

# 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



**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

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.

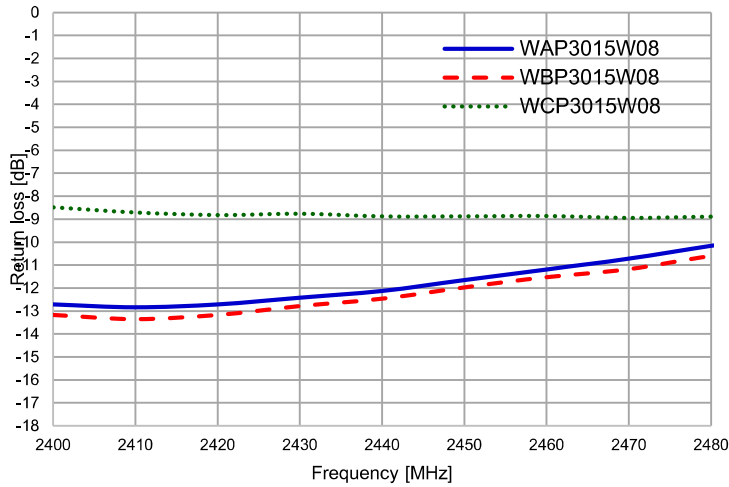


Wi-Fi 2.4 & 5 GHz embedded antenna specifications  
Ethertronics produces a wide variety of standard and custom antennas to meet user needs

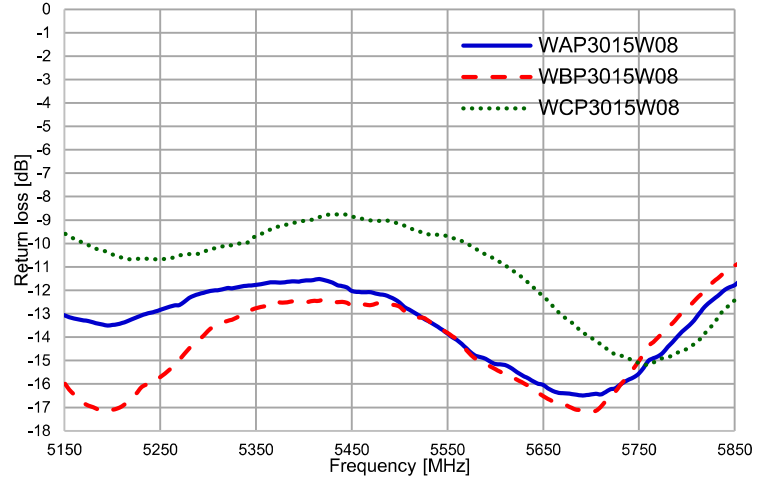
Return Loss and Efficiency Plots

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

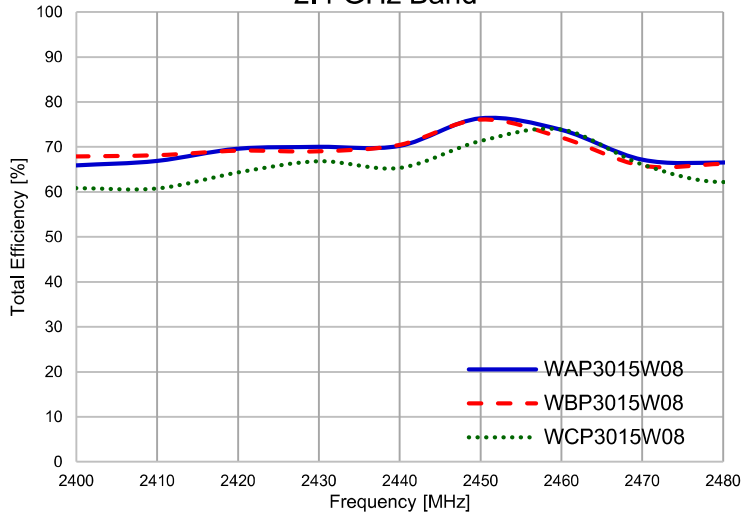
2.4 GHz Band



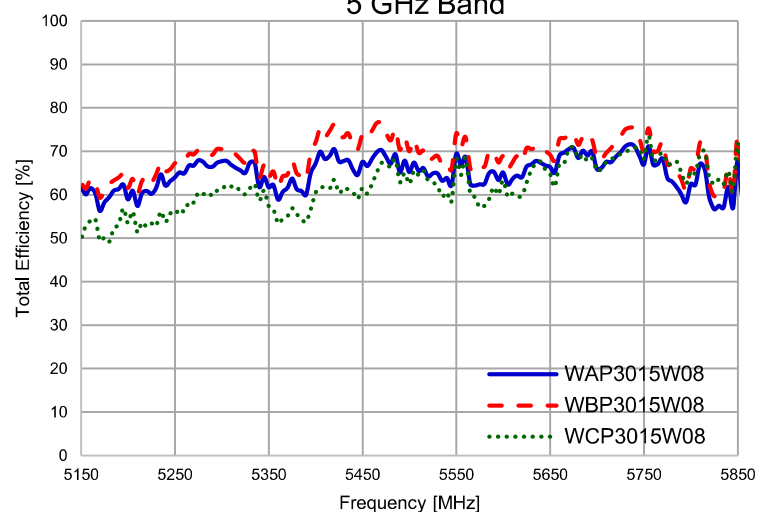
5 GHz Band



2.4 GHz Band



5 GHz Band

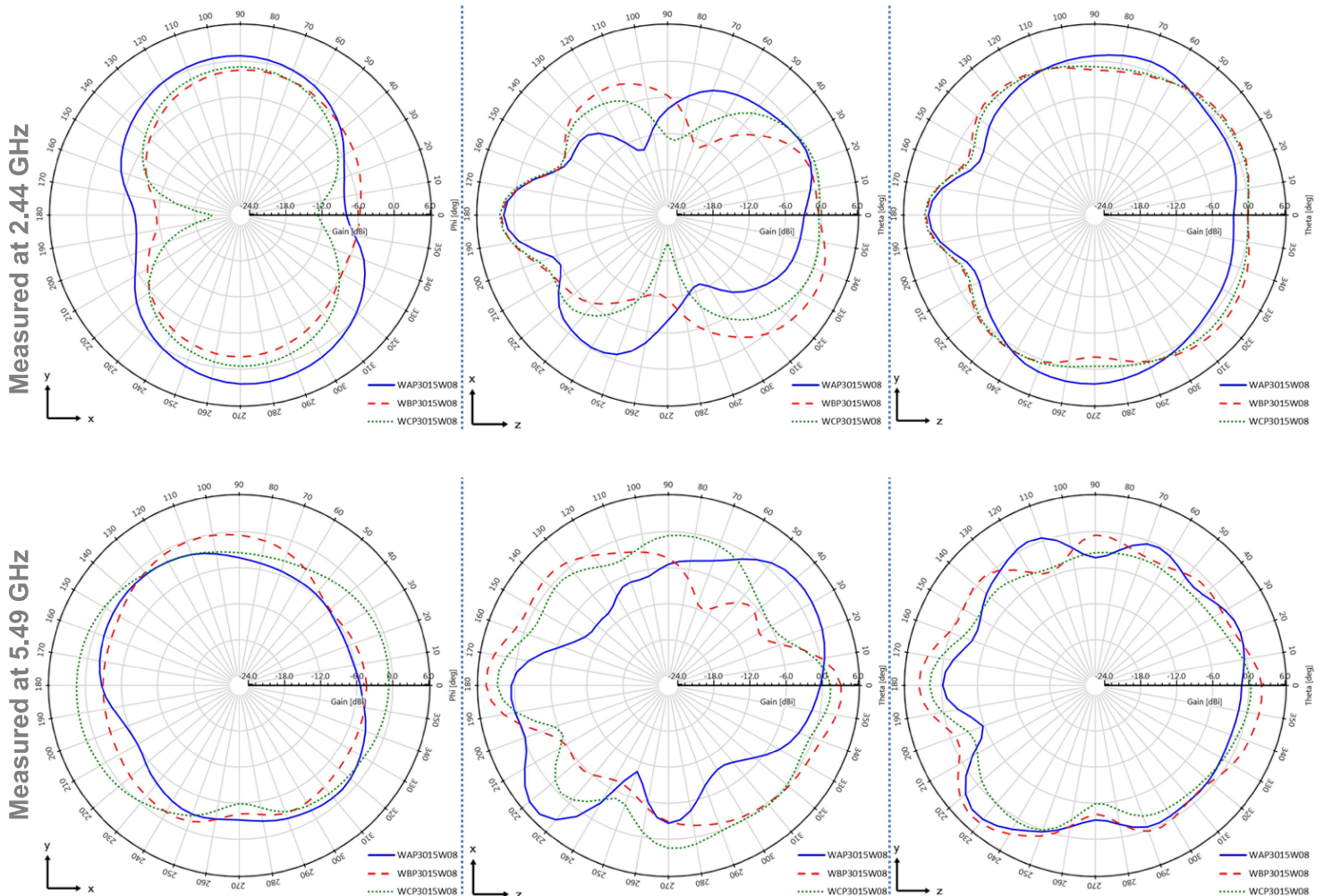
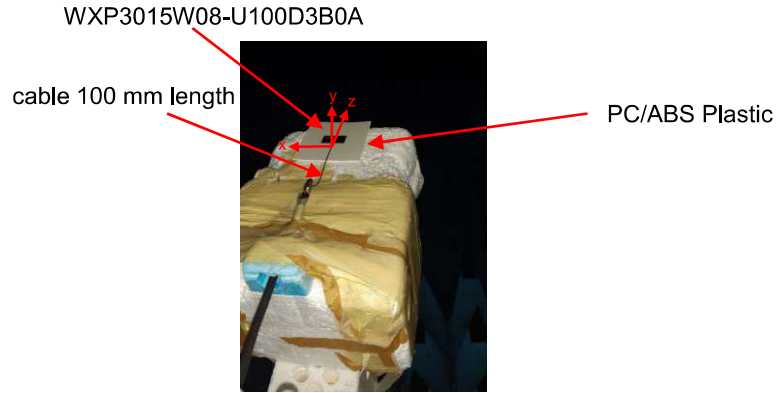
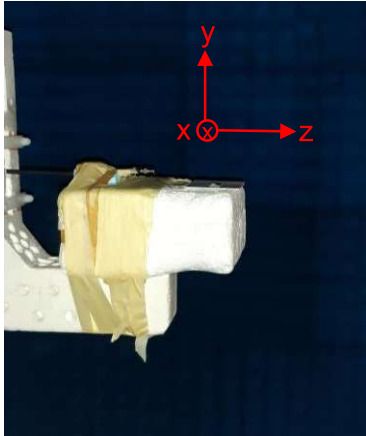




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Antenna Radiation Patterns plots

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





**Generic Antenna Part Numbers**

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

**PN Nomenclature**

PCB silk screen number

**W**  
T

**Series**

**A**  
T

**Rad. pattern orientation**

**P**  
T

**Type**

**3015**  
T

**Size**

**W**  
T

**Tuning version**

**08**  
T

**PCB thickness**

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

**U**  
T

**Connector type**

**100**  
T

**Cable**

**D**  
T

**Connector orientation**

**3**  
T

**Cable diameter**

**G**  
T

**Cable color**

**0**  
T

**Ferrite beads**

**A**  
T

**Mounting options**

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	

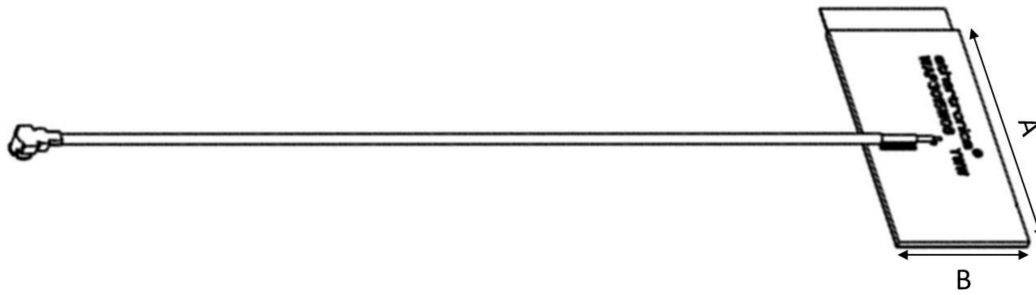


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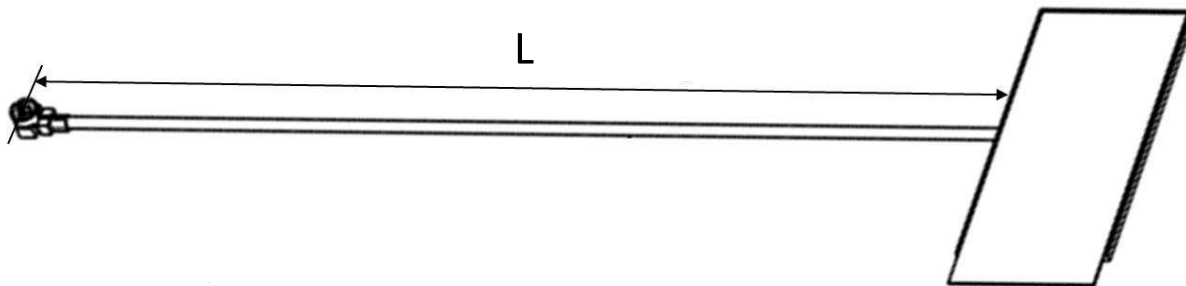
### Mechanical Dimensions

Typical dimensions in mm

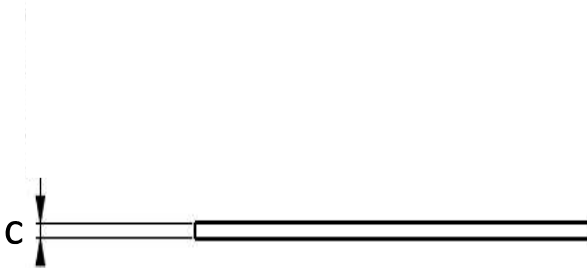
Part Number	A (mm)	B (mm)	C (mm)	L (mm)	Connector
WXP3015W08-U100D3B0A	30.00 ± 0.15	15.50 ± 0.15	0.80 ± 0.05	100	u.fl compatible



Top View



Bottom View



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