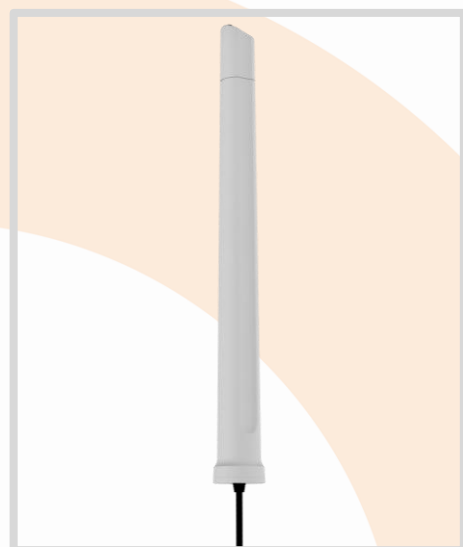


## ANTENNAS | OMNI-600 SERIES

# OMNI-DIRECTIONAL, 2X2 MIMO LTE ANTENNA

410 - 3800 MHz; 6.2 dBi



- 2X2 MIMO high performance omni-directional antenna
- Consistent gain over a wide frequency band
- Increased connectivity stability
- Excellent broadband quality antenna
- Vandal and water-resistant enclosure

APPLICATION AREAS

## Product Overview

The OMNI-600 is a unique new design with improved 2x2 MIMO electrical performance. The ultra-wide band covers all contemporary operating frequencies with excellent balanced gain across all frequencies. Higher frequencies are not compromised, and the antenna design allows Poynting to have superior pattern control over the entire frequency range, making the OMNI-600 a true high performance omni-directional antenna. The OMNI-600 guarantees signal reception almost everywhere, making it usable in all parts of the world. Poynting Antennas achieves this through new antenna configuration using multiple dipoles and a unique (patented) feed network. The antenna is future proof as it covers the 450 MHz frequency and 3.5 GHz CBRS band which is gaining popularity in various regions and countries.

## Features

- Medium gain omni-directional antenna
- 2X2 MIMO capability
- Robust and weather resistant
- Operational in the 2.4 – 2.5 GHz Wi-Fi band
- Lightweight

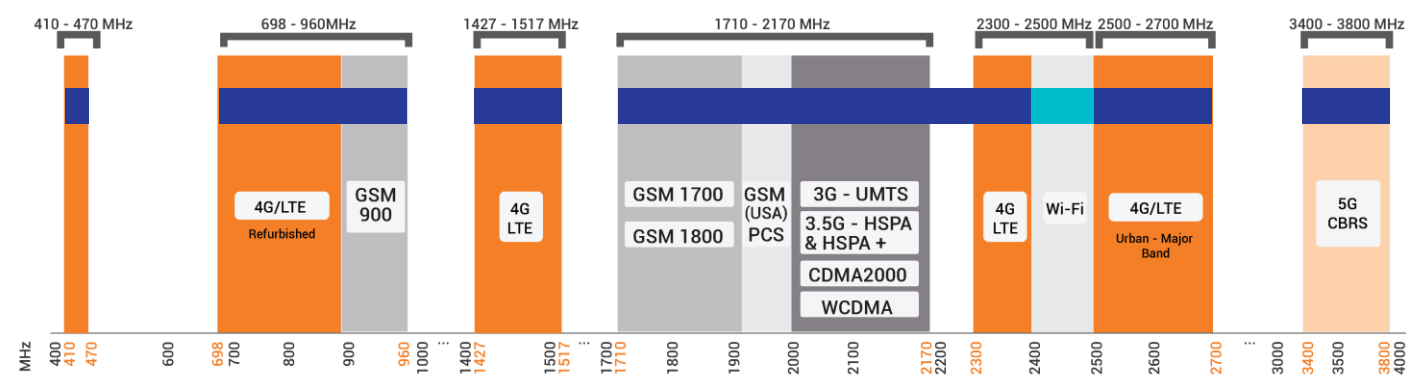
## Application Areas

- Machine to machine (M2M)
- Poor data signal reception (indoor or outdoor)
- Slow data transmission connection
- Wi-Fi applications
- Unstable connection
- Increases system transmission reliability
- High-end industrial grade router applications
- Mobile offices



Frequency Bands

The OMNI-600 is a cellular / IoT antenna that works from | 410 – 470 MHz | 698 – 960 MHz | 1427 – 1517 MHz | 1710 – 2700 MHz | and | 3400 – 3800 MHz |



 Indicates the 5G/LTE bands on which OMNI-600 works

 Indicates the WI-FI bands on which OMNI-600 works

Antenna Overview

|                   |                                                                                     |
|-------------------|-------------------------------------------------------------------------------------|
|                   |  |
| Ports             | 2                                                                                   |
| SISO / MIMO       | 2X2 MIMO                                                                            |
| Frequency Bands   | 410 – 3800 MHz                                                                      |
| Polarisation      | Linear Vertical                                                                     |
| Peak Gain         | 6.2 dBi                                                                             |
| Coax Cable Type   | Twin HDF 195                                                                        |
| Coax Cable Length | 5m                                                                                  |
| Connector Type    | SMA (M)                                                                             |

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

## Electrical Specifications

|                      |                           |
|----------------------|---------------------------|
| Frequency Bands:     | 410 – 470 MHz             |
|                      | 698 – 960 MHz             |
|                      | 1427 – 1517 MHz           |
|                      | 1710 – 2700 MHz           |
|                      | 3400 – 3800 MHz           |
| Gain (Max):          | 1 dBi @ 410 – 470 MHz     |
|                      | 2 dBi @ 698 – 960 MHz     |
|                      | 4 dBi @ 1427 – 1517 MHz   |
|                      | 6.2 dBi @ 1710 – 2700 MHz |
|                      | 2 dBi @ 3400 – 3800 MHz   |
| VSWR:                | <3:1                      |
|                      | Over 90% of the band      |
| Feed Power Handling: | 10 W                      |
| Input Impedance:     | 50 Ohm (nominal)          |
| Coax Cable Loss:     | 0.250 dB/m @ 400 MHz      |
|                      | 0.385 dB/m @ 900 MHz      |
|                      | 0.507 dB/m @ 1500MHz      |
|                      | 0.565 dB/m @ 1800 MHz     |
|                      | 0.666 dB/m @ 2400 MHz     |
|                      | 0.788 dB/m @ 3000 MHz     |
| Polarisation:        | Linear Vertical           |
| DC Short:            | Yes                       |

## Product Box Contents

|                   |                          |
|-------------------|--------------------------|
| Antenna:          | A-OMNI-0600-V1-02        |
| Mounting Bracket: | Pole up to 50mm diameter |
|                   | Wall and pole mount      |
|                   | stainless steel bracket  |

## Ordering Information

|                     |                   |
|---------------------|-------------------|
| Commercial name:    | OMNI-600-02       |
| Order product code: | A-OMNI-0600-V1-02 |
| EAN number:         | 6009880915101     |

## Mechanical Specifications

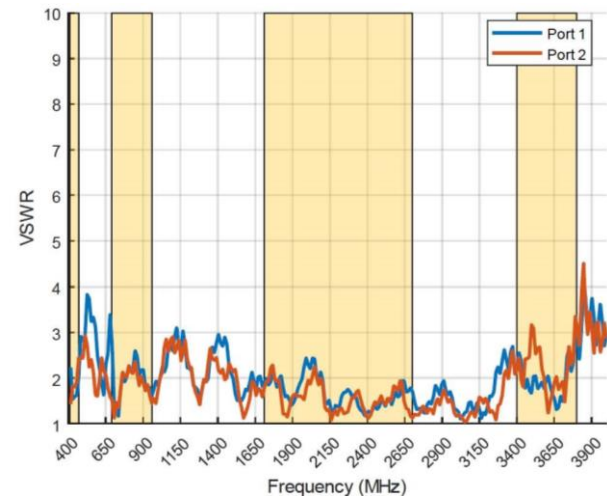
|                      |                                       |
|----------------------|---------------------------------------|
| Product Dimensions   | 646 mm x Ø71 mm<br>excluding bracket  |
| Packaged Dimensions: | 700 mm x 150 mm x 100 mm              |
| Weight:              | 0.8 kg                                |
| Packaged Weight:     | 1.64 kg                               |
| Radome Material:     | ABS (Halogen Free)                    |
| Radome Colour:       | Pantone – Cool Gray (1C)<br>RAL -7047 |
| Mounting Type:       | Wall/Pole mount                       |

## Environmental Specifications, Certification & Approvals

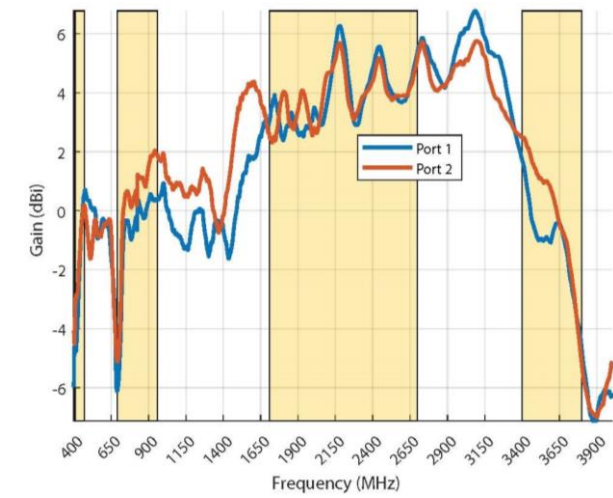
|                                 |                                     |
|---------------------------------|-------------------------------------|
| Antenna Wind Survival:          | ≤160 km/h                           |
| Temperature Range (Operating):  | -40°C to +80°C                      |
| Environmental Conditions:       | Outdoor/Indoor                      |
| Ingress Protection:             | 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 |

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 OMNI-600 delivers superior performance across all bands with a VSWR of <3:1 over 90% of the band.

Gain\* in dBi

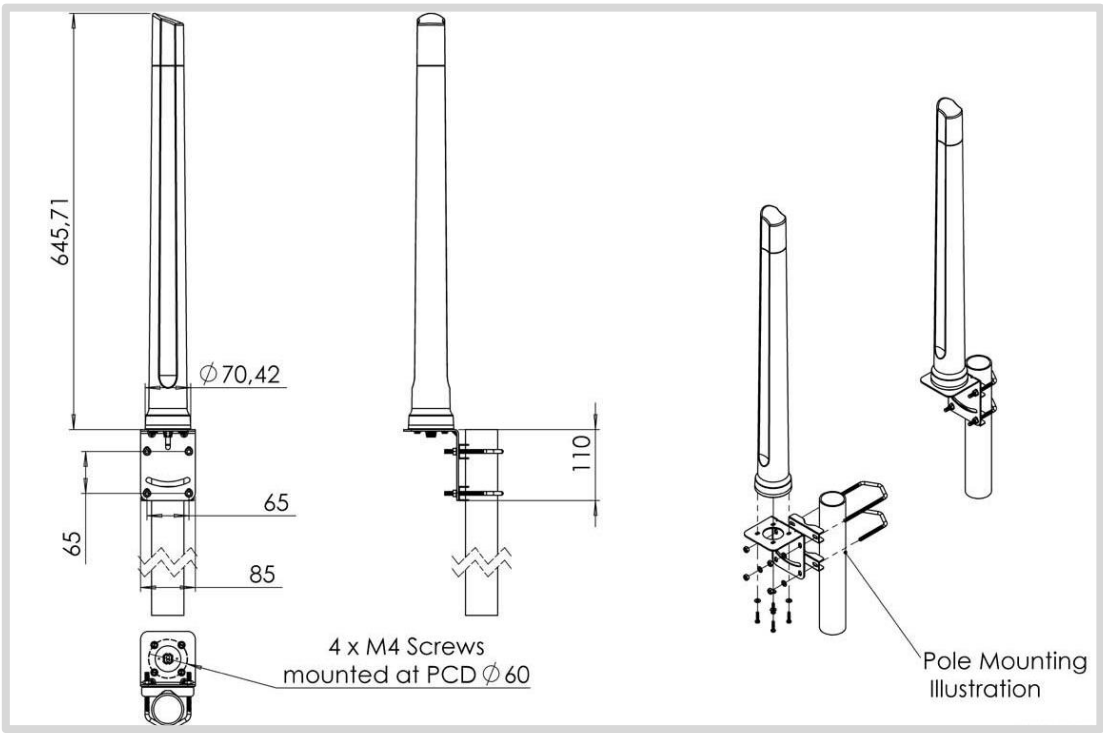
6.2 dBi is the peak gain across all bands from 410 – 3800 MHz

|                         |         |
|-------------------------|---------|
| Gain @ 410 – 470 MHz:   | 1 dBi   |
| Gain @ 698 – 960 MHz:   | 2 dBi   |
| Gain @ 1427 – 1517 MHz: | 4 dBi   |
| Gain @ 1710 – 2700 MHz: | 6.2 dBi |
| Gain @ 3400 – 3800 MHz: | 2 dBi   |

\*VSWR measured with a 5m low loss cable

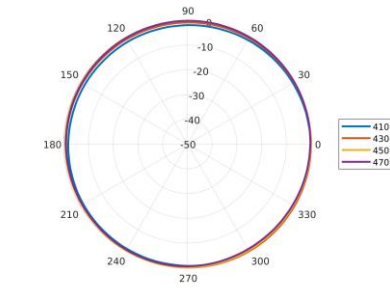
\*Antenna gain measured with polarisation aligned standard antenna

Technical Drawings

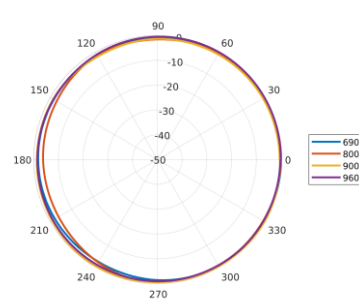


## Radiation Patterns – Port 1

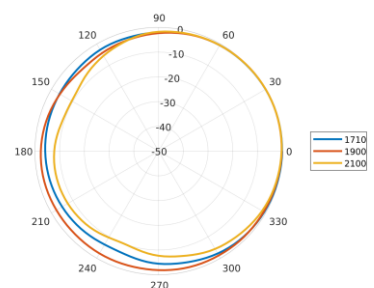
**Azimuth: 410 – 470 MHz**



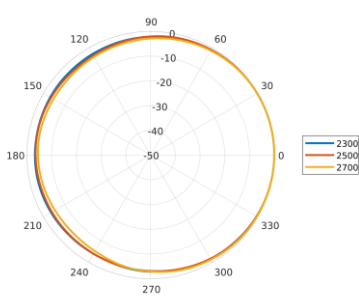
**Azimuth: 690 – 960 MHz**



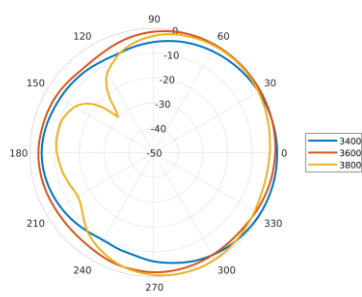
**Azimuth: 1710 – 2100 MHz**



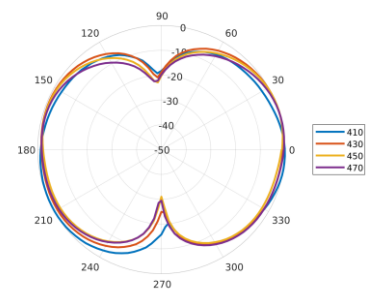
**Azimuth: 2300 – 2700 MHz**



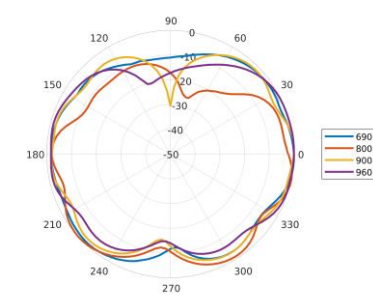
**Azimuth: 3400 – 3800 MHz**



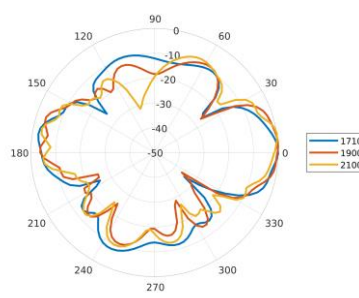
**Elevation 1: 410 – 470 MHz**



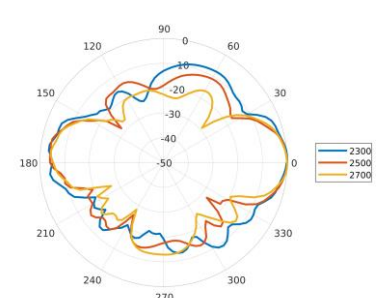
**Elevation 1: 690 – 960 MHz**



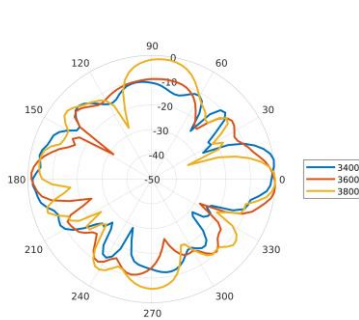
**Elevation 1: 1710 – 2100 MHz**



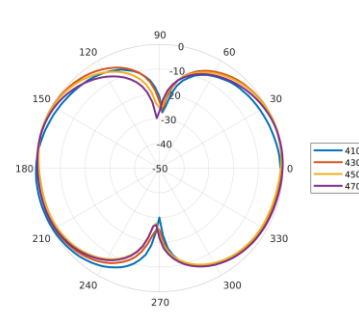
**Elevation 1: 2300 – 2700 MHz**



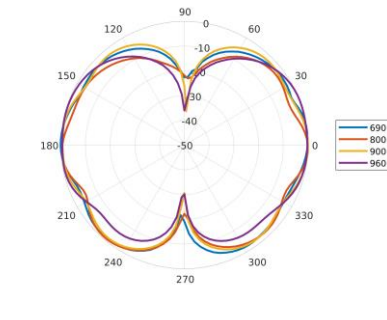
**Elevation 1: 3400 – 3800 MHz**



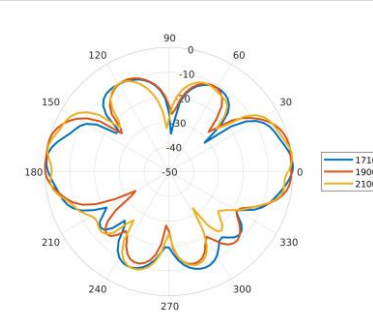
**Elevation 2: 410 – 470 MHz**



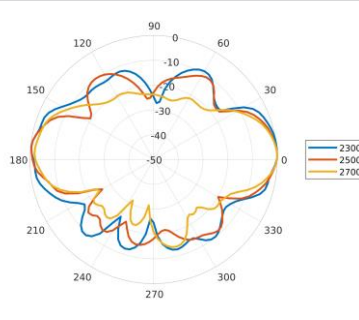
**Elevation 2: 690 – 960 MHz**



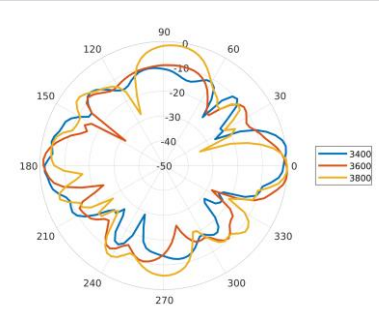
**Elevation 2: 1710 – 2100 MHz**



**Elevation 2: 2300 – 2700 MHz**



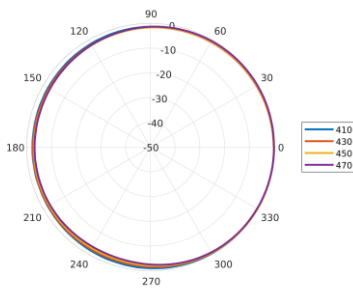
**Elevation 2: 3400 – 3800 MHz**



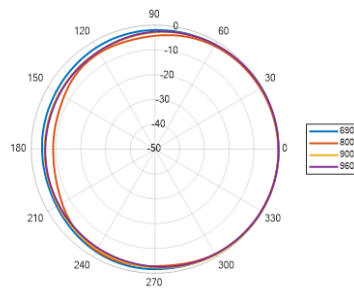


## Radiation Patterns – Port 2

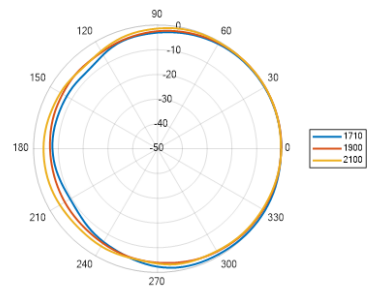
**Azimuth: 410 – 470 MHz**



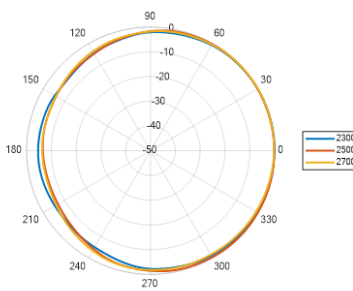
**Azimuth: 690 – 960 MHz**



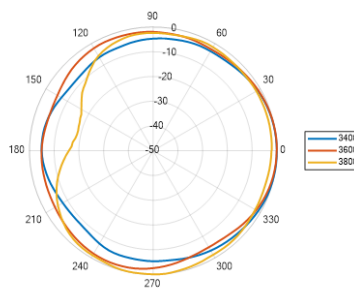
**Azimuth: 1710 – 2100 MHz**



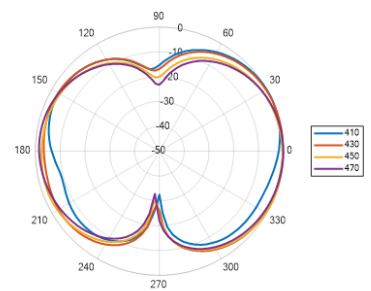
**Azimuth: 2300 – 2700 MHz**



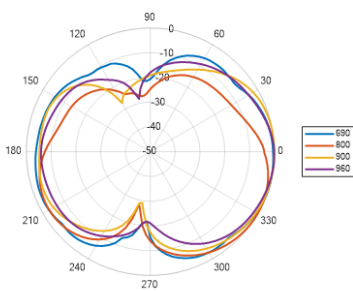
**Azimuth: 3400 – 3800 MHz**



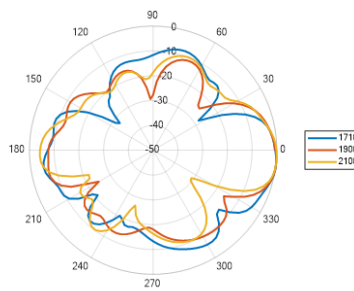
**Elevation 1: 410 – 470 MHz**



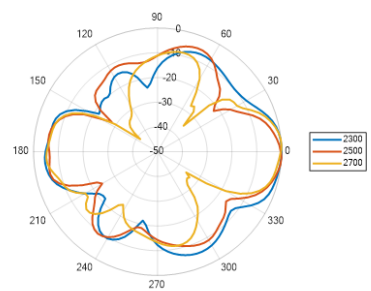
**Elevation 1: 690 – 960 MHz**



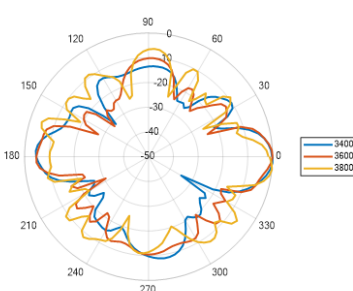
**Elevation 1: 1710 – 2100 MHz**



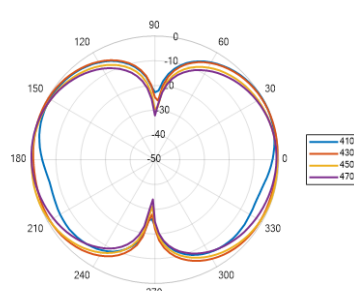
**Elevation 1: 2300 – 2700 MHz**



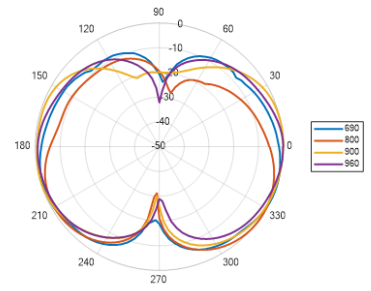
**Elevation 1: 3400 – 3800 MHz**



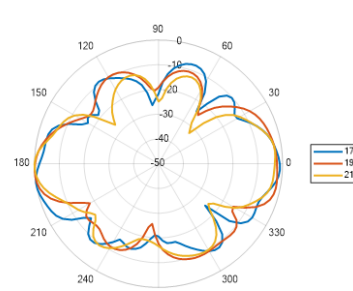
**Elevation 2: 410 – 470 MHz**



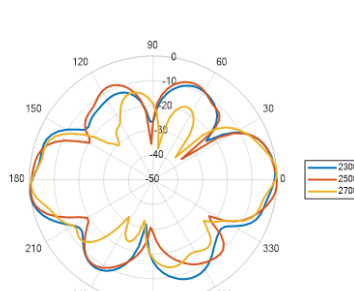
**Elevation 2: 690 – 960 MHz**



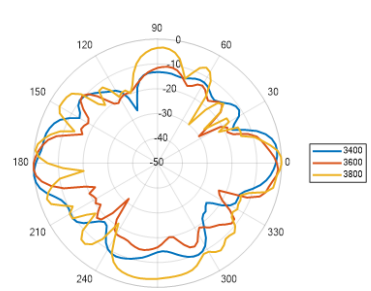
**Elevation 2: 1710 – 2100 MHz**



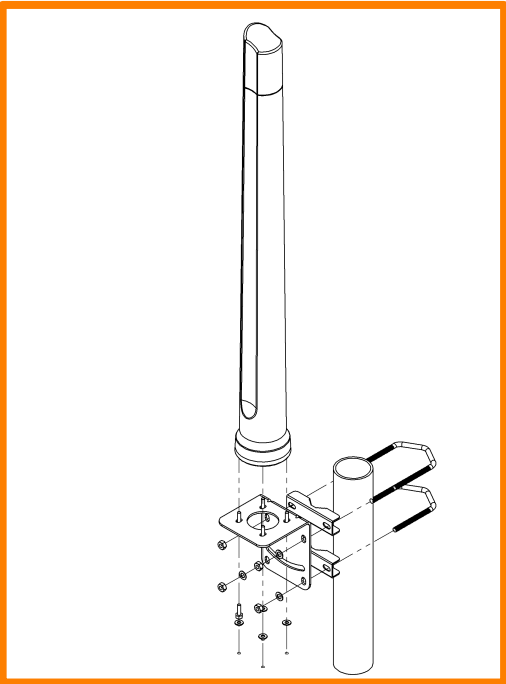
**Elevation 2: 2300 – 2700 MHz**



**Elevation 2: 3400 – 3800 MHz**

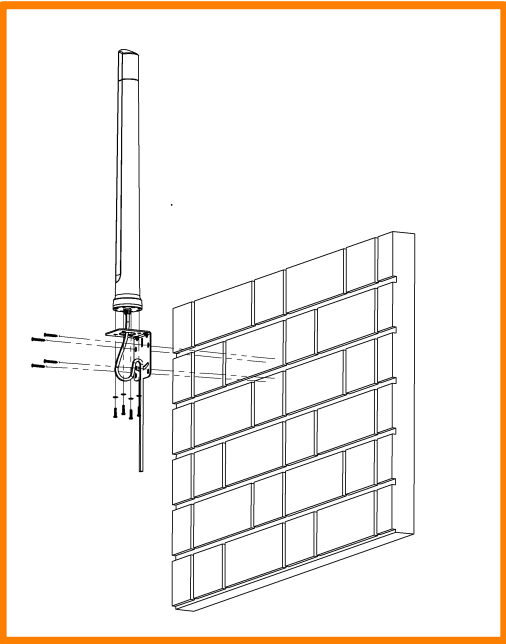


Mounting Options



Pole Mount

Wall/pole mount bracket included



Wall Mount

Wall/pole mount bracket included

## Additional Accessories

Extension Cables: Up to 15m HDF 195  
Various connectors available  
Installation poles and brackets available

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

## CONTACT POYNTING

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