

## ANTENNAS | EPNT-1 SERIES

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

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



						
617 - 960 MHz; 1427 - 1517 MHz; 1710 - 2700 MHz; 3400 - 3800 MHz	5 dBi	Increase x Mb/s	Omni- Directional	5G	4G LTE	CBRS Band
						
2.4 & 5 GHz	4X4 MIMO	Fire Resistant -40°C to +80°C		IP 65		



APPLICATION AREAS

- Antenna enclosure with high performance antennas
- Wideband 4x4 MIMO 4G/5G antenna
- 2x2 MIMO dual-band 2.4 GHz and 5 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 a 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 omnidirectional 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 5 dBi. The EPNT-1 also includes two omnidirectional dual-band Wi-Fi antennas that cover the 2.4 GHz and 5 to 6 GHz Wi-Fi bands for 2x2 MIMO. The EPNT-1 enclosure was also designed to withstand adverse weather condition, 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 5 dBi
- 4x4 MIMO for improved performance
- Wall, pole, and window mountable
- Weatherproof and waterproof enclosure (IP65)
- 1 x External USB ports, 1 x Ethernet port and 2 x External SMA connections for additional antennas

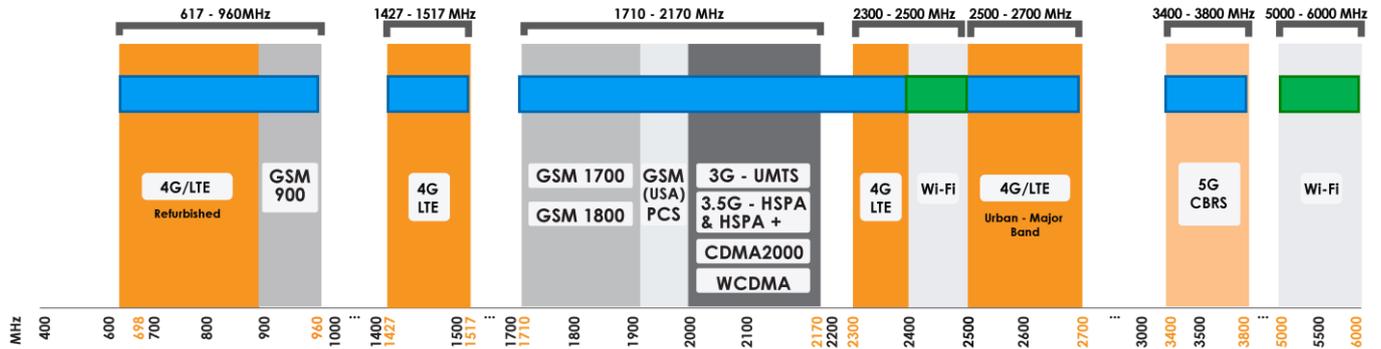


## Application Areas

- Outdoor antenna for Fixed Wireless Access (FWA)
- Consumer 5G/LTE internet connectivity
- Industrial and commercial 5G/LTE deployment
- Urban and rural household reception enhancement
- Smart environmental, water systems for M2M & IoT
- Oil & Gas communication systems

### Frequency Bands

The EPNT-1 is a CPE 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 | 5000 - 6000 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 5000-6000 MHz
Peak Gain	5 dBi	7 dBi
Connector Type*	SMA (F)	SMA (F)

\*The connectors are factory mounted to the antenna  
Additional pigtailed (not supplied) are required to connect the antenna to the router  
See accessories section at the end of this document for pigtail options offered

## Electrical Specifications - Cellular

Frequency bands:	617 - 960 MHz 1427 - 1517 MHz 1710 - 2700 MHz 3400 - 3800 MHz
Gain (max):	1 dBi @ 617 - 960 MHz 2.5 dBi @ 1427 - 1517 MHz 5 dBi @ 1710 - 2700 MHz 4.5 dBi @ 3400 - 3800 MHz
VSWR:	<2.5:1
Feed power handling:	10W
Input impedance:	50 Ohm (nominal)
Polarisation:	Cell 1: ±45° Cell 2: Vertical & Horizontal linear
Path to Ground:	Yes

## Electrical Specifications - Wi-Fi

Frequency:	2400 - 2500 MHz 5000 - 6000 MHz
Gain (Max):	3 dBi @ 2400 - 2500 MHz 7 dBi @ 5000 - 6000 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-V1-01
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## Ordering Information

Commercial name:	EPNT-1
Order product code:	A-EPNT-0001-V1-01
EAN number:	6009710922521

## Mechanical Specifications

Product dimensions	260mm x 264mm x 168mm
Maximum router dimensions:	185mm x 145mm x 45mm
Packaged dimensions:	450mm x 270mm x 180mm
Weight:	TBC
Packaged weight:	TBC
Radome material:	UV stable ASA
Radome colour:	Brilliant White Pantone P 179-1C
Mounting Type:	Wall/Pole and Window Mounted

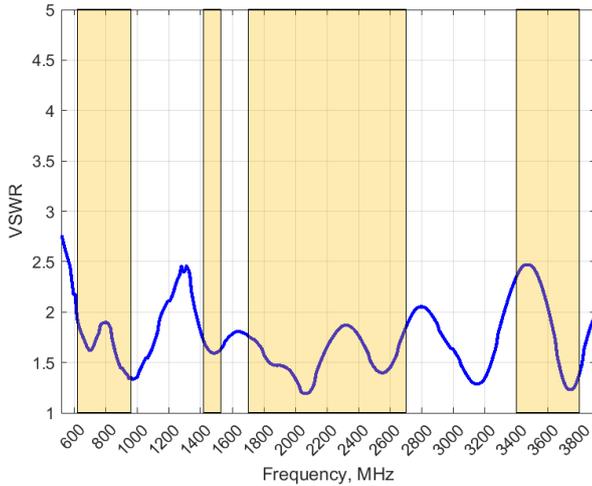
## Environmental Specifications, Certification & Approvals

Wind Survival:	≤220 km/h
Temperature Range (Operating):	-40°C to +70°C
Environmental Conditions:	Outdoor/Indoor
Water ingress protection ratio/standard:	IP 65
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**



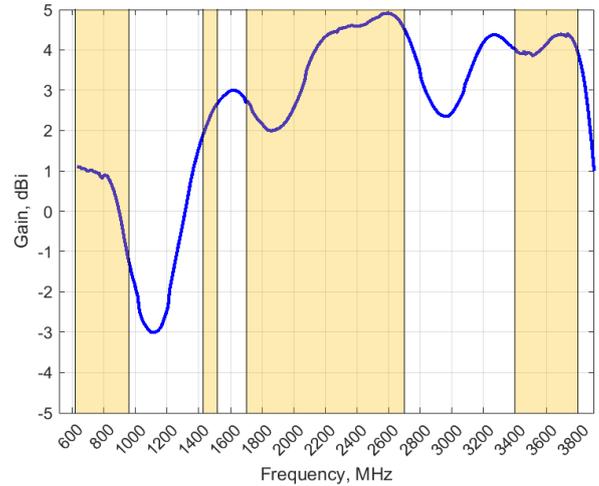
**Voltage Standing Wave Ratio (VSWR)\***

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.

\*Antenna VSWR measured without a cable

**GAIN (EXCLUDING CABLE LOSS)**



**Gain\* in dBi**

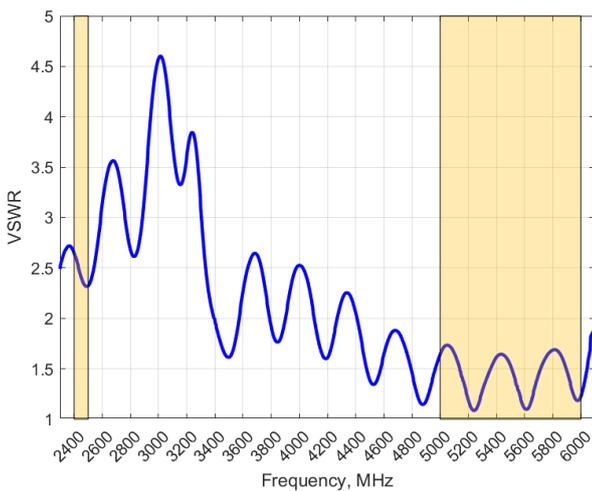
5 dBi is the peak gain across all bands from 617 – 3800 MHz

Gain @ 617 - 960 MHz:	1 dBi
Gain @ 1427 – 1517 MHz:	2.5 dBi
Gain @ 1710 – 2700 MHz:	5 dBi
Gain @ 3400 - 3800 MHz:	4.5 dBi

\*Antenna gain measured with polarisation aligned standard antenna

**Antenna Performance Plots -Wi-Fi**

**VSWR**



**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 Wi-Fi delivers superior performance across all bands with a VSWR of ≤ 2.5:1 or better across all bands.

\*Antenna VSWR measured without a cable

**Gain (EXCLUDING CABLE LOSS)**



**Gain\* in dBi**

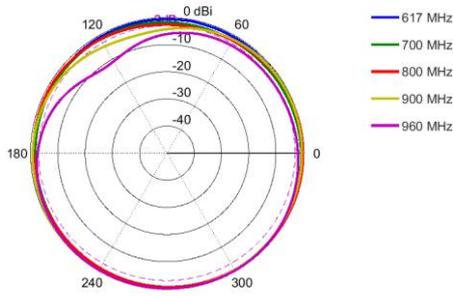
7 dBi is the peak gain across all bands from 2400 – 2500 MHz & 5000 – 6000 MHz

Gain @ 2400-2500 MHz:	3 dBi
Gain @ 5000-6000 MHz:	7 dBi

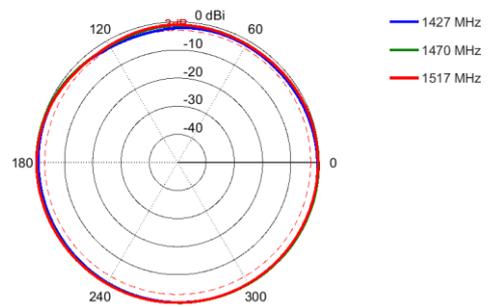
\*Antenna gain measured with polarisation aligned standard antenna

**Radiation Patterns - Cellular**

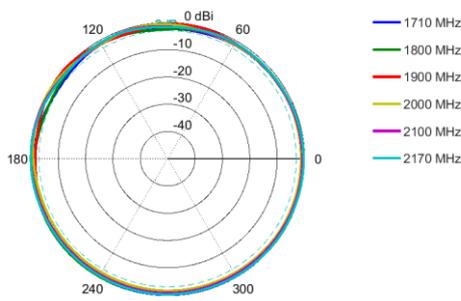
Azimuth: 617 – 960 MHz



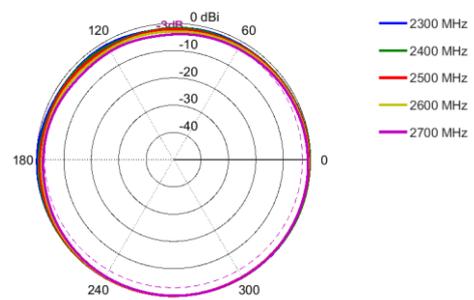
Azimuth: 1427 – 1517 MHz



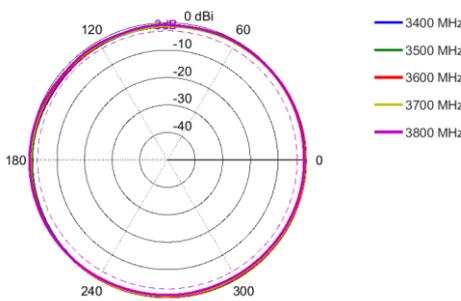
Azimuth: 1710 – 2170 MHz



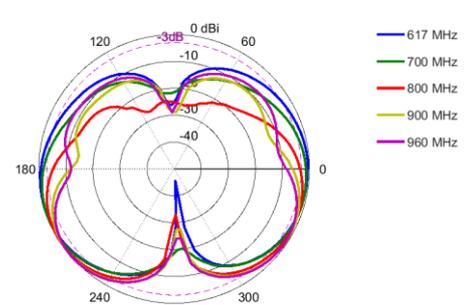
Azimuth: 2300 – 2700 MHz



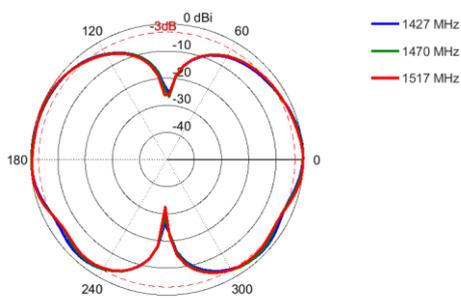
Azimuth: 3400 – 3800 MHz



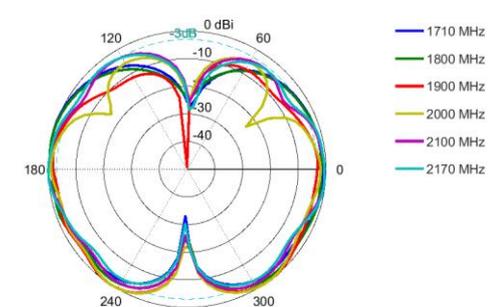
Elevation: 617 – 960 MHz



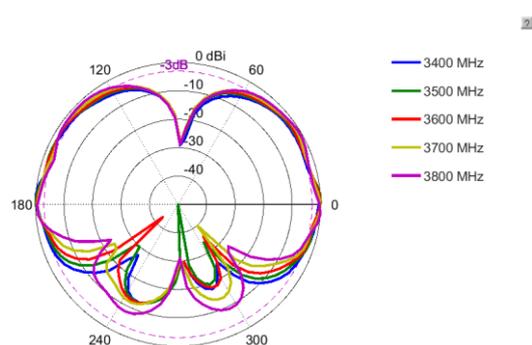
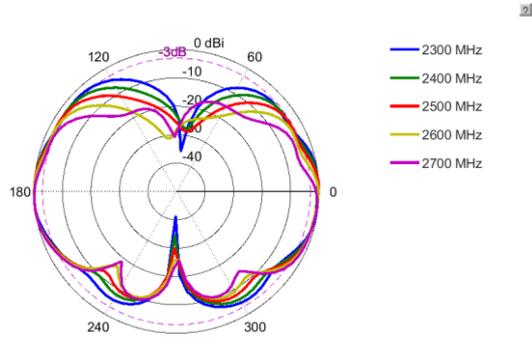
Elevation: 1427 – 1517 MHz



Elevation: 1710 – 2170 MHz

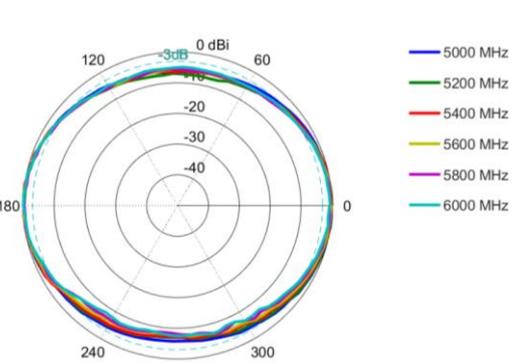
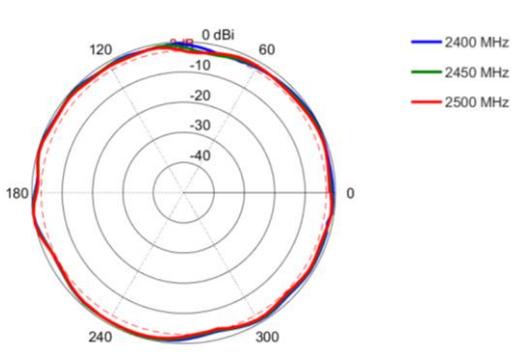


Elevation: 2300 – 2700 MHz      Elevation: 3400 – 3800 MHz

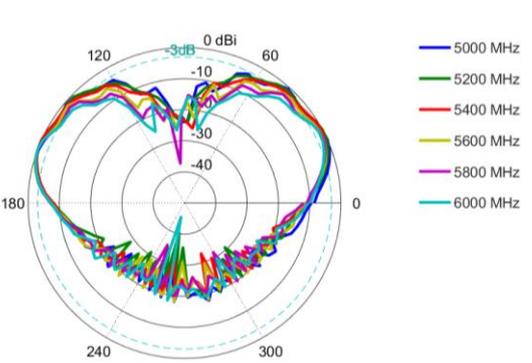
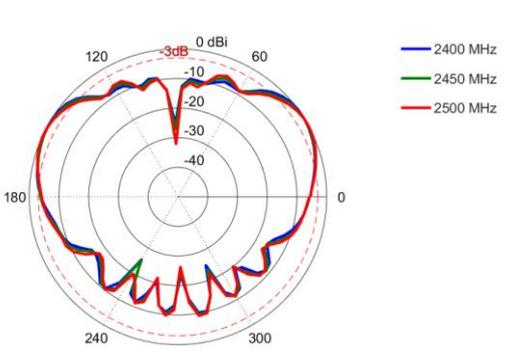


Radiation Patterns – Wi-Fi

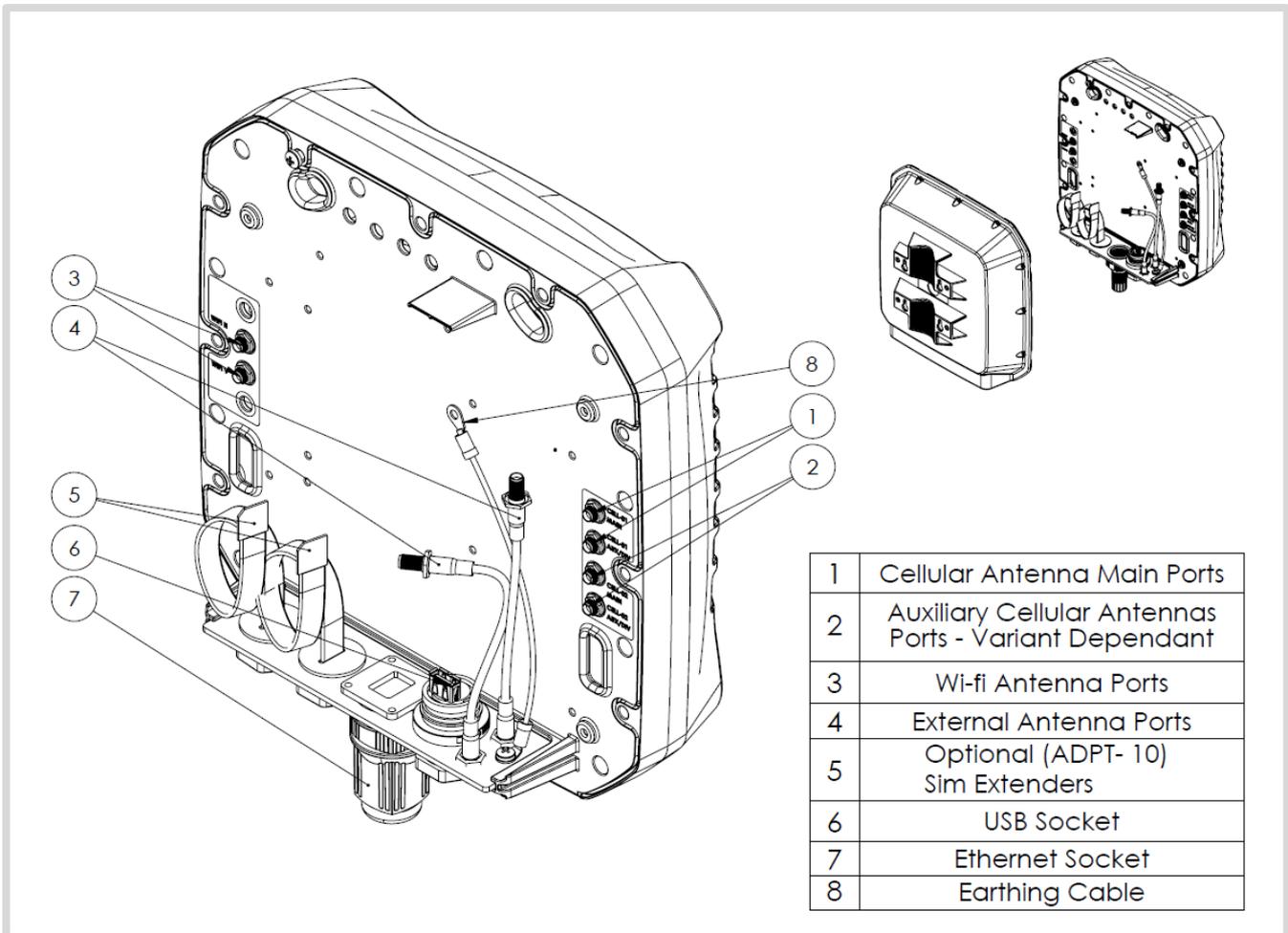
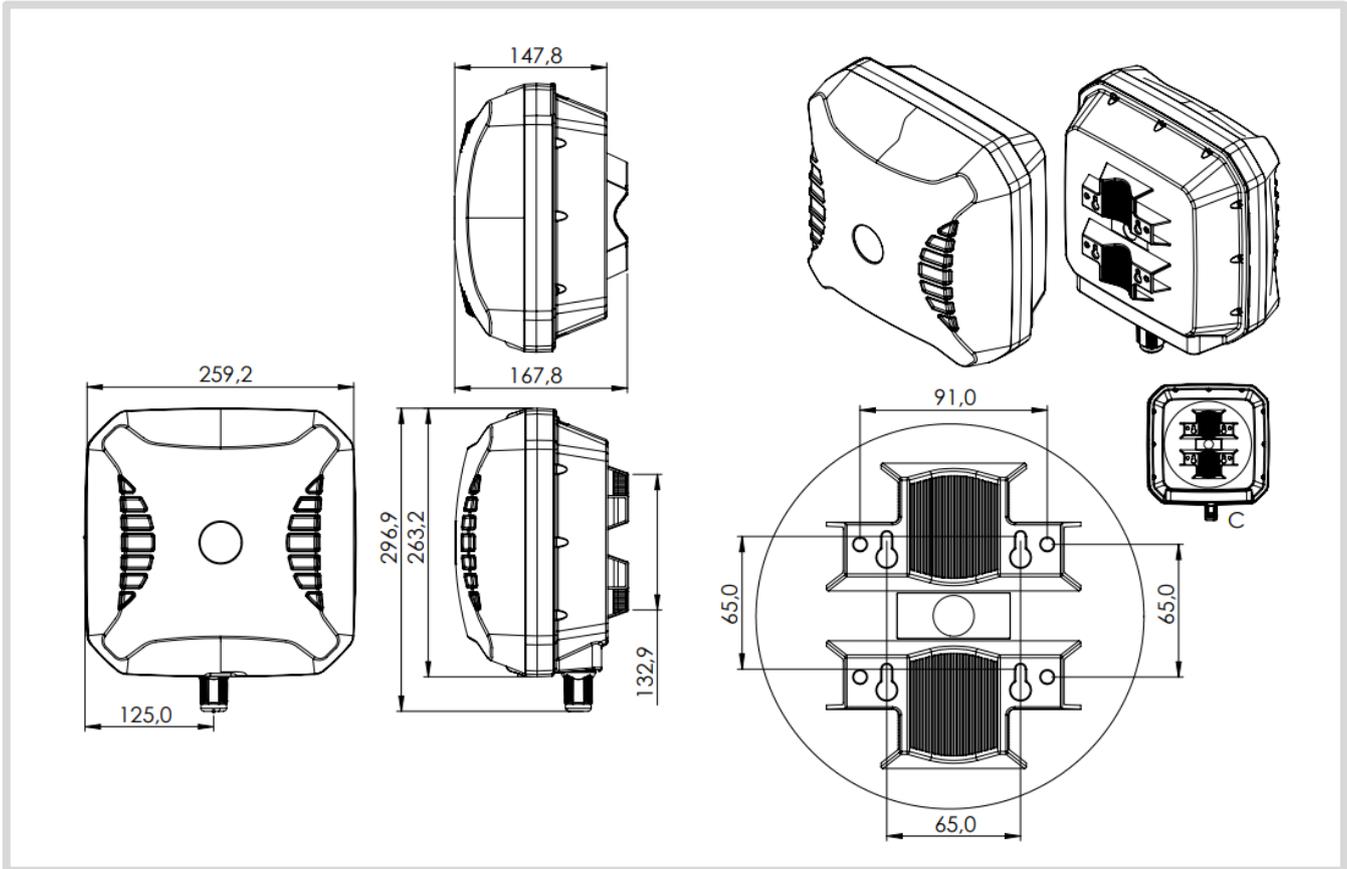
Azimuth: 2400 – 2500 MHz      Azimuth: 5000 – 6000 MHz



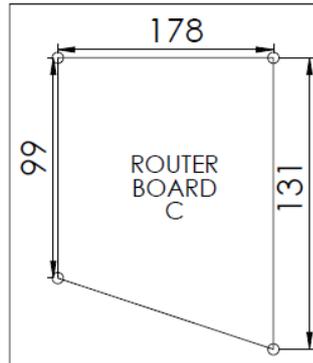
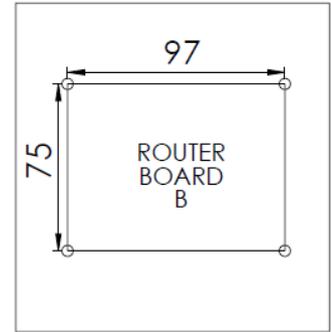
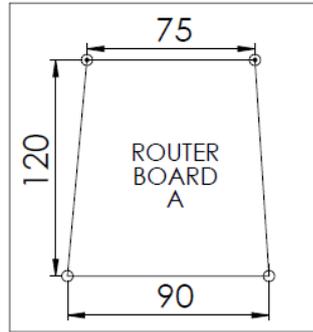
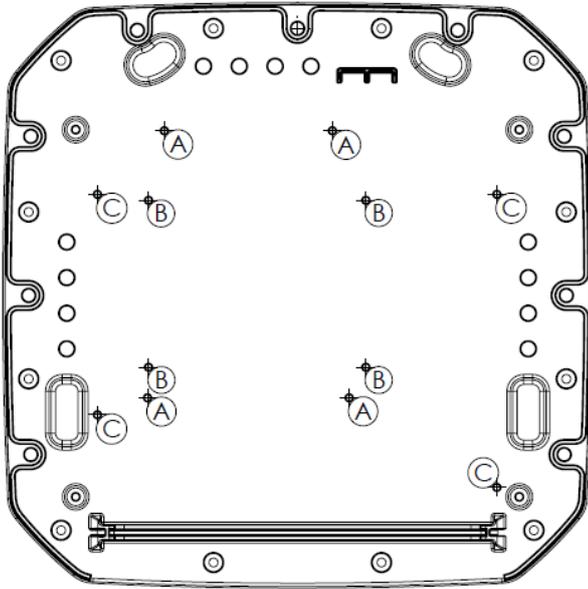
Elevation: 2400 – 2500 MHz      Elevation: 5000 – 6000 MHz



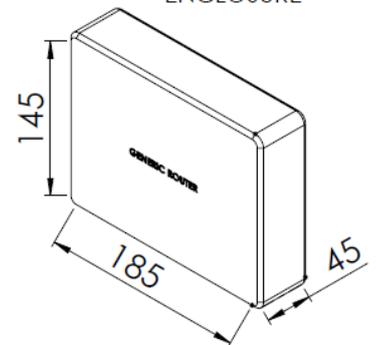
Technical Drawings



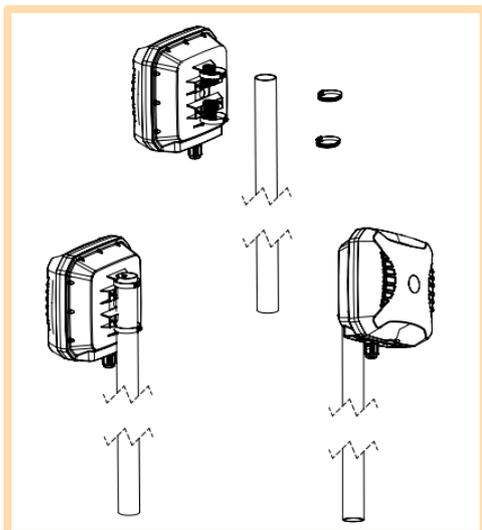
GENERIC ROUTER  
MOUNTING HOLES SPACING



AVAILABLE SPACE  
FOR COMPATIBLE  
ROUTER  
ENCLOSURE

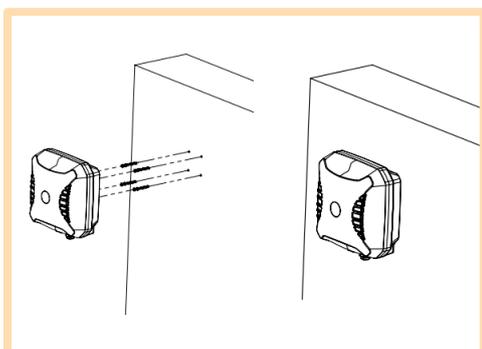


## Mounting Options



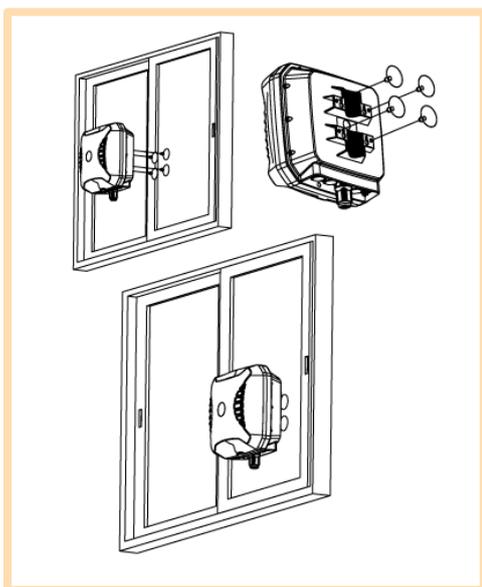
### Pole Mount

Pole mounting bracket used pipe clamps (included)



### Wall Mount

Wall mounting bracket used with knock-in screws (included)



### Window Mount\*

Pole/Wall mounting bracket used with 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

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