

THURAYA

SPACE42

THURAYA MBH





Value proposition



Features and functionality



Applications

Product Offering

Thuraya Mobile Broadband Hotspot [MBH]

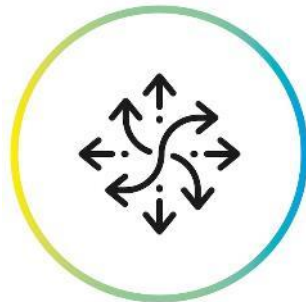
Value proposition

01
Most desirable



Unrivalled features at its price point compared to competitors in its category

02
Multipurpose



Works for both Maritime & Land vehicular segments – **Most convenient to buy and sell**



03
The best alternative



Game-changing data plans compared to competitors – a much-needed alternative for service providers and system integrators without compromising quality

04
Easy to setup



All inclusive package options with Plug and play functionality

05
Easy to use



Designed for both LAN with WIFI capabilities in one unit, with programming **like a home router**

What's in the box?

Easy to order for both Maritime & Land vehicular setups

Main device

Thuraya MBH pack



- MBH terminal
- POE external power supply with DC power cable assembly
- USB memory (Contains usermanual)
- Quick start guide
- Warranty card

Accessory Pack choices

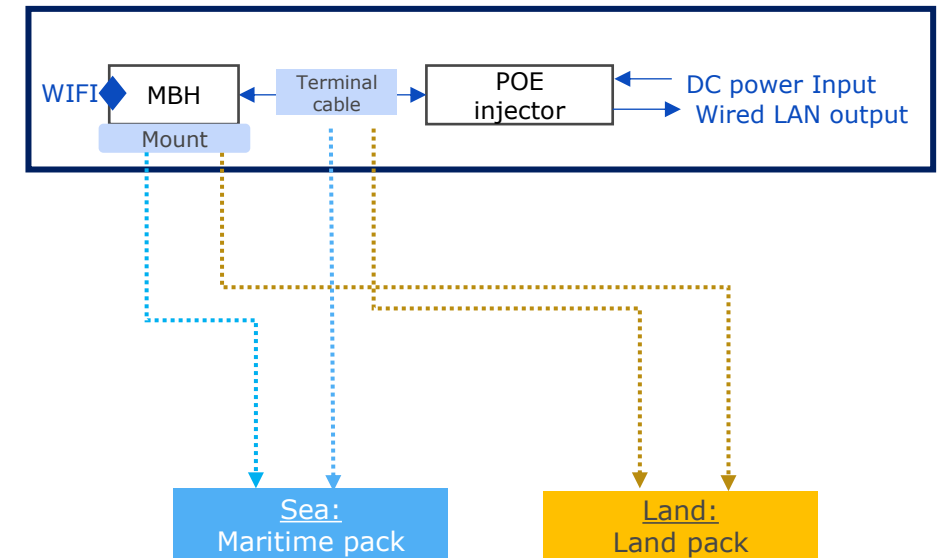
Maritime pack

- POE cable 25m
- Pole mount kit



Land pack

- POE cable 6m
- Mag mount kit



Product description

Functionality & Specs

■ **Functionality:**

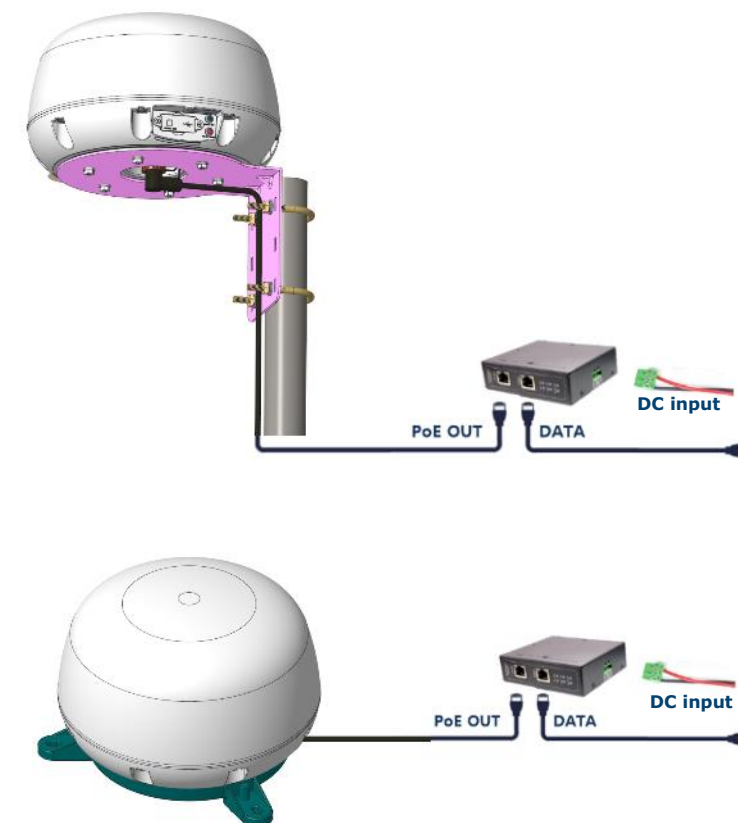
- Designed to be an entry level satellite data product for both Maritime and vehicular setups
- Built in WIFI and router capabilities
- Secure Web MMI access using Laptop, PC, Smart devices access with Multi-level login credentials
- 3rd party integrations
 - Remote*: Tracking, geofencing, distress alert, remote configuration
 - Local: Integrate with 3rd party products onboard via API

■ **High level specs:**

- Service: Standard IP – 300/100kbps
- IP rating: IP 67 & IP 68
- Weight & Dimensions: 3.30kg & 301×181 mm (Ø X H)
- Data output: 1 port (@PoE injector)
- Input power: 12 ~36 Vdc [>50W] (@PoE injector)

■ **Warranty:** 12 months

■ **Compliance:** CE, UKCA, RoHS, REACH, ITU GMPCS-MoU, Thuraya certified.



* To be developed with 3rd party server – Eg: Thuraya SatTrack

Service

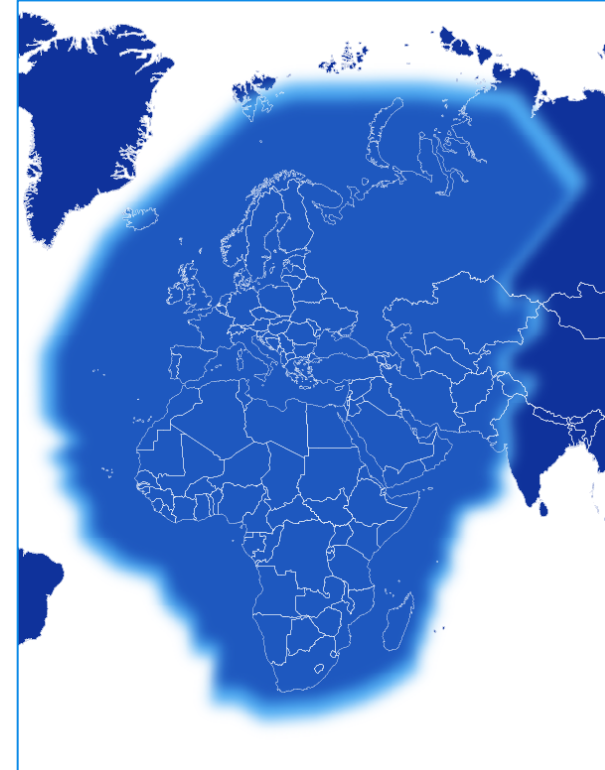
Designed to work seamlessly



Existing coverage



Next generation –T4



The above coverages is shown for reference purposes only

Web MMI summary

Use your latest web-browser

- Modem status
- Satellite connection management
- WAN and LAN router configuration and connected devices overview
- Access-level management
- Firewall management
- Distress alert
- Track and monitor configuration
- Logs
 - Track and geofence
 - System
- Traffic statistics
- Device sim pairing configuration
- Remote and Local access management

THURAYA
SPACE42

STATUS

Wi-Fi

ROUTER

SATELLITE

SECURITY

LOCATION

ALERT

SEND EMAIL

SYSTEM

SOS

TERMINAL STATUS

Connection	
Satellite	44°
Registration	Registered, Home network
Service	In service
GNSS	[3D FIX] Fixed: 31, Visible: 28





























GNSS	
Lat/Long	25.24355°, 55.82919°
Date/Time	04/02/2025 07:32:27 UTC
Speed	0.03 knot
Course	N

System	
WAN IP address	85.115.79.9
IMEI	359034180001642
IMSI	901059898015516
APN	standard-vbr
SSID	MBH-0001642
FW version	BBH_TH_NR_V0.8.5
Error code	NONE

Signal Quality	
RSSI	55 %
SQI	60 %

Web menu status indicators

Meaningful information in one screen

Status Indicators	Description	Status Indicators	Description
	System logout		Restricted Zone
	Reboot		Radio Silence Zone
	Admin account		SIM Present
	Operator account		SIM not present
	User account		SIM Blocked
	Wi-Fi ON		SIM Pairing Lock
	Wi-Fi OFF		SIM PIN required
	SOS		Incompatible PoE
	SOS Start		SAT Up/Downlink Traffic
	SOS Stop		No Signal
	SOS ON		Weak Signal
	Configuration required		Fair Signal
	GNSS 3D Fix		Good Signal
	GNSS No Fix		Best Signal

Typical quick start setup

- Step 1: Install the product along with relevant accessory

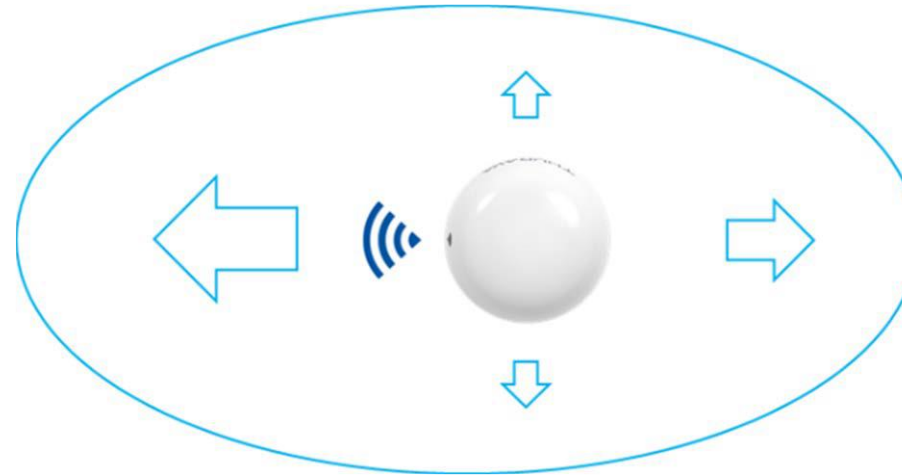


- Step 2: Power up MBH and ensure to connect to a regulated power supply within the operating power rating.
- Step 3: Connect to 192.168.64.1 web interface [WIFI or LAN (PoE – data out)] using laptop or Smart phone/tablet with latest web browser [Chrome, Safari, IE].
- Step 4: Login using admin credentials [Username – admin, Password – admin].
- Step 5: Register to the network. By default, the setup is plug and play for always ON connectivity.

WIFI signal range

Directional Guide Featuring Wi-Fi Icon

- The signal strength of the Wi-Fi varies depending on the direction, so it is important to pay attention to the direction when installing the BBH-01.
- As shown in the following figure, the signal quality is best in the direction of the Wi-Fi mark and worst at ± 90 degrees. Install the product with the Wi-Fi mark facing in the direction where the user will be located.
- Based on trials, the unobstructed range in the optimal direction would be approx. 20m -> 30m



Smart visual indicators without logging in to the device

Multi-color LED indicators

UPPER LED

Power and Network



LOWER LED

Wi-Fi and GNSS

LED operation	Conditions
Red blinking	PoE Injector is incompatible. ¹⁾
Orange blinking	NO SIM card ²⁾
Green blinking	Searching network
Red and Green blinking alternatively	Registration rejected ³⁾
Green	In service

LED operation	Conditions
Green blinking	Wi-Fi is on and GNSS is not fixed
Green	Wi-Fi is on and GNSS is fixed
Orange blinking	Wi-Fi is off and GNSS is not fixed.
Off ¹⁾	PoE Injector is incompatible ¹⁾ or Wi-Fi is off and GNSS is fixed ²⁾

Multi-level access & permission management

Flexibility offered for the admin to define custom access policy

Menu item	Operator	User
Wi-Fi	Read Only	Read Only
LOCAL NETWORK	Read Only	Read Only
SATELLITE SEARCH	Full	Full
SATELLITE SELECTION > Auto	Full	Full
SATELLITE SELECTION > Manual	Full	Read Only
SEND EMAIL > SEND	Hidden	Hidden
ACCOUNT > operator	Full	Hidden
ACCOUNT > user	Full	Full
LOGS > SYSTEM LOGS	Full	Hidden
SOS > MESSAGE	Read Only	Read Only

- 3 levels of users:
 - Admin – controls the full system
 - Operator – has lesser permissions than admin
 - User – Restricted access
- Built-in flexibility to change permissions:
 - With the admin account, you can change the default access permissions for operator and user for each page menu.
 - Example: Admin can allow the operator can change WIFI SSID name and password

Security features

Key menus

1. MBH Web-login account management:

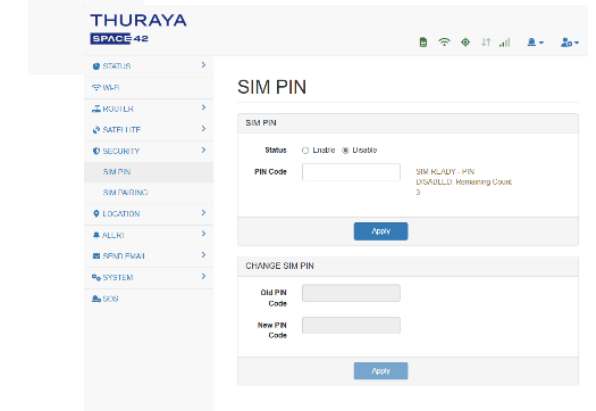
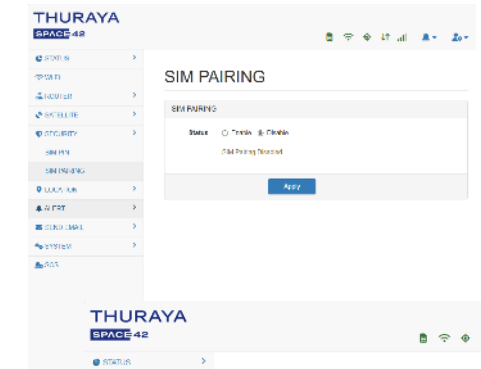
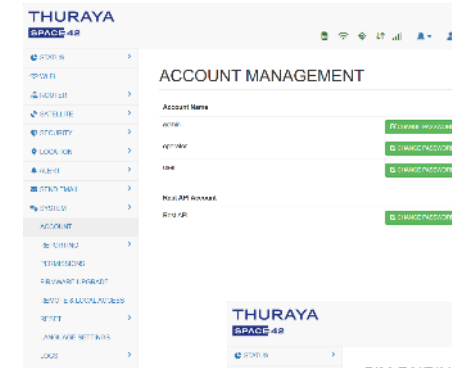
- The admin can change the password of each account.
- The Rest API Account password for remote access control can only be changed from the admin account.

2. SIM pairing:

- This feature allows the device to be functionally locked with a specific SIM-card in admin account. If you insert another SIM card that is not paired with the terminal, then you shall need to enter the special PIN security code to use the terminal.
- If the code is changed from the default value, kindly ensure to memorize or save the code in a register.

3. SIM PIN:

- Enabling this feature requires the user to input the correct SIM PIN upon powering on the device to allow access to satellite services.
- If the wrong SIM PIN code is entered more than 3 times, you will be directed to the SIM PUK entry screen.
- To unlock the SIM PIN Code, you need to enter the SIM PUK code. If the wrong SIM PUK code is entered more than 10 times, the SIM will be blocked.



Router capabilities

Local network management

1. Device web-login management:
 - This displays the terminal's local IP address and allows you to change it.
 - The default IP address is 192.168.64.1
2. DHCP Management
 - This displays the terminal's dynamic IP address range and allows you to change it.
 - The default range is from 192.168.64.2 to 192.168.64.126

The screenshot displays the THURAYA SPACE42 web interface. On the left is a sidebar menu with options: STATUS, Wi-Fi, ROUTER, LOCAL NETWORK (selected), MAC FILTER, PORT FORWARDING, FIREWALL, SATELLITE, SECURITY, LOCATION, ALERT, SEND EMAIL, SYSTEM, and SOS. The main content area is titled 'LOCAL NETWORK SETTING'. It contains a 'LOCAL NETWORK' section with three fields: 'Local IP Address' set to 192.168.64.1, 'Subnet Mask' set to 255.255.255.128, and 'Dynamic IP Address Range' set to 192.168.64.2 ~ 192.168.64.126. An 'Apply' button is located at the bottom of the settings area.

Router capabilities

MAC filter

THURAYA

SPACE 42

STATUS

Wi-Fi

ROUTER

LOCAL NETWORK

MAC FILTER

PORT FORWARDING

FIREWALL

SATELLITE

SECURITY

LOCATION

ALERT

SEND EMAIL

SYSTEM

SOS

MAC FILTER SETTING

MAC ADDRESS FILTER

MAC Address Filter Policy

☐ Whitelist

☐ Blacklist

☒ Disable

Apply

#	Name	MAC Address	
1	a	58:86:94:fd:80:05	<div>EditDelete</div>

- MAC filtering allows you to restrict terminal access for devices specified in the Whitelist or Blacklist by their MAC addresses.
- Example:
 - Restrict only 1 authorized user device to connect
 - Restrict MBH service to be used only with a 3rd party device like Data management device.

Firewall capabilities

Standard

THURAYA

SPACE 42

STATUS

Wi-Fi

ROUTER

LOCAL NETWORK

MAC FILTER

PORT FORWARDING

FIREWALL

SATELLITE

SECURITY

LOCATION

ALERT

SEND EMAIL

SYSTEM

SOS

FIREWALL SETTINGS

#	Name	Direction	Protocol	Source IP	Destination IP	Source Port	Destination Port	Action	Status	
1	a	Inbound	TCP	ANY	ANY	ANY	5201	Allow	Enabled	<div><div>+ Add</div><div>Edit</div><div>Delete</div></div>

- The firewall settings configured applies to the data traffic from and to the **satellite network**
- It does not apply the local area network (POE data port and Wi-Fi connections).
- The admin can define the inbound and outbound policies to allow and/or deny TCP/UDP traffic

Integration to 3rd party servers

Reporting – Distress alert, Tracking, Geofencing, Terminal alert

- You can configure server settings such as the server IP or Domain Name, TLS port number, username, and password for sending Reporting messages
- Step 1: Configure reporting server details
- Step 2: Upload latest and correct server certificate to ensure uninterrupted reporting
- Step 3: Choose the reporting format that was chosen during server application design

THURAYA
SPACE42

STATUS > Wi-Fi > ROUTER > SATELLITE > SECURITY > LOCATION > ALERT > SEND EMAIL > SYSTEM > ACCOUNT > REPORTING > SERVER

REPORTING SERVER

Caution: Server configuration is required.

REPORTING SERVER SETTINGS

Server

TLS port

Username

Password

Apply

THURAYA
SPACE42

STATUS > Wi-Fi > ROUTER > SATELLITE > SECURITY > LOCATION > ALERT > SEND EMAIL > SYSTEM > ACCOUNT > REPORTING > SERVER

REPORTING CERTIFICATES

Name	Filename	Status	Upload	Remove
Root Certificate	ca.pem	Empty		
Client Certificate	client.pem	Empty		
Client Key	client.key	Empty		

THURAYA
SPACE42

STATUS > Wi-Fi > ROUTER > SATELLITE > SECURITY > LOCATION > ALERT > SEND EMAIL > SYSTEM > ACCOUNT > REPORTING > SERVER > CERTIFICATES > FORMAT

REPORTING FORMAT

REPORTING FORMAT SETTINGS

Format

Apply

Remote & Local access for 3rd party integrations

Remote: OTA configuration /Web menu access; Local: 3rd party devices

- Configure the access control as per requirement
- Remote access:
 - Remote access is possible via the Web UI and REST API.
 - When the Web UI is enabled, you can use a web browser to access remotely.
 - On the Home screen, enter the displayed WAN IP address as shown below.
 - Type `https://“WAN IP address”:55380/` in the Address field and press Enter.
- Local access:
 - Local access to the BBH-01 is available via TCP communication using an Ethernet or Wi-Fi interface.
 - The terminal operates as a TCP server, and the 3rd party operates as a TCP client.
 - The connection TCP ports are 20000 for AT Command and 21000 for NMEA data

THURAYA
SPACE 42

STATUS >
Wi-Fi >
ROUTER >
SATELLITE >
SECURITY >
LOCATION >
ALERT >
SEND EMAIL >
SYSTEM >
ACCOUNT
REPORTING >
PERMISSIONS
FIRMWARE UPGRADE
REMOTE & LOCAL ACCESS
RESET >
LANGUAGE SETTINGS
LOGS >

ACCESS CONTROL SETTINGS

REMOTE ACCESS

Web UI Disable ▾

Rest API Disable ▾


LOCAL ACCESS

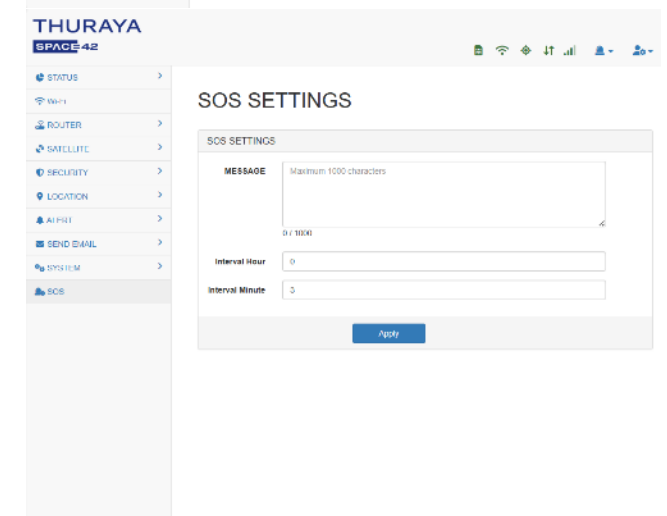
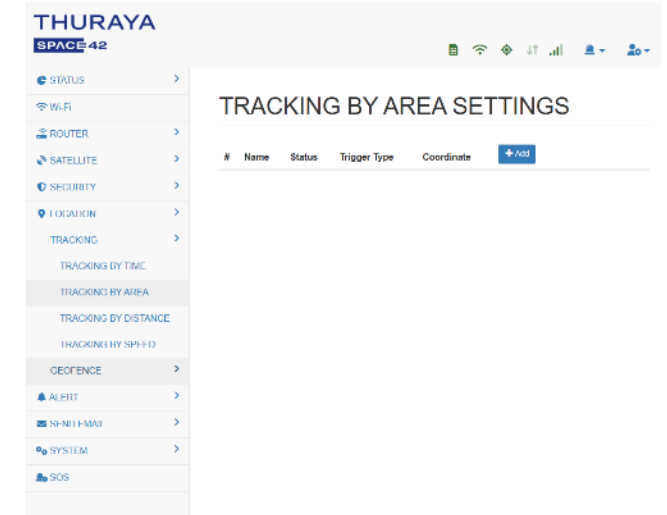
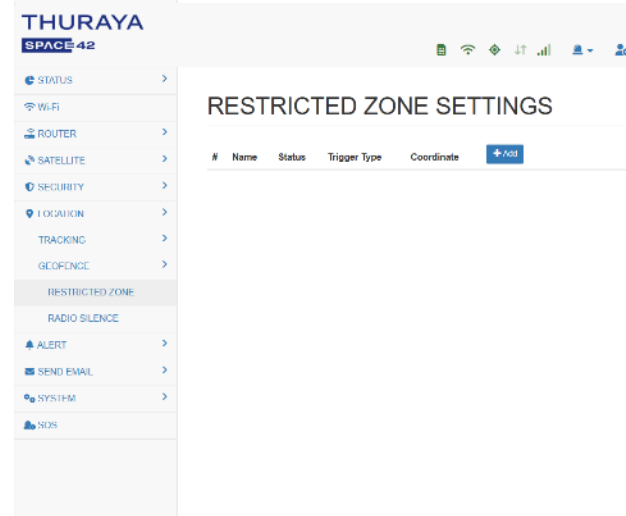
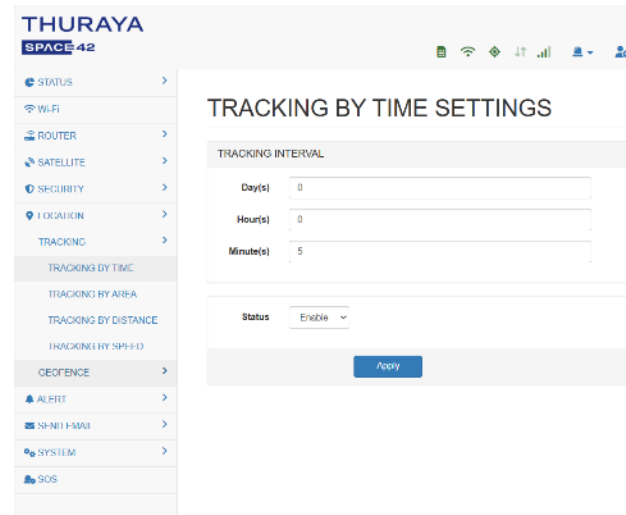
Local Access API Disable ▾

Apply

Location services for 3rd party integrations

Tracking, Geofencing & Distress Alert

- Tracking:
 - There are four types of tracking available – By time, area, distance, and speed.
 - In order to access this menu, you will need to login using admin account credentials
- Geofencing:
 - There are two types of geo fencing available – Restricted zone and radio silence.
 - You can configure up to 10 polygons for the restricted zone with 3 to 50 geo-coordinates and for radio silence with 3 to 100 geo-coordinates.
- Distress Alert / SOS:
 - Send an SOS to pre-determined recipients by clicking the SOS Start button  from the SOS icon in the status bar.
 - When SOS is activated, the SOS ON icon is displayed in the status bar.
 - To deactivate SOS, simply click the SOS Stop button from the SOS icon in the status bar.



Alert reporting for 3rd party integrations

Choose your terminal alert preferences

- You can enable/disable some useful trigger levels to be sent as a notification alert from the device to the message using admin account.
- Changes in the status of the below functions are configured as events on the terminal and the status can be reported to the server from any of its previous states.
 - Signal strength
 - Power cycle
 - SIM IN/OUT
 - Admin login/logout
 - Wi-Fi On/Off

THURAYA

SPACE42

STATUS

Wi-Fi

ROUTER

SATELLITE

SECURITY

LOCATION

ALERT

ALERT EVENTS

SEND EMAIL

SYSTEM

SOS

ALERT SETTINGS

ALERT EVENTS

Signal strength

☒ Enable ☐ Disable

Power cycle

☒ Enable ☐ Disable

SIM in/out

☒ Enable ☐ Disable

Admin login/logout

☒ Enable ☐ Disable

Wi-Fi on/off

☒ Enable ☐ Disable

Apply

Firmware upgrade

Upload and proceed

THURAYA

SPACE42

STATUS

Wi-Fi

ROUTER

SATELLITE

SECURITY

LOCATION

ALERT

SEND EMAIL

SYSTEM

ACCOUNT

REPORTING

PERMISSIONS

FIRMWARE UPGRADE

REMOTE & LOCAL ACCESS

RESET

LANGUAGE SETTINGS

LOGS

FIRMWARE UPGRADE

FIRMWARE UPLOAD

Choose File

No file chosen

Upload

FIRMWARE UPGRADE

The data connection will experience a brief interruption during the upgrade process.

Caution: Interrupting this process may cause damage to the product.

Proceed

- To upgrade the firmware, select and upload the firmware file. Then, click the "Proceed" button.
- A progress bar will appear, indicating the status of the firmware upgrade.

Copyright © 2024 Space42 Plc (Space42)

23

INTERNAL

System logs

For troubleshooting purposes

THURAYA

SPACE42

STATUS

Wi-Fi

ROUTER

SATELLITE

SECURITY

LOCATION

ALERT

SEND EMAIL

SYSTEM

ACCOUNT

REPORTING

PERMISSIONS

FIRMWARE UPGRADE

REMOTE & LOCAL ACCESS

RESET

LANGUAGE SETTINGS

LOGS

SYSTEM LOGS

TRACK/ALERT LOGS

OPEN SOURCE

SYSTEM LOGS

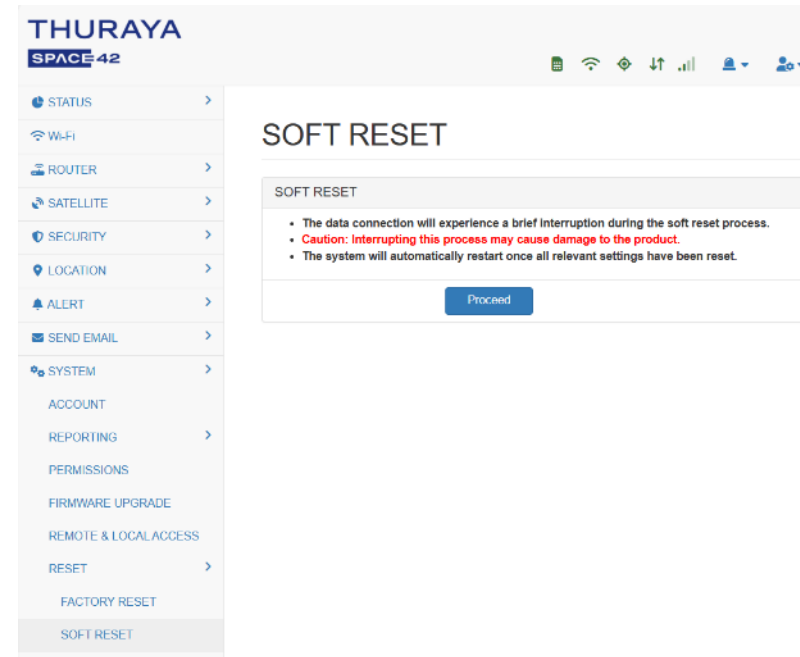
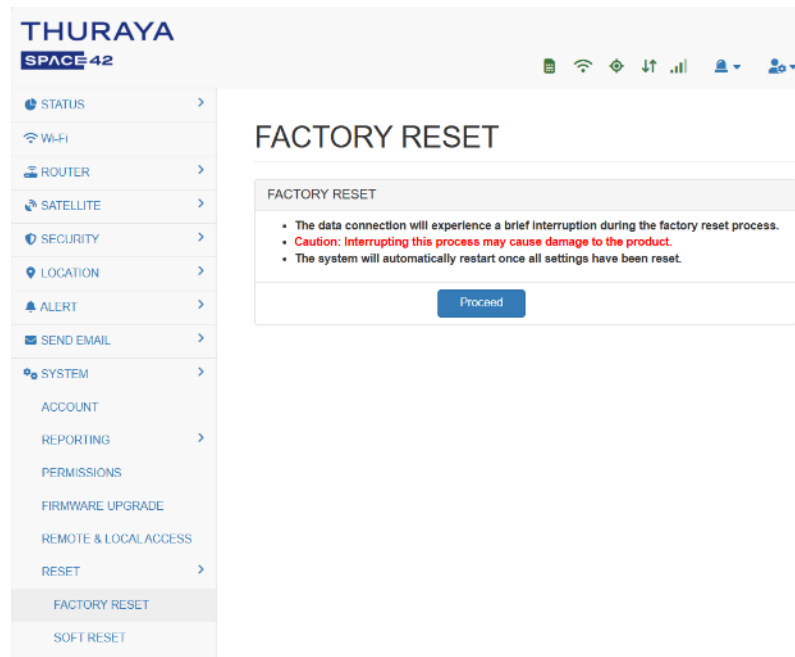
20250204

1

- It allows you to check the terminal’s operational status, can be downloaded and deleted by date.
- The system logs are stored for up to 90 days, and any logs older than 90 days are automatically deleted.

RESET – Factory reset & Soft reset

- Factory reset: Restores the settings as they were when the terminal was delivered. You will lose your custom settings like certificates, configurations and logs saved on the terminal.
- Soft reset: Allows you to restore the terminal without losing certain settings, such as certificates. You will lose your custom settings like configurations and logs saved on the terminal.



Send email

Worst-case scenario backup communication for the client

- This feature is a “send only” feature and is available as a backup to only send text emails to an email server.
- For this feature to work, it is important to program the email settings correctly. Ensure to seek advice from your IT department to use this functionality.
- The terminal’s unique IMEI is automatically inserted at the beginning of the Subject line and sent.

The image displays two screenshots of the THURAYA SPACE42 user interface, specifically the email functionality.

Left Screenshot: SEND E-MAIL

The interface shows a sidebar menu on the left with options: STATUS, Wi-Fi, ROUTER, SATELLITE, SECURITY, LOCATION, ALERT, SEND EMAIL, SEND, SETTINGS, SYSTEM, and SOS. The main area is titled "SEND E-MAIL" and contains "E-MAIL INFORMATION" fields:

- Sender:** A text input field with the placeholder "Sender".
- Receiver:** A text input field with the placeholder "Press the spacebar to add more recipients".
- Subject:** A text input field with the placeholder "Subject".
- Text:** A large text area with the placeholder "Maximum 1000 characters" and a character count "0 / 1000".

At the bottom of the main area is a blue "Send" button.

Right Screenshot: E-MAIL SETTINGS

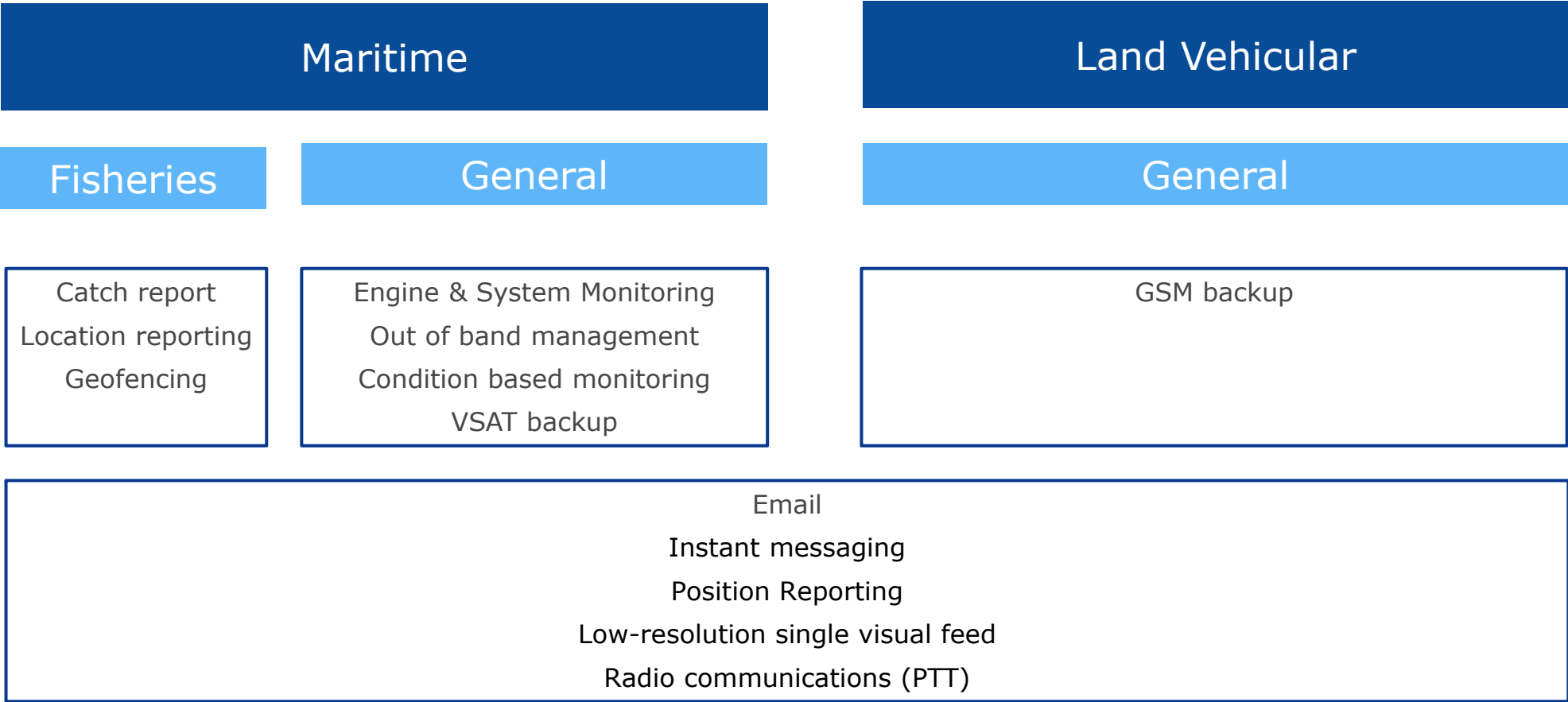
The interface shows a sidebar menu on the left with options: STATUS, Wi-Fi, ROUTER, SATELLITE, SECURITY, LOCATION, ALERT, SEND EMAIL, SEND, SETTINGS, SYSTEM, and SOS. The main area is titled "E-MAIL SETTINGS" and contains two sections:

- SMTP SETTINGS:** Includes fields for "Server" (placeholder "Server"), "Authentication" (checkbox), "Secure" (dropdown menu with "None" selected), and "Port" (text input field with "25"). There is an "Apply" button at the bottom.
- CA CERTIFICATES:** Includes fields for "Version" (placeholder "Tue Nov 26 13:58:25 2024 GMT") and "URL" (placeholder "https://curl.se/ca/cacert.pem"). There is an "Update" button at the bottom.

Applications

Market requirement for critical comms

Typical applications for an **entry level data solution**



Thuraya MBH key target markets

Segments

Maritime

Civil Government

- Coastal boats
- Fisheries
- Ferries



Energy

- Offshore vessels
- Tug-boats
- Jack-up barges/Rigs



Transportation

- Hopper barges
- Regional merchant
- Crew boats



Leisure

- Private yachts
- Tour boats



NGO

Land Vehicular

- Ambulance
- Border patrol
- Search & rescue



- Petrochem carrier
- Remote site inspection



- Enterprise Logistics
- Cross- Border Trucking



- Safaris
- Individual Travelers/ trekkers



- Rapid Deployment
- Security Missions



USE CASES



Primary mode for small boats

Critical comms - COTM

VSAT backup



Space42.ai