

# Part No. WXP3015W08-U100D3B0A

## Embedded Wi-Fi Dual Band Antenna - Multiple Radiation Patterns

**2.4 & 5 GHz**

Supports: Access Points, Routers, Gateways, Wi-Fi enabled TV's and monitors



Ethertronics WXP3015W08 series FR4 based antennas include an embedded Wi-Fi dipole design that delivers on the key needs of today's wireless product designers: miniaturized design and superior signal sensitivity. This antenna is ideal to rotate the radiation patterns with a single mechanical outline, slightly to the left (WA), to the right (WB) and straight aligned with Z-axis (WC), which allows to maximize system throughput and migrate peak gain issues.

### Excels in Real-Life Conditions

Meets the ever-growing demand for smaller, thinner product designs by eliminating whip and stub antennas.

### 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 support an integrated network of design centers that can take projects from concept to production.

### Electrical Specifications

Typical Characteristics (in reference device housing made in PC/ABS plastic and 100mm cable length)

Frequency (GHz)	2.4 – 2.48	5.15 – 5.85
Return Loss*	< -8.4 dB	< 8.7 dB
Average Efficiency*	65 %	61%
Peak Gain*	< 3 dBi	< 6.7 dBi
Feed Point Impedance	50 ohms unbalanced	

### Mechanical Specifications & Ordering Part Number

\*Among all variants

Part Number	WXP3015W08-U100D3B0A
Size (mm)	30.00 ± 0.15 length 15.50 ± 0.15 width 0.80 ± 0.05 thickness
*Connector	u.fl compatible
*Cable length (mm)	100
Weight (g)	N/A
Adhesive	3M468MP
Packing	Individual PE bags (default) or tray (per request)

\*Additional variations available in different cable lengths, colors and connectors, refer to Appendix on page 4.

### Embedded Wi-Fi Antenna AP, Routers, Gateways

2.4 / 5 GHz

#### KEY BENEFITS

##### Quicker Time-to-Market

Standard part means fewer design changes Simple implementation

##### Superior Network Coverage

Better network coverage means more reliable wireless connections.

##### Single form factor with Three Radiation Patterns

Single mechanical outline with different radiation patterns  
Easy fine tune to maximize MiMo performance  
Maximize system throughput  
Mitigate peak gain issues

##### RoHS Compliant

Products are the latest RoHS version compliant

#### APPLICATIONS

- Access Points and Routers
- Gateways
- Wi-Fi enabled TV's and monitors

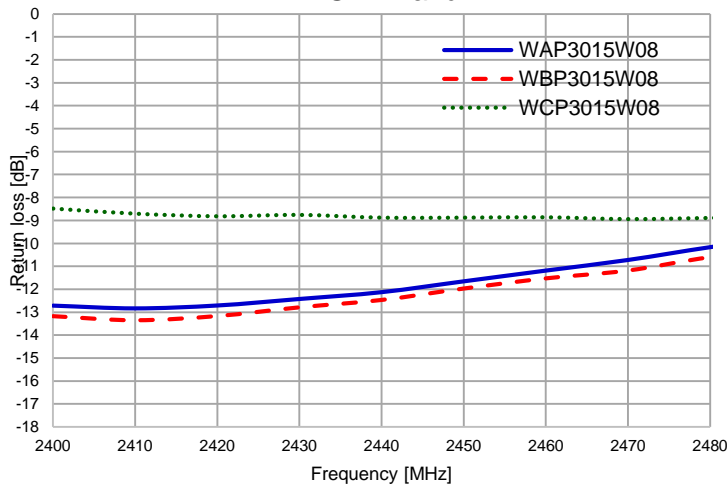


Wi-Fi 2.4 & 5 GHz embedded antenna specifications  
Ethertronics produces a wide variety of standard and custom antennas to meet user needs

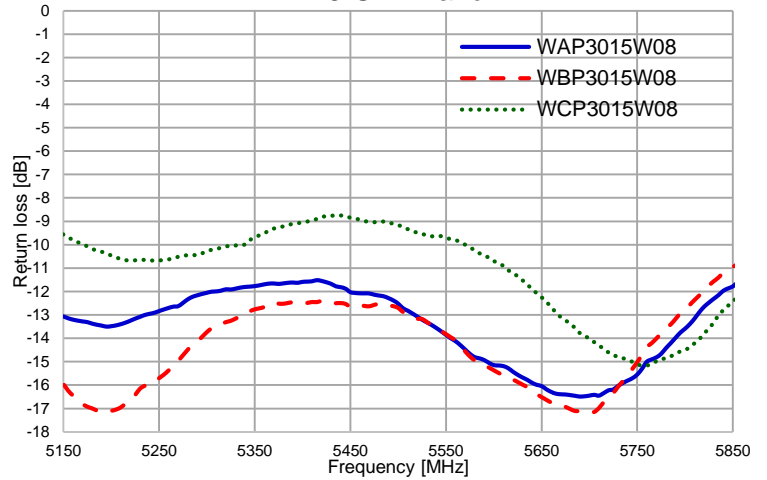
Return Loss and Efficiency Plots

Measured in reference device housing made in PC/ABS plastic and 100 mm cable length

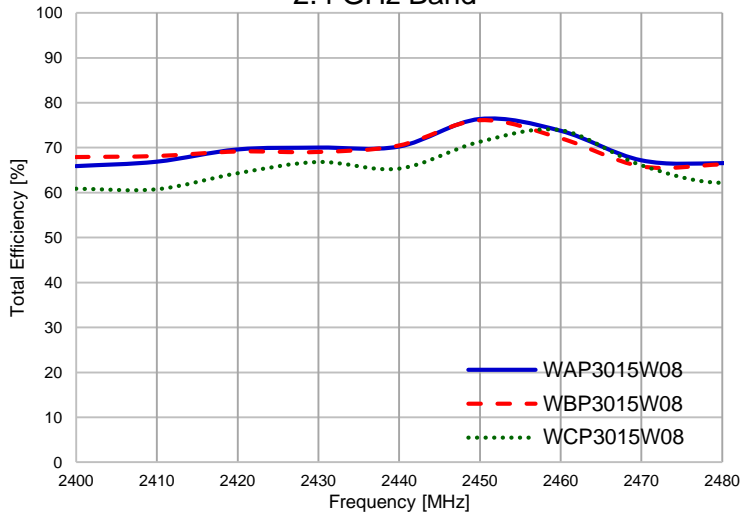
2.4 GHz Band



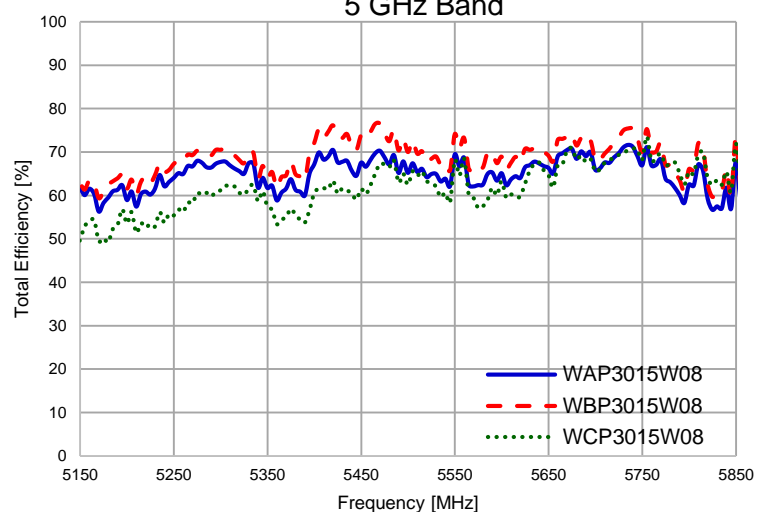
5 GHz Band



2.4 GHz Band



5 GHz Band

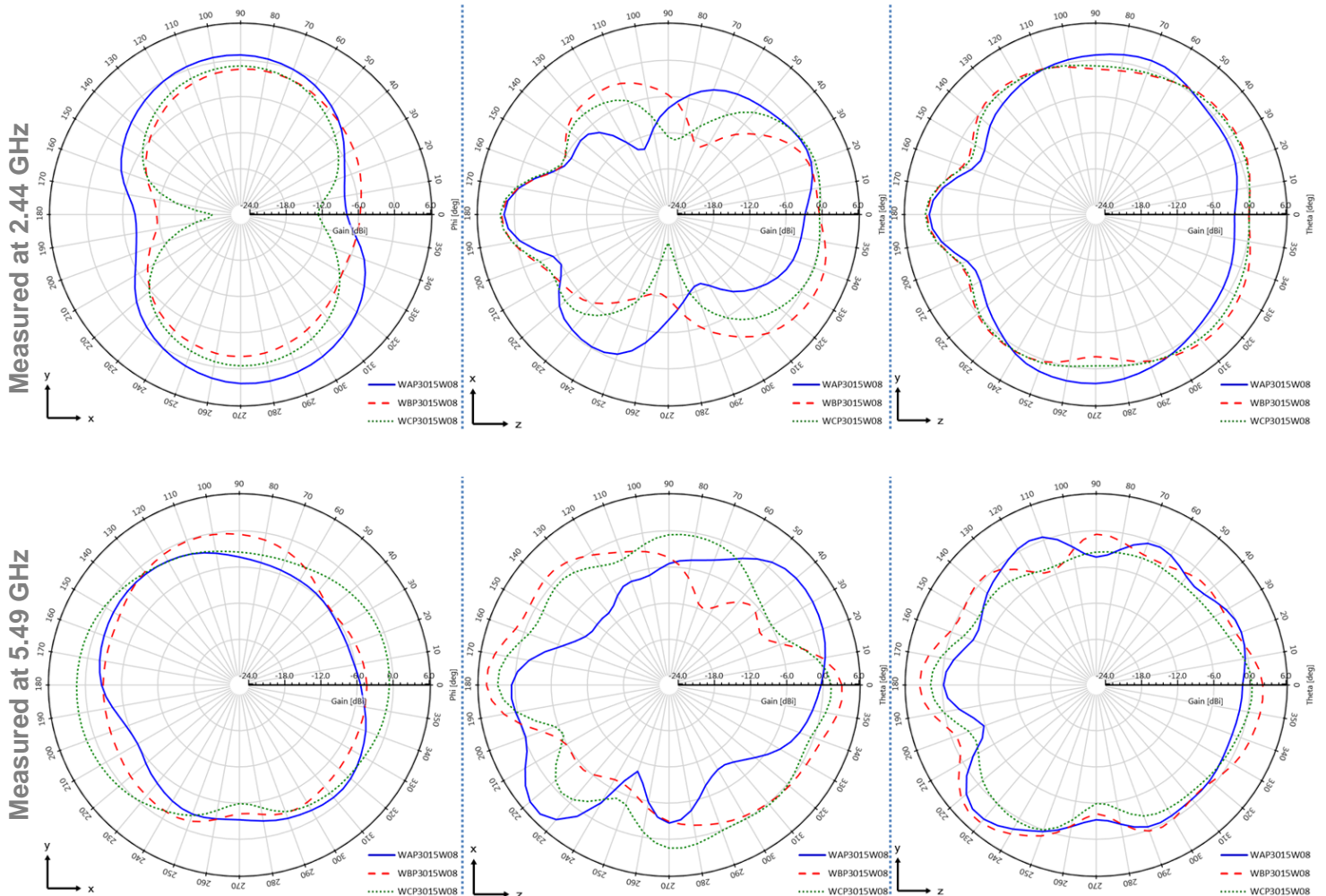
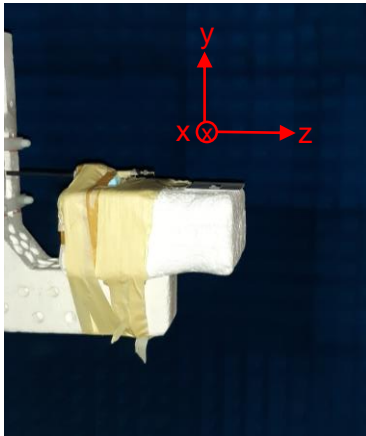




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**Antenna Radiation Patterns plots**

Typical Performances in reference device housing made in PC/ABS plastic and 100 mm cable length





**Generic Antenna Part Numbers**

Ethertronics produces a wide variety of standard and custom antennas to meet user needs

Example of generic Wi-Fi PN: **WAP3015W08-U100D3G0A**

**PN Nomenclature**

PCB silk screen number

<b>W</b> T	<b>A</b> T	<b>P</b> T	<b>3015</b> T	<b>W</b> T	<b>08</b> T
<b>Series</b>	<b>Rad. pattern orientation</b>	<b>Type</b>	<b>Size</b>	<b>Tuning version</b>	<b>PCB thickness</b>
W = Wi-Fi Family	A = Slant to left (+x) B = Slant to right (-x) C = Straight (aligned with z-axis)	P = PCB	30x15 mm	W=Tuning on plastic wall	08 = 0.8 mm

**PN Nomenclature**

Second part of the PN

<b>U</b> T	<b>100</b> T	<b>D</b> T	<b>3</b> T	<b>G</b> T	<b>0</b> T	<b>A</b> T
<b>Connector type</b>	<b>Cable</b>	<b>Connector orientation</b>	<b>Cable diameter</b>	<b>Cable color</b>	<b>Ferrite beads</b>	<b>Mounting options</b>
U = u.fl compatible* W = w.fl compatible H = MH4F N = No connector	050 = 50mm 100 = 100mm* 150 = 150mm	D = Connector down* U = Connector Up L = Left Side R = Right Side N = No connector	1 = 0.81 mm 3 = 1.13mm*	B = Black* G = Gray	0 = No* 1 = Yes	N = No adhesive A = using adhesive 3M468MP*
*Typical connector	*Typical length	*Typical orientation	*Typical diameter for u.fl	*Typical color	*Default configuration	*Adhesive for PCB



Ethertronics produces a wide variety of standard and custom antennas to meet user needs

**Typical Ordering Part Numbers**

Part Number	Type	Tuning version	Connector	Cable length (mm)	Mounting Options
WAP3015W08-U050D3B0A	PCB	Tuning on Plastic Wall	u.fl compatible	50	Using Adhesive 3M468MP
WAP3015W08-U100D3B0A				100	
WAP3015W08-U150D3B0A				150	
WAP3015W08-H100D3B0A			MHF4	100	
WBP3015W08-U050D3B0A	PCB	Tuning on Plastic Wall	u.fl compatible	50	Using Adhesive 3M468MP
WBP3015W08-U100D3B0A				100	
WBP3015W08-U150D3B0A				150	
WBP3015W08-H100D3B0A			MHF4	100	
WCP3015W08-U050D3B0A	PCB	Tuning on Plastic Wall	u.fl compatible	50	Using Adhesive 3M468MP
WCP3015W08-U100D3B0A				100	
WCP3015W08-U150D3B0A				150	
WCP3015W08-H100D3B0A			MHF4	100	

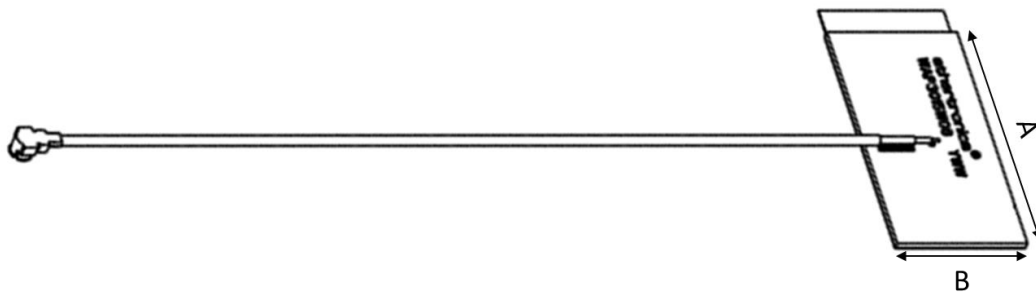


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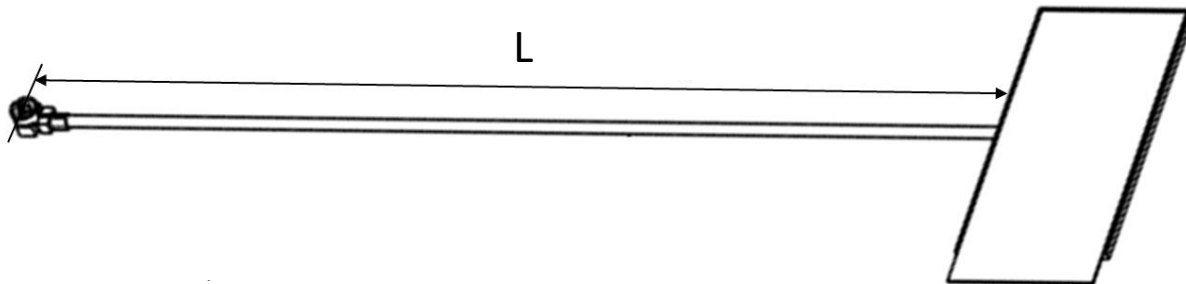
### Mechanical Dimensions

Typical dimensions in mm

Part Number	A (mm)	B (mm)	C (mm)	L (mm)	Connector
WXP3015W08-U100D3B0A	30.00 ± 0.15	15.50 ± 0.15	0.80 ± 0.05	100	u.fl compatible



Top View



Bottom View



\*All dimensions provided in this document are for informational purposes only