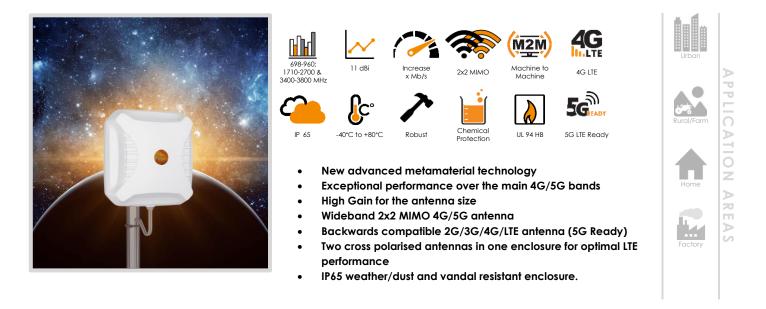
XPOL-2-5G



ANTENNAS | XPOL-2-5G

698 – 3800 MHZ HIGH GAIN CROSS POLARISED LTE MIMO ANTENNA 2X2 LTE (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 - 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 gain over all the bands compared to "V2"
- New 3400MHz-3800MHz, 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

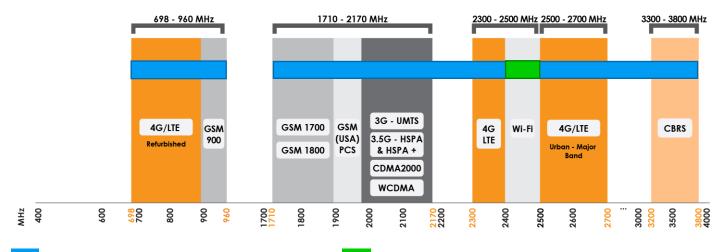
- Outdoor antenna for Fixed Wireless Access (FWA)
- Consumer LTE/5G internet connectivity
- Industrial & Commercial LTE/5G deployments
- Urban and rural household reception enhancement
- Agricultural & Farming LTE/5G data distribution
- Power, Energy & Water telemetry access
- Oil & Gas communication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





Frequency Bands - 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 |



Indicates the frequency bands which XPOL-2-5G supports

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Antenna Overview

Antenna Variant	A-XPOL-0002-V3-01	A-XPOL-0002-V3-02	A-XPOL-0002-V3-03
Ports	2	2	2
SISO / MIMO	2x2 MIMO	2x2 MIMO	2x2 MIMO
Frequency Bands	698 MHz - 3800 MHz	698 MHz - 3800 MHz	698 MHz - 3800 MHz
Peak Gain	11 dBi	11 dBi	11 dBi
Coax Cable Type	Twin HDF 195	NA	Twin HDF 195
Coax Cable Length	5m	NA	10m
Connector Type	SMA Male	N-Type Female	SMA Male



Electrical Specifications - Cellular

Frequency bands: Gain (max) Port 1 & 2:	698-960 MHz 1710-2700 MHz 3400-3800 MHz 11 dBi
VSWR Port 1 & 2:	≤1.5.1 over 95% of the band
Feed power handling:	20 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 0.66dB/m @ 3500 MHz
DC Short:	Path to ground

Antenna Variant: 5m coax with SMA (Male) Coax Cable & Connector Type

Cable length:	5m ±5%
Coax cable type:	Twin HDF-195
Connector type:	2 x SMA (Male) With finger grips for easier connection
Ordering Information	
Commercial name:	XPOL-2-V3-5G
Order product code:	A-XPOL-0002-V3-01
EAN number:	6009880915750

Antenna Variant: Bulkhead N-Type (Female) Coax Cable & Connector Type

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Cable length:	NA
Coax cable type:	NA
Connector type:	Bulkhead N-Type (Female)
Ordering Information	
Commercial name:	XPOL-2-V3-5G
Order product code:	A-XPOL-0002-V3-02
EAN number:	6009710920107

Antenna Variant: 10m coax with SMA (Male) Coax Cable & Connector Type

Cable length:	10m ±5%
Coax cable type:	Twin HDF-195
Connector type:	2 x SMA (Male) With finger grips for easier connection
Ordering Information	
Commercial name:	XPOL-2-V3-5G
Order product code:	A-XPOL-0002-V3-03
EAN number:	6009710920121

Product Box Contents

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

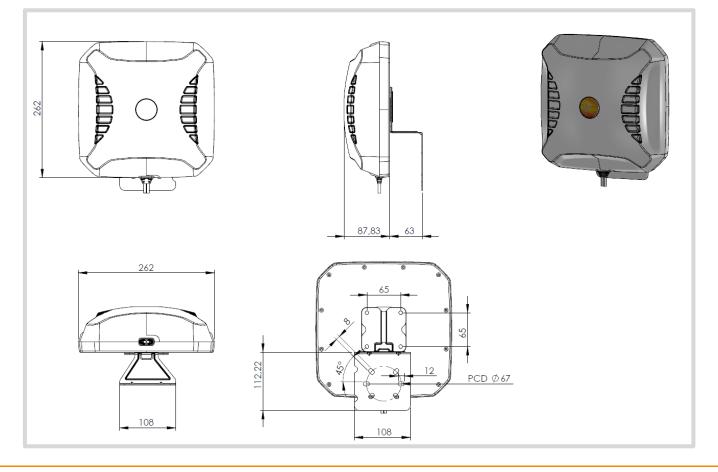
Environmental Specificat	tions, Certification & Approvals
Wind Survival:	Antenna wind survival: <250 km/h
Incl	uded Z-Bracket wind survival: <160km/h
Optional bracket BRKT-030* is	s required for wind speeds of <250 km/h
Temperature Range (Operating):	-40°C to +80°C
Environmental Conditions:	Outdoor/Indoor
Water ingress protection ratio/standard:	IP 65
Salt Spray:	MIL-STD 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



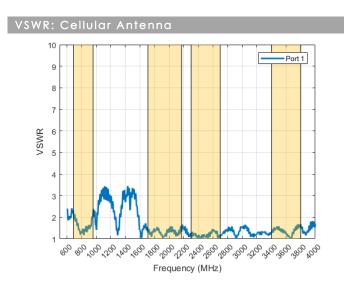
* BRKT-030 is an optional accessory, which is required for high wind areas of up to 250km/h. The BRKT-030 requires 4 x M6 x 20mm bolts for installation, not included.

Technical Drawings





Antenna Performance Plots

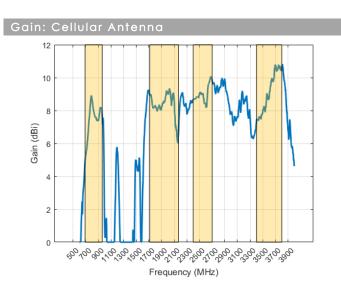


Voltage Standing Wave Ratio (VSWR)*

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



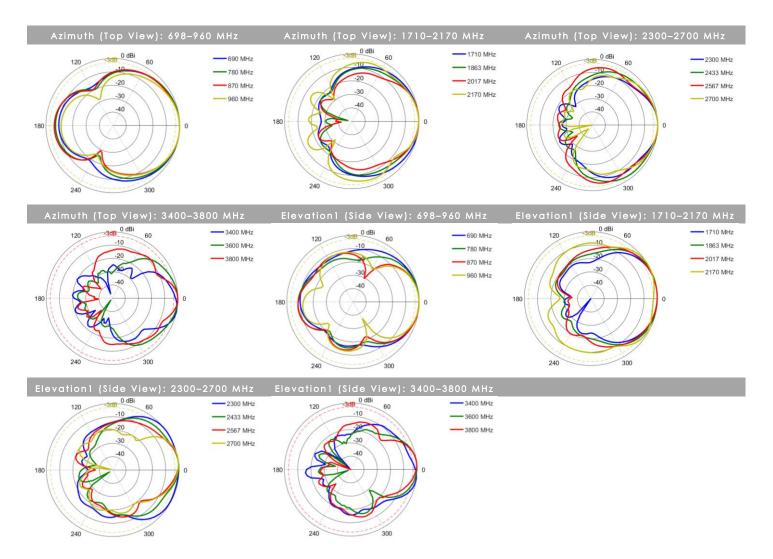
Gain in dBi

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

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

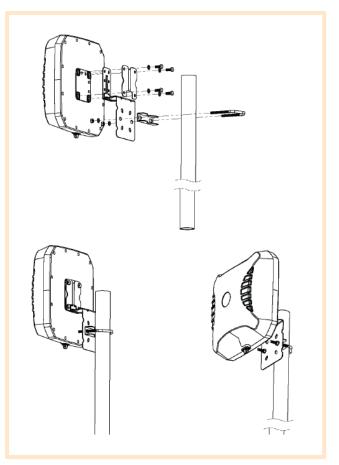


Radiation Patterns – Cellular



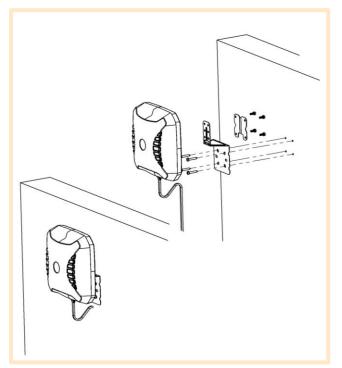


Mounting Options



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 <u>www.poynting.tech</u>

Contact Poynting

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