

Using Iconics over FleetBroadband

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1 Overview

Iconics has been designed to enable secure voice communications across various internet platforms, such as BGAN and Fleet Broadband.

Iconics enables radio communications to be carried worldwide, therefore bridging the distance via various internet platforms, especially when two-way radio communications are in use,

An example of how you could use Iconics over BGAN or FleetBroadband is to connect your satellite terminal to the Iconics Radio interface unit, which is also connected to a local base station radio, All voice traffic will then be carried to other sites across the world using your own Iconics system. Iconics enables cross network transmission for VHF, UHF and even HF users.

If using a BGAN or FleetBroadband terminal connected to a laptop/ computer, then you can carry out voice communication to all your contacts using a headset and microphone.

2 Product range

The Iconics solution is made up of the following:

- Smart Link radio interface unit, for two way radio connectivity.
- Smart Client PC software, enabling voice communication from your laptop/computer to other Iconics users.
- Smart Admin software, providing full control of users, that is who talks to who, and when.

3 Typical users

- First responders
- Broadcasters
- Aid agencies
- Oil and Gas
- Mining
- Military
- multi radio site users
- Construction
- Marine

- Security
- Road & Rail
- Financial
- Sports and Arts establishments.

4 Key features

Iconics offers the following main features over the BGAN network:

- Provides the ability to interconnect two-way radio systems, enabling worldwide communications
- Computer users can communicate via the Smart Client PC software, enabling a Virtual private Network (VPN)
- Cost effective use over BGAN and FleetBroadband
- Enhances your existing communications
- Designed for site-to-many-site inter-connectivity
- Full advanced controlling features, voice prompts, call logging and more
- Auto-configure and logon as standard features of the Iconics Smart-Link interface modules.
- Hardware interface module designed to operate 24/7.
- Rugged hardware construction, designed for harsh environments.
- Software and firmware can be remotely configured via the Internet.

5 Benefits to BGAN and FleetBroadband users

Iconics offers you the following main benefits:

- Site-to-many-site connectivity across all Internet platforms, including BGAN and FleetBroadband
- Excellent voice quality.
- Full control of users via the Administration software.
- Extremely low bandwidth requirement.
- Very cost effective.

6 Before you set up

This section describes what you need to set up BGAN and FleetBroadband for use with Iconics, and gives an example of an Iconics configuration.

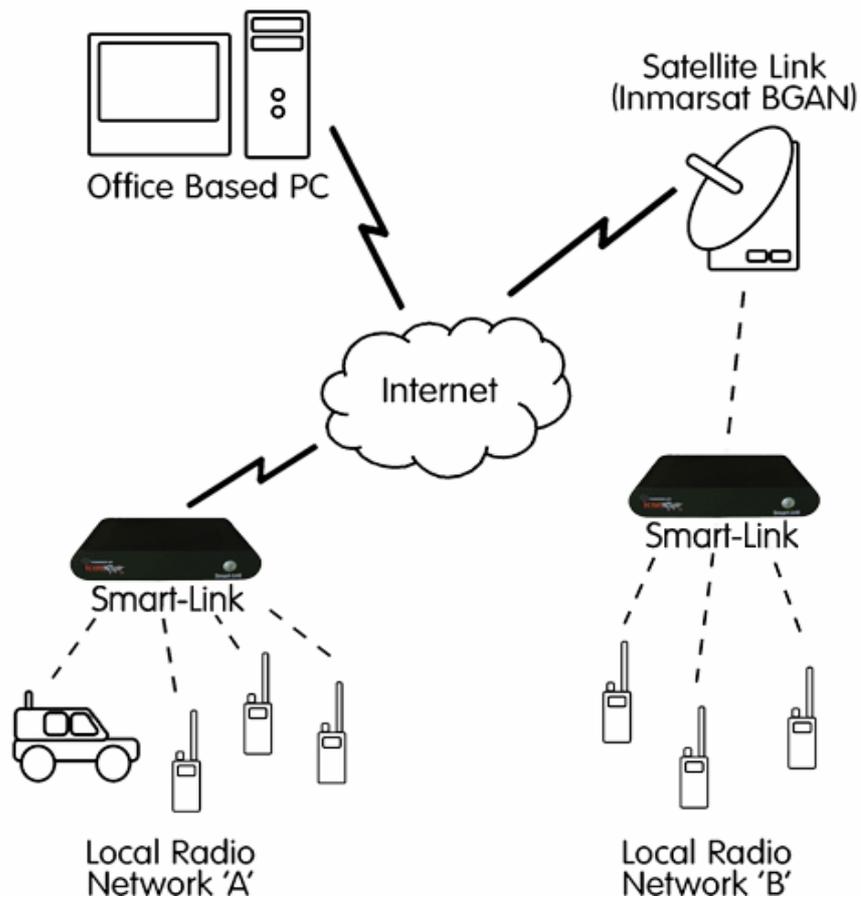
6.1 Solution requirements:

- Physical interface: one of Ethernet, USB, WiFi
- Dynamic IP addressing from BGAN or FleetBroadband network
- For two-way radio connectivity, a local base is required, also a dedicated interface lead to the Iconics Smart Link radio interface.

- TCP and UDP protocols.
- Packet size 68kb per minute on standby.
- Screen shots of the solution or pictures, if it is a hardware-based solution

No specific OS is required, and Iconics is a very light application so no particular computer specification is required for operation

6.2 Typical configuration



7 Step by step setup

To set up your computer and BGAN or FleetBroadband terminal for Iconics:

- Iconics requires a gateway to the BGAN server.
- Dedicated ports on the BGAN terminal and any routers will need to be open. These ports are 10026 & 10027
- The Smart-link system is designed to automatically connect to the server once the system is booted up. You must make sure that an PDP context is open on the BGAN for the system to log in.

7.1 Setting up using the Hughes 9201

Ionics uses the Automatic Context Activation (ACA) feature of the HNS 9201/9250 to activate a PDP context after the terminal is pointed and registered with the BGAN Network.

Ionics cannot manually configure the Hughes 9201 to establish a PDP context. To set up the Hughes 9201 to establish a PDP context automatically, simply change the Ionics IP address as follows in BGAN LaunchPad:

- a. Click on **Terminal > Automatic Connection Mode**.
- b. Uncheck **Automatically Open a Data Connection in the terminal**
- c. Click on **OK**.
- d. Click on **Terminal > Auto Start Mode**.
- e. Uncheck **Automatically register**.
- f. Click on **OK**.

For more details, see the "HNS 9201 Getting Started Guide".

Note: If you have a fixed BGAN installation, you can choose to register the terminal automatically when it receives power. To do this, in BGAN LaunchPad, click **Terminal > Auto-Start Mode**. Choose to automatically register by checking the appropriate box. Click on **OK**

- g. Once you have pointed the terminal, press and hold the audio button for 5 seconds to register the terminal. You should have the Smart-Link plugged in at this time.
- h. It is recommended that the Ionics unit is set to a static IP address between **192.168.128.201** to **192.168.128.209**. Once the Ionics is ready to connect BGAN IP network, it will automatically open a background IP data connection. You should use LAN1 interface on the smart-link.

The data connection is established when the first (right most) signal strength light goes solid Green.

7.2 Setting up using the EXPLORER 300/500/700

The 32 kbps Streaming service should be initiated from the BGAN terminal, and can be configured from either the EXPLORER's built-in web server (via a laptop's web browser), or using the LCD interface on the terminal.

Note: Although the solution will work on the Standard IP connection type, there is no quality guarantee, so Inmarsat recommends that you utilise the 32Kbps Streaming connection.

The screenshot below shows the settings required as configured via the EXPLORER's web server interface. This is a one-time configuration, before you open a connection for the first time. You do not need to do this every time.



Please consult your EXPLORER manual for more detailed information.

Connecting to BGAN via the terminal's LCD interface

For security reasons, a Streaming IP connection needs to be started manually. This is to ensure that per minute charges do not inadvertently accrue when the EXPLORER terminal is switched on, and allows you to more carefully monitor usage and connection time. The screenshot below shows you how to set up using the EXPLORER's LCD interface.

- a. To initiate a connection from the LCD interface, go to the main view of the LCD.



- b. Press the arrow down button until the **CONNECT** menu displays.



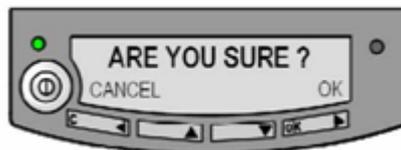
- c. Press **OK**. The following screen displays:



- d. Select **STREAMING 32**, and press **OK**. The following screen displays:



- e. Select **START** and press **OK**. The following screen displays:



- f. Press **OK** to confirm the Streaming connection, and wait a minute or two to allow the EXPLORER to register the Packet Switched connection with the BGAN system. After registration the LCD main screen will show **DATA ACTIVE**, as shown below:



7.3 Setting up using the EXPLORER 110 (formerly Nera WorldPro 1010)

The 32 kbps Streaming service should be initiated from the BGAN terminal, and needs to be configured from the EXPLORER 110's built-in web server (via a computer's web browser).

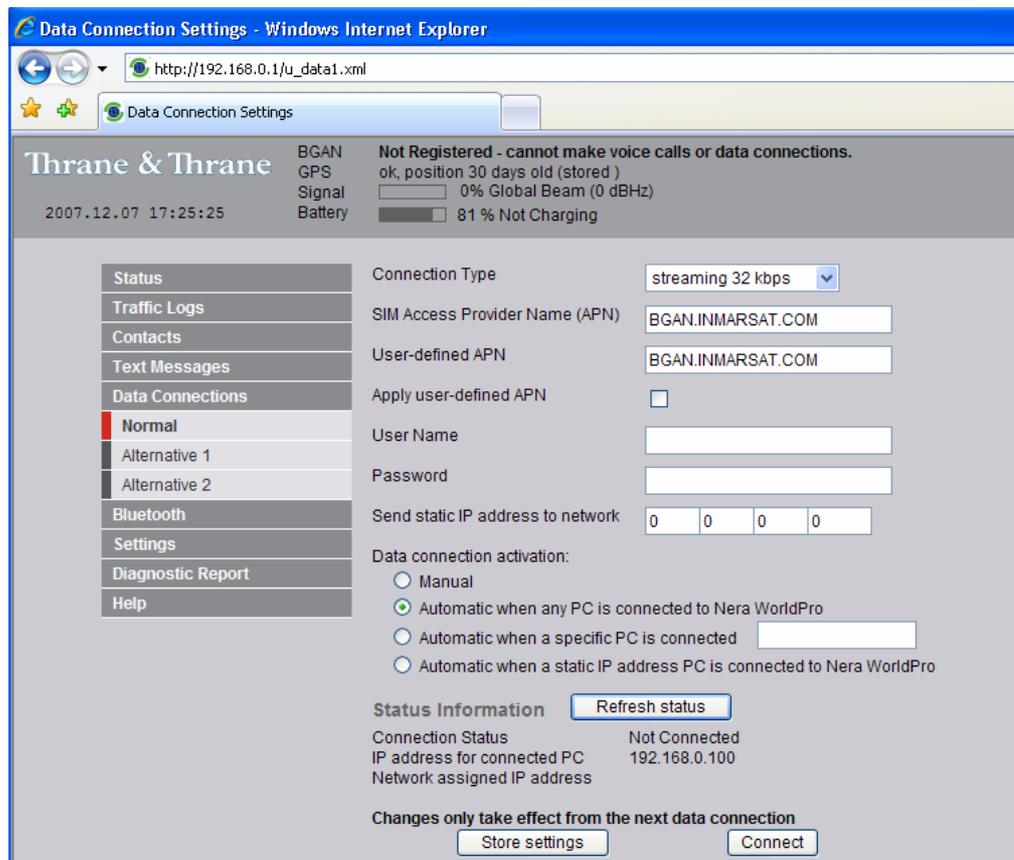
Note: Although the solution will work on Standard IP, there is no quality guarantee, so Inmarsat recommends that you utilise the 32kbps Streaming connection.

Steps a to e below are a one-time configuration, before you open a connection for the first time. You do not need to do this every time.

- a. Open your internet web browser and type the following IP address in the address bar:
192.168.0.1



- b. Now you should see the web server interface. On the left hand navigation select **Data connections**.
- c. Change the connection type by clicking the dropdown box and selecting **Streaming 32 kbps**.
- d. Make sure **Data Connection Activation** is set to **Automatic when any PC is connected to the Nera WorldPro**.
- e. Before you exit the web interface make sure you click **Store Settings**.



Connecting to BGAN

You can connect to BGAN in two different ways - from the web server interface, or by using the terminal's front panel.

To use the front panel:

- a. Power on the terminal by pressing and holding the **ACTIVATE** button for 1.5 seconds.
- b. Obtain a GPS fix.
- c. Find the best signal.
- d. Press the **ACTIVATE** button to automatically register to the network. Wait approx. 30 seconds and you should be able to connect to the Internet. (If you have a Nera World Set, the display shows **Connected**')

7.4 Setting up using the Wideye SABRE 1

Set up the terminal as follows.

- a. Connect the SABRE I to your PC.
- b. Open LaunchPad, and select **Terminal > Ethernet Configuration**.
- c. Change the mode of operation to **Router Mode**.
- d. Click on **Apply**. The terminal will reboot.
- e. After reboot, plug into LAN1 on the Smart-Link.
- f. Using the **Enter** button on the terminal, register the terminal after pointing it.
- g. Once registered the terminal will activate a data connection.

Note: Steps a - d are a one time configuration and do not need to be done everytime.

7.5 Setting up using FleetBroadband terminals

Contact your Distribution Partner for details on setting up Iconics over your FleetBroadband terminal.

8 Hints and tips

- Audio quality on Laptop/Computers for Smart Client operation should be set to Direct sound.
- Use Iconics dedicated echo test channel to check your voice quality is correct prior to going live.

9 Further details and support

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