Hughes 9502

Quick Setup Guide

30-December 2013

11717 Exploration Lane, Germantown, MD 20876 T: 301.428.5500 F: 301.428.1868/2830

Copyright © 2013 Hughes Network Systems, LLC

All rights reserved. This publication and its contents are proprietary to Hughes Network Systems, LLC. No part of this publication may be reproduced in any form or by any means without the written permission of Hughes Network Systems, LLC, 11717 Exploration Lane, Germantown, Maryland 20876.

Hughes Network Systems, LLC has made every effort to ensure the correctness and completeness of the material in this document. Hughes Network Systems, LLC shall not be liable for errors contained herein. The information in this document is subject to change without notice. Hughes Network Systems, LLC makes no warranty of any kind with regard to this material, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose.

Trademarks

Hughes and Hughes Network Systems are trademarks of Hughes Network Systems, LLC. All other trademarks are the property of their respective owners.

1. Objective

Program a BGAN M2M Hughes 9502 Terminal to maintain a connection to the network and provision the unit to have a Global Public IP Address that is translated to a device connected to the 9502 on the LAN. Also included are instructions on how to convert a 9502 M2M terminal to use BGAN services.

2. Powering Up the terminal

- The 9502 will power up automatically when DC power is applied. It does not have a power button. By default it will bypass antenna (ODU) pointing and automatically register, attach and activate a PDP context.
- Once you have applied DC power, the terminal goes through a power-on-self-test (POST) that takes approximately 15-20 seconds and then the *power LED will start flashing* for another 15 seconds.
- If you want to enter pointing mode, you will need to *short press (<2 seconds)* the function button within those 15 seconds. If you do not short press the Function button, the unit will try to register with the network and set up a PDP context.

3. Getting a GPS Fix

- Once you get into pointing mode (all three LEDs are flashing), you have to first obtain a GPS fix by laying the antenna flat, pointing up to the sky in order to see the GPS satellites. The *GPS LED will go solid* once you have a fix. Once you have a fix, then you can point to the Inmarsat satellite (sect. 5.0)

4. Connecting to the BGAN Terminal

- If you are connecting your PC via USB port, you must first have the *Hughes USBLAN driver* installed on your laptop (**www.bgan.hughes.com**). If connecting through the Ethernet port, configure your laptop's network parameters to the following:
    - IP Address 192.168.128.200 Subnet 255.255.255.0 Gateway 192.168.128.100

- Open Internet Explorer and type *192.168.128.100* in the address section to obtain the web interface.

5. Point the antenna

- Once you have your PC connected to the IDU, monitor the Signal strength section.
    - The Signal Strength section of the WebUI will indicate "Pointing"
    - Adjust the antenna to achieve the highest receive level *>50db*. The higher the better of course
    - Once you have locked down the antenna and have a >50db signal, *short press (<2 seconds)* the function button to get out of pointing mode and start registering with the network.
    - The unit will now proceed with the registration process.

6. Configuring the Terminal

Settings>IP Address /DHCP:

- The terminals Netmode is by default set to ***NAT*** mode. See the User manual for *Relay Mode* instructions.

Connections>Manage APN:

- Check to make sure that the APN that you want to use for your connection is listed at the top under Defined APNs. If not add the APN and user credentials (if required), click *Save* and then highlight it on the left hand side and click on *Make Default*.

7. M2M Settings

Context Watchdog

- Set to ***ON***
- *Primary Ping Address* - this needs to be a server address that is within your VPN or if you are routed to the Public Internet, you can use a DNS Server (4.2.2.1)
- *Secondary Ping Address* - this needs to be a server address that is within your VPN or if you are routed to the Public Internet, you can use a DNS Server (8.8.8.8)
- *Time between pings* – this parameter depends upon the frequency that data will be pulled/pushed. If data will be pushed/pulled frequently, this parameter can be increased to avoid unnecessary pings/data being consumed
- *Ping required*: Recommended setting is No.

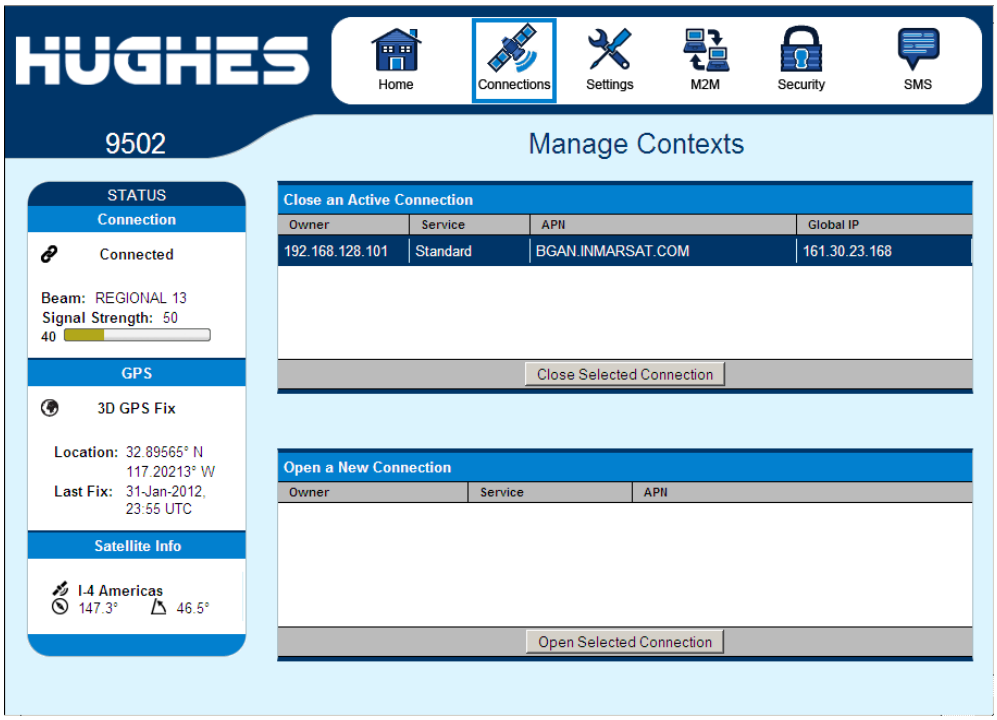
Always On Context

- *Always On* context needs to be set to **ON**.
- *Static ACA IP Address* – setting this parameter depends upon how you setup the device connected to the 9502. If the device can accept DHCP addressing, leave this field blank or 0.0.0.0. If the device uses a static IP address only, configure the device as 192.168.128.200 and then put this same address in this field
- *APN Configuration* - you will need to select the appropriate APN from the drop down
- Username and Password, Leave the Username and Password blank unless it is required for a static public IP address
- Click on *Apply*
- You will be asked to reboot the unit, click *Reboot* and wait for the terminal to reboot.

8. Test Your Configuration

- Make sure that the device is connected to the 9502 via Ethernet. If you want to monitor the activity via the webUI, connect your laptop via the USB port. Ensure that you have the *Hughes USB driver* installed.

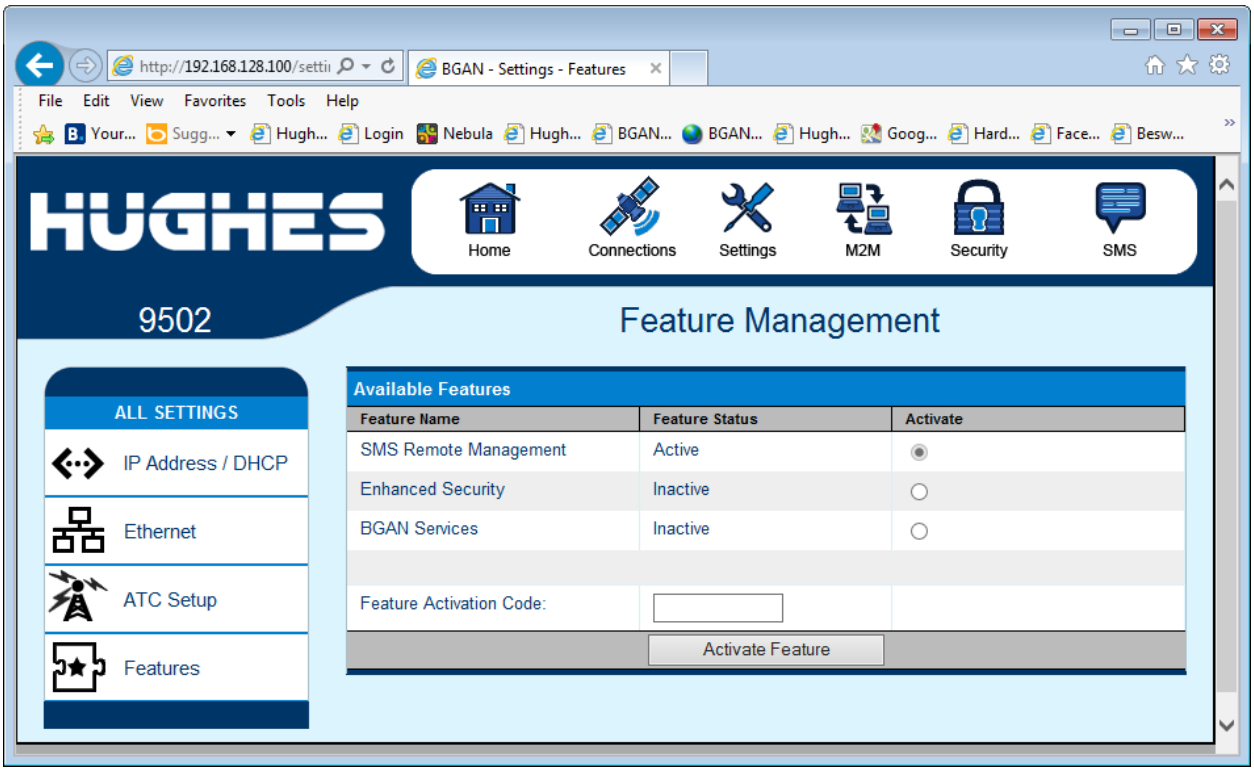
- Open the webUI and go to the *Manage Context Page*; once a PDP context has been automatically setup you should see something similar to the example below. The *global IP address* will be listed if you have a data session active.



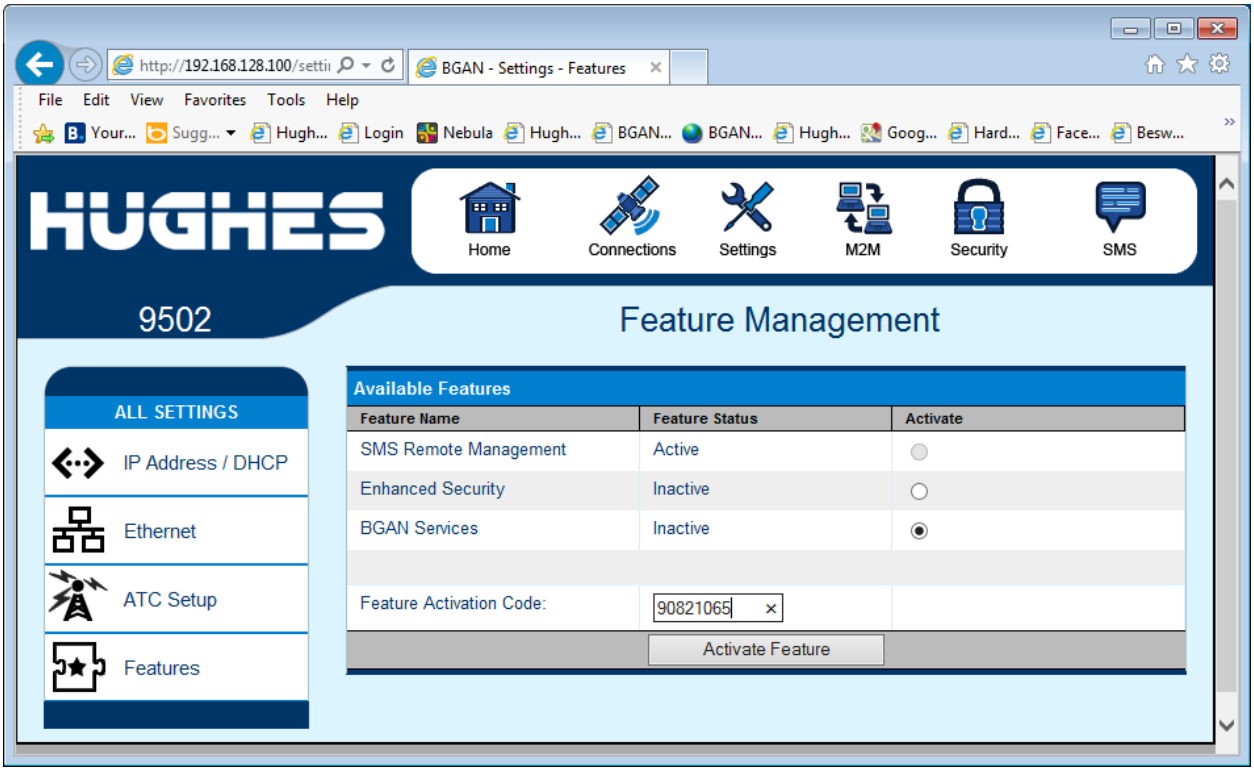
Note: The proceeding configuration this allows a customer to have access to his asset over the internet via a public internet. The customer will need to point his polling engine at the global public IP address.

9. Converting a 9502 M2M Service to BGAN Service

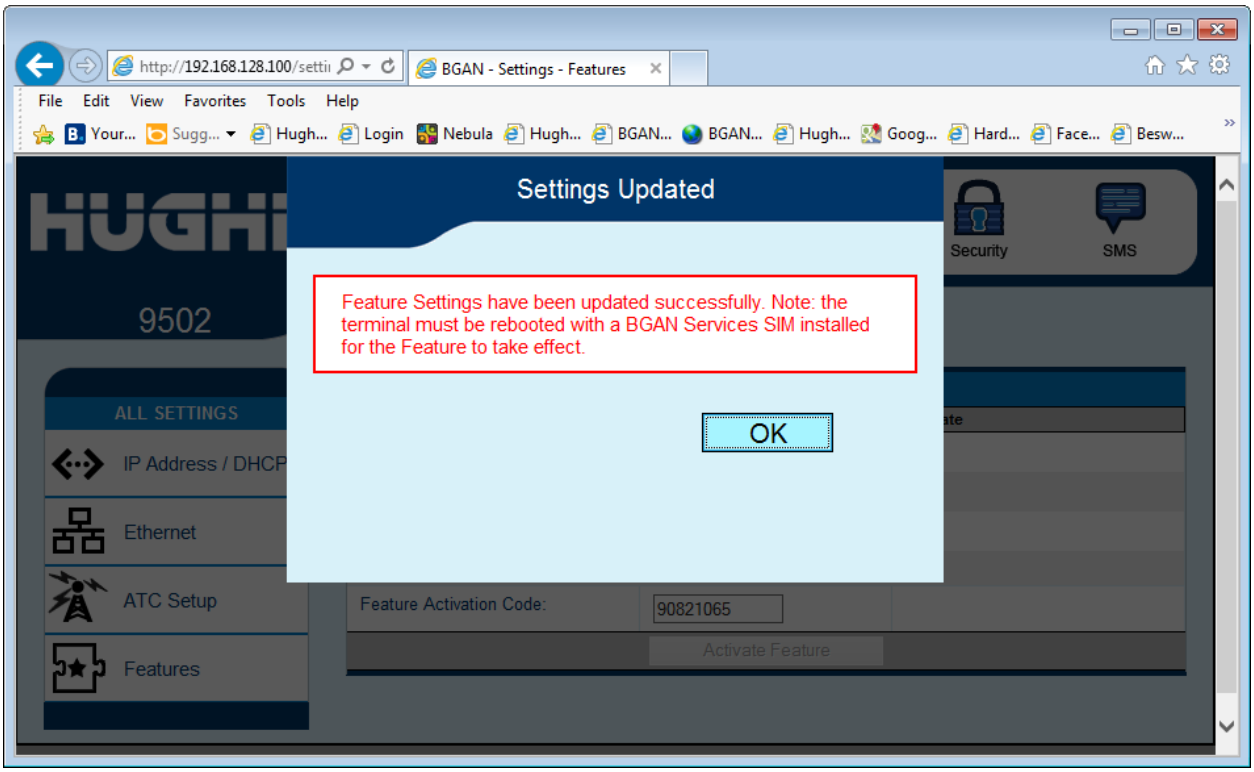
Open up a browser and type in *192.168.128.100* in the URL field. Click on the *Settings>Features* page as shown below:


http://192.168.128.100/settii
BGAN - Settings - Features
File Edit View Favorites Tools Help
HUGHES
Home
Connections
Settings
M2M
Security
SMS
9502
Feature Management
ALL SETTINGS
IP Address / DHCP
Ethernet
ATC Setup
Features
Available Features
Feature Name
Feature Status
Activate
SMS Remote Management
Active
Enhanced Security
Inactive
BGAN Services
Inactive
Feature Activation Code:
Activate Feature

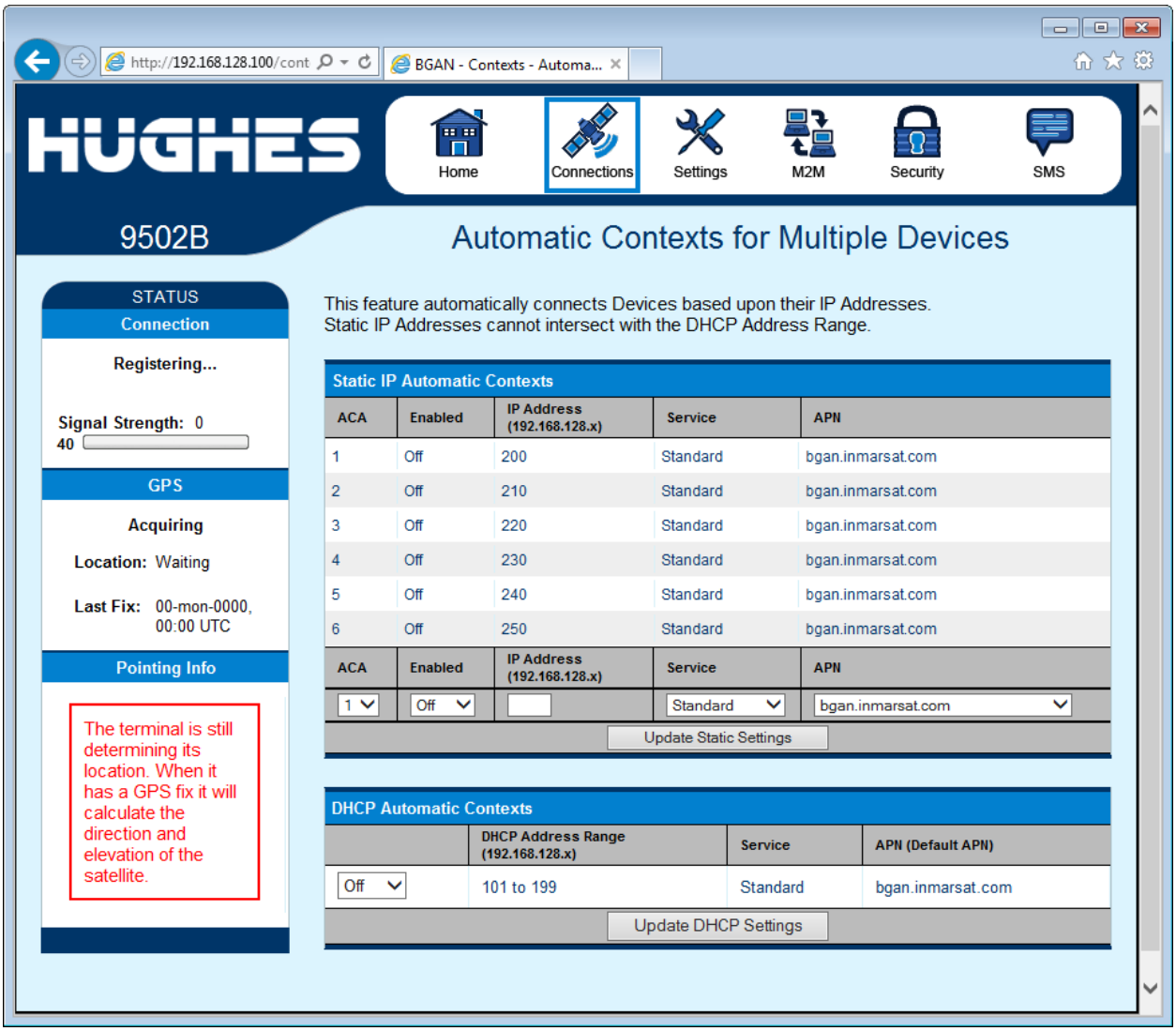
Click on the *BGAN Services Activate* radio button and enter the *Activation code* in the space provided then click on *Activate Feature*.



Read the note about needing a *BGAN SIM card* inserted into the terminal in order to have the BGAN features take effect. Insert a BGAN SIM card and *reboot* the terminal by pulling the power and then re-applying the power.



Go to the *Connections>Automatic Contexts* page and click on *Services* down arrow to make sure that the streaming options are now available. You will also see that the webUI will indicates that the terminal is enabled for BGAN Services by the *9502B* up in the left-hand corner of the page as shown below. Now you can start to use your 9502 with BGAN services.



Note: Once you convert the terminal to use BGAN Services, there is no way currently to convert the terminal back to using M2M Services. This fall back feature **may** be added in a future software release.