

# BGAN from Stratos

Application Note

## Frontline Communicator



Private Communications

Revision: Dec-11  
AuthID:SE.AH

**Purpose** This document describes the configuration/installation and basic use of the Frontline Communicator solution from AudiSoft over the Class One BGAN terminals.

**Summary** The Frontline Communicator is a wireless, compact, ergonomic and lightweight video-communication system.



**Description** Specifically developed for remote support and distance training, this system provides maximum mobility. With the Frontline Communicator, you can have a discussion with another person from a distance and transmit video images of what you are seeing. The Frontline Communicator can be used in multiple sectors.

- Provides full audiovisual conversation
- Is able to transmit video images in real-time
- Connect specialized cameras (composite or S-video) and send video images
- Record video clips and still images
- Obtain and gather data with other peripherals or specialized software
- Get rapid access to experts
- Reduce downtime
- Improve your employee's productivity
- Allow quick reactions/decisions in case of emergencies
- Share quality information in real-time
- Enhance your customer service
- Reduce travelling and accommodation costs

### System Requirements

Class 1 BGAN terminal with Wi-Fi capabilities. The Thrane E700 or the Hughes 9201 can be used.

### Configuration Settings

The Stratos sim card will need to be provisioned with a User Profile that has a Public Static IP Address assigned to it.

User Profile Details

Details for User Profile andrew

Access Type: Public IP Access

User Name: abcdefg

Password: abcdefg

Description: User Profiles using Public IP Access get one public IP address. Static or Dynamic, that will work globally.

Update by End-user Allowed:

Customer ID: 5

SIM Card: 9011

Default:

Maximum Streaming Speed Allowed: Streaming Symmetrical 384+ (BGAN only)

Billing Profile: 5 BGAN

Trench Rules: Open

Subscription: UP\_01

Current Sessions: 2

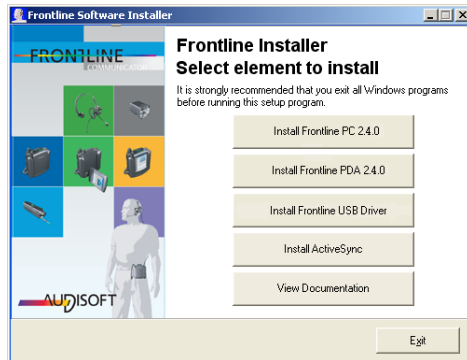
Accept SIM cards: Accept any SIM card

Area	Address Type	Home POP	IP Address
Global	Static	New York	216.86.10.124

Actions: OK Finish

## Install Frontline PC Client:

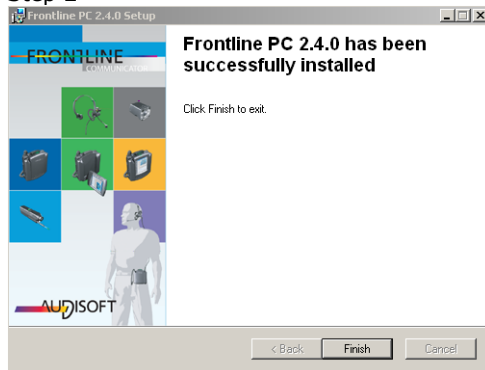
Below are the set up steps required to install the Frontline PC client software. Click on the radio button "Install Frontline PC 2.4.0" and follow the Install wizard. Check the AudiSoft website [www.audisoft.net](http://www.audisoft.net) for the latest version of software.



### Step 1

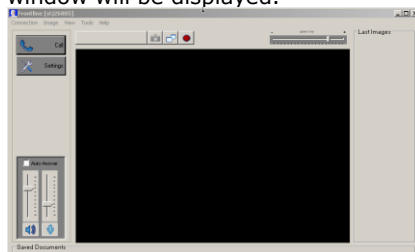


### Step 2

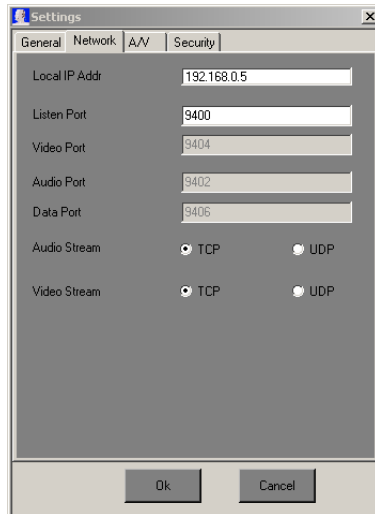


### Step 3

After you click on "Finish" the Frontline Application window will open and the below application window will be displayed.



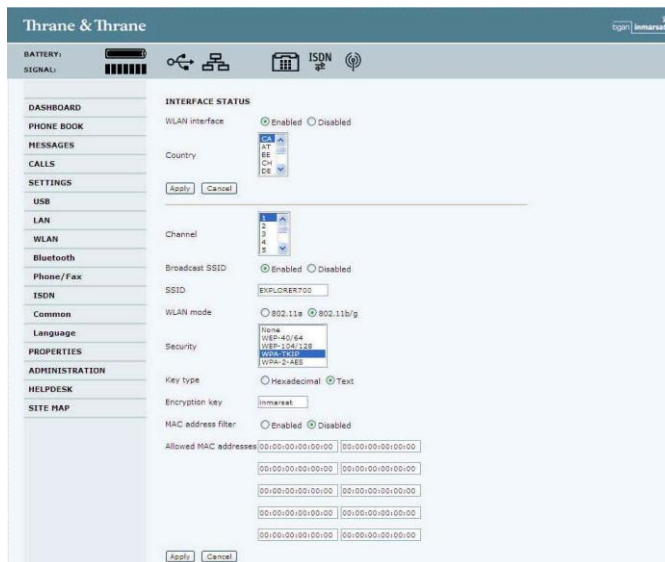
Click on "Menu" > "Settings" > "Network" tab to display and view the port settings options that will be required to configure the port forwarding on the Thrane E700 terminal.



### Configuring the Thrane E700:

The first step is to verify that the Thrane E700 terminal is configured as a Wi-Fi access point. This is not the default configuration of the terminal out of the box. To gain access to the menus of the Thrane E700 web MMI by typing the IP address of the terminal into the URL 192.168.0.1. The main Thrane DashBoard page will open and you must navigate to the WLAN configuration page. "Settings" > "WLAN", enable the WLAN interface and chose an encryption type and configure it per your network policy. We used a WEP encryption protocol for our security in this example.

**NOTE:** Stratos recommends that a password be used with the Wi-Fi Access Point.



**Wi-Fi enabled**

The application note was tested using the Thrane E700. The terminal was configured in Router mode. A Streaming contexts of 128Kbps and 256Kbps were configured and used. See the Screen capture below.



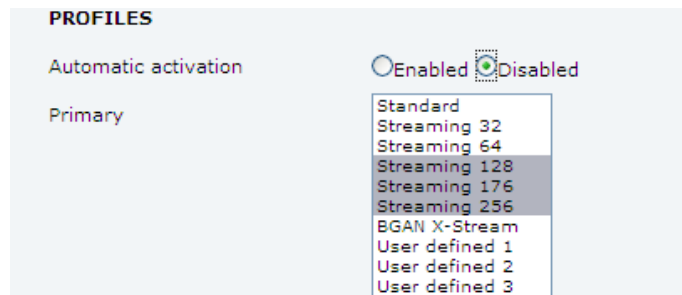
**Router Mode**

The Thrane E700 will also require that the Port Forwarding feature is configured to allow the traffic to be forwarded at the terminal. Once typing the Thrane MMI IP address 192.168.0.1 into the URL, navigate to the "Settings" > "LAN" > "Port Forwarding" menu and add the port address of the Frontline Communicator. As seen below.

<b>LAN</b>	<input checked="" type="checkbox"/>	9400 - 9400	192.168.0.100	9400 - 9400
Port forwarding	<input checked="" type="checkbox"/>	9402 - 9402	192.168.0.100	9402 - 9402
PPPoE	<input checked="" type="checkbox"/>	9404 - 9404	192.168.0.100	9404 - 9404

**Port Forwarding**

In order to switch between the QOS services you can also follow the steps using the Thrane E700 display feature on the terminal. "Settings" > "LAN" and hold down the Shift key and select the QOS services that will be used with the Frontline Communicator. These three selection will be seen on the option at the bottom of the main Thrane Dashboard page. As seen below.

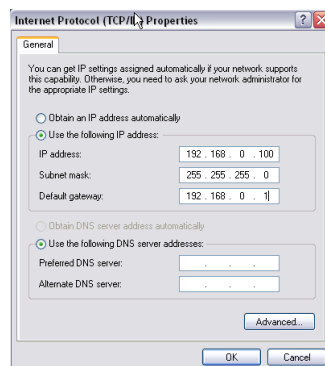


You can also connect to a QOS service through the display on the E700.



Additional configuration that was setup in the handheld device:

- Under "General" settings the "Automatically start Frontline" and "Auto reconnect" were selected.
- Under "Network" the "Profile" was configured to "Manually" connection.
- "Audio Stream" and "Video Stream" were set to "UDP".
- "Max bandwidth" should be set to appropriate desired maximum bandwidth. This depends on how much bandwidth is available on the satellite link, how good a quality is needed by the user.  
**NOTE:** QOS services are charged by the minute and Background services are charged on data volume.
- On a 256K Streaming service the maximum bandwidth was set to 250kbps.
- In "Control Panel" > "Network and Dial-up Connections" the Wi-Fi IP addressing was set to: Static IP address: 192.168.0.100, Subnet Mask: 255.255.255.0, Default Gateway: 192.168.0.1.



- Go to the pc's Wi-Fi settings and connect to the E700 Wi-Fi access point. When the Frontline Communicator tries to connect the very first time to the E700 then a Wireless Properties window will appear. In this window select "Encryption" to "WEP" or the defined parameter and then enter the network encryption key as defined in the E700 Wi-Fi settings. Press OK and the Frontline Communicator will now connect to the E700.

## Hughes 9201 Terminal

The first step is to verify that the Hughes 9201 terminal is configured as a Wi-Fi access point. This is not the default configuration of the terminal out of the box. To gain access to the means of the Hughes 9201 web MMI by typing the IP address of the terminal into the URL 192.168.128.100. The main Hughes 9201 Properties page will open and you must navigate to the WLAN configuration page. Enable the WLAN interface and chose an encryption type and configure it per your network policy. We used a WEP encryption protocol for our security in this example.

### Hughes Properties page

**Hughes Control Pad - Properties**

C/N0

BEAM

BATT

MAINS

- PROPERTIES
- SETUP
- STATISTICS
- PDP CONTEXTS
- WLAN
- WEP SECURITY
- ACA
- ISDN
- SMS
- M2M
- FEATURES

Registration Status: Registered with Home network.  
 PS Attach Status: Attached, Services available.  
 CS Attach Status: Attached, Services available.

[Register with Network](#)

Fix Quality: 3D  
 Last Update: 11/10/05, 18:04:08  
 GPS Position: Latitude: 26.11  
 Longitude: -80.26

Emergency Call Numbers: **000:008:112:110:118:119:911:999**

Software Version: 3.8.0.6  
 Alarms: None

Satellite Modem IMEI: 351785-00-007872-6  
 Satellite Modem IMSI: 901112112117957  
 USIM PIN Status: READY  
 USIM APN Name: XANTIC.BGAN.INMARSAT.COM

MS-ISDN 1: Unavailable  
 MS-ISDN 2: Unavailable  
 MS-ISDN 3: Unavailable  
 MS-ISDN 4: Unavailable

[Extract System Log](#)

[Restore Factory Defaults](#)

### WLAN page

**Hughes Control Pad - Wireless LAN**

C/N0

BEAM

BATT

MAINS

- PROPERTIES
- SETUP
- STATISTICS
- PDP CONTEXTS
- WLAN
- WEP SECURITY
- ACA
- ISDN
- SMS
- M2M
- FEATURES

WLAN Power:

SSID:

Region:

Channel:

WEP Security: Enabled (64-bit)  
[Edit WLAN Security Settings](#)

[Apply](#) [Cancel](#)

**NOTE:** Stratos recommends that a password be used with the Wi-Fi Access Point.

### PDP Context Page

**Hughes Control Pad - Connection Control**

C/N0

BEAM

BATT

MAINS

- PROPERTIES
- SETUP
- STATISTICS
- PDP CONTEXTS
- WLAN
- WEP SECURITY
- ACA
- ISDN
- SMS
- M2M
- FEATURES

ID	Local IP Address	APN	Global IP Address	QoS	DNS1	DNS2		
1	192.168.128.101	XANTIC.BGAN.INMARSAT.COM	10.166.105.221	Background	212.165.65.67	212.165.65.70	<a href="#">Deactivate</a>	<a href="#">Clear</a>
2							<a href="#">Activate</a>	<a href="#">Clear</a>
3							<a href="#">Activate</a>	<a href="#">Clear</a>
4							<a href="#">Activate</a>	<a href="#">Clear</a>
5							<a href="#">Activate</a>	<a href="#">Clear</a>
6							<a href="#">Activate</a>	<a href="#">Clear</a>
7							<a href="#">Activate</a>	<a href="#">Clear</a>
8							<a href="#">Activate</a>	<a href="#">Clear</a>
9							<a href="#">Activate</a>	<a href="#">Clear</a>
10							<a href="#">Activate</a>	<a href="#">Clear</a>
11							<a href="#">Activate</a>	<a href="#">Clear</a>

CID:

Local IP:

QoS:

APN Name:

Username:

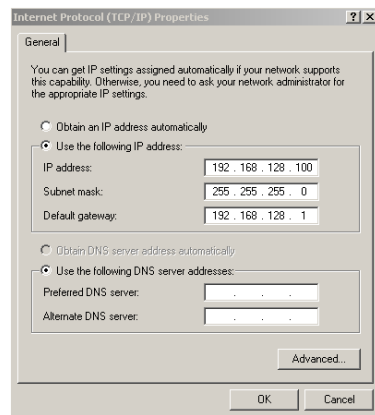
Password:

Operation Successful

[Create Context](#)

Additional configuration that was setup in the handheld device:

- Under "General" settings the "Automatically start Frontline" and "Auto reconnect" were selected.
- Under "Network" the "Profile" was configured to "Manually" connection.
- "Audio Stream" and "Video Stream" were set to "UDP".
- "Max bandwidth" should be set to appropriate desired maximum bandwidth. This depends on how much bandwidth is available on the satellite link and how good the video quality is required by the user.  
**NOTE:** QOS services are charged by the minute and Background service are charged on data volume.
- On a 256K Streaming service the maximum bandwidth was set to 250kbps.
- In "Control Panel" > "Network and Dial-up Connections" the Wi-Fi IP addressing was set to: Static IP address: 192.168.128.100, Subnet Mask: 255.255.255.0, Default Gateway: 192.168.128.1.



- Go to the pc's Wi-Fi settings and connect to the Hughes 9201 Wi-Fi access point. When the Frontline Communicator tries to connect the very first time to the Hughes 9201 then a Wireless Properties window will appear. In this window select "Encryption" to "WEP" or the defined parameter and then enter the network encryption key as defined in the Hughes 9201's Wi-Fi settings. Press OK and the Frontline Communicator will now connect to the Hughes 9201.

## Technical Summary

The Frontline Communicator was tested using the Hughes 9201 and the Thrane E700 using the built-in Wi-Fi access points.

## Tested

Product	Result	Comments
Hughes 9201	Successful	Easy
Thrane E700	Successful	Port forwarding configured

## Vendor Contact Details

Support: <http://www.audisoft.net>  
Sales: <http://www.audisoft.net>  
Web site: <http://www.audisoft.net>

## Stratos Contact Details

Web site: <http://www.stratosglobal.com>