

INTEGRITY 150

/ Configuration Guide



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Published and printed in the U.S.A. by:

Globalstar, Inc.

1351 Holiday Square Blvd.

Covington, LA 70433

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Introduction

The configuration for the INTEGRITY 150 is done online at iot.globalstar.com. That configuration is applied to the device via the Globalstar Realm App. If the app is already installed see the next section “Device Configuration Profile Creation”.

What is the Globalstar Realm App?

The Globalstar Realm app updates INTEGRITY 150 firmware and configuration via a Bluetooth® connection. VARs have full access to all available features when logged in using their credentials.

Which devices does the mobile app support?

You can install the Globalstar Realm App on any smart phone or tablet that has iOS 13+ or Android 14+ operating systems.

Note: *Ensure the unit is connected to cellular or WiFi prior to installing the app.*

Install Globalstar Realm App for iOS

1. On your iPhone or iPad, open **App Store**.
2. Tap the Search icon.
3. Enter *Globalstar Realm App* in the search field.
4. Select “**Get**” in the search results to start the download.

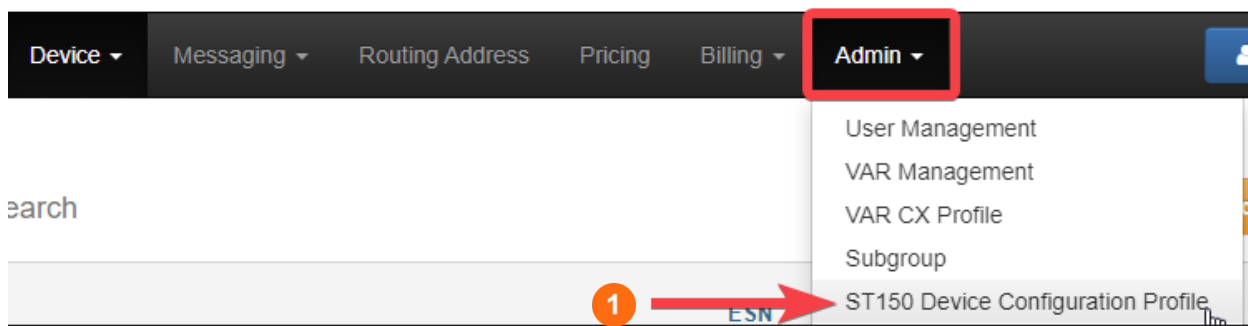
Install Globalstar Realm App for Android

1. On your phone or tablet, open **Play Store**
2. Tap the Search bar
3. Enter *Globalstar Realm App* in the search field.
4. Select “**Install**” in the search results to start the download.

Device Configuration Profile Creation

To create a configuration profile for the INTEGRITY 150, you must have a valid login and user role (VAR ADMIN, CM ADMIN, VAR USER) on the <https://iot.globalstar.com> site.

- 1 Once logged in, click “Admin” and select "ST150 Device Configuration Profile":



- 2 Select “add configuration”:

ST150 Device Configuration Profile Search



VAR Name * Configuration Name VAR CX Profile

- 3 Select "INTEGRITY 150" for configuration type:

- 4 Name the configuration:

▪ *Note: the profile name can not end with the text “DEFAULT”*

ST150 Device Configuration Profile add

Choose configuration Type

☐ ST150M ☐ ST150M DK ☒ INTEGRITY 150

VAR Name * Configuration Name *

Profile Type: ☒ Standard Messaging ☐ Change of Location ☐ Advanced

- 5 Select which type of profile you would like to create
 - Standard Messaging – Location based tracking with or without motion
 - Change of Location – Geofence based tracking within or outside of the Geofence
 - Advanced – Fully user-defined device configuration
 - *Note: Advanced configurations should only be made after reading 8550-0002-01 Globalstar Unified API*

Details about the configurable values for Standard and Change of Location are located in Appendix A of this document.

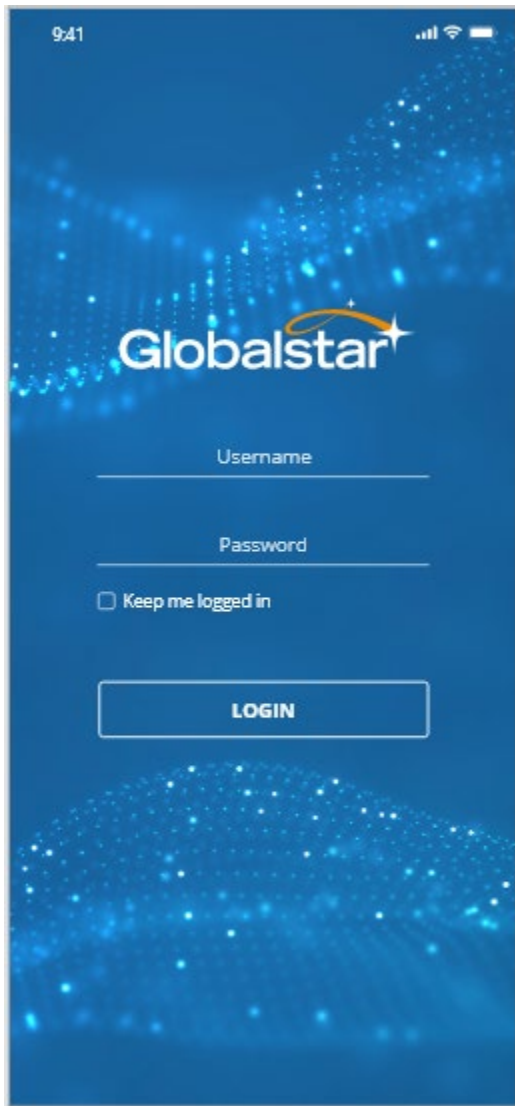
App Screens

Note: *Ensure the unit is connected to cellular or WiFi.*

The app screens are from the iOS version of our App. If you are using an Android version of our App, there might be slight differences in the interface.

Login Screen

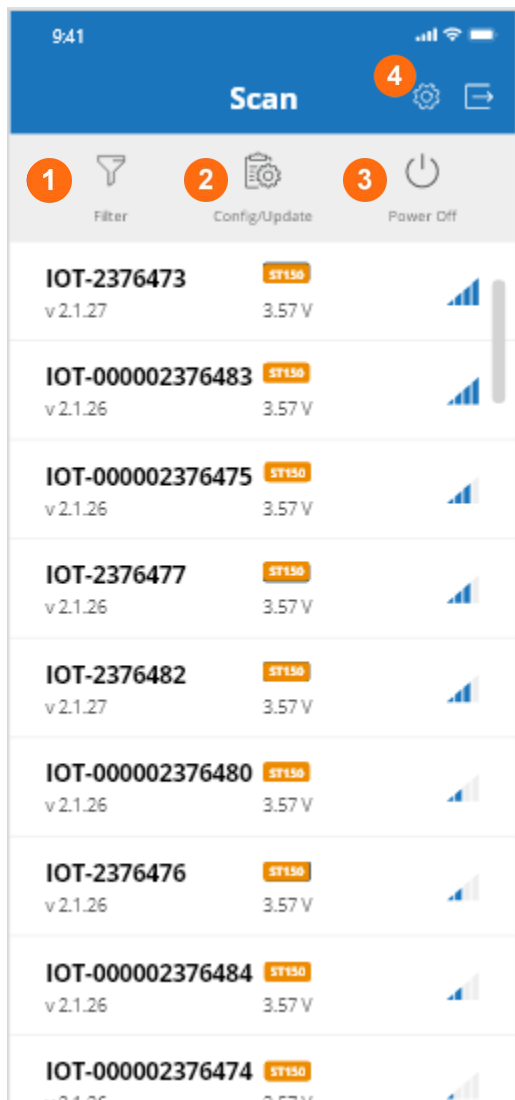
Allows the user to login using their credentials. Once logged in for the first time the credentials will be stored on the device. If credentials are saved on the device, the login screen allows the user to login biometrically. **SKIP LOGIN** is available for end users to do FW updates and view their configuration.



Username and Password – Use your Simplex MyAccount login credentials

Scanning Screen

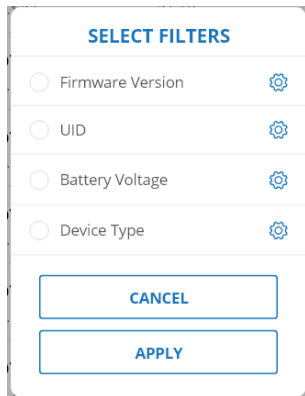
Devices broadcast their ID, FW version, battery voltage, and signal strength to your mobile device. Several actions and displays can also be accessed from this screen as described below:



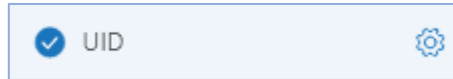
- 1 **Filter** – Filter by FW Version, UID Range, Battery Voltage, or Device Type
- 2 **Config/Update**
 - **Configuration Profile** – View the list of available configuration profiles and choose to load onto one or multiple Devices
 - **Update** – Go to the Update screen and update one or multiple Devices
- 3 **Power Off**
 - Select units to power off
- 4 **Settings** (Located in top right gear icon) – Displays the app settings menu to access the below information
 - Notification Settings
 - App Version and Installation ID
 - Upload App logs
 - Support API Endpoint
 - Logout
 - Last Sync to the Simplex MyAccount
 - Sync the device to Simplex MyAccount

Filtering

When you choose **Filter** on the **Scan** screen, the list of available filters will open.

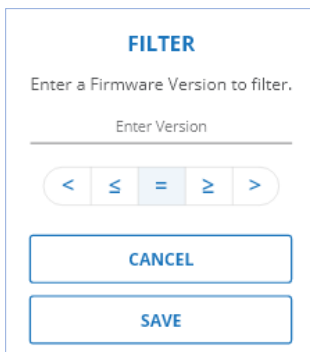


The **Gear icon** will open the filter settings, so that the filter can be configured. A blue checkmark and highlighting will show when a filter is selected.



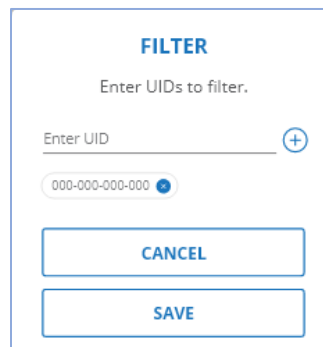
Firmware Version

Allows you to show only Devices in the selected range of firmware

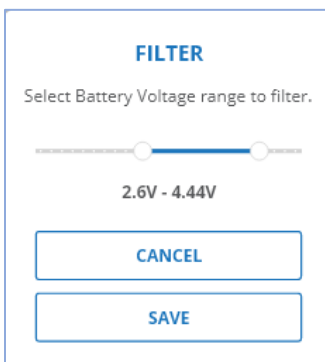


UID

Allows you to enter UID numbers to display

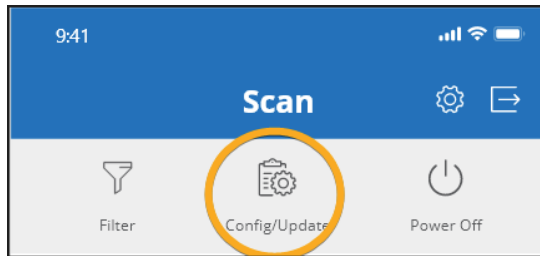


Battery Voltage



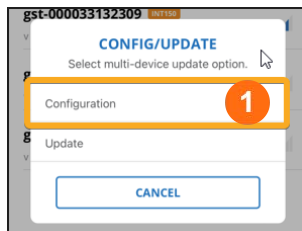
Allows you to show voltages in a designated range

Update Device Configuration

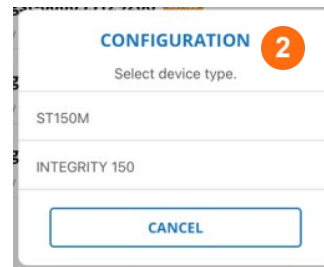


Accessing the **Configuration Profiles** menu from the scan screen allows you to apply a selected profile to multiple Devices.

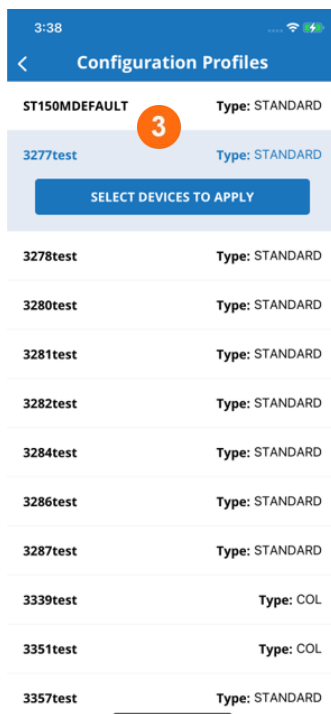
Note: Ensure the unit is connected to cellular or WiFi.



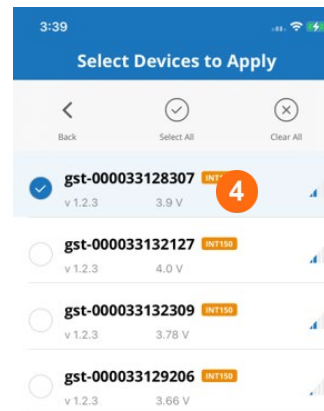
1 Select **Configuration**



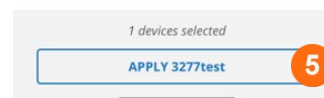
2 Select the device type on the modal



3 Select the profile that you would like to apply the profile to and click **Select Devices to Apply**



4 Select one or more devices that you would like to apply the configuration to. This queues the selected devices as pending in the order listed.

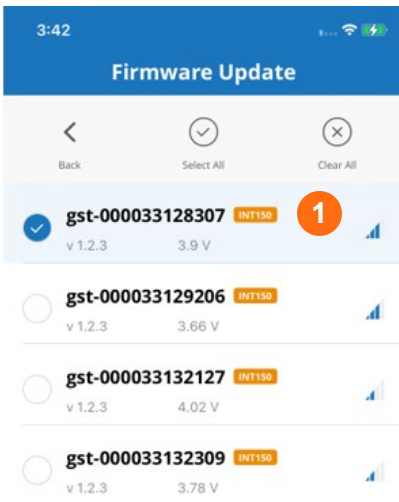


5 Select **Apply**

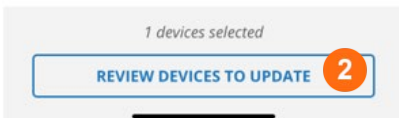
Firmware Update

Select one or more devices that you wish to update the firmware. This creates a pending queue of devices to update in the order listed.

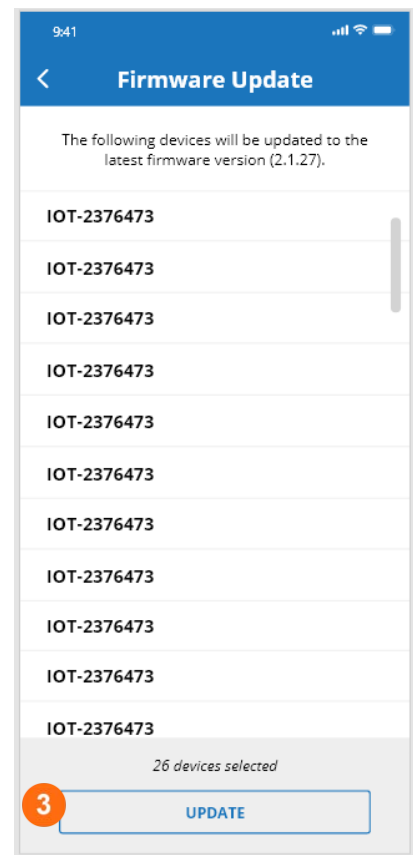
The newest update will be downloaded to your mobile app from the cloud, if you're connected to the internet, and be available when you are offline.



1 Select the Devices that you would like to update

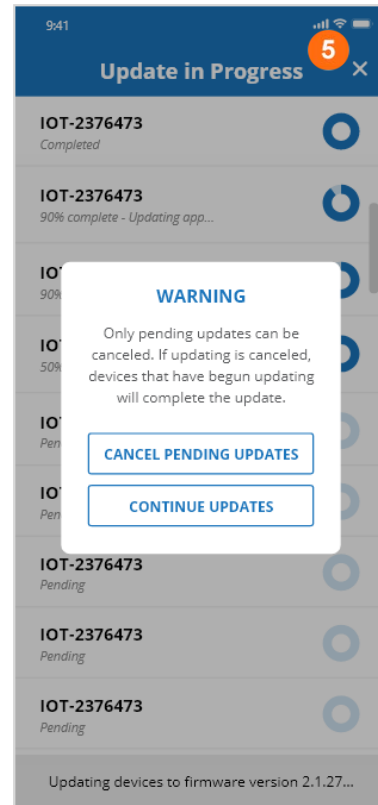
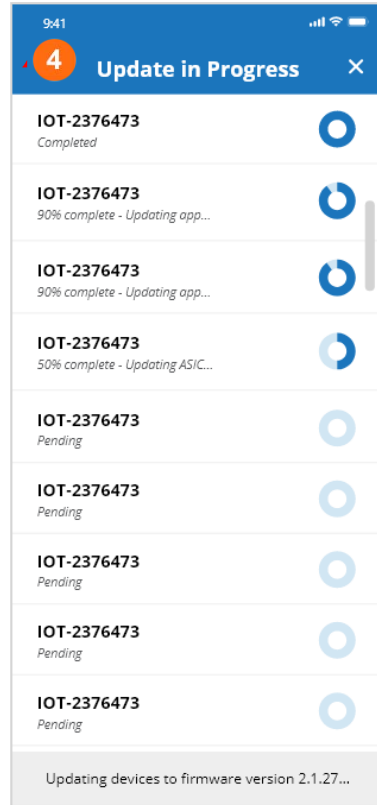


2 Press the **Review Devices** to Update button

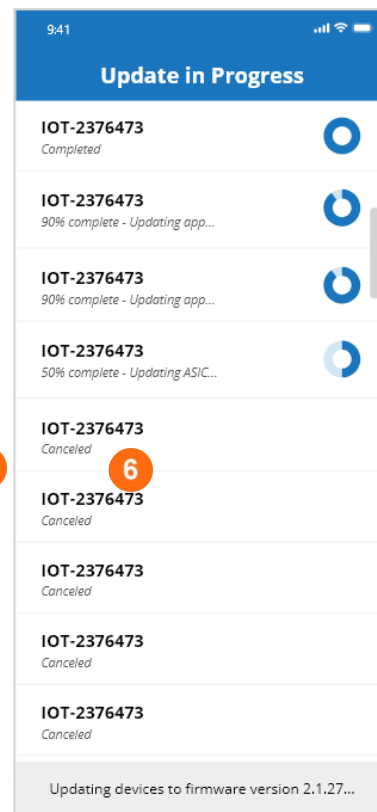


3 Review that the correct number of Devices are to be updated and press the **Update** button

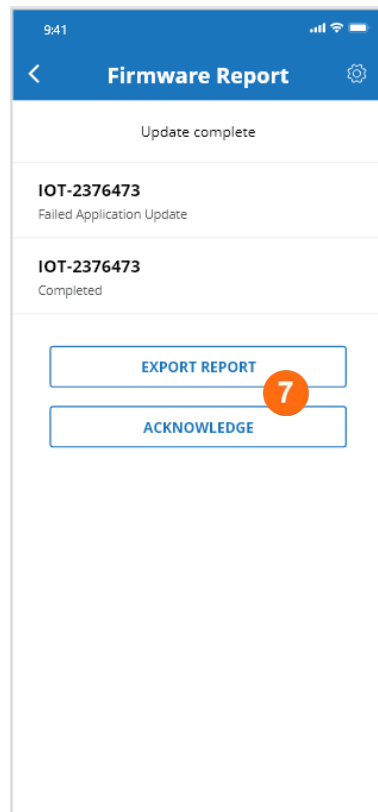
The update will begin. Three devices can be updated at a time, so the remaining devices will be in the queue and listed as pending. You must remain on this screen until all updates are complete or the queue will not be processed.



Pressing the **X** in the top right of the screen will cancel all queued items, but all Devices that are in the middle of an update will continue.



If updating is cancelled, the queue will show as cancelled and you must remain on the update screen until the remaining Devices complete their update.

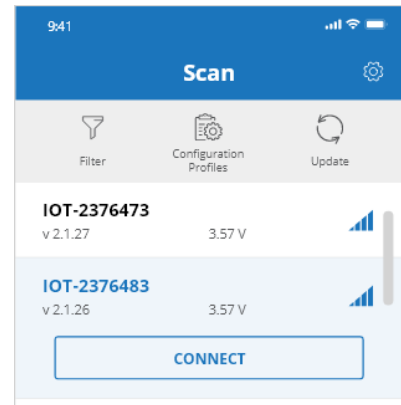


Once all Devices have updated, you will be able to view a report of the Devices. You can Export the report as a CSV or Acknowledge to return to the Scan screen.

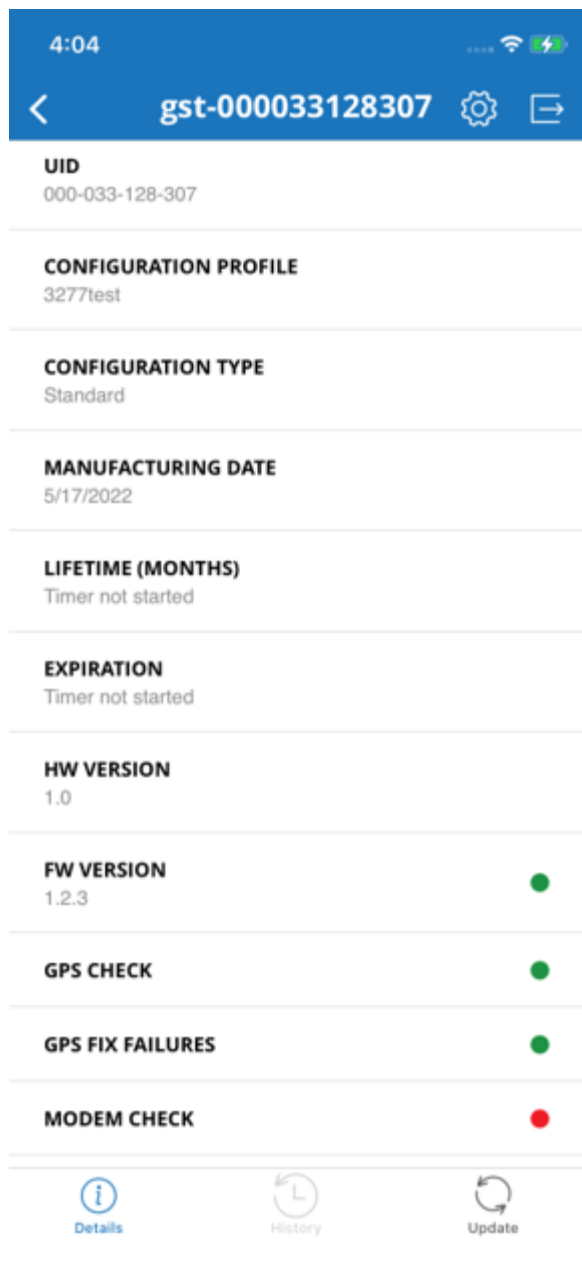
Connecting to a Device

From the Scan Screen, you can connect to an individual Device. Whether you are logged in or not determines what options are available to you once connected.

Select the Device that you would like to connect to and select **Connect**.



Details Screen



UID – Unique device identifier number

Configuration Profile – The currently loaded configuration

Configuration Type – Type of configuration loaded on the device (Standard, Change of Location, or Advanced)

Manufacturing Date – When the unit was produced

Lifetime (months) – Remaining time the device will be active on the Globalstar network

Expiration – The date the device will deactivate

Hardware (HW) Version – Version of the board

Firmware (FW) Version – Number of the currently installed FW

GPS Check – Working status of GPS

GPS Fix Failures – If the Device is currently unable to get a GPS fix

Modem Check – Working status of internal modem

Battery – The status of the battery

GPS Mean Fix Time – Average time to acquire a GPS fix

GPS Total Fixes – Number of good GPS fixes

Total Messages Sent – Number of messages sent by the device

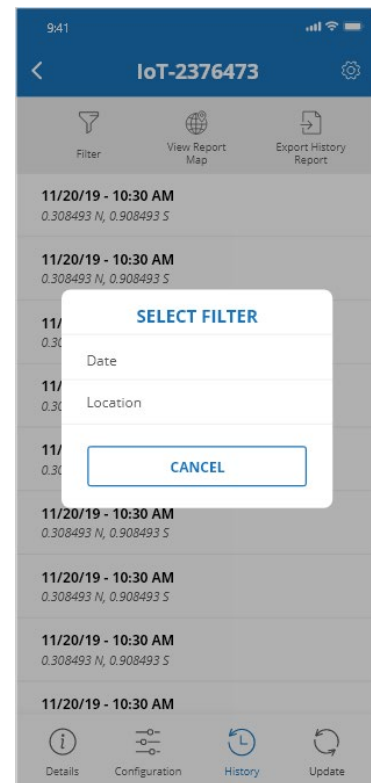
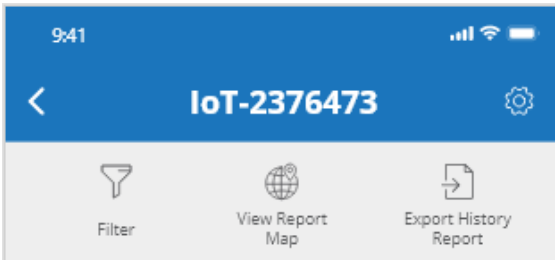
History Tab

Only available when logged in

Allows the user to select a filter to show device history in that criteria:

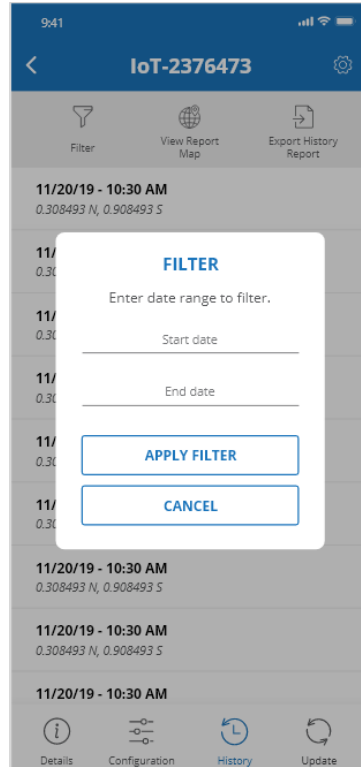
- Date
- Location

The filtered content can be displayed on a map or exported as a CSV file.

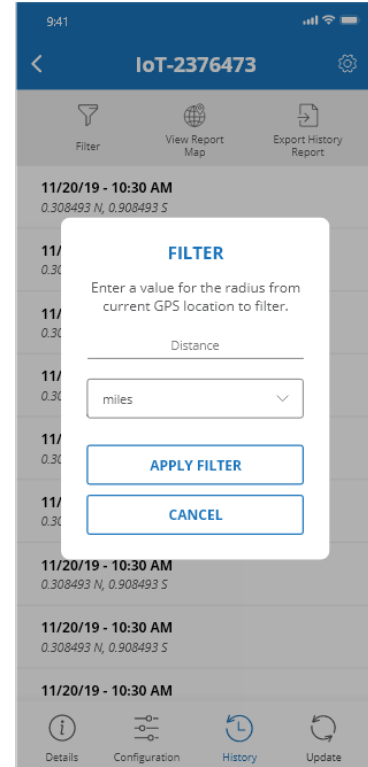


Date Filter

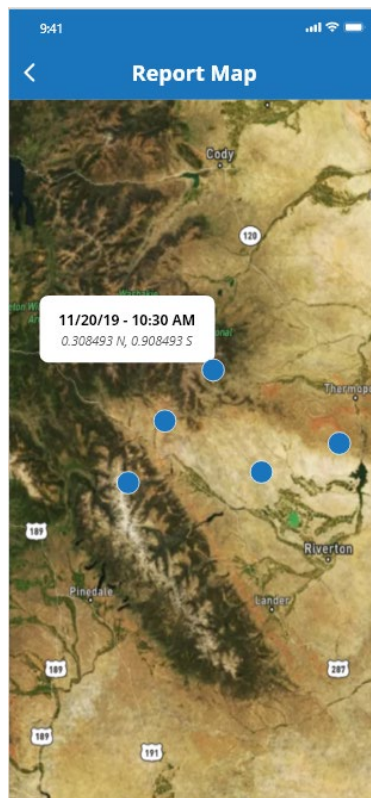
The start date and end date are entered and all messages in that period are listed.

**Location Filter**

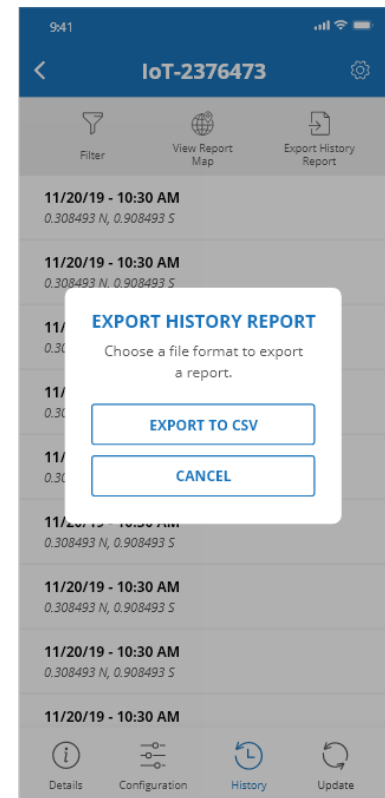
A distance is selected and all messages within a circle from the current GPS location are listed.

**View Report Map**

Shows the filtered data on a map. Up to 50 locations can be viewed, starting with the most recent date.

**Export History Report**

Allows the user to export the current filter to CSV and save it on their mobile device.



Appendix A

Battery charging maximum thermal limit - Maximum configurable battery temperature for charging.

Battery charging minimum thermal limit - Minimum configurable battery temperature for charging.

Battery discharging maximum thermal limit - Maximum configurable battery temperature for discharging.

Battery discharging minimum thermal limit - Minimum configurable battery temperature for discharging.

Bluetooth Advertising Interval - How often the advertising packet will be transmitted. It is configurable in INTEGRITY 150 from 250ms to 2 sec in steps of 250ms.

Bluetooth RF power level - This is the BLE radio RF output transmit power. This is a configurable in INTEGRITY 150 only to this subset (-8dBm, -4dBm, 0dBm, +3dBm and +4dBm).

Broadcast Name Prefix - 3 character prefix in BLE advertising name of the INTEGRITY 150 device. This is configurable and must be 3 ASCII characters.

COL Area Recentered Message – enable to be messaged when two consecutive GPS fixes and track points indicate that it has remained within the COL Radius, it re-centers the change of location area to its current location and resumes transmitting at the “at rest” rate.

COL Radius Size (meters) – diameter of circle representing the area where a change of location is allowed. Default is 30 meters, maximum is 65,535 meters.

Enable change of state message – enable to be messaged when a device has entered a state of vibration and/or a state lacking vibration at a specified message interval.

Enable/Disable previous track messages - Also known as Delta messaging.

GPS Fix timeout – How long to wait for a GPS fix to time out, in case the device is unable to acquire a fix.

Health Status Message Frequency (days) - Number of times in a 30 day window a health check is sent.

Interval between messages - Track time/Messaging frequency that can be configured. For Ex. 30 min is a message every 30 minutes.

Interval between satellite messages in SOV (mins) - Track time/Messaging frequency that can be configured while in a State of Vibration.

Location Message Type - Interval or Time of Day.

Low battery interval between messages - This is the track time that user can configure while INTEGRITY 150 goes in low power mode. This must be 2X the interval between messages.

Message inside COL Area – enable or disable to be messaged at a specified interval when a device has entered a state of vibration and/or a state lacking vibration exceeding a specified period while remaining inside a change of location area.

Message interval in COL Area (mins) – Interval in minutes specified to be messaged based on a state of vibration and/or a state lacking vibration exceeding a specified period while remaining inside a change of location area.

Message Outside of COL Area – enable or disable to be messaged at a specified interval in minutes if a device leaves the change of location area.

Message payload bytes - These are the three bytes that user can configure with user data in a track message

Message retransmit interval maximum - Maximum timing between the randomized interval between transmit tries in seconds. Minimum value = 5 seconds greater than the Message retransmit interval minimum. Maximum value = 600 seconds.

Message retransmit interval minimum - Minimum timing between the randomized interval between transmit tries in seconds. Minimum value = 5 seconds, maximum value = 300 seconds.

Message while in state of Vibration

Outside COL Message Interval (mins) – specified interval in minutes to be messaged if a device leaves the change of location area.

Satellite transmission attempts - This is the # of satellite transmission retries for a particular message.

Send Accumulate Message every X hours of accumulation - Frequency to send message while accumulating

Send message when circuit is in: State of Vibration, State of Lacking Vibration – Choose a state that the device will send messages while it is in

Send message when circuit is: Both , Enters, Exits – Send a message to notify of a state change

Send message when device leaves – specify if a message is to be sent when a device goes into a state of vibration and/or a state lacking vibration after exceeding a specified period in minutes

Send message when exiting COL Area – enable or disable whether to be messaged if a device leaves a specified change of location area.

Time to be in a state of lacking vibration (mins) – the time in minutes to be exceeded before generating a message based on the device being in a state lacking vibration.

Time to be in a state of vibration (mins) – the time in minutes to be exceeded before generating a message based on the device being in a state of vibration.

