

ACCREDITED SOLUTION

EXPLORER[®] 300 – CPN Enclosure



Document Name: EXPLORER 300 - CPN Enclosure

Revision: F

Introduction: This document describes step-by-step how to mount the enclosure from CPN Satellite Services GmbH and how to install and configure the EXPLORER 300 terminal.

Typical Applications:

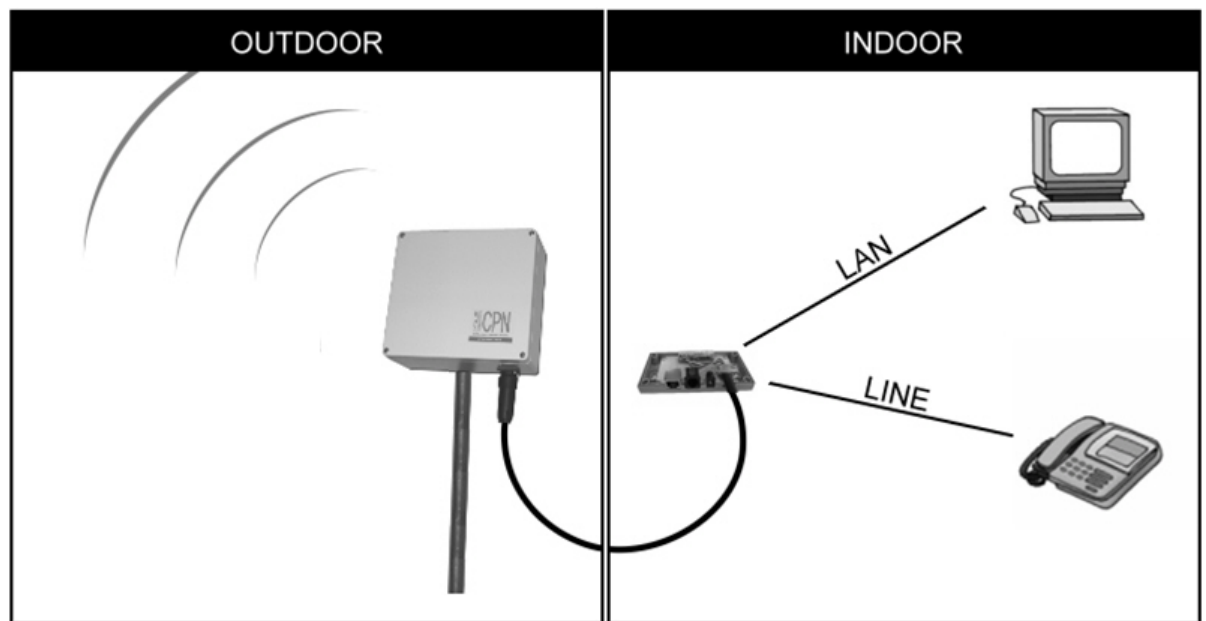
- ▶ Data Acquisition / M2M
- ▶ Disaster Relief
- ▶ Remote work sites
- ▶ or any other fixed or semi fixed outdoor installation

Product Description: The enclosure is a non-metallic enclosure that is specifically designed to accommodate the EXPLORER 300 terminal.

When mounted inside the Ingress Protection 67 enclosure the EXPLORER 300 terminal can be installed outdoors permanently in any weather condition.

The enclosure and the EXPLORER 300 terminal is the ideal solution for instance as a satellite back-up, emergency system or for transferring data or video from a remote site. The enclosure can be installed up to 75 m away from your wired/wireless router, switch, computers, surveillance camera, PABX and phone etc.

The Breakout box offers a DC input, a Phone interface (RJ-11) and LAN interface. With the EXPLORER 300 wireless voice and data connections will be available in a range of up to 25 m (82 ft) away from the enclosure.



Features and specifications:

- ▶ IP67 (6 = Totally protected from dust, 7 = Immersion between 15cm & 1m)
- ▶ Overall size of enclosure (H x W x D): 250 x 250 x 125 mm (9.8 x 9.8 x 4.9 in)
- ▶ Complete and pre-assembled enclosure, no cutting or drilling necessary
- ▶ No degradation of throughput or GPS time-to-fix
- ▶ Breakout box with Ethernet (RJ-45), 2-wire Phone (RJ-11) and DC input
- ▶ Pole mount kit with adjustable elevation angle included for easy installation
- ▶ Single cable between enclosure and breakout box, available in lengths of 10 m (32 ft), 25 m (82 ft), 50 m (164 ft) and 75 m (246 ft)
- ▶ Rounded edges, minimal protrusions or exposed pocket areas for accumulation of dust or debris
- ▶ Color of enclosure: White

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Tested on products:

EXPLORER 300 Software version: 2.03

Instructions:

Use the built-in compass in the EXPLORER 300 terminal and the Inmarsat BGAN coverage map found in the User Manual to get a rough indication of the direction of the satellite before choosing where to mount the enclosure.

Make sure that when the EXPLORER 300 terminal is mounted inside the enclosure the directional antenna has a clear line-of-sight to the satellite and is not blocked by objects like buildings, trees, passing cars etc. If the EXPLORER 300 terminal will be switched OFF from time to time, it will speed-up the GPS time-to-first-fix if it is placed in an open area with a clear view to the sky.

The enclosure must be located such that during transmission, no person can come closer than the minimum safe distance to the front of the antenna of 60 cm (24 inches).

Once a suitable location has been determined, switch ON the EXPLORER 300 terminal and fine adjust its position for best possible signal strength/reception. Be careful not to block the received satellite signal (does not transmit when in Pointing mode). Please refer to User Manual for further instructions. When in the right position make a note of the C/No value, shown in the EXPLORER 300 terminal display. Now adjust the enclosure accordingly to match the exact pointing direction and elevation angle of the EXPLORER 300 terminal. You may now switch OFF the EXPLORER 300 terminal.

Depending on the application you may want to remove the battery in the EXPLORER 300 terminal, so it will be possible to power the EXPLORER 300 terminal ON and OFF from the Breakout box by simply applying/removing the power.

Remove the four screws holding the front cover and the screws that hold the sub-panel. The EXPLORER 300 terminal is mounted to the sub-panel using the included M6 screw that fits into the mounting bush in the back of the EXPLORER 300 terminal. Please refer to the step-by-step guide below for mounting the EXPLORER 300 terminal in the correct position.

- Step 1:** Use the specially designed brackets to attach the CPN enclosure to a pole or railing. Tighten all four bolts equally but make sure not to tighten them too hard this might damage the aluminium brackets.

Furthermore make sure that the CPN enclosure is pointing in the direction where the best possible signal strength is obtained which is found by following the instructions above.

- Step 2:** Mount the EXPLORER 300 terminal on the aluminium sub-panel with the supplied screw.

The screw goes through the panel into the back of the EXPLORER 300 terminal. A washer should be placed between the screw and the aluminium plate.



Figure 1.



Figure 2.

Step 3: Connect the Ethernet (RJ-45) to the LAN connector on the EXPLORER 300 terminal, then the RJ-11 to the Phone port and finally the power plug to the DC input of the EXPLORER 300 terminal as shown in the picture to the right.



Figure 3.

Step 4: Mount the aluminium panel with the EXPLORER 300 terminal in the CPN enclosure with the supplied screws.

Make sure that the cables are not behind the aluminium panel when tightening the screws.



Figure 4.

Step 5: Calibrate the elevation to get the most optimal signal strength then tighten the two bolts firmly to make sure the elevation will not change in harsh weather conditions.

This is a good time to check that the EXPLORER 300 terminal is pointing in the best possible direction. The EXPLORER 300 display is still visible so it is possible to go in to pointing mode and made the final calibrations to both direction and elevation.

If installing an EXPLORER 300 then use the built-in web server to check the signal strength.

The better signal strength the EXPLORER 300 terminal has the higher data throughput it will offer and the less power it will use and thereby also generating less heat.



Figure 5a.



Figure 5b.

Step 6: Before mounting the front cover on the enclosure it may be a good idea to verify that it indicates the same C/No value as noted earlier and to make a quick test phone call on the RJ-11 (see User Manual) and connect to the built-in web server in the EXPLORER 300 terminal as explained below this step-by-step installation guide.

Secure the lid on the front to the CPN enclosure with a screw in each corner. Make sure that there are no dirt on the seal when the screws are tightened. This might break or damage the seal and thereby not granting the full protection to the EXPLORER 300 terminal.



Figure 6.

Step 7: Connect and secure the main multi-plug located on the outside of the enclosure so it is tight and thereby hindering water and dust from penetrating.

The installation of the EXPLORER 300 terminal into the CPN enclosure has now been completed.



Figure 7.

Step 8: Pull the cable from the CPN enclosure into the office or building where access to the EXPLORER 300 terminal needs to be and connect the power supply, Ethernet and RJ-11 cable to the connection box.



Figure 8.

Your EXPLORER 300 terminal is now safely located outside while you have full access to the EXPLORER 300 terminal from inside your office, or where ever you please to pull the cable with the connection box to.

To connect to the built-in web server, simply connect a computer to the Ethernet interface of the Breakout box. Switch ON the EXPLORER 300 terminal by connecting the EXPLORER 300 terminal Power Supply to the DC input of the Breakout box.

Power up your computer. Start up the Internet Explorer and type <http://192.168.0.1> to get into the built-in web server in the EXPLORER 300 terminal as shown.

The screenshot displays the Thrane & Thrane web interface. At the top, it shows the company logo and the Inmarsat logo. Below the header, there are status indicators for BATTERY and SIGNAL, along with icons for network connectivity (BT) and a terminal. The main content area is divided into several sections:

- Navigation Menu:** DASHBOARD, PHONE BOOK, MESSAGES, CALLS, SETTINGS, PROPERTIES, ADMINISTRATION, HELPDESK, SITE MAP.
- NETWORK:** Airtime provider: BETA TEST DATA.
- TERMINAL:** Status: Data active; Pointing: [Go to pointing mode](#); Unit serial number: 06434844; Software version: 2.03, build EXP_2_03F-7; Local IP address: 192.168.0.1; IMEI number: 35315000-006156-0; MAC address: 00:11:CF:00:BC:AE.
- SESSIONS TOTAL:** Standard voice inbound: 00:00:00; Standard voice outbound: 04:45:08.
- ONGOING DATA SESSIONS:** Standard data (161.30.180.7).
- ONGOING CALLS:** (No active calls).
- STREAMING PROFILES ON LAN:** [Start Streaming 32](#), [Start Streaming 64](#).

A 'Refresh' button is located at the bottom of the main content area.

Click on 'Go to pointing mode' and verify that it indicates the C/No value as expected. If the C/No is as expected click on 'Accept signal strength', if not, then make the necessary adjustments to the enclosure. As a help use the built-in audio indication for pointing of the antenna/enclosure.

Having already successfully pointed the antenna, you should configure the terminal to automatically skip pointing at power up by clicking No to 'Pointing required at power up'. This can be configured under SETTINGS. Also set the terminal to switch ON when power is applied to the Breakout box by clicking the Yes button for 'The terminal will switch on when external power is connected'. Please refer to picture on next page.

Thrane & Thrane bgan inmarsat

BATTERY: SIGNAL: **BT**

DASHBOARD

PHONE BOOK

MESSAGES

CALLS

SETTINGS

LAN

Bluetooth

Phone

Common

Language

PROPERTIES

ADMINISTRATION

HELPDESK

SITE MAP

POWER UP

Pointing required at power up Yes No

The terminal will switch on when external power is connected Yes No

BACKLIGHT

Timed

Set level

CONTRAST

Automatic Yes No

Set level

AUDIO INDICATORS

Pointing On Off

Messages On Off

Alarm On Off

STEALTH MODE

Stealth Enable Disable

Click on the Apply button to save the new settings.

Bluetooth can be disabled if not used: found under SETTINGS – INTERFACES

ATTENTION: Do not disable the LAN interface as this is the only means of re-establishing the configuration besides connecting via Bluetooth or having to open the enclosure and changing it back using the keypad.

When the installation and configuration is successfully completed, remember to mount the front cover on the enclosure.

Note:

If the instructions are followed step-by-step, then it will take approximately 15 min. to do the installation and configuration.

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