



LOW POWER SENSING AND TRACKING

SODAQ



Quickstart Guide

v1.0

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TERMINOLOGY

Term	Definition
TRACK	A Track Device either Active or Solar
Activation Magnet	A small magnet provided with TRACK units for activation.
Magnet Reset	A magnet swipe over the face of a TRACK device (just above the logo) to reset or trigger a firmware update.
Over-The-Air-Updates (OTAU)	Over-The-Air Updates or OTAU are firmware updates delivered to TRACK units over a secure connection to the SILICA Cloud Platform.
Messages	A string of data that includes the device information, its cell, wifi & gps information as well as additional sensor data. This is compiled into a single message and sent to the SILICA platform.
Uplink	Messages communicated from TRACK to a web application. Uplinks typically contain information such as positioning data and sensor readings.
Downlinks	Messages communicate from web application to TRACK. Downlinks usually contain new configurations or a request for TRACK to install its latest firmware.
Device Configurations	Parameters that dictate the behaviour of a TRACK device, for example, how often it sends messages while in motion.
Idle Interval	Routine messages sent at a fixed interval, for example once every 12 hours (twice a day).
Idle Positioning Type	Type of positioning (cell, wifi or gps) used for an idle message
Active Interval	Time interval between messages when TRACK is in motion.
Active Positioning Type	Type of positioning (cell, wifi or gps) used for an active message.
Message Interval Doubling	Idle messages will double each time. The idle message interval is reset after motion is detected.
Flight Mode	After motion is detected, TRACK will not send any messages until it reaches a full stop for a configured period of time.
Motion Trigger	This toggles motion-based messaging, if turned off there will be no messages triggered when motion occurs.
Flanges	A hard plastic edge that is sticking out on the left & right side of the TRACK. They have 4x screw holes allowing you to mount the TRACK to an object by using screws. (Refer to Section 5.1)

1. INTRODUCTION

Thank you for ordering a TRACK.

This Quickstart guide is here to introduce you to your TRACK and assist you in activating and using it. Let's get started.

2. ORDERING & RECEIVING YOUR TRACKS

Depending on how you ordered your device, your shipment may come from SODAQ Headquarters in Hilversum, The Netherlands or from one of our partner suppliers.

Your TRACK will come in a well wrapped package, however please check and make sure that there was no physical damage to the packaging or the device caused during shipping.

In the event of any damage to the device, please let us know by emailing support@sodaq.com and include your order number so that we can assist you promptly.

3. PREPARATION FOR ACTIVATION AND ONBOARDING

3.1. BEFORE YOU START

Before unpacking and activating your TRACK devices, please ensure that you have **sufficient LTE-M connectivity within your premises**. This is critical as TRACK is unable to be activated without LTE-M coverage.

We also recommend that you prepare any necessary materials including screws, screw drivers, USB-C cables. Required materials can vary according to the TRACK model you use. For more information on the materials you would need for your selected model please refer to Section 5 - MOUNTING.

3.2. MATERIALS

Below is a list of materials that you will typically need to successfully onboard a TRACK.

Table 1. Recommended items to prepare when integrating TRACK units on site. Optional items are suggested for increased efficiency.

Item	Mounting	Required	Provided with Shipment
Activation Magnet	All	Required	Depending on Order
Screws	Flanges	Required	No
Screw Driver	Flanges	Required	No
3M Tape	No Flanges	Required	No
Trolley	All	Optional	No
Plastic Tray	All	Optional	No

4. ACTIVATION

4.1. PROCESS

The TRACK devices that come from production are in a dormant state and will require an activation process to be done so that they can install their latest software to start operating.

(Note: In some cases, the device may have already been activated prior to being sent to you. If that is the case, you can skip this section and go straight to mounting the device (See SECTION 5). You can check if your device has already been activated by logging into the Silica Platform with your username / password (See SECTION 7.1). The device will be visible in the Home screen.)

The process for activating the device is relatively simple, it requires you to swipe a strong magnet over the top of the device (see Table 2 for the specific area) after which the device's LED will light up (See SECTION 3.2 for more information on what the LED lights mean) and it will download its intended software from the OTAU server. After downloading & installing the software, the device will then send a **STARTUP** message to the Silica Platform after which it is ready to be used.

See Table 2 (below) that shows the location on the device of where you should swipe the magnet to activate it.

Table 2. Overview of the area on the device where the magnet should be swiped to activate it.



4.2. BUTTON & LED FUNCTIONALITIES

The below information shows the Button behaviour / LED responses and what they mean. This information is for the two different types of TRACK devices (ACTIVE / SOLAR) that are currently available.

4.2.1. TRACK ACTIVE

Table 3. Overview of primary functions and required actions to trigger a function in a TRACK ACTIVE device. The LED response is given.

Function	Action	Image	LED Signal
Pulse	Single press	 <p>The image shows the TRACK ACTIVE device with the black location pin icon. The circular part of the icon is glowing with a white ring, indicating the magnet area is active.</p>	All four LEDs fade in/out in white.

<p>Reset</p> <p>*Only applicable if TRACK hasn't carried out an OTAU in the last 24 hours, otherwise it will start an OTAU with a magnetic reset.</p>	<p>Magnet Reset</p>		<p>All four LEDs fades in/out in orange</p>
<p>OTAU Start</p>	<p>Magnet Reset</p>		<p>Top LED pulse in white 5 times</p>
<p>OTAU Fail</p>	<p>None</p>		<p>Top LED pulse in red 5 times</p>

Start test-rig application	-		Top LED flashes in purple for 1.5 seconds
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4.2.2.TRACK SOLAR

Table 4. Overview of primary functions and required actions to trigger a function in a TRACK SOLAR device. The LED response is given.

Function	Action	Image	LED Signal
OTAU Start	Magnet Reset		White LED pulses 5 times
Reset *Only applicable if TRACK hasn't carried out an OTAU in the last 24 hours, otherwise it will start an OTAU with a magnetic reset.	Magnet Reset		Orange LED fades in/out

OTAU Fail	None		Red LED pulses 5 times
Start test-rig application	-		Purple LED flashes for 1.5 seconds

5. MOUNTING

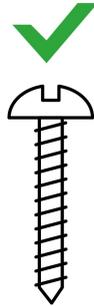
Depending on whether your TRACKs are equipped with **Flanges** or **No Flanges**, your mounting solutions will vary. This section provides our recommendations on these two mounting options as well as the required orientation for optimal performance.

5.1. FLANGES

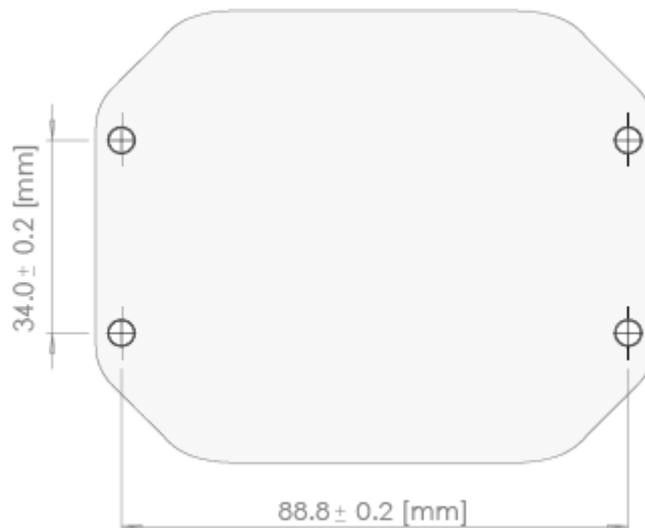
A TRACK with flanges will feature 2 screw holes on either side of the device, an example is shown in the image below.



It is recommended to use **non-countersunk pan head M4 screws or bolts** when mounting a flanged TRACK to an asset.



Your asset will need to have the necessary holes in place to accommodate the screws. Please refer to the drilling template below to ensure the correct dimensions are implemented.



5.2. NO FLANGES

Non-flanged TRACK models will have a regular base without lateral screw holes as shown in the image below.



It is recommended to use **2 strips of 3M Tape (VHB or GPH)** - or alternatively **LSE series tape** for applying to some plastics like HDPE - each **5.0 x 1.9 cm** long attached to the back of the tracker as shown in the image below. It is important that the device is attached to a smooth, non-curved and clean surface on your asset. The surface should be at least **80x80 mm**.

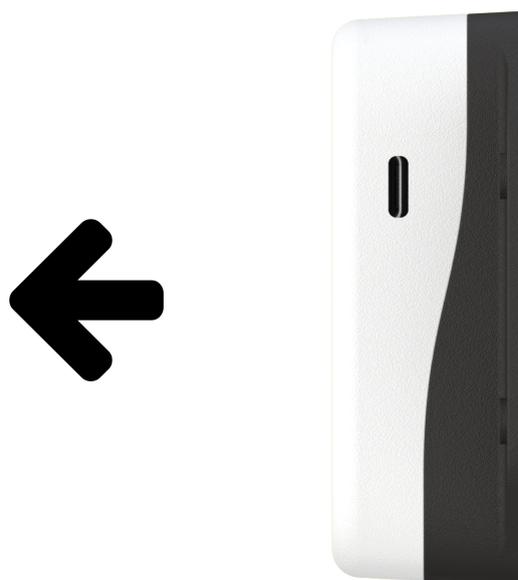


5.3. ORIENTATION

For optimal GPS positioning, SODAQ TRACK should be placed facing upwards, in a **horizontal orientation**. This maximises the number of satellites that the device can detect.



If a horizontal orientation is not feasible, a **vertical orientation** is the second preference. Note that with this orientation, GPS positioning accuracy can diminish in comparison to a **horizontal orientation**.



5.4. SURROUNDING STRUCTURES

GPS accuracy is influenced by surrounding structures; buildings, trees, tunnels, mountains and vehicles. When mounting TRACK onto your assets, it is recommended to ensure its view of the sky isn't obstructed by metallic structures, for example in a metal container or a vehicle.

5.5. HEAVY IMPACTS

The IP67 enclosure of TRACK can withstand strong jets of water (e.g. for use on ship decks) and is totally protected against dust. However with extremely powerful impacts there is a risk that the device will fall off or take some damage. When mounting TRACK onto your assets, select a placement with minimal risk of powerful impacts to ensure operational longevity.

6. DEVICE BEHAVIOUR AND OPERATING PROFILE

SODAQ TRACK is designed to operate as a low power tracking device. There are numerous mechanisms used by TRACK to send uplinks in an autonomously manner, which is primarily based on motion using the onboard accelerometer. This behaviour allows TRACK to minimise power consumption and to communicate the most relevant information about your assets. TRACK alternates between two primary operational states while tracking; **Idle Mode** and **Active Mode**.

6.1. IDLE MODE

The **Idle Mode** is the baseline state of TRACK and will always revert to this state when no activity is taking place. When TRACK is stationary, it remains in deep sleep until it needs to wake up to send an **IDLE message**. These messages (or uplinks) are communicated at a fixed interval of once a day, for example. The **idle interval** can be configured to reduce or increase the message frequency. Refer to Section 6.8 - Configuration for more information on configuring idle messaging.

6.1.1.MESSAGE DOUBLING

To further minimise power consumption, the TRACK device has a feature called **message doubling**. This feature will double its idle interval when your asset remains stationary for a period longer than the device's current **idle interval**. For example, if the starting **idle interval** is 1

message per day, the next message will be sent in 2 days, then 4 days and so on. However, once motion is detected, the idle interval will be reset.

The maximum interval for this feature can be configured using a downlink with intervals of 1 day up to 32 days.

6.2. ACTIVE MODE

Using the onboard accelerometer, TRACK can detect the movement of your asset, for which it enters the **Active Mode**. A **MOTION START** message is sent to indicate motion has occurred. With continuous motion, TRACK will consistently send uplinks at the rate of its **active interval**. The default configuration for the **active interval** is 30 minutes.

6.2.1.FLIGHT MODE

When your asset is moving, particularly when in an aircraft, the TRACK can be configured not to send messages throughout the asset's journey (while it is in motion). With **Flight Mode ON**, TRACK will send a **MOTION START** message once it first detects motion. When your asset reaches its final destination and arrives at a full halt, the TRACK will wait for a period of time to confirm that it has stopped moving, after which it will send a **MOTION STOP** message to report the final location after your asset's journey.

6.2.2.MOTION TRIGGER

The onboard accelerometer can be toggled switching the Motion Trigger configuration.

With **Motion Trigger OFF**, TRACK will only stay in **Idle Mode**. TRACK will communicate at a fixed time interval (the idle interval) regardless of any motion occurring with your asset. Please note that if **Motion Trigger** is switched off, **Message Doubling** is switched off by default to avoid extended periods of no communication from the device.

6.3. POSITIONING TYPE

The method of positioning used by TRACK dictates the overall accuracy of its reported location. **Positioning Type** can be configured respectively for both **idle** and **active messages**. It is important to note that Cell and WiFi location are resolved in the SILICA Platform, meaning they will only be formatted as latitude and longitude coordinates once they have been processed in

the platform. The SILICA Platform gives preference to positioning type in the order of GPS, WiFi and Cell.

A detailed overview is given in Table 3 below.

Table 5. Indication of preference, accuracy and reliability for positioning types

Type	Preference	Accuracy	Reliability
GPS	High	5 - 100 m	<ul style="list-style-type: none"> • Unreliable inside buildings (Requires Line of Sight or Near Line of Sight to the sky) • Accuracy influenced by surrounding metallic structures • Most power consuming positioning method
WiFi	Medium	20 - 200 m	<ul style="list-style-type: none"> • Depends on coverage of access points in the surrounding area. • Accurate in urban areas • Less reliable in rural areas • Up to 6 WiFi access points reported
Cell	Low	100m - 2 km	<ul style="list-style-type: none"> • Default fallback • Always available with a successful uplink message. • Accuracy up to the nearest Cell Tower.

6.4. TRIGGER REASONS

Trigger reasons indicate the mechanism that triggered an uplink message. There are 5 trigger reasons, all shown in the Table below.

Table 6. Trigger reason IDs (software encoding), labels and description

ID	Label	Description
0	Startup	<p>An initial message will be sent when the device is:</p> <ol style="list-style-type: none"> 1. Activated with a magnet 2. Switched on again after recharging the battery 3. Reboot of the device <p>Note: Idle Positioning Type is used for Startup messages.</p>
1	Button	For TRACK ACTIVE only, a button press will trigger a message using the Idle Positioning Type for location.
2	Idle	An Idle Message is sent every X hours/days, as prescribed by the Idle Interval. Positioning used for Idle Messages can be configured by the

		user.
3	Motion Start	TRACK will send a Motion Start message when it detects motion after its Active Interval time. Note: If GPS is configured, then the Motion Start message is only sent after it gets a GPS location from the Satellites, this can take up to 2 minutes depending on coverage and interference.
4	Motion Stop	TRACK sends a Motion Stop message after coming to stop and confirming that there is no motion detected.

6.5. CONFIGURATION

There are 7 configuration parameters which can be modified to control your TRACKs' behaviour. For details on how to update, refer to **Section 7 - SILICA PLATFORM**. It is important to note that the **battery performance is strongly dependent on configurations and how often your asset is moving**. It is important to select the configurations that work with your use case while optimising power consumption. Our team can support you in identifying opportunities to optimise battery life, for further support please contact your Account Manager. Table 6 provides an overview of all configuration options along with their accepted value ranges.

Table 7. Configuration parameters, the default values and the accepted ranges are shown

Configuration	Default	Min	Max
Idle Interval	24 hours	6 hour	32 days
Idle Positioning Type	Cell & WiFi	Cell	Cell, Wifi & GPS
Active Interval	30 minutes	5 minutes	24 hours
Active Positioning Type	Cell & WiFi	Cell	Cell, Wifi & GPS
Message Interval Doubling	OFF	OFF	ON
Flight Mode	ON	OFF	ON
Motion Trigger	ON	OFF	ON

Table 8. Available configuration options for positioning types and their power consumption

Configuration	Description	Power Consumption
Cell Only	Cell location always used	Low
Cell and WiFi	WiFi attempted first, cell location as fallback	Medium
Cell and GPS	GPS attempted first, cell location as fallback	Medium
Cell, WiFi and GPS	GPS attempted first, WiFi is first fallback, Cell is second fall back	High

Configuration changes are only implemented on a TRACK after it sends an uplink to the SILICA Platform. Once a configuration change is made within the SILICA Platform, a downlink with the new configurations is queued for the device and is sent upon its next uplink.

When handling devices in the field, it is useful to force a configuration change by triggering a message from the device, this can be done by pressing the button (ACTIVE only) or moving the device to trigger a motion message. The SILICA Dashboard allows you to monitor the update status of your devices and make these configuration changes.

Please refer to the next section for more details.

7. SILICA PLATFORM

SILICA is a cloud-native IoT platform hosted on AWS where all traffic from TRACK devices are managed. An application handles all the processing to make the data available for customers via the [SILICA Dashboard](#).

Below is an overview of the primary applications running on the platform.

Table 9. Applications running on the SILICA platform that handle TRACK's data

Application	Description
UDP Listener	UDP Listener receives raw UDP payloads from TRACK units over Private APN connection. Binary data is decoded, preprocessed, cell/wifi lookups are carried out, then stored in the database for later use. The listener handles device configurations by sending downlinks back to the device while it is connected to the network.

Data Forwarder	Within the UDP Listener, live payload data can be posted to the customer's application over an HTTPS request. The data is provided in JSON. Please contact your Account Manager for further details.
TRACK Dashboard	User interface providing overview of location and status of devices, enables device configurations.
TRACK API	For integration of SILICA backend with customer application. Enables customers to retrieve device metadata, telemetry data and to update configurations from their own application. Contact your Account Manager for further details.
Over-the-Air Updates	Central firmware management system for all TRACK devices. The system is used to provide devices with their latest firmware when activated and when a new firmware version is available. To get an overview of the features in current software versions, please contact your Account Manager.

7.1. DASHBOARD

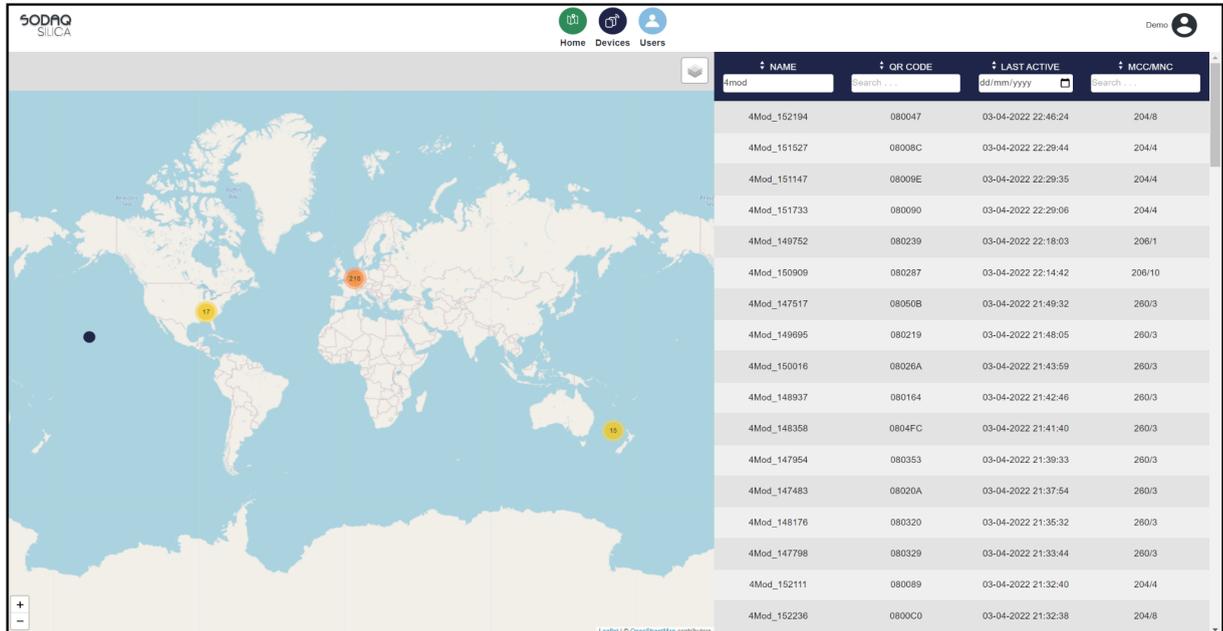
When a TRACK is purchased, a SILICA account is created for the primary contact in your organisation. Upon creation of this account, you will receive an email with your username and password. You should then carry out the following steps:

1. Go to <https://trackdash.sodaq.com>
2. Enter your username and temporary password, then click Login
3. Enter your new password, confirm by clicking Update Password
4. You should now be logged in



7.1.1.HOME PAGE - FLEET OVERVIEW

An initial glance at your entire TRACK fleet is given in the Home Page screen.



Here you can feasibly identify the latest location of your assets and identify TRACK units that require further inspection. Table 10 below specifies the available functionalities in this screen.

Table 10. Available features on the Fleet Overview screen

Feature	Description
Map Clusters	When zoomed out of the map view, nearby points are clustered together and represented by the number of assets within a given region to see an assets' location, zoom in to see a precise location for your asset.
Map Points	Last reported location by TRACK is shown with a point feature on the map. There is one point for every TRACK owned by your organisation. Hovering your mouse over a point will show a popup with more data. Clicking on the point will take you to the historical perspective of the TRACK in the Device Overview screen
Base Map Layer	It is possible to change the base map layer. Options include Terrain, Satellite and White & Grey.
Devices Table	A table list shows all your devices with information about each tracker:

- Name - a unique name tag per device. It consists of a text name + last 6 digits of the imei (International Mobile Equipment Identity)
- QR Code - unique alphanumeric code printed on the top casing of all TRACK units
- Last Active - datetime of the last uplink seen from the device
- MCC / MNC - Mobile Country Code and Mobile Network Code

All the data can be filtered and sorted using the components in the table headers, for example you can search for a device by name or qr code to filter through the list, or you can sort your list by the time they were last active.

You can also click on a specific device to open its Device Overview Page and see its location history.

7.1.2.DEVICE OVERVIEW

The Device Overview page provides a full historical perspective of an individual TRACK device. There are various components on this screen that allow you to explore the data through the map, table and charts.

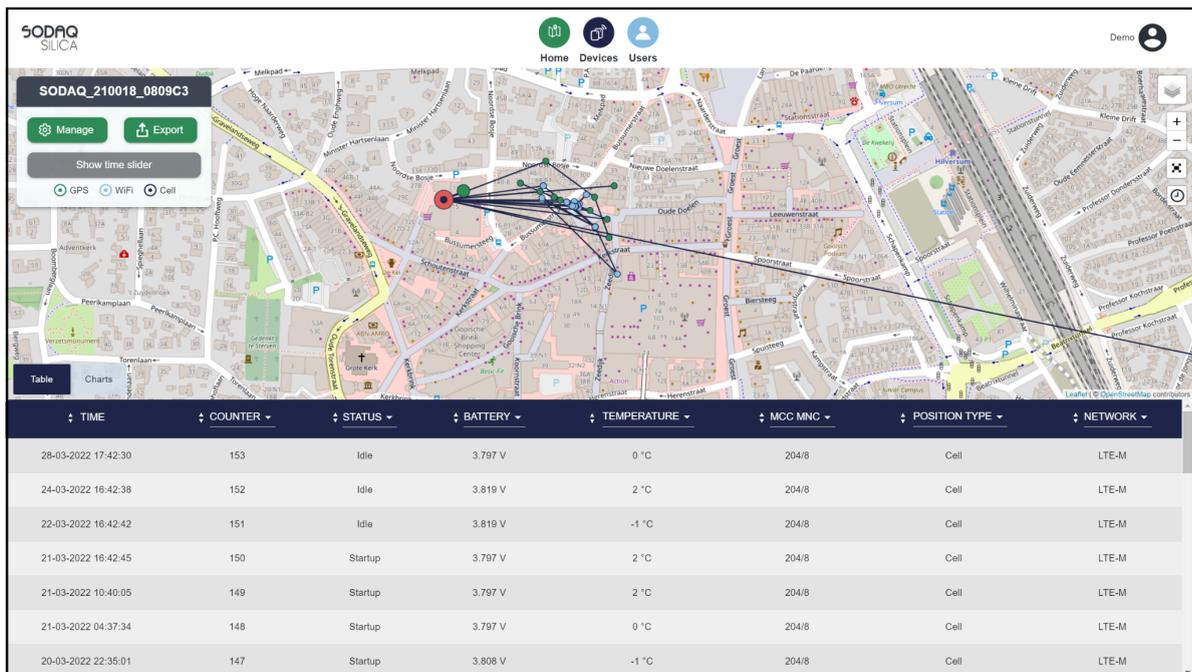


Table 11. Available features on the Device Overview screen

Feature	Description
Historical Location	<p>A line feature on the map indicates the historical location of your asset. The green dot indicates the start, while the red point indicates the end of the journey.</p> <p>Dark Blue dots show location points by using CELL. Light Blue dots show location points by using WIFI. Green dots show location points by using GPS</p>
Change Map Layers	<p>You can change the base map layer by clicking on the layers button in the top right corner. Options include Terrain, Satellite and Grayscale.</p>
Map Zoom In / Out	<p>You can zoom in or out of the map by using the mouse scroll or the +/- buttons on the top right corner.</p>
Full Screen Mode	<p>You can enable full screen mode by clicking on the fullscreen button on the top right corner underneath the +/- buttons.</p>
History Table	<p>The table on the bottom provides additional data. Each row represents an uplink message. Click on a row to locate it on the map.</p> <p>You can change the different Data Headers by clicking on them and a dropdown will show what data headers are available.</p> <p>Note: Only the last 200 data points are shown by default, if you want to view before that, enable the Time Slider and drag it to the dates you want to view.</p>
Time Slider	<p>The “show time slider” button presents a slider whereby you can subset data by time and grab more historical data for your TRACK.</p>
Manage Button	<p>Clicking the manage button will take you to this device within the Device Configuration page, allowing you to modify the configurations for the selected TRACK.</p>
Export Button	<p>Downloads a CSV file of the device’s historical data.</p>
Charts	<p>The charts tab provides a line chart for temperature and voltage measurements.</p>

7.1.3.DEVICE CONFIGURATION MANAGEMENT

The Device Management screen provides a list of all your TRACK units. Each row represents a TRACK's **device shadow**. A device shadow is a TRACK's digital twin hosted on the SILICA Platform that enables users to keep track of the configuration state on all devices.

NAME	LAST SEEN	QR CODE	IDLE POSITIONING INTERVAL	ACTIVE POSITIONING INTERVAL	MESSAGE DOUBLING	FLIGHT MODE	MOTION TRIGGER	GROUP	STATUS
4Mod_149513	A DAY AGO	08028E	1 d 0 h	00:30	On	On	On	N/A	Up to date
4Mod_149570	13 HOURS AGO	08047C	1 d 0 h	00:30	On	On	On	N/A	Up to date
4Mod_150925	9 DAYS AGO	0804AA	1 d 0 h	00:30	On	On	On	N/A	Up to date
4Mod_149646	3 DAYS AGO	0802E9	1 d 0 h	00:30	On	On	On	N/A	Up to date
4Mod_150594	9 DAYS AGO	080168	1 d 0 h	00:30	On	On	On	N/A	Up to date
4Mod_150966	9 DAYS AGO	0801A8	1 d 0 h	00:30	On	On	On	N/A	Up to date
4Mod_150164	5 HOURS AGO	080505	1 d 0 h	00:30	On	On	On	N/A	Up to date
4Mod_147376	9 DAYS AGO	08021C	1 d 0 h	00:30	On	On	On	N/A	Up to date
4Mod_152111	AN HOUR AGO	080089	0 d 6 h	00:01	Off	Off	On	N/A	Up to date
4Mod_151972	AN HOUR AGO	0800BC	0 d 6 h	00:05	Off	Off	On	N/A	Up to date
4Mod_152129	5 HOURS AGO	N/A	0 d 6 h	00:05	Off	Off	On	N/A	Up to date
4Mod_151733	6 HOURS AGO	080090	0 d 6 h	00:05	Off	Off	On	N/A	Up to date
4Mod_151626	4 HOURS AGO	080094	0 d 6 h	00:05	Off	Off	On	N/A	Up to date
4Mod_152236	AN HOUR AGO	0800C0	0 d 6 h	00:01	Off	Off	On	N/A	Up to date

By clicking the Edit button, you are able to modify a TRACK's device shadow, after selecting the new configurations and clicking **Save**, the TRACK's device shadow is updated in the database, which queues a downlink message to update the device's configuration. The table below explains the different configuration status:

Table 12. Available features on the Device Overview screen

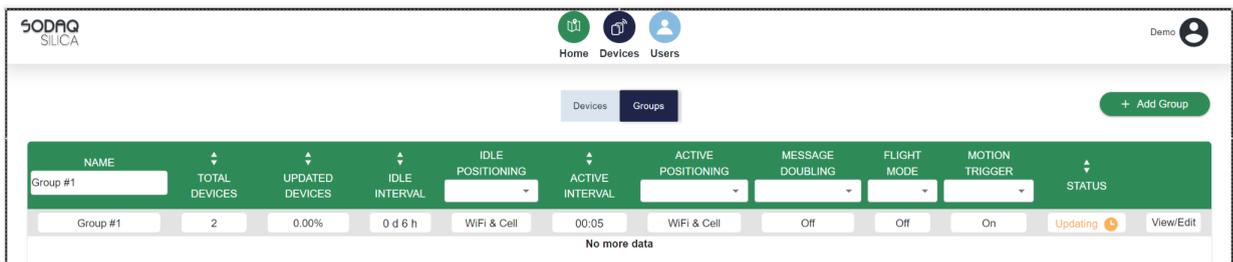
Configuration Status	Description
Updating	TRACK is waiting to receive its downlink message
Confirming	TRACK received its downlink message, the server is waiting a confirmation of its configuration state upon the next uplink
Up to date	TRACK matches the desired configurations

7.1.4.GROUP MANAGEMENT AND CONFIGURATION

To navigate to the Group Management page, go to Devices and click on the **Groups** tab.

On this page you see groups that have been created in your SILICA account, the amount of devices in each group, their configuration settings and a percentage of how many have been updated.

Note: Devices can only be part of one group and once they are in a group, their individual configuration can not be changed.

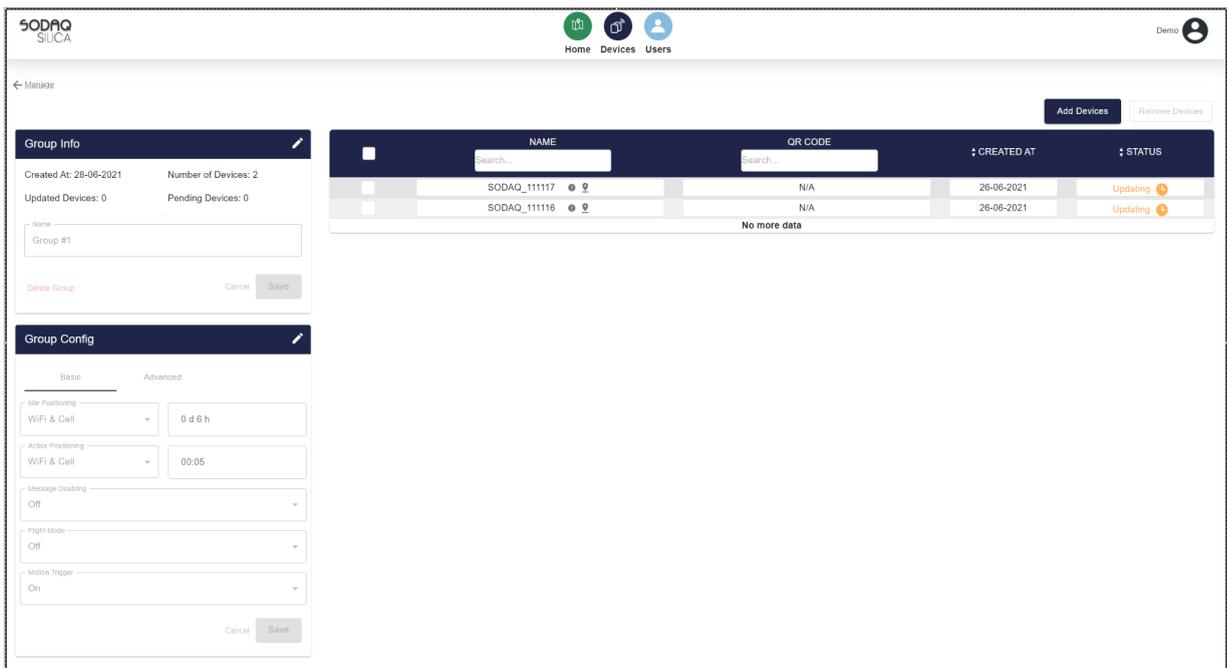


NAME	TOTAL DEVICES	UPDATED DEVICES	IDLE INTERVAL	IDLE POSITIONING	ACTIVE INTERVAL	ACTIVE POSITIONING	MESSAGE DOUBLING	FLIGHT MODE	MOTION TRIGGER	STATUS
Group #1	2	0.00%	0 d 6 h	WIFI & Cell	00:05	WIFI & Cell	Off	Off	On	Updating

To create a new group, click **Add Group**, you will be prompted to enter the group name, select the devices you wish to add to the group and the configuration settings for the group.

To manage a group, simply click on the **View/Edit** button on the right side of a group field.

This opens up the individual group management page. In this page you can add/remove devices, edit the groups configuration, change the name of the group and delete the group as well.



Group Info

Created At: 28-06-2021 Number of Devices: 2
Updated Devices: 0 Pending Devices: 0

Name: Group #1

Delete Group Cancel Save

Group Config

Basic Advanced

Idle Positioning: WIFI & Cell 0 d 6 h
Active Positioning: WIFI & Cell 00:05
Message Doubling: Off
Flight Mode: Off
Motion Trigger: On

Cancel Save

NAME	QR CODE	CREATED AT	STATUS
SODA_Q_11117	N/A	26-06-2021	Updating
SODA_Q_11116	N/A	26-06-2021	Updating

8. SAFETY INFORMATION

Follow the guidelines and warning information of this chapter to prevent incidents such as fire or explosion, injury to people or damage to the product.

Follow the warning information about safe conditions below to prevent incidents such as fire or explosion:

- Do not use and/or stop using the product immediately if any part of the product, such as the plastic body, LED's, the USB-cable or USB-adapter is broken, shows signs of corrosion, smokes or emits a burning odour
- Only use manufacturer-approved accessories and supplies
- Do not expose the product to physical impact or damage
- Do not charge the device with the USB connection while the device is in contact with liquids

Environmental Aspect	Lower Boundary	Upper Boundary
Ambient temperature during installation and use	-10°C	60°C
Ambient temperature during transport and storage	-10°C	60°C

9. WARRANTY

A warranty period of 12 months applies to the product, commencing on the day of purchase of the product.

The warranty solely covers inadequacies caused by material defect or manufacturing defect. The warranty does not cover any unauthorised use or tampering with the product, such as product overloading, use of violence or force, damage as a result of any unauthorised interference or caused by foreign items. Failing to follow the safe conditions or safe installation condition instructions and common wear are not included in the guarantee.

10. SUPPORT

For additional questions or general support regarding your TRACK units, please contact support@sodaq.com. If you need support accessing the SILICA Dashboard, please contact the primary SILICA administrator within your organisation.

10.1. FAQ FOR TROUBLESHOOTING

- **RED Light after Magnet Activation**

This means that for some reason the Over-The-Air-Update process failed. This is most likely due to network connectivity issues. Try the activation process again (if possible in a location where you know the LTE-M coverage is good) and see if it works.

If it still shows a RED Light, then please contact us at support@sodaq.com and we can assist you in troubleshooting the issue.

- **No Lights showing during Magnet Activation**

This is most likely due to battery depletion. Please connect the device to a charger using a USB-C connector and let it charge for 30 mins after which try the activation process again. If there are still no lights showing, then please contact us at support@sodaq.com and we will arrange a replacement asap.

- **TRACK not showing in Home Page**

This means that the TRACK hasn't sent any uplink messages yet and is most likely still in an "dormant" state. Please check the Device Configuration Management page to see your TRACK is there and then try activating it again.

- **Device showing correct lights on Magnet activation but no messages on the dashboard.**

The activation process can take 10 - 15 minutes to complete depending on network coverage. If it still doesn't show any messages after 15 mins, try the activation process again (if possible in a different location than the first time) and see if it works.

If there are still no messages in the Dashboard, then please contact us at support@sodaq.com and we can assist you in troubleshooting the issue.

- **Device not sending any Uplink messages when moved.**

Please check if Motion Trigger is enabled on the device, otherwise check its Active Interval and when it last sent a Motion Stop message. The device can only be Motion Triggered (Motion Start message after the Active Interval has expired from the last Motion Stop message. (E.g Active Interval set at 30 mins, the device will only check for Motion and send a Motion Start message after 30 mins from the last Motion Stop message).

- **Devices sending messages several minutes after motion has been detected.**

Check if the Device has GPS enabled, if GPS is enabled then the device must first get a GPS fix prior to sending an message. This GPS fix can take several minutes depending on the location of the device and its "view" to the sky.

If you need the TRACK to send a message earlier, try using WIFI / CELL positioning instead.

- **I have changed the configuration for my device, but it is still showing "Updating"**

The process for changing the configuration and confirming that the configuration on the device was change is done in several steps:

1. After making the configuration changes in the platform, the changes are then queued to send to the device (when it sends its next message) via a downlink.
2. The device sends a message with its current configuration and receives the new configuration via a downlink. The device then applies the new configuration.
3. The device then sends a message that shows that its current configuration are new and the platform confirms that the settings are correct before changing the device status to "Up to Date"

This whole process requires that the device sends a minimum of two messages (1x to receive its new configuration and 1x to confirm its configuration) before being confirmed as "Up to date".

Note: Depending on your device state (eg. In idle mode and only sending a message every 12/24 hours), this process could take a day or two. If you want to speed up this process then either move the device or press the button on the device.

- **I have changed the configuration for my device, but it is showing "Confirming"**

Following the general configuration update process (shown above), this means that the new configuration set for the device is the same configuration that the device has. However the platform will confirm this (when the device sends its next message) before changing the device status to "Up to Date".