

Part No. 1002857

EtherHelix Mission Critical GPS Antenna

1.575 GHz Circularly Polarized



EtherHelix GPS Antenna Quadhelix design

1.575 GHz

KEY BENEFITS

Smallest Effective Size

IMD antennas require a smaller keep-out area for surrounding components, leading to a smaller effective size.

High Performance

IMD's high efficiency and simple design rules lower development risk and speed time-to-market without sacrificing performance. Plus, high RF selectivity eliminates the cost and space for band-pass circuitry.

Reliability

Products are the latest RoHS version compliant.

APPLICATIONS

- GPS enabled cell phones
- GPS navigation systems
- Mobile devices

EtherHelix™ series of Isolated Magnetic Dipole GPS™ (IMD) antennas deliver on the key needs of device designers for higher functionality and performance in the worlds smallest Stand alone Circular polarized external and internal designs. These innovative antennas provide compelling advantages for GPS enabled cell phones, navigation equipment, and other mobile devices.

Real-World Performance and Implementation

Antennas may look alike on the outside, but the important difference is inside. Other antennas may contain simple PiFA or monopole patch designs that inter-act with their surroundings, complicating component layout or changing performance with use position. Ethertronics' antennas utilize patented IMD technology to deliver a unique size and performance combination.

Stays in Tune

High RF isolation means IMD antennas resist de-tuning regardless of usage position. And one standardized part can typically be placed in a variety of locations.

Electrical Specifications

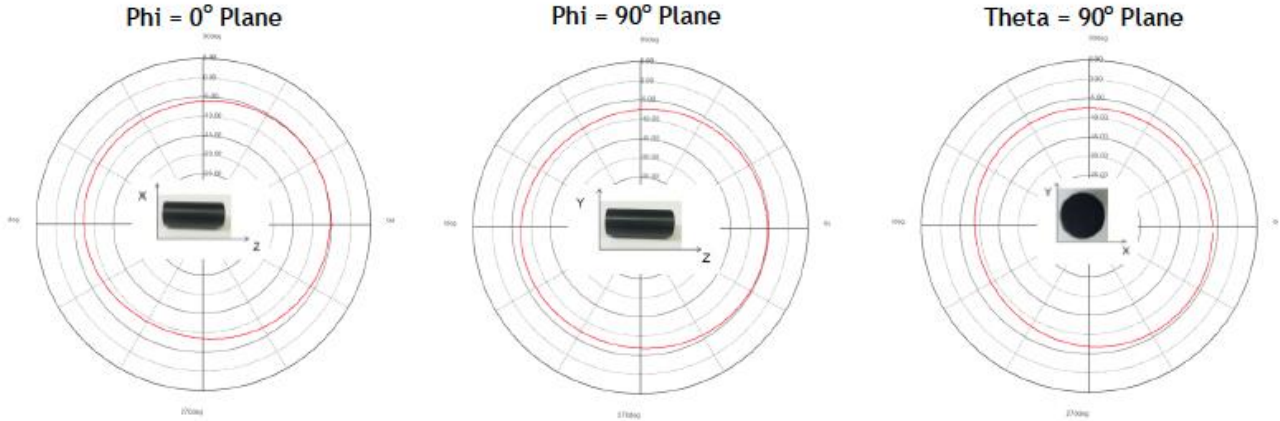
Frequency	GPS - 1.575 GHz
Polarization	Right Hand CP (RHCP)
Peak Gain	-3.0 dBi [-5 dB at Zenith]
Beam-width	120 degrees (Axial Ratio < 3dB)
Axial Ratio	< 1.5 dB at zenith
Average Efficiency	27%
VSWR Match	2.0:1.0 max
Feed Point Impedance	50 ohms unbalanced
Power Handling	0.5 Watt CW

Mechanical Specifications

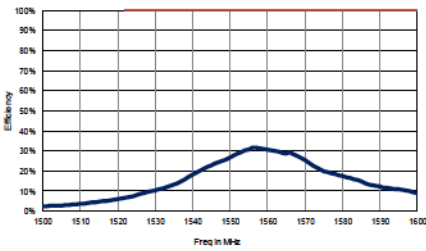
Dimensions	34.0mm height. 15.0mm diameter
Connector	SMA Male
Weight	11.8 g
Packaging	Trays: 60 per tray - 300 per master carton

Ethertronics' EtherHelix GPS Antenna Specifications.
 Ethertronics produces a wide variety of standard and custom antennas to meet user needs.
 Below are the typical specs for a high performance GPS application.

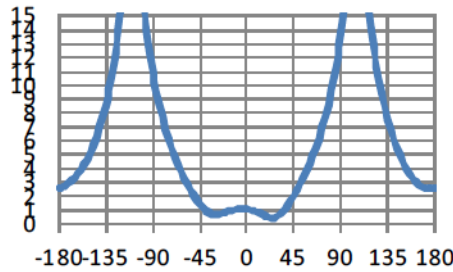
Antenna Radiation Patterns @ 1.575 GHz



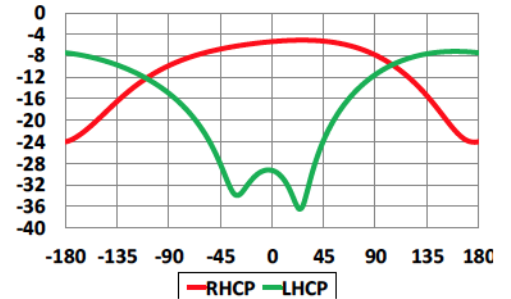
Efficiency Plot



Axial Ratio Plot



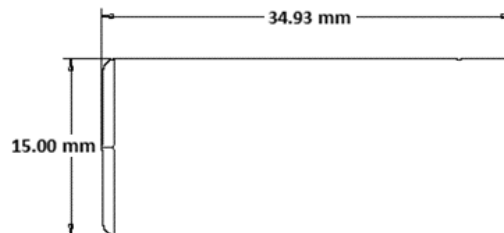
RHCP LHCP Plot



Mechanical Features

Mechanical Rating	IP 68 UV Protected
Connector	SMA Male
Operative Temperature	-40C to +85C
Humidity	95% RH at 130 °F

Main Dimensions



*All dimensions provided in this document are for informational purposes only.