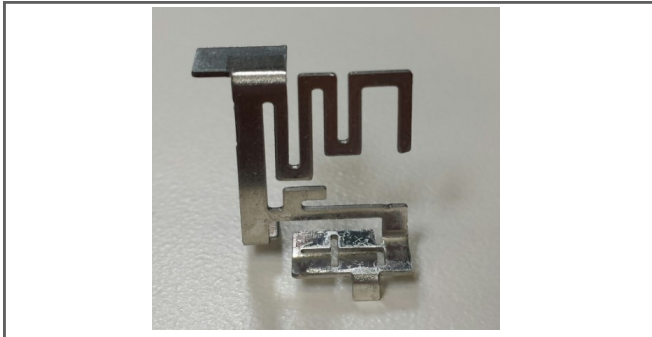


**Presta™ WLAN with through hole features – Embedded Antenna**  
2.4 GHz (802.11 b/g/n)



**KEY BENEFITS**

Ethertronics' Presta 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:

- Access Points, Gateways, Routers
- Industrial Handhelds
- WiFi enabled Televisions & Monitors
- STB
- M2M

**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.

Presta WLAN antennas use patented IMD technology in a stamped metal 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.

**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.

**RoHS Compliant**

- Ethertronics' antennas are fully compliant with the European RoHS Directive 2011/65/EU.

**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.

# PRODUCT: Embedded Dual Band antenna WLAN b/g/n - 1002295

## Ethertronics' Internal (Embedded) Antenna Specifications.

Below are the typical specs.

### Electrical Specifications

Typical Characteristics on  
120x180mm PCB

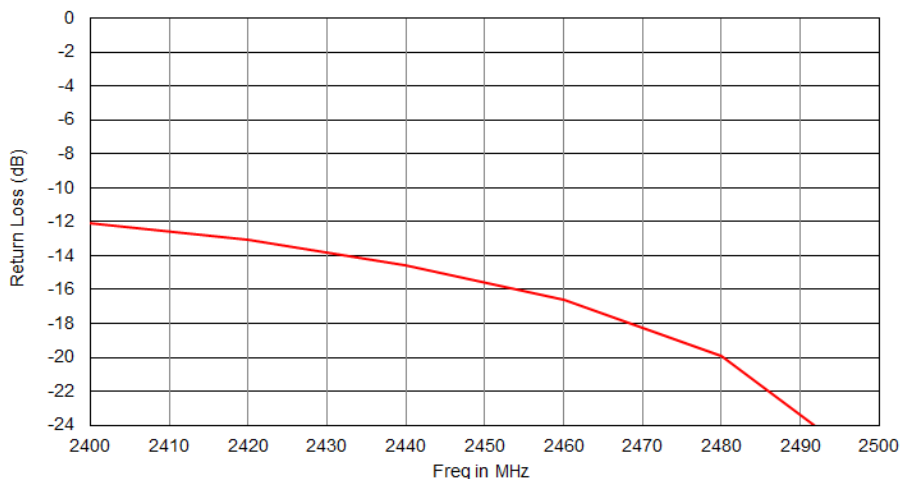
	2.400 - 2.485 GHz
Peak Gain	2.95 dBi
Average Efficiency	70%
Return Loss	$\leq -10$ dB
Feed Point Impedance	50 $\Omega$ unbalanced

### Mechanical Specifications

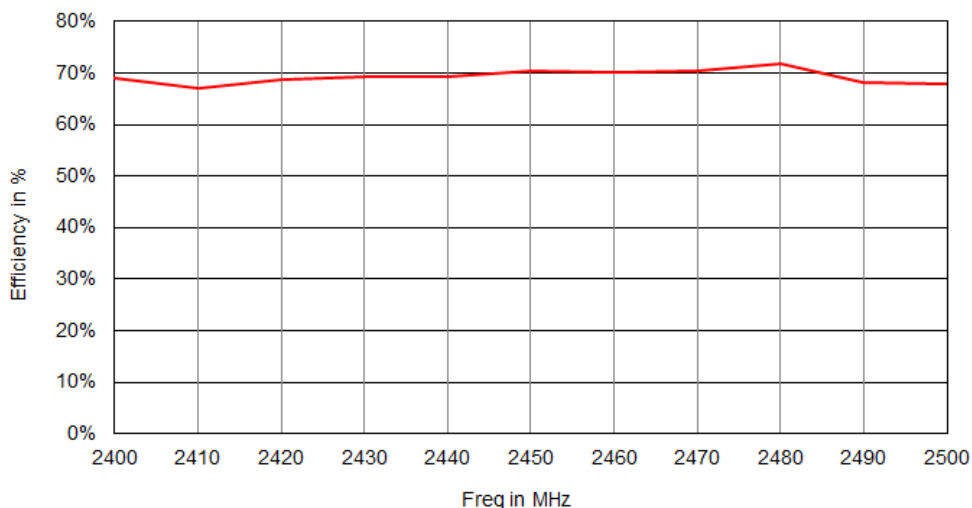
Typical Characteristics on  
120x180mm PCB

Dimensions	15.60 x 16.10 x 9.70 mm (thickness 0.5mm)
Weight	0.75g
Packaging	Delivered in Trays.

### Return Loss in the 2.4GHz band



### Efficiency in the 2.4GHz band in %



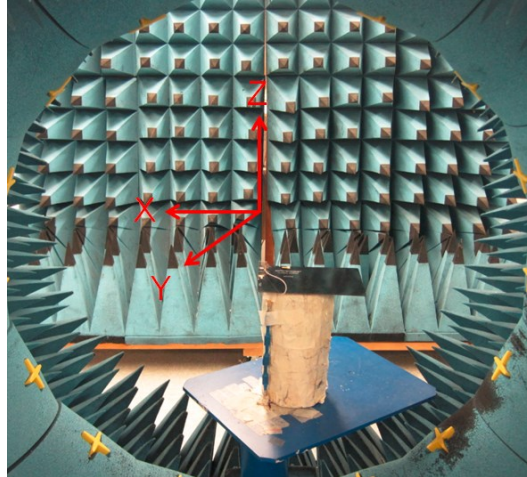
# PRODUCT: Embedded Dual Band antenna WLAN b/g/n - 1002295

## Ethertronics' Internal (Embedded) Antenna Specifications.

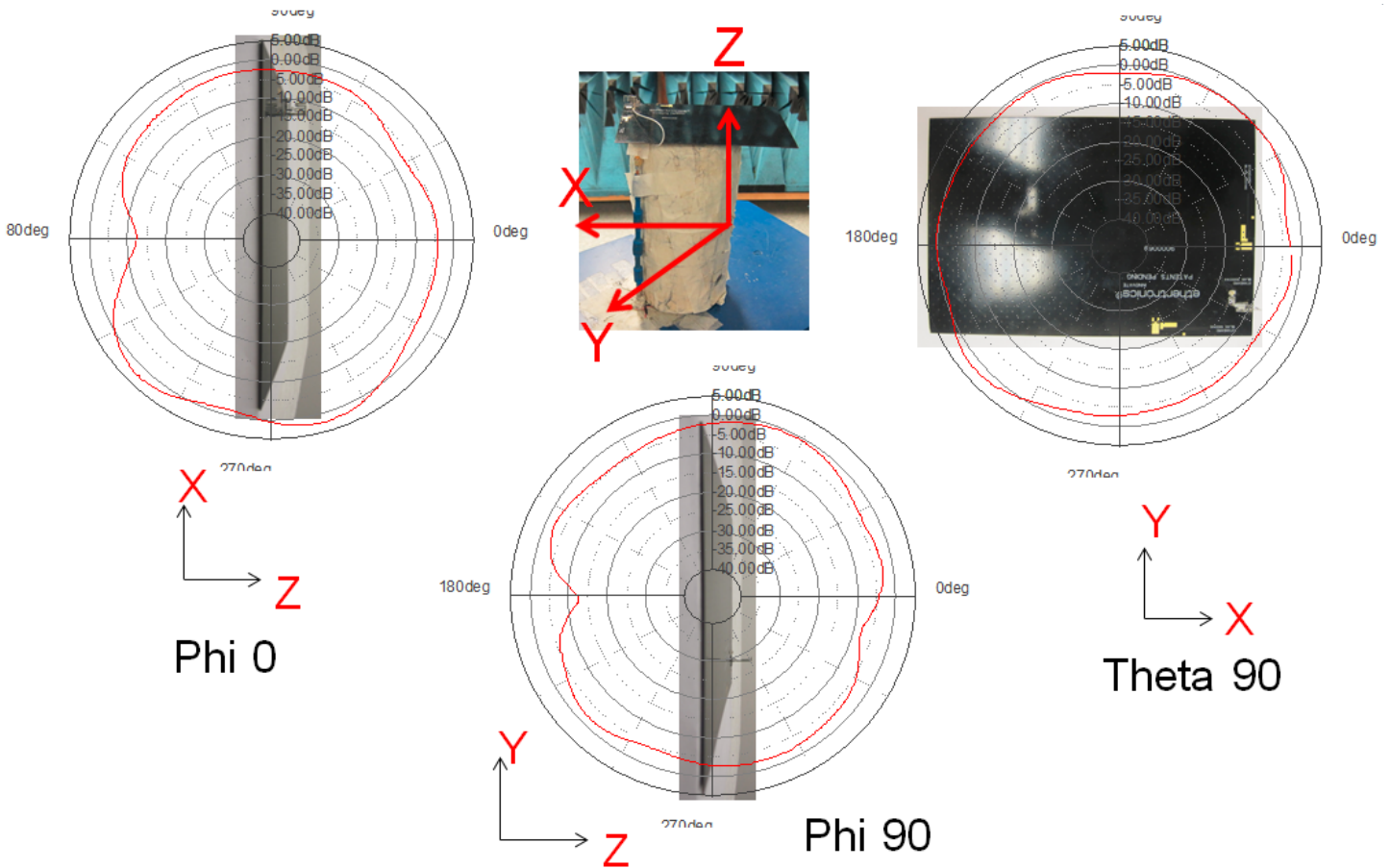
Below are the typical specs.

### Radiation Patterns Set-Up

Typical Characteristics on 120x180mm PCB



### Radiation Patterns at 2.44 GHz band

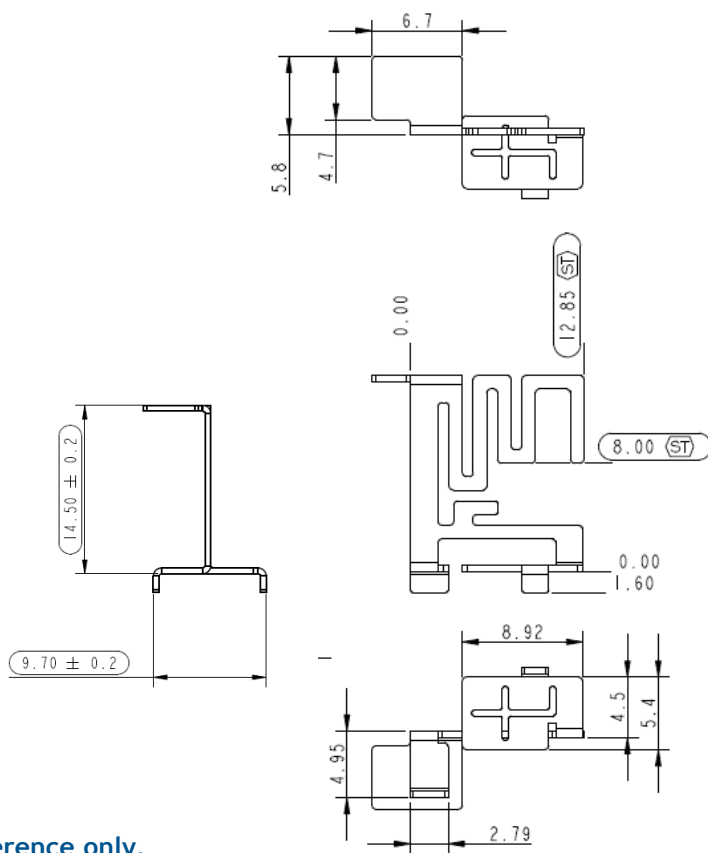
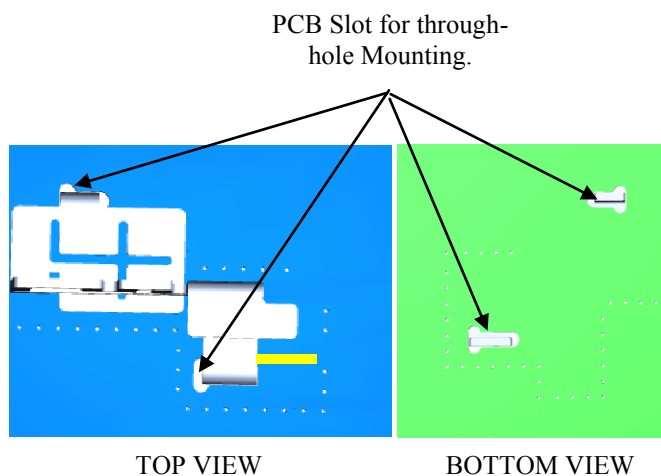


**PRODUCT: Embedded Dual Band antenna WLAN b/g/n - 1002295**

**Ethertronics' Internal (Embedded) Antenna Specifications.**

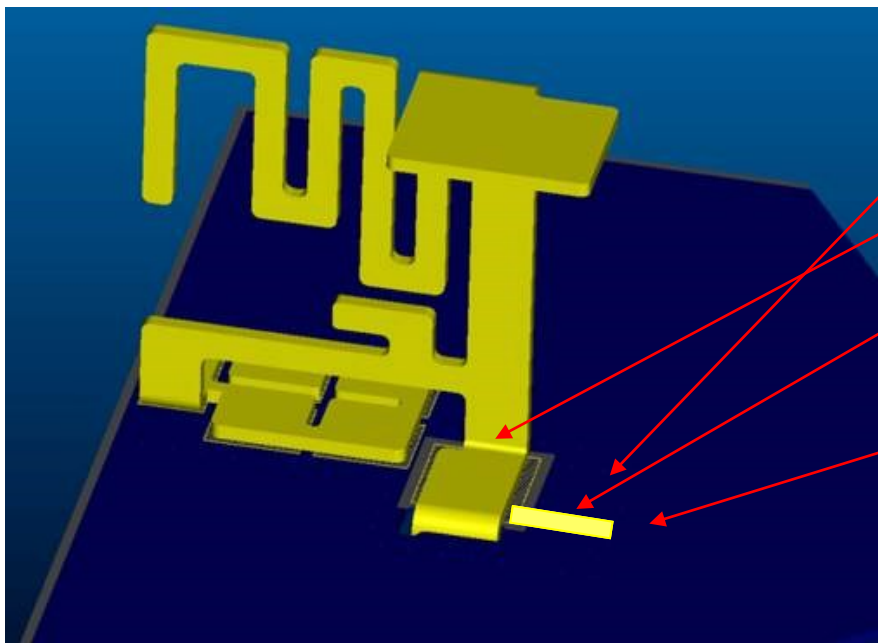
Below are the typical dimensions and footprint.

**Main Dimensions (in mm)**



\*Dimensions and Tolerances on data sheet are for reference only.

**3D View of Antenna on PCB**



Clearance Needed around the Feed pad only.

Au plated Pads for GND connection.

Au plated Feed Pad

Based upon Final PCB stack-up, a 50 Ohms line needs to be designed and connected at this location.