

## ANTENNAS | EPNT-1 SERIES

# X-POLARISED, OMNI-DIRECTIONAL, 5G/LTE & WI-FI CPE

617 – 4200 MHz; 4x4 LTE/5G (MIMO), 3.8 dBi; 2x2 Wi-Fi (MIMO), 7.5 dBi



 617 – 960 MHz 1427 – 1517 MHz 1710 – 2700 MHz 3400 – 4200 MHz	 3.8 dBi	 Increase X Mb/s	 Omni- Directional	 5G	 4G LTE
 3.5 GHz CBRS	 4x4 MIMO	 WI FI DUALBAND	 Fire Resistant	 IP 65	 -40°C to +80°C
CBRS Band		2.4 – 2.5 GHz 5.0 – 7.2 GHz			

- Antenna enclosure with high-performance antennas
- Wideband 4x4 MIMO 4G/5G antenna
- 2x2 MIMO dual-band 2.4 GHz and 5 – 7.2 GHz Wi-Fi antennas
- Cross-polarised antennas for improved performance
- IP65 weather/dust and vandal-resistant enclosure

APPLICATION AREAS

Urban

Rural/Farm

## Product Overview

Poynting Antennas introduces its all-new antenna enclosure range, the ePoynt series. The ePoynt enclosures are designed to fit a variety of router modules, transforming the antenna enclosure into Customer Premises Equipment (CPE) – just add your own LTE/5G router. The ePoynt enclosure can accommodate routers up to the size of 185 x 145 x 45 mm<sup>3</sup>. The ePoynt-1 (EPNT-1) combines our cross-polarised omni-directional antennas for enhanced performance. This is ideal in built-up areas where there are several base stations close by, but where higher stability and throughput is required due to its enhanced MIMO configuration.

The EPNT-1 includes four cross-polarised antennas, making it ideal for 4x4 MIMO or dual 2x2 MIMO routers. The antennas offer wideband coverage from 617 to 4200 MHz, making it ideal for LTE & 5G implementation with a peak gain of 3.8 dBi. The EPNT-1 also includes two omni-directional dual-band Wi-Fi antennas that cover the 2.4 GHz and 5 to 7.2 GHz Wi-Fi bands for 2x2 MIMO. The EPNT-1 enclosure was also designed to withstand adverse weather conditions, making the antenna weatherproof and waterproof with an IP65 rating.

## Features

- Ultra-wideband coverage for 2G, 3G, 4G and 5G
- Omni-directional antennas with peak gain of 3.8 dBi
- 4x4 MIMO for improved performance
- Wall, pole and window mountable
- Weatherproof and waterproof enclosure (IP65)
- 1x Ethernet port

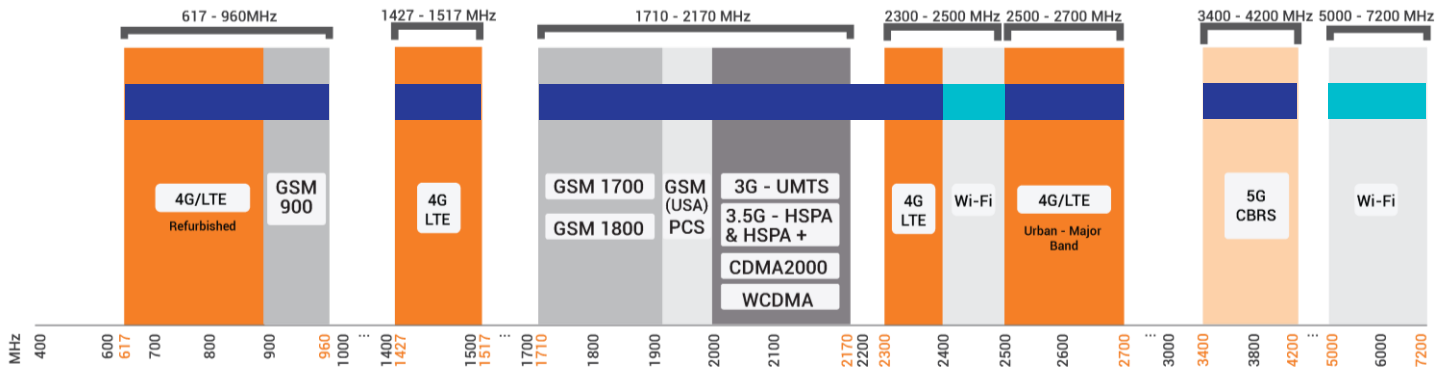
## Application Areas

- Outdoor antenna for Fixed Wireless Access (FWA)
- Consumer 5G/LTE internet connectivity
- Industrial and commercial 5G/LTE deployment
- Urban and rural household reception enhancement
- Oil & Gas communication systems



**Frequency Bands**

The EPNT-1 is an Omni-directional antenna that works from | 617 – 960 MHz | 1427 – 1517 MHz | 1710 – 2700 MHz | 3400 – 4200 MHz | and the following Wi-Fi frequency bands | 2400 – 2500 MHz | and | 5000 – 7200 MHz |



Indicates the LTE bands on which EPNT-1 works  Indicates the WI-FI bands on which EPNT-1 works

**Antenna Overview**

	<b>5G LTE</b>	<b>Wi-Fi DUALBAND</b>
<b>Ports</b>	Cell 1 & Cell 2 Main Cell 1 & Cell 2 Aux/Div	1 & 2
<b>SISO / MIMO</b>	4x4 MIMO	2x2 MIMO
<b>Frequency Bands</b>	617 - 4200 MHz	2400 - 2500 MHz 5000 - 7200 MHz
<b>Peak Gain</b>	3.8 dBi	7.5 dBi
<b>Coax Cable Type</b>	RG 178	RG 178
<b>Coax Cable Length</b>	250 mm	250 mm
<b>Connector Type</b>	4 x RA SMA (M) to RA SMA (M)	2 x RA RPSMA (M) to RA SMA (M)

\*RA SMA: Right Angle/90° SMA

\*RA RPSMA: Right Angle/90° Reverse Polarity SMA

**Electrical Specifications - Cellular**

<b>Frequency Bands:</b>	617 – 960 MHz 1427 – 1517 MHz 1710 – 2700 MHz 3400 – 4200 MHz
<b>Gain (Max):</b>	2 dBi @ 617 – 960 MHz 2.5 dBi @ 1427 – 1517 MHz 3.8 dBi @ 1710 – 2700 MHz 3.8 dBi @ 3400 - 4200 MHz
<b>VSWR:</b>	≤2.5:1 across 95% of the bands
<b>Feed Power Handling:</b>	10 W
<b>Input Impedance:</b>	50 Ohm (nominal)
<b>Polarisation:</b>	Cell 1: ±45° Cell 2: Vertical & Horizontal linear
<b>Path to Ground:</b>	Yes

**Wi-Fi Electrical Specifications**

<b>Frequency:</b>	2400 - 2500 MHz 5000 – 7200 MHz
<b>Gain (Max):</b>	3 dBi @ 2400 - 2500 MHz 7.5 dBi @ 5000 - 7200 MHz
<b>VSWR:</b>	<2.5:1 over 90% of the band
<b>Feed Power Handling:</b>	10 W
<b>Nominal Input Impedance:</b>	50 Ohm (nominal)
<b>Polarisation:</b>	Vertical & Horizontal Linear
<b>Path to Ground:</b>	Yes

**Product Box Contents**

<b>Antenna:</b>	A-EPNT-0001-V2-01
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**Ordering Information**

<b>Commercial Name:</b>	EPNT-1
<b>Order Product Code:</b>	A-EPNT-0001-V2-01
<b>EAN Number:</b>	6009710927892

**Mechanical Specifications**

<b>Product Dimensions:</b>	260 mm x 264 mm x 168 mm
<b>Maximum Router Dimensions:</b>	185 mm x 145 mm x 45 mm
<b>Packaged Dimensions:</b>	450 mm x 270 mm x 180 mm
<b>Weight:</b>	1.035 kg
<b>Packaged Weight:</b>	1.785 kg
<b>Radome Material:</b>	UV Stable ASA
<b>Radome Colour:</b>	Brilliant White Pantone P 179-1C
<b>Mounting Type:</b>	Wall/ Pole and Window Mounted

**Environmental Specifications, Certification & Approvals**

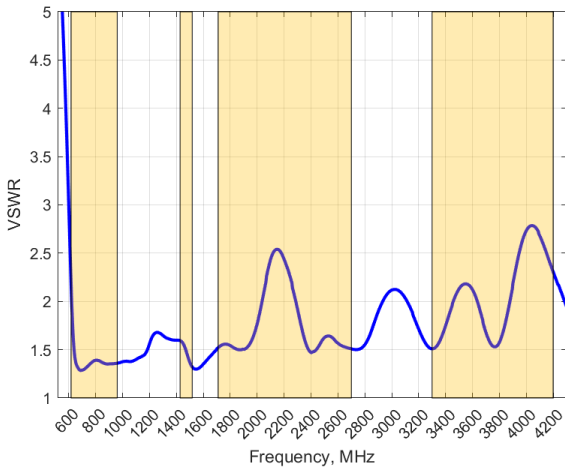
<b>Wind Survival:</b>	≤220 km/h
<b>Temperature Range (Operating):</b>	-40°C to +80°C
<b>Environmental Conditions:</b>	Outdoor/Indoor
<b>Water Ingress Protection Ratio/Standard:</b>	IP65
<b>Salt Spray:</b>	MIL-STD 810G/ASTM B117
<b>Operating Relative Humidity:</b>	Up to 98%
<b>Storage Humidity:</b>	5% to 95% - non-condensing
<b>Storage Temperature:</b>	-40°C to +80°C
<b>Enclosure Flammability Rating:</b>	UL 94-HB
<b>Impact Resistance:</b>	IK 08
<b>Product Safety &amp; Environmental:</b>	Complies with CE and RoHS standards

*\*Routers/Router boards have their own operating temperatures as provided in their individual data sheets. Routers/router boards mounted within an EPNT-1 which is exposed to solar radiation will operate at 10-12°C above ambient temperature. Please take this into consideration and select your device to be used with the EPNT-1 accordingly.*



Antenna Performance Plots - Cellular

**VSWR: Cellular Antenna**



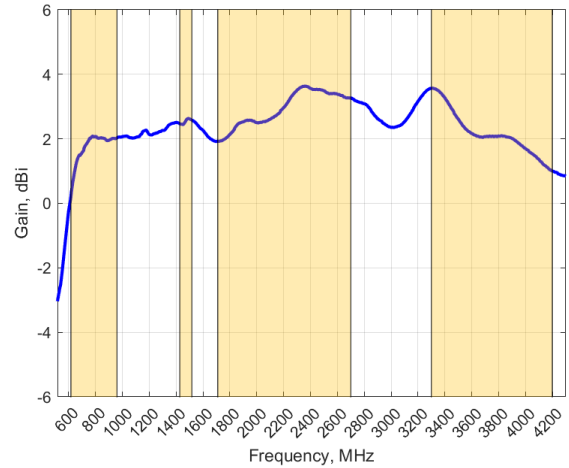
**Voltage Standing Wave Ratio (VSWR)\***

VSWR is a measure of how efficiently radio-frequency power is transmitted from a power source, through a transmission line, into a load. In an ideal system, 100% of the energy is transmitted which corresponds to a VSWR of 1:1.

The EPNT-1 delivers superior performance across all bands with a VSWR of 2.5:1 or better across 95% of the bands.

\*VSWR measured without a cable.

**GAIN (EXCLUDING CABLE LOSS): Cellular Antenna**



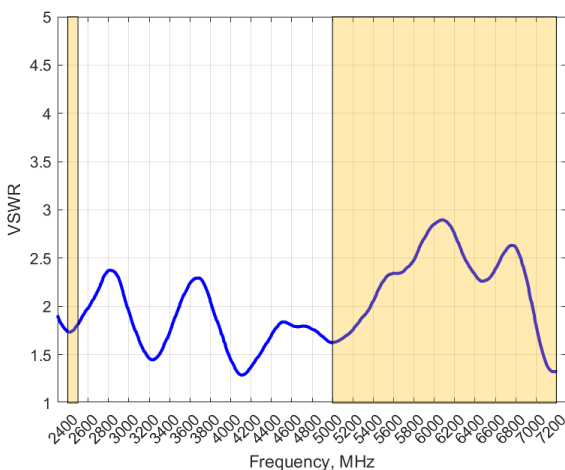
**Gain\* in dBi**

3.8 dBi is the peak gain across all bands from 617 – 4200 MHz

Gain @ 617 – 960 MHz:	2 dBi
Gain @ 1427 – 1517 MHz:	2.5 dBi
Gain @ 1710 – 2700 MHz:	3.8 dBi
Gain @ 3400 – 3800 MHz:	3.8 dBi

\*Antenna gain measured with polarisation aligned standard antenna

**VSWR: Wi-Fi Antenna**



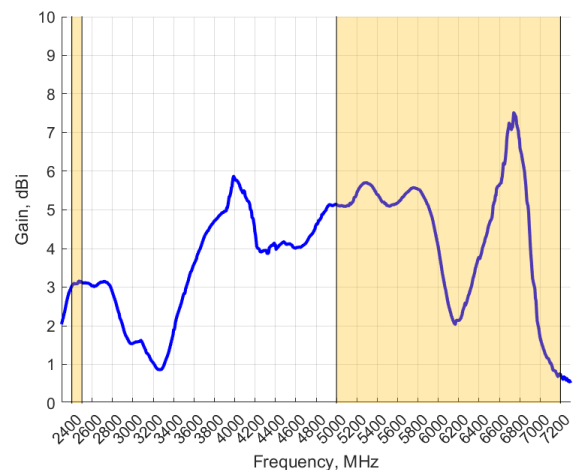
**Voltage Standing Wave Ratio (VSWR)\***

VSWR is a measure of how efficiently radio-frequency power is transmitted from a power source, through a transmission line, into a load. In an ideal system, 100% of the energy is transmitted which corresponds to a VSWR of 1:1.

The EPNT-1 delivers superior performance across all bands with a VSWR of <3:1.

\*VSWR measured without a cable.

**GAIN (EXCLUDING CABLE LOSS): Wi-Fi Antenna**



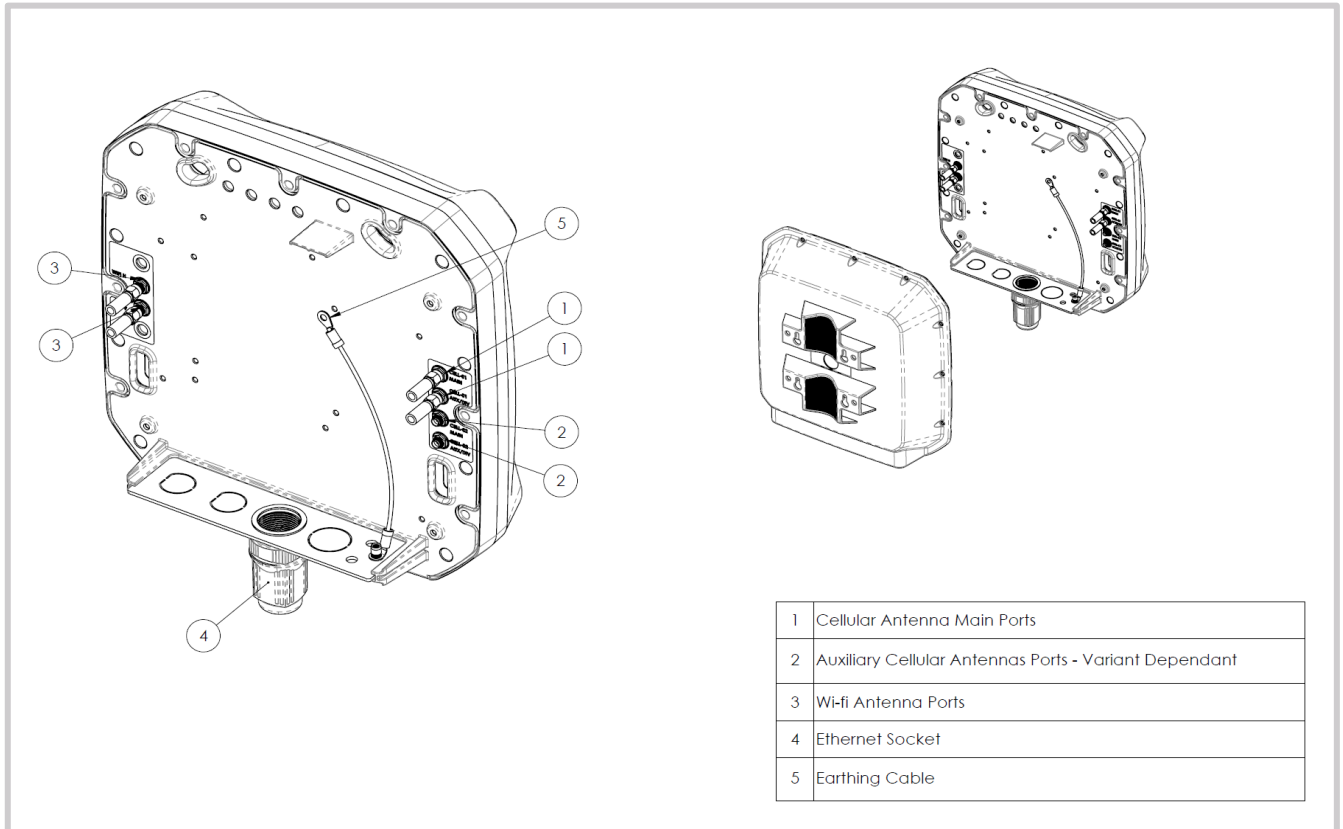
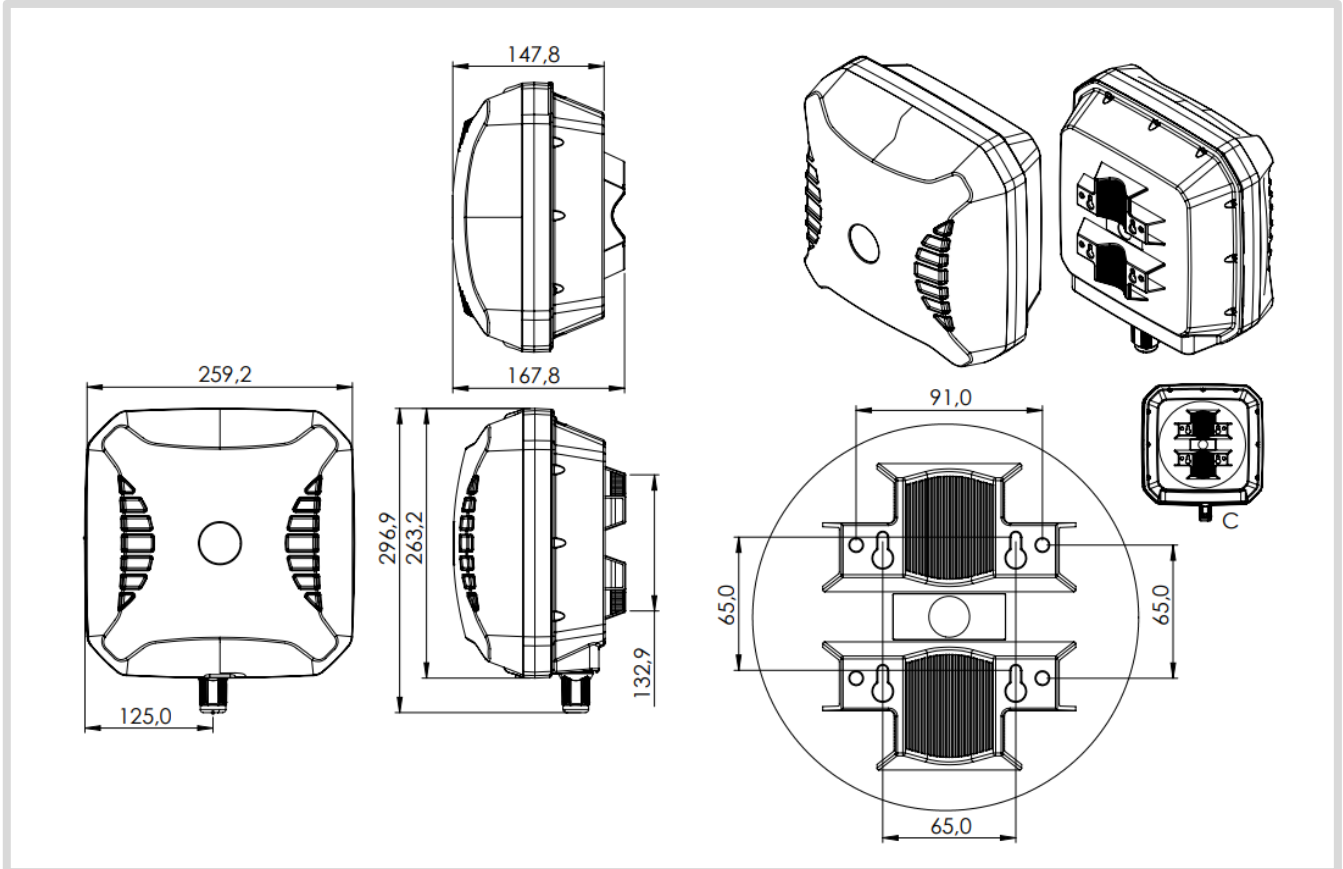
**Gain\* in dBi**

7.5 dBi is the peak gain across all bands from 2400 – 2500 MHz and 5000 – 7200 MHz

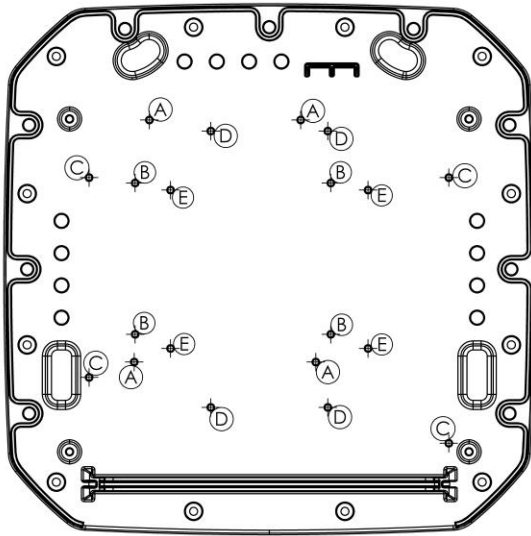
Gain @ 2400 - 2500 MHz:	3 dBi
Gain @ 5000 – 7200 MHz:	7.5 dBi

\*Antenna gain measured with polarisation aligned standard antenna

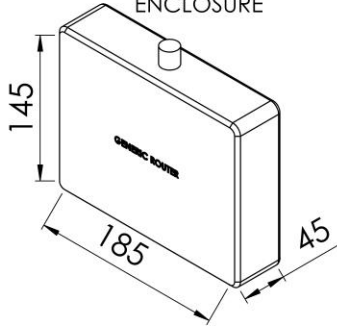
Technical Drawings



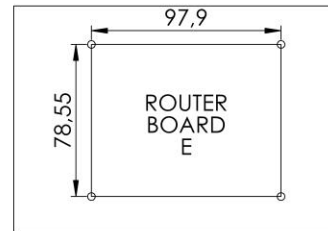
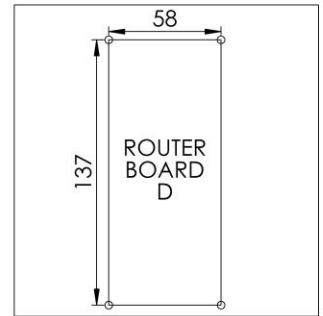
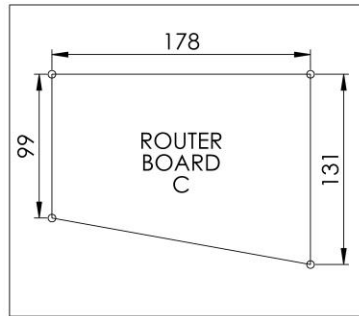
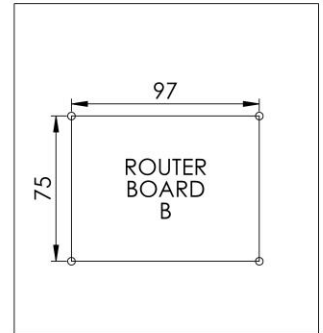
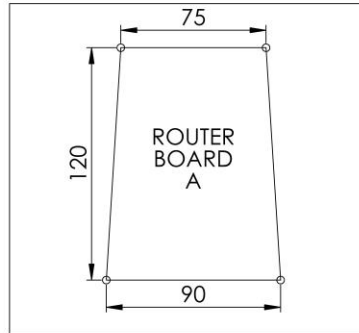
1	Cellular Antenna Main Ports
2	Auxiliary Cellular Antennas Ports - Variant Dependant
3	Wi-fi Antenna Ports
4	Ethernet Socket
5	Earthing Cable



AVAILABLE SPACE FOR COMPATIBLE ROUTER ENCLOSURE



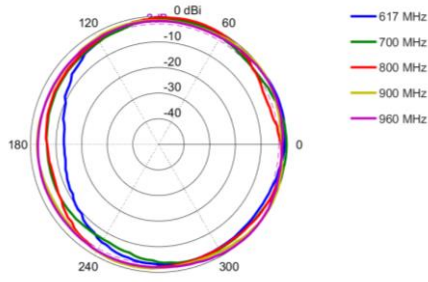
GENERIC ROUTER MOUNTING HOLES SPACING



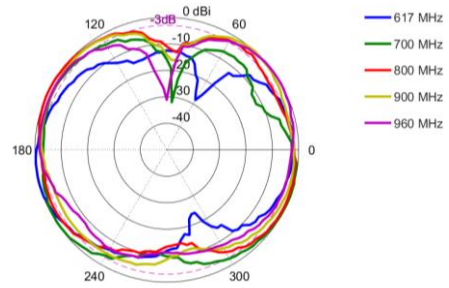


**Radiation Patterns – Cellular**

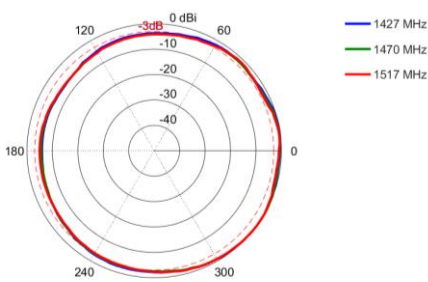
**Azimuth: 617 – 960 MHz**



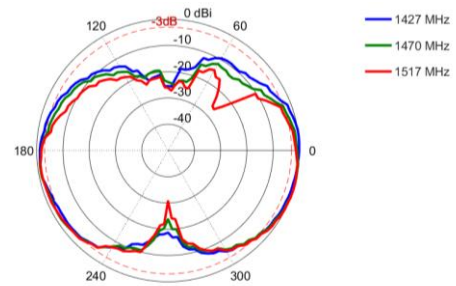
**Elevation: 617 – 960 MHz**



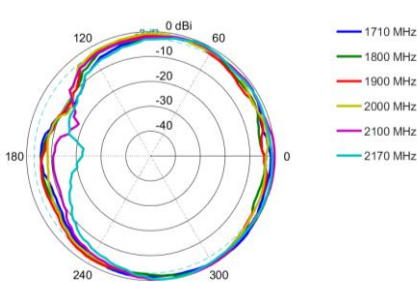
**Azimuth: 1427 – 1517 MHz**



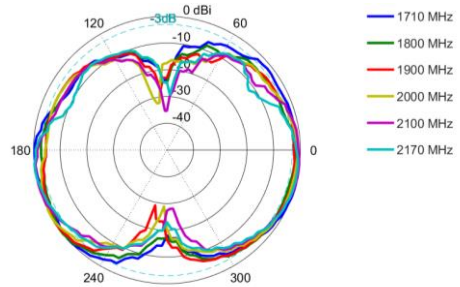
**Elevation: 1427 – 1517 MHz**



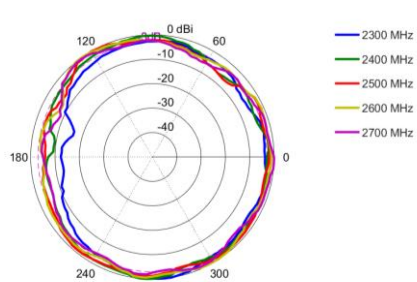
**Azimuth: 1710 – 2170 MHz**



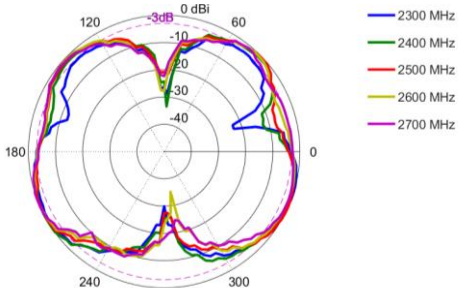
**Elevation: 1710 – 2170 MHz**



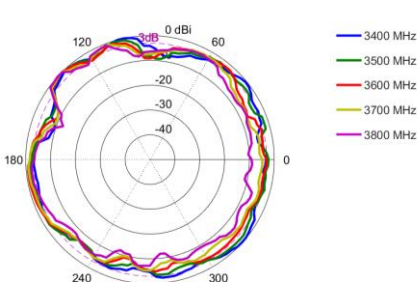
**Azimuth: 2300 – 2700 MHz**



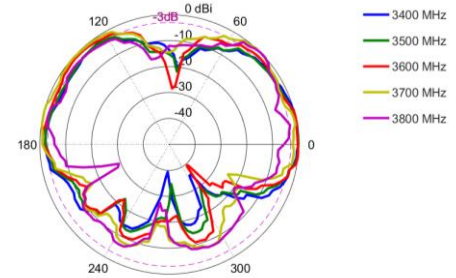
**Elevation: 2300 – 2700 MHz**



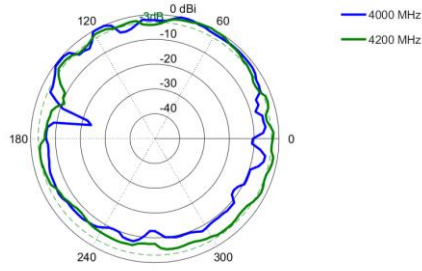
**Azimuth: 3400 – 3800 MHz**



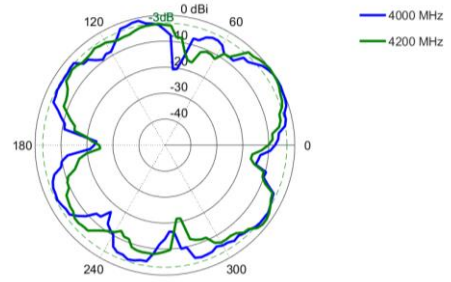
**Elevation: 3400 – 3800 MHz**



**Azimuth: 4000 – 4200 MHz**

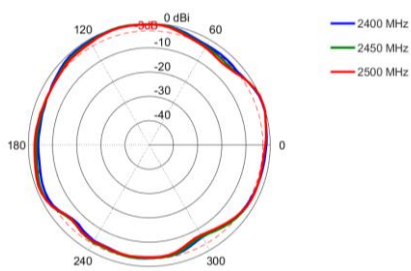


**Elevation: 4000 – 4200 MHz**

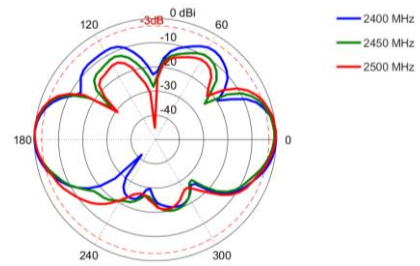


**Radiation Patterns – Wi-Fi**

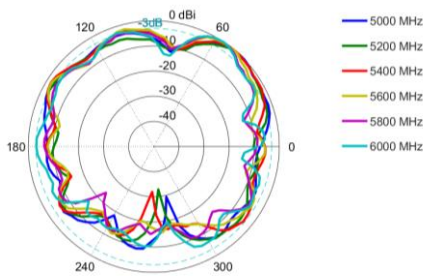
**Azimuth: 2400 – 2500 MHz**



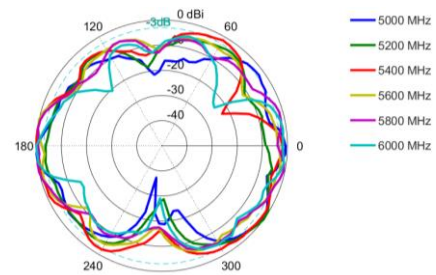
**Elevation: 2400 – 2500 MHz**



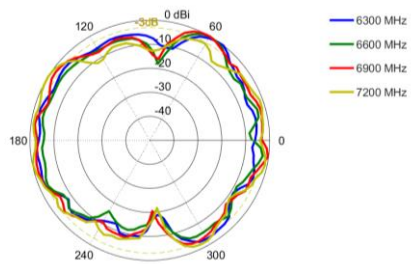
**Azimuth: 5000 – 6000 MHz**



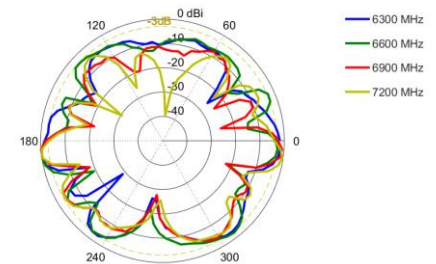
**Elevation: 5000 – 6000 MHz**



**Azimuth: 6300 – 7200 MHz**

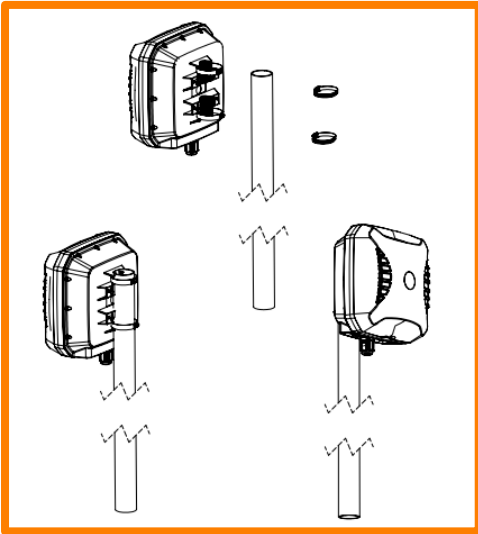


**Elevation: 6300 – 7200 MHz**



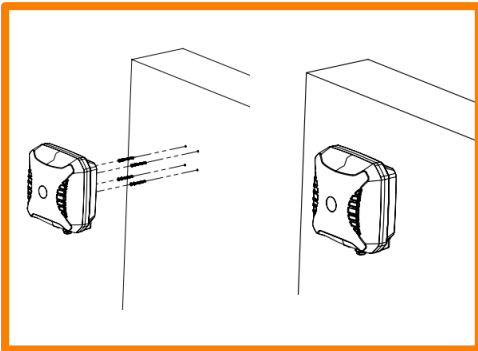


**Mounting Options**



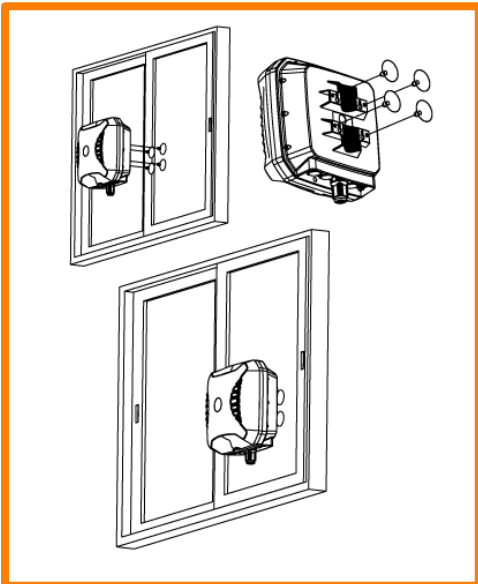
**Pole Mount**

Pole mounting bracket using pipe clamps (included)



**Wall Mount**

Wall mounting bracket using knock-in screws (included)



**Window Mount\***

Pole/Wall mounting bracket using window suckers (included)

*\* Window mounting using suckers is a temporary solution provided for convenience. Ensure that the grounding cable used is strong enough to double as a safety fallback. For sturdier long-term mounting, consider the wall/pole mount options.*

## Additional Accessories



**A-ADPT-010**

SIM Extender



### Various fly leads/pigtails available

- A-CAB-156: 250mm RG178 MCX (M) to RA SMA (M) Cable Assembly
- A-CAB-157: 250mm RG178 MMCX (M) to RA SMA (M) Cable Assembly
- A-CAB-158: 250mm RG178 U.FL (M) to RA SMA (M) Cable Assembly
- A-CAB-159: 250mm RG178 RA SMA (M) to RA SMA (M) Cable Assembly
- A-CAB-160: 250mm RG178 RA RPSMA (M) to RA SMA (M) Cable Assembly
- A-CAB-161: 250mm 1.13mm Coaxial Cable MHF4 (F) to RA SMA (M) Cable Assembly

## CONTACT POYNTING

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