/rules/>

<https://docs.allthingstalk.com/cloud/concepts/pinboards/>

<https://docs.allthingstalk.com/developers/api/get-started/>

## Important Details

- Make sure to put the device outside when a satellite is passing by. You can find the satellite passings [here](#).
- The buzzer on the kit will produce a sound when:
  - KIM1 is not detected: [1000ms sound] > [500ms pause] > [1000ms sound]
  - Payload sending fails: [200ms sound]
  - Button press is registered: [50ms sound]
- The LED on the kit will light up when the KIM1 module is active.
- The range for values of light, sound and potentiometer are from 0 to 255.
- The payload being sent to Kineis needs to be **exactly** 23 bytes.
- If you change the data payload in Arduino, make sure to reflect that in the [ABC1](#) on the platform, as well as in assets.
- Do not use GPIO pin number 4 on the Arduino. This pin is used to power on/off the Kineis KIM1 module. When the Arduino is connected to the grove starter kit, GPIO 4 is the LED module, so you can observe it to figure if the KIM1 is on or off.