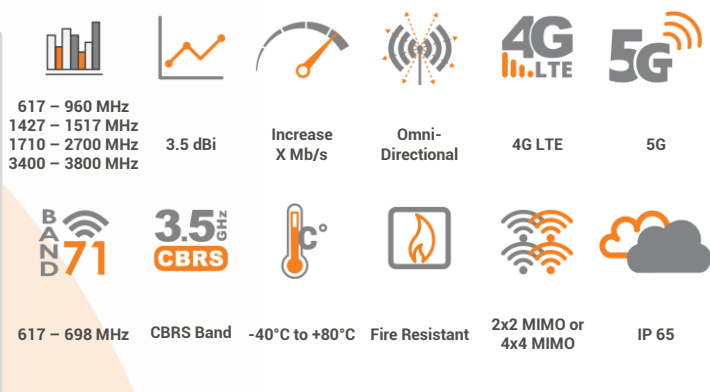


## ANTENNAS | XPOL-1- 5G SERIES

# X-POLARISED, OMNI-DIRECTIONAL, MIMO 5G ANTENNA

617 – 3800 MHz, 3.5 dBi



- Ultra-Wideband cellular antennas from 617 to 3800 MHz
- Cross-polarised antennas for improved performance
- Omni-directional antenna with a low-profile design
- High gain for the antenna size
- 2x2 or 4x4 MIMO 4G/5G antenna for higher data throughputs
- Versatile mounting options for ease of installation
- Weather, dust, and vandal resistant enclosure (IP 65)

APPLICATION AREAS



Urban

## Product Overview

The XPOL-1-5G is Poynting's second generation "V2" of this very popular Cross Polarised (XPOL), cellular band, 2x2 or 4x4 MIMO antenna. The antenna has been completely redesigned from previous generations, featuring an all-new enclosure and high-performing antenna design. The antenna now includes the newer 3400 - 3800 MHz bands as well as the in demand lower 617 MHz band. This allows it to be utilized across different cellular operators and technologies, and it is ready for future cellular technologies up to 6GHz for 5G applications. This antenna performs exceptionally well in the following frequency bands: 617 – 960 MHz, 1427 – 1517 MHz, 1700 – 2700 MHz & 3400 – 3800 MHz, with a peak gain of 3.5 dBi across the frequency bands of operation.

The radiation patterns of this antenna are omni-directional and exceptionally well controlled, further enhancing its performance. This makes the antenna perfect for various application areas, such as urban, suburban, and commercial, to achieve the best possible coverage over a large area. The robust mechanical enclosure design makes the antenna weather, dust, and vandal resistant, granting it an IP65 rating, suitable for outdoor environments.

## Features

- Ultra-wideband coverage from 617 to 3800 MHz
- X-Polarised 2x2 or 4x4 MIMO Antenna
- Wall, Pole, or Window mountable
- High pattern consistency across bands for 4G/5G carrier aggregation
- Low-profile and rugged mechanical design with an IP65 rating
- Lightweight & Rugged
- Weatherproof (IP65)

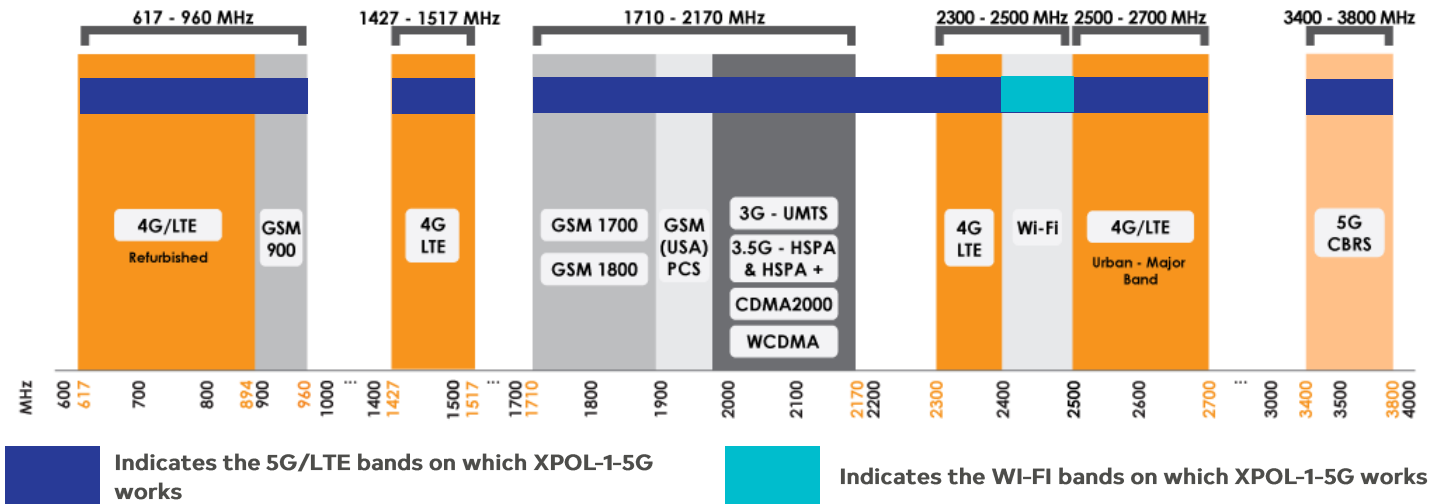
## Application Areas

- Outdoor antenna for Fixed Wireless Access (FWA)
- Homes and small offices in both urban and suburban environments
- Small to medium-sized businesses across various commercial and industrial sectors such as retail outlets, petrol stations, guesthouses, banks, etc.
- Temporary offices on construction sites
- Serve as a reliable backup connectivity option for locations that use fibre or Starlink as their primary internet connection



**Frequency Bands**

The XPOL-1-5G is an LTE MIMO antenna that works from | 617 – 960 MHz | 1427 – 1517 MHz | 1710 – 2700 MHz | and | 3400 – 3800 MHz |



**Antenna Derivatives**

| Product Order Code (SKU) | A-XPOL-0001-V2-21 | A-XPOL-0001-V2-41 |
|--------------------------|-------------------|-------------------|
| Number of Ports          | 2                 | 4                 |
| SISO / MIMO              | 2x2 MIMO          | 4x4 MIMO          |
| Coax Cable Type          | HDF 195           | HDF 195           |
| Coax Cable Length        | 5m                | 5m                |
| Connector Type           | SMA (M)           | SMA (M)           |
| Product Weight           | 0.70 Kg           | 1.10 Kg           |
| Packaged Weight          | 1.05 Kg           | 1.45 Kg           |
| EAN                      | 6009710920763     | 6009710920886     |

\*The coax cable & connector are factory mounted to the antenna

## Electrical Specifications

|                             |  |
|-----------------------------|--|
| <b>Frequency Bands:</b>     | 617 – 960 MHz<br>1427 – 1517 MHz<br>1710 – 2700 MHz<br>3400 – 3800 MHz                                     |
| <b>Gain (Max):</b>          | 0.5 dBi @ 617 – 960 MHz<br>2 dBi @ 1427 – 1517 MHz<br>3 dBi @ 1710 – 2700 MHz<br>3.5 dBi @ 3400 – 3800 MHz |
| <b>VSWR:</b>                | ≤2.5:1<br>across 90% of the bands  |
| <b>Feed Power Handling:</b> | 10 W   |
| <b>Input Impedance:</b>     | 50 Ohm (nominal)   |
| <b>Polarisation:</b>        | Cross Polarised  |
| <b>Coax Cable Loss:</b>     | 0.385 dB/m @ 900 MHz<br>0.507 dB/m @ 1500 MHz<br>0.565 dB/m @ 1800 MHz<br>0.788 dB/m @ 3000 MHz            |
| <b>DC Short:</b>            | Yes, path to ground  |

## Product Box Content

|                          |   |
|--------------------------|---|
| <b>Antenna:</b>          | A-XPOL-0001-V2  |
| <b>Mounting Bracket:</b> | Pole/Wall mounting bracket and window suction cups included |

## Mechanical Specifications

|                             |  |
|-----------------------------|--|
| <b>Product Dimensions</b>   | 246 mm x 157 mm x 88 mm<br>(Including bracket) |
| <b>Packaged Dimensions:</b> | 271 mm x 191 mm x 120 mm                       |
| <b>Radome Material:</b>     | UV Stable ASA                                  |
| <b>Radome Colour:</b>       | Brilliant White<br>Pantone P 179-1 C           |
| <b>Mounting Type:</b>       | Wall, pole, and window mount                   |

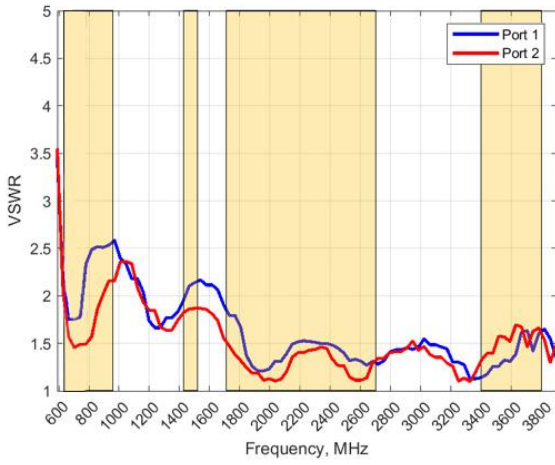
## Environmental Specifications, Certification & Approvals

|   |   |
|---|---|
| <b>Wind Survival:</b>                           | ≤250 km/h<br>*Except for window mount configuration |
| <b>Temperature Range (Operating):</b>           | -40°C to +80°C                                      |
| <b>Environmental Conditions:</b>                | Outdoor/Indoor                                      |
| <b>Water Ingress Protection Ratio/Standard:</b> | IP 65   |
| <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 10   |
| <b>Product Safety &amp; Environmental:</b>      | Complies with CE and RoHS standards                 |

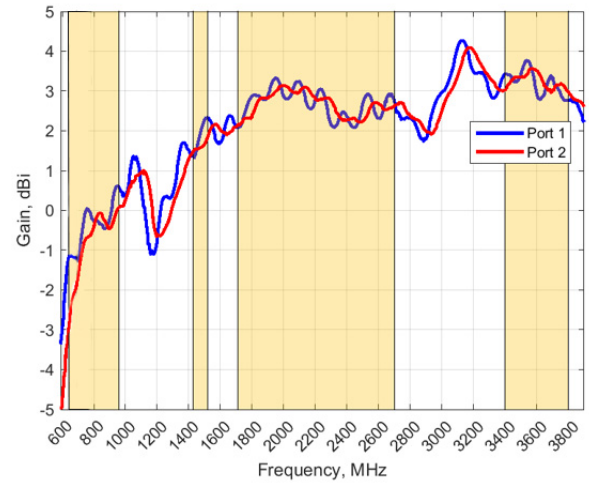


**Antenna Performance Plots**

**VSWR**



**GAIN (EXCLUDING CABLE LOSS)**



**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 XPOL-1-5G delivers superior performance across all bands with a VSWR of  $\leq 2.5:1$ .

\*VSWR measured with a 5m low loss cable.

**Gain\* in dBi**

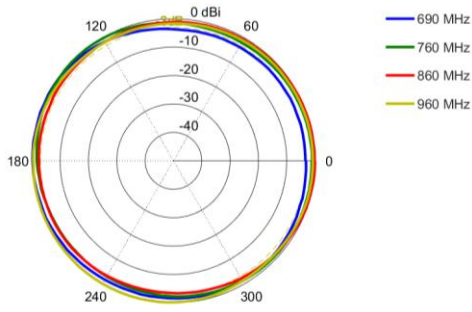
3.5 dBi is the peak gain across all bands from 617 – 3800 MHz

|                         |         |
|-------------------------|---------|
| Gain @ 617 – 960 MHz:   | 0.5 dBi |
| Gain @ 1427 – 1517 MHz: | 2 dBi   |
| Gain @ 1710 – 2700 MHz: | 3 dBi   |
| Gain @ 3400 – 3800 MHz: | 3.5 dBi |

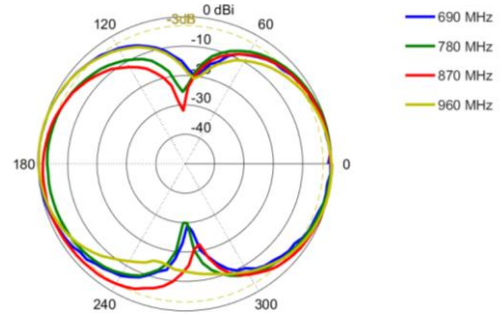
\*Antenna gain measured with polarisation aligned standard antenna

**Radiation Patterns**

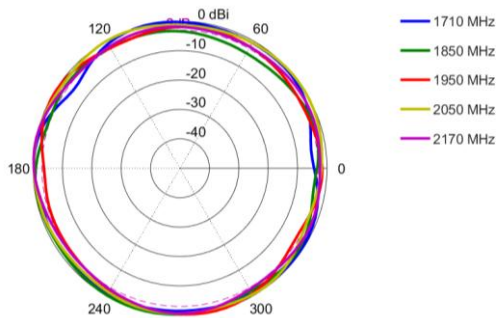
**Azimuth: 690 – 960 MHz**



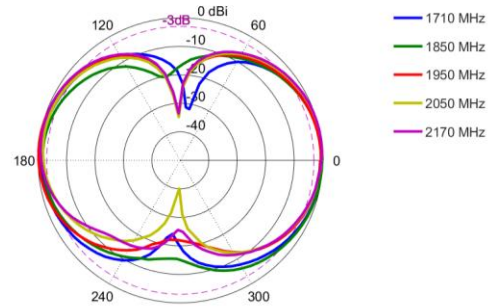
**Elevation: 690 – 960 MHz**



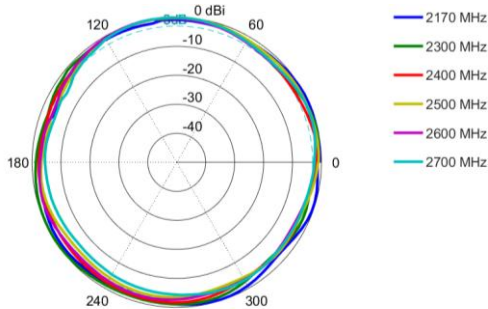
**Azimuth: 1710 – 2170 MHz**



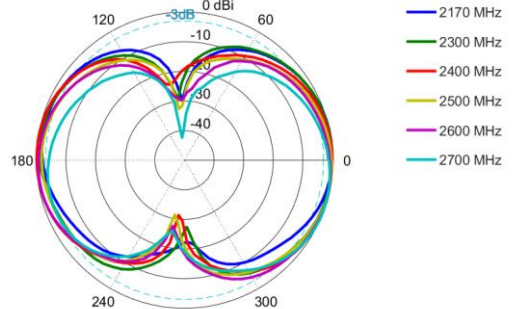
**Elevation: 1710 – 2170 MHz**



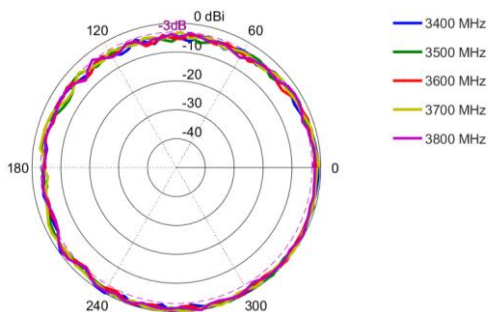
**Azimuth: 2170 – 2700 MHz**



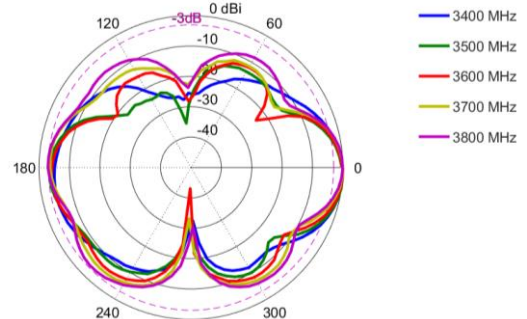
**Elevation: 2170 – 2700 MHz**



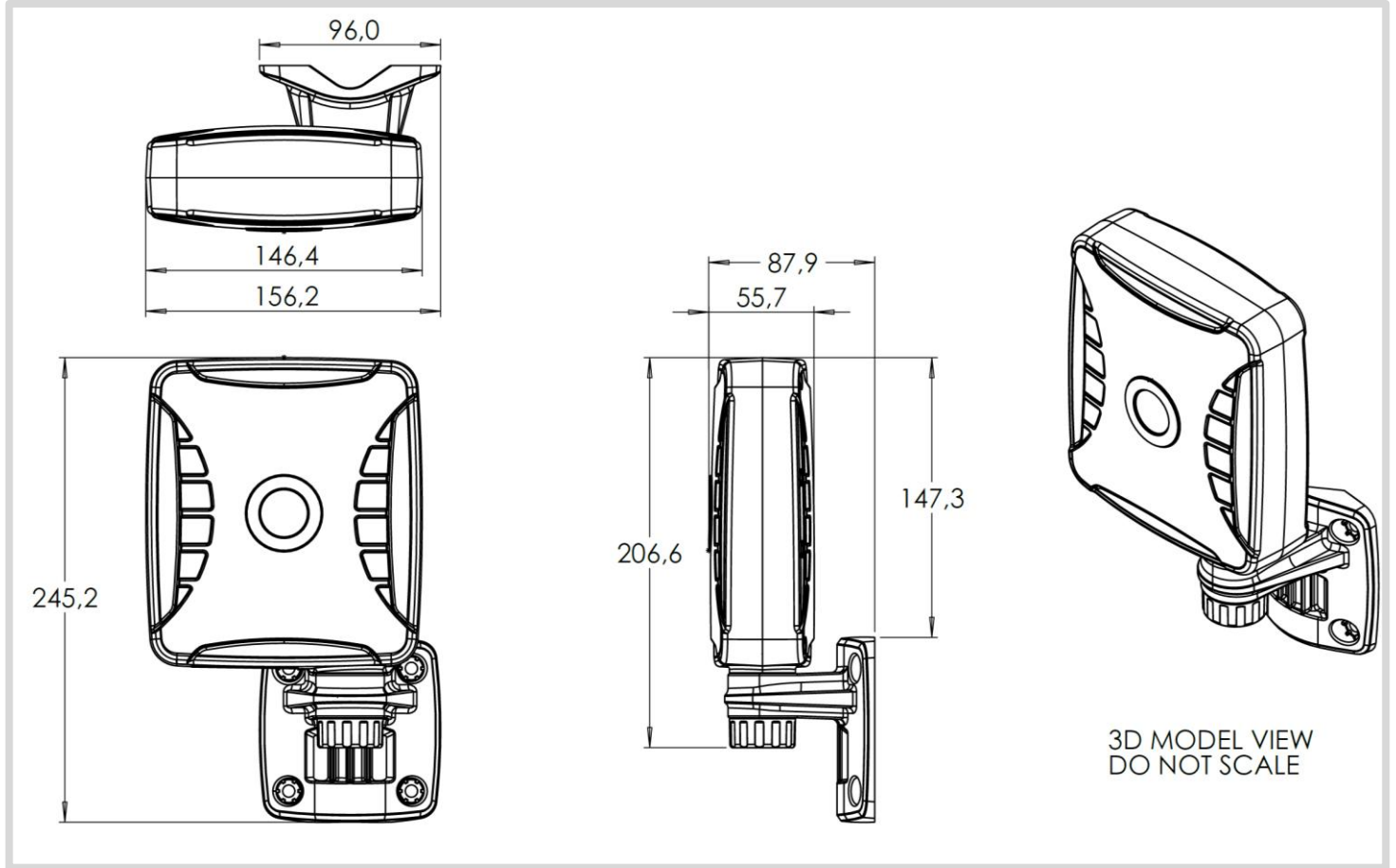
**Azimuth: 3400 – 3800 MHz**



**Elevation: 3400 – 3800 MHz**



Technical Drawings



**Mounting Options**



**Pole Mount**

Pole mounting using the provided bracket and pipe clamp



**Wall Mount**

Wall mounting using provided bracket and knock-in screws



**Window Mount**

Window mounting using the provided suction cups

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## Additional Accessories

Extension Cables: Up to 10m HDF 195  
Various connectors available  
Installation poles and brackets available

See accessories technical specifications on [www.poynting.tech](http://www.poynting.tech)

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