



# Thuraya ATLAS IP Satellite Terminal



Installation Manual  
Rev 1.0

### LIST OF CONTENT:

<b>REGULATORY INFORMATION</b>	<b>4</b>
<b>SAFETY INSTRUCTIONS</b>	<b>5</b>
<b>IMPORTANT INFORMATION TO INSTALLERS AND USERS</b>	<b>8</b>
<b>SYSTEM CONFIGURATION</b>	<b>9</b>
<b>1 ATLAS IP TERMINAL</b>	<b>10</b>
<b>1.1 Introduction</b>	<b>10</b>
<b>1.2 Above Deck Equipment</b>	<b>10</b>
<b>1.3 Below Deck Equipment</b>	<b>11</b>
<b>1.4 Wired Primary Handset with Cradle</b>	<b>11</b>
<b>2 INSTALLATION OF ATLAS IP TERMINAL</b>	<b>12</b>
<b>2.1 Installation of ADU</b>	<b>12</b>
2.1.1 Overview	12
2.1.2 Radiation Hazard	12
2.1.3 Interference	13
2.1.4 Obstruction	14
2.1.5 Antenna Mast	15
2.1.6 Installing ADU	16
<b>2.2 Installation of BDU</b>	<b>17</b>
<b>2.3 Installation of Primary Handset and Cradle</b>	<b>19</b>
2.3.1 Connecting Primary Handset with a Cable Holder	19
2.3.2 Overview	20
<b>3 CONNECTIONS</b>	<b>21</b>
<b>3.1 BDU's Outputs Connection</b>	<b>22</b>
3.1.1 RS-232 Serial Connector	22
3.1.2 GPIO Output Port	23
3.1.3 Grounding Stud	24
<b>4 GETTING STARTED ON THE SYSTEM</b>	<b>24</b>
<b>4.1 Installing the SIM card</b>	<b>24</b>
<b>4.2 Powering up the system</b>	<b>26</b>
4.2.1 Switching on the BDU	26
<b>4.3 Settings on Web Console</b>	<b>27</b>
4.3.1 Activating on Web Console	27
4.3.2 Data Connection Settings	28
<b>4.4 Selection of Data / CS Voice Mode</b>	<b>30</b>
<b>5 GLOSSARY</b>	<b>31</b>

**APPENDIX A OUTLINE DRAWINGS** \_\_\_\_\_ **32**

**A-1 ADU's Outline Dimensions and Weight** \_\_\_\_\_ **32**

**A-2 ADU's Hole Pattern (Cut-out Holes)** \_\_\_\_\_ **33**

**A-5 BDU's Outline Dimensions** \_\_\_\_\_ **34**

**A-4 Primary Handset's Outline Dimensions** \_\_\_\_\_ **34**

## REGULATORY INFORMATION



### Federal Communication Commission Notice

**FCC Identifier: QO4-AVIATLASIP**

#### USE CONDITIONS:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two Conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

#### NOTE:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

#### IMPORTANT NOTE: EXPOSURE TO RADIO FREQUENCY RADIATION

This Device complies with FCC radiation exposure limits set forth for an uncontrolled environment. The Antenna used for this transmitter must be installed to provide a separation distance of at least 100cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

#### FCC CAUTION:

Any Changes or modifications not expressly approved by the manufacturer could void the user's authority, which is granted by FCC, to operate this Maritime Broadband Satellite Terminal, ATLAS IP

### Declaration of Conformity:

Addvalue Innovation Pte Ltd., 8, Tai Seng Link, Level 5 (Wing 2), Singapore 534158.

declares under our sole responsibility that the Product, brand name as Thuraya and model: ATLAS IP, Maritime Broadband Satellite Terminal to which this declaration relates, is in conformity with the following standards and/or other normative documents:

ETSI EN 301 489-1, -17, -19, -20, ETSI EN 301 444, ETSI EN 300 328, EN 60945,  
IEC 60950 – 1 AND EN 60950-1,

We hereby declare that all essential radio test suite have been carried out and that the above named product is in conformity to all the essential requirements of Directive 1999/5/EC.

The Conformity Assessment procedure referred to Article 10 and detailed in Annex [III] or [IV] of Directive 1999/5/EC has been followed with involvement of the following notified body(ies):

TIMCO ENGINEERING, INC., P.O BOX 370, NEW BERRY, FLORIDA 32669.

Identification mark: 1177 (Notified Body number)

The technical documentation relevant to the above equipment are held at:

- Addvalue Innovation Pte Ltd., 8, Tai Seng Link, Level 5 (Wing 2), Singapore 534158.
- Signed by Mr. Tan Khai Pang (Chief Technology Officer, September 29, 2014) and  
Mr. Prabakar Kuttaniseeri (Manager- Quality Management, September 29, 2014).


### SAFETY INSTRUCTIONS




For the sake of safety and protection, read the manual before attempting to use Thuraya Atlas IP Terminal.

The following general safety precautions must be observed during all phases of operation, service and repair of this equipment. Failure to comply with these precautions or with specific warnings elsewhere in this user guide violates safety standards of intended use of the terminal.

Addvalue Innovation Pte Ltd assumes no liability for the customer's failure to comply with these requirements.

#### Hazard Symbols

<b>Antenna Radiation Warning and Distance to other Radiation Equipment</b>  	For safety reasons, all personnel must keep at least 2 meters from the ADU.

<p><b>Power Supply</b></p> 	<p>Turn off the power at the mains switchboard before beginning of the installation.</p> <p>Confirm the power voltage is compatible with voltage rating of the equipment. It is highly recommended to use +24V DC power line, provided that it is available on the vessel.</p> <p>In case of unavailability of +24V DC power line provided by the vessel, an external AC/DC power supply of 115/230V AC with its output of +24V DC can be used.</p> <p>Note: The requirements of the AC/DC power supply should take care of <b>high surge current of 25A at 24V DC for 1ms</b>.</p>
<p><b>Grounding, cables and connections</b></p> 	<p>The chassis of the equipment must be connected to an electrical ground. This will minimise electric shock and mutual interference. In short, the EQUIPMENT must be grounded to the vessel.</p>
<p><b>Service</b></p> 	<p>Do not attempt to access to the interior of the equipment. Only qualified personnel authorized by its manufacturer may perform service. Failure to comply with this rule will result in the warranty void.</p> <p>Under certain conditions, dangerous voltages may exist even with the power cable removed. To avoid injuries, always disconnect power before accessing the equipment.</p>

### Equipment Ventilation

To ensure adequate cooling of the terminal, 5-centimeter of unobstructed space must be maintained around all sides of the unit except the bottom side. The ambient temperature range of the transceiver is: -25°C to +55°C.

### Fire Precautions

The equipment shall not be operated in the presence of flammable gases or fumes as well as any explosive atmosphere. Operation of any electrical equipment in such an environment constitutes a definite safety hazard.

### Obtaining Licensing For Thuraya Transceivers

Under rights given under ITU Radio Regulations, local telecommunications administrations establish and enforce national rules and regulations governing types of emissions, power levels, and other parameters that affect the purity of signal, which may be radiated in the various frequency bands of the radio spectrum.

To legally operate Thuraya equipment, it is necessary to obtain permission from the local telecommunications regulatory authorities of the country you are operating from. Using your equipment in any country without permission causes you to run the risk of confiscation of the equipment by the local authorities. The normal procedure to bring such equipment into another country is to apply for a license before travel. If a license has not been obtained before travel, the equipment may be put in to storage by local authorities until such time license is obtained.

### IMPORTANT INFORMATION TO INSTALLERS AND USERS

#### General

It is important that the user of this equipment read and observe all safety requirements and operate the terminal according to the descriptions published in this manual.

Failure to comply may result in risk of injury or equipment failure and voids the validity of the warranty provided by equipment manufacturer.

The terminal consists of 2 systems, BDU and ADU and they must be used as provided by the manufacturer or authorized dealer. Do not substitute any one of the system which is not provided by the manufacturer or authorized dealer. Should needs of servicing or replacement is required, always contact the distributor or manufacturer for instructions.

Any modifications or attempts to open up the devices by not authorized personnel will void the warranty.

Contents in this manual may be subjected to change without notice, to obtain latest version, please enquire it from product manufacturer or distributor.

#### Copyright

© Copyright 2012 Addvalue Innovation Pte Ltd.

All rights reserved. This publication and its contents are proprietary to Addvalue Innovation Pte Ltd. No part of this publication may be reproduced in any form or by any means without the written permission of Addvalue Innovation Pte Ltd.

#### Warranty

Addvalue Innovation Pte Ltd has made every effort to ensure the correctness and completeness of the material in this document. Addvalue Innovation Pte Ltd shall not be liable for errors contained herein. The information in this document is subject to change without notice. Addvalue Innovation Pte Ltd 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

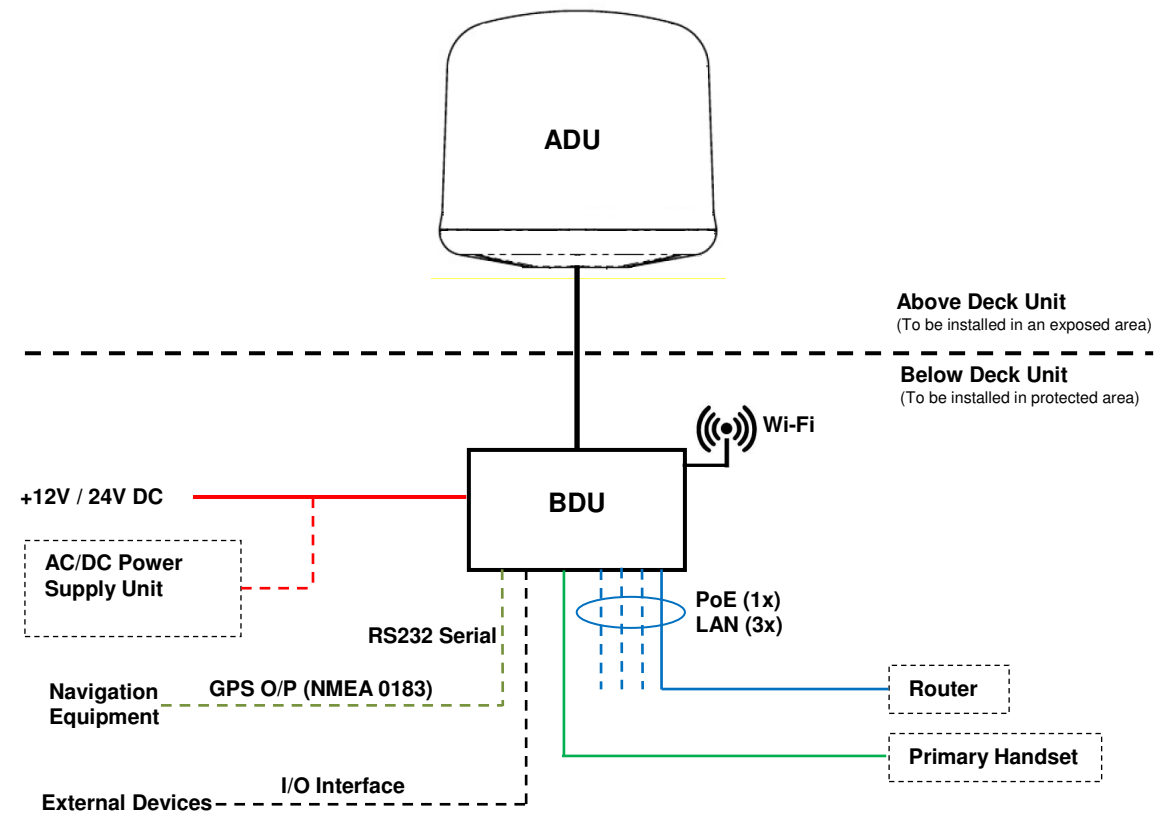
All trademarks, marks, names, or product names referenced in this publication are the property of their respective owners, and Addvalue Innovation Pte Ltd neither endorses nor otherwise sponsors any such products or services referred to herein.

Microsoft, Windows, Windows NT, Windows 2000, and Windows XP are registered trademarks of Microsoft Corporation in the U.S.A. and/or other countries.

All other company and product names may be the registered trademarks or trademarks of their respective owners.



SYSTEM CONFIGURATION



Solid line refers to the basic configuration.

# 1 ATLAS IP TERMINAL

## 1.1 Introduction

The Atlas IP terminal consists of two units;

- Below Deck Equipment (BDU) which is a communication unit
- Above Deck Equipment (ADU) which is an antenna unit

## 1.2 Above Deck Equipment

The ADU is an active tracking antenna unit.



The radome covers the antenna unit, which is comprised of

- Antenna Module
- RF and GPS Module
- Rotary Joint
- Antenna Pedestal

The antenna module includes a low noise amplifier (LNA), high power amplifier (HPA), and tracking receiver circuitry. All the signals and power pass through a single coaxial antenna cable, which connects the ADU to the BDU.

### 1.3 Below Deck Equipment

The BDU is the heart unit of the Atlas IP Terminal. It has several interface ports and handles all communication links between the ADU and the local communication devices such as analog telephone, computer, network equipment, navigation equipment etc.



The BDU is supplied by +12V or +24V DC power supply and it supplies to the ADU via a single RF / coaxial antenna cable.

### 1.4 Wired Primary Handset with Cradle

The wired Primary Handset has a colour liquid crystal display (LCD) and keypad for making and receiving normal voice calls and sending SMS, which both are similar as any mobile phone. The handset is provided with a cradle.

Additionally, it can serve as a remote access for an user to access various configuration supported by the BDU.



The Primary Handset's connector is plugged into the BDU's primary handset port. It is powered directly from the BDU.

## 2 INSTALLATION OF ATLAS IP TERMINAL

### 2.1 Installation of ADU

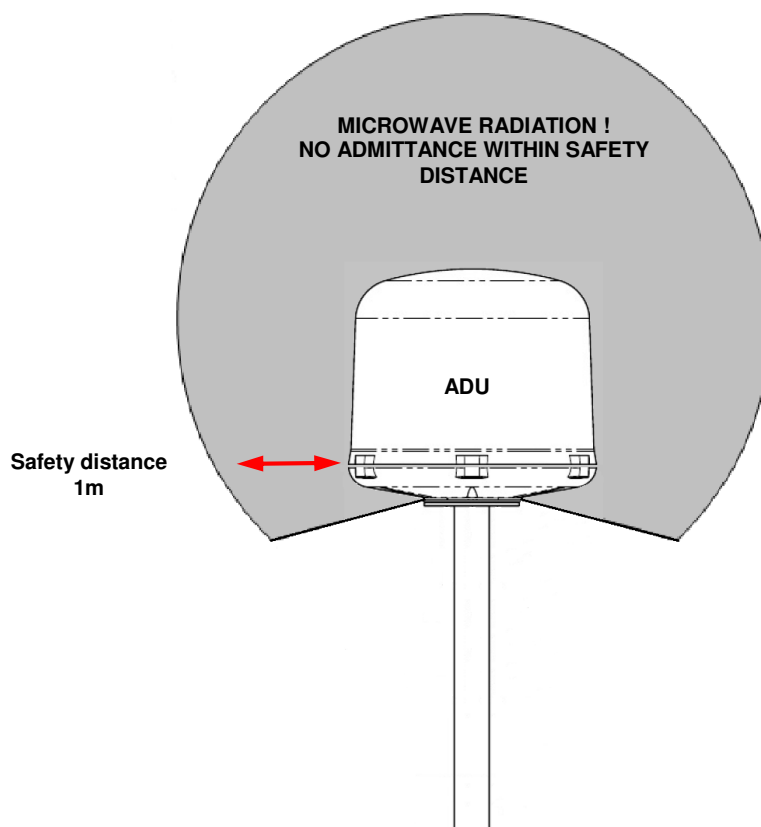
#### 2.1.1 Overview

In general, any obstructing objects like mast near the antenna unit can block reception or transmission from a satellite's line of sight. In addition, RF radiation emitting from the antenna will affect human body. When selecting a mounting location, it is important to ensure that the antenna unit shall be free of severe vibration and shock and heat and smoke from funnel. More guidelines will be detailed in the next sections.

#### 2.1.2 Radiation Hazard

Radio wave can pose hazard to human body. Safe distances are changed, subjected to country and ship construction. There is no standard formula to calculate safe distance. The below guidelines are to be noted.

#### ADU



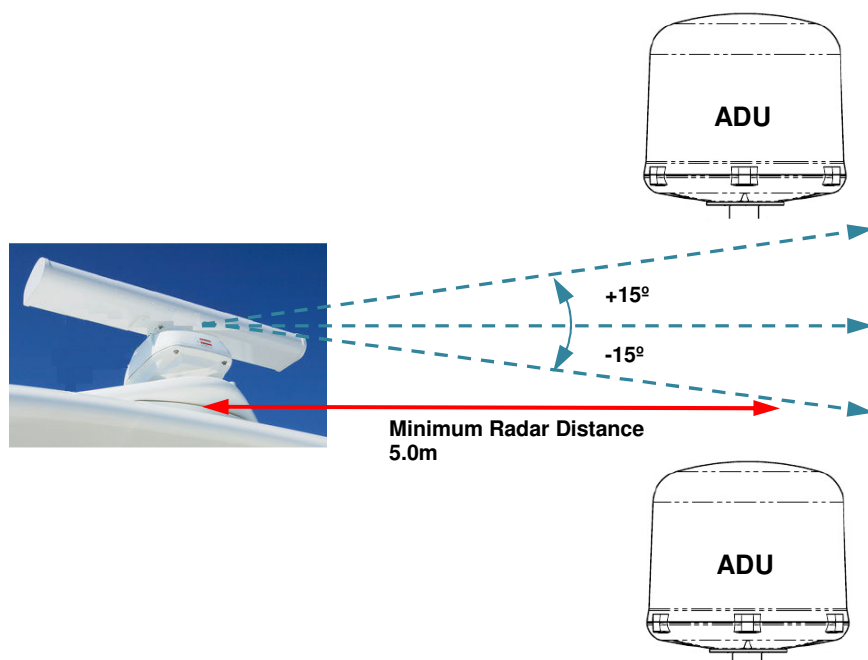
**WARNING:** Keep away from the antenna radome at the mentioned safe distance when it is transmitting. Microwave radiation can be harmful to human body, particularly the eyes.

### 2.1.3 Interference

The antenna unit must be mounted as far as possible away from the ship's radars, MF/HF antennas, communication/navigation antennas, VSAT system and any high power radio transmitter (including other Inmarsat-based system).

As for a ship's radar (see below), it is difficult to provide the exact minimum distance between a radar and the antenna unit due to different type of radars in terms of power, radiation pattern and operating frequency band.

The antenna unit is recommended to be at least 5-meter away from the radar position and at least  $\pm 15^\circ$  from the radar's vertical beam.



### 2.1.4 Obstruction

The mounting position of the antenna unit especially its line-of-sight are possibly obstructed by any large obstacle in a vessel or ship. This will result in the degradation of the satellite signal. It is very important to choose the ideal installation site on the upper deck to minimise the satellite blocking.

Examples of the large obstacles are:

- ➡ Upper Deck and funnel of ship



- ➡ VSAT with its radome



- ➡ Large mechanical structure mounting of radars



With the understanding of the large obstacle, it helps in the decision of the installation site with the reduction of the physical obstruction.

### 2.1.5 Antenna Mast

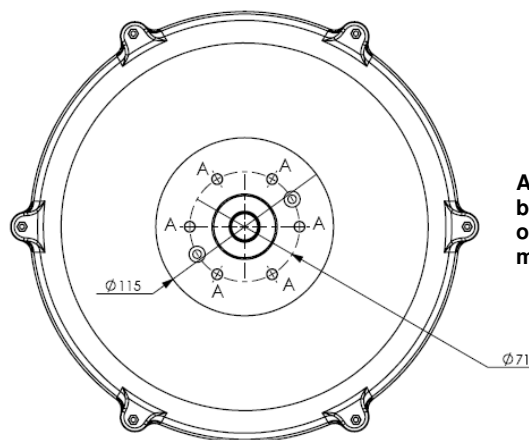
The ADU should be located at least 3-meter away from the ship's mast having a diameter of less than 15cm. If the antenna mast is available on the vessel and it is free of any shock or vibration, its physical size shall support the weight and size of the ADU.

An example of the antenna mast is illustrated as below

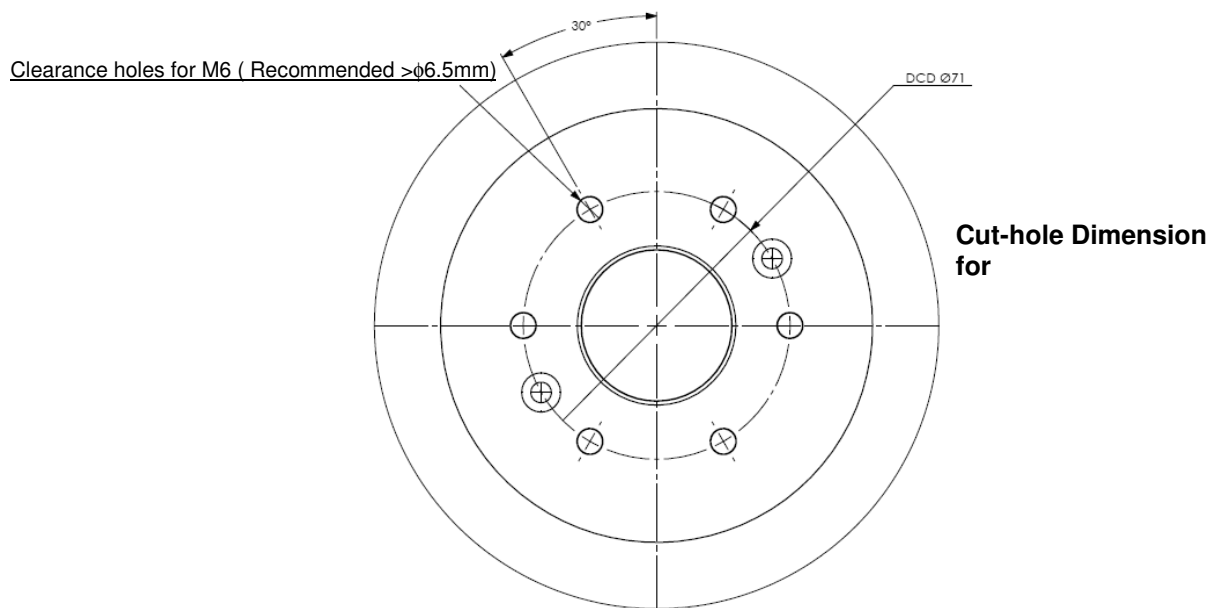


and the recommendations of the antenna masts :

- The mast should provide the internal hole for the installation of the coaxial cable.
- The flange (known as the top plate) of the mast shall meet the dimensions of the ADU's mounting base, where there are 6 holes.
- The rubber gasket is required to be inserted between the ADU mounting base and the flange.



**A : Use M6x20 Hex Head Screw bolts (6x) into the threaded holes of ADU Mounting Base for mounting the ADU.**



In case of the existing mast's flange in a vessel or ship does not fit the ADU's mounting base's holes, a custom-made mechanical adaptation flange is to be designed and plate, which acts as an interface between the existing mast and the ADU.



### 2.1.6 Installing ADU

The ADU is carefully unpacked and checked for any damage.

The procedure of the installing the ADU is as follow:

- Attach the coaxial cable to the RF connector (N-Type) of the ADU's bottom
- Position the ADU to the mounting location.
- Ensure the connection of the coaxial cable and wrap it with self-adhesive tape for water-proofing.



- Put the ADU on the mounting flange and use 6 sets of M6 x 20 Hex head screw bolts with flat washers into the threaded holes of ADU mounting base via the mounting flange's holes.
- Tighten the flat washers and screw to the antenna unit in order to secure it to the mounting flange.

Alternatively it can be mounted on the long pole. The physical dimension of a long pole shall be preferably at 2 meter height with its diameter ranges from Ø35 to Ø 50mm. In addition, the optional pole mount kit is available for the installation of the ADU onto the long post.

## 2.2 Installation of BDU

The BDU's pretty box is unpacked and the following items should be checked whether they are present:

- BDU
- 1.5 meters Ethernet Cable
- 1.8 meters DC Power Cable
- 1 meter Wired Primary Handset with Cradle
- Wi-Fi Antenna
- Hardcopy Quick Start Guide
- CD Format User Manual

The following important notes are to be followed for the selection of a location before installing the BDU:

- The BDU is not water proof and it has to be kept away from water splash.
- The ambient temperature and humidity in the selected location must the requirements given in the BDU's specification.

Ambient Temperature	-25°C to +55°C
Relative Humidity	Up to 95% at +40°C.

- The BDU shall be kept away from direct sunlight.
- The BDU shall be placed away from any high-vibrated and shock areas (for example, motor engine and generator) as far as possible.
- The BDU shall be kept away from any sensitive electronic equipment.
- The BDU has to follow the recommended compass safe distance of 1m to prevent interference to a magnetic compass

- For maintenance and checking, the BDU's location has sufficient space at its sides and rear.

The BDU can be installed on a desktop, bulkhead, top ceiling or under captain's console where the wall thickness is required minimum 15mm.

The procedure of the installing the BDU is simple as follow:

- Place the BDU on the desired installation area.
- Look for the holes of the BDU's mounting brackets.



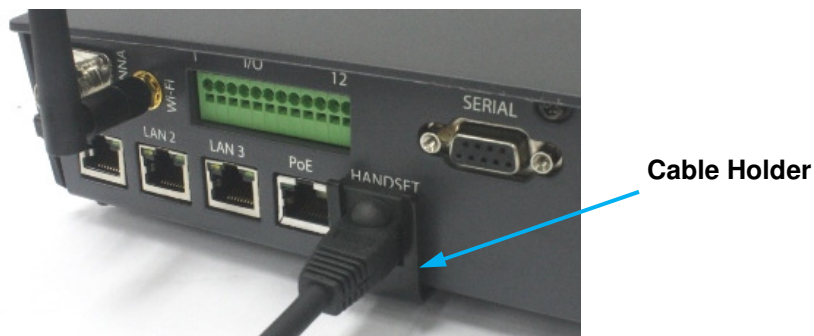
- Fix the holes of mounting brackets with four M4x12mm self-tapping or machined screws so that the BDU is being secured.

### 2.3 Installation of Primary Handset and Cradle

#### 2.3.1 Connecting Primary Handset with a Cable Holder

The procedure of the installing Primary Handset with the cable holder is simple as follow:

- a. Connect the handset to BDU's handset port.
- b. Mount the cable holder to secure the handset connector against the BDU's front panel.



- c. At the bottom of the BDU, use M3 x 8 mm screw to secure the cable holder and handset's connection to the BDU's handset port. This is important especially when the BDU is being mounted on the wall.



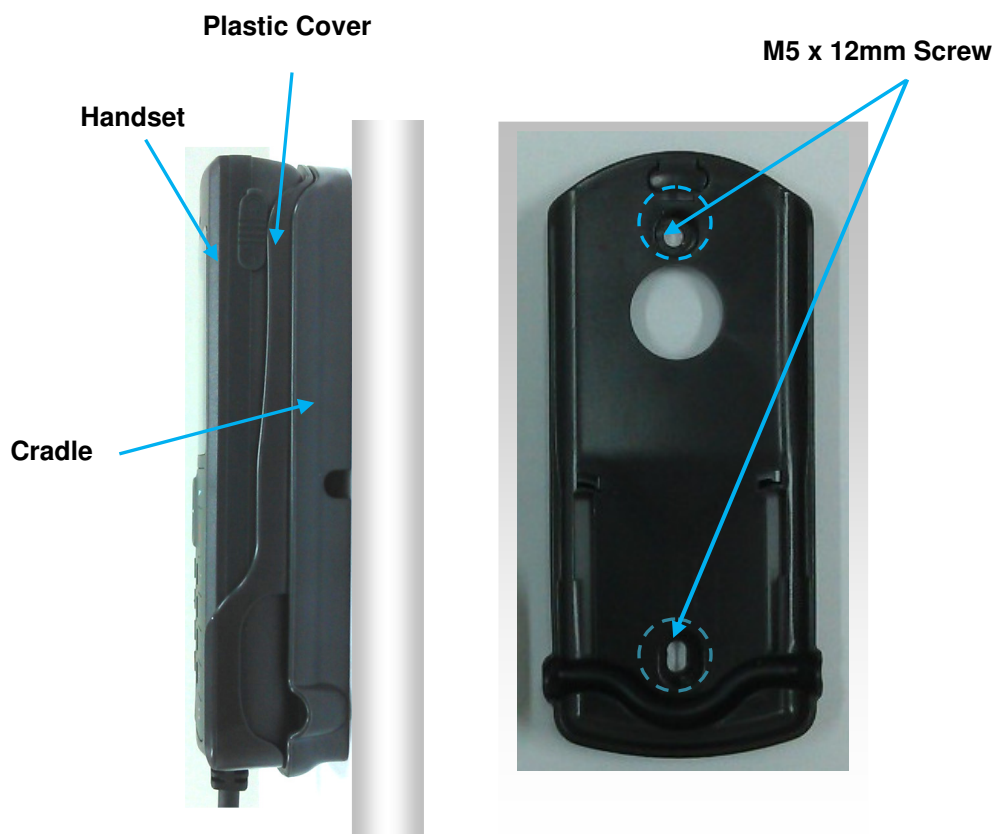
### 2.3.2 Overview

The primary handset is provided with cradle. It can be mounted on a desktop, bulkhead, top ceiling or under captain's console as similar as the BDU.

The primary handset is to be separated from its cradle so that the cradle can be fixed with the M5 x 12mm self-tapping screws.

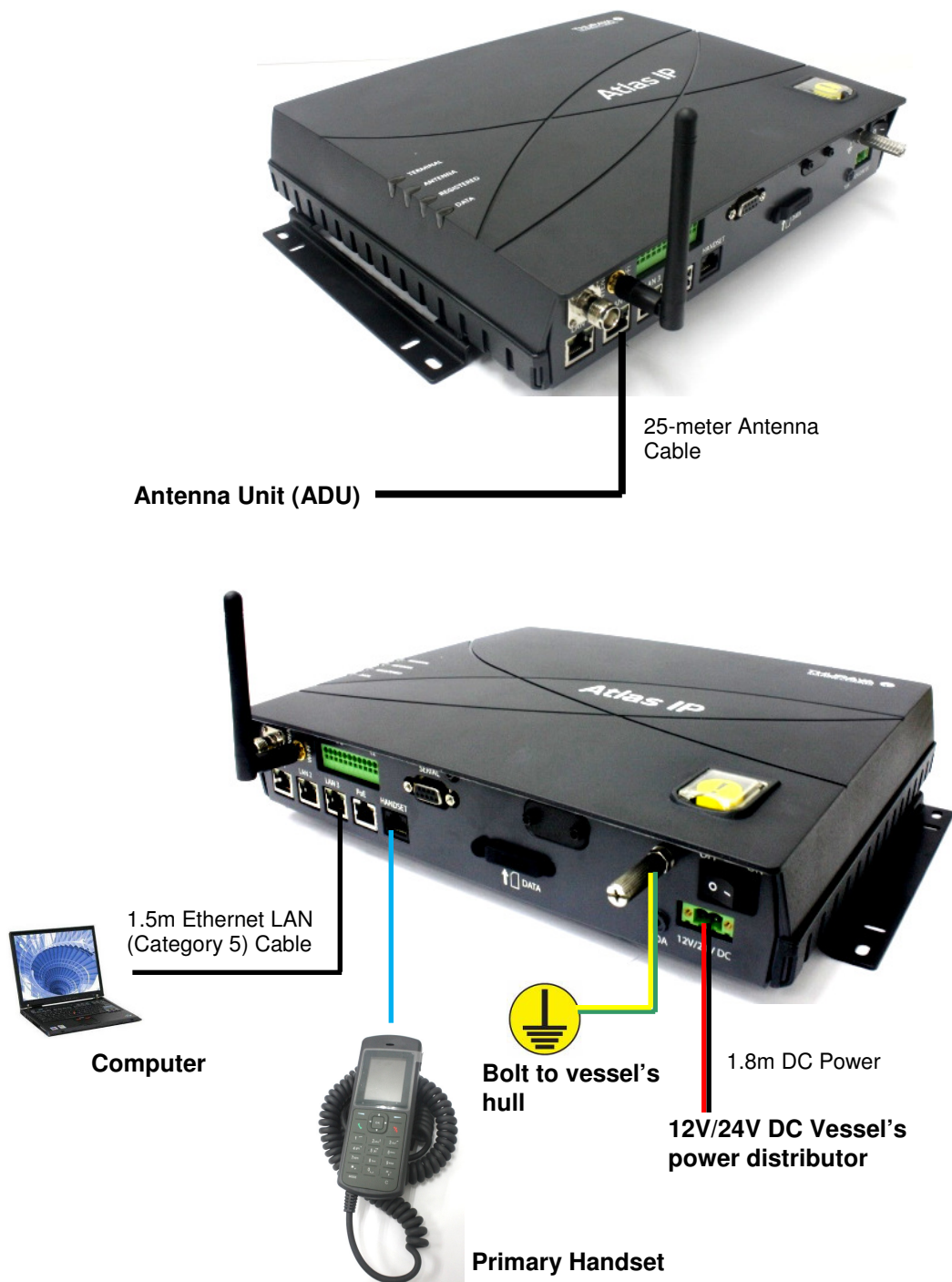
The procedure of the installing the cradle is simple as follow:

- Separate the handset from the cradle and remove the plastic cover of the cradle.
- Position the cradle on the mounting areas.
- Fix the cradle with M5 x 12mm self-tapping screws, which are supplied.
- Reattach the plastic cover onto the cradle.
- Secure the handset onto the cradle.



### 3 CONNECTIONS

Below is the interconnection diagram of Atlas IP Terminal with the cables.

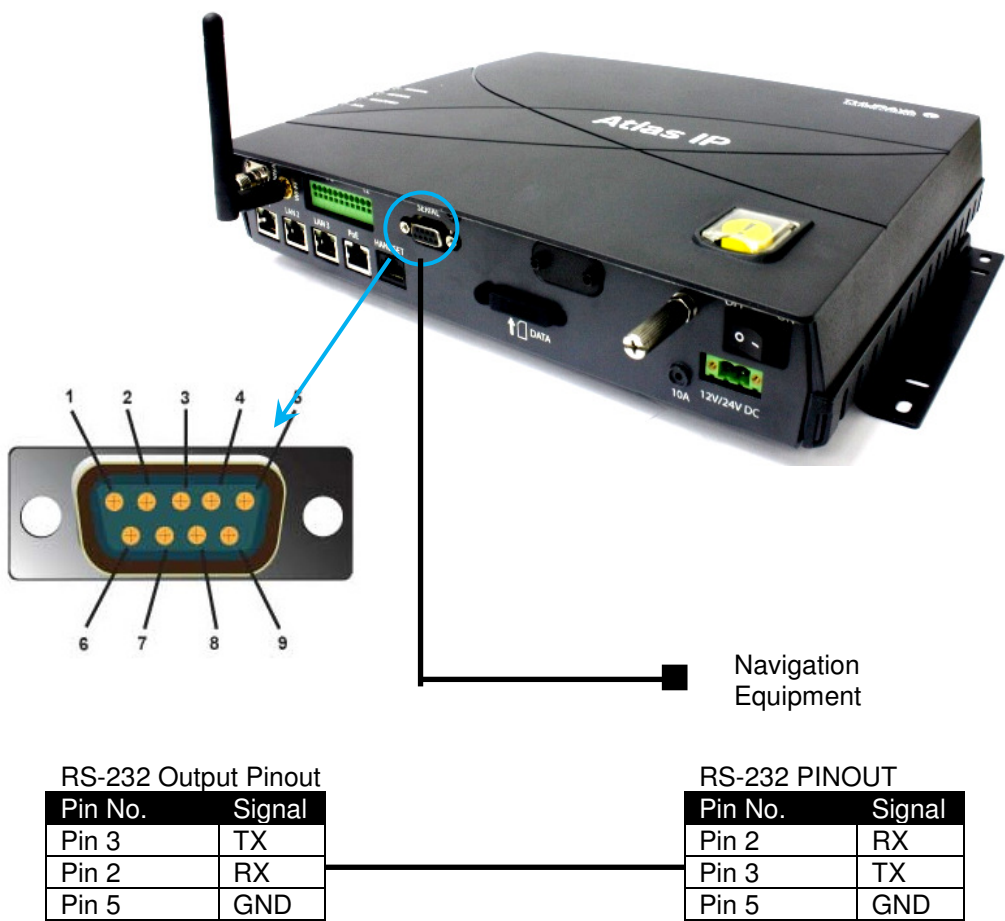


3.1 BDU’s Outputs Connection

The additional information of the output ports of Serial and GPIO.

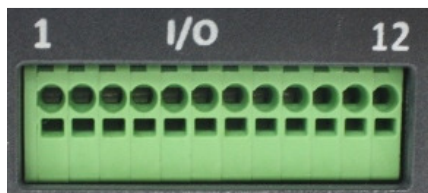
3.1.1 RS-232 Serial Connector

The BDU has a serial connector for outputting the GPS data in NMEA0183



### 3.1.2 GPIO Output Port

The BDU has a dedicated 12-pin phoenix connector to provide GPIO (General Purpose Input/Output) interface to the external devices.



**I/O Connector Pinout**

**GPIO Port Pinout**

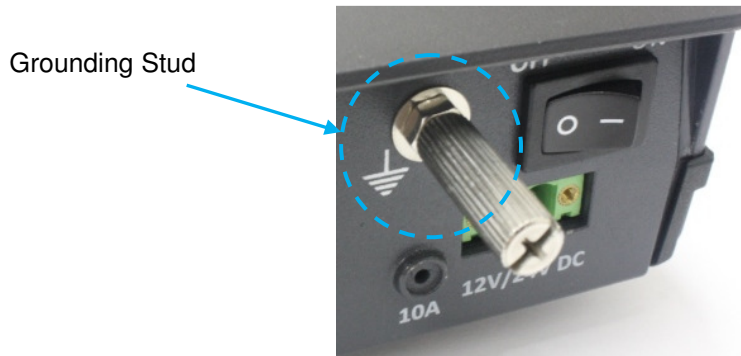
GPIO Port Pin	Signal Name	Description of Signal
GPIO - 1	IGNITION+	Active high signal of ignition. Input voltage of +10.8 ~ 31.2 V DC.
GPIO - 2	IGNITION-	Return path for "IGNITION+" signal
GPIO - 3	EXT_PANIC+	External Alert Button Input Port.
GPIO - 4	EXT_PANIC-	A momentary pushbutton can be connected across these 2 pins. Shorting those 2 pins will be treated as external panic alert triggered.
GPIO - 5	REMOTE+	For the connection to Remote ON/ OFF switch.
GPIO - 6	REMOTE-	A momentary pushbutton can be connected across these 2 pins. Long press of this switch will turn on (if the BDU is off) or off (if the BDU is on) the terminal.
GPIO - 7	LED+	Power Indicator.
GPIO - 8	LED-	An LED indicator can be connected across these 2 pins. The port is capable of sourcing 25 ~ 30mA current with the LED forward voltage at around +3V DC. It will be on when the unit is powered on and off when the unit is powered off.
GPIO - 9	RELAY1	External Ringer indicator.
GPIO - 10	RELAY2	It is a relay output port. When there is an incoming call, the internal relay will be energized and these 2 pins will be shorted.
GPIO - 11	Reserved Line	For future use.
GPIO - 12	Reserved Line	For future use.

All wires for the GPIO connector shall use AWG 24 unscreened wire type.



### 3.1.3 Grounding Stud

The BDU has a grounding stud with a locking screw for the earth cable (with its colors of green and yellow) with its lug. It is recommended to include spring washers to secure the lug to the grounding stud.



## 4 GETTING STARTED ON THE SYSTEM

### 4.1 Installing the SIM card

The system requires a SIM card to access the Thuraya network and it is provided by your Airtime Service Provider. Insert the SIM card to the BDU as follow:

- Tilt up the SIM card slot's rubber cover



SIM CARD SLOT's  
RUBBER COVER

- Position the SIM card with its gold-contacts facing down. (There is a symbol of SIM Card with its arrow on the front panel. It will ensure the correct orientation of the SIM Card when it is being inserted. )





- Push the SIM card gently until it is being clicked and locked in place. A screwdriver can help to push the SIM card if the SIM card cannot be inserted properly.
- Tilt down the SIM card cover to its original position.

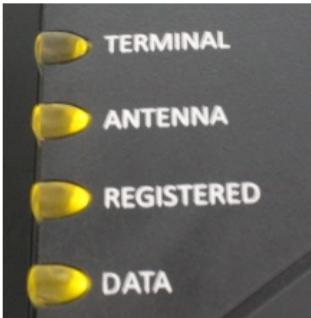
4.2 Powering up the system

4.2.1 Switching on the BDU

Use ON/OFF switch on the BDU's front panel. It normally takes about 2 to 3 minutes for the whole terminal to be powered up.



Wait for all LED indicators to turn green.



LED Name	Status	Meaning
TERMINAL	Blinking Green	BDU is functioning as the “heartbeat”.
	Steady Red	BDU powers up or detects failure.
ANTENNA	Steady Green	ADU is functioning.
	Steady Red	ADU detects failure.
	No Light	ADU is calibrating.
REGISTERED	Steady Amber	Registration to network in progress.
	Steady Green	Registration to network.
	Steady Red	Network failure/Error
DATA	Steady Green	In <b>Data</b> Mode, user can browse internet.
	No light (Off)	In <b>Data</b> Mode, user cannot browse internet. In <b>Voice</b> Mode, user can make a voice call using Primary Handset.

### 4.3 Settings on Web Console

#### 4.3.1 Activating on Web Console

Open the web browser (for example: Internet Explorer, Google Chrome or Firefox.)




and type <http://192.168.2.1> in the Address field.

Username and Password will be prompted.

Default Username : **admin**  
Password : **admin**

Username:  Password:



Click “**Login**” after entering the Username and Password.

The Web Console will appear with the information of Thuraya Network identification, satellite signal strength indicator and the GPS information.

---

**Region:** SINGAPORE -D

**Signal:**



**GPS:**

Latitude: 1° 20' 11.16" N (1.336436°)  
Longitude: 103° 53' 28.02" E (103.89111883°)  
Date/Time: 07/08/2014,06:30:36 GMT  
Speed: 0.38 km/h  
Course: 284°



**WARNING:** If the signal strength is low, check any obstruction against the antenna unit or the condition of antenna cable.

Upon successful registration, with all three BDU's LED indicators (**ANTENNA**, **REGISTERED** and **DATA**) are in green while **TERMINAL** indicator is having blinking green, the terminal will be ready for normal operation.

### 4.3.2 Data Connection Settings



Click **Data** on the web console.

Click **Primary Profiles** and set the following:

- Enable checkbox of “**Set as default**” and ensure “**Standard**” in the Profile Name.
- Enable radio button of “**Standard**” of Connection Type.
- Enable checkbox of “**Always On (Auto PDP Context Activation)**”
- Enable radio button of “**Dynamic IP Address**” of IP configuration.

---

<div><div>#Standard</div><div>Streaming16k</div><div>Streaming32k</div><div>Streaming64k</div><div>Streaming128</div><div>Streaming256</div><div>Streaming384</div><div>Profile 8</div><div>Profile 9</div><div>Profile 10</div></div> <div>Refresh</div>	<div><input checked="" type="checkbox"/> Set as default</div> <div>Profile Name: <input type="text" value="Standard"/></div> <div>Connection Type:<div><div><input checked="" type="radio"/> Standard</div><div><input type="radio"/> Streaming</div></div></div> <div><input checked="" type="checkbox"/> Always On (Auto PDP Context Activation)</div>	<div><b>Standard</b></div> <div>Using this connection type you will be charged for the <b>VOLUME</b> (kilobytes) of data used. Use this connection type for TCP/IP applications, data exchange and transfer such as Email, Internet Browsing, FTP, etc.</div>
<hr/>		
<div>Access Point Name (APN):</div> <div>APN <input type="text" value="standard-vbr"/></div> <div>Username: <input type="text"/></div> <div>Password: <input type="text"/></div>		
<hr/>		
<div>IP Configuration</div> <div><div><input checked="" type="radio"/> Dynamic IP Address</div><div><input type="radio"/> Static</div></div> <div>IP Address <input type="text" value=""/><input type="text" value=""/><input type="text" value=""/><input type="text" value=""/></div>		
<div><div>Update Settings</div><div>Cancel</div><div>Deactivate Profile</div></div>		



**Note:**

The Standard profile is set as the default primary profile and the default connection type is standard (this is charged by the **volume** [in kilobytes] of data used).

Click “**Always On (Auto PDP Context Activation)**” checkbox if it is required to get the standard IP Data connection to be reconnected automatically in the event the connection is disconnected without user intervention, i.e. antenna blockage, etc.

Click [Settings](#) and set the following:

For the data connection, under the Ethernet mode, enable radio button of “**Router Mode (Multi-User)**” which is with NAT/PAT enabled for multi-user.

---

### Ethernet mode:

☐ Router Mode (Single User)

IP Address:  .  .  .

☒ Router Mode (Multi-User)

Update



**Note:**

*The Router settings cannot be changed while the Data connection is active. The Data session must be first disconnected.*

Click **Update** to allow the selection to take effect.

➡ Click **Refresh** to query the current mode.

Click [Connection](#)

To activate the PDP context, click “**Activate Default Profile**”.

---

No connection exists

Activate Default Profile

The data connection will be activated with a notification of the public IP address assigned to the active data connection. An user may now browse the internet, do file transfer (FTP) or run any IP-based application services.

To disconnect the data connection, click [Disconnect](#).  
The PDP context will be deactivated.

---

standard-vbr - 85.115.85.84 [Disconnect](#) (Standard)

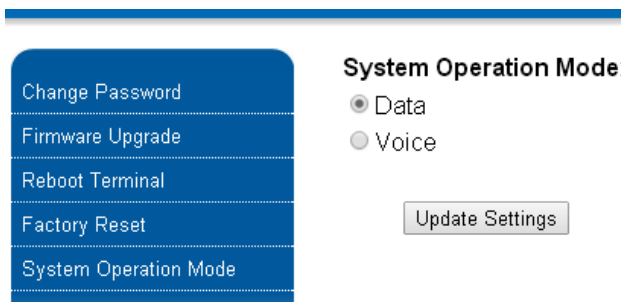
### 4.4 Selection of Data / CS Voice Mode

The terminal is set as **Data** as the defaulted mode upon powering up the terminal.

The **Data** mode is used for user to browse internet, email, ftp etc.

The **Voice** mode is used for user to make a voice call via Primary Handset. There are 2 ways to switch from **Data** mode to **Voice** mode;

#### ➤ Web Console\*



Select **Settings>Admin>System Operation Mode**, click radio button of “**Voice**” and then **Update Settings**.

For switching back from **Voice** to **Data** mode, click radio button of “**Data**” and then **Update Settings**.

#### ➤ Primary Handset's Mode Key\*



On Primary handset's “**Mode**” key, press it to switch from “**Data**” to “**Voice**” mode to make a voice call. Press it again to switch back from “**Voice**” to “**Data**”.



#### \* Note:

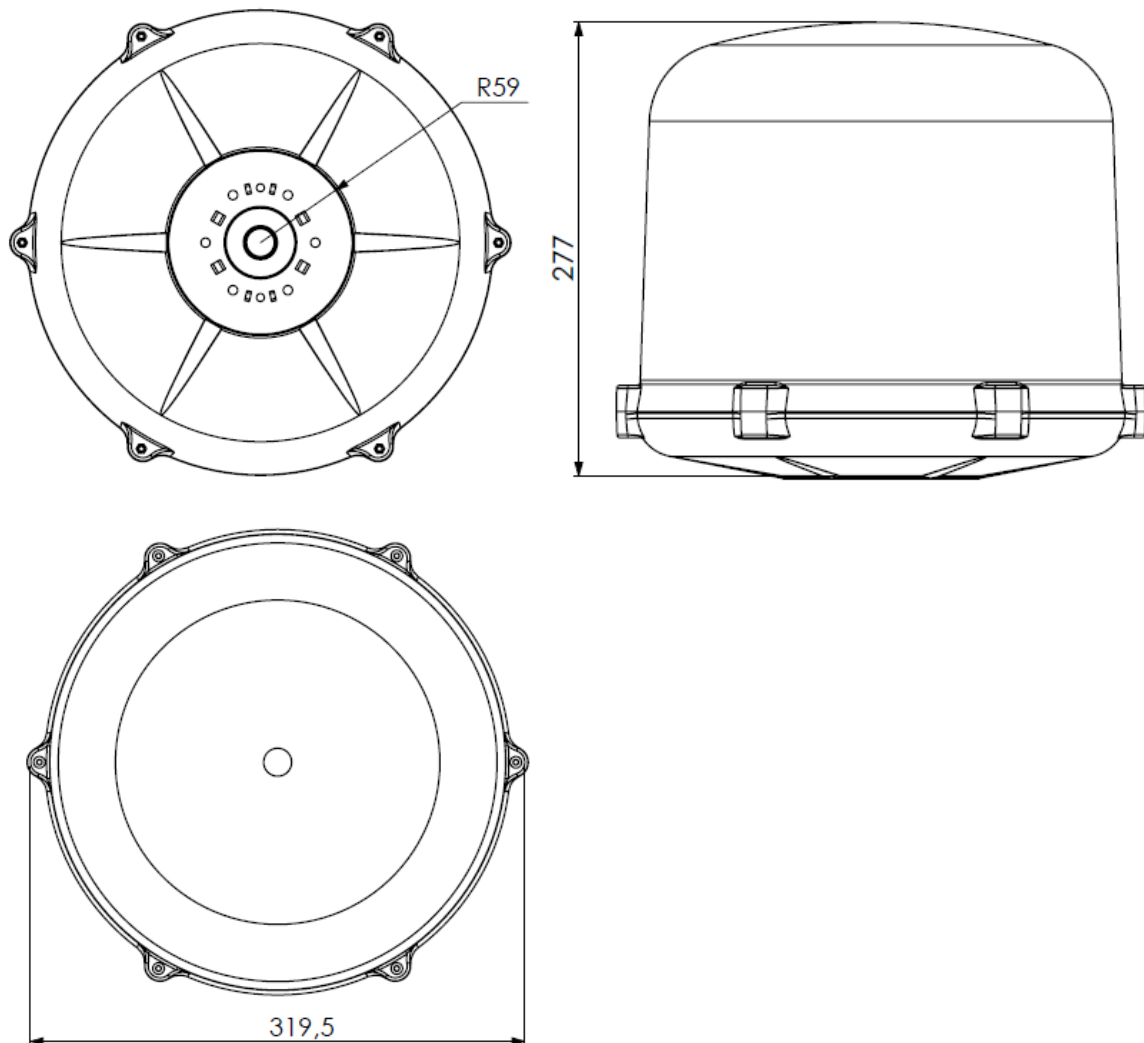
Setting from “**Data**” to “**Voice**” mode via Web Console or Primary Handset, it will take at least 2 minutes to take effect. Likewise for switching from “**Voice**” to “**Data**” mode.

### 5 GLOSSARY

AC	Alternating Current
ADU	Above Deck Equipment
BDU	Below Deck Equipment
DC	Direct Current
GPS	Global Position System
GPIO	General Purpose Input / Output

## APPENDIX A OUTLINE DRAWINGS

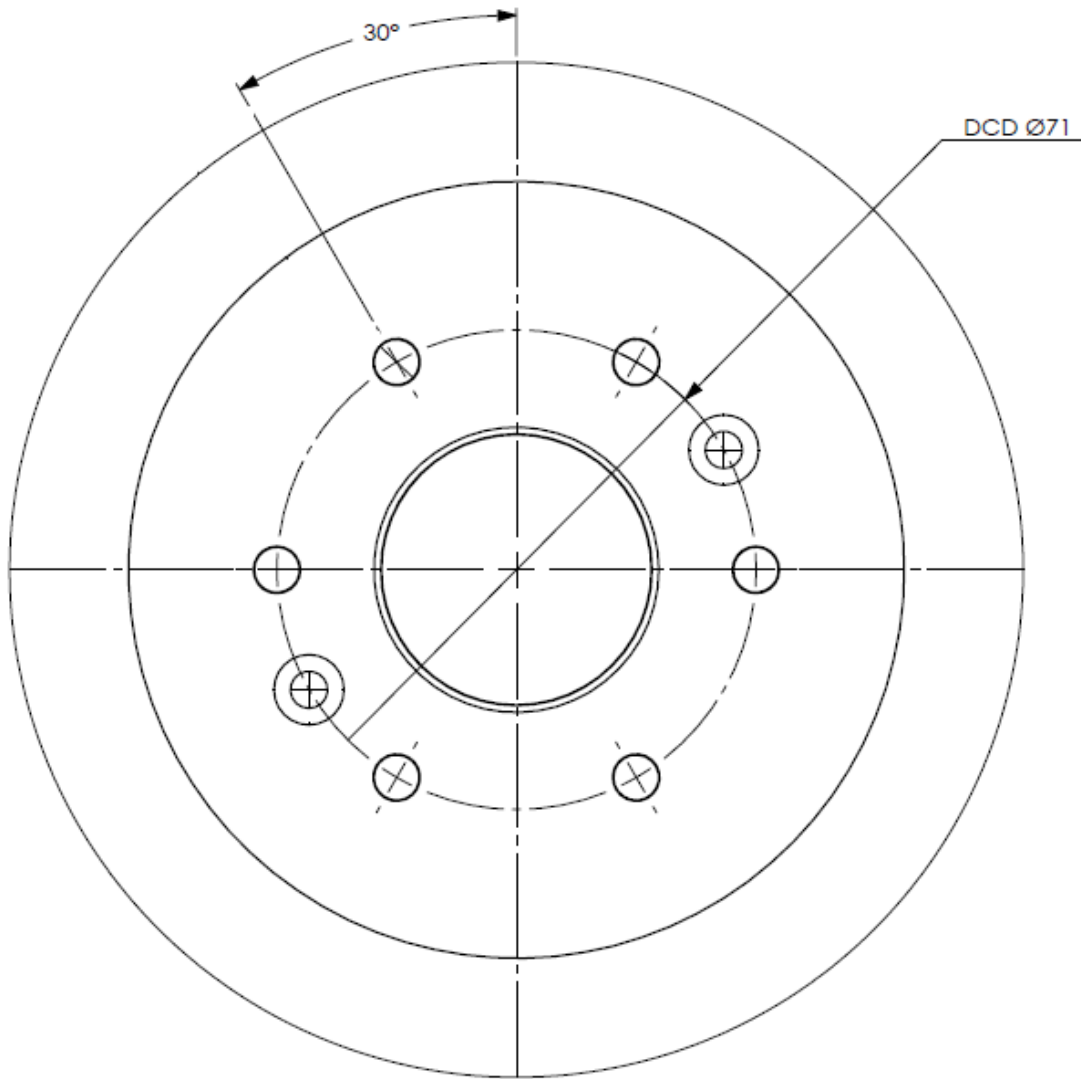
### A-1 ADU's Outline Dimensions and Weight



Weight : **3 kg**.  
Dimensions are expressed in terms of mm.

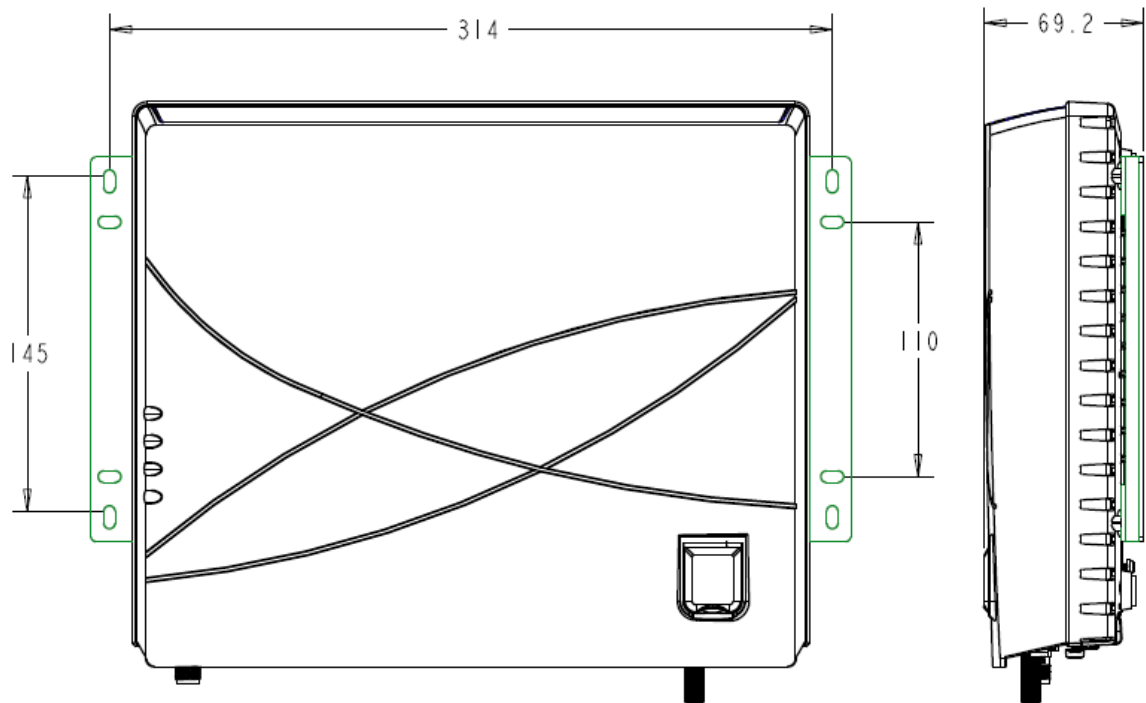


## A-2 ADU's Hole Pattern (Cut-out Holes)



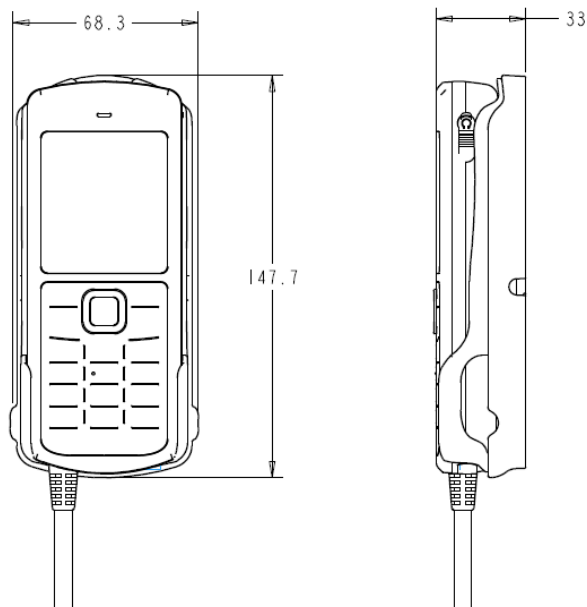
Dimensions are expressed in terms of mm.

**A-5 BDU's Outline Dimensions**



Dimensions are expressed in terms of mm.

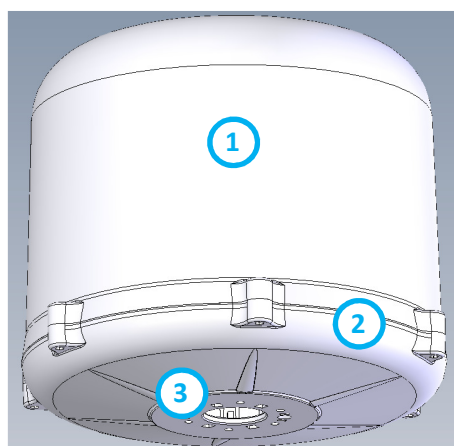
**A-4 Primary Handset's Outline Dimensions**



Dimensions are expressed in terms of mm.

# Thuraya Atlas IP Terminal Quick Start Guide

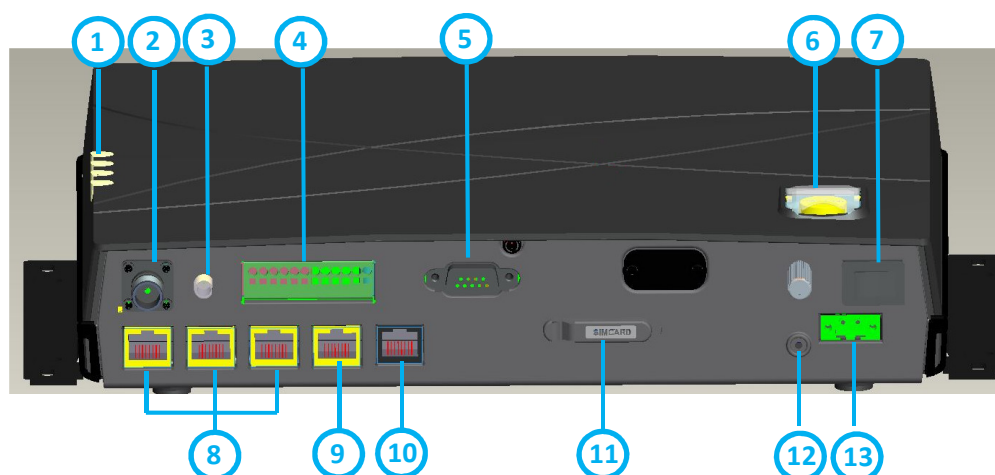
## Atlas IP Antenna Unit



Atlas IP ADU

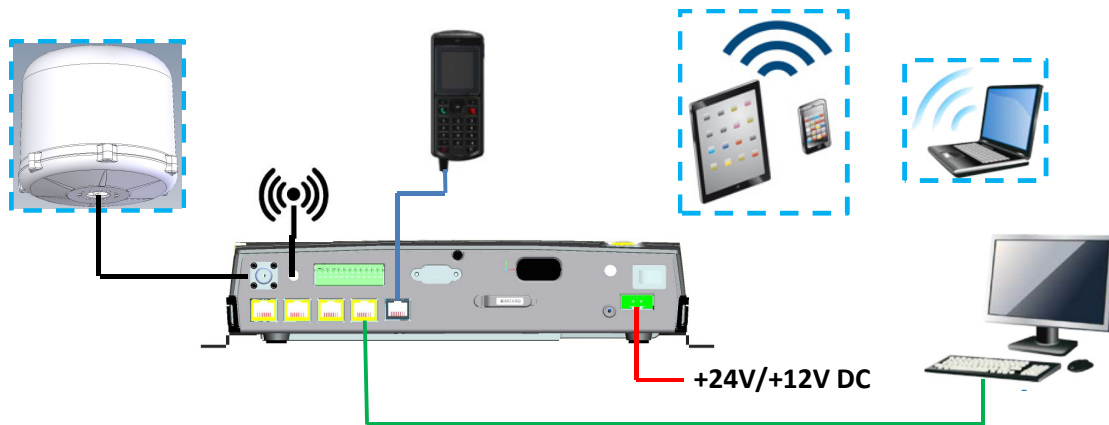
- 1. Radome Top
- 2. Radome Bottom
- 3. Antenna Connector (N-Type)

## Atlas IP Modem Unit



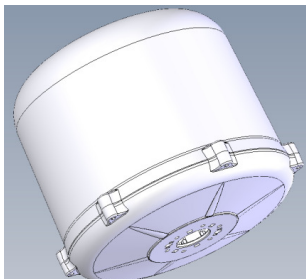
- 1. Status Indicators
- 2. Antenna Connector (TNC)
- 3. Wi-Fi Antenna
- 4. I/O Port
- 5. RS-232 Serial Port
- 6. Alert Button
- 7. ON / OFF Switch
- 8. LAN Ports 1, 2, 3
- 9. PoE Port
- 10. Primary Handset Port
- 11. SIM Card Slot
- 12. Circuit Breaker Reset
- 13. DC Input

# Atlas IP Terminal Simplified Block Diagram



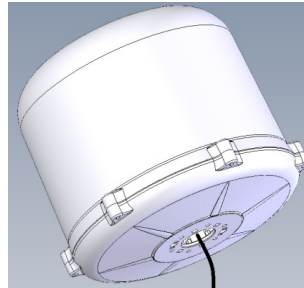
## Above Deck Unit (ADU) Installation

①



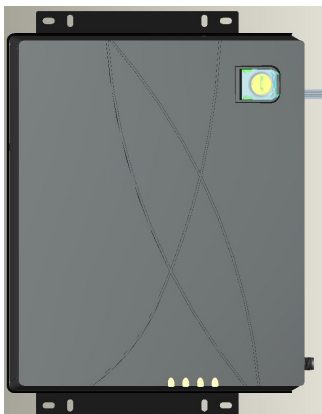
Connect antenna cable to ADU properly without kinking it. Ensure that there is a rubber gasket between the ADU's base and the mounting surface of the pole mount or mast.

②

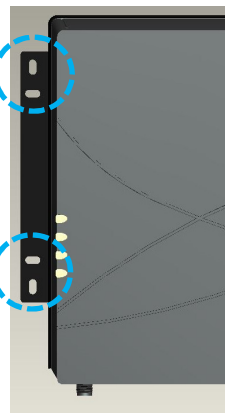


Secure ADU to the pole mount or mast by using M6 x 25mm screws and flat washers.

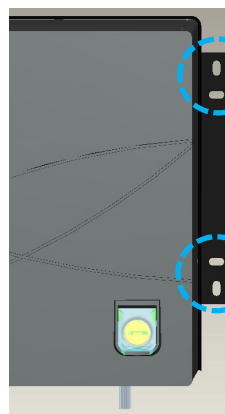
## Below Deck Unit (BDU) Installation



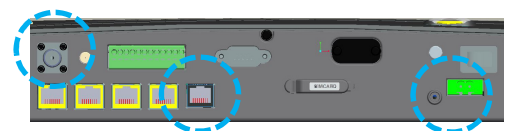
Place BDU onto the desired installation area.



Secure the right mounting bracket using M5 x 12mm Self-Tapping Screws (2x).



Secure the left mounting bracket using M5 x 12mm Self-Tapping Screws (2x).



On the BDU's front panel, connect and secure DC power cable, antenna cable and primary handset cable.

*Graphical Representative Only.*

## Getting Start



- Connect the cables and accessories as show in Terminal Simplified Block Diagram.
- Insert a Thuraya SIM card, with the gold printed circuit facing down and switch on Atlas IP Terminal.
- User can access the web console when the Terminal LED turns blinking green while other LEDs turn green.
- System is ready for normal operation at the defaulted **DATA** mode.

## Selecting DATA or VOICE Mode

- On the Web Console, **Settings>Admin>System Operation Mode**, there are 2 modes of “**Data**” and “**Voice**”.
- Select **DATA** mode for browsing internet, emailing, etc.
- Select **VOICE** mode for initiating a voice call using a Primary Handset.

*Note: Switching between DATA and VOICE mode, it will take about 2 to 3 minutes to take effect.*

## Using Primary Handset

- On the Web Console, **Settings>Admin>System Operation Mode**, click “**Voice**” and then “**Update Settings**”.
- On the primary handset, dial phone number in the format: <00><Country Code><Telephone Number> .
- Disconnect the call by pressing the  key.

## Sending an SMS using Primary Handset

- Select **Menu>Messaging>OK>New message>OK**. Enter your test message using the keypad
- Select **OK > Send**.
- Enter the destination mobile number format: <00><Country Coode><Telephone Number>  
OR  
Select **OK** to choose an existing contact and then select **OK** to send text message.

## Activating Wi-Fi Setting using Web Console

- Select **Settings>Wi-Fi**.
- Select **Enabled** and click **Update**.
- Use a Wi-Fi Enabled device to search for Network Name (SSID): **Wideye-GenericAP**.
- On the device, select connect to the network.

## BDU LEDs States

### Terminal:

- Blinking **Green**: BDU is functioning.
- Steady **Red**: BDU powers up or detects failure.

### Antenna:

- Steady **Green**: ADU is functioning.
- Steady **Red**: ADU detects failure.
- No Light: ADU is calibrating.

### Registered:

- Steady **Amber**: Registration to network in progress.
- Steady **Green**: Registered to network

### Data:

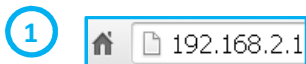
- Steady **Green**: In **Data** Mode, user can browse internet.
- No light (Off) : In **Data** Mode, user cannot browse internet.  
In **Voice** Mode, user can initiate a voice call using The Primary Handset.

## Useful Password Reference:

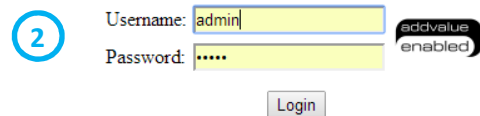
- Web Console Username: **admin** (Default)
- Web Console Password: **admin** (Default)
- Terminal Pin: **000000**  
*Also applies to Factory Reset and Boot up password.*

## Accessing Web Console

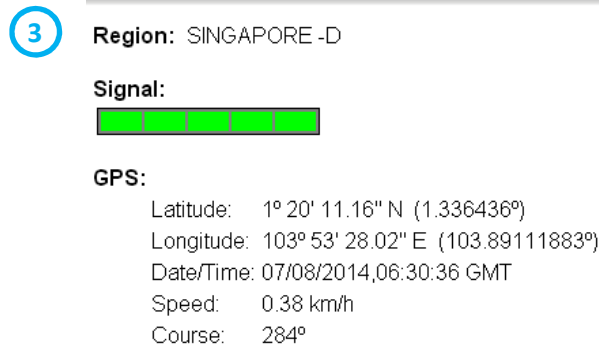
Open the web browser. Type  
<http://192.168.2.1> in the Address field.



Type in **admin** in Username field and **admin** in Password field. Click **Login**.



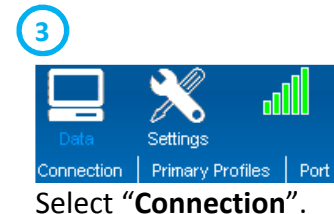
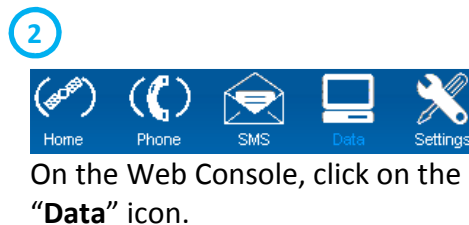
The terminal will register to the network, achieve GPS acquisition and satellite region.



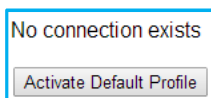
The terminal will register to the network, achieve GPS acquisition and satellite region.

## Deactivating / Activating a Data Session with the Web Console

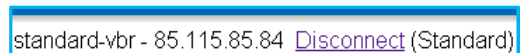
1 Select **Settings>Admin>System Operation Mode**, click “Data” and then “Update Settings”.



4 No connection exists  
Click on “**Activate Default Profile**” button.



5 standard-vbr - 85.115.85.84 **Disconnect** (Standard)  
Standard Data Session is now active and user can access the internet.  
To disconnect Data Session, click on “**Disconnect**”.



## Tips and Troubleshooting

### Primary Handset

#### Unable to make outgoing call

- Ensure the terminal is set as **Voice** mode.
- Ensure a correct number format is being dialled.
- Ensure BDU LED states areas follow;  
**Terminal** : **Blinking Green**  
**Antenna** : **Green**  
**Registered**: **Green**  
**Data** : **Off**

### Web Console

#### Unable to access Web Console

- Ensure the terminal is set as **Data** mode
- Ensure that there is no issue with the Ethernet connectivity.
- Ensure that IP address is entered correctly.
- Try to refresh the browser after correcting the problem.

### Data Connection

#### Unable to activate Data Session

- Ensure the terminal is set as **Data** mode.
- Ensure a valid APN.
- Ensure good satellite signal strength.
- Ensure PS status icon is highlighted.
- Ensure a SIM card supports PS services.
- Ensure a Prepaid Credit is not exhausted.

#### Unable to access internet after Data Session is activated.

- Ensure proper PC/Laptop Ethernet settings.
- Ensure no firewall/proxy settings are preventing access to the BDU.
- Ensure that PC/Laptop is configured to obtain IP address automatically (DHCP).