



DEEP-SEA ANTENNAS

Trident
Sensors



APPLICATIONS

- Trident Sensors' Tracking, Data & Recovery Beacons
- Autonomous Underwater Vehicles (AUVs)
- Remotely Operated Vehicles (ROVs)
- Manned Submersibles
- Profiling Floats
- Drifters

FEATURES

- Rated to 5000m
- For use with the global, 2 way Iridium communications system for data, command and control
- Available in three primary configurations:
 - Combined Iridium and GPS
 - Iridium only
 - GPS only

SPECIFICATIONS

- Length: 169mm (150mm tip to base + 19mm thread)
- Width: 25mm
- Thread width: 7/16" UNF
- GPS and Iridium cable length: approx. 17cm from base
- Iridium connector: SMA plug or U.FL plug
- GPS connector: MCX plug



*TRIDENT SENSORS'
DEEP-SEA RECOVERY
BEACON*

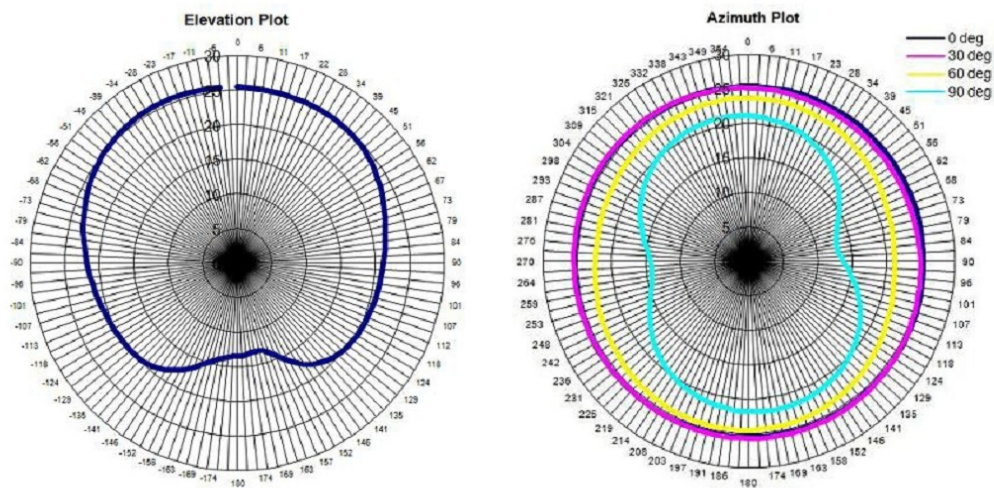
*DEEP-SEA ANTENNA
WITH IRIDIUM AND
GPS CABLES*



GPS SPECIFICATION

Type	Quadrifilar Helix			
Frequency	1573.42	1575.42	1577.42	MHz
Polarization	Right-hand circular polarized			
Voltage	2.8	3.3	3.6	V
Current		13	15	mA
Gain	+24	+25		dBic
Beamwidth		135		Degrees
Bandwidth (3dB)		20		MHz
Axial Ratio		<2.0		@Zenith
VSWR		<2.0:1	2.3:1	
Impedance		50		
Noise Figure		1.2	1.3	dB
Input 3rd Order Intercept Point		-10		dBm
Operating Temperature	-40	+20	+85	°C

Radiation Patterns (dBic)

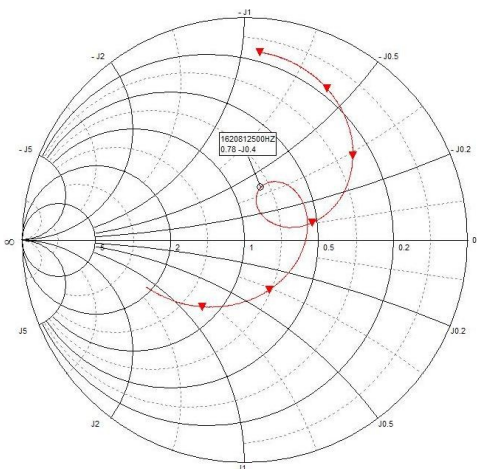


IRIDIUM SPECIFICATION

Electrical Characteristics with NO GROUND PLANE

Parameter	Typical	Units
Frequency	1616-1626	MHz
Gain @ 90° (Zenith)	1.7-2.0	dBic
Gain @ 10° Elevation	-4.0	dBic
Gain @ 20° Elevation	-2.2	dBic
Gain @ 30° Elevation	-1.2	dBic
Gain @ 45° Elevation	0.0	dBic
Gain @ 70° Elevation	1.2	dBic
Beamwidth (3dB)	120	Degrees
Radiation Pattern	see below	
Polarisation	RHCP	
VSWR	2:1	
Operating Temperature	-40 to +80	° C

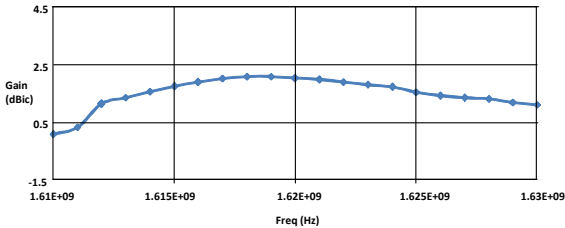
Impedance Plot



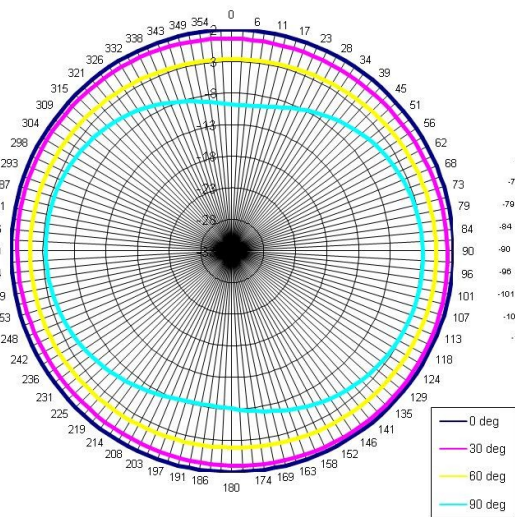
Physical Characteristics

Connector Version	Diameter mm (inch)	Length mm (inch)
SMA Plug	19 (0.75)	53.0 (2.08)
TNC Plug	19 (0.75)	78.3 (3.08)
TNC Jack	19 (0.75)	75.3 (2.96)
SMA Jack (GPS only)	19 (0.75)	58.5 (2.30)

Typical Gain vs Frequency



Azimuth Plot



Elevation Plot

