

# DEEP-SEA ANTENNAS



## APPLICATIONS

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

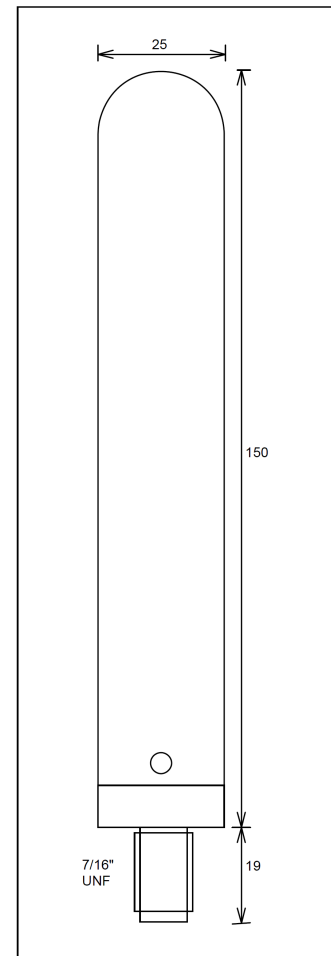
## FEATURES

- **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

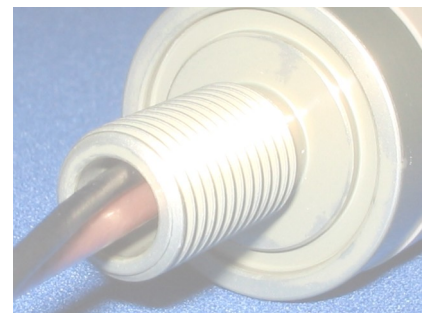
- Length: 169mm (150mm tip to base + 19mm thread)
- Width: 25mm
- Thread width: 7/16" UNF
- GPS and Iridium cable length: approx. 17cm from base
- Iridium connector: SMA plug or U.FL plug
- GPS connector: MCX plug

## DIMENSIONS



*TRIDENT SENSORS'  
DEEP-SEA RECOVERY  
BEACON*

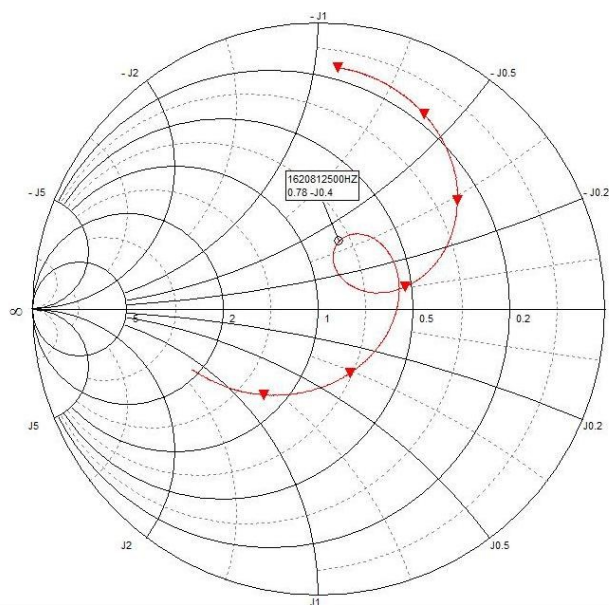
*DEEP-SEA ANTENNA  
WITH IRIDIUM AND  
GPS CABLES*



## 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

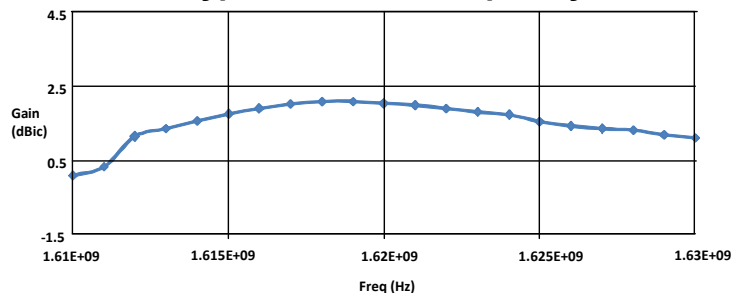
### Impedance Plot



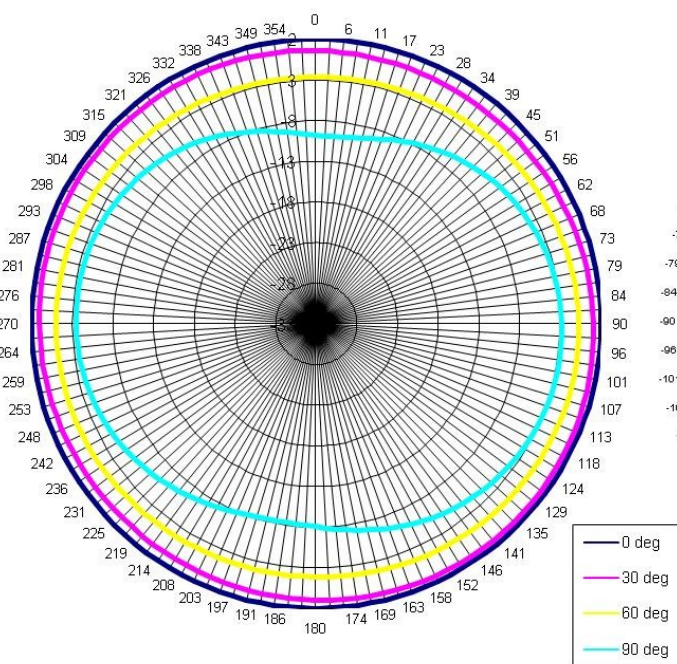
### Physical Characteristics

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)

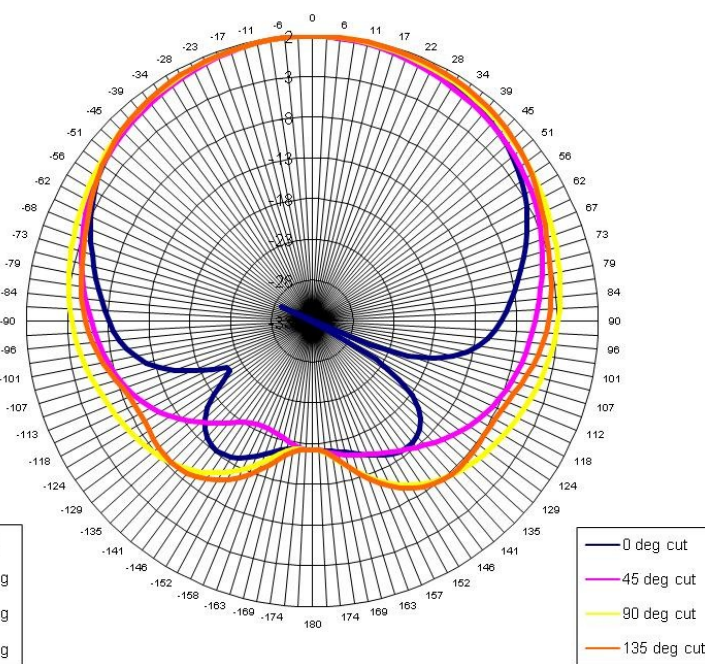
### Typical Gain vs Frequency



### Azimuth Plot



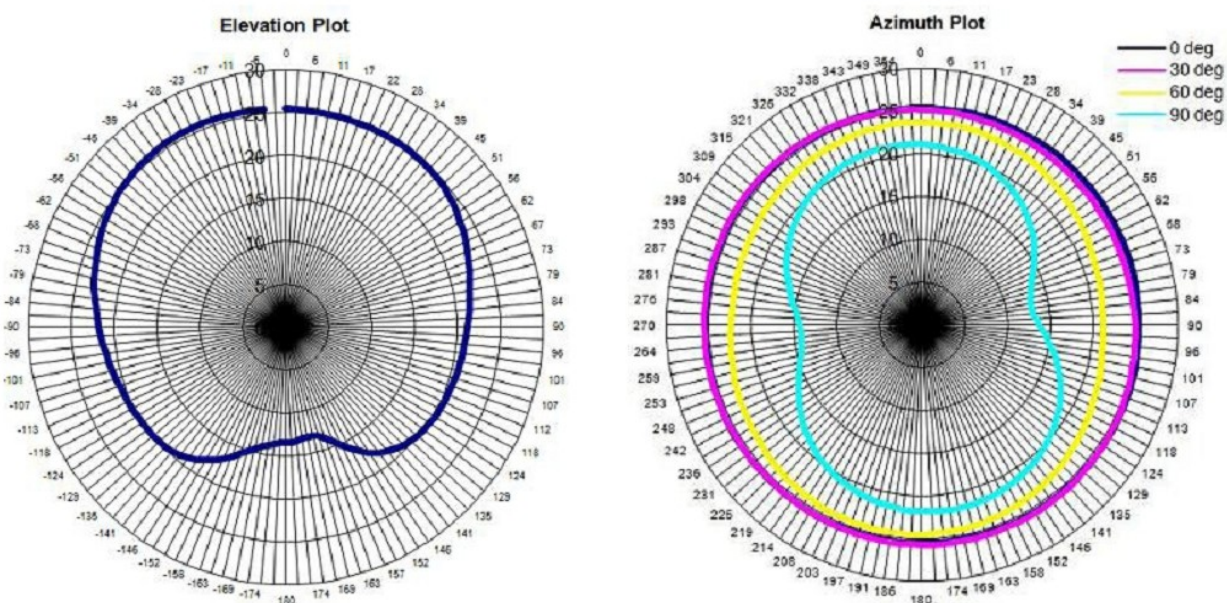
### Elevation Plot



## Specifications

	Minimum	Typical	Maximum	Unit
Part Number	SL1206(see page 4 for detailed part numbers)			Each
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)



The strength of the PowerHelix antenna technology is its immunity to de-tuning in the presence of dielectric loading, like human tissues. The SL1206 antenna retains efficiency and polarization near the human body. Conventional antennas lose 5-10dB of gain in similar circumstances.