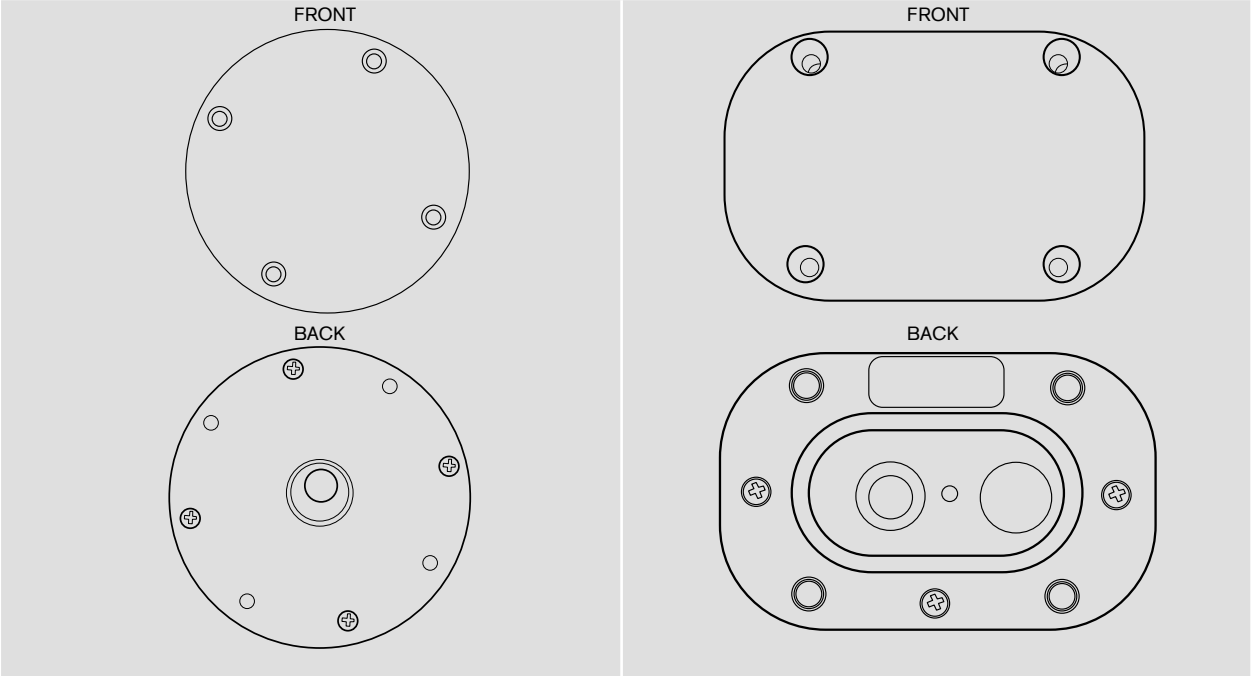
Beam Antenna RST701 and 703



RST701	RST703

These Iridium antennas are designed to be installed in what is referred to as a “Bulk Head Mount” installation, these antennas are not supplied with a cable and a suitable cable within specification should be used. The antennas are designed for permanent installations and will require drilled holes and screws to affix them in place.

The GPS antenna have SMA connectors and the Iridium TNC. The 701 require 1 drilled hole and the hexagon locking nut used to secure the antenna in place. The 703 requires 4 screws (supplied) to affix the antenna in place.

To install the antenna you will need to;

1. Use an existing mounting hole or drill a hole that will enable the antenna connector to pass through
2. The hole size should not exceed the size of the hexagonal locking nut
3. Remove the hexagon locking nut from the base of the antenna
4. Secure the hexagonal nut in place on the base of the antenna and tighten antenna firmly in place
5. If this is has screw holes then it is advisable to use these to secure to the surface.
6. connect antenna cable to the antenna and then to the terminal

Applications

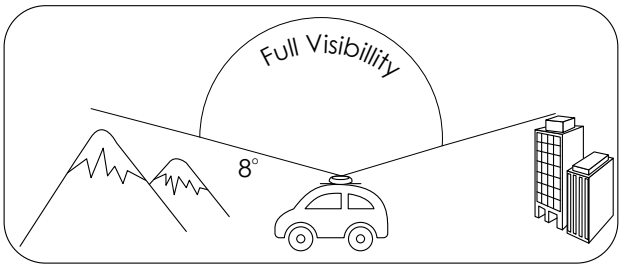
TRANSPORTATION **VESSELS** **RAIL**

Antenna installation is critical for optimum performance of your Iridium service.

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 and free 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



Installing Antenna Cables

When installing antenna cables, follow these guidelines:

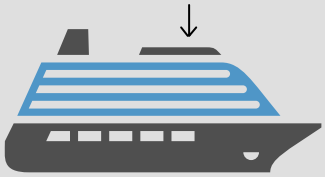
- Route and restrain cables to prevent them from vibrating or moving under normal conditions, which could result in damage to the antenna or the coaxial cable connections.
- Wherever the cables contact structures, protect the cables from chafing or abrasion. If a cable needs to be bent, avoid kinking 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.
- 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.
- To minimize the loss of radio signal from the antenna to the terminal, the specific coaxial cable system between the antenna and the other component should be less than 3db including connector loss.

Installation Options

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

The following figure shows typical Installations:

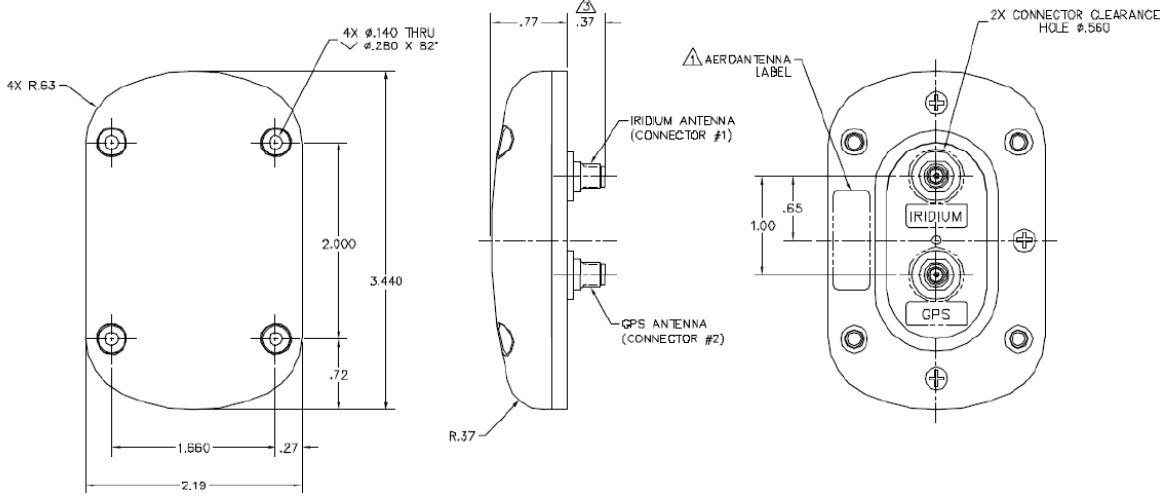
Preferred Antenna Location

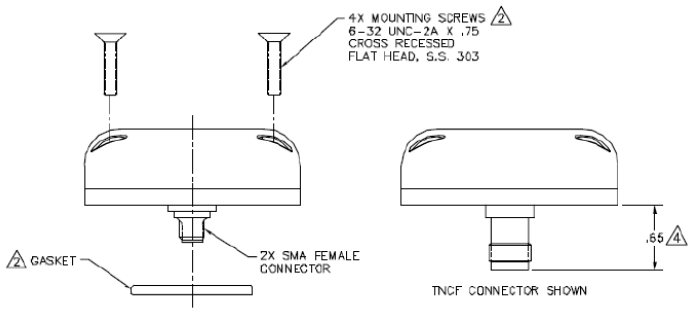
Vehicle Antenna Installation The ideal position for any vehicle-mounted application is to capitalise on the greatest ground plane from the surface of the vehicle.	
Marine Antenna Installation The antenna must be installed without obstruction of other instruments or structures. The antenna must not be positioned within range of radar equipment or other RF interference.	
Fixed Site Installation The antenna must be installed without obstruction of other buildings, chimneys or other structures. Consideration should also be given to the surrounding environments such as large trees, mountains or other buildings.	

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVED
1	ENGINEERING RELEASE	09/01/06	

NOTES: UNLESS OTHERWISE SPECIFIED.

1. SIZE, SHAPE, AND CONTENTS OF NAME PLATE ARE SUBJECT TO CHANGE WITHOUT NOTICE.
2. MOUNTING SCREWS AND O-RING SUPPLIED BY AEROANTENNA.
3. DIMENSIONS FOR SMAF CONNECTOR.
4. DIMENSIONS FOR TNCF CONNECTOR.
5. TOLERANCE: .XX = ±.03
   .XXX = ±.010





SPECIFICATION:

FREQUENCY:	1621 ±5 MHz 1575 ±5 MHz	
POLARIZATION:	RIGHT HAND CIRCULAR	
AXIAL RATIO:	3 dB MAX	
RADIATION COVERAGE:	IRIDIUM	
	ELEVATION ANGLE:	GAIN:
	0°<θ<10°	-2.5 dBic min
	10°<θ<90°	0 dBic min
	GPS	
	ELEVATION ANGLE:	GAIN:
	0°<θ<10°	-7.5 dBic min
	10°<θ<20°	-5.5 dBic min
	20°<θ<30°	-3.5 dBic min
	θ>30°	-2.5 dBic min
AMPLIFIER:		
GAIN:	IRIDIUM: PASSIVE GPS L1: 26 dB (35 mA)	
VOLTAGE:	IRIDIUM: PASSIVE GPS L1: 3 VDC	
NOISE FIGURE:	2.5 dB MAX	
IMPEDANCE:	50 OHMS	
VSWR:	≤2.0:1	
POWER HANDLING:	10 WATTS	
CONNECTOR:	SPECIFY	
WEIGHT:	4.50 OZ.	
OPERATING TEMP:	-55°C TO +85°C	

DO NOT SCALE THIS DRAWING
REMOVE BURRS AND BREAK SHARP EDGES:
PART TO BE CLEAN AND OIL FREE
ALL DIMENSIONS ARE IN INCHES
DIMENSIONING & TOLERANCING PER ASME Y14.5M-1994
TOLERANCES:
~~.XX = ±.01~~ FRACT = ±1/32
~~.XXX = ±.005~~ ANG. = ±1/2°
✓ SURFACE ROUGHNESS
MACHINED PARTS √63
MOLDED PARTS √32

HOLE DIA.	TOLERANCE
.0135 – .125	+.004 −.001
.126 – .250	+.005 −.001
.251 – .500	+.006 −.001
.501 – .750	+.008 −.001

NEXT ASSY

DRAWN	A. DEVERA	09/01/06
CHECKED		
ENGR		
MFG		
Q.A.		
APPROVED		
DRAWN IN	ACAD	

AeroAntenna Technology Inc

TITLE: Dual Mode Ant - White

SIZE	DRAWING NO.	REV
B	RST703	1

SCALE NONE | SHEET 1 OF 1