

## Prestta™ GPS Embedded Antennas 1.575 GHz



Ethertronics' Prestta series of Isolated Magnetic Dipole™ (IMD) stamped metal embedded GPS antennas delivers on the key needs of today's GPS product designers: **small antenna volume**, **superior wireless range** and **high isolation characteristics** that exhibit extremely low interaction with surrounding components. Together, they provide compelling advantages for GPS-enabled cell phones, watches and other mobile devices driven by Ethertronics IMD antenna technology. The omnidirectional radiation patterns provide strong signal capturing strength even in urban settings with tall buildings and dense foliage.

### TECHNOLOGY ADVANTAGES



#### Stays in Tune

The form factor of IMD antenna technology provides superior RF field containment, resulting in greater sensitivity to highly precise GPS signals in single and multi-function mobile devices. Ethertronics IMD antennas resist de-tuning.

With standard and custom stamped metal and ceramic solutions, patented IMD technology can be quickly implemented from single to quad-band designs; and deliver **performance up to 40% higher** than competing technologies. The end result is a smaller antenna, with outstanding performance, lower program development risk and quicker time-to-market.



### KEY BENEFITS

#### DESIGN ADVANTAGES

##### High Tolerance to Frequency Shifts

- High isolation characteristics make IMD technology immune to frequency shifts that might otherwise impair reception—critical in GPS applications.

##### Quicker Time-to-Market

- By optimizing antenna size and performance, customer specifications are more easily met.

##### RoHS Compliant

- Ethertronics' antennas are fully compliant with the European RoHS Directive 2002/95/EC.

#### END USER ADVANTAGES

##### Excels in Real-Life Conditions

- GPS antennas that incorporate IMD technology deliver better end-user performance, helping you exceed consumers' high expectations of superior service.
- Meets the ever-growing demand for smaller, thinner product designs by eliminating whip and stub antennas.

##### Superior Range

- Better performance means longer range and greater sensitivity to critically precise signals.

##### Fast Acquisition Time

- Improved performance also means faster signal acquisition times so users can utilize the GPS application more quickly and reliably.

#### SERVICE AND SUPPORT

##### Extensive RF Experience

- Our design teams are composed of RF PhDs, project managers and a complete engineering team to support every project — from initial prototyping to TIS and TRP performance testing.

##### Global Operations & Design Support

- Ethertronics' global operations supports an integrated network of design centers that can take projects from concept to production.

**PRODUCT: GPS**

**Example: Ethertronics' GPS Embedded Antenna Specifications.**  
 (Ethertronics produces a wide variety of standard and custom antennas to meet user needs.  
 Below are the typical specs for a GPS application.)

**Electrical Specifications**

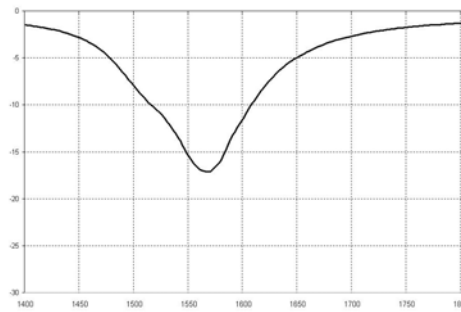
Typical Characteristics  
 (inside an enclosure)

<b>GPS Antenna</b>	<b>1.575 GHz</b>
Peak Gain	2 dBi
Efficiency	60%
VSWR Match	2.1:1
Front to Back Ratio	-6 dB
Feed Point Impedance	50 ohms unbalanced (other if required)
Power Handling	2 Watt cw
Polarization	Linear
Shielding Ratio	(near field)

**Mechanical Specifications**

Size	Many standard sizes available to fit a variety of applications
Mounting	Surface mount
Weight	2-5 g depending upon version
Packaging	Individually packaged

**Typical Return Loss**



**Antenna Radiation Patterns**

Typical Performance

