

ANTENNAS | EPNT-1 SERIES

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

617 – 3800 MHz; 4x4 LTE/5G (MIMO), 4.5 dBi; 2x2 Wi-Fi (MIMO), 7.5 dBi



APPLICATION AREAS

- 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

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 mm³. 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 3800 MHz, making it ideal for LTE & 5G implementation with a peak gain of 4.5 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 4.5 dBi
- 4x4 MIMO for improved performance
- Wall, pole and window mountable
- Weatherproof and waterproof enclosure (IP65)
- 1x Ethernet port

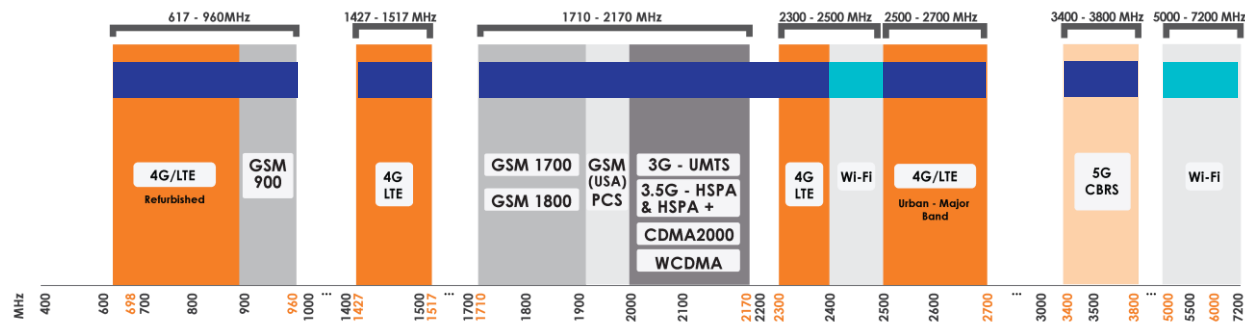
Application Areas

- 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 – 3800 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

		
Ports	Cell 1 & Cell 2 Main Cell 1 & Cell 2 Aux/Div	1 & 2
SISO / MIMO	4x4 MIMO	2x2 MIMO
Frequency Bands	617 - 3800 MHz	2400 - 2500 MHz 5000 - 7200 MHz
Peak Gain	4.5 dBi	7.5 dBi
Coax Cable Type	RG 178	RG 178
Coax Cable Length	250 mm	250 mm
Connector Type	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

Frequency Bands:	617 – 960 MHz 1427 – 1517 MHz 1710 – 2700 MHz 3400 – 3800 MHz
Gain (Max):	1 dBi @ 617 – 960 MHz 0.5 dBi @ 1427 – 1517 MHz 4.5 dBi @ 1710 – 2700 MHz 2.5 dBi @ 3400 – 3800 MHz
VSWR:	≤2.5:1
Feed Power Handling:	10 W
Input Impedance:	50 Ohm (nominal)
Polarisation:	Cell 1: ±45° Cell 2: Vertical & Horizontal linear

Path to Ground:	Yes
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Wi-Fi Electrical Specifications

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

Product Box Contents

Antenna:	A-EPNT-0001-V2-01
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Ordering Information

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

Mechanical Specifications

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

Environmental Specifications, Certification & Approvals

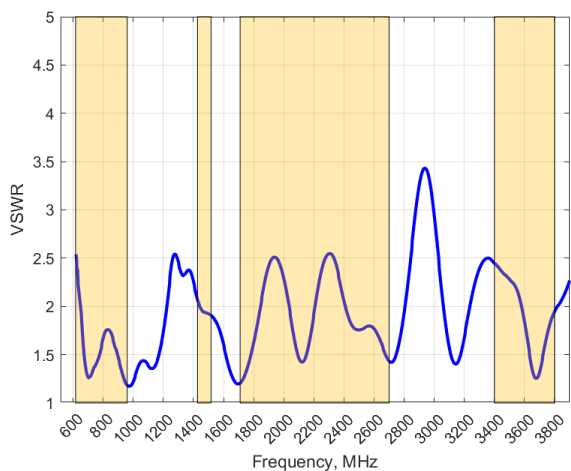
Wind Survival:	≤220 km/h
Temperature Range (Operating):	-40°C to +70°C
Environmental Conditions:	Outdoor/Indoor
Water Ingress Protection Ratio/Standard:	IP65
Salt Spray:	MIL-STD 810G/ASTM B117
Operating Relative Humidity:	Up to 98%
Storage Humidity:	5% to 95% - non-condensing
Storage Temperature:	-40°C to +70°C
Enclosure Flammability Rating:	UL 94-HB
Impact Resistance:	IK 08
Product Safety & Environmental:	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



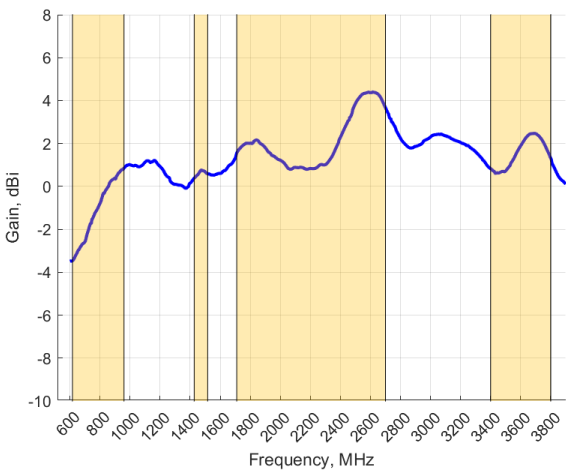
Voltage Standing Wave Ratio (VSWR)*

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 all bands.

*VSWR measured without a cable.

GAIN (EXCLUDING CABLE LOSS): Cellular Antenna



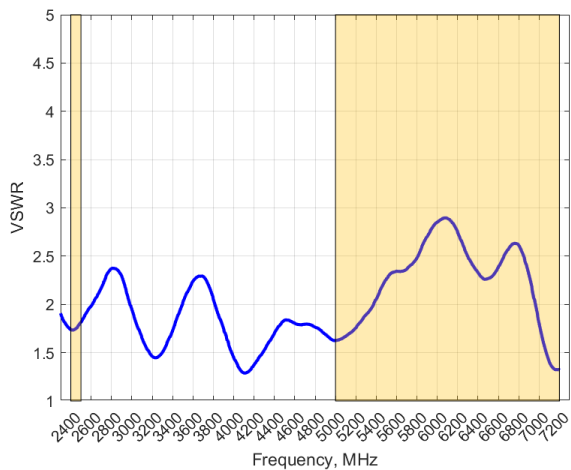
Gain* in dBi

4.5 dBi is the peak gain across all bands from 617 – 3800 MHz

Gain @ 617 – 960 MHz:	1 dBi
Gain @ 1427 – 1517 MHz:	0.5 dBi
Gain @ 1710 – 2700 MHz:	4.5 dBi
Gain @ 3400 – 3800 MHz:	2.5 dBi

*Antenna gain measured with polarisation aligned standard antenna

VSWR: Wi-Fi Antenna



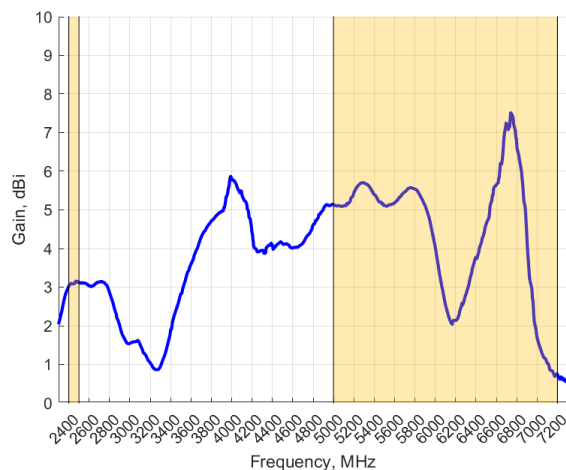
Voltage Standing Wave Ratio (VSWR)*

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



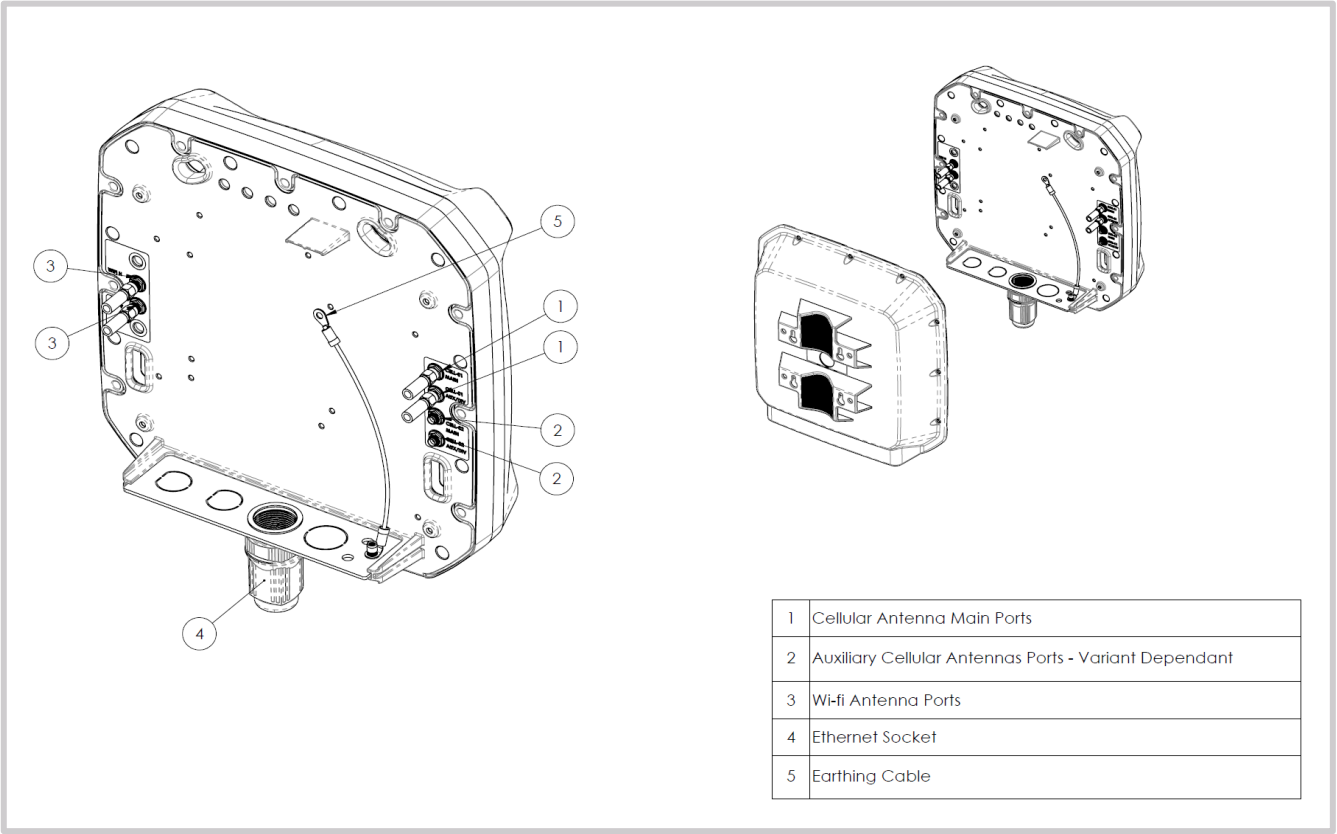
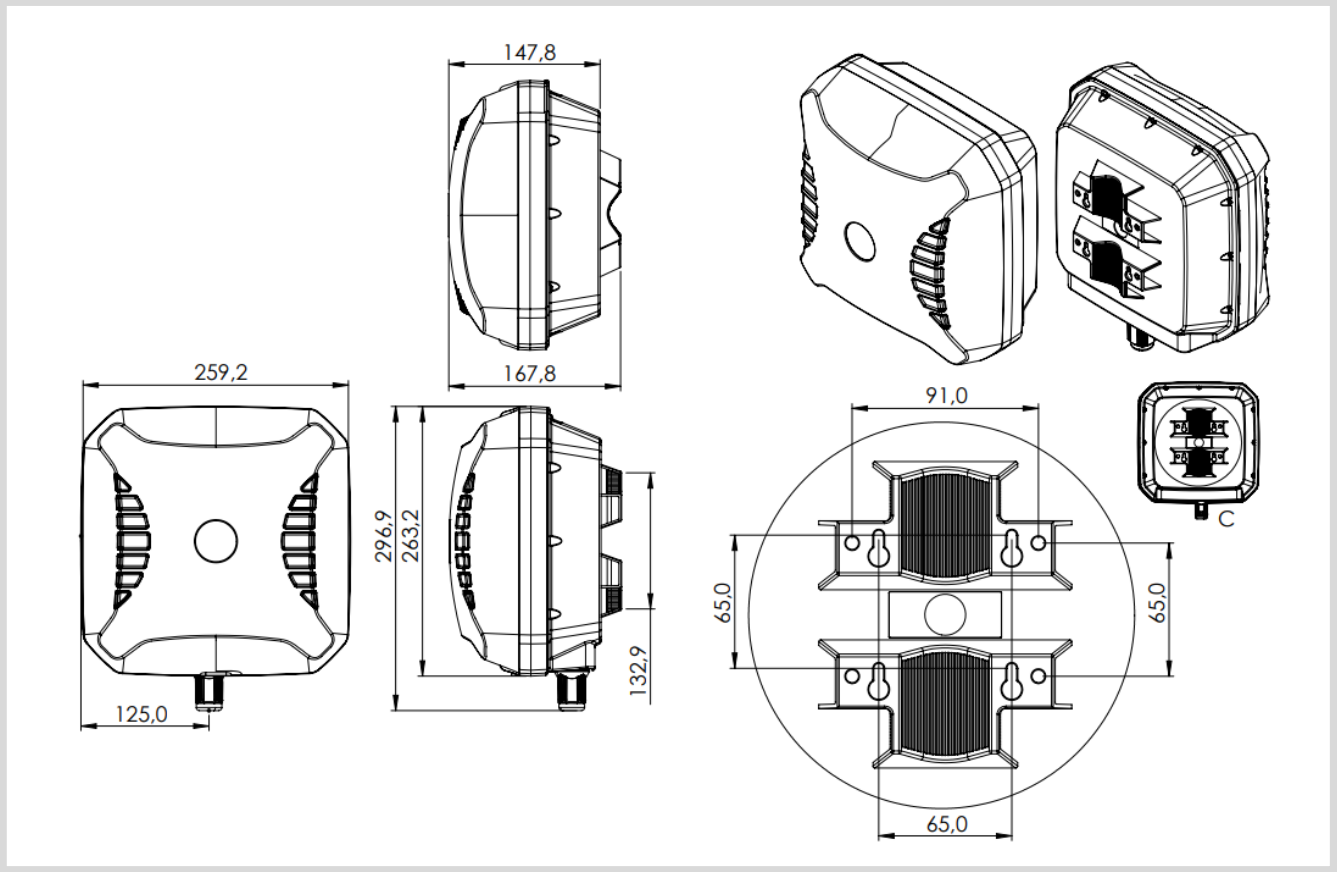
Gain* in dBi

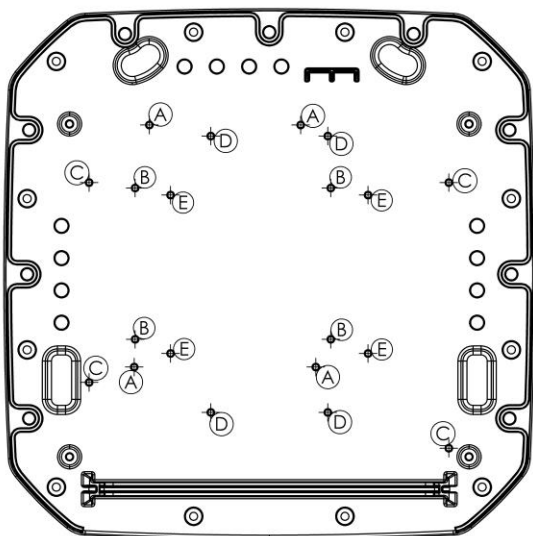
7.5 dBi is the peak gain across all bands from 2400 – 2500 MHz and 5000 – 7200 MHz

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

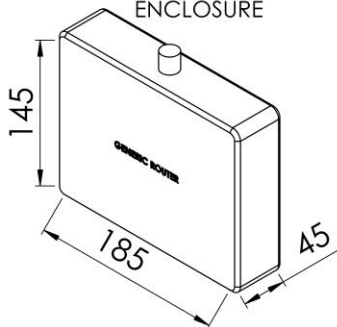
*Antenna gain measured with polarisation aligned standard antenna

Technical Drawings

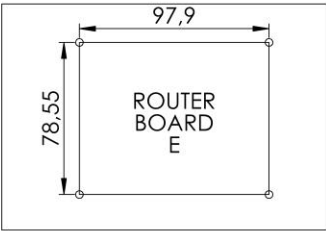
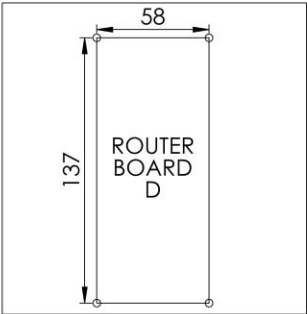
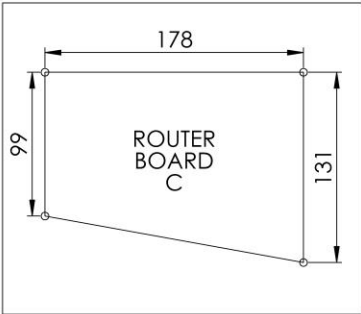
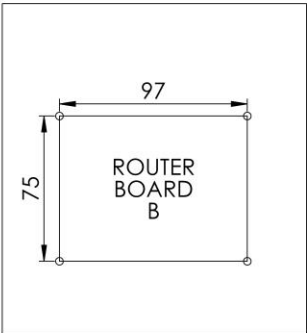
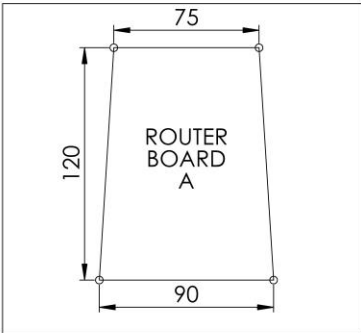




AVAILABLE SPACE
FOR COMPATIBLE
ROUTER
ENCLOSURE

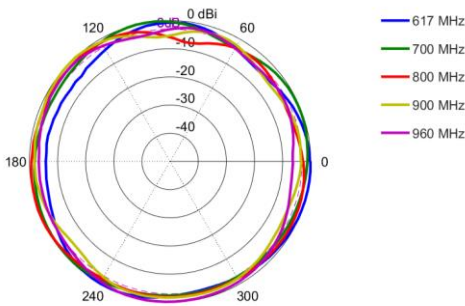


GENERIC ROUTER
MOUNTING HOLES SPACING

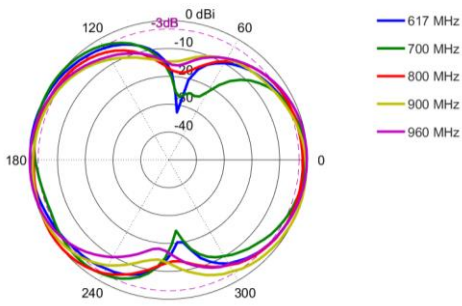


Radiation Patterns – Cellular

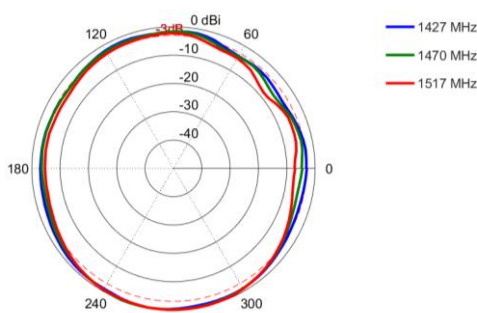
Azimuth: 617 – 960 MHz



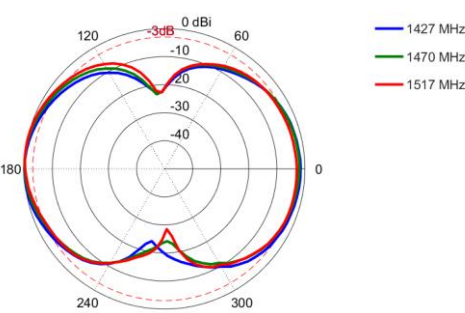
Elevation: 617 – 960 MHz



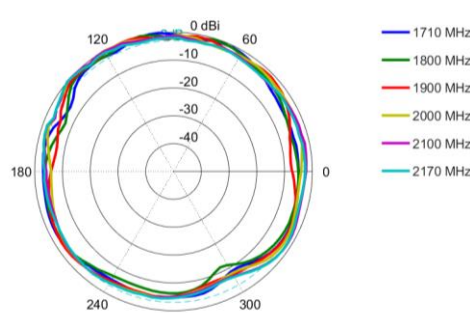
Azimuth: 1427 – 1517 MHz



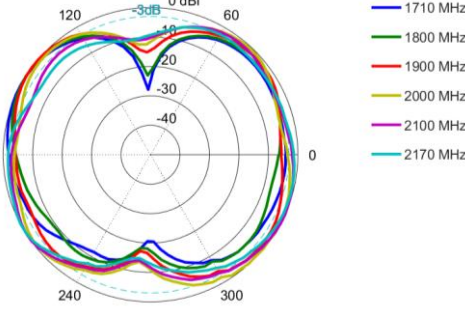
Elevation: 1427 – 1517 MHz



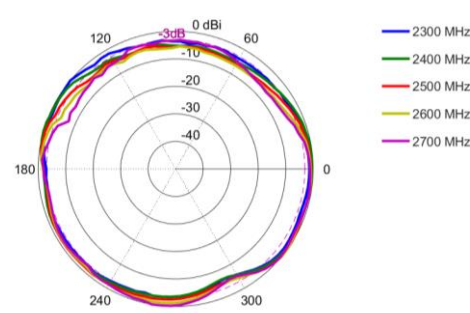
Azimuth: 1710 – 2170 MHz



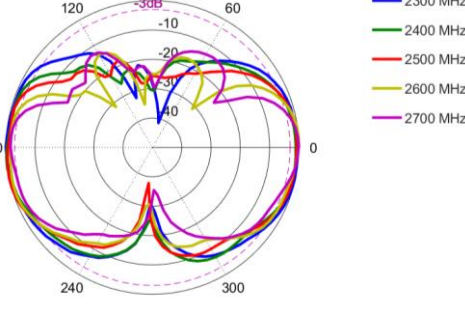
Elevation: 1710 – 2170 MHz



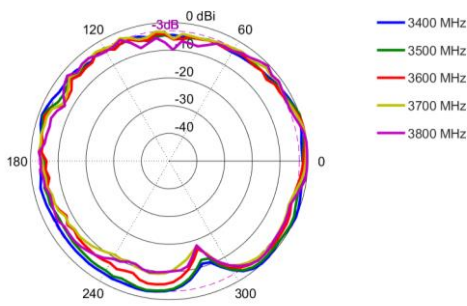
Azimuth: 2300 – 2700 MHz



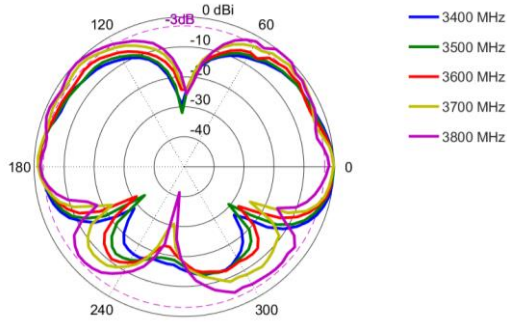
Elevation: 2300 – 2700 MHz



Azimuth: 3400 – 3800 MHz

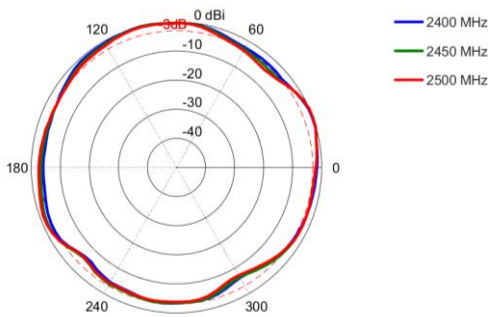


Elevation: 3400 – 3800 MHz

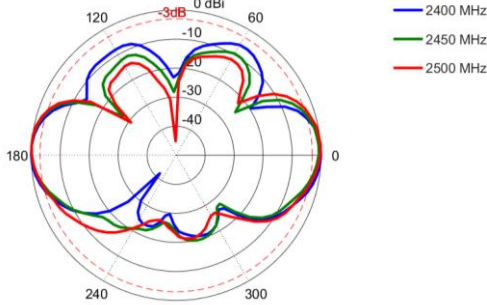


Radiation Patterns – Wi-Fi

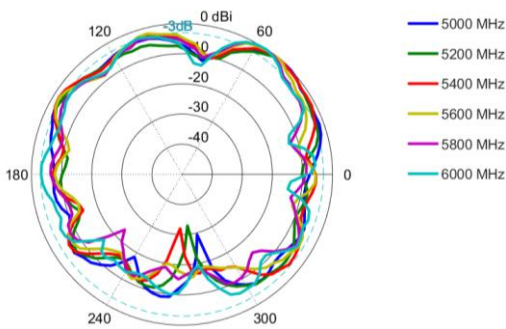
Azimuth: 2400 – 2500 MHz



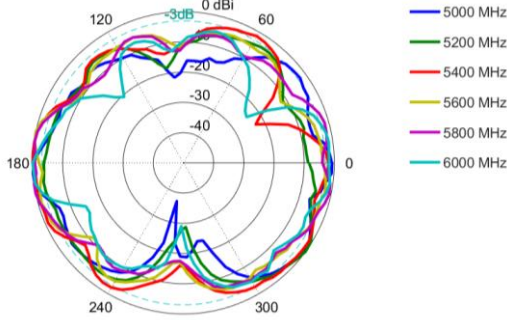
Elevation: 2400 – 2500 MHz



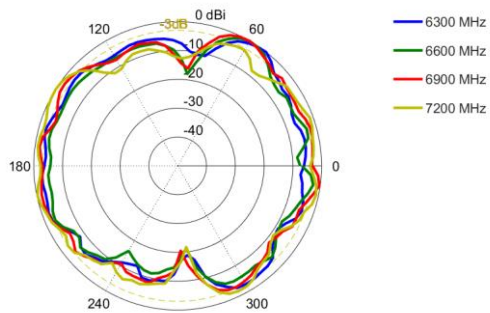
Azimuth: 5000 – 6000 MHz



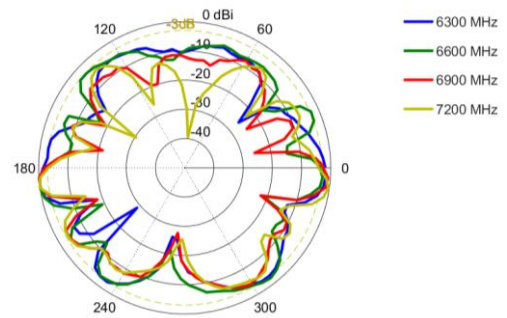
Elevation: 5000 – 6000 MHz



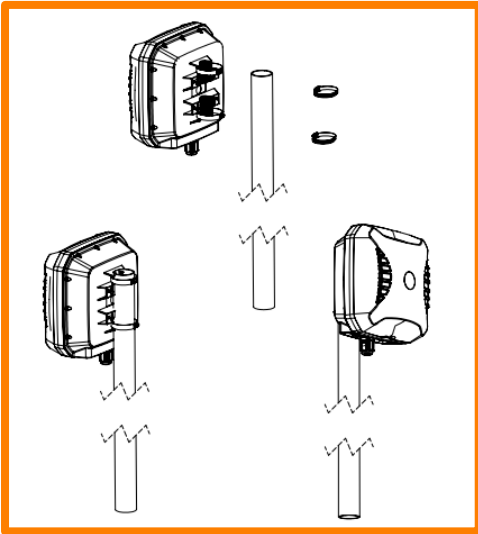
Azimuth: 6300 – 7200 MHz



Elevation: 6300 – 7200 MHz

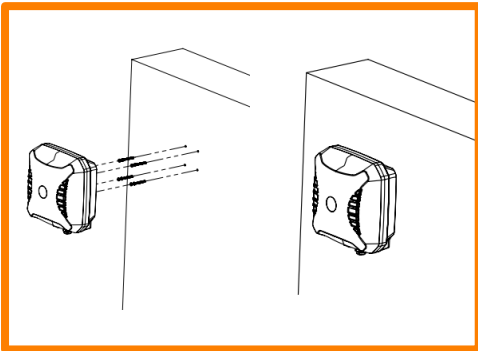


Mounting Options



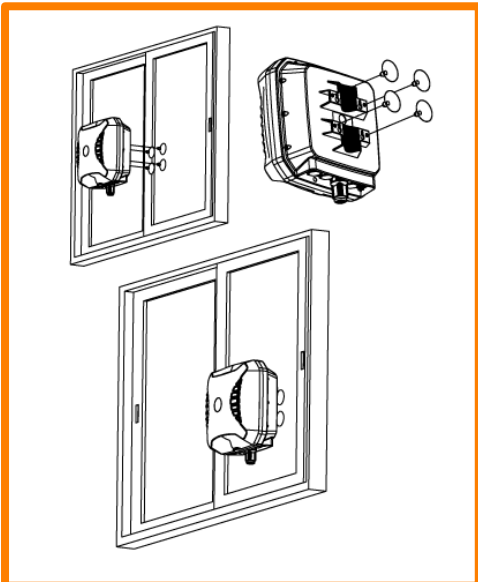
Pole Mount

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

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