



# Thuraya SatTrack for Land



Thuraya T2M-DUAL

## User Guide – End Customer

v0.2

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Revision history	4
1. Introducing Thuraya SatTrack for Land	5
2. Setup	6
2.1 Pre-requisites for Thuraya SatTrack for Land setup	6
3. Customer Care Landing Page	7
4. Vehicles and the Map Area	8
Search and Filter	11
4.1 Customers/ Vehicles	13
4.1.1 List of Vehicles	13
4.2 Vehicle Information Form	13
4.2.1 Vehicle Information	16
4.2.1.1 Vehicle	16
4.2.1.2 Vehicle Information	16
4.2.1.3 Tracking Information	16
4.2.2 Tracking & Monitoring	17
4.2.2.1 Tracking & Monitoring - map	17
4.2.2.2 Tracking & Monitoring - table	18
4.2.3 Vehicle Configuration	19
4.2.3.1. Reboot Terminal	19
4.2.3.2. Tracking	19
4.2.3.3. Report Transmission	20
4.2.3.4. Terminal Setting Value Request Command	20
4.2.3.5. RSSI Information	20
4.2.3.6. Use Geo-fences	20
4.2.4 Transmission Settings	21
4.2.4.1 Short Code	21
4.2.5 Terminal Settings	22
4.2.5.1 GPIO	22
4.2.5.2 Selectable Data Settings	23

4.2.5.3 Event Sending Select	24
4.2.5.4 Sudden Acceleration and Deceleration	25
4.2.6 Vehicle Settings	26
4.2.6.1 G-sensor Event Value	26
4.2.6.2 Overspeed Alarm	26
4.2.6.3 Coefficient	26
4.2.6.4 Driver	27
4.2.7 Geofences	28
4.2.8 Ignition Turn On/ Off Reports	29
4.2.9 IO Reports	30
4.3 Areas	31
4.3.1 Areas	31
4.3.2 Creating a New Area	32
4.3.2.1 Creating an Area file for import	33
5. Map display options	35

## Revision history

Date	Version	Author	Approver	Changes
07-Jan-22	0.1	Sagar S. H. (FrontM)		Initial draft
15-Feb-22	0.2	Sagar S. H. (FrontM)		V 0.2

# 1. Introducing Thuraya SatTrack for Land

Thuraya SatTrack for Land is a software-based tracking system designed for Thuraya T2M. Thuraya SatTrack for Land provides secure, private and accurate vehicle tracking to support operations, voyage planning benefiting vehicle owners and operators.

When you subscribe to a Thuraya SatTrack for Land package and receive confirmation of your vehicle being set up, a simple initial setup is required on the terminal to start tracking.

Thuraya SatTrack for Land software can be accessed at <https://sattrackland.thuraya.com/>

The software will show you the latest reported locations of all your vehicles which you have active on a map. Thuraya SatTrack for Land will also allow you to receive alerts when the vehicle deviates from geofence, over-speeds, Ignition is turned on or off, and remotely manage accessible terminal settings.

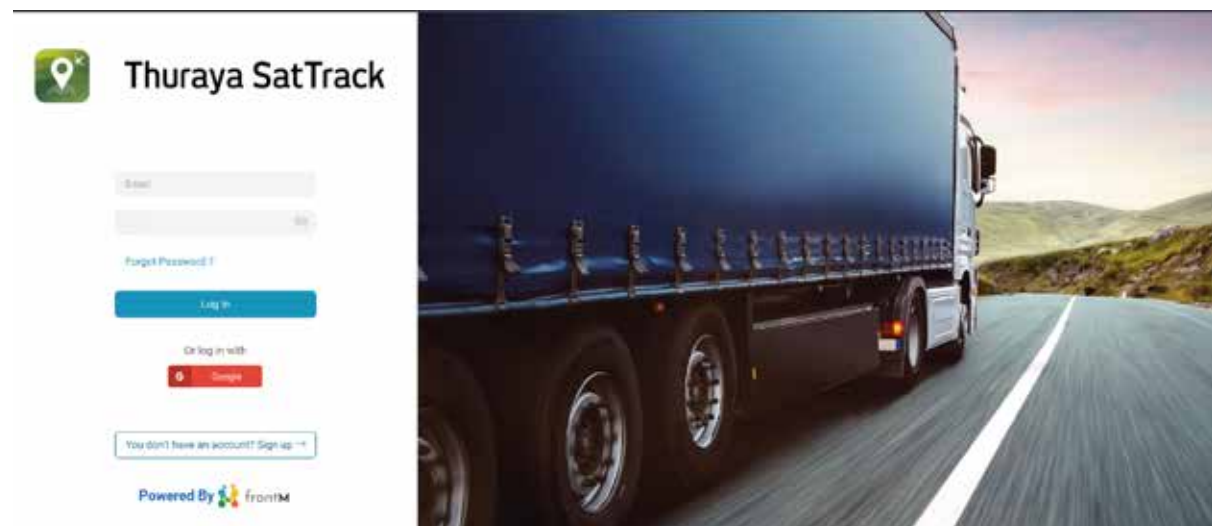
## 2. Setup

A software account will be set up and you will be provided with a license key per portal, so you can view your vehicles.


### 2.1 Pre-requisites for Thuraya SatTrack for Land setup

1. SatTrack portal access
  - a. Steady internet access
  - b. Laptop/PC with latest web-browser

Ensure no firewall blocking <https://sattrackland.thuraya.com/>



#### Important notes:

1. GNSS co-ordinate format DD.ddddd is the only format supported on the portal. Ensure that the terminal is set up to send location in this format.
2. The portal is set up for English language only.
3. The time shown in the assistant  is the local PC time (the timezone on the end users PC).
4. All other times are in GMT (indicated with a "GMT" tag in the column header)

### 3. Customer Care Landing Page

When Customer Care user logs in, below screen with List of all the service providers (SPs) would be displayed -



This table lets user know SPs present along with the license codes for the respective SP accounts (existing SP users and new SP users).

When user clicks on desired Service Provide – list of end-customer user for the given service provider would be displayed in similar manner in a table view under a new tab –



This table lets user know ECs present along with the license codes for the respective EC accounts (existing SP users and new SP users) under the selected SP.

## 4. Vehicles and the Map Area

The map will display the most recent positions of the vehicle you are tracking.



You can scroll the map by clicking and using your mouse/touchscreen  
 You can zoom in and out [use your mouse scroll-wheel, pinch zoom on your touchscreen or touchpads, or “+” and “-” icons provided on top right to zoom in and out respectively]

### Option 1: To view individual vehicle

To find a vehicle on the map and zoom in on it, you can follow the below steps:

Step 1: Click on right arrow button on left top corner of map. Vehicles’ list would be displayed in grid view

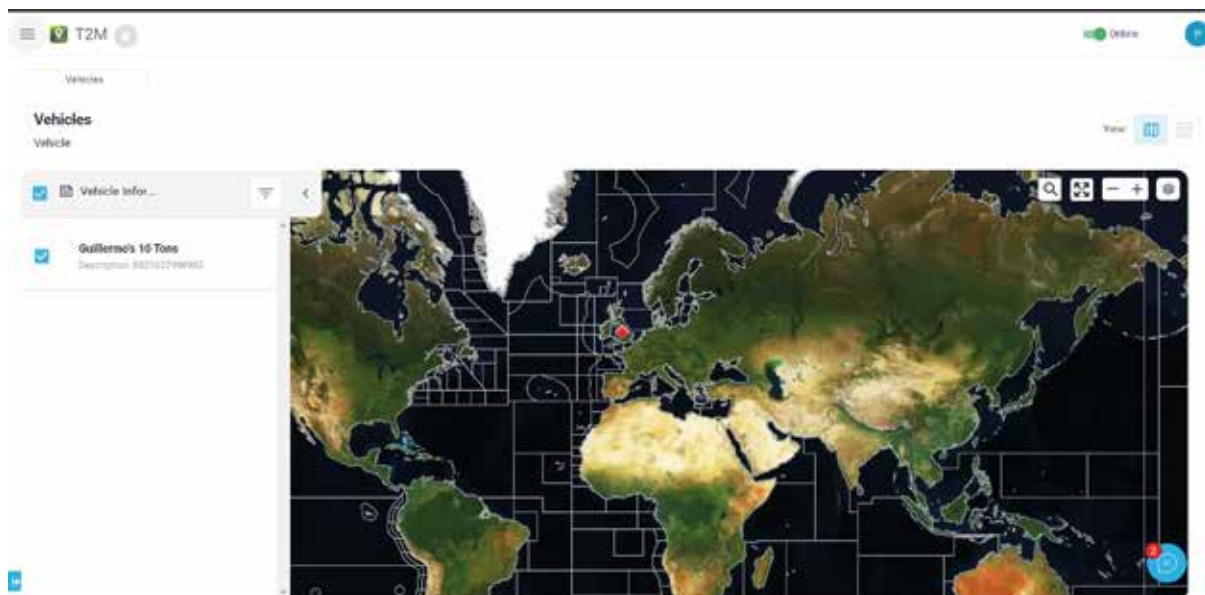




Step 2: Click on the desired vehicle from the vehicles' list in left side grid view. The map would be navigated to the current location of the vehicle.

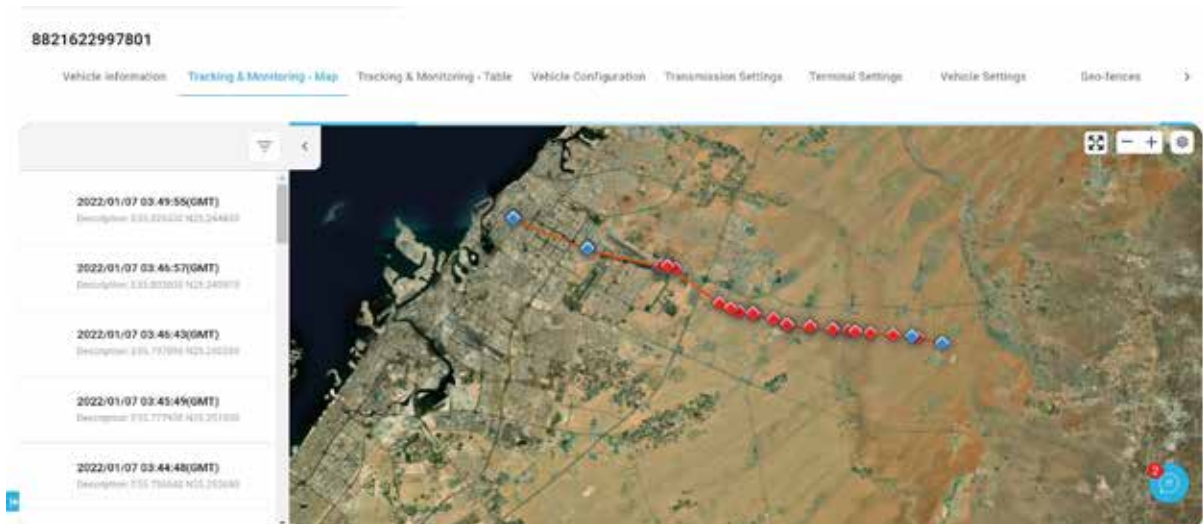


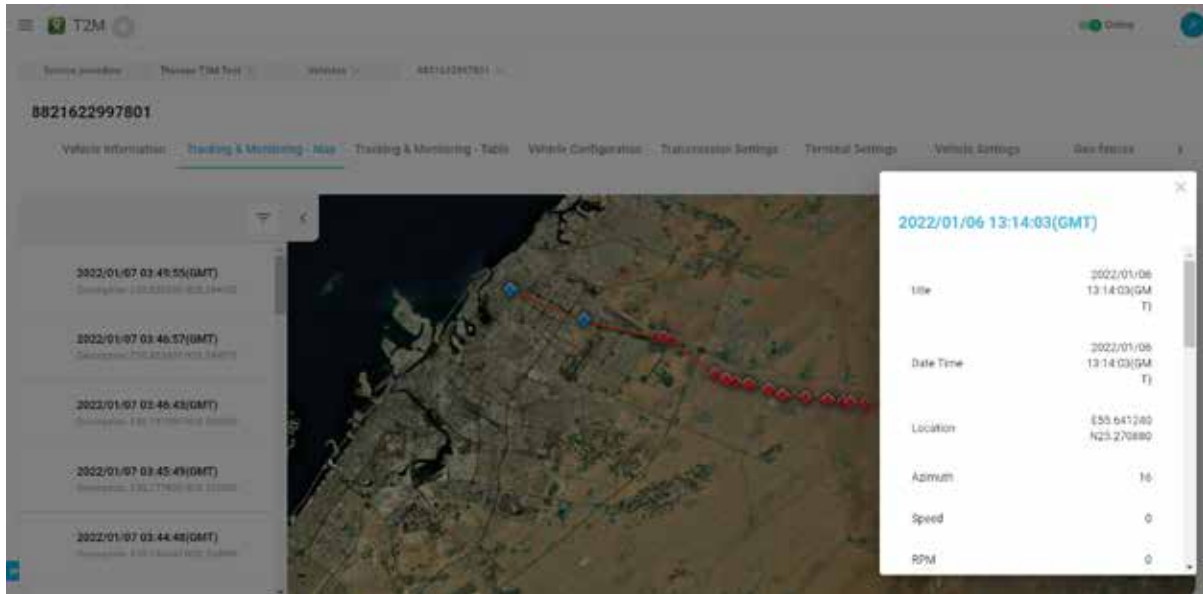
Step 2: Click on the checkbox against the given vehicle. Then click on "Vehicle Information" button on top of the vehicles' grid. Click on the "Tracking & Monitoring" tab from the given form





Step 3: Click on “Tracking & Monitoring map”. The trail is visible on the map. The trail is also available in the left grid – tracking history tab. Records are sorted based on descending order of date and time. Click on any of the records from the grid and respective trail-point along with details pop-up is displayed on the map.





### Option 2 – Table View

To switch to table view for Vehicles' list click on view icon on top right-hand side. This gives list of all the vehicles corresponding to the logged in user. Parameters - Vehicle name, Terminal number, ID number, MSISDN, Status, Plate number are displayed for all the vehicles in table format.



Vehicles

Vehicle View  

<input type="checkbox"/>	Vehicle Name	ID Number	MSISDN	Terminal No	Status	Plate Number	Latest Event	Latest Event Time
<input type="checkbox"/>	8821622997801	test2	8821622997801	11001668	Active	120482-45	Geo-Fence Deviation Event	2022/01/07 03:48:55 (GMT)
<input type="checkbox"/>	8821622997801		8821622997801	9004	Active		IDN ON	2022/01/07 08:22:42 (GMT)

### Search and Filter


On map and table view search and filter features are provided.

**Search:** Click on search  icon in order to search a vehicle record from the vehicles' list. Type relevant input for any of the

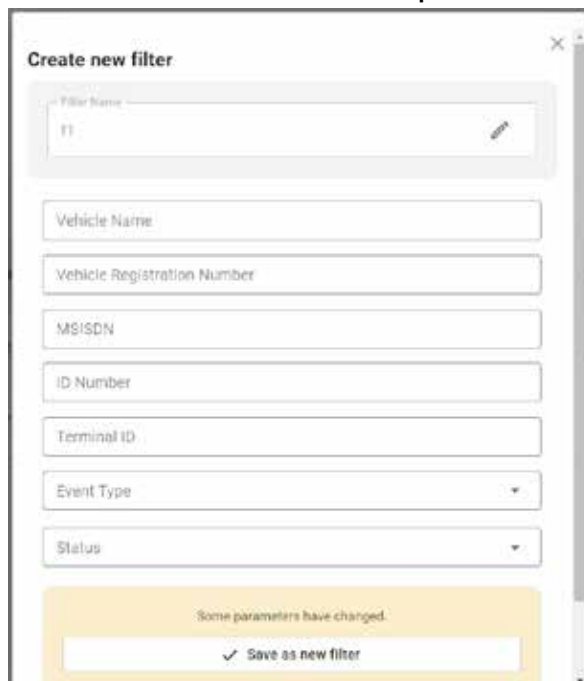
- Vehicle Name

- MSISDN
- ID Number
- Terminal ID
- Plate Number

Once desired input is entered in the search box, hit Enter and the relevant search result(s) are displayed on the Vehicles' list grid on left side.


**Filter:** Click on filter  icon displayed on top of vehicles list grid. Select any of the below parameters OR combination of them to filter out relevant results in the Vehicles' list grid –

- Vehicle name - text field
- Vehicle Registration Number - text field
- MSISDN - text field
- ID number - text field
- Terminal ID - text field
- Latest Event Type – drop-down
- Latest Status – drop-down



## 4.1 Customers/ Vehicles

### 4.1.1 List of Vehicles

In map view, on left side, a button provided. Click on the same to see points - Vehicle names and  to expand the grid is vehicles' list. Key data-respective terminal IDs are displayed in the grid view on left hand side. Click on any vehicle record from the grid to see more details on a pop-up displayed on the map. Details consist of Vehicle name, Terminal number, ID number, MSISDN, Status, Vehicle Registration Number, Latest event, Latest event time



Click on the checkbox against a given vehicle record from the vehicles' list from the grid-view. Click on the "Vehicle Information" button on top of the grid view. This opens a new tab with a form with different tabs for the selected vehicle.

## 4.2 Vehicle Information Form

The different tabs show the various options available and whether they are configurable through the portal or not (either by an end user, service partner or Thuraya customer care using read only OR read & edit access).

### Important note:

1. Any configuration changes sent from the Thuraya SatTrack for Land portal will overwrite the existing settings on the terminal.

2. Please refer below table to view the options available to you.



SatTrack-V\_Permissioning\_Document.xlsx

The tabs in the form display below click-to-action buttons against required sections:

### Retrieve From Terminal:

This button is to preform manual retrieve only, unless it is in response to a poll command.




### Poll Current Location:

Clicking on the “Poll Current Location” button will try to get the current location from the terminal. This is an on-demand request for a vehicle’s location.

### Send To Terminal:

This button is to send configuration parameters to the terminal.

### Tips:

1. For every configuration setting sent to the terminal from the portal (except Notifications), the acknowledgement received from the terminal will be shown in the assistant  at the bottom right corner of the map.
2. The assistant can be opened and the notifications can be viewed by clicking on the  at the bottom right corner of the map area.
3. Before sending any new configuration setting, make sure that the acknowledgement for the previous setting was received.
4. To expand any section of a given tab of the Vehicle Information form, click on this  icon displayed at top left against the given section of the tab.
5. Search and filter options are provided for the reporting screens.
6. Option to export reports is provided on reporting screens.

### Note:

The terminal should be on and active on the Thuraya network to be able to send back a response.

## 4.2.1 Vehicle Information

This tab is divided in three sections

### 4.2.1.1 Vehicle

In first section, an option to upload a vehicle image is provided. If image is previously uploaded, it would be displayed in the same placeholder. When user uploads and saves image here, the same would get displayed on vehicle pop-up displayed on landing page map view.



### 4.2.1.2 Vehicle Information

This section has vehicle information data-points – Vehicle name, ID number, MSISDN, Terminal ID, Subscription Status, Plate number, Latest event and latest event date & time



Vehicle Name	VT	ID Number	test2
MSISDN	8821622987801	Terminal ID	118010408
Subscription Status	ACTIVE	Plate Number	1255482-45
Last Event	Geo-Fence Deviation Event	Last Event Time	2022/01/07 03:48:55 (GMT)

### 4.2.1.3 Tracking Information

Latest event information such as – date & time, location, IGN status, Azimuth, Speed, RPM would be displayed





The data, once response from the terminal is received, is updated into this form.

## 4.2.2 Tracking & Monitoring

### 4.2.2.1 Tracking & Monitoring - map

Tracking and monitoring has 2 tabs – map and table views.

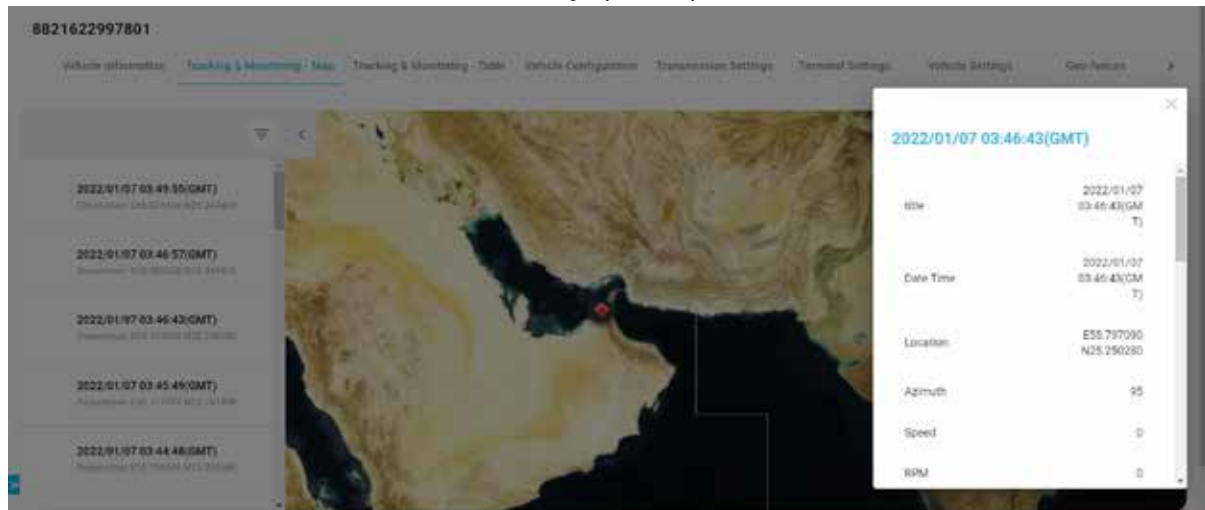
Clicking 'Tracking & Monitoring map' tab on from the vehicle information form to a vehicle opens the tracking history information and displays trail on the map. By default, map shows the trail for the given vehicle for past 7 days or 200 records whichever is lower.

Tracking History would display the history of the points in time the vehicle has been tracked and the locations of the vehicle at that time. These trail points are captured in grid view displayed on left side.

Click on any of the tracking history records on the left side grid view, this highlights the respective trail point on the map with a pop-up to display detailed information –

- Date Time
- Location
- Azimuth
- Speed
- RPM
- Event Type
- Event Time
- Internal Battery
- Terminal Temperature
- 1-Wire (Sensor)
- Altitude (GPS)
- GPS Speed (GPS)
- Moving Distance (Terminal)

- Vehicle Battery Voltage (Sensor)
- Fuel Level (CAN)
- Engine Hours (CAN)
- High Resolution total vehicle distance (CAN)
- Engine Coolant temperature (CAN)
- Ambient Temperature (CAN)
- Fuel Rate (CAN)
- Instantaneous Fuel Economy (CAN)



#### 4.2.2.2 Tracking & Monitoring - table

Above data-points for tracking history would be displayed in table view.

Tracking & Monitoring - Table

Title	Date Time	Location	Azimuth	Speed	RPM	Event Type	Event Time	Internal Battery Voltage Value	Terminal Temperature
2022/01/07 03:49:55(GMT)	2022/01/07 03:49:55(GMT)	E06.650530 N25.244430	111	0	0	Geo-Fence Deviation Event	2022/01/07 03:49:55(GMT)	4345	0
2022/01/07 03:46:57(GMT)	2022/01/07 03:46:57(GMT)	E18.802090 N25.249670	98	0	0	Over Speed Event	2022/01/07 03:46:57(GMT)	4357	0
2022/01/07 03:46:43(GMT)	2022/01/07 03:46:43(GMT)	E58.797090 N25.250280	95	0	0	Geo-Fence Deviation Event	2022/01/07 03:46:43(GMT)	4369	0
2022/01/07 03:45:49(GMT)	2022/01/07 03:45:49(GMT)	E38.777930 N25.251930	95	0	0	Over Speed Event	2022/01/07 03:45:49(GMT)	4374	0
2022/01/07 03:44:40(GMT)	2022/01/07 03:44:40(GMT)	E58.790540 N25.250430	95	0	0	Over Speed Event	2022/01/07 03:44:40(GMT)	4376	0
2022/01/07 03:43:47(GMT)	2022/01/07 03:43:47(GMT)	E58.734890 N25.250400	98	0	0	Over Speed Event	2022/01/07 03:43:47(GMT)	4388	0
2022/01/07 03:43:07(GMT)	2022/01/07 03:43:07(GMT)	E58.721900 N25.250400	95	0	0	Over Speed Event	2022/01/07 03:43:07(GMT)	4372	0
2022/01/07 03:42:03(GMT)	2022/01/07 03:42:03(GMT)	E58.698300 N25.250520	95	0	0	Over Speed Event	2022/01/07 03:42:03(GMT)	4365	0

User can use filter to filter out relevant entries based on below parameters

- Event type
- Date & Time Range (Local time)

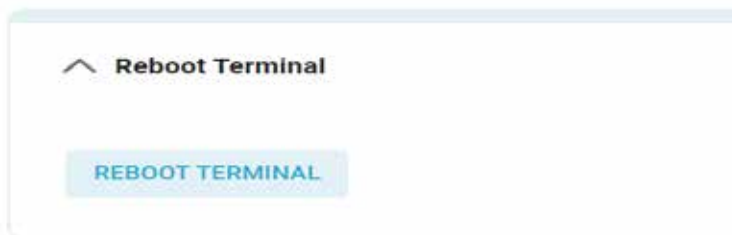
Option to export the report is provided to the user. Once clicked on export .csv report for the screen would be exported.

### 4.2.3 Vehicle Configuration

This tab of Vehicle Information form displays configuration settings in 5 sections.

#### 4.2.3.1. Reboot Terminal

This section has a “Reboot Terminal” button. Once user clicks on it, terminal gets reset.



#### 4.2.3.2. Tracking

This section is to set tracking configurations. Input desired values for Sampling Period, Send Period, IO Sampling Period, IO Send Period and click on “Send to Terminal”.

**Note:**

- Input values are in “seconds”
- If the entered values are not within defined thresholds, an error is displayed against the parameter



Possible values

Sampling Period	60 to 99999 seconds
Send Period	60 to 99999 seconds

IO Sampling Period	60 to 99999 seconds
IO Send Period	60 to 99999 seconds

#### 4.2.3.3. Report Transmission

This section has a read-only switch to display On or OFF.



#### 4.2.3.4. Terminal Setting Value Request Command

A button to “Retrieve from Terminal” is provided to retrieve terminal setting value request from the terminal.



#### 4.2.3.5. RSSI Information

A drop-down to select RSSI type is provided. Select the desired input and click on “Retrieve from Terminal”.



#### 4.2.3.6. Use Geo-fences

This section has a switch to turn the “Use Geo-fences” On or OFF.

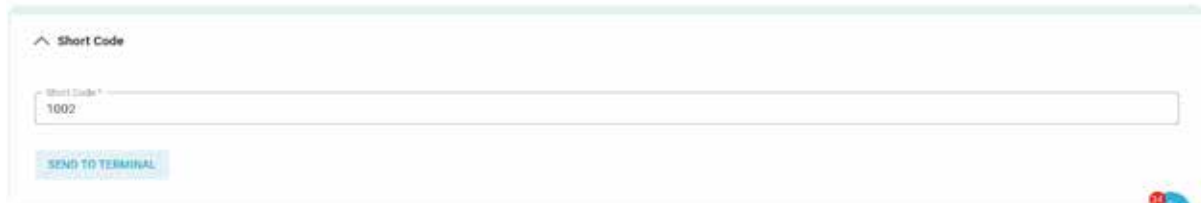


## 4.2.4 Transmission Settings

This tab is to view and/ or configure transmission settings. This tab of Vehicle Information form displays configuration settings in 5 sections.

### 4.2.4.1 Short Code

Enter desired input to the parameter. Once done, click on “Send to Terminal” button.



The screenshot shows a web interface for configuring a 'Short Code'. At the top, there is a header 'Short Code' with a small upward-pointing arrow. Below this is a text input field with the value '1002' entered. Underneath the input field is a blue button labeled 'SEND TO TERMINAL'. In the bottom right corner of the interface, there is a small globe icon with a red notification bubble containing the number '21'.

## 4.2.5 Terminal Settings

This tab is to view and/ or configure terminal settings. This tab of Vehicle Information form displays configuration settings in 4 sections.

### 4.2.5.1 GPIO

This section of the terminal settings' tab has 8 configurable parameters – IOused1, IOused2, ..... , IOused8 with corresponding 8 sub-parameters – IOinout1, IOinout2, ..... , IOinout8 respectively.

Click on drop-downs for desired parameters for IOused fields and select input from the given list –

- Periodic mode
- Not used
- Event Mode
- All Mode
- Periodic Mode

Click on drop-downs for desired parameters for IOinout1 to IOinout4 fields and select input from the given list –

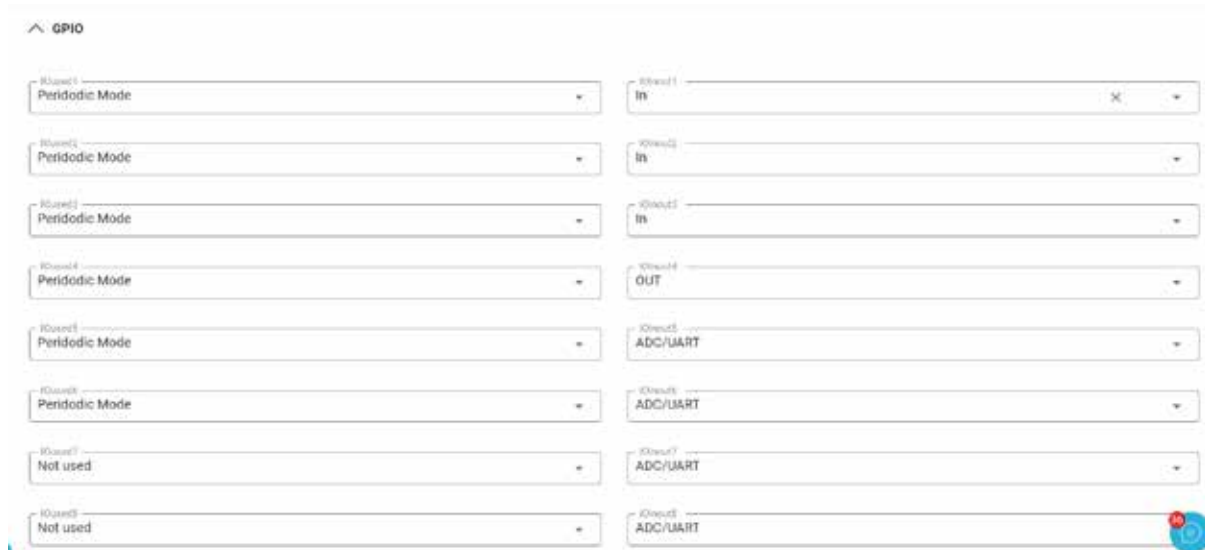
- In
- ADC/ UART
- Out

Click on drop-downs for desired parameters for IOinout5 & IOinout6 fields and select input from the given list –

- In
- Out

Drop-down for IOinout7 and IOinout8 fields would have only “ADC/ UART” as default and only available selection

Click on “Send to Terminal” button once desired inputs are selected.



#### 4.2.5.2 Selectable Data Settings

These settings are divided in 3 groups as shown in below image -

Group A has below selectable parameters –

- Internal Battery Voltage (Sensor)
- Terminal temperature (Sensor)
- 1-wire (sensor)

Group B has below selectable parameters –

- Altitude (GPS)
- GPS Speed (GPS)
- Moving Distance (Terminal)
- Vehicle Battery Voltage (Sensor) (Value = x/10)
- G-sensor (Value = x/10)

Group C has below selectable parameters –

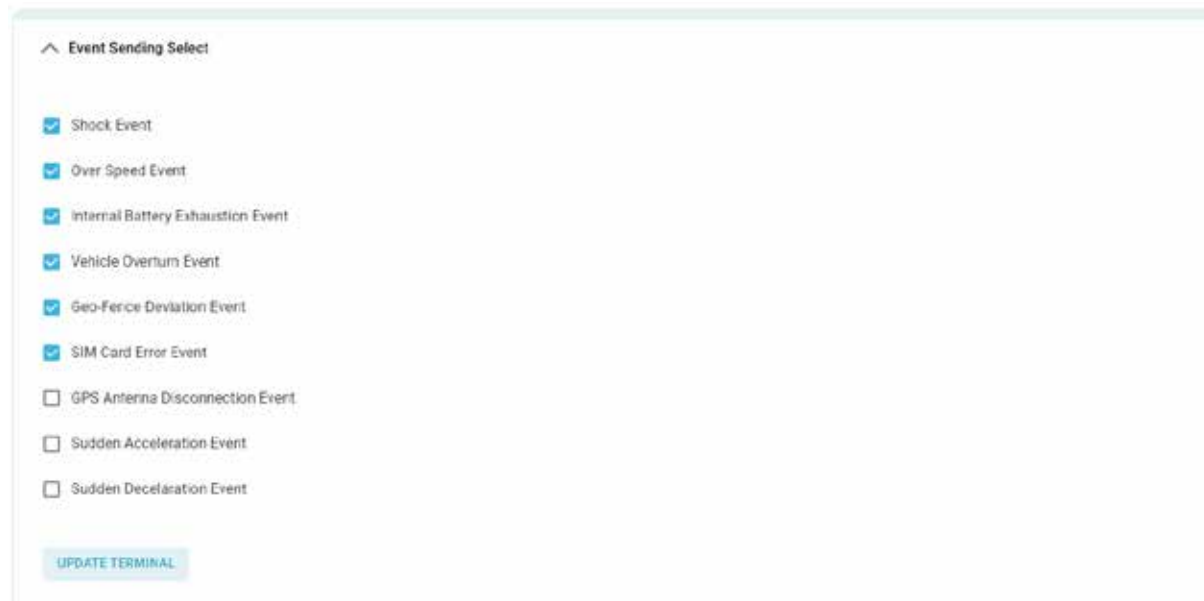
- Fuel Level (CAN)
- Engine Hours (CAN)
- High Resolution Total Vehicle Distance (CAN)
- Engine Coolant Temperature (CAN)
- Ambient Temperature (CAN)
- Fuel Rate (CAN)
- Instantaneous Fuel Economy (CAN)
- Accelerator Pedal Position (CAN)
- Current Gear (CAN)

Select/ Unselect desired parameters across all the 3 groups and click on “Send to Terminal”.



#### 4.2.5.3 Event Sending Select

Below are the Event Sending Select parameters –



- E1. Shock Event
- E2. Over Speed Event
- E3. Internal battery Exhaustion Event
- E4. Vehicle Overturn Event
- E5. Geo-fence Deviation Event
- E6. Sim card Error Event
- E7. GPS Antenna Disconnection Event



- E8. Sudden Acceleration Event
- E9. Sudden Deceleration Event
- E10. GPI Input Event
- E11. SOS Event

Select/ Unselect desired parameters and click on “Update Terminal”.

#### 4.2.5.4 Sudden Acceleration and Deceleration

This section has 2 parameters for user to enter input. The parameters are

—

- Sudden Acceleration Value
- Sudden Deceleration Value



Note – User can select values from the desired thresholds. Portal would display error message if entered values are not as per the criteria of 5 to 50 km/ hour

Once desired values are selected, click on “Update Terminal”

## 4.2.6 Vehicle Settings

This tab is to view and/ or configure terminal settings. This tab of Vehicle Information form displays Vehicle settings in 4 sections.

### 4.2.6.1 G-sensor Event Value

This section has below 2 configurable parameters –

- Shock Value when Driving
- Shock Value when Parked



Once desired inputs are entered, click on “Send to Terminal”

#### Note:

- Input values are in m/sec

### 4.2.6.2 Overspeed Alarm

This section has below configurable parameter –

- Overspeed Limit



Once desired input is entered, click on “Send to Terminal”

#### Note:

- Input values are in km/hour
- If the entered values are not as per defined thresholds, an error is displayed against the parameter

### 4.2.6.3 Coefficient

This section has below configurable parameters –

- Speed coefficient: Input field
- RPM coefficient: Input field
- Brake: Switch to turn On or Off

Once desired input is entered, click on “Send to Terminal”

#### Note:

If the entered values are not as per defined threshold criteria, an error is displayed against the parameter



#### 4.2.6.4 Driver

This section has below configurable parameters –

- Driver Name
- Contact Number

Once desired input is entered, click on “Send to Terminal”



## 4.2.7 Geofences

Geo-Fences  
GeoFences

	Name
1	area1
2	area2
3	area3
4	area4
5	area5
6	area6
7	area7
8	area8
9	area9
10	area10
11	area11
12	area12
13	area13
14	area14
15	area15
16	area16
17	area17
18	area18
19	area19
20	area20
21	area21
22	area22
23	area23
24	area24
25	area25
26	area26
27	area27
28	area28
29	area29
30	area30
31	area31
32	area32
33	area33
34	area34
35	area35
36	area36
37	area37
38	area38
39	area39
40	area40
41	area41
42	area42
43	area43
44	area44
45	area45
46	area46
47	area47
48	area48
49	area49
50	area50
51	area51
52	area52
53	area53
54	area54
55	area55
56	area56
57	area57
58	area58
59	area59
60	area60
61	area61
62	area62
63	area63
64	area64
65	area65
66	area66
67	area67
68	area68
69	area69
70	area70
71	area71
72	area72
73	area73
74	area74
75	area75
76	area76
77	area77
78	area78
79	area79
80	area80
81	area81
82	area82
83	area83
84	area84
85	area85
86	area86
87	area87
88	area88
89	area89
90	area90
91	area91
92	area92
93	area93
94	area94
95	area95
96	area96
97	area97
98	area98
99	area99
100	area100

100 rows for 100 geofences slots are provided in this tab. User has option to either “edit” or “clear” the assigned geo-fence.

1	area1	<input type="button" value="Edit"/> <input type="button" value="Clear"/>
2	area2	
3	area3	

Once user clicks on edit – portal displays look-up dropdown for user to enter area name and click on search icon. Portal would search for the input and give list of area names which have the entered input. User would select the desired input and click on tick sign to save the changes or cross sign to cancel the changes.

If look-up search doesn't find anything as per searched input, blank result would be displayed.

## 4.2.8 Ignition Turn On/ Off Reports

This tab displayed historic data for “Ignition Turn On/ Off” events for the given vehicle. For these events data points such as –

- Terminal ID,
- Ignition On date & time,
- Ignition Off date & time,
- driver name,
- driving distance,
- number of braking,
- sudden acceleration,
- sudden deceleration,
- max RPM
- max speed is displayed on the table view.

IGN On/Off Reports  
IGN On/Off Reports

Terminal ID	IGN On Date Time	IGN Off Date Time	Driver Name	Driving Distance	Number Of Braking	Sudden Acceleration	Sudden Deceleration	Max RPM	Max Speed
118216418	2022/11/04 08:45:13 (GMT)	2022/11/04 08:45:43 (GMT)	xxxxx	9029	0	0	0	0	0
118216418	2022/11/04 08:46:17 (GMT)	2022/11/04 18:24:28 (GMT)	xxxxx	21119	0	0	0	0	0
118216418	2022/11/04 08:46:44 (GMT)	2022/11/04 18:24:51 (GMT)	xxxxx	0	0	0	0	0	0
118216418	2022/11/04 11:40:24 (GMT)	2022/11/04 12:08:10 (GMT)	xxxxx	4464	0	0	0	207	74
118216418	2022/11/04 09:09:04 (GMT)	2022/11/04 11:39:41 (GMT)	xxxxx	11108	0	0	0	0	0
118216418	2022/11/04 17:46:34 (GMT)	2022/11/04 18:46:40 (GMT)	xxxxx	35274	0	0	0	1776	40
118216418	2022/11/04 01:00:15 (GMT)	2022/11/04 01:02:19 (GMT)	xxxxx	36214	0	0	0	0	0
118216418	2022/11/04 01:10:05 (GMT)	2022/11/04 01:09:05 (GMT)	xxxxx	42017	0	0	0	0	0
118216418	2022/11/04 01:08:05 (GMT)	2022/11/04 01:03:44 (GMT)	xxxxx	72079	0	0	0	1776	40
118216418	2022/11/04 02:00:10 (GMT)	2022/11/04 02:01:10 (GMT)	xxxxx	18002	0	0	0	1130	38
118216418	2022/11/04 04:00:00 (GMT)	2022/11/04 04:00:00 (GMT)	xxxxx	404	0	0	0	1470	38
118216418	2022/11/04 02:00:10 (GMT)	2022/11/04 02:00:00 (GMT)	xxxxx	30	0	0	0	1219	37
118216418	2022/11/04 01:00:00 (GMT)	2022/11/04 01:00:00 (GMT)	xxxxx	1400	0	0	0	1560	40

User can use filter to filter out relevant entries based on below parameters

- Date & Time Range (Local time)

Option to export the report is provided to the user. Once clicked on export .csv report for the screen would be exported.

## 4.2.9 IO Reports

I/O Reports

I/O Reports

EXPORT

Date Time	I/O Sampling Time	I/O Number 1	Separator 1	I/O Value Count 1	Value 1	I/O Number 2	Separator 2	I/O Value Count 2	Value 2	I/O Number 3	Separator 3	I/O Value Count 3	Value 3	I/O Number 4	Separator 4	I/O Value Count 4	Value 4
Jan 6, 2022 1:45 PM	1200	1	1	1	1	2	1	1	1	3	1	1	1				
Jan 6, 2022 1:50 PM	1200	1	1	1	1	2	1	1	1	3	1	1	1				
Jan 6, 2022 1:55 PM	1200	1	1	1	1	2	1	1	1	3	1	1	1				
Jan 6, 2022 1:58 PM	1200	1	1	1	1	2	1	1	1	3	1	1	1				
Jan 6, 2022 1:59 PM	1200	1	1	1	1	2	1	1	1	3	1	1	1				
Jan 6, 2022 12:46 PM	1200	1	1	1	1	2	1	1	1	3	1	1	1				
Jan 6, 2022 12:54 PM	1200	1	1	1	1	2	1	1	1	3	1	1	1				
Jan 6, 2022 12:56 PM	1200	1	1	1	1	2	1	1	1	3	1	1	1				
Jan 6, 2022 11:46 AM	1200	1	1	1	1	2	1	1	1	3	1	1	1				
Jan 6, 2022 11:58 AM	1200	1	1	1	1	2	1	1	1	3	1	1	1				
Jan 6, 2022 11:59 AM	1200	1	1	1	1	2	1	1	1	3	1	1	1				
Jan 6, 2022 11:48 AM	1200	1	1	1	1	2	1	1	1	3	1	1	1				

This tab displayed historic data for “Ignition Turn On/ Off” events for the given vehicle. For these events data points such as –

- Date Time I/O Sampling Time
- I/O Number 1
- Separator 1
- I/O Value Count 1
- Value 1

And for rest of the 7 IO parameters

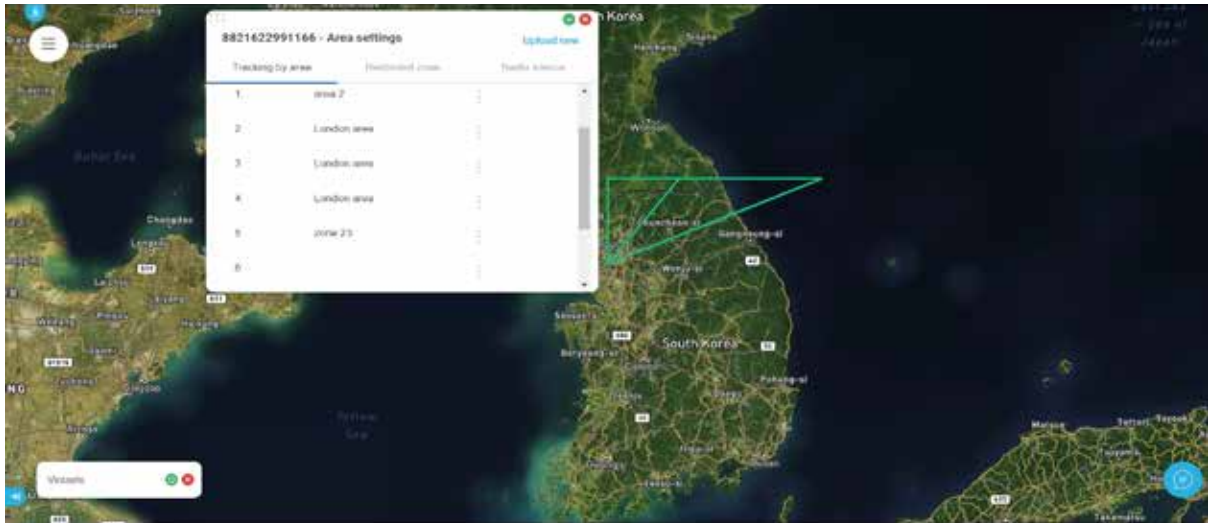
User can use filter to filter out relevant entries based on below parameters

- Date & Time Range (Local time)

Option to export the report is provided to the user. Once clicked on export .csv report for the screen would be exported.

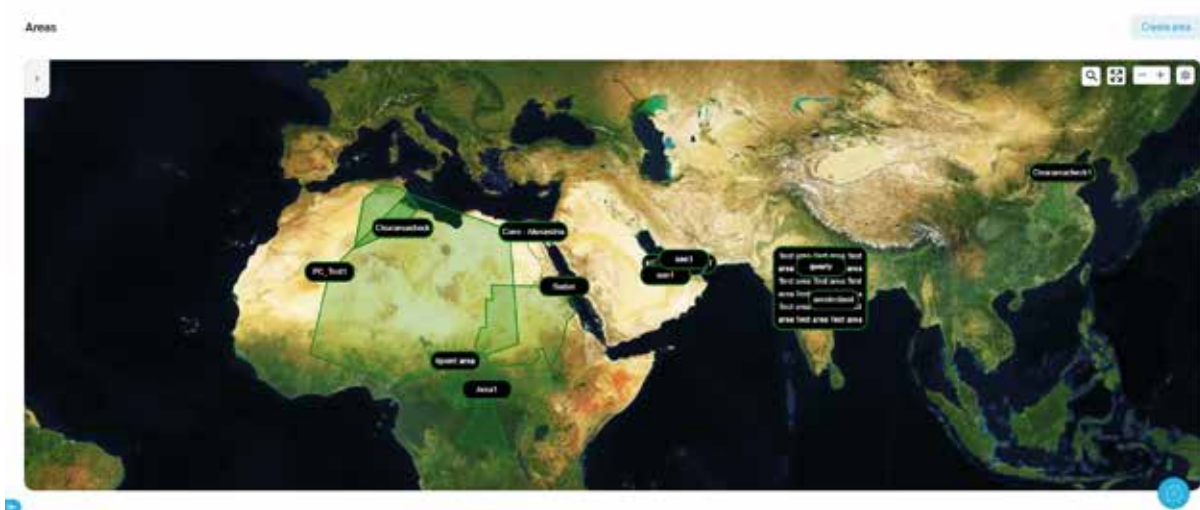
## 4.3 Areas

### 4.3.1 Areas

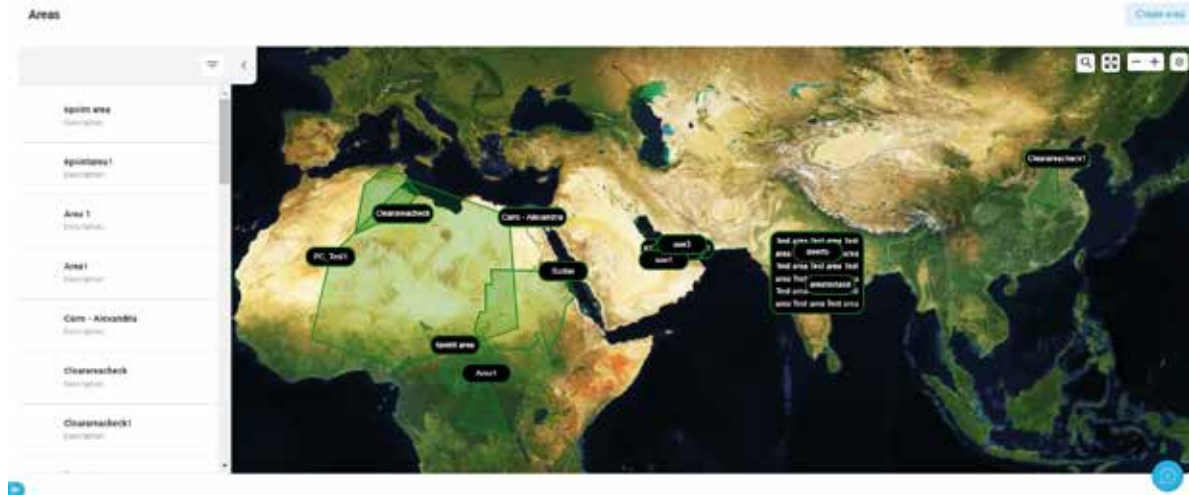


Areas can be defined on the map for tracking purposes. For example, they can alert you if you are entering a different zone.

Click on Areas menu item form main menu.



All the area names belonging to your network are displayed on left side grid view.



A new area can be created on the portal in 2 ways –

- Create a new area using “Create Area” tool provided on portal on the map.
- Create a new area by uploading a .csv document to the portal

### 4.3.2 Creating a New Area

A new area can be created by

1. importing a csv file and storing it on the portal.
2. drawing an area on the map and storing it on the portal

This area can then be assigned to the respective slots.

#### To import a csv file to create a tracking area:



Step 1: Create and save the csv file

Step 2: In Thuraya SatTrack for Land, open the Areas’ screen. Click on “Create Area” button displayed on top right side. Create area form is displayed

Step 3: In the form section 2, click on the “Upload your file” button.

Step 4: An “Upload area” form appears:

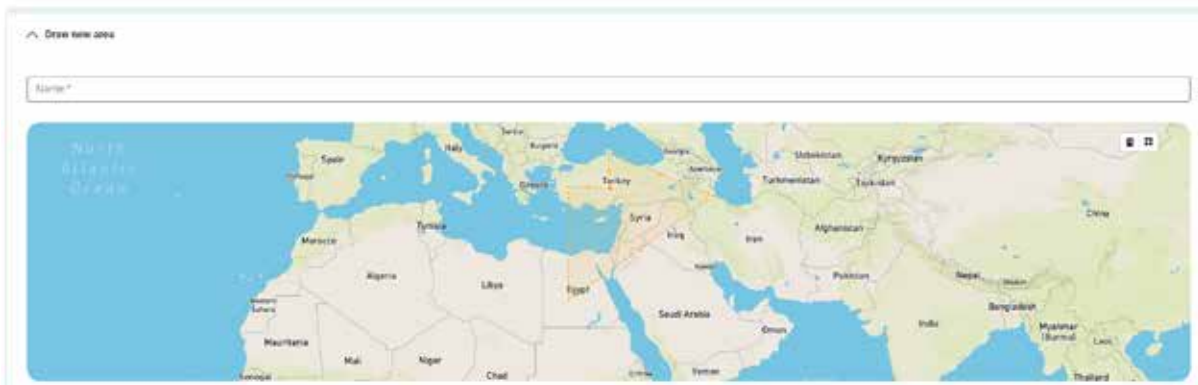


Step 5: Fill in the name (as you would want it to appear in the list) in section 1 and upload the file using the “Upload a file” button.


Step 6: Click on “Save” to upload the file and save it on the portal.

**To draw an area on the map:**

Step 1: Select the “Create Area” option on the Areas’ screen



Step 2: A Create Area form shows up in 3 sections.

- a. Enter the Name.
- b. Click on  on top right of map and then select desired starting coordinate on map. Continue drawing coordinates one by one till the time desired area (with at least 3 coordinates) is drawn.
- c. Click on save to save the created area.

**4.3.2.1 Creating an Area file for import**

The file should be created and saved in csv format – the Area name can be entered while importing the file.

You can create and edit these in a spreadsheet program Microsoft Excel, or in a plain-text tool like notepad. The file should have two columns and up to 500 rows.

The first row should be the header (latitude,longitude).

<p>Latitude in a decimal degrees format with the following prefix:                  (i) - to denote S                  (ii) no prefix for N                  e.g.                  37.47775</p>	<p>Longitude in a decimal degrees format with the following prefix:                  (i) - to denote W                  (ii) no prefix for E                  e.g.                  023.88643</p>
---	---

09.56486	126.88161
-66.43152	-033.98412
-05.65735	-003.78432

Each row represents a corner of the boundary of the area to be defined on the terminal. These should be sequentially ordered, so Point 00 is joined to point 01, point 01 to point 02 etc.

The last geo point is joined to the first geo point to draw an enclosed shape.

### Important notes:

1. If you open the file in a spreadsheet software like excel, the leading zeroes will be removed (i.e., it will become 1.54675,23.52134 instead of 01.54675,023.52134), which will cause the file to error when uploading onto the portal.  
You can fix this by either changing the cell to a “text” format in the spreadsheet or opening the file in a plain text tool to ensure the leading zeroes are not removed.
2. Only areas with less than or equal to 25 co-ordinates can be assigned to “Radio Silence” and “Restricted Zones”.
3. Areas with more than 25 co-ordinates can be assigned to “Portal tracking areas” only.

### Tips:

1. If the points are not sequentially ordered, it will error out and the area will not be loaded onto the portal.
2. The latitude should always be 2 digits (02, 25, etc) and the longitude should always be 3 digits (005, 012, 123, etc) before the decimal point.
3. If the precision for Latitude/Longitude is less than or more than 5 digits after decimal, it will error out and the area will not be loaded onto the portal.

### Sample file:

```
latitude,longitude
52.17176,-001.93881
50.60889,-002.01022
50.85228,001.18129
52.31639,001.24721
```

## 5. Map display options

There are two types of map options available - Satellite and Basic vector  
Click on the menu button at the top left corner of the map to open the menu.

Select the option “Satellite” for Satellite map and “Vector” for Basic vector map. The displayed map will be updated.

[Satellite map]



[Vector map]

