

ANTENNAS | XPOL-2-5G SERIES

X-POLARISED, HIGH GAIN, DIRECTIONAL 4G/5G ANTENNA

617 – 960 MHz & 1710 – 4200 MHz, 11 dBi, 2x2 MIMO



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 - 4200 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: 617 – 960 MHz, 1710 – 2170 MHz, 2300 – 2700 MHz & 3400 – 4200 MHz in addition to the new bands, the gain in the 1700 MHz and 2.7 GHz is around 3 dB 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

- 2-3 dBi higher gain over all the bands compared to "V2"
- New 3400 to 4200MHz, 5G band with 11dBi gain
- Consistent broadband performance
- X-Polarised 2x2 MIMO Antenna
- Wall or pole mountable
- Lightweight & Rugged
- Weatherproof & waterproof (IP65)
- High pattern consistency across bands for 4G/5G carrier aggregation

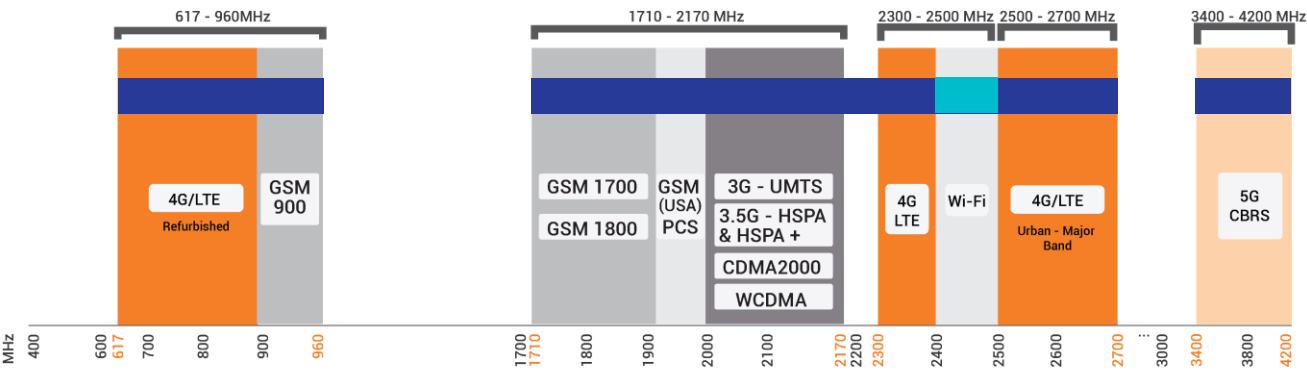
Application Areas

- 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

The XPOL-2-5G is a directional antenna that works from | 617 – 960 MHz | 1710 – 2700 MHz | and | 3400 – 4200 MHz |



 Indicates the 5G/LTE bands on which XPOL-2-5G works

 Indicates the WI-FI bands on which XPOL-2-5G works

Antenna Derivatives

Product Order Code (SKU)	A-XPOL-0002-V3-01	A-XPOL-0002-V3-02	A-XPOL-0002-V3-03
Coax Cable Type	Twin HDF 195	N/A	Twin HDF 195
Coax Cable Length	5m	N/A	10m
Connector Type	SMA (M)	N-Type (F)	SMA (M)
Product Weight	1.55 kg	1.43 kg	1.73 kg
Packaged Weight	1.98 kg	1.86 kg	2.16 kg
EAN	6009880915750	6009710920107	6009710920121

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

Electrical Specifications

Frequency Bands:	617 – 960 MHz 1710 -2700 MHz 3400 – 4200 MHz
Gain (Max):	9 dBi @ 617 – 960 MHz 8.5 dBi @ 1710 -2700 MHz 11 dBi @ 3400 – 4200 MHz
VSWR:	≤1.5:1 Over 90% of the band
Feed Power Handling:	10 W
Input Impedance:	50 Ohm (nominal)
Polarisation:	±45°
Coax Cable Loss:	0.362 dB/m @ 900 MHz 0.514 dB/m @ 1800 MHz 0.533 dB/m @ 2400 MHz 0.603 dB/m @ 3000 MHz
DC Short:	Path to ground

Product Box Contents

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

Mechanical Specifications

Product Dimensions	265 mm x 265 mm x 90 mm
Packaged Dimensions:	375 mm x 270 mm x 100 mm
Radome Material:	UV Stable ASA
Radome Colour:	Brilliant White Pantone P 179-1 C
Mounting Type:	Wall and Pole mount

Environmental Specifications, Certification & Approvals

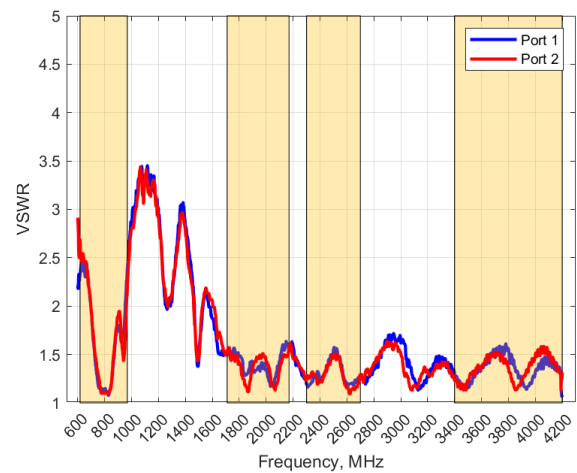
Wind Survival:	Antenna wind survival: ≤ 250 km/h Included Z-Bracket wind survival: ≤160km/h Optional bracket BRKT-030* is required for wind speeds of ≤250 km/h
Temperature Range (Operating):	-40°C to +80°C
Environmental Conditions:	Outdoor/Indoor
Water ingress protection ratio/standard:	IP 65
Salt Spray:	MIL-STD 810G/ASTM B117
Operating Relative Humidity:	Up to 98%
Storage Humidity:	5% to 95% - non-condensing
Storage Temperature:	-40°C to +80°C
Enclosure Flammability Rating:	UL 94-HB
Impact resistance:	IK 08
Product Safety & Environmental:	Complies with CE and RoHS standards

BRKT-030 is an optional accessory, which is required for high wind areas of up to 250km/h. The BRKT-030 requires 4 x M6 x 20mm bolts for installation, not included



Antenna Performance Plots

VSWR



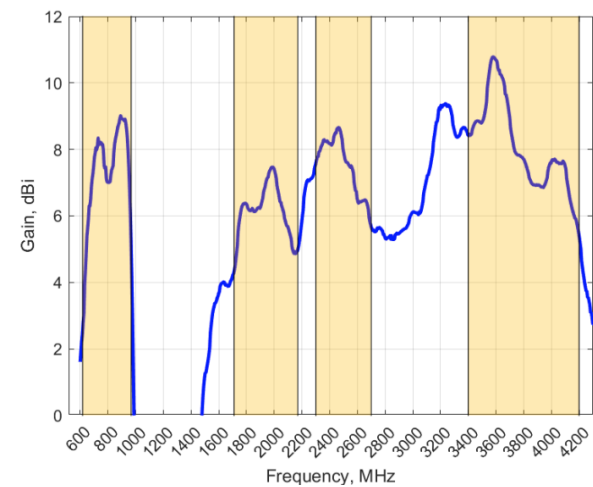
Voltage Standing Wave Ratio (VSWR)*

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 XPOL-2-5G delivers superior performance across all bands with a VSWR of $\leq 1.5:1$ over 90% of the band.

*VSWR measured with a 5m low loss cable.

GAIN (EXCLUDING CABLE LOSS)



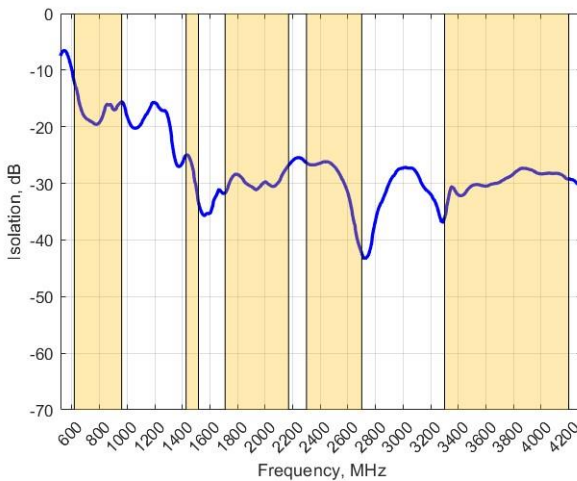
Gain* in dBi

11 dBi is the peak gain across all bands from 617 – 4200 MHz

Gain @ 617 – 960 MHz:	9 dBi
Gain @ 1710 – 2700 MHz:	8.5 dBi
Gain @ 3400 – 4200 MHz:	11 dBi

*Antenna gain measured with polarisation aligned standard antenna

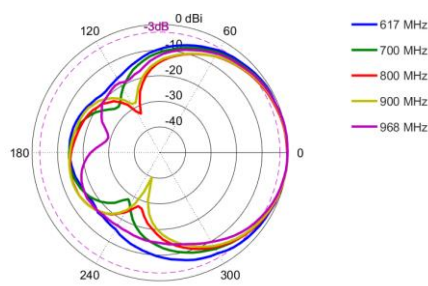
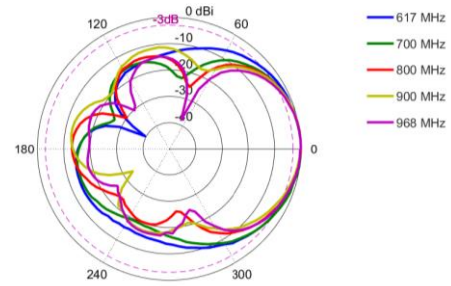
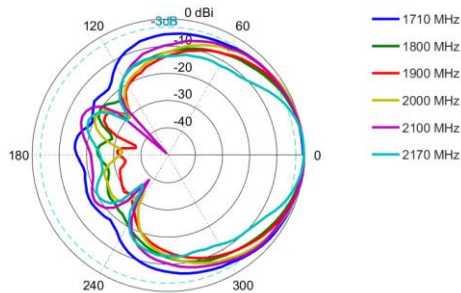
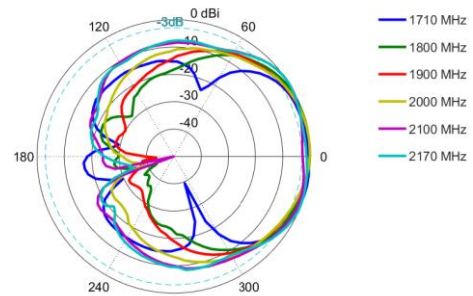
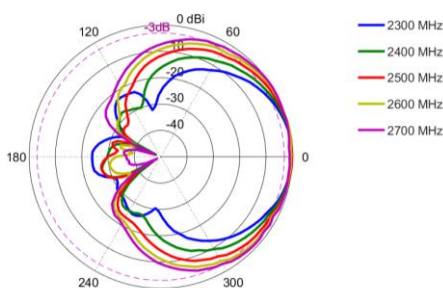
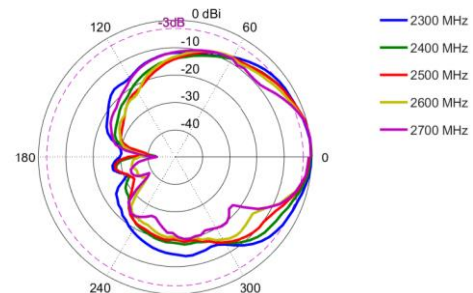
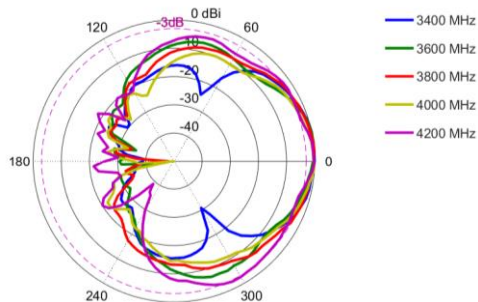
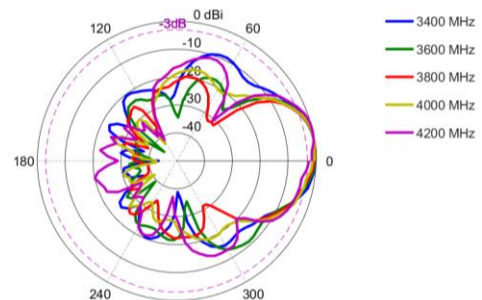
ISOLATION



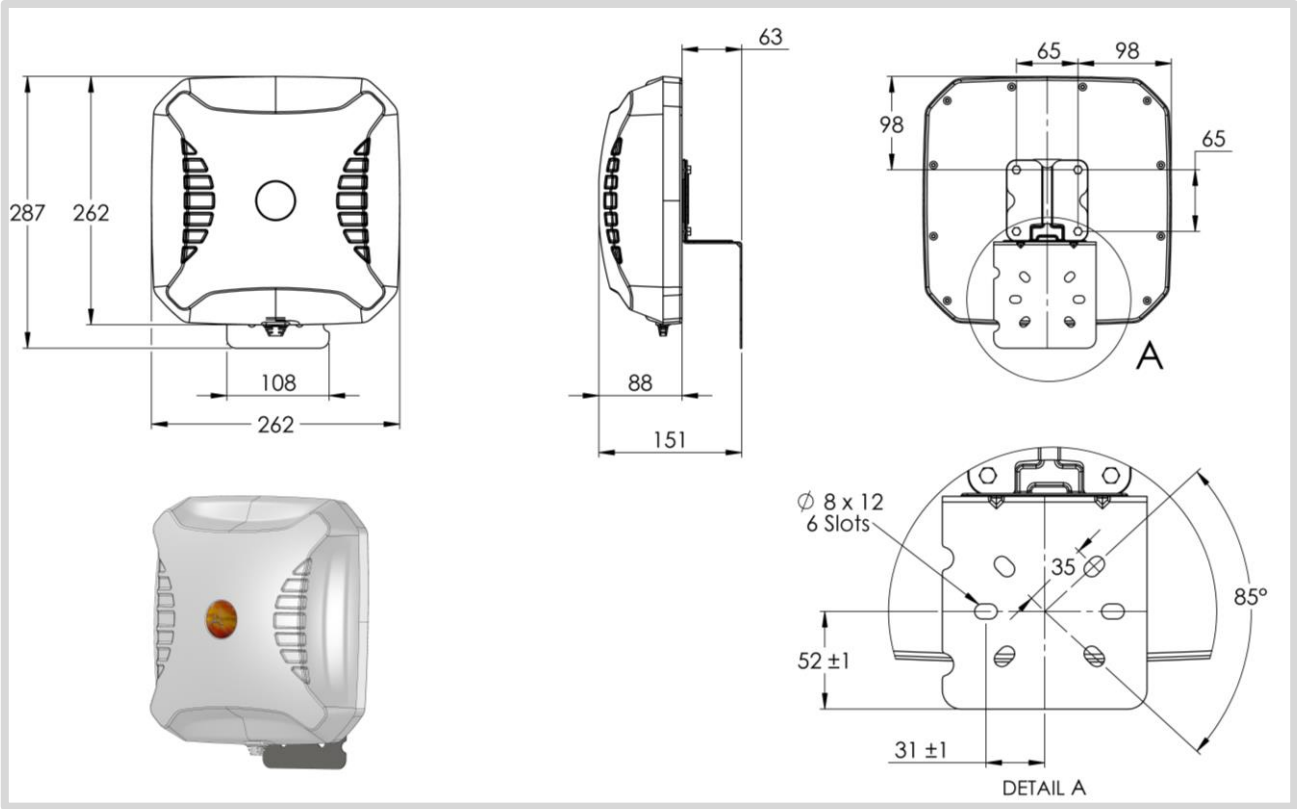
Isolation

Isolation is a measure of how much energy from one port leaks into another port undesirably. Isolation of 0 dB between 2 ports means that there is no isolation and the energy from 1 port excitation is visible on another port. Isolation of -30 dB or more means that $<0.1\%$ of 1 port's energy is leaked into another. A good isolation is under -10 dB.

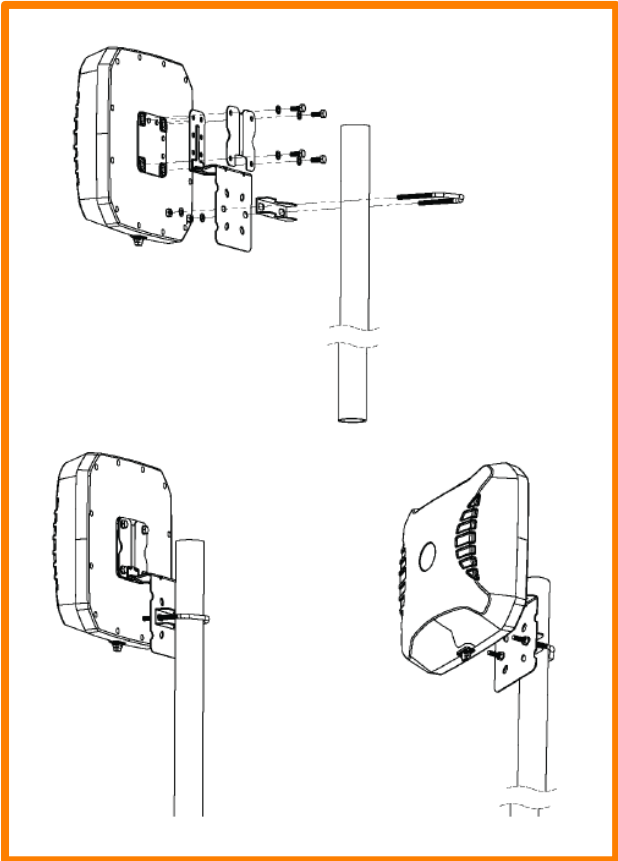
Radiation Patterns

Azimuth (Top View): 617 – 960 MHz

Elevation (Side View): 617 – 960 MHz

Azimuth (Top View): 1710 – 2170 MHz

Elevation (Side View): 1710 – 2170 MHz

Azimuth (Top View): 2300 – 2700 MHz

Elevation (Side View): 2300 – 2700 MHz

Azimuth (Top View): 3400 – 4200 MHz

Elevation (Side View): 3400 – 4200 MHz


Technical Drawings

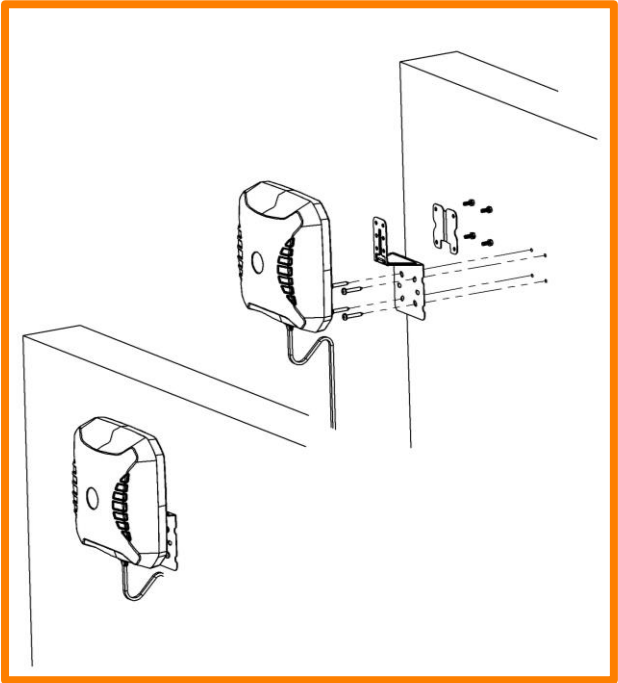


Mounting Options



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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