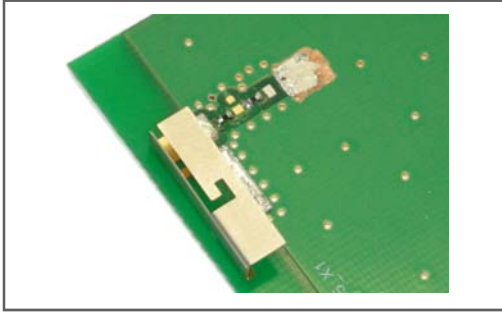


## Prestta™ WLAN Embedded Antenna

2.4/4.9/5.2/5.8 GHz (802.11 a/b/g/n + Japan)



Ethertronics' Prestta series of Isolated Magnetic Dipole™ (IMD) stamped metal antennas address the challenges facing today's product designers. IMD's high performance and isolation characteristics offer better connectivity and minimal interference. IMD antennas can be used in a variety of devices:

- Notebook Computers
- Access Points
- Industrial Handhelds
- Mobile Phones

### TECHNOLOGY ADVANTAGES



**Stays in Tune**  
IMD antenna technology provides superior RF field containment, resulting in less interaction with surrounding components. Ethertronics IMD antennas resist de-tuning; providing a robust radio link regardless of the usage position.

The patented IMD technology can be utilized in a variety of form factors, ranging from single to quad-band stamped metal antennas to compact, yet high performance ceramics. IMD antennas requires a smaller design keep-out area, carry lower program development risk which yields a quicker time-to-market, without sacrificing RF performance.



### KEY BENEFITS

#### DESIGN ADVANTAGES

##### Quicker Time-to-Market

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

##### Greater Flexibility

- Ethertronics' first-in-class IMD technology enables you to develop concept designs that are more advanced and that deliver superior performance in reception-critical GPS/WiFi applications.

##### RoHS Compliant

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

#### END USER ADVANTAGES

##### Unique Form Factors Support Advanced Industrial Designs

- Smaller, more efficient IMD embedded antennas break through restrictive design rules and provide new freedom in component placement.

##### Superior Range & Signal Strength

- Better antenna function means longer range and greater sensitivity to critically precise signals—delivering greater customer satisfaction while building brand loyalty.

##### Faster Acquisition Times and Data Rates

- Improved performance provides faster data rates for downloading e-mail or surfing the internet and watching mobile video. Improved performance also means faster signal acquisition times so users can utilize GPS applications 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: WLAN a/b/g/n + Japan

## Ethertronics' Internal (Embedded) Antenna Specifications.

Ethertronics produces a wide variety of standard and custom antennas to meet user needs. Below are the typical specs for a WLAN application.

### Electrical Specifications Typical Characteristics

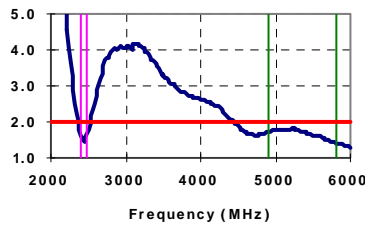
WLAN a/b/g/n + Japan Antenna (GHz)	2.390-2.490	4.900-5.100	5.150-5.350	5.70-5.900
Peak Gain	3 dBi	4 dBi	4 dBi	4 dBi
Efficiency	65%	60%	55 %	45 %
VSWR Match	<2.1 : 1	<2.1 : 1	<2.1 : 1	<2.1 : 1
Front to Back Ratio	-2 dB	-10 dB	-10 dB	-10 dB
Feed Point Impedance	50 Ω unbalanced (other if required)			

### Mechanical Specifications

Dimensions	17.9 mm x 6.9 mm x 4.3 mm
Weight / Packaging	0.3 g
Cable / Connector	Optional – Hirose Electric Co, U.FL-LP-088 or equivalent
Cable Length	Surface Mount standard configuration, 450mm cable length optional

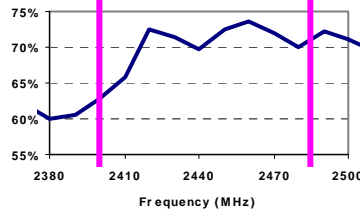
### VSWR

Typical WLAN VSWR

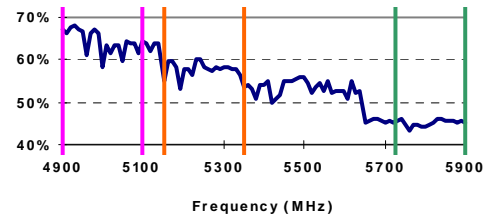


### Efficiencies

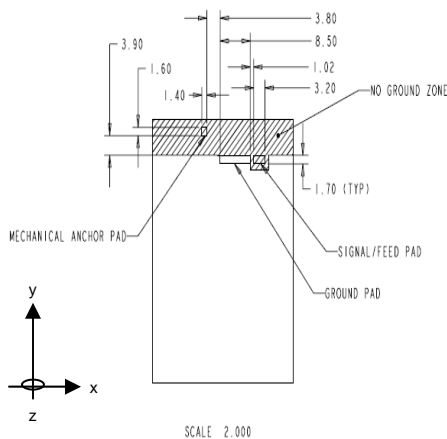
WLAN b & g



WLAN a



### Antenna PCB Ground/Feed Layout



#### Notes:

1. PCB size is a representative sample and able to be modified to specific requirements.
2. No Ground Zone: The shaded area is to be free of any ground plane on all layers.
3. All dimensions are in mm.

### Antenna Radiation Patterns

Typical Performance

2.390-2.490 GHz Band

4.900-5.900 GHz Band

