













## ANTENNAS | OMNI-297 SERIES




# OMNI DIRECTIONAL, WIDEBAND LTE/5G RHYNO ANTENNA

617 - 3800 MHz; 2 dBi



					
617 - 960 MHz; 1427 - 1517 MHz; 1710 - 2700 MHz; 3400 - 3800 MHz	2 dBi	Increase x Mb/s	Omni- Directional	4G LTE	5G
					
2.4 - 2.5 GHz	IoT & M2M	-40°C to +80°C	Fire Resistant	IP 69K	617 - 698 MHz

- **Medium gain, omni directional antenna**
- **Suitable for 5G deployment up to 3800 MHz**
- **Compatible with 4G/3G/2G technologies, supports 2.4 GHz Wi-Fi**
- **Ideal for IoT and M2M applications**
- **Robust and low-profile design**
- **Water and dust ingress protected with IP 69K rating**

 Urban
  Rural/Farm
  Meter

APPLICATION AREAS

## Product Overview

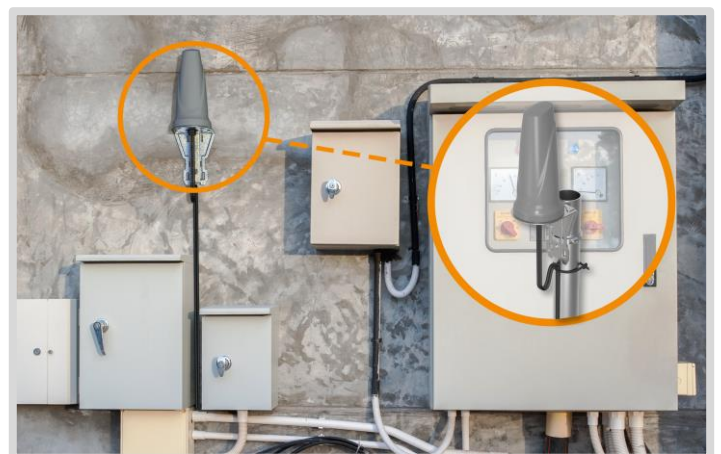
The new OMNI-297 antenna forms part of our new "Rhyno" antenna range. The OMNI-297 is wideband cellular antenna that operates from 617 to 3800 MHz, covering the contemporary 5G and LTE frequency bands. The antenna is designed for superior pattern control over the entire frequency range, making the OMNI-297 an exceptional omni-directional antenna for its size. The constant gain across the entire frequency range improves the LTE performance features, such as multi carrier aggregation (CA). The ideal operation for the antenna will be for fixed installations of any cellular bands. It is also ideal for machine to machine (M2M) and internet of things (IoT) applications that communicate through the GSM networks (GPRS/EDGE/3G/HSPA/LTE).

## Features

- Suitable for all 5G networks up to 3800 MHz
- Medium gain omni-directional antenna
- Wall or pole mountable for easy installation
- Vandal and dust ingress protected
- Aesthetically pleasing

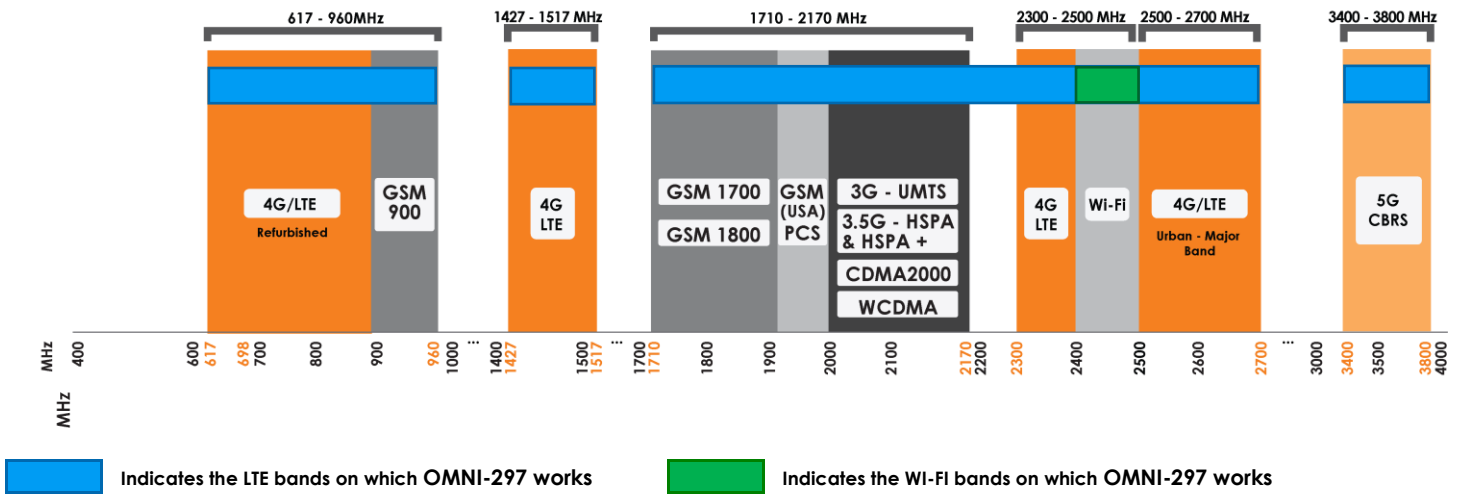
## Application Areas

- Machine to Machine (M2M) and Internet of Things (IoT)
- Poor data signal reception (indoor or outdoor)
- Improves slow data transmission connection
- Increases system transmission reliability
- High-end industrial grade router applications
- Improves reception for mobile offices



### Frequency bands

The OMNI-297 is a marine antenna that works from | 617 - 960 MHz | 1427 - 1517 MHz | 1710 - 2700 MHz | 3400 - 3800 MHz



### Antenna Overview

Ports	1
SISO / MIMO	SISO
Frequency Bands	617 – 3800 MHz
Peak Gain	2 dBi
Coax Cable Type	RG 58
Coax Cable Length	0.6 m
Connector Type	SMA (M)

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

## Electrical Specifications

<b>Frequency bands:</b>	617 - 960 MHz 1427 - 1517 MHz 1710 - 2700 MHz 3400 - 3800 MHz
<b>Gain (peak):</b>	-3.5 dBi @ 617 - 960 MHz -1 dBi @ 1427 - 1517 MHz 2 dBi @ 1710 - 2700 MHz 1.8 dBi @ 3400 - 3800 MHz
<b>VSWR:</b>	≤ 2.5:1 over 90% of the bands
<b>Feed power handling:</b>	10 W
<b>Input impedance:</b>	50 Ohm (nominal)
<b>Polarisation:</b>	Linear Vertical
<b>Coax cable loss:</b>	0.535 dB/m @ 900 MHz 0.76 dB/m @ 1500 MHz 0.79 dB/m @ 1800 MHz 0.97 dB/m @ 2400 MHz 1.1 dB/m @ 3000 MHz
<b>DC short:</b>	Path to Ground

## Product Box Contents

<b>Antenna:</b>	A-OMNI-0297
<b>Mounting bracket:</b>	Included L-Bracket, Adhesive Surface Mount

## Ordering Information

<b>Commercial name:</b>	OMNI-297
<b>Order product code:</b>	A-OMNI-0297-V1-01
<b>EAN number:</b>	6009710920909

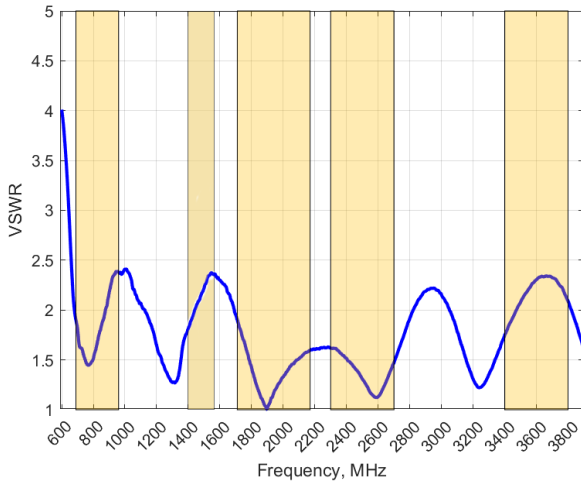
## Mechanical Specifications

<b>Product dimensions:</b>	155 mm x Ø70 mm
<b>Packaged dimensions:</b>	240 mm x 100 mm x 85 mm
<b>Weight:</b>	0.35 Kg
<b>Packaged weight:</b>	0.53 Kg
<b>Radome material:</b>	UV Stable ASA
<b>Radome colour:</b>	Grey Pantone 429C
<b>Mounting Type:</b>	Wall and Pole Mount Using Bracket, Surface Mount Using Adhesive Disc

## Environmental Specifications, Certification & Approvals

<b>Wind Survival:</b>	≤190 km/h
<b>Temperature Range (Operating):</b>	-40°C to +80°C
<b>Environmental Conditions:</b>	Outdoor/Indoor
<b>Water ingress protection ratio/standard:</b>	IP 69K
<b>Salt Spray:</b>	MIL-STD 810F/ASTM B117
<b>Operating Relative Humidity:</b>	Up to 98%
<b>Storage Humidity:</b>	5% to 95% - non-condensing
<b>Storage Temperature:</b>	-40°C to +80°C
<b>Enclosure Flammability Rating:</b>	UL 94-HB
<b>Impact resistance:</b>	IK 10
<b>Product Safety &amp; Environmental:</b>	Complies with CE and RoHS standards

**Antenna Performance Plots**

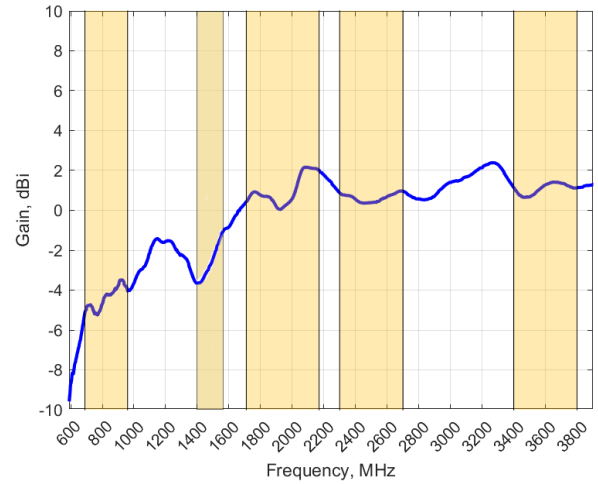


**Voltage Standing Wave Ratio (VSWR)\***

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 OMNI-297 delivers superior performance across all bands with a VSWR of <2.5:1 over 90% of the bands.

\*Antenna VSWR measured with 2m low loss cable



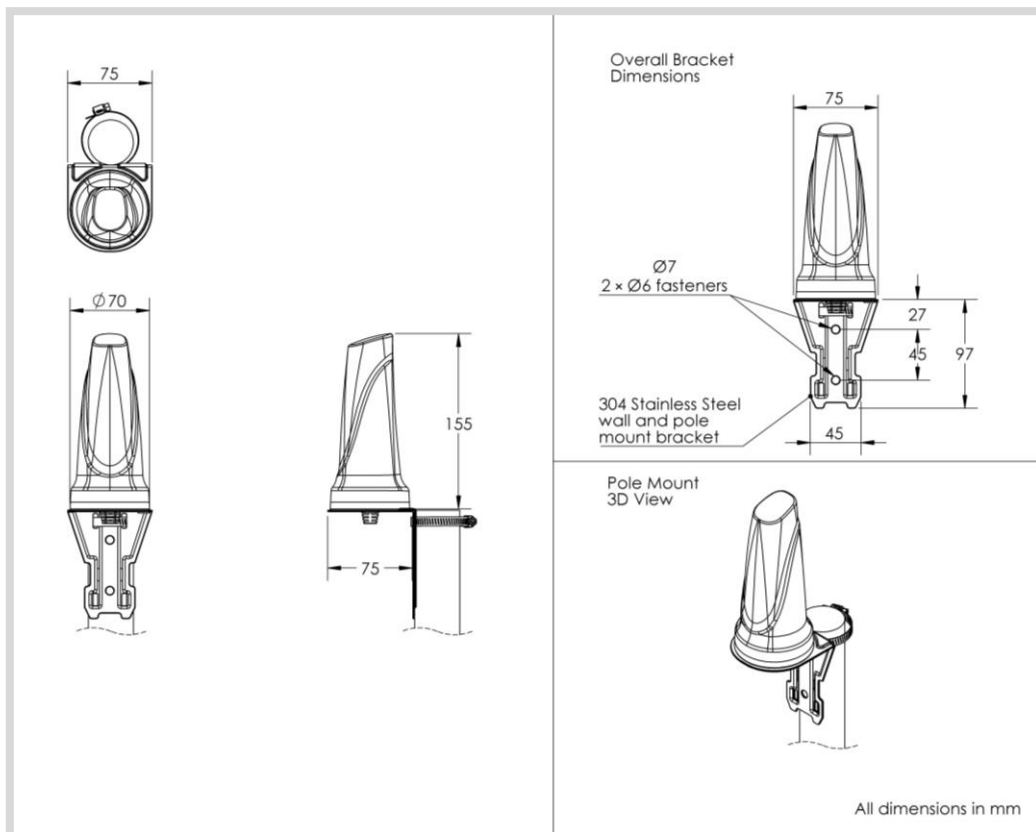
**Gain\* in dBi**

2dBi is the peak gain across all bands from 617 – 3800 MHz

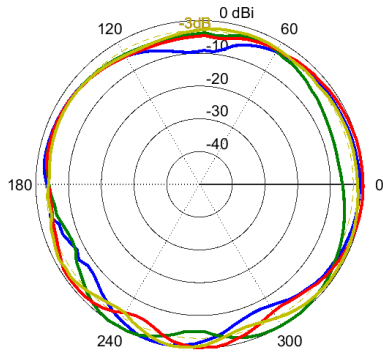
Gain @ 617 – 960 MHz	-3.5 dBi
Gain @ 1427 – 1517 MHz	-1 dBi
Gain @ 1710 – 2700 MHz	2 dBi
Gain @ 3400 – 3800 MHz	1.8 dBi

\*Antenna gain measured with polarisation aligned standard antenna

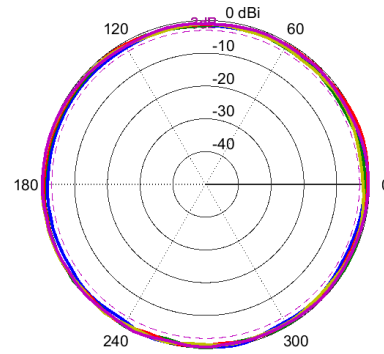
**Technical Drawings**



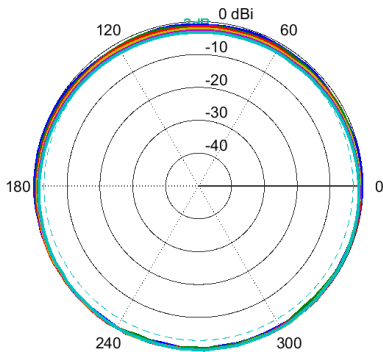
Radiation Patterns



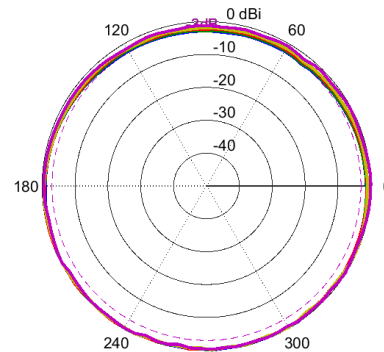
- 690 MHz
- 780 MHz
- 870 MHz
- 960 MHz



- 1710 MHz
- 1850 MHz
- 1950 MHz
- 2050 MHz
- 2170 MHz



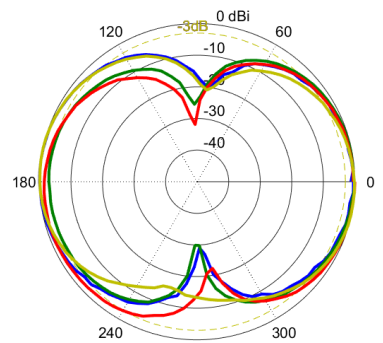
- 2170 MHz
- 2300 MHz
- 2400 MHz
- 2500 MHz
- 2600 MHz
- 2700 MHz



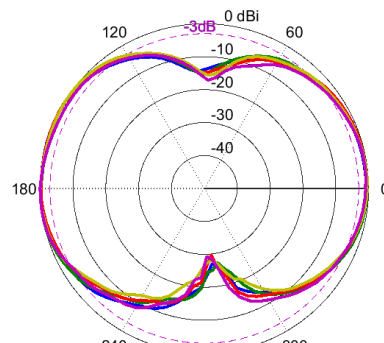
- 3400 MHz
- 3500 MHz
- 3600 MHz
- 3700 MHz
- 3800 MHz

Side View (Side View): 617 - 960 MHz

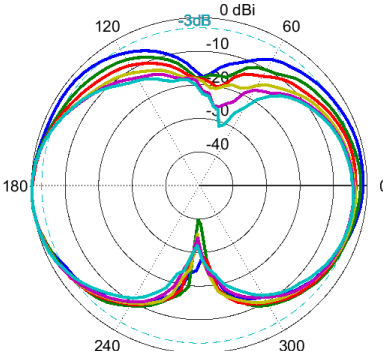
Elevation (Side View): 1710 - 2170 MHz



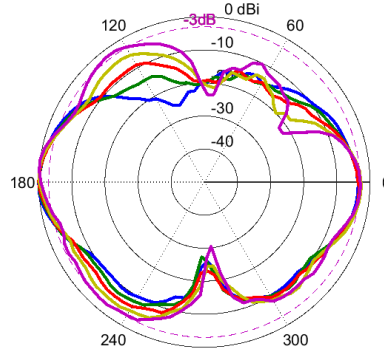
- 690 MHz
- 780 MHz
- 870 MHz
- 960 MHz



- 1710 MHz
- 1850 MHz
- 1950 MHz
- 2050 MHz
- 2170 MHz

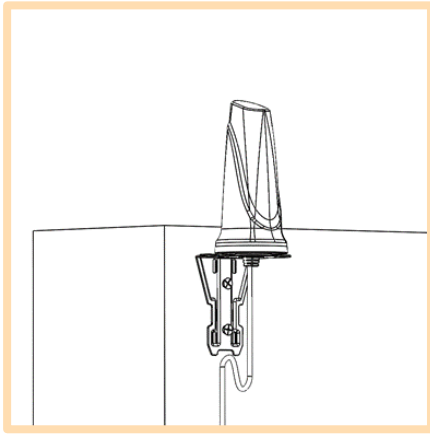


- 2170 MHz
- 2300 MHz
- 2400 MHz
- 2500 MHz
- 2600 MHz
- 2700 MHz



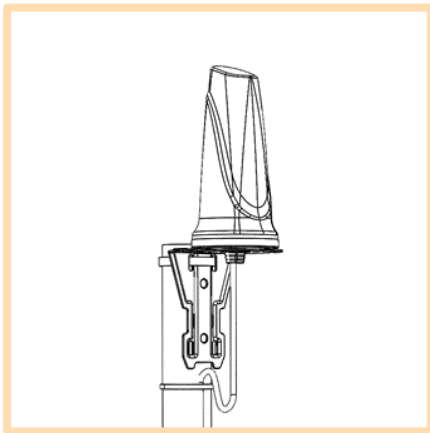
- 3400 MHz
- 3500 MHz
- 3600 MHz
- 3700 MHz
- 3800 MHz

## Mounting Options



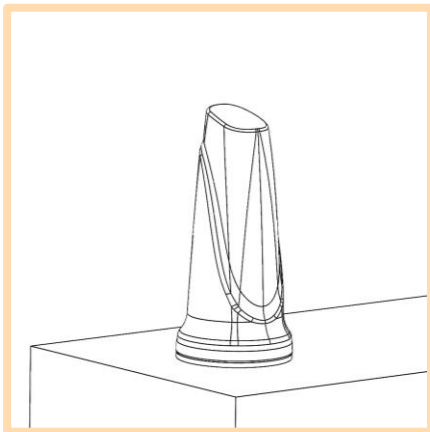
### Wall/Cabinet Mount

Wall/Cabinet mounted using included L-Bracket



### Pole Mount

Pole mounted using included L-Bracket and cable clamp



### Surface Mount

Surface mounted using included adhesive disc

---

## Optional Accessories

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

---

## Contact Poynting

### Poynting Antennas (Pty) Ltd - Head Office

Unit 4, N1 Industrial Park  
Landmarks Avenue,  
Samrand, 0157  
South Africa

**Phone:** +27 (0) 12 657 0050

**E-mail:** [sales@poynting.co.za](mailto:sales@poynting.co.za)

### Poynting Europe

Regus Business Center Neue Messe Riem  
Kronstadter Straße 4  
81677 München  
Germany

**Phone:** +49 89 208026538

**E-mail:** [sales-europe@poynting.tech](mailto:sales-europe@poynting.tech)

### Poynting USA

1804 Owen Court, Suite 104,  
Mansfield,  
TX 76063  
USA

**Phone:** +1 817 533-8130

**E-mail:** [sales-us@poynting.tech](mailto:sales-us@poynting.tech)