













ANTENNAS | XPOL-2-5G-US

X-POLARISED, HIGH GAIN, UNI-DIRECTIONAL LTE ANTENNA 617 – 894 MHz & 1710 – 3800 MHz, 11 dBi; 2X2 MIMO (US Specific)



| | | | | | | |
|--|---|---|--|--|---|---|
|  617-894 MHz; 1710-2700 MHz; 3400-3800 MHz |  11 dBi |  Increase x Mb/s |  Uni-Directional |  Machine to Machine |  4G LTE |  5G Ready |
|  IP 65 |  -40°C to +80°C |  2X2 MIMO |  Chemical Protection |  Fire Resistant | | |

- **New advanced metamaterial technology**
- **Exceptional high gain performance over the main 4G/5G bands**
- **Includes the 617 to 894 MHz frequency band for US applications**
- **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.**



APPLICATION AREAS

Product Overview

The XPOL-2-5G-US 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-US antenna includes the 617 to 894 MHz band and 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: 617 – 894 MHz, 1710 – 2170 MHz, 2300 – 2700 MHz & 3400 – 3800 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.

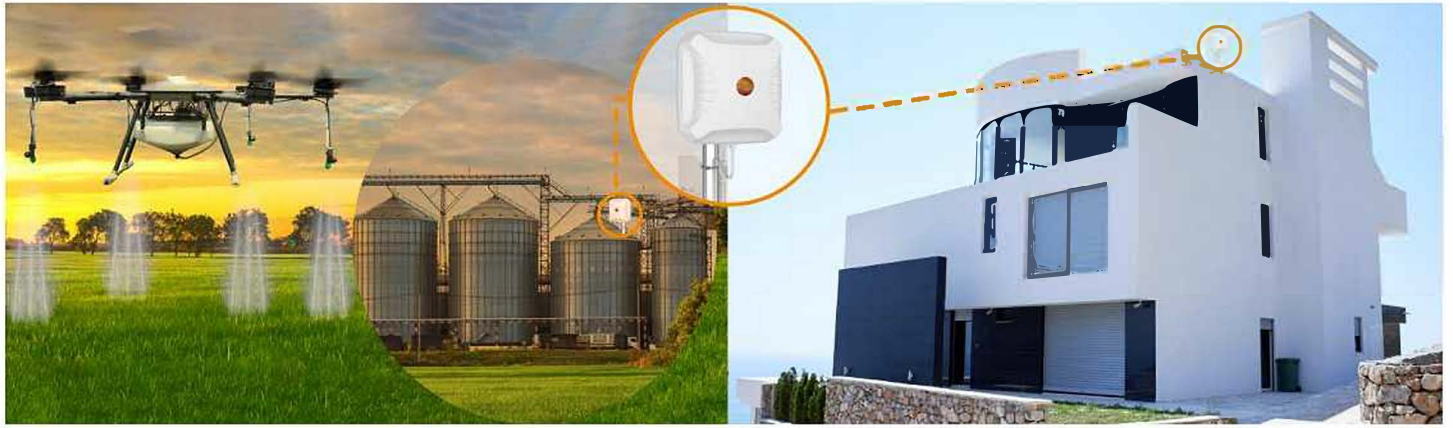
So, if it was a car, we installed an entirely new technology engine producing twice the power under the bonnet – it may look the same, but just wait until you turn the ignition on!

Features

- 2-3dB higher gain over all the bands compared to "V2"
- Includes 617 to 894 MHz for US applications
- New 3400 to 3800 MHz, 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

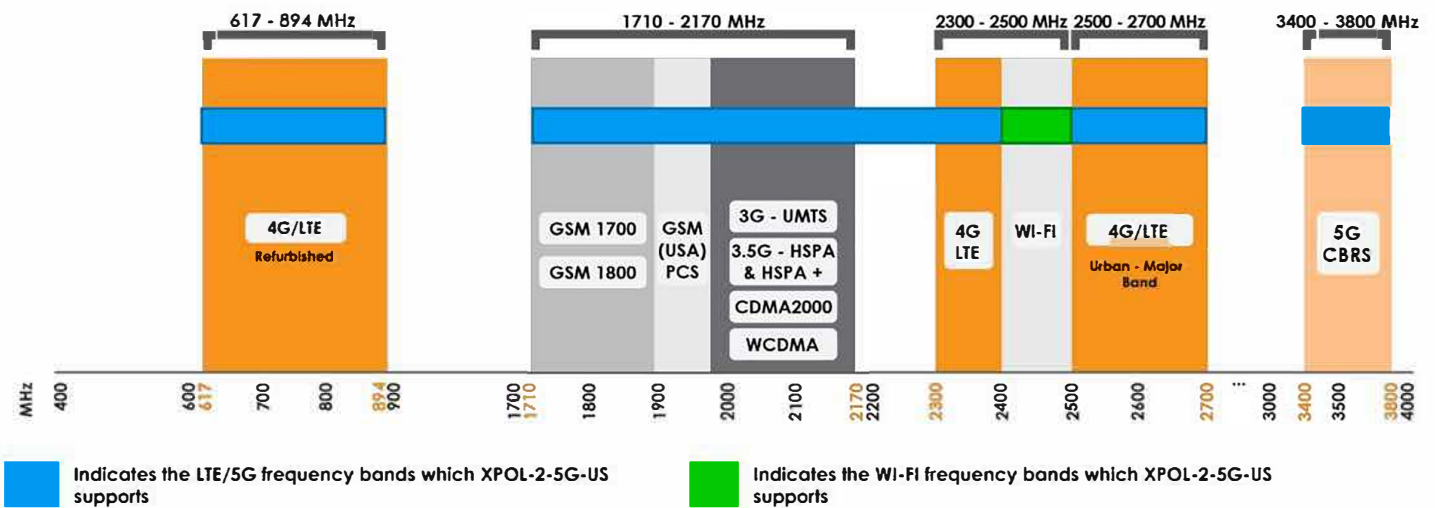
Application Areas

- 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-US is suitable for the following Cellular frequency bands | 617-894 MHz | 1710-2700 MHz | 3400-3800 MHz | and the following Wi-Fi frequency bands | 2400-2500 MHz |



Antenna Derivatives

| Product Order Code (SKU) | A-XPOL-0002-V3-11 | A-XPOL-0002-V3-12 |
|--------------------------|-------------------|-------------------|
| Coax Cable Type | Twin HDF 195 | N/A |
| Coax Cable Length | 5m | N/A |
| Connector Type | SMA (M) | N-Type (F) |
| Product Weight | 1,55 kg | 1.43 kg |
| Packaged Weight | 1.98 kg | 1.86 kg |
| EAN | 6009710921609 | 6009710920862 |

**The cable and connector are factory mounted to the antenna*

Electrical Specifications - Cellular

| | |
|------------------------|---|
| Frequency bands: | 617-894 MHz 1710-2700 MHz 3400-3800 MHz |
| Gain (max) Port 1 & 2: | 9 dBi @ 617-894 MHz 10 dBi @ 1710-2700 MHz 11 dBi @ 3400-3800 MHz |
| 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: | 0.362 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

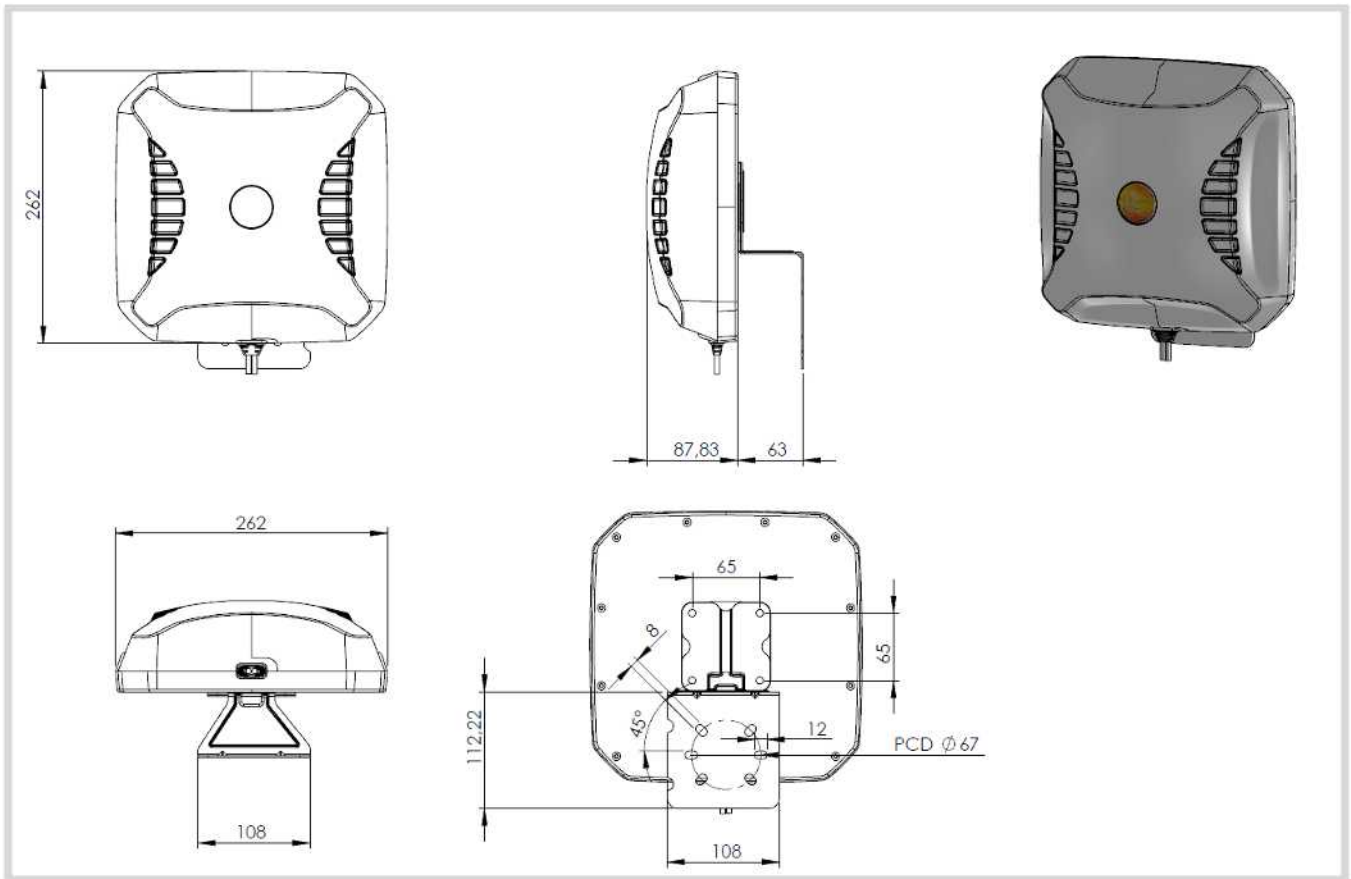
| | |
|----------------------|--------------------------------------|
| Product dimensions | 262 mm x 262 mm x 90 mm |
| Packaged dimensions: | 375 mm x 267 mm x 98 mm |
| Radome material: | UV Stable ASA |
| Radome colour: | Brilliant White Pantone P 179-1 C |
| Mounting Type: | Wall and pole mount |

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 810F/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, ECE-R118.02 Certified cables |
| Impact resistance: | IK 08 |
| Product Safety & Environmental: | Complies with CE and RoHS standards |

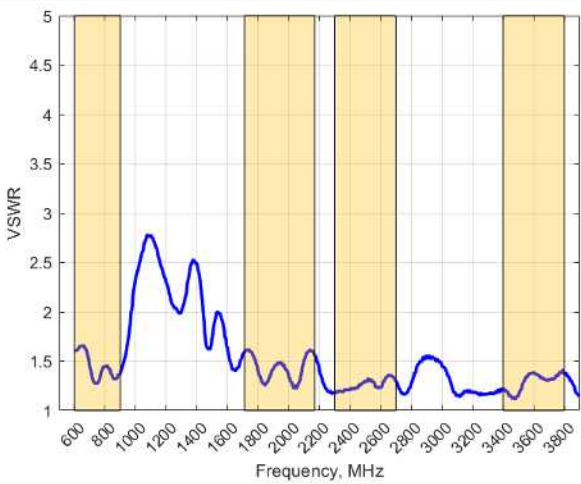
* BRKT-030 is an optional accessory, which is required for high wind areas of up to 250km/h. The BRKT-030 requires 4 x M6 x 20mm bolts for installation, not included.

Technical Drawings

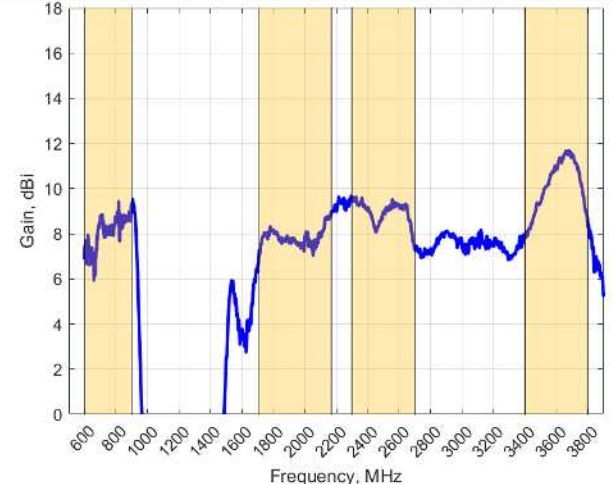


Antenna Performance Plots

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-US 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

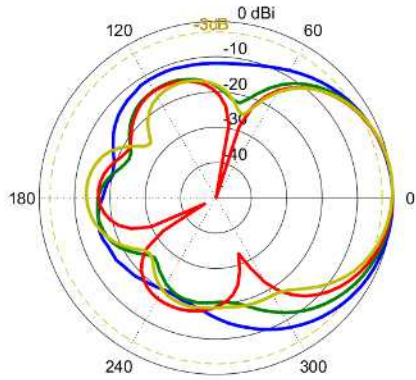
Gain in dBi

10 dBi is the peak gain across all bands from 617-894, 1710-2700 & 3400-3800 MHz

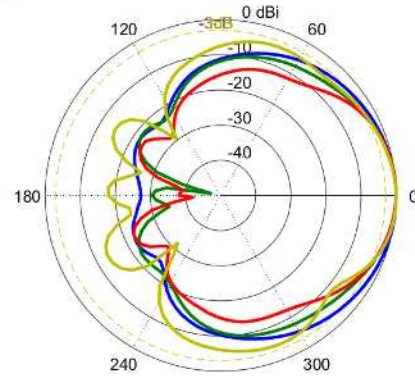
| | |
|------------------------------|-----------------------|
| Peak Gain @ different bands: | 9 dBi @617-894MHz |
| Peak Gain @ different bands: | 10 dBi @ 1710-2700MHz |
| Peak Gain @ different bands: | 11 dBi @3400-3800MHz |

Radiation Patterns – Cellular

Azimuth (Top View): 600–900 MHz | Azimuth (Top View): 1710–2170 MHz

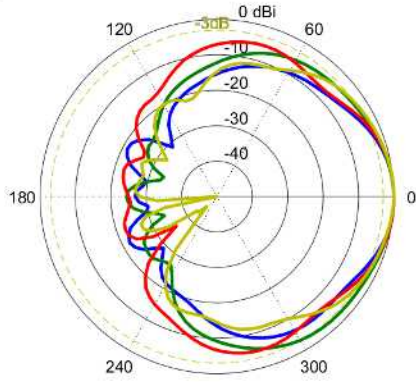


- 600 MHz
- 700 MHz
- 800 MHz
- 900 MHz

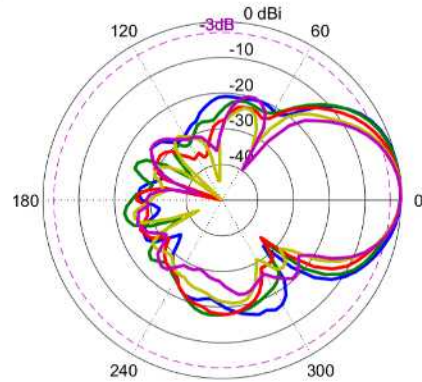


- 1710 MHz
- 1863 MHz
- 2017 MHz
- 2170 MHz

Azimuth (Top View): 2300–2700 MHz | Azimuth (Top View): 3400–3800 MHz

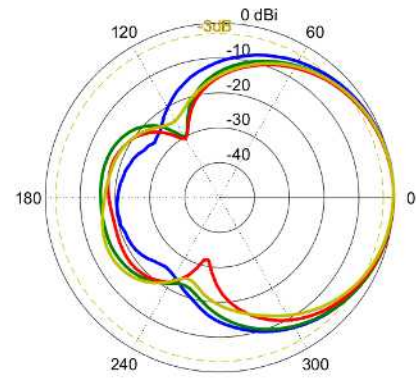


- 2300 MHz
- 2433 MHz
- 2567 MHz
- 2700 MHz

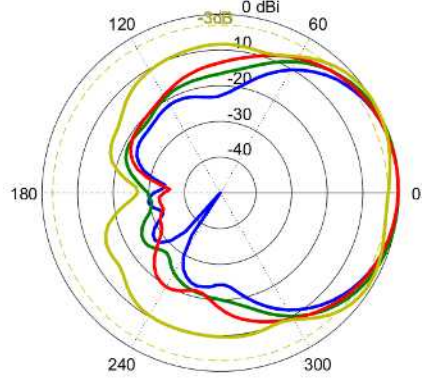


- 3400 MHz
- 3500 MHz
- 3600 MHz
- 3700 MHz
- 3800 MHz

Elevation1 (Side View): 600–900 MHz | Elevation1 (Side View): 1710–2170 MHz

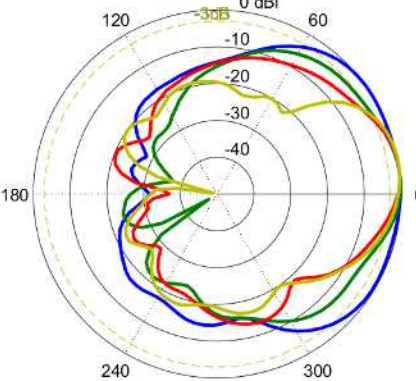


- 600 MHz
- 700 MHz
- 800 MHz
- 900 MHz

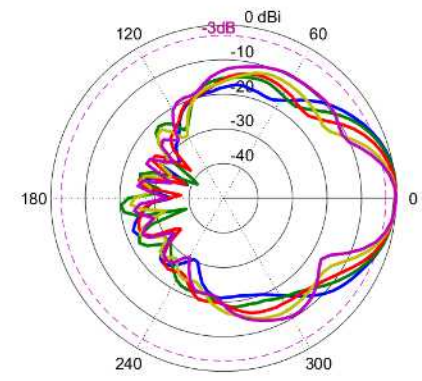


- 1710 MHz
- 1863 MHz
- 2017 MHz
- 2170 MHz

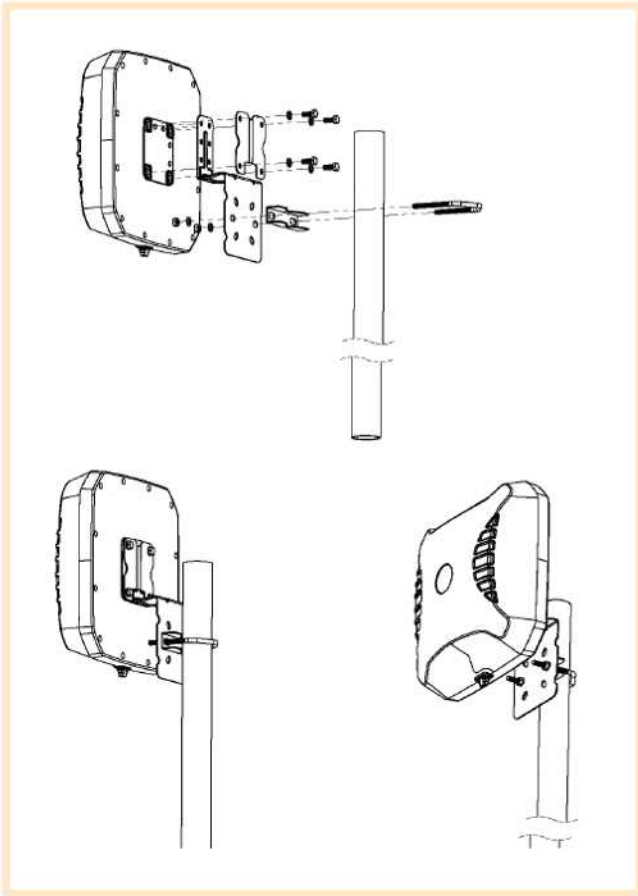
Elevation1 (Side View): 2300–2700 MHz | Elevation1 (Side View): 3400–3800 MHz



- 2300 MHz
- 2433 MHz
- 2567 MHz
- 2700 MHz

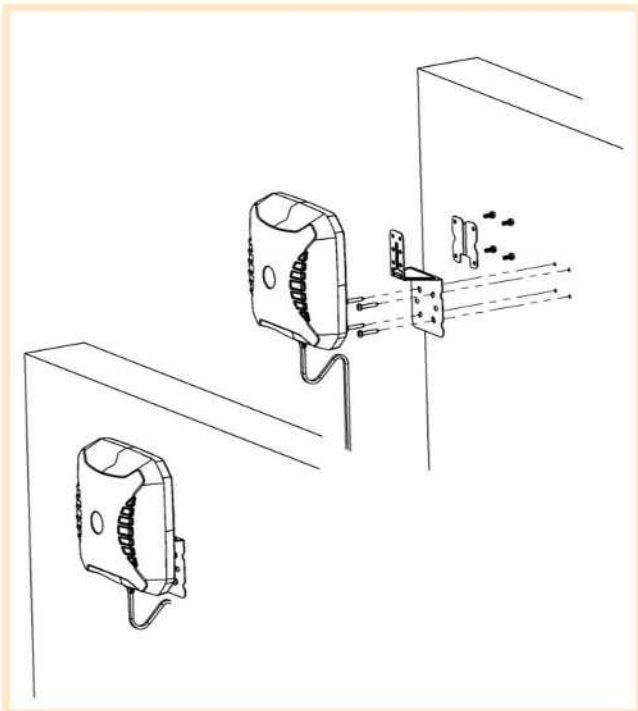


- 3400 MHz
- 3500 MHz
- 3600 MHz
- 3700 MHz
- 3800 MHz



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

Contact Poynting

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