

**Presta™ WLAN BT Zigbee
Tunable Embedded PCB Antenna**
802.11 2.4GHz/5GHz



Ethertronics' Presta 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:

- Computing Devices
- Networking Devices
- M2M, IoT wireless devices

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 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.

This antenna enables limited range RF tuning by solder bridges or cuts to be more adaptive for the antenna install environment.



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 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

- Ethertronics 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: 802.11 2.4GHz/5GHz

Internal (Embedded) Antenna Specifications Typical specs for a WLAN, BT, Zigbee applications

Electrical Specifications

Typical Characteristics
(In reference device housing
made of PC/ABS plastic with
100mm long cable)

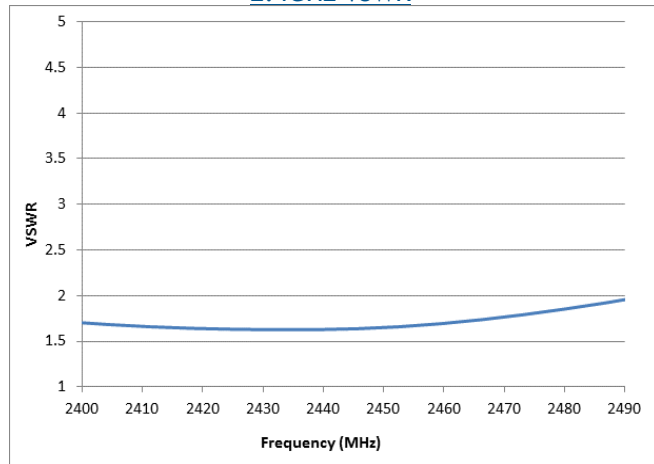
WLAN a/b/g/n/ac Antenna (GHz)	2.390-2.490	4.900-5.100	5.150-5.350	5.70-5.900
Peak Gain	2.5 dBi	3.7 dBi	3.4 dBi	4.4 dBi
Efficiency	63%	78%	75%	70%
VSWR Match	<2.0:1	<2.0:1	<2.0:1	<2.0:1
Feed Point Impedance	50 Ω unbalanced (other if required)			

Mechanical Specifications

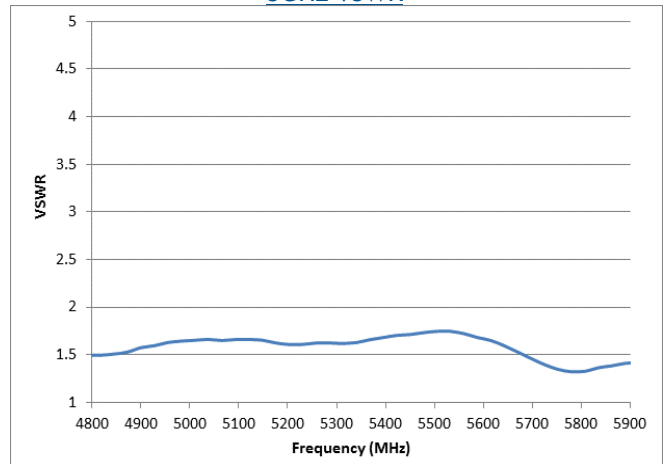
Dimensions	35.2 x 8.5 x 0.4 mm
Weight	0.5 g
Cable / Connector	1.13mm cable / U.FL compatible or IPEX MHF4 connector
Cable Length	1001932PT -Antenna with 100 mm black cable, with 3M Adhesive on PCB back side
Packaging	Bags

Data

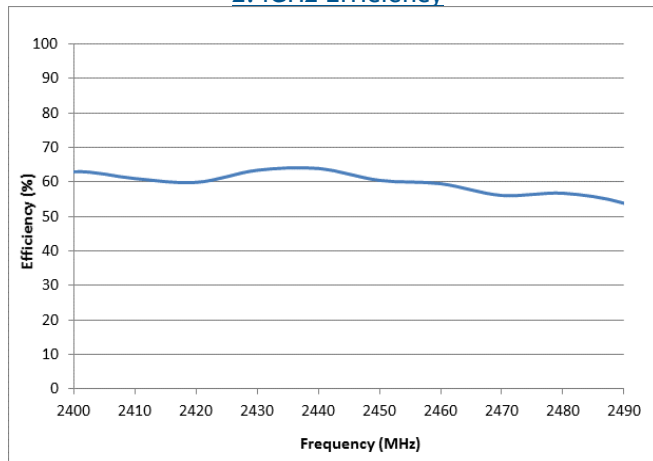
2.4GHz VSWR



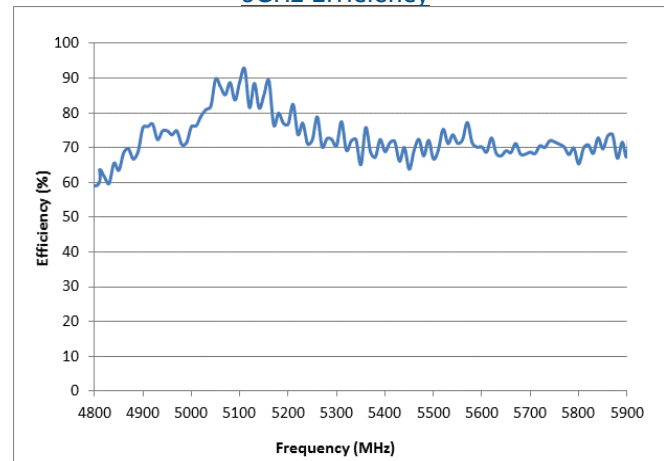
5GHz VSWR



2.4GHz Efficiency



5GHz Efficiency

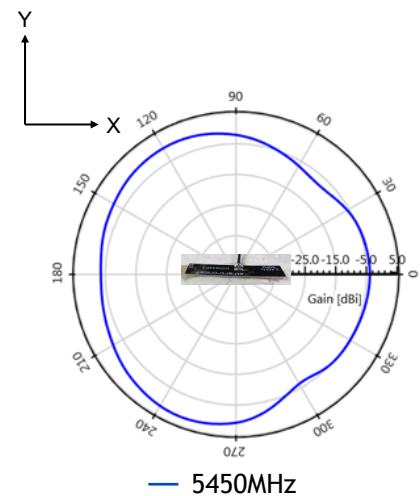
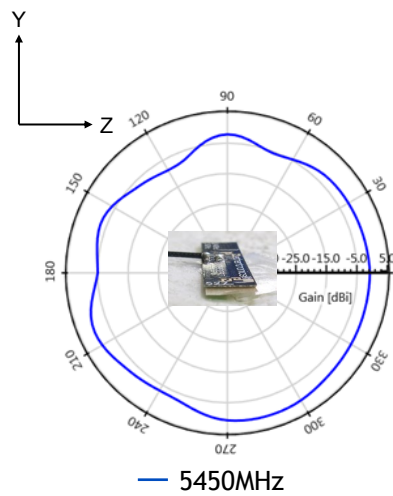
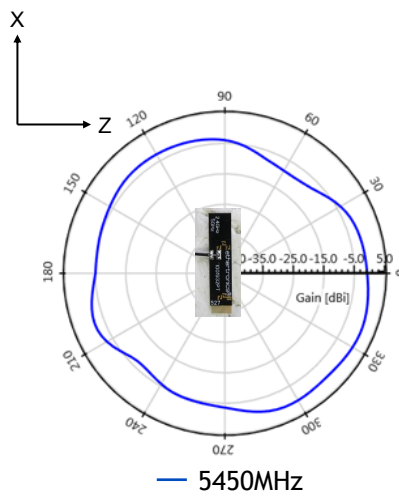
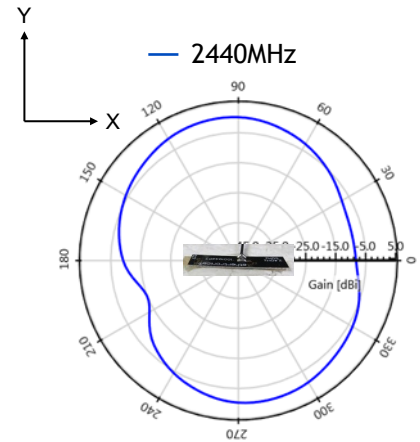
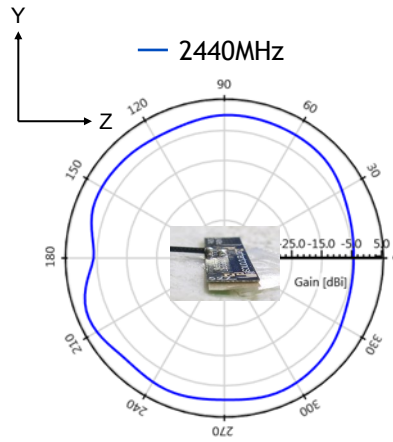
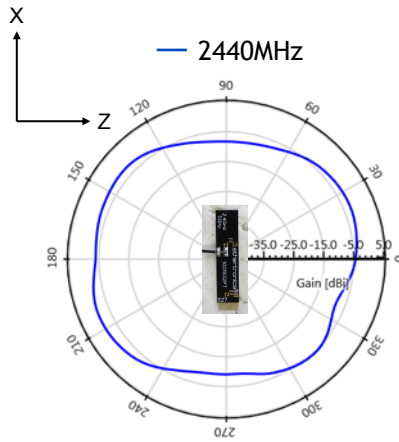
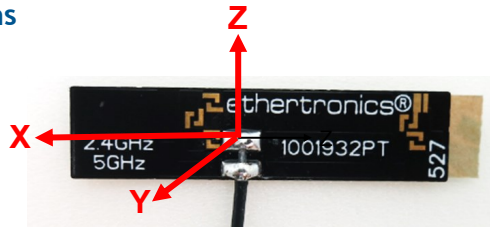


PRODUCT: 802.11 2.4GHz/5GHz

Internal (Embedded) Antenna Specifications Typical specs for a WLAN, BT, Zigbee applications

Antenna Radiation Patterns

Typical Performance

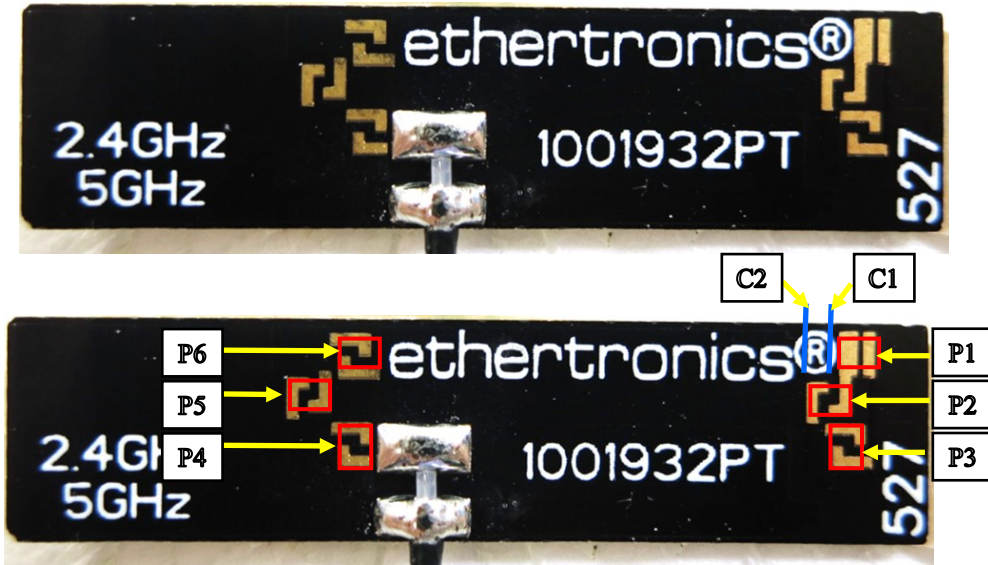


PRODUCT: 802.11 2.4GHz/5GHz

Internal (Embedded) Antenna Specifications
 Typical specs for a WLAN, BT, Zigbee applications

Antenna Tuning

This antenna has unique features enabling limited range RF tuning by leaving P1-P6, C1-C2 solder bridge or cut. Refer to detailed tuning options.



Tuning Options

Options for Tuning: "2.4GHz (Lower)"

<u>MODE</u>	<u>T1</u>	<u>T2</u>	<u>T3</u>	<u>T4</u>
PADS	Connect: P2	Connect: P1	Connect: (P2+P3)	Connect: (P1+P3)
Outcome: (Ref: Baseline)	~200MHz shift low	~250MHz shift low	~350MHz shift low	~370MHz shift low

Options for Tuning: "2.4GHz (Higher)"

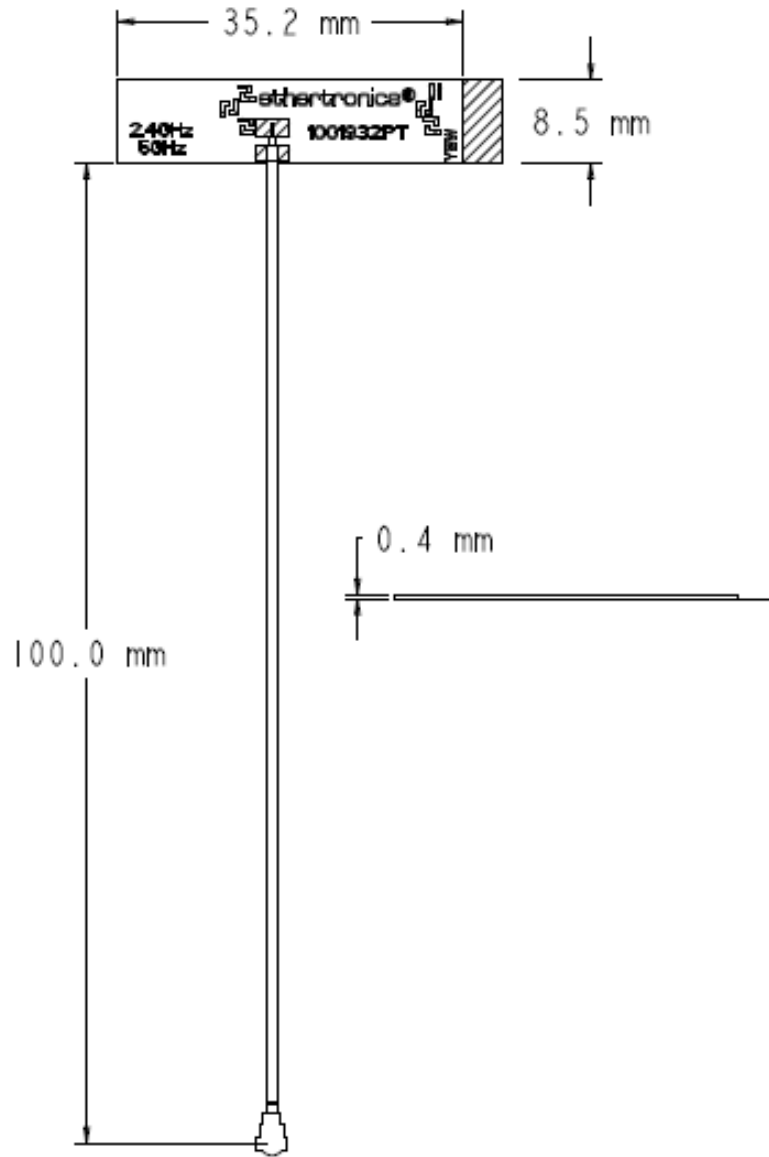
<u>MODE</u>	<u>C1</u>	<u>C2</u>
PADS	Cut: C1	Cut: C2
Outcome: (Ref: Baseline)	~170MHz shift high	~300MHz shift high

Options for Tuning: "5GHz (Lower)"

<u>MODE</u>	<u>T5</u>	<u>T6</u>	<u>T7</u>	<u>T8</u>
PADS	Connect: P4	Connect: (P4+P5)	Connect: P6	Connect: (P5+P6)
Outcome: (Ref: Baseline)	~200MHz shift low	~1500MHz shift low	~500MHz shift low	~1900MHz shift low

PRODUCT: 802.11 2.4GHz/5GHz

Internal (Embedded) Antenna Specifications
Typical specs for a WLAN, BT, Zigbee applications



Ordering Guide

	Connector	Cable	Adhesive
1001932PT-AA10L0100	u.FL compatible	Diameter: 1.13mm Length: 100mm Color: Black	3M468
1001932PT-AC10L0100	MHF4	Diameter: 1.13mm Length: 100mm Color: Black	3M468

*Additional configurations available by contacting Ethertronics support at info@ethertronics.com