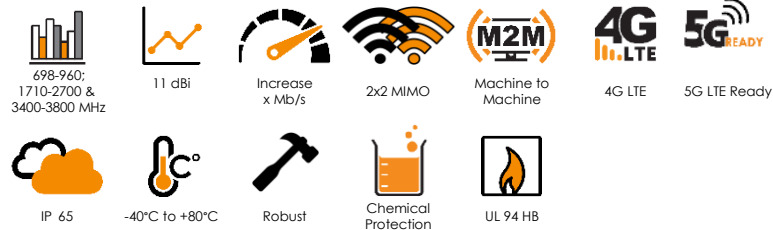


ANTENNAS | XPOL-2-5G

698 – 3800 MHZ HIGH GAIN CROSS POLARISED LTE MIMO ANTENNA 2X2 LTE (MIMO)



APPLICATION AREAS

- **Exceptional over the main 4G/5G bands**
- **High Gain for the antenna size**
- **Wideband 2x2 MIMO 4G/5G antenna**
- **Backwards compatible 2G/3G/4G/LTE antenna (5G Ready)**
- **Two cross polarised antennas in one enclosure for optimal LTE performance**
- **IP65 weather/dust and vandal resistant enclosure.**

Product Overview

The XPOL-2-5G is Poynting's third generation "V3" of this very popular Cross Polarised (XPOL), cellular band, 2x2 MIMO antenna. The antenna enclosure effectively looks the same as the second generation "V2" but has been completely redesigned on the inside. We have used advanced metamaterial technology, making use of Artificial Magnetic Conductors (AMC) and new registered/patent pending radiator configuration, which is proving to yield exceptional improvements in bandwidth and gain. Radiation patterns of this antenna are exceptionally well controlled, further adding to the performance of the antenna.

The XPOL-2-5G antenna includes the newer 3400 - 3800 MHz bands, which were not previously covered by our V2 and is suitable for 2G, 3G, 4G & 5G. This antenna performs exceptionally well in the following frequency bands: 698 – 960MHz, 1700 – 2170MHz, 2300 – 2700MHz & 3400 – 3800MHz. In addition to the new bands, the gain in the 1700MHz and 2.7GHz is around 3dB higher than the "V2" over the same frequency bands! Our "V2" antenna already outperformed most competitors over these bands, so this substantial improvement in gain shows the benefits of the new advanced materials and novel radiator design.

So, if it was a car, we installed an entirely new technology engine producing twice the power under the bonnet – it may look the same, but just wait until you turn the ignition on!

Features

- 2-3dB higher over all the bands compared to "V2"
- New 3400MHz-3800MHz, 5G band with 11dBi gain
- Broadband, including the latest 3.5GHz bands
- X-Polarised 2x2 MIMO Antenna
- Wall or pole mountable
- Lightweight & Rugged
- Weatherproof & waterproof (IP65)
- High pattern consistency across bands for 4G/5G carrier aggregation

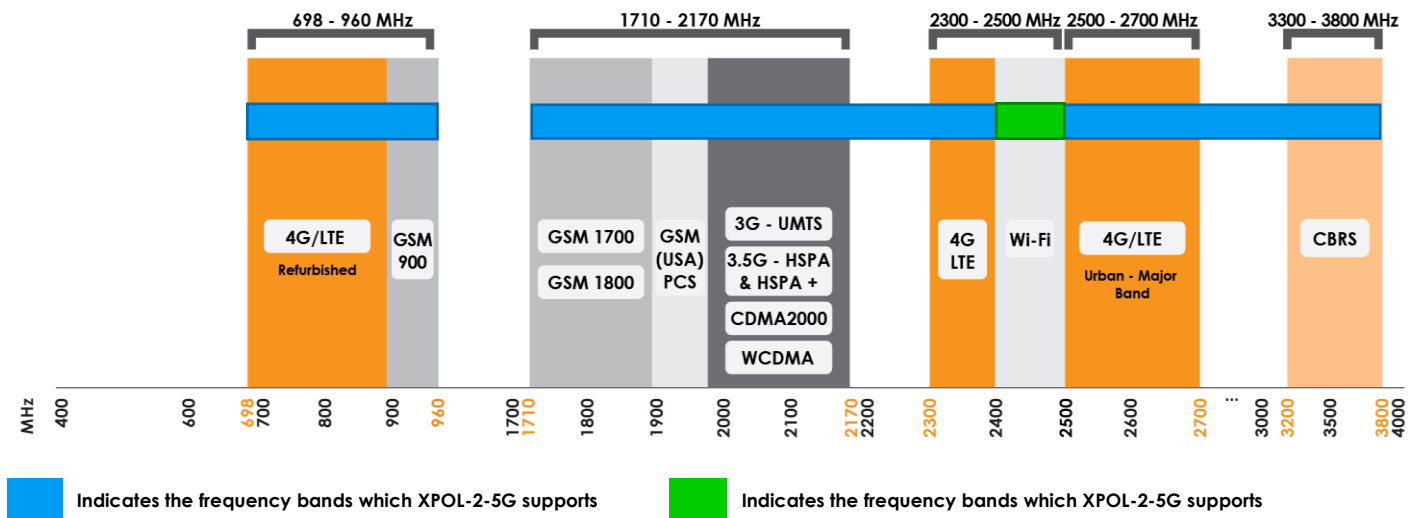
Application Areas

- Outdoor antenna for Fixed Wireless Access (FWA)
- Consumer LTE/5G internet connectivity
- Industrial & Commercial LTE/5G deployments
- Urban and rural household reception enhancement
- Agricultural & Farming LTE/5G data distribution
- Power, Energy & Water telemetry access
- Oil & Gas communication systems
- Municipal & Government systems
- Repeaters & coverage enhancement amplifiers



Frequency Bands – Cellular & Wi-Fi

The XPOL-2-5G is suitable for the following Cellular frequency bands | 698-960 MHz | 1710-2170 MHz | 2300-2500 MHz | 2500-2700 MHz | 3400-3800 MHz | and the following Wi-Fi frequency bands | 2400-2500 MHz |



Antenna Overview

| | |
|-------------------|--------------------|
| | |
| Ports | 2 |
| SISO / MIMO | 2x2 MIMO |
| Frequency Bands | 698 MHz - 3800 MHz |
| Peak Gain | 11 dBi |
| Coax Cable Type | Twin HDF 195 |
| Coax Cable Length | 5m |
| Connector Type | SMA Male |

Electrical Specifications - Cellular

| | |
|------------------------|--|
| Frequency bands: | 698-960 MHz 1710-2700 MHz 3400-3800 MHz |
| Gain (max) Port 1 & 2: | 11 dBi |
| VSWR Port 1 & 2: | ≤1.5:1 Over 95% of the band |
| Feed power handling: | 10 W |
| Input impedance: | 50 Ohm (nominal) |
| Polarisation: | ±45° |
| Coax cable loss: | 0.35 dB/m @ 900 MHz 0.53 dB/m @ 2000 MHz 0.6 dB/m @ 2500 MHz |
| DC Short: | Path to ground |

Coax Cable & Connector Type -Cellular

| | |
|------------------|---|
| Cable length: | 5m ±5% |
| Coax cable type: | Twin HDF-195 |
| Connector type: | 2 x SMA (Male) With finger grips for easier connection |

*The coax cables & connectors are factory mounted to the antenna

Product Box Contents

| | |
|-------------------|---------------------------|
| Antenna: | A-XPOL-0002-V3-01 |
| Mounting bracket: | Z-shaped mounting bracket |

Ordering Information

| | |
|---------------------|-------------------|
| Commercial name: | XPOL-2-V3-5G |
| Order product code: | A-XPOL-0002-V3-01 |
| EAN number: | 6009880915750 |

Ordering Information – for Bulkhead N-Type (Female)

| | |
|---------------------|-------------------|
| Commercial name: | XPOL-2-V3-5G |
| Order product code: | A-XPOL-0002-V3-02 |
| EAN number: | 6009693810105 |

Ordering Information – for 30cm pigtail N-Type (Female)

| | |
|---------------------|-------------------|
| Commercial name: | XPOL-2-V3-5G |
| Order product code: | A-XPOL-0002-V3-01 |
| EAN number: | 6009693810129 |

Mechanical Specifications

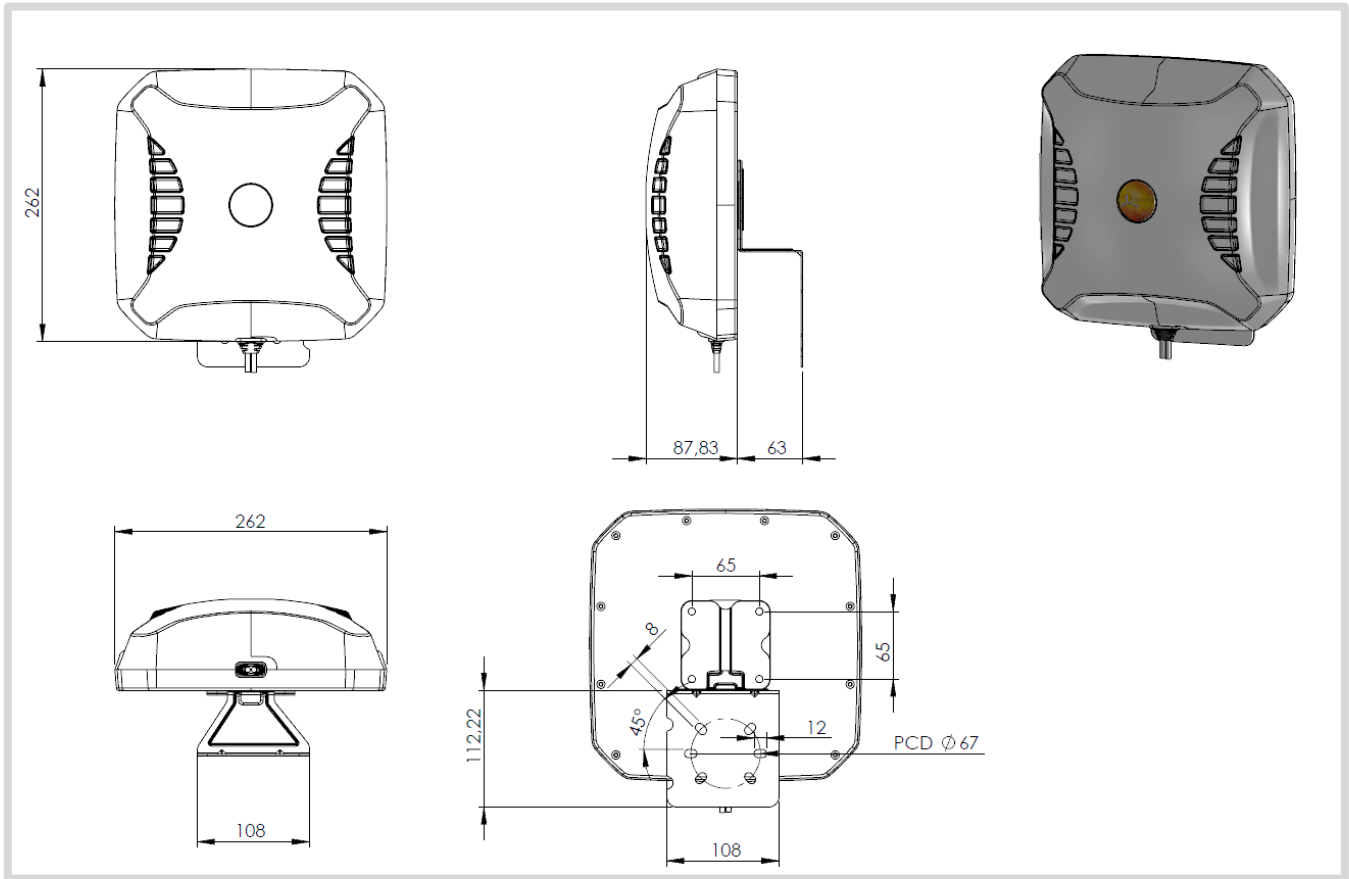
| | |
|----------------------|--------------------------------------|
| Product dimensions | 255mm x 255 mm x 80 mm |
| Packaged dimensions: | 290 mm x 276mm x 98mm |
| Weight: | 1,55 kg |
| Packaged weight: | 1,98 kg |
| Radome material: | UV Stable SAN Marine ASA |
| Radome colour: | Brilliant White Pantone P 179-1 C |
| Mounting Type: | Wall and pole mount |

Environmental Specifications, Certification & Approvals

| | |
|--|---|
| Wind Survival: | <120 km/h |
| Temperature Range (Operating): | -40°C to +80°C |
| Environmental Conditions: | Outdoor/Indoor |
| Water ingress protection ratio/standard: | IP 65 |
| Salt Spray: | MIL-STD 810F/ASTM B117 |
| Operating Relative Humidity: | Up to 98% |
| Storage Humidity: | 5% to 95% - non-condensing |
| Storage Temperature: | -40°C to +80°C |
| Flammability Rating: | UL 94-HB, ECE-R118.02 Certified cables |
| Impact resistance: | IK 08 |
| Product Safety & Environmental: | Complies with CE, EN, CSA, RoHS and IEC standards, E-mark certified |

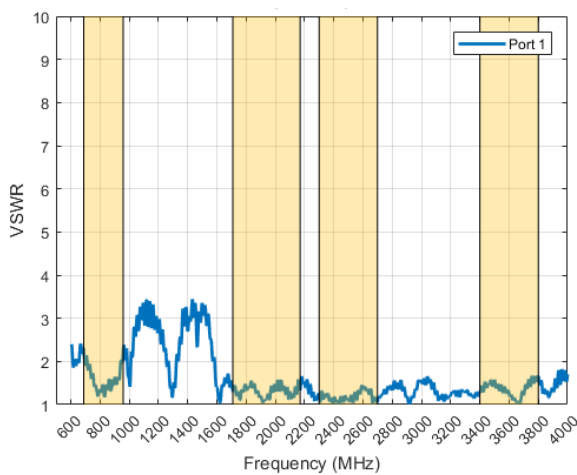


Technical Drawings

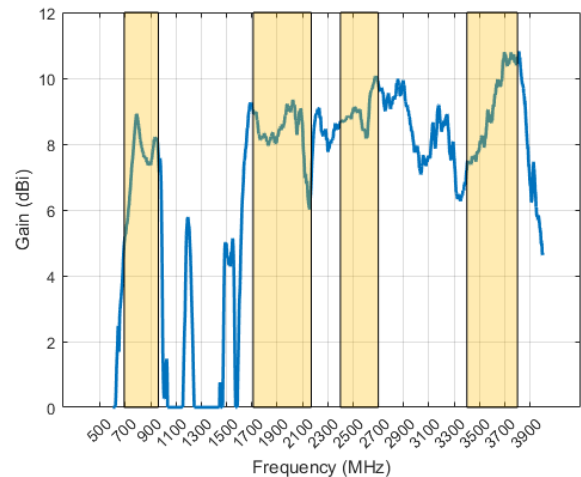


Antenna Performance Plots

VSWR: Cellular Antenna



Gain: 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 XPOL-2-5G delivers superior performance across all bands with a VSWR of $\leq 1.5:1$ over 95% of the band

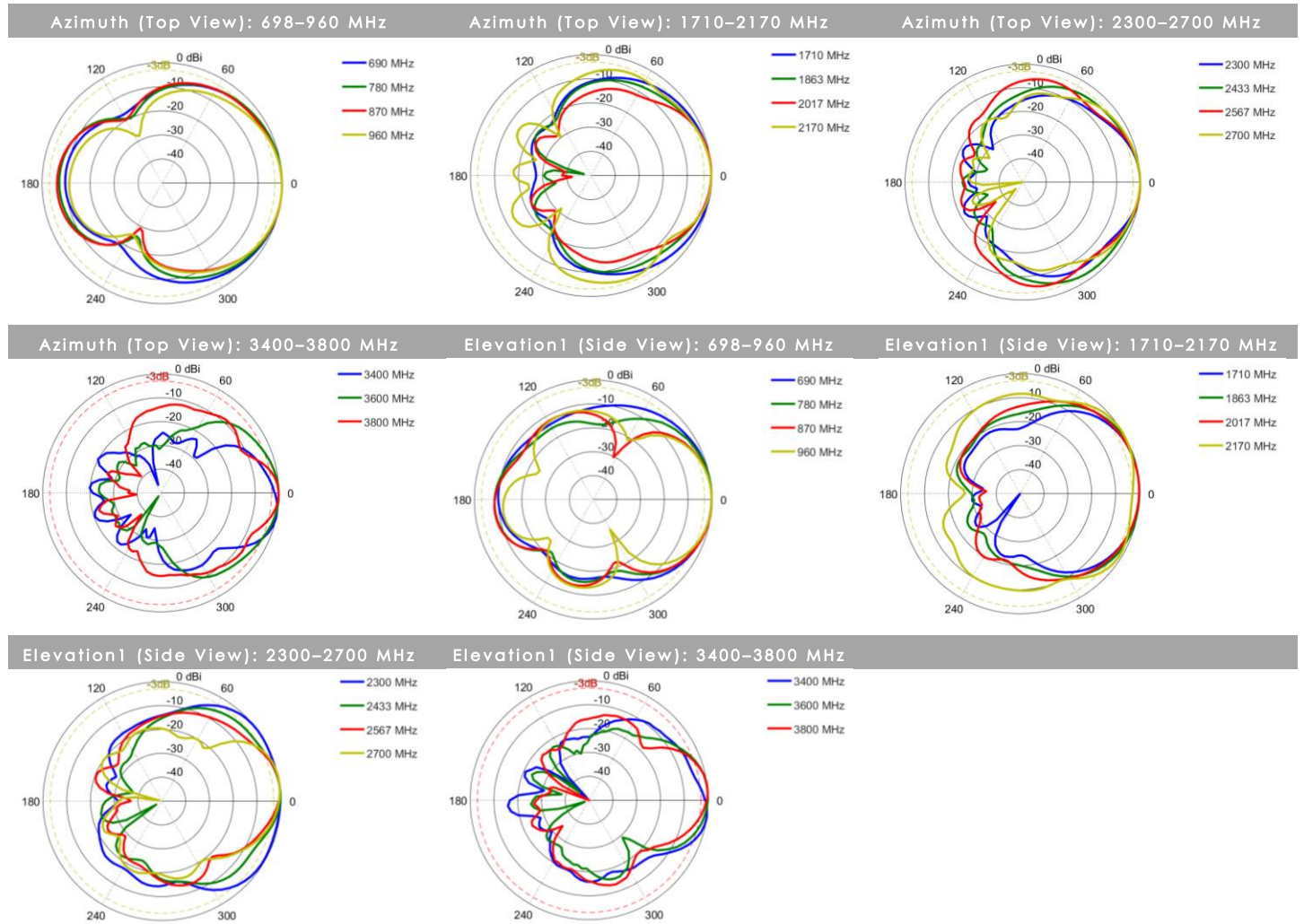
*Measured with 5m low loss cable

Gain in dBi

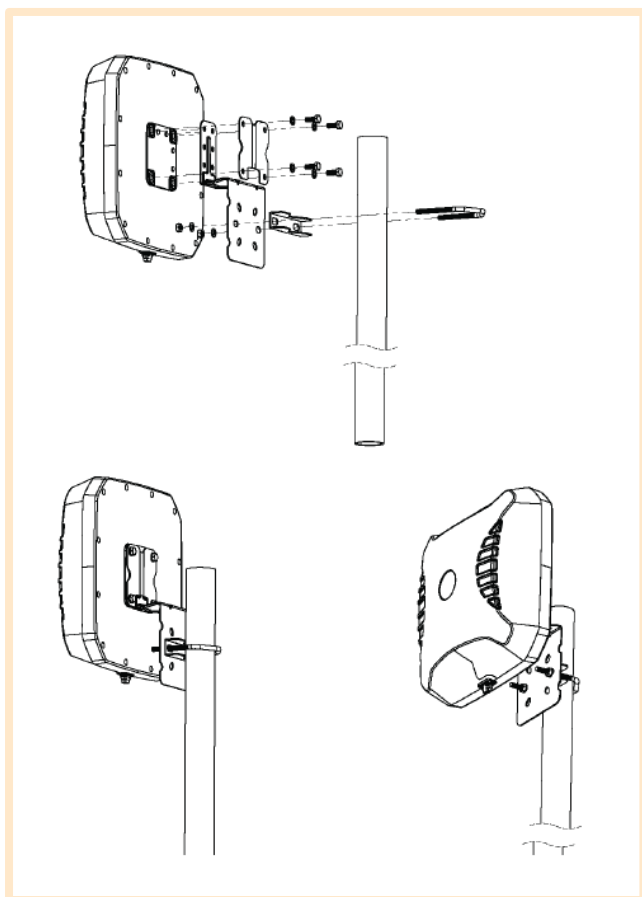
11 dBi is the peak gain across all bands from 690-960, 1710-2700 & 3400-3800 MHz

Peak Gain @ different bands: 9 dBi @690-960MHz
 Peak Gain @ different bands: 10 dBi @ 1710-2700MHz
 Peak Gain @ different bands: 11 dBi @3400-3800MHz

Radiation Patterns – Cellular

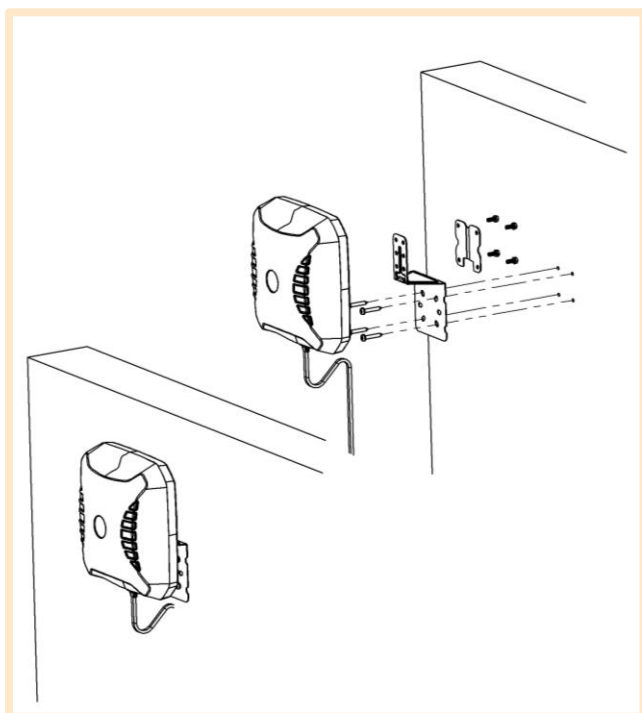


Mounting Options



Pole Mount

Pole/Wall Mounting bracket (included)



Wall Mount

Pole/Wall Mounting bracket (included)

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

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