

## PRODUCT: WLAN

Part No. 1000615-A, 1000617-A, 1000668, 1000672

# Prestta™ WLAN Embedded Antenna

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

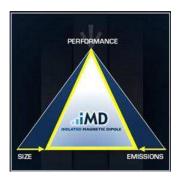


Ethertronics' Prestta series of Isolated Magnetic Dipole™ (IMD) trace antennas address the challenges facing today's product designers. IMD's high performance and isolation characteristics offer better connectivity and minimal interference.

IMD antennas can be used in a variety of devices:

- Notebook Computers
- Access Points
- WiFi enabled Televisions & Monitors

### **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.

Prestta WLAN antennas use patented IMD technology in a trace configuration to provide high performance. 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 applications.
- Multiple cable lengths to fit a variety of devices. 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.

### SERVICE AND SUPPORT

### **Extensive RF Experience**

• Our WLAN antennas are supported by documentation, and when needed, by the expertise of RF engineers who have integrated hundreds of antenna designs into wireless devices.

### **Global Operations & Design Support**

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

ETHERTRONICS

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# PRODUCT: WLAN a/b/g/n + Japan

### Ethertronics' Internal (Embedded) Antenna Specifications. Below are the typical specs for a WLAN application.

|  | WLAN a/b/g/n + Japan<br>Antenna (GHz)            | 2.390-2.490<br>b, g  | 4.900-5.100<br>Japan  | 5.150-5.350<br>a       | <b>5.70-5.900</b><br>a             |               |
|--|--|--|---|------------------------|------------------------------------|---------------|
| Typical Characteristics  | Peak Gain  | 1.5-2.5 dBi  | 3.0-5.0 dBi   | 3.0-5.0 dBi            | 3.0-5.0 dBi                        |               |
| (In reference device housing<br>made of PC/ABS plastic)        | Efficiency                                       |  | 65%   | 65%                    | 50%                                |               |
|  | VSWR Match                                       | <2.0:1   | <2.5:1  | <2.0:1                 | <2.5:1                             |               |
|  | Feed Point Impedance                             | 50   | $\Omega \Omega$ unbalanced  | (other if required     | 1)                                 |               |
| Mechanical Specifications                                      | Dimensions                                       |  | 35.2 x 8.5 x  | 0.85 mm                |                                    |               |
| •  | Weight   |  | 0.5 g   |                        |                                    |               |
|  | Cable / Connector                                | Contact Ethertronics for details.  |   |                        |                                    |               |
|  | Cable Length                                     | 1000615-A—Antenna with 100mm cable<br>1000617-A—Antenna with 150mm cable<br>1000668—Antenna with 50mm cable<br>1000672—Antenna with 200mm cable  |   |                        |                                    |               |
| VSWR   |  | Efficiencies   | 100%  |                        |                                    |               |
| 3  |  |  | 90%<br>80%  |                        |                                    |               |
|  |  |  | 70%<br>60%  |                        |                                    |               |
| VIAN b.g<br>VSWR (:1)  |  |  | 50%<br>40%  |                        |                                    |               |
| S WE   |  | 3  | 30%   |                        |                                    |               |
|  |  |  | 20%<br>10%  |                        |                                    |               |
| 2370 2390 2410 2430<br>Freq in                                 |  | 10   | 0%  | 350 2400               | 2450 2500                          | ) 2           |
|  |  |  | 100%  | Freq in                |                                    | ) 2           |
|  |  |  | 90%   |                        |                                    |               |
| 3  |  | _  | 80%   |                        |                                    |               |
|  |  |  | 60%   |                        | -vmm                               | $\sim$        |
| D MLAN a   |  |  | 50%<br>40%  |                        |                                    |               |
| VLAN a<br>VSWR (:1)  |  |  | 30%<br>20%  |                        |                                    |               |
| 1  | 5400 5000 5000                                   | _  | 10%   |                        |                                    |               |
| 4800 5000 5200<br>Fre  | 5400 5600 5800<br>eq in MHz                      |  | 0%<br>4800 50   | 00 5200 5<br>Free      | 5400 5600<br>in MHz                | 5800          |
| Antenna Radiation Patterns                                     | s <b>≜</b> x                                     | ∮y   |   | ∮y                     |                                    |               |
| Typical Performance  | Z sodeg  | Z  | 90deg   | x                      | 90deg                              |               |
| Band   | 50048<br>50048                                   |  | 5.00dB  |                        | 5.00dB                             | $\mathbf{X}$  |
| Ä  | 16.004B<br>16.004B                               |  | 10.00dB<br>15.00dB  |                        | 40,00,48<br>46,00,48               | N.            |
| 2.390-2.490 GHz  | an option<br>as option<br>as option<br>as option | $\left  \right\rangle \left  \right\rangle = \left  \left( $ | 20,004B<br>25,004B<br>26,004B                                       | M = I(I)               | 25,0049<br>25,0049<br>26,0049      | ]///[         |
| 190  | 180deg   | Odeg 180deg  | III (QX)  | 0deg 180deg            | (                                  | 111           |
| -2.  |  |  |   |                        |                                    | $\mathcal{H}$ |
|  |  |  |   |                        |                                    |               |
|  |  |  |   |                        |                                    |               |
| / z  | 270deg<br>30deg<br>#8904B                        |  | 270deg<br>sodeg   |                        | 270deg<br>90deg<br>49.00dB         |               |
| Į g  | 500dB  | \ /  |   |                        | 5.00dB<br>5.00dB<br>5.00dB         |               |
| Y a  | 40.008<br>55.008                                 |  | 6008<br>16008<br>16008  | $\rightarrow$ $\wedge$ | 10.00dB<br>15.00dB                 | $\mathcal{H}$ |
| £  |  | <u>}</u> )) //((   |   | $\lambda $             | 20,008<br>25,0038<br>26,0038       | 2111          |
| 0  | 1805eg   | Odeg 100deg  | $\left( \left( \begin{array}{c} 0 \\ 0 \end{array} \right) \right)$ | cdeg 180deg            | $\mathbb{N}(\mathbb{Q})$           |               |
| 8  |  |  |   |                        | $         X \times   X \wedge I  $ |               |
| 000<br>90<br>90  |  |  |   |                        |                                    | HJ            |
| <ul> <li>A</li> <li>A</li> <li>4.900-5.900 GHz Band</li> </ul> |  |  |   |                        |                                    | H             |

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270deg