

EPNT-1



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 mm³. 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

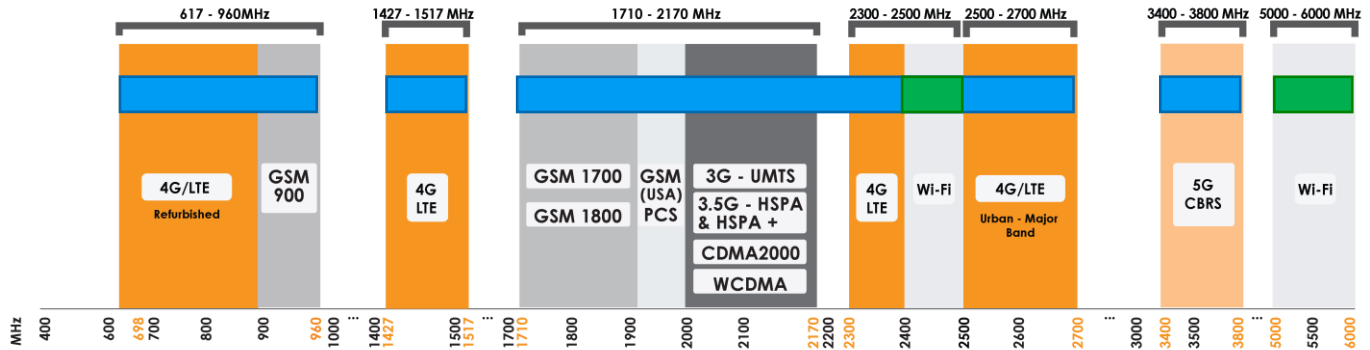
- Outdoor antenna for Fixed Wireless Access (FWA)
- Consumer 5G/LTE internet connectivity
- Industrial and commercial 5G/LTE deployment
- Urban and rural household reception enhancement
- Smart environmental, water systems for M2M & IoT
- Oil & Gas communication systems



EPNT-1

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 |
|----------|-------------------|

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

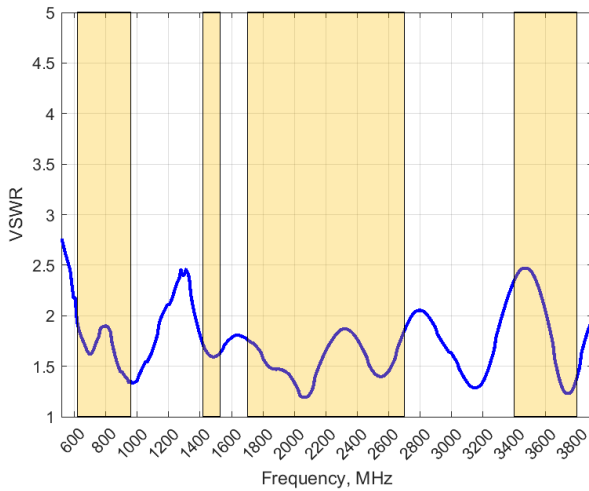
| | |
|--|-------------------------------------|
| Wind Survival: | ≤220 km/h |
| Temperature Range (Operating): | -40°C to +70°C |
| Environmental Conditions: | Outdoor/Indoor |
| Water ingress protection ratio/standard: | IP 65 |
| Salt Spray: | MIL-STD 810G/ASTM B117 |
| Operating Relative Humidity: | 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



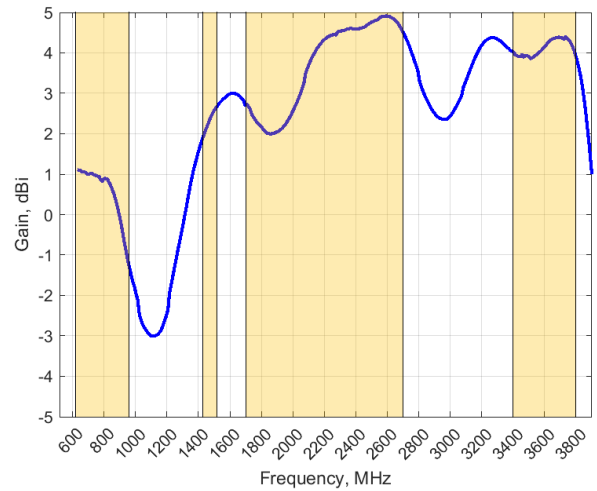
Voltage Standing Wave Ratio (VSWR)*

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

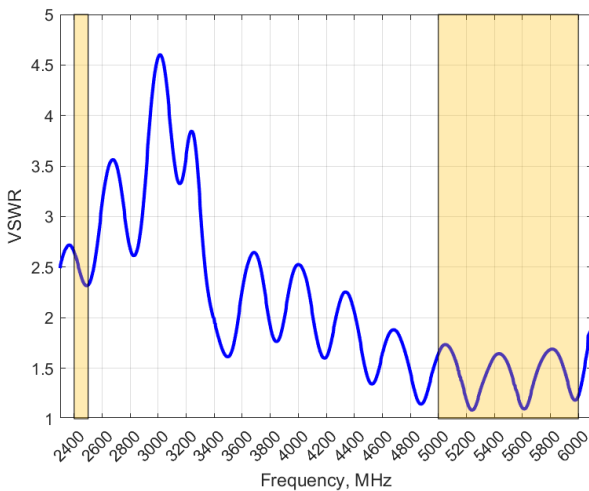
5 dBi is the peak gain across all bands from 617 – 3800 MHz

| | |
|-------------------------|---------|
| 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



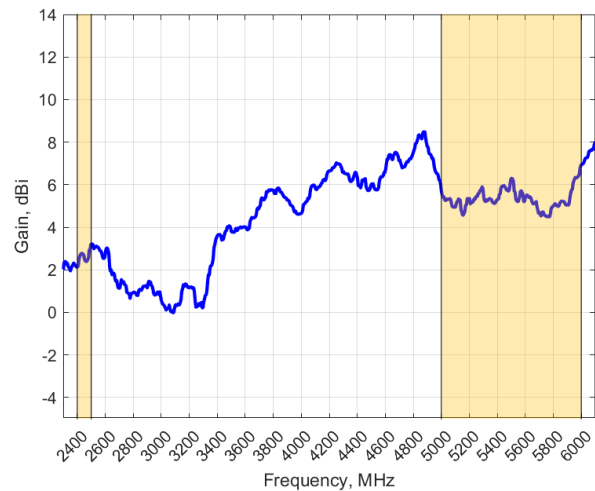
Voltage Standing Wave Ratio (VSWR)*

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 $\leq 2.5:1$ or better across all bands.

*Antenna VSWR measured without a cable

Gain (EXCLUDING CABLE LOSS)



Gain* in dBi

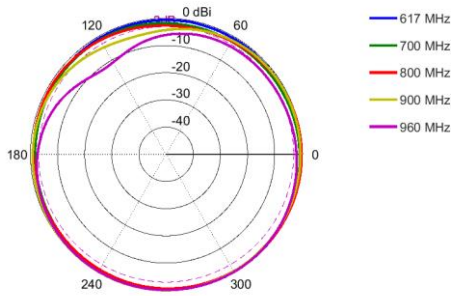
7 dBi is the peak gain across all bands from 2400 – 2500 MHz & 5000 – 6000 MHz

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

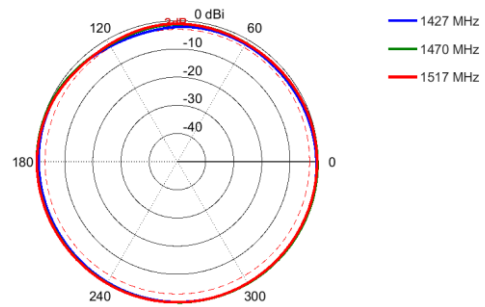
*Antenna gain measured with polarisation aligned standard antenna

Radiation Patterns - Cellular

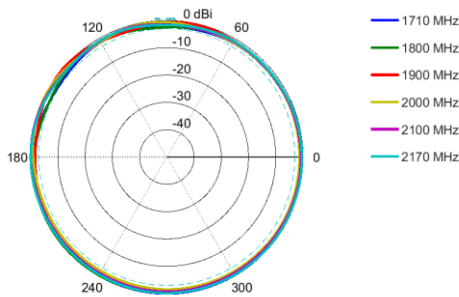
Azimuth: 617 – 960 MHz



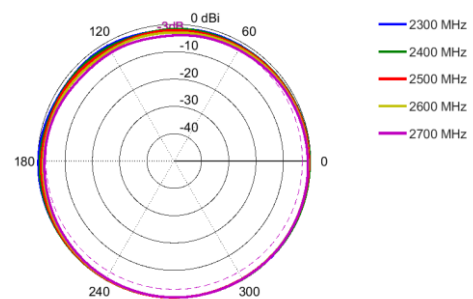
Azimuth: 1427 – 1517 MHz



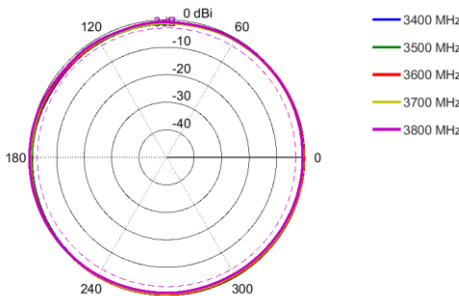
Azimuth: 1710 – 2170 MHz



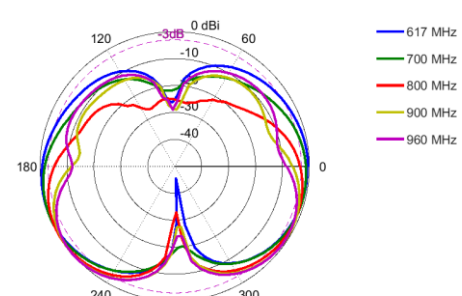
Azimuth: 2300 – 2700 MHz



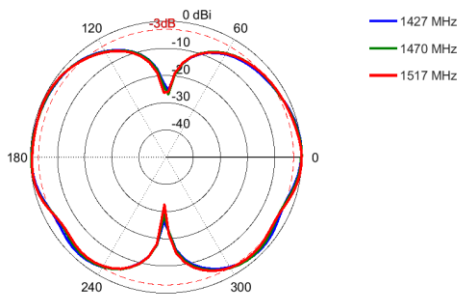
Azimuth: 3400 – 3800 MHz



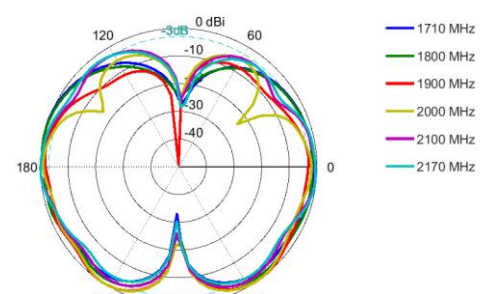
Elevation: 617 – 960 MHz



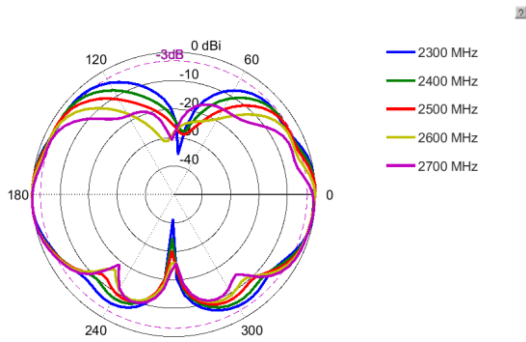
Elevation: 1427 – 1517 MHz



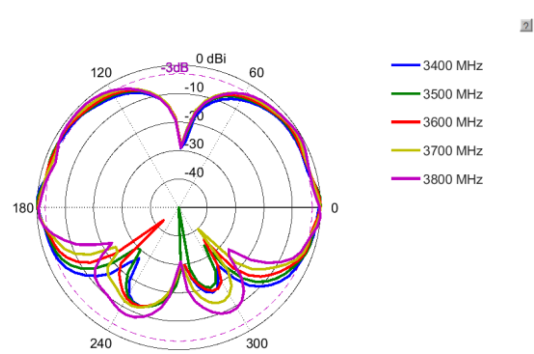
Elevation: 1710 – 2170 MHz



Elevation: 2300 – 2700 MHz

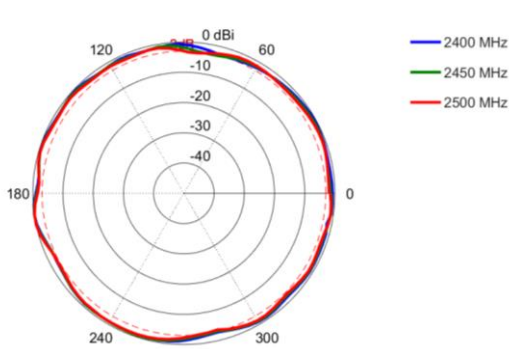


Elevation: 3400 – 3800 MHz

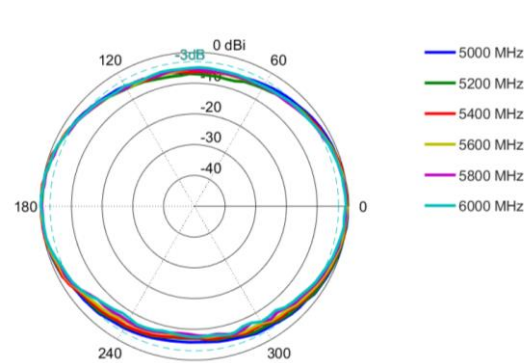


Radiation Patterns – Wi-Fi

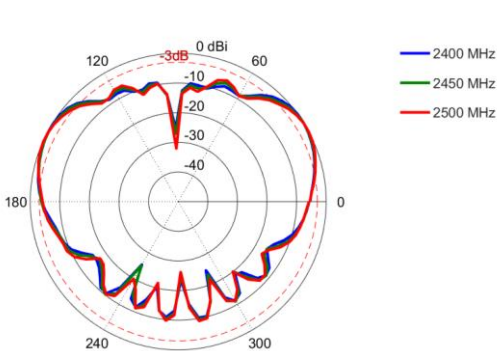
Azimuth: 2400 – 2500 MHz



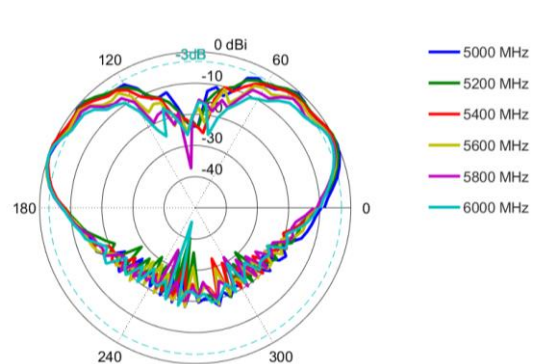
Azimuth: 5000 – 6000 MHz



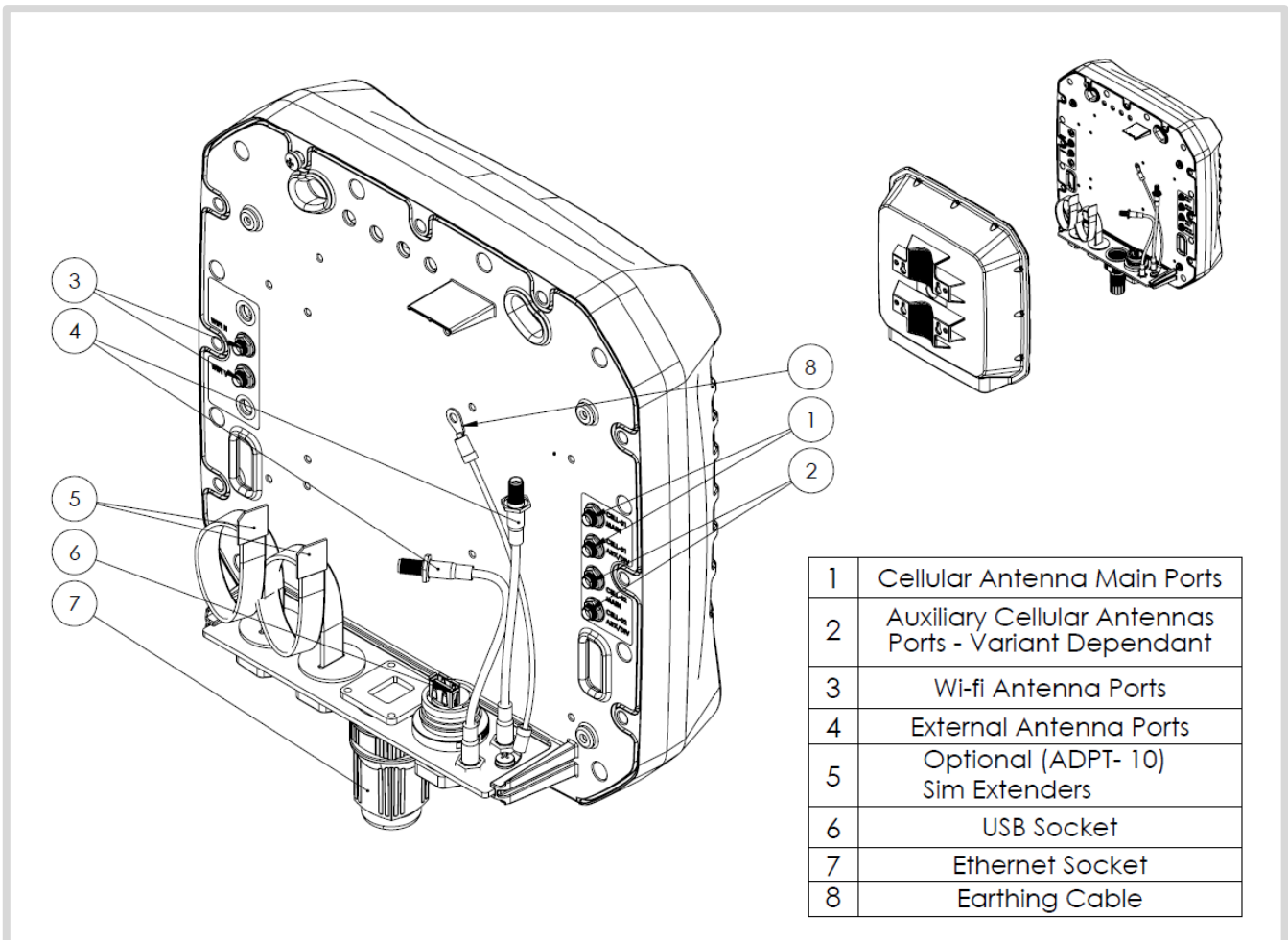
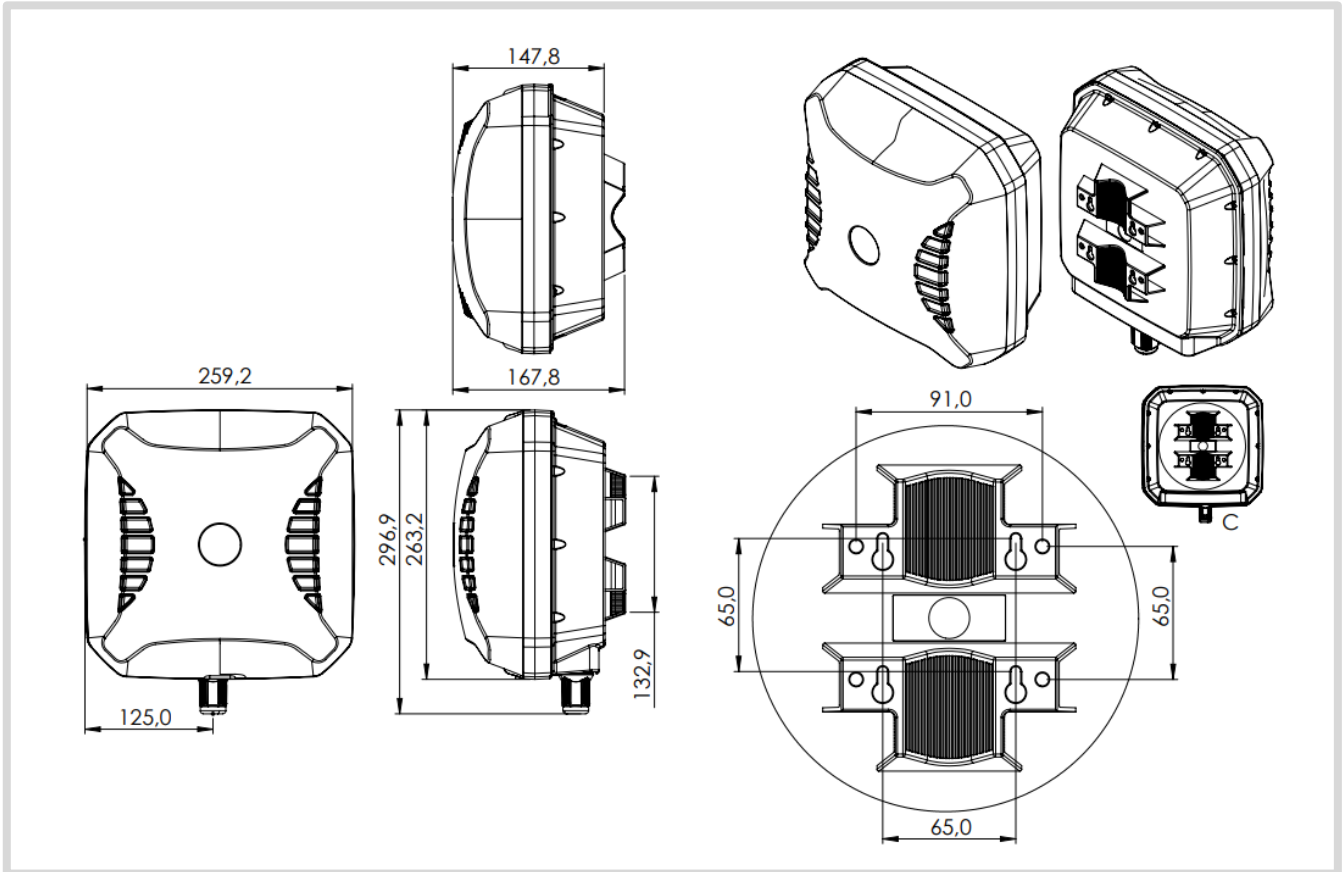
Elevation: 2400 – 2500 MHz



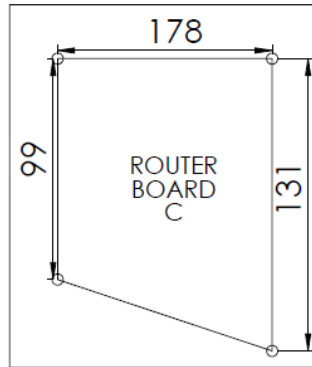
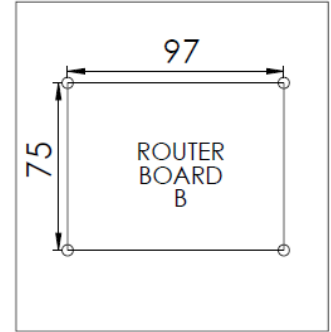
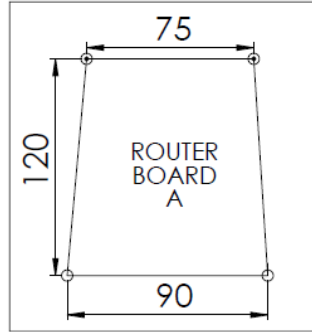
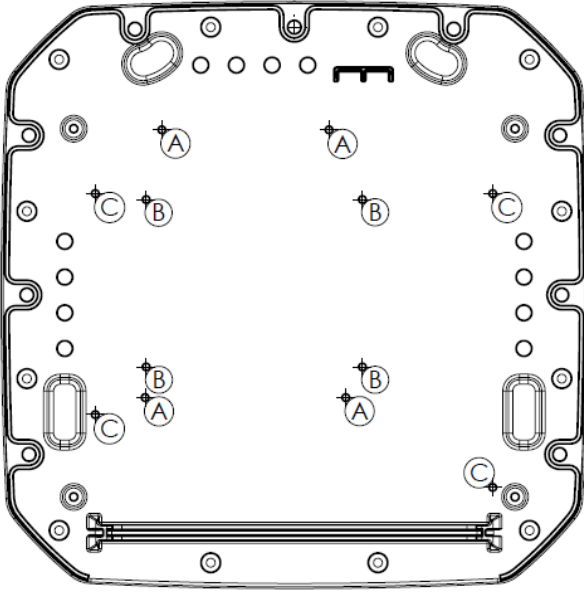
Elevation: 5000 – 6000 MHz



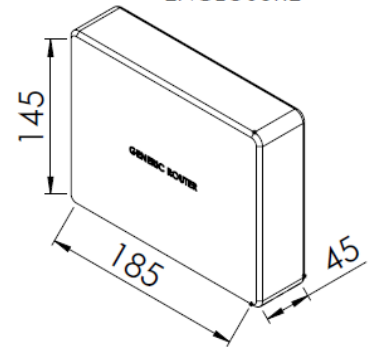
Technical Drawings



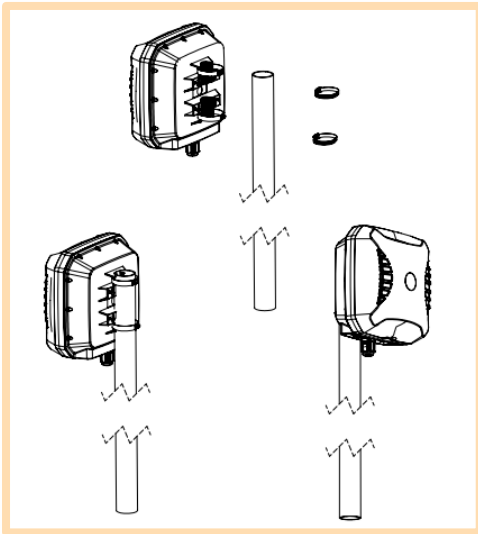
GENERIC ROUTER
MOUNTING HOLES SPACING



AVAILABLE SPACE
FOR COMPATIBLE
ROUTER
ENCLOSURE

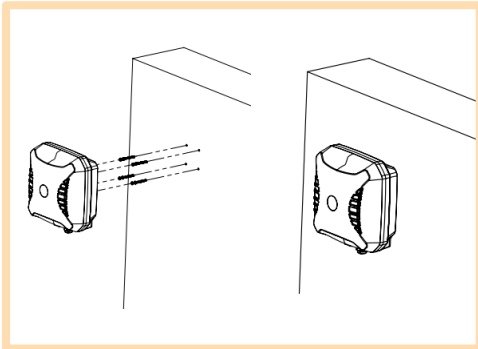


Mounting Options



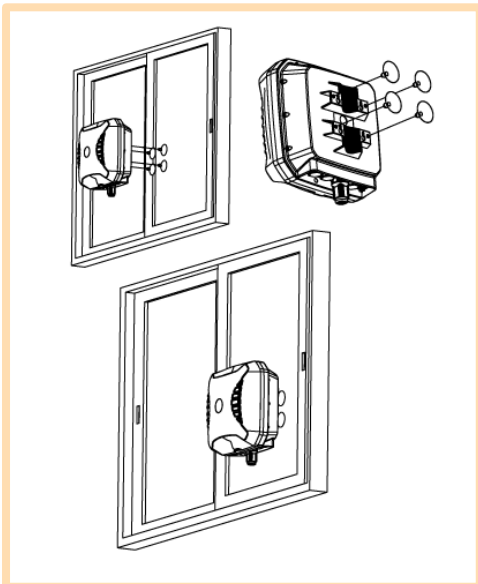
Pole Mount

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)

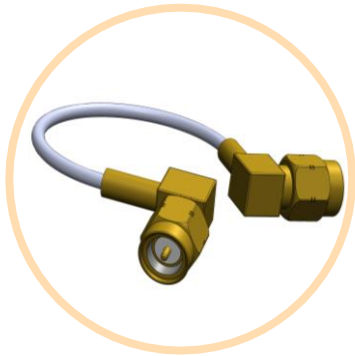
** Window mounting using suckers is a temporary solution provided for convenience. Ensure that the grounding cable used is strong enough to double as a safety fallback. For sturdier long-term mounting, consider the wall/pole mount options.*

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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