

ANTENNAS | OMNI-297 SERIES

OMNI-DIRECTIONAL, WIDEBAND 5G/LTE RHYNOC ANTENNA

617 – 3800 MHz, 2 dBi



Product Overview

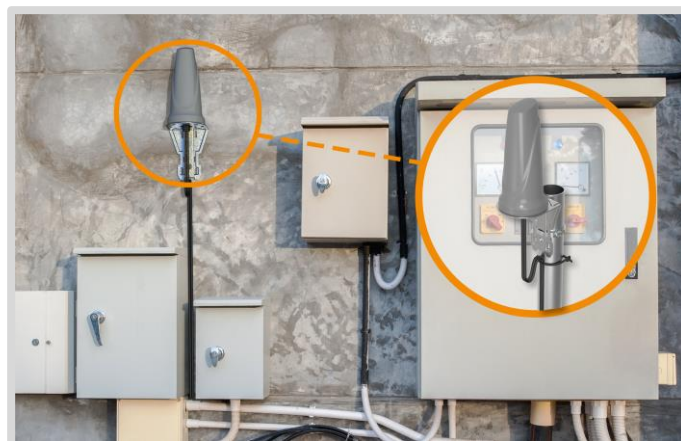
The new OMNI-297 antenna forms part of our new “Rhyno” antenna range. The OMNI-297 is wideband cellular antenna that operates from 617 to 3800 MHz, covering the contemporary 5G and LTE frequency bands. The antenna is designed for superior pattern control over the entire frequency range, making the OMNI-297 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

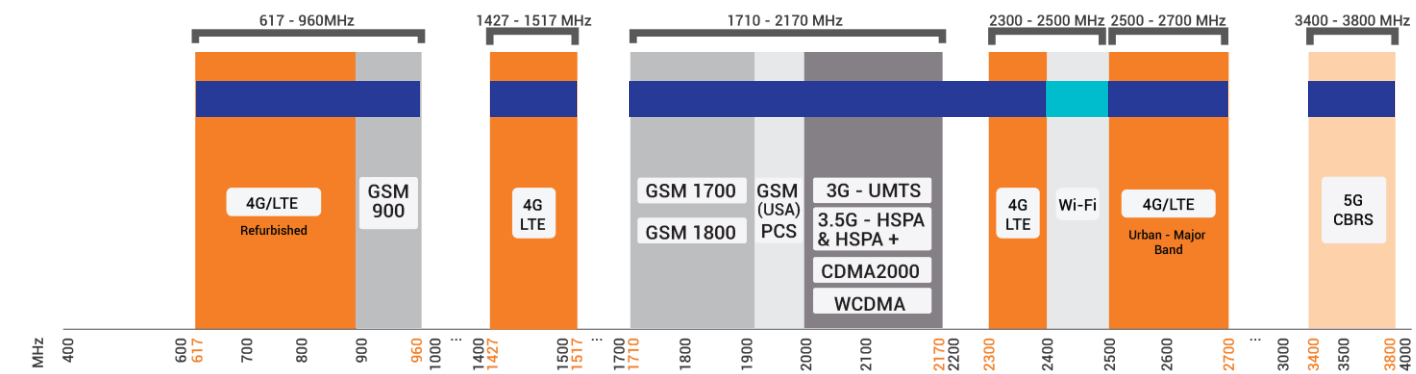
Application Areas

- 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 | and | 3400 – 3800 MHz |



 Indicates the 5G/LTE bands on which OMNI-297 works

 Indicates the WI-FI bands on which OMNI-297 works

Antenna Overview

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

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

Electrical Specifications

Frequency Bands:	617 – 960 MHz 1427 – 1517 MHz 1710 – 2700 MHz 3400 – 3800 MHz
Gain (Max):	-3.5 dBi @ 617 – 960 MHz -1 dBi @ 1427 – 1517 MHz 2 dBi @ 1710 – 2700 MHz 1.8 dBi @ 3400 – 3800 MHz
VSWR:	< 2.5:1
Feed Power Handling:	10 W
Input Impedance:	50 Ohm (nominal)
Coax cable loss:	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
Polarisation:	Linear Vertical
DC Short:	Path to Ground

Product Box Contents

Antenna:	A-OMNI-0297
Mounting Bracket (Included):	Adhesive Disc & L-Bracket (Ø20-70mm Pole)

Ordering Information

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

Mechanical Specifications

Product Dimensions	155 mm x Ø70 mm
Packaged Dimensions:	240 mm x 100 mm x 85 mm
Weight:	0.35 kg
Packaged Weight:	0.53 kg
Radome Material:	UV Stable ASA
Radome Colour:	Grey Pantone 429C
Mounting Type:	Wall and Pole Mount Using Bracket, Surface Mount Using Adhesive Disc

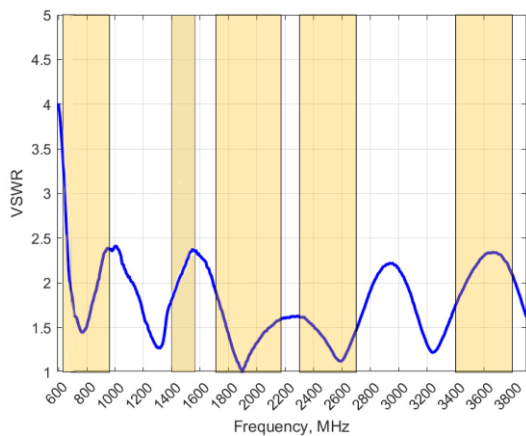
Environmental Specifications, Certification & Approvals

Antenna Wind Survival:	≤190 km/h
Temperature Range (Operating):	-40°C to +80°C
Environmental Conditions:	Outdoor/Indoor
Ingress Protection:	IP 69K
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 10
Product Safety & Environmental:	Complies with CE and RoHS standards



Antenna Performance Plots

VSWR



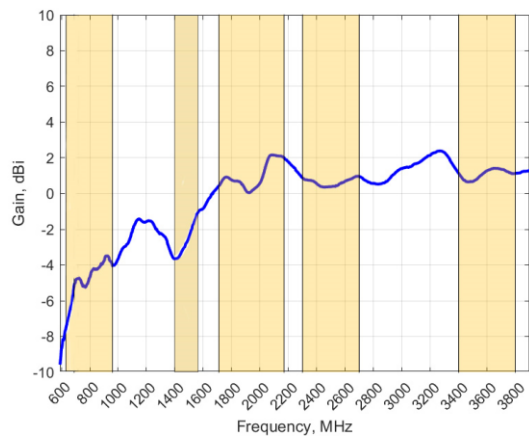
Voltage Standing Wave Ratio (VSWR)*

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

*VSWR measured with a 2m low loss cable.

GAIN (EXCLUDING CABLE LOSS)



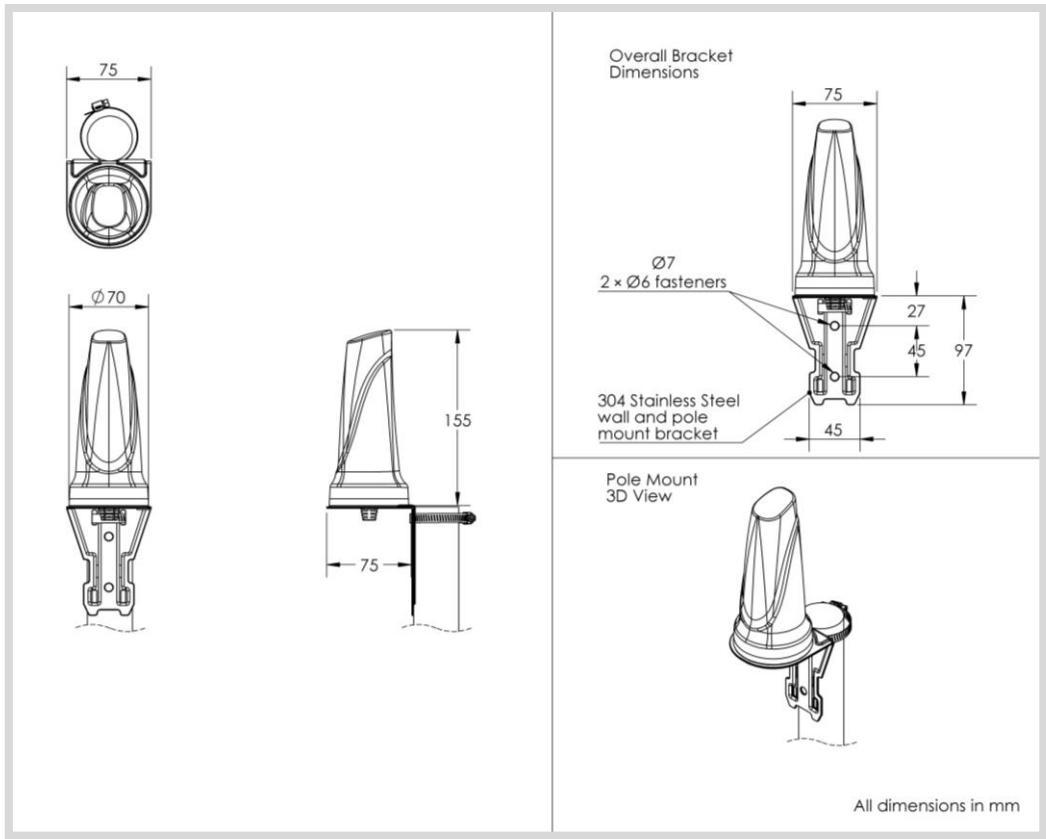
Gain* in dBi

2 dBi 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

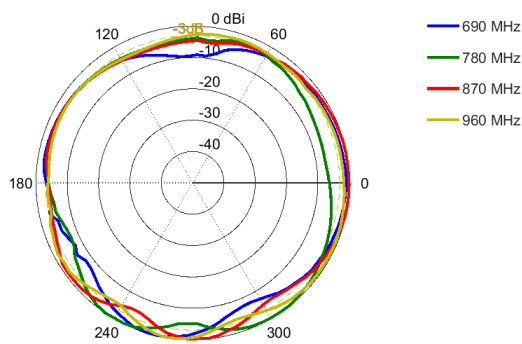
*Antenna gain measured with polarisation aligned standard antenna

Technical Drawings

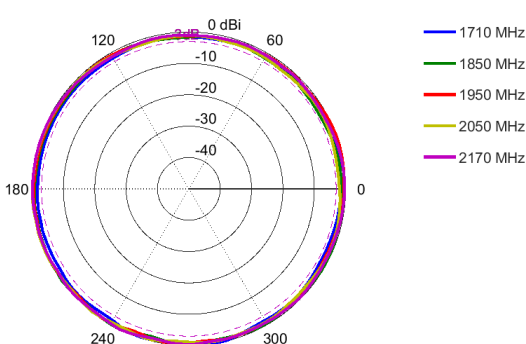


Radiation Patterns

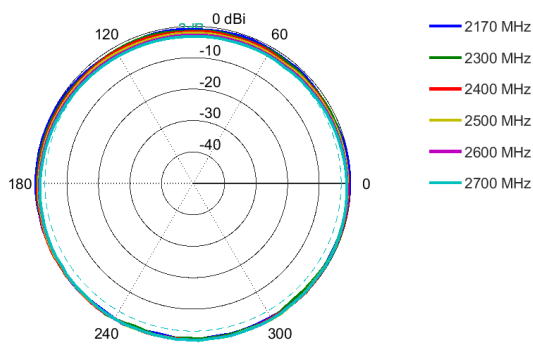
Azimuth: 690 - 960 MHz



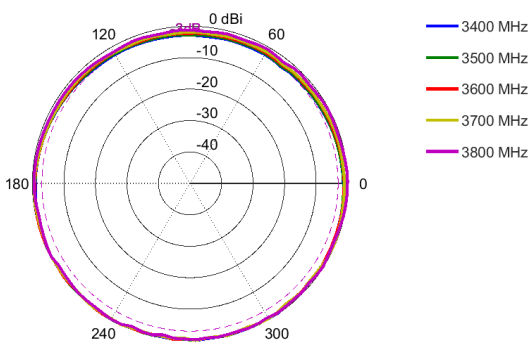
Azimuth: 1710 - 2170 MHz



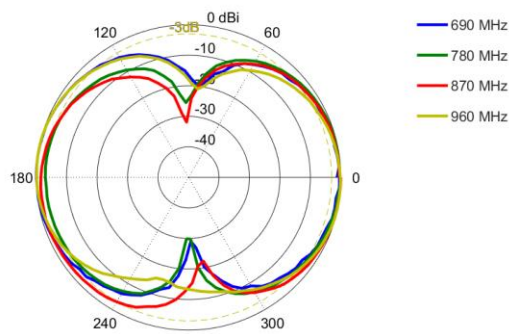
Azimuth: 2170 - 2700 MHz



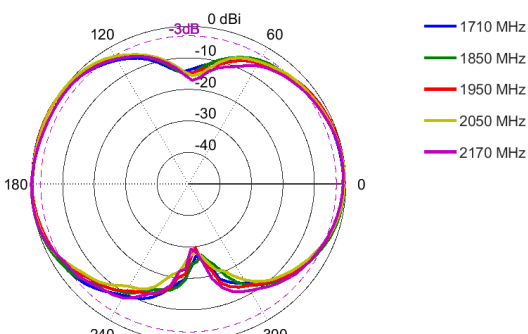
Azimuth: 3400 - 3800 MHz



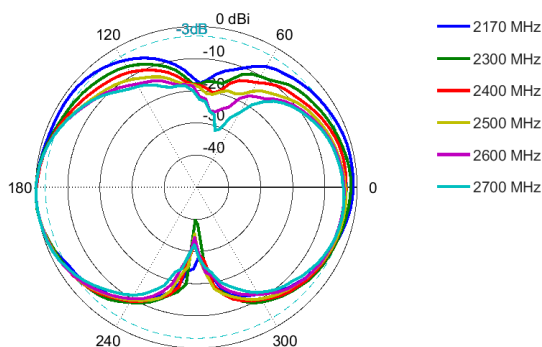
Elevation: 690 - 960 MHz



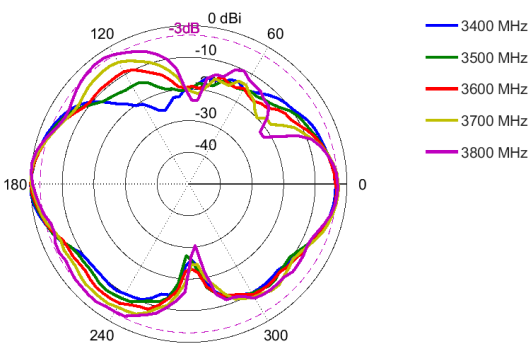
Elevation: 1710 - 2170 MHz



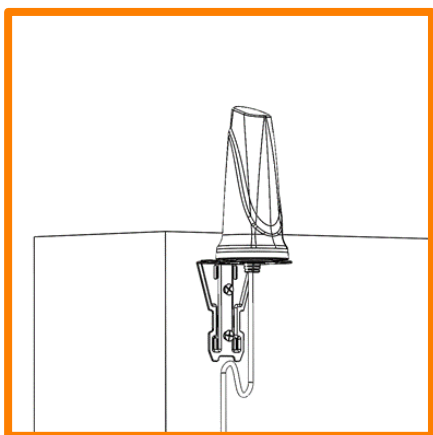
Elevation: 2170 - 2700 MHz



Elevation: 3400 - 3800 MHz

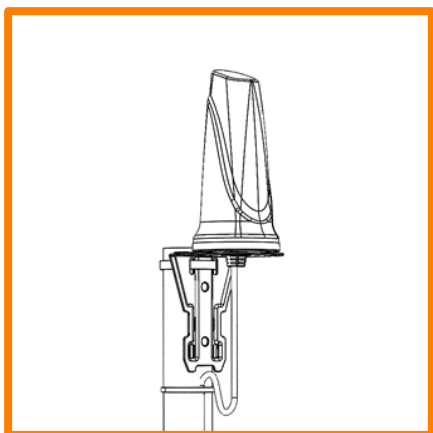


Mounting Options



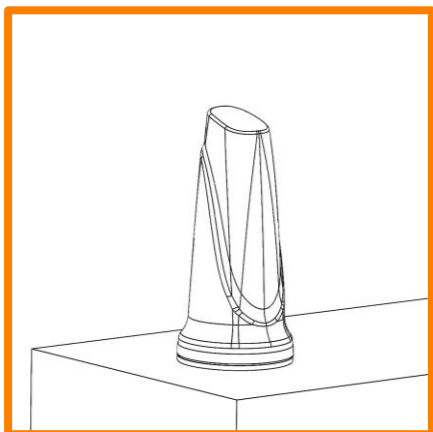
Wall/Cabinet Mount

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

Additional Accessories

See accessories technical specifications on www.poynting.tech

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