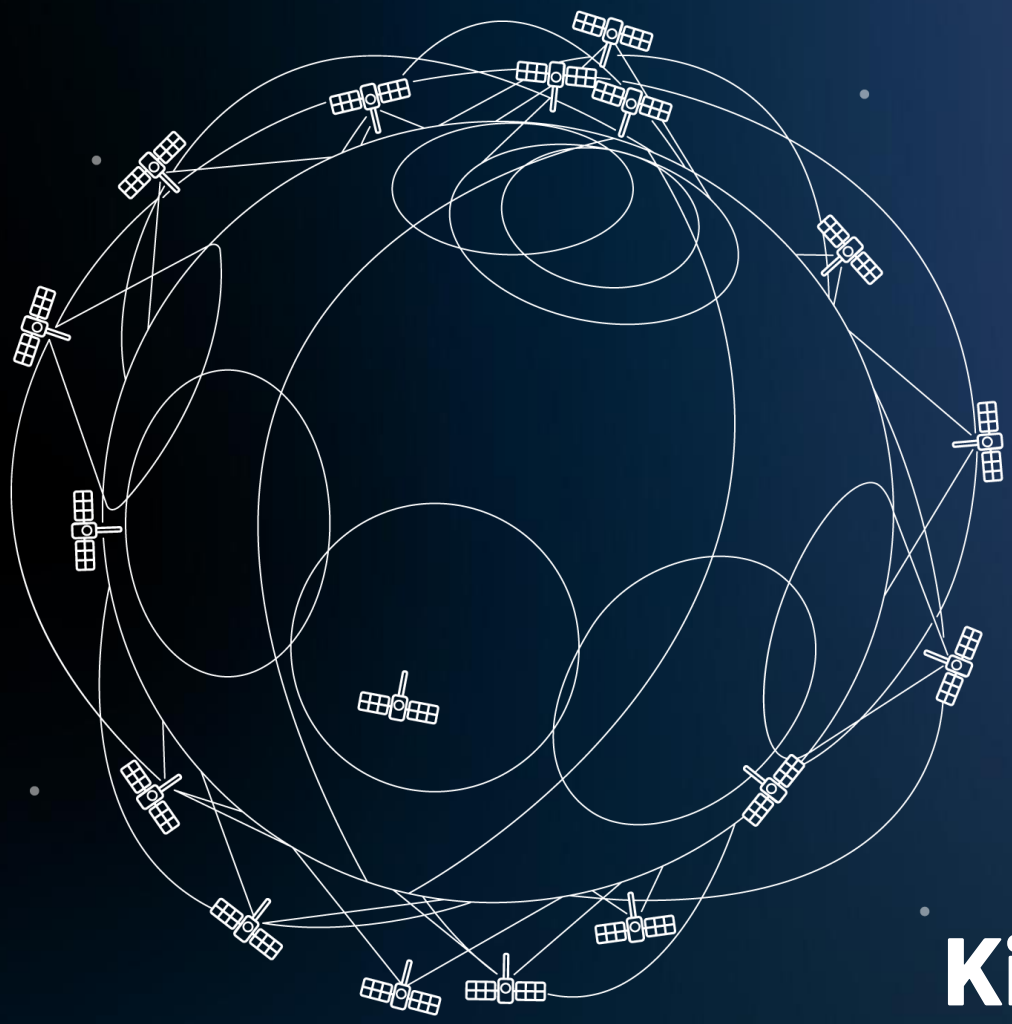

Kinéis

EXPLORER

User manual

Reference:	KINEIS-MU-21-0249
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kinéis

SAS au capital de 15 687 654 euros
11, rue Hermès, Parc Technologique du Canal
31520 Ramonville Saint-Agne - France
RCS Toulouse - SIREN 841 489 123

Contact us
+33 (0) 5 61 39 47 00
sales@kineis.com

CONTENT

I. Product presentation

The Kinéis Explorer demonstration device is a highly adaptable device enabled with Kinéis connectivity, operating on a specific bandwidth dedicated for Kinéis-enabled devices.
Battery powered with micro-USB charging option, this ready-to-use device is compact, versatile and combines four sensors, GPS, dry contact, and a button. Designed to fit most environments, the Kinéis Explorer offers multiple mounting options.
Supporting your Proof of Concept (PoC), Kinéis Shuttle Program is the end-to-end solution offer proposed by Kinéis combining the Kinéis Explorer with demo platform, Kinéis connectivity and support.

Kinéis' direct-to-satellite IoT connectivity service opens a whole new world of possibilities: available everywhere, simple, reliable, low power and affordable, our unique technology serves multiple use cases, remote assets, infrastructure, agriculture, logistics and environmental around the globe.

The Kinéis Explorer is sending uplink messages exclusively.

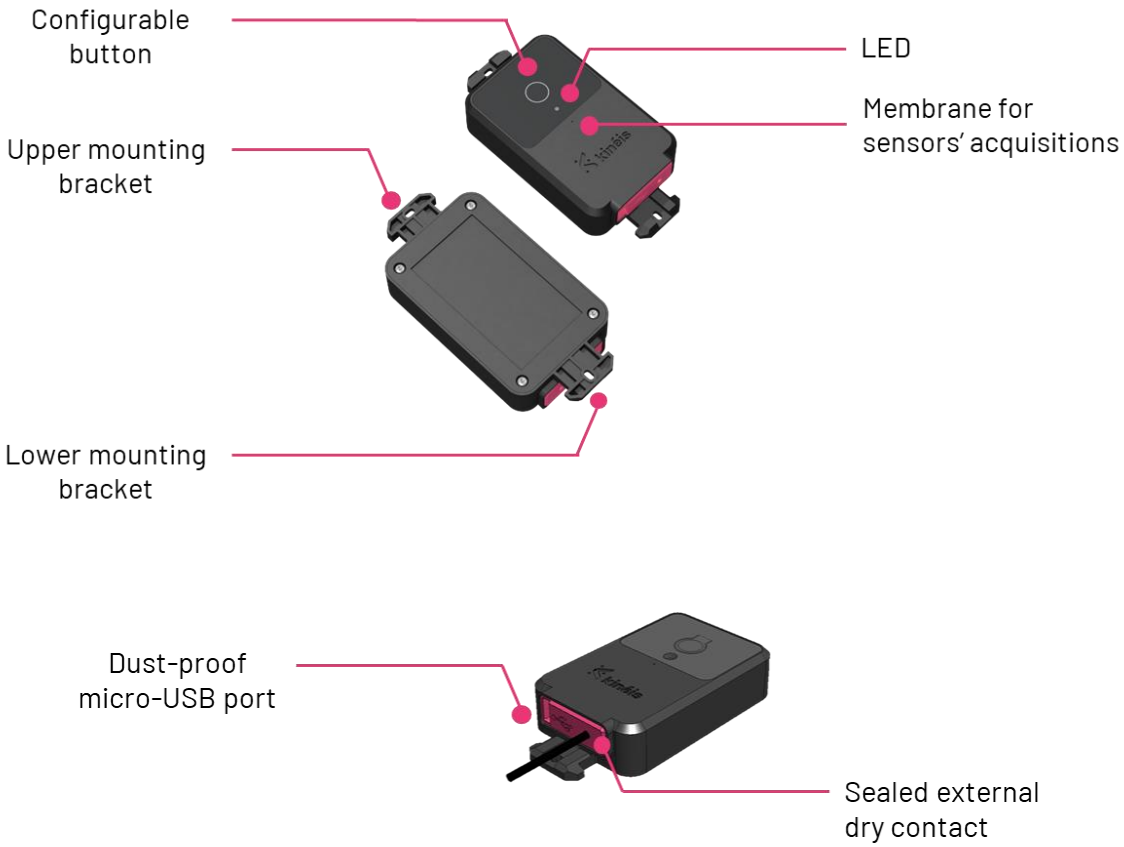


Figure 1 - Kinéis Explorer features

Figure 2 – Exploded view - Front

Figure 3 – Exploded view - Back

II. Solution overview

The Kinéis Explorer is integrating Kinéis connectivity with a data flow as described in the system overview below.

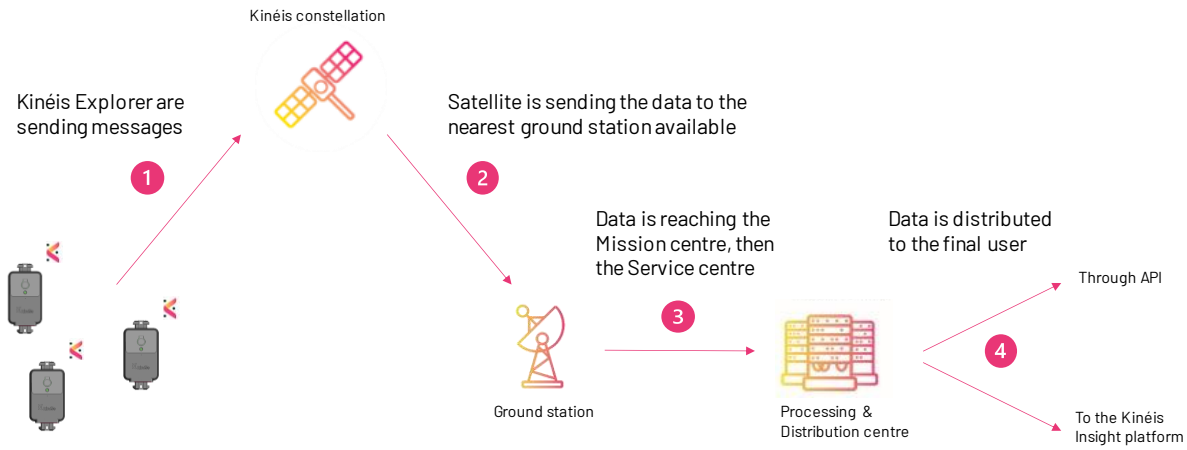


Figure 4 - Kinéis connectivity system overview

Moreover, Kinéis Explorer is part of a complete solution, including Kinéis connectivity, and data accessibility, either through a platform or via an API.

III. Package content

- Kinéis Explorer

- Accessories available separately upon request:
    - USB shielded I/O Cable Assembly, USB 2.0, Type A Male-to-Micro-USB B Male, 1.0m-length

IV. Configuration

A. Commissioning

1. Power supply

The Kinéis Explorer is powered with a polymer lithium-ion battery. The nominal voltage of the battery is 3,7V and the nominal capacity is 2800mAh. It can be charged via the micro-USB port at the bottom of the device, protected by the pink silicon cap.

The Kinéis Explorer is running on battery and can take up to 9 hours to be fully charged. Kinéis recommends charging completely the battery before installing the Kinéis Explorer to its definitive location.

2. Initialisation

To start the boot up process, you need to perform a short press on the button. The LED will be flashing alternatively green then red five times. Then, the flashing will pause and turn green two times. This means the Kinéis Explorer is starting sensors acquisition.

If the Kinéis Explorer was already in operation and the alert on the button is configured, then a short press on the button will trigger sensors acquisition and the LED will be notifying the user with a solid red for the duration of the short press.

You can turn the Kinéis Explorer off to inactive mode by pressing for 5 seconds on the button: the LED stays red solid and then goes off, indicating the user that the Kinéis Explorer is going to inactive mode.

3. LED status

Actions	LED	Meaning
None	Off	No power
		On but without any acquisition or configuration under way.
Short press on the button	1. Alternatively green and red - Flashing five times. 2. Pause	Initialisation: Kinéis Explorer starts the boot up process.
	3. Then green – flashing two times.	Starting sensors acquisition
None	Green – flashing two times	Notifying sensors acquisition is under way
None	Green – solid for 5 seconds	Notifying message emission
Short press on the button	Red – solid	Trigger sensors acquisition (if configured this way)
		Device listening for 10s for configuration with AT commands. Kinéis Explorer needs to be connected with a micro-USB/USB cable to a computer with console.
Kinéis Explorer is connected to a power supply	Green solid	Green solid until fully charged. LED is off when the battery is full.
Long press on the button – For 5s	1. Red – Solid 2. Pause 3. Then flashing red – two times	The Kinéis Explorer is going down to inactive mode.

When the light-based alert is activated, the LED is disabled. The boot up process stays the same and a long press on the button will turn the device off to inactive mode. The rest of the LED-based indications are off.

B. Device configuration

The Kinéis Explorer is configured by Kinéis according to the use case defined with the customer. The Kinéis Explorer can also be configured with AT commands[1]. A dedicated document with AT commands details is available upon request.

V. Installation recommendation

For temporary location, the Kinéis Explorer is perfectly stable sitting on a table, a desk or a shelf. For permanent installation, we recommend using the mounting options of your choice for long-term fixation. Kinéis strongly recommends installing the Kinéis Explorer at a minimum distance of 5cm from any metallic structure surrounding the device, to maximize the transmission performance and ensure the widest visibility window to the satellites.

For outdoor operation, if the Kinéis Explorer needs to be powered by an external power supply, power cables need to go through the dry contact port to ensure waterproofness. Please contact us to go over that option.

The Kinéis Explorer must not be opened without Kinéis' written consent. The device must not be submerged in any way.

A. Installation

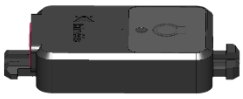
1. Coexistence with another RF equipment

The Kinéis Explorer, as any radio equipment or device, should not be installed close to systems or equipment operating on the same frequency band. A general recommendation would be not to install two Kinéis Explorer side to side and leave at least 1m between two devices.

[1] The AT is an ATTENTION command and is used as a prefix to other parameters in a string. The AT command combined with other parameters can be set up in the communications package or typed in manually as a command line instruction.

2. Kinéis Explorer orientation

The table below describes the preferred orientation to maximize the radio performances of the Kinéis Explorer:

Preference	Orientation	Example
1	Standing - vertical	
2	Lying flat	 
3	Aside	

Note: Please refer to the installation recommendations in the introduction segment on section V.

3. Kinéis Explorer mounting options

The following table describes the different mounting options proposed for the Kinéis Explorer:

	Flat surface mounting	Pole mounting
Required tooling	• A drill and/or a screwdriver • 2 screws 3.5x20mm (minimum) & anchors adapted to the nature of the surface. Material not included.	2 non-metallic cable ties not included. Maximum width: 8mm

B. Testing

Once the installation is completed, you can verify if the Kinéis Explorer is working:

- If no light alerting is configured, you can press the button and the LED will turn red. This means that the Kinéis Explorer is working and is starting an acquisition. (if the alerting on the button is also configured)
- If a light-based alerting is configured, then the LED is disabled. The Kinéis Explorer will start an acquisition as expected but no LED indicator will be available. Next, you can verify that the Kinéis Explorer is commissioned with the reception of a message.

VI. Annexes

A. Compliances

The Kinéis Explorer is a prototype and is not certified.