



Remote Terminal Manager

User Guide

Version 2.0

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Contents

- 1 INTRODUCTION4**
 - 1.1 A Global Monitoring and Control Platform4**
- 2 REMOTE TERMINAL FUNCTIONS5**
 - 2.1 Basic Remote Terminal Manager functions5**
 - 2.2 Remote Control functions5**
- 3 REMOTE TERMINAL MANAGER SUPPORT PER TERMINAL TYPE ...7**
- 4 GETTING STARTED8**
 - 4.1 Is the BGAN terminal Online/off-line?8**
 - 4.2 How to activate an IP session.....8**
 - 4.3 Where is the BGAN terminal located?.....10**
 - 4.4 More detailed information from the BGAN terminal13**
 - 4.5 Notifications when terminal goes on- or offline.....14**

1 Introduction

1.1 A Global Monitoring and Control Platform

The need to remotely monitor and control equipment through a satellite communication IP platform is becoming increasingly important. Instant access to location information and remote access to satellite terminal and connected equipment could be of essence.

Inmarsat has a solution in its portfolio called Remote Terminal Manager (RTM) that enables the NOC (Network Operation Center) of a company to remotely access the (unmanned) BGAN equipment and IP device(s) behind it.

This unique platform is a scalable, internet-based monitoring and control application that enables you to activate an IP session, close down/disconnect an IP session, provide information which IP devices' are online/offline, provide detailed information on signal strength, in which Inmarsat spot beam the BGAN is located and which firmware is being used by the BGAN device. If from the remote side a data connection is setup or disconnected Remote-IP can send out an email message to notify the NOC of the event. It also provides the latest position report for an individual site or all sites combined on one map/screen. It depends on the BGAN hardware and firmware which data you can pull out of the terminal.

In the paragraphs below a description is provided of the functionality offered via the RTM application. Please note that in order to use the RTM service for a particular terminal. The SIM of the terminal must be subscribed to RTM service via Inmarsat Solutions provisioning Dashboard.

2 Remote Terminal Functions

2.1 Basic Remote Terminal Manager functions

Network information

Based on the information retrieved from the Inmarsat network RTM provides the following overviews:

<i>Retrieve connection status</i>	Get an immediate insight if a terminal is online and the number of active data connections it has
<i>Retrieve call history</i>	Get a historic overview of successful and failed data connections Get an overview of remote control commands sent to the terminal and the associated reply
<i>Report session failure details</i>	In case connections fail, RTM will show the reason for failure

Alert Service

<i>Connection alert</i>	RTM will allow an alert notification to be sent when a data connection is started by the terminals or when it gets disconnected. The alert can be configured to be sent to multiple destinations
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Note: The above information and alert service is only available if one of the following APNs are used for the data connections:

- stratos.bgan.inmarsat.com
- xantic.bgan.inmarsat.com

SMS

<i>Free form SMS</i>	When needed a free form text message can be sent to the terminal from within the RTM application
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2.2 Remote Control functions

Data Connection control

The following options for data connection control are offered in RTM:

<i>Wake up and stop data connection</i>	RTM allows for the remote activation of an IP or streaming connection, ready to be used by remote applications to exchange data.
<i>Set up multiple connections</i>	If the terminal supports multiple connections, RTM is able to remotely activate multiple PDP contexts
<i>Automatic PDP context restart</i>	The RTM application can be configured to automatically restart a PDP context if a connection fails
<i>Wake up for specific UT device</i>	Depending on terminal capabilities, it is possible to activate connection for specific devices connected to the remote terminal

Advanced data connection control

<i>Wake up for specific APN</i>	If terminal and SIM capabilities allow, connections can be activated for specific APN's
<i>Wake up with non-default profile</i>	When multiple profiles are created for the SIM, the connection can be remotely activated using a specific profile
<i>Configure APN</i>	If the SIM allows multiple APNs to be used, the preferred APN can be configured for use in RTM

Remote Terminal Control

<i>Reboot</i>	From within the RTM application it is possible to instruct the terminal to reboot itself. The RTM application will report when the terminals is available again
<i>Remote firmware upgrade</i>	For terminals that support remote firmware upgrade, RTM provides the options to initiate a firmware upload and activate the firmware once uploaded

Terminal Status and Information

Depending on the capability of the terminal, the RTM service provides functions to retrieve status information and geographic location from the terminal. The status information retrieved from the terminals may contain:

- Signal Level
- Spot beam information
- IP address of the terminal
- Firmware version
- Serial number and IMSI
- Uptime
- GPS Location

GPS Position and Mapping services

If the terminal supports the retrieval of its geographical position, RTM will provide the following functions:

- Plot and present the last know position on a world map
- Provide a color indication to show if a terminal has an active data session
- Plot all terminals on a map in the terminal overview
- The option to automatically retrieve a position from the terminal when a new data connection is setup

Note: GPS position reporting is only available for SIMs that are activated on the Full RTM Subscription; for SIMs activated on the Basic RTM Subscription this information is not available.

3 Remote Terminal Manager support per terminal type

The below table lists the level of Remote Terminal Manager functionality supported by the different types of BGAN terminals. Below the table a short description is provided for each function category.

		Network Information	Connection Status Alerts	Send SMS	Data Connection Control	Advanced Data Connection Control	Terminal Status and Information	Remote Terminal Control	Geo- position and Mapping services
Manufacturer	Terminal(s)	Basic			Remote Control				
HNS	9201*, 9202*, 9450*	√	√	√	√	√	√	√	√
	9250, 9350	√	√	√					
	9502	√	√	√	√	√	√	√	√
Thrane & Thrane	Explorer 100/110	√	√	√					
	Explorer 300, 500, 700	√	√	√	√	√			
	Explorer 325, 527, 727	√	√	√	√	√			
Addvalue	Sabre 1 Remote	√	√	√	√	√			
	Sabre 1	√	√	√					
	Sabre Ranger	√	√	√	√	√			

Notes:

*Remote control functions to be activated by PIN from HNS

** Network and connect status available when the APNs of the legacy Stratos network are used

4 Getting started

Below paragraphs provide an introduction into the most used functions or RTM.

4.1 Is the BGAN terminal Online/off-line?

ICCID	Actions	Name	Customer		Phone Number	Data Sessions	Online Si
			ID	Name			
898709905442110171	  	Troubleshooting card LES Perth (Hns9201)	114	ISOL - Test and Dev Account	870772216887	0	
898709907414105390	  	GC030060 O3B Networks	1381	Tamera Ryals	870773252702	1	07 Oct 2014 06:48
898709907414105391	  	GC030728 O3B Networks	1299	O3B Networks	870773701640	1	06 Oct 2014 14:56
898709907414105899	  	Troubleshooting Card LES BURUM	117	Stratos Demo for Burum	870773151608	0	
898709908412413541	  	SatCam Demo System	705	Ralph's Radio Ltd. (Postpaid)	870773151608	0	

The '0' indicates that a SIM card does not have an active IP session
The '1' indicates that the SIM has an active session

4.2 How to activate an IP session

Step1

Actions	ICCID
  	898709907412317216
  	898709907414105390
  	898709907414105391

Click on the red alarm-clock to start the 'wake-up' command process

Step 2a

Terminal 898709905442110171

Action **Wake Up**

Data Speed Wake Up

Device

APN Use terminal default

Select the 'Wake Up' command

Step 2b

The screenshot shows the 'Data Speed' dropdown menu open, displaying the following options:

- Standard Data Service
- 32 Kb/s Streaming
- 64 Kb/s Streaming
- 128 Kb/s Streaming
- 256 Kb/s Streaming
- 384+ Kb/s X-Stream

A callout box points to the 'Standard Data Service' option with the text: *Select the type of data session you prefer to activate.*

Step 2c

The screenshot shows the 'Device' dropdown menu open, displaying a table with the following data:

Device Name	Device Description
Any	All Devices
Static	All Devices with Static IP Address
DHCP	All Devices with Dynamic (DHCP) IP Address

A callout box points to the 'Any' option with the text: *In this section you can choose which RTU you want to activate in case you have multiple devices connected to the BGAN*

Step 2d

The screenshot shows the 'APN' field with the text 'Use terminal default' highlighted. A callout box points to this field with the text: *In this section you can choose which IP address you want to assign to this IP session. Default is a Private Dynamic IP address*

Below the 'APN' field is a 'Send' button.

Step 2e

Terminals History

Terminal **898709905442110191**

Action **Wake Up**

Data Speed **Standard Data Service**

Device **Static**

APN **Use terminal default**

Send

Hit 'Send' to initiate the IP activation command.

4.3 Where is the BGAN terminal located?

Please note that the availability of this function depends on the terminal type in use. Please refer to section 1.4 for details.

Step 1

ICCID	Actions	Name	Customer	
			ID	Name
898709905442110171	  	Troubleshooting card LES Perth (Hsc9201)	114	Test a Dev
Request new position report for 898709905442110171				
		Troubleshooting	ISOL -	

In order to get a position report, click on the blue pin on the main page

Step 2

After you click the button below, a command will be sent to 898709905442110171, instructing it to report its position and status

Send

Click the Send button to send the command to retrieve the position and status

Step 3

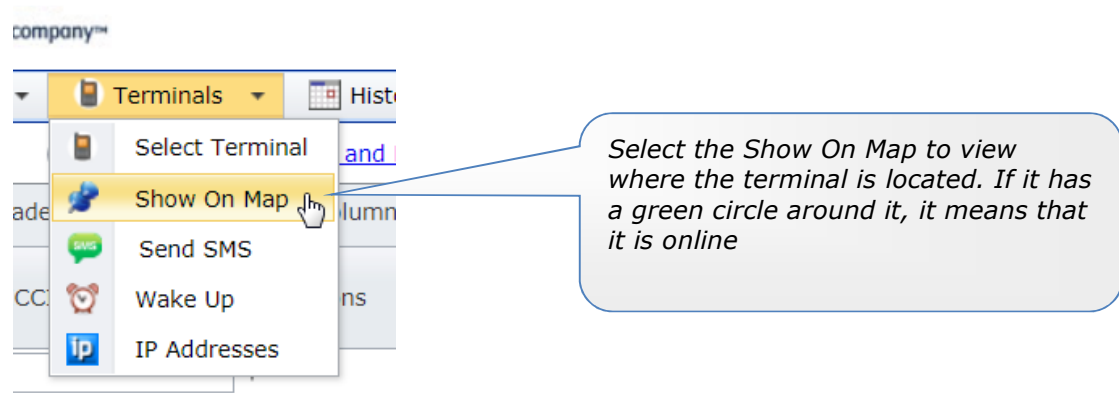
The Position Report has been requested. It may take a few minutes for the Terminal to respond. You can track the status of this request in the [Message Archive](#).

Click the link to go to the message archive

The Message Archive show the position and status information (this may take a few minutes):

ID	Cust	Terminal	Direction	To	Content	Raw Content
322837443	114	898709905442110171	From Mobile	STC	[GPS Response]	IMSI: 901112112110171 IMEI: 35178500001119 LAT:-31.80 LON: 115.88 SW: 3.8.0.6 C/N0: 62 Beam: 16 Uptime: 396982 GIP: 0.0.0.0
322837442	114	898709905442110171	To Mobile	870772216887	[GPS Command]	GETINFO 1 ALL ***

Step 4



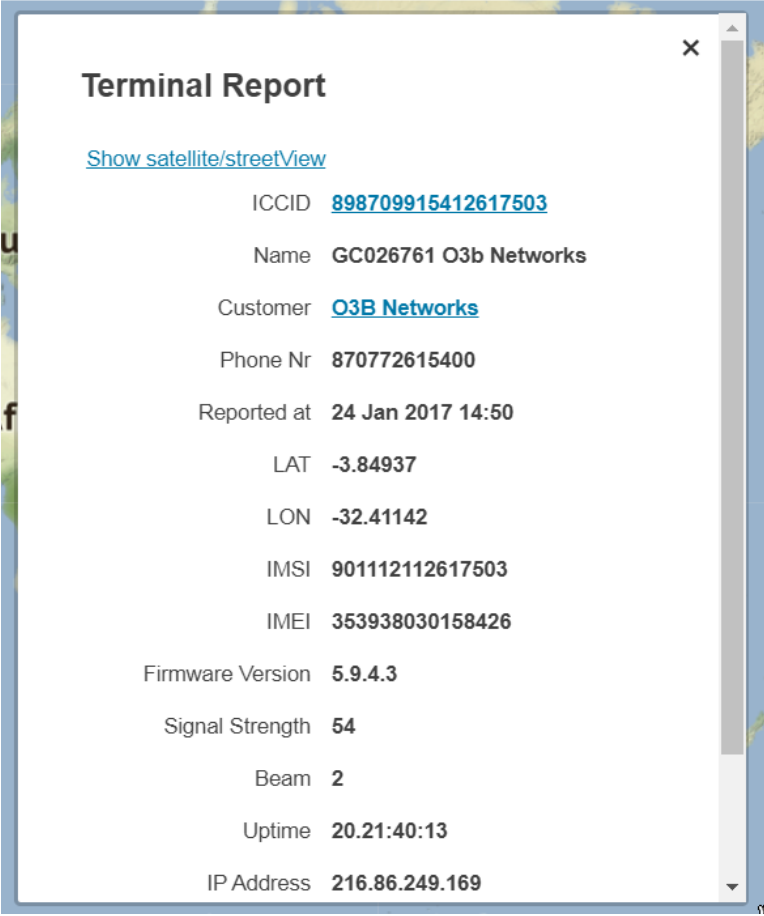


If you have multiple terminals you can see them all on one map.

4.4 More detailed information from the BGAN terminal

Please note that the availability of this function depends on the terminal type in use.
Please refer to section 1.4 for details.

If you click on a terminal on the map, a terminal report opens up; this report contains the following information:



The image shows a 'Terminal Report' window with a close button (X) in the top right corner. The window contains the following information:

- [Show satellite/streetView](#)
- ICCID: [898709915412617503](#)
- Name: GC026761 O3b Networks
- Customer: [O3B Networks](#)
- Phone Nr: 870772615400
- Reported at: 24 Jan 2017 14:50
- LAT: -3.84937
- LON: -32.41142
- IMSI: 901112112617503
- IMEI: 353938030158426
- Firmware Version: 5.9.4.3
- Signal Strength: 54
- Beam: 2
- Uptime: 20.21:40:13
- IP Address: 216.86.249.169

4.5 Notifications when terminal goes on- or offline

You can set a notification to inform the NOC once the BGAN terminal goes on- or offline.

To set a notification, select the ICCID of the terminal; this opens up the terminal details screen:

Customers

Terminals

History

Tasks

Tools

SIM ICCID

898709905442110171

Name

Troubleshooting card LES Perth (Hns9201)

Terminal IMEI

35178500001119

Description

Perth LES

Customer

 [ISOL - Test and Dev Account \(114\)](#)

Phone Nr

870772216887

Firmware Version

HNS 9201 - 3.8.0.6

Icon

 Mobile

License

RTM for BGAN/FBB

Session Start Email

Auto-track

No

At End of Data Session

Do Nothing

Preferred APN

Terminal Password

Recent Data Session(s)

Completed IP: 10.166.120.218 Since: 17 Sep 01:04 User: TCCBH01 Data In: 4.12 MB Data Out: 1.82 MB [more...](#)

Completed IP: 10.166.120.133 Since: 17 Sep 01:03 User: TCCBH02 Data In: 29.5 MB Data Out: 33.6 MB [more...](#)

Completed IP: 10.187.1.5 Since: 26 Sep 01:35 User: lorawan Data In: 2.21 MB Data Out: 301 KB [more...](#)

Completed IP: 212.165.100.196 Since: 27 Sep 01:39 User: PU10750534 Data In: 334 KB Data Out: 13.1 MB [more...](#)

Completed IP: 212.165.100.196 Since: 01 Oct 01:59 User: PU10750534 Data In: 900 B Data Out: 1.29 KB [more...](#)

Last Failed Session

17 Sep 2019 00:52 Reason: Requested QoS is not supported by User Profile ; Supported QoS: 0, Requested QoS:32 [more...](#)

Last Terminal Interaction

[GPS Response] (22 minutes ago)

Status Reported by Terminal

Reported at

07 Oct 2019 11:52

location

[-31.80000/115.88000](#)

Signal Strength

62

Beam

16

Uptime

4.14:16:22

IP Address

0.0.0.0

[Request new report](#)

Edit

Delete

Click Edit to enable the setup of the email notifications:

Customers ▾ Terminals ▾ History ▾ Tasks Tools ▾

SIM ICCID **898709905442110171**

Name **Troubleshooting card LES Perth (Hns9201)**

Terminal IMEI

Description

Customer [ISOL - Test and Dev Account \(114\)](#)

Phone Nr **870772216887**

Firmware Version

Icon

License **RTM for BGAN/FBB**

Session Start Email

Auto-track ☒

Enter (multiple) email addresses that will be informed when the terminal starts a session

Tick Auto-track to request a position report whenever the system detects that the terminal

Customers ▾ Terminals ▾ History ▾ Tasks Tools ▾

SIM ICCID **898709905442110171**

Name **Troubleshooting card LES Perth (Hns9201)**

Terminal IMEI

Description

Customer [ISOL - Test and Dev Account \(114\)](#)

Phone Nr **870772216887**

Firmware Version

Icon

License **RTM for BGAN/FBB**

Session Start Email

Auto-track ☒

At End of Data Session

Preferred APN

Terminal Password

Recent Data Session(s) **Completed IP: 10.166.120.218 Since: 17 Sep 01:04 User: TC**

Select what you want to happen when a data session is terminated

Customers Terminals History Tasks Tools

SIM ICCID898709905442110171

NameTroubleshooting card LES Perth (Hns9201)

Terminal IMEI35178500001119

DescriptionPerth LES

CustomerISOL - Test and Dev Account (114)

Phone Nr870772216887

Firmware VersionHNS 9201 - 3.8.0.6

IconMobile

LicenseRTM for BGAN/FBB

Session Start Emailcustomer@company.com;fleetm

Auto-track☒

At End of Data SessionSend Emailafter 5 minutes. Send Alert to:customer@company.com

Enter the number of minutes after which the email alert is send to the email recipients