



ISD710 Maritime Antenna (Active)

Installation Guide

Suitable for IsatDocks



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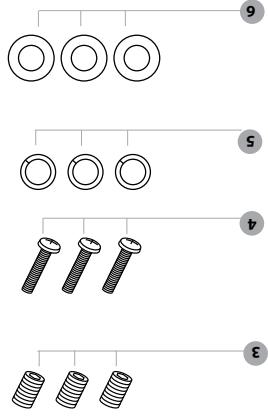
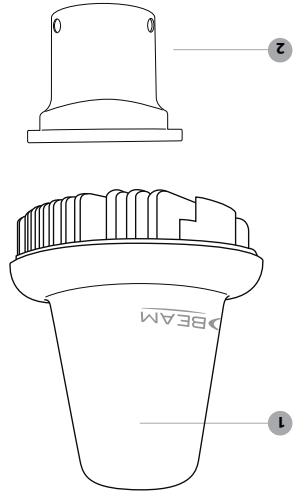
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BEAM Communications

PART #: USRMAN006404

Maritime Antenna Kit Contents

1. Maritime Antenna
2. Pole or Mast Mounting Bracket to suite 34mm diameter pole
3. 3 x Small Mast Mounting Grub Screws
4. 3 x Large Antenna Mounting Screws
5. 3 x Small Split Washers
6. 3 x Large Flat Washers



ANTENNA SPECIFICATIONS

AMPLIFIER + INTEGRAL ANTENNA	
EQUIPMENT TYPE	Mobile or Fixed Base Station
INTEGRATED OPERATING ENVIRONMENT	[x] Commercial [x] Light Industry & Heavy Industry
POWER SUPPLY REQUIREMENT	32V DC maximum
RF INPUT POWER RATING (US & CANADA)	30.0 dBm or 1.0 Watt peak (conducted)
RF OUTPUT POWER RATING (US & CANADA)	37.5 dBm or 5.6 Watts peak (conducted)
DUTY CYCLE	N/A
TX OPERATING FREQUENCY RANGE	1626.5 - 1660.5 MHz
RX OPERATING FREQUENCY RANGE	1565.19 - 1585.65 MHz (GPS) 1518 - 1559 MHz (Inmarsat)
RF OUTPUT IMPEDANCE	50 Ohms
CHANNEL SPACING	N/A

OCCUPIED BANDWIDTH (99%)	83.1 KHz
MODULATION	TX Modulation: GMSK RX Modulation: OQPSK
EMISSION DESIGNATION*	G7W
ANTENNA CONNECTOR TYPE	Integral
ANTENNA DESCRIPTION	Manufacturer: Aeroantenna Technology, Inc. Type: Maritime Model: AT1595-82 Frequency Range: GPS 1565.19 - 1585.65 MHz Inmarsat Receiver: 1518-1559 MHz Inmarsat Transmitter: 1626.5-1660.5 MHz GPS Amplifier Gain: 26 dB Inmarsat Receiver Amplifier: 26 dB Inmarsat Transmitter Amplifier: 11 dB Antenna: 3.5 dBi (for model AT1595-82)
AMBIENT TEMPERATURE RATING STORAGE	-40°C to +80°C
OPERATIONAL:	-25°C to +55°C

WARNING



All antenna cables used must be compliant with approved db signal loss. Failure to use Beam approved antenna cables may result in non-compliance, degraded performance and may damage the IsatPhone Pro.

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.

To Satisfy FCC RF exposure requirements for mobile transmitting devices, a separation distance of 55cm or more should be maintained between the antenna of this device and persons during device operation. To ensure compliance, operations at closer than this distance is not recommended.
The antenna used for this transmitter must not be co-located in conjunction with any other antenna or transmitter.

Maritime Antenna Installation Guide

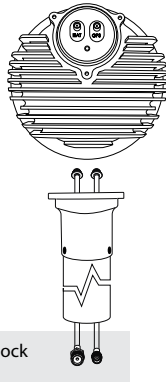
Step One:

Antenna Cables to be brought to top of pole or mast



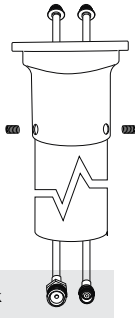
Step Three:

Attach both SMA connectors to the bottom of the antenna making sure to connect the GPS cable to the GPS connector and the Inmarsat Cable to the ISAT connector.



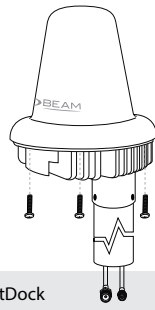
Step Two:

Place pole or mast mounting bracket over the top of the pole or mast and fix with 3 grub screws.



Step Four:

Place the antenna on top of the mast or pole and screw in the 3 mounting screws (with a split washer and a flat washer on each) to hold it into place.



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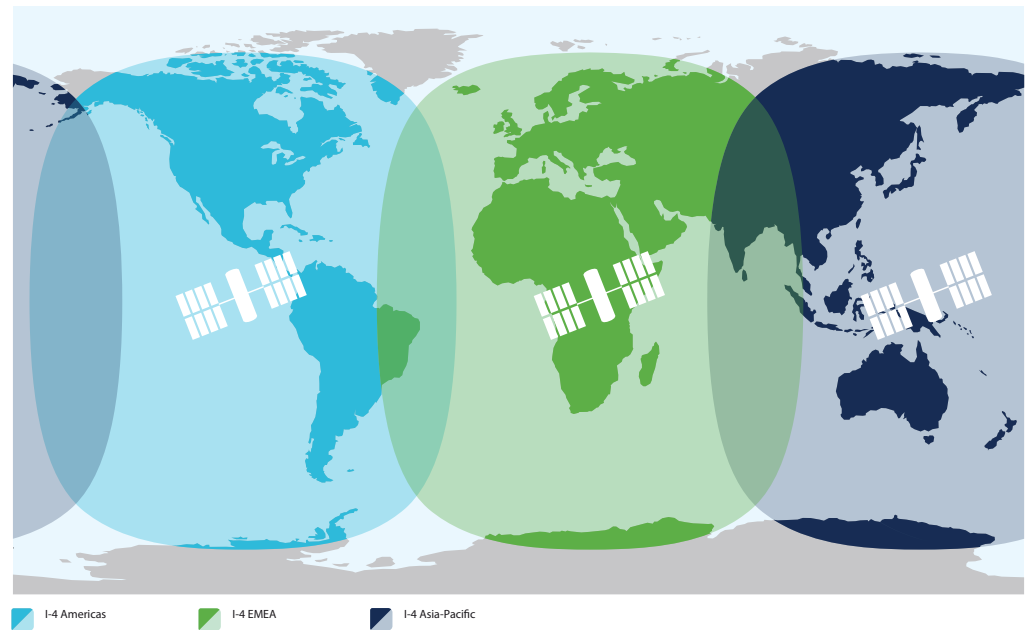
WARNING

Galvanic Corrosion Protection

This antenna has a base and pipe adapter is constructed out of aluminum. When the antenna is mounted to a steel mast or metallic bracket, a galvanic reaction can occur resulting in aluminum corrosion. To minimize corrosion the following steps can be taken:

- apply self-fusing silicone tape to all connectors
- use a UV-resistant, non metallic mast when possible
- apply silicone grease or joint compound do all metallic surfaces that make contact with the antenna or mounting adapter
- if possible use an insulating plastic or rubber sleeve between a steel mast and the aluminum adapter.

Antenna Coverage



Sourced from Inmarsat

Installation Guidelines

To ensure maximum performance of the antenna system and to maximise availability and reliability of service the antenna must;

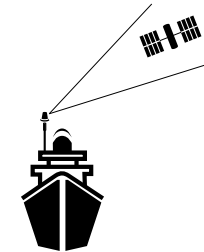
- have a clear line of site to the sky
- be clear of obstructions
- be clear of metal objects
- be located away from other transmitting devices
- be securely affixed in location
- not be located indoors
- be installed in conjunction with a certified cable

- Mount all antennas vertically and clear of nearby metal obstructions.
- Minimize horizontal obstructions as much as possible because they can create areas of poor system coverage.

Installation Options

The antenna system is suitable for marine, vehicle and fixed applications and is designed to meet Inmarsat System performance requirements when installed according to the instructions in this guide.

The following figure shows typical Installations:



The antenna must be installed without obstruction of other instruments or structures. The antenna must not be positioned within range of radar equipment or other RF interference.

Installing Antenna Cables

When installing antenna cables, follow these guidelines:

- Route and restrain cables to prevent them from vibrating or moving under normal conditions, which could result in damage to the antenna or the coaxial cable connections.
- Wherever the cables contact structures, protect the cables from chafing or abrasion. If a cable needs to be bent, avoid kinking it, and ensure that each bend radius follows the cable supplier limits.
- Use coaxial sealant, shrink-wrap tubing, electrical tape, or another suitable product to seal all cable connections appropriately to prevent moisture and corrosion damage from weather exposure.



NOTE: For Satellite & GPS connection instructions please consult your Beam Inmarsat Product manual.
WARNING: Do not place the antenna anywhere there is a source of heat or fumes such as the ship's exhaust.