

## Product Brief



## PW Series Panel-Mount Single-Band Antennas

PW series antennas are rugged panel-mount monopole external antennas for low-power wide-area (LPWA) networks, LTE cellular, and ISM applications in plastic<sup>1</sup> and metal enclosures.

For NB-IoT and LTE-M applications, PW series single-band antennas typically outperform multiband counterparts over desired frequencies and reject signals from unwanted frequencies. The job of antenna selection is simplified by including the LTE frequency band in the part number. Other PW antennas align with LoRaWAN<sup>®</sup> and Sigfox<sup>®</sup> low-power, wide-area (LPWA) applications as well as license-free ISM band uses.



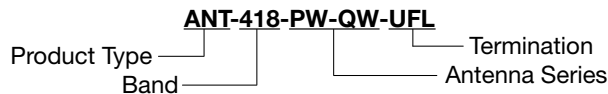
### Features

- Outperforms similar multiband solutions
- Durable, flexible main shaft
- Weather resistant for IP-rated applications<sup>2</sup>
- Wide bandwidth
- O-ring compatible base
- MHF1/U.FL-compatible plug (female socket) on 216 mm of 1.32 mm coax or 216 mm of unterminated RG-174 coax
- Compatible with plastic<sup>1</sup> and metal enclosures

### Applications

- LTE-M (Cat-M1) and NB-IoT cellular IoT
- LoRaWAN<sup>®</sup> and Sigfox<sup>®</sup>
- FirstNet<sup>®</sup> Public Safety
- ISM/Bluetooth<sup>®</sup>/ZigBee<sup>®</sup>
- Sensing and remote monitoring
- Hand-held devices
- Internet of Things (IoT) devices
- Low-power wide-area (LPWA) networks

### Ordering Information



Band	Frequency Range (MHz) <sup>3</sup>	VSWR	Peak Gain (dBi)	Efficiency (%)	Standard Bands	Termination
418	380 to 450	≤ 2.0 : 1	2.9	~	GSM, Remote Control	UFL, (blank) = Cut end
433	400 to 470	≤ 2.0 : 1	3.3	~	LoRaWAN, ISM, LTE, GSM	UFL, (blank) = Cut end
490	470 to 510	≤ 2.0 : 1	1.3	72	LoRaWAN, GSM	UFL, (blank) = Cut end
868	750 to 950	≤ 2.0 : 1	1.2	65	LoRaWAN, SIGFOX, LTE, GSM, UMTS	UFL, (blank) = Cut end
916	865 to 965	≤ 2.0 : 1	1.6	68	LoRaWAN, SIGFOX, ISM, LTE, GSM, UMTS	UFL, (blank) = Cut end
B5	800 to 900	≤ 2.0 : 1	1.2	65	LTE B5, LTE B6, GSM, UMTS	UFL, (blank) = Cut end
B8	870 to 960	≤ 2.0 : 1	1.6	68	LTE B8, GSM, UMTS	UFL, (blank) = Cut end
B13	740 to 790	≤ 2.0 : 1	1.7	77	LTE B13, UMTS	UFL, (blank) = Cut end
B14	750 to 800	≤ 2.0 : 1	1.9	80	LTE B14, FirstNet Public Safety	UFL, (blank) = Cut end
B20	790 to 870	≤ 2.5 : 1	1.6	72	LTE B20, UMTS	UFL, (blank) = Cut end
B28	700 to 810	≤ 2.7 : 1	1.7	73	LTE B17, LTE B28, LTE B44, GSM, UMTS	UFL, (blank) = Cut end
2.4	2350 to 2600	≤ 1.9 : 1	1.6	~	ISM	UFL, (blank) = Cut end

Available from Linx Technologies and select distributors and representatives.

#### Notes

1 With appropriate counterpoise.

2 Use of an O-ring is recommended, IP-ratings cannot be guaranteed.

3 Suggested frequency range. Antennas may support wider bandwidth than listed. See individual datasheets.

Electrical Specifications (Common to all)

<b>Polarization</b>	Linear	<b>Electrical Type</b>	Monopole
<b>Radiation</b>	Omnidirectional	<b>Operating Temp. Range</b>	-40 °C to +90 °C
<b>Max Power</b>	10 W	<b>Impedance</b>	50 Ω
<b>Wavelength</b>	1/4-wave (ANT-2.4-PW-QW-ccc is a 1/2-wave monopole)		
<b>Connection</b>	ANT-fff-PW-QW-UFL: 216 mm of 1.32 mm coaxial cable terminated with an MHF1/U.FL-compatible plug (female socket) ANT-fff-PW-QW: 216 mm of RG-174 coaxial cable, unterminated		

Electrical specifications and plots measured with a 102 mm x 102 mm (4 in x 4 in) reference ground plane.

Product Dimensions

<b>Band</b>	<b>418</b>	<b>433</b>	<b>490</b>	<b>868</b>	<b>916</b>	
<b>Dimension A</b>	177.2 mm (6.98 in)	173.4 mm (6.83 in)	157.7 mm (6.21 in)	83.5 mm (3.29 in)	80.5 mm (3.17 in)	
<b>Band</b>	<b>B5</b>	<b>B8</b>	<b>B13</b>	<b>B14</b>	<b>B20</b>	<b>B28</b>
<b>Dimension A</b>	83.5 mm (3.29 in)	80.5 mm (3.17 in)	98.4 mm (3.87 in)	94.2 mm (3.71 in)	89.7 mm (3.53 in)	98.4 mm (3.87 in)

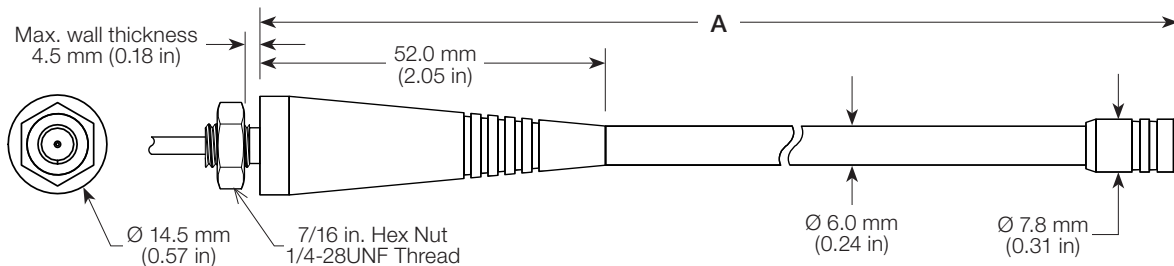


Figure 1. PW Series Antenna Dimensions (except 2.4 GHz)

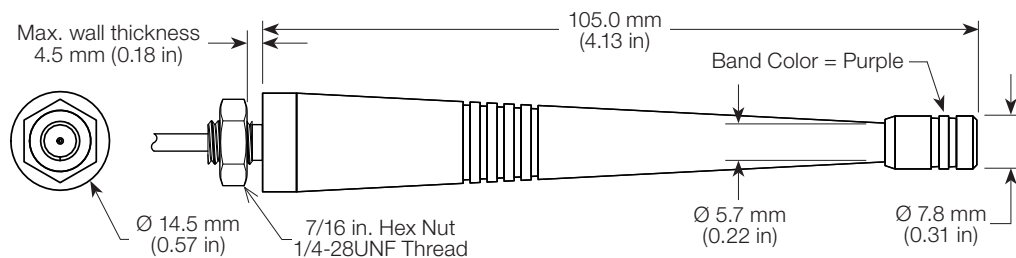


Figure 2. PW Series 2.4 GHz Antenna Dimensions

Website: <http://linxtechnologies.com>  
 Linx Offices: 159 Ort Lane, Merlin, OR, US 97532  
 Phone: +1 (541) 471-6256  
 E-MAIL: [info@linxtechnologies.com](mailto:info@linxtechnologies.com)

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