

COBHAM

EXPLORER 510

Getting started



Getting started

EXPLORER 510 is the smallest EXPLORER BGAN terminal ever and is the perfect choice when you are working off the beaten track and you are depending on a reliable connection.

The EXPLORER 510 meets the need for mobile access to office resources, providing simultaneous high quality **voice** and **broadband access** at speeds up to 464 kbps.

WLAN is the primary interface for connecting your user equipment.

Before you start, check that the following items are present:

- EXPLORER 510 (TT-3711A)
- AC/DC adapter
- Softbag
- Getting started (this guide)



Install the EXPLORER Connect app (smartphone users)

If you want to use your smartphone with the EXPLORER 510, install the **EXPLORER Connect** app, which is available for iOS at the Apple Store and for Android phones at Google Play.

The EXPLORER Connect app provides:

- A built-in SIP client, enabling you to make calls through the EXPLORER 510
- Access to all settings of the EXPLORER 510

When you start the EXPLORER Connect app, you get the following options:

Tile	Function
Satellite Phone	Use your phone as a satellite phone when connected to the EXPLORER 510
Terminal Access	Start and stop your data connections and access all settings of the EXPLORER 510
Pointing	Activate the pointing process towards the BGAN satellite
Dashboard	Status information



Insert the SIM card for BGAN

The location of the SIM slot is indicated in the picture.

1. Loosen the two screws holding the SIM cover.
2. Lift the cover.
3. Insert the SIM card in the SIM slot with the chip side facing down as shown.
4. Press gently until it clicks.
5. Close the cover and tighten the two screws carefully.
This is important in order to maintain the IP grade of the EXPLORER 510.



Switch on the EXPLORER 510

The EXPLORER 510 has an internal battery, which is recharged when external DC power is connected to the DC input.

To switch on the EXPLORER 510:

1. Push and hold the power button for 2 seconds until the **Status** LED flashes rapidly green.
2. When the **Status** LED flashes slowly (power on) or is constant green (power on with DC input), the EXPLORER 510 is ready for use.

NOTE: If you hear a sound from the EXPLORER 510 at this point, it is in pointing mode. See *Point the antenna (BGAN)* on page 5.

To switch off, hold the power button for 2 seconds until the **Status** LED flashes rapidly yellow (closing down).



Connect to WLAN



WLAN is the primary interface to the EXPLORER 510. To connect your user equipment, do as follows:

1. Check that the WLAN LED is on (green or yellow), meaning that WLAN is ready in your EXPLORER 510.
2. Place your WLAN-enabled device (computer, tablet or smartphone) close to the EXPLORER 510, but **not** in front of the BGAN antenna.
3. On your device, search for available WLAN networks.
4. Select the EXPLORER 510 WLAN access point when it appears in your list of available wireless networks.

The default name is **EXPLORER510**.



NOTE: You may have to enter a password. By default the password is the **serial number** of your EXPLORER 510 and the encoding type is **WPA2-AES**. The serial number is found on the label at the back of the EXPLORER 510.

Your device is now connected to the EXPLORER 510. When the EXPLORER 510 is registered on the BGAN or cellular network, the connection to the Internet is established automatically.

Calls: If you want to use WLAN to make calls over the BGAN network, you must have the EXPLORER Connect app or another SIP client installed on your smartphone. See *Connect a phone to WLAN for making calls* on page 8.



Optional: Set up cellular network for data

The EXPLORER 510 is a BGAN terminal by default. However, if you are within coverage of a cellular network, you may want to acquire an EXPLORER Cellular Modem and use that as an alternative to the BGAN network. Note that you need a separate SIM card for the cellular network, the EXPLORER 510 SIM card can only be used for the BGAN network.

NOTE: The EXPLORER 510 does not provide automatic switch-over between BGAN and cellular network, so you have to select the network you want to use.

To enable the EXPLORER 510 to use the cellular network, do as follows:

1. Acquire an EXPLORER Cellular Modem from Cobham SATCOM (optional accessory).
2. Insert your SIM card for cellular network into the EXPLORER Cellular Modem and plug the cellular modem into the USB connector on the EXPLORER 510.
3. Connect your computer, smartphone or tablet to the EXPLORER 510, e.g. using WLAN, see *Connect to WLAN* on page 3.
4. Start the **EXPLORER Connect** app and select **Terminal Access**¹.
5. Select  from the top of the page. If the EXPLORER Cellular Modem is connected, you can now select either BGAN or Cellular modem.
6. Select **EXPLORER Cellular Modem**.
NOTE: You may have to enter a PIN before you can use the cellular network, see the next section.

You can now access the Internet through the cellular network from a device connected to the EXPLORER 510. Note that you cannot make calls over this connection, and you cannot use the BGAN network as long as Cellular modem is selected.

Point the antenna (BGAN)



To obtain optimum bandwidth and operating time, adjust the position of the EXPLORER 510 to maximum signal strength.

Do as follows:

1. Find the approximate direction of the satellite.
See *Satellite coverage* on page 13 for a map with the location of the satellites.
2. Use the pointing sound to find the highest possible signal strength, while slowly rotating and tilting the EXPLORER 510 in the direction of the satellite.
If you need to see signal strength, you can connect your smartphone, start the EXPLORER Connect app¹ and select **Pointing** to follow the pointing process on screen.
3. Push the power button briefly or select **OK** in the EXPLORER Connect app to accept when you have obtained the highest possible signal strength.

The EXPLORER 510 now starts to establish a connection to the BGAN network.

NOTE: You must start your data connection manually before you can use it. See *Connect to the Internet* on page 7.

When you are not using your data connection, stop the connection or disconnect your device to avoid being charged for any unwanted transmission.

To restart the pointing process, select **Pointing** from your EXPLORER Connect app.



1. Or access the web interface, see *Access the EXPLORER 510 web interface* on page 6.



Enter the PIN for your network (if required)

This step is only needed if the SIM card for your EXPLORER 510 or your cellular modem requires a PIN and you want to communicate on the BGAN or cellular network.

To enter the PIN do as follows:

1. Connect your smartphone to the EXPLORER 510. See *Connect to WLAN* on page 3.
2. Start the **EXPLORER Connect** app on your smartphone and select **Terminal Access**.¹
3. If a PIN is required, you are now prompted for the PIN.
4. Type in the PIN and click **OK**.

If you do not enter a PIN code now, you can enter it later from the alarm list. Click  at the top of the page to access the list.



Access the EXPLORER 510 web interface

If you are not using the EXPLORER Connect app, you can access the EXPLORER 510 using the web interface. The web interface is used for configuration and daily use of the EXPLORER 510. To access the web interface, do as follows:

1. Connect a PC, tablet or smartphone to the EXPLORER 510, e.g. with WLAN.
2. Start your Internet browser.
3. Enter the local IP address of the EXPLORER 510 (default **192.168.0.1**) in the address bar.



The web interface now opens in your browser. For information on how to use the web interface, click  on the screen to access the user manual.

NOTE: To change the language of the web interface, click , select **Terminal settings** and select your language from the **Language** list.

1. Or access the web interface, see *Access the EXPLORER 510 web interface* on page 6.



Connect to the Internet

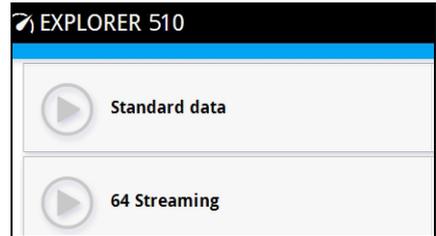
By default, you must manually start data connections from the EXPLORER Connect app or the web interface.

With a Standard data connection you can browse the Internet, send e-mail etc. With a Streaming connection you get an exclusive, high-priority connection for time critical applications such as live video over IP.

Start a data connection

To start a data connection do as follows:

1. From the EXPLORER Connect app select **Terminal Access** (or start the web interface).
2. Locate the connection you want to start.
3. Click  to start the connection. 
4. Click  to stop the connection.



NOTE: Under **Terminal Access** or in the web interface you can configure your selectable data connections and whether or not you want automatic activation of your data connection.



Connect a phone to WLAN for making calls

Your smartphone can be set up to make and receive calls over the BGAN network, using the phone number of the EXPLORER 510.

If you have the EXPLORER Connect app on your smartphone, no initial setup is necessary and you can connect as described in the next section.

To connect your smartphone for making calls

To use your phone to make calls through the EXPLORER 510 using WLAN, do as follows:

1. Start up the EXPLORER 510.
2. Connect your smartphone to the wireless access point of the EXPLORER 510.
See *Connect to WLAN* on page 3.
3. Start the EXPLORER Connect app and select **Satellite Phone** (or start another SIP application).

NOTE: The first time you use the EXPLORER Connect app with your EXPLORER 510 you must select **Register** to register the phone with the EXPLORER 510.

You should now be ready to make and receive calls over BGAN.



If you do not have the EXPLORER Connect app, you must first set up your phone as described in the next section.

First time setup

If you have the EXPLORER Connect App you can skip this section.

NOTE: Make sure your phone has an integrated SIP client. If you do not have a SIP client, you can find SIP applications available for download on the Internet.

The first time you connect your phone to the EXPLORER 510 for making calls, you must set up the SIP server details in your smartphone. For information how, see the user documentation for your smartphone and for the SIP application. You may be asked to enter some of the following details:

- | | |
|-------------------------------|--|
| • SIP server address and port | Default address: 192.168.0.1 , Port: 5060 |
| • User name | Local no. in EXPLORER 510 (0501 to 0516) |
| • Password | Default same as user name |
| • Codec priority | Highest priority codec type: G.711 |

The user name and password must match the IP handset settings in the EXPLORER 510. You can configure these settings in the web interface by selecting  and then **IP handsets**.

Make a voice call



Call from the EXPLORER 510

To make a call from a phone connected to the EXPLORER 510:

dial **00 <country code> <phone number>**

Example: To call Cobham SATCOM in Denmark: (+45 39558800):

dial **00 45 39558800**

NOTE: There are two audio qualities: Standard voice and Premium voice. By default, the Standard voice quality is used. To force the call to use Standard voice, dial 1* before the number. To force the call to use Premium voice, dial 2* before the number.

Example: To force the call to Premium voice in the example above:

dial **2*00 45 39558800**

Call to the EXPLORER 510

To make a call to an EXPLORER 510:

dial **+<mobile number>**

(+ is the prefix to call out of the country you are located in).

NOTE: There are two voice numbers, one for Premium voice and one for Standard voice.

You can find the voice numbers for your EXPLORER 510 in your airtime subscription. The numbers are listed as **MS-ISDN** (Standard voice) and **AMS-ISDN** (Premium voice).



Light indicators

The EXPLORER 510 has two LEDs placed on the side of the terminal, one marked **Status** and one marked **WLAN**. The tables below explain the meaning of each light pattern.



Status LED

Indicator pattern		Meaning
	Green flashing rapidly	Starting up
	Green flashing slowly	Power on (ready)
	Green constant	Power on with DC input
	Yellow flashing slowly	Battery charging
	Yellow flashing rapidly	Closing down
	Yellow constant	Warning. See the web interface.
	Red constant	Error. See the web interface.
	Blue flashing	Uploading software to the EXPLORER 510
	Off	Power off

WLAN LED

Indicator pattern		Meaning
	Green flashing	Rx/Tx traffic
	Green flashing slowly	In use - has WLAN registration(s)
	Green constant	Ready - customized configuration
	Yellow constant	Ready - factory default configuration
	Off	Not active – power off / starting up / closing down

Restore the settings of the EXPLORER 510



The EXPLORER 510 has a restore button that has two functions: To restore all settings to factory settings or to restore WLAN settings only.

Action	Function
Push and hold the Restore button for 2-10 seconds	WLAN settings are restored to default. The WLAN LED lights yellow. Default WLAN settings: <ul style="list-style-type: none">• Broadcast SSID is EXPLORER510• Encryption standard is WPA2-AES• Encryption key is the serial number of the EXPLORER 510• Region is Other, i.e. the most restrictive setting
Push and hold the restore button for > 10 seconds	The EXPLORER 510 restores factory settings and reboots the system. All changes to the configuration are lost.

The restore button is located inside the small hole next to the SIM slot.



Restore button

Do as follows:

1. Loosen the two screws holding the SIM cover.
2. Lift the cover.
3. Use a pointed device to push the restore button.
4. Close the cover and tighten the two screws carefully.
This is important in order to maintain the IP grade of the EXPLORER 510.



Provide power

Battery

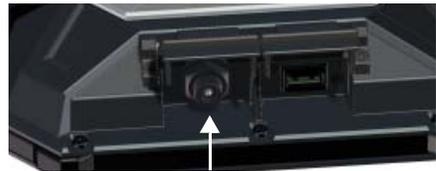
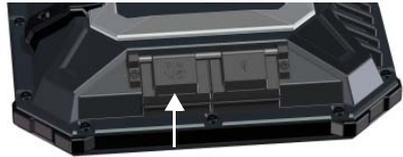
The EXPLORER 510 has an internal battery, which is recharged when external DC power is connected to the DC input.

Note: The charging temperature range in Japan is 10 to 45°C due to legal requirements. The charging temperature in all other countries is 0 to 45°C.

External power

To power the EXPLORER 510 or to charge the battery, lift the cover for the **DC In** connector and connect one of the following external power sources to the DC input:

- 10-32 VDC
- The supplied AC/DC adapter connected to 100-240 V Mains.
- A solar panel (min. 65 W, 10-32 VDC)



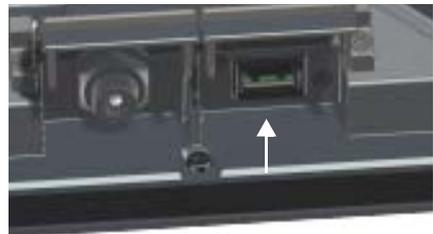
Connect user equipment

WLAN: The EXPLORER 510 is designed to connect to user equipment primarily through WLAN (see *Connect to WLAN* on page 3).



USB: Use the USB interface in the EXPLORER 510 to:

- Connect an EXPLORER Cellular Modem as an alternative to the BGAN satellite network.
- Upload software from a USB memory stick.
- Charge your smartphone (power class 0.5 A and 1.0 A)



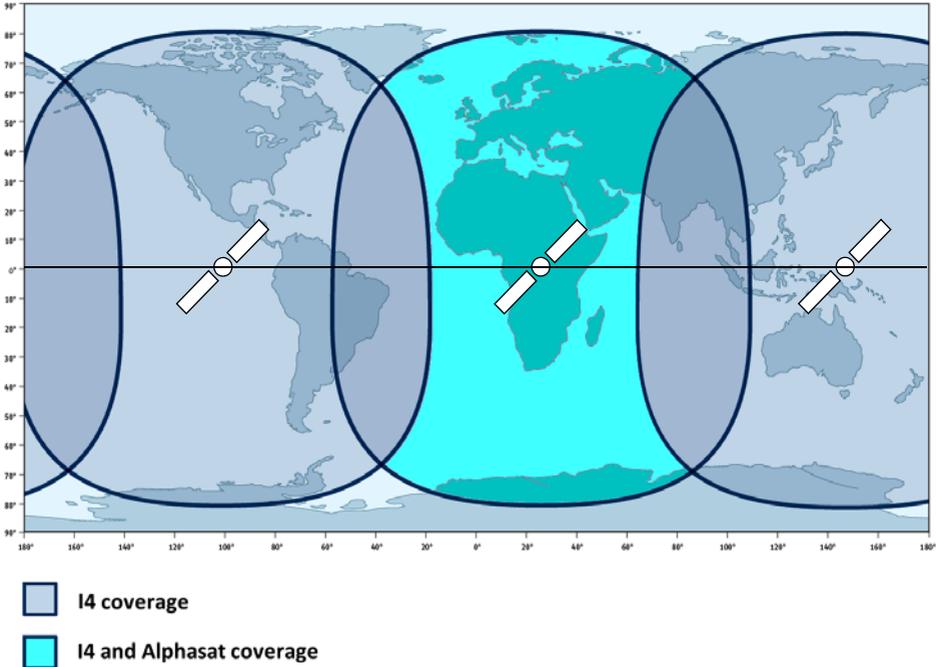
USB connector

Satellite coverage



Before pointing the antenna you can use the coverage map below to find your approximate location in relation to the satellites.

The Inmarsat satellites are positioned above the equator, at the center of each “footprint”.



Disclaimer

Any responsibility or liability for loss or damage in connection with the use of this product and the accompanying documentation is disclaimed by Thrane & Thrane A/S. The information in this manual is provided for information purposes only, is subject to change without notice and may contain errors or inaccuracies. Manuals issued by Thrane & Thrane A/S are periodically revised and updated. Anyone relying on this information should acquire the most current version e.g. from www.cobham.com/satcom > Service and support, or from the distributor. Thrane & Thrane A/S is not responsible for the content or accuracy of any translations or reproductions, in whole or in part, of this manual from any other source. In the event of any discrepancies, the English version shall be the governing text.

Thrane & Thrane A/S is trading as Cobham SATCOM.

