OMNI-297

ANTENNAS | OMNI-297 SERIES

OMNI DIRECTIONAL, WIDEBAND LTE/5G RHYNO ANTENNA

698 - 3800 MHz; 2 dBi

698-960 MHz; 1710-2700 MHz; 3400-3800 MHz | 2 dBi | Increase x Mb/s | Omni-Directional | 4G LTE | 5G Ready

2.4 – 2.5 GHz | IoT & M2M | -40°C to +80°C | Fire Resistant | IP 68

- **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 IP68 rating**

APPLICATION AREAS: Urban | Rural/Farm | Meter

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 698 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

Revised: December 2020

Regulatory Compliance: RoHS 2011/65/EU Compliant | ISO 9001:2015
Document version: TS-A-OMNI-0297-V1-01 REV3
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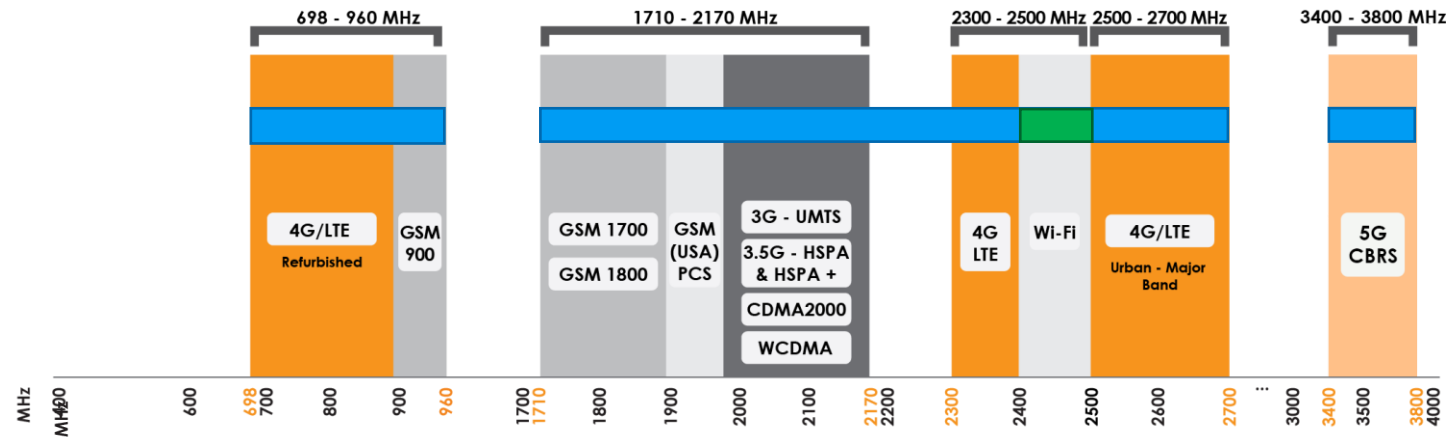
Frequency bands

The OMNI-297 is a marine antenna that works from | 698-960 MHz | 1710-2700 MHz |3400-3800 MHz



Indicates the LTE bands on which **OMNI-297** works

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

Antenna Overview

	LTE
Ports	1
SISO / MIMO	SISO
Frequency Bands	698 – 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*

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Electrical Specifications

Frequency bands:	698-960 MHz 1710-2700 MHz 3400-3800 MHz
Gain (max):	-1.5 dBi @ 698-960 MHZ 2 dBi @ 1710-2700 MHz 2 dBi @ 3400-3800 MHz
VSWR:	≤ 2.5:1
Feed power handling:	10 W
Input impedance:	50 Ohm (nominal)
Polarisation:	Linear Vertical
Coax cable loss:	0.48 dB/m @ 900 MHz 0.71 dB/m @ 1800 MHz 0.86 dB/m @ 2400 MHz 1.0 dB/m @ 3000 MHz
DC short:	Path to Ground

Product Box Contents

Antenna:	A-OMNI-0297
Mounting bracket:	Included L-Bracket, Adhesive Surface Mount

Ordering Information

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

Mechanical Specifications

Product dimensions:	150 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

Wind Survival:	≤190 km/h
Temperature Range (Operating):	-40°C to +80°C
Environmental Conditions:	Outdoor/Indoor
Water ingress protection ratio/standard:	IP 68
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
Impact resistance:	IK 10
Product Safety & Environmental:	Complies with CE and RoHS standards

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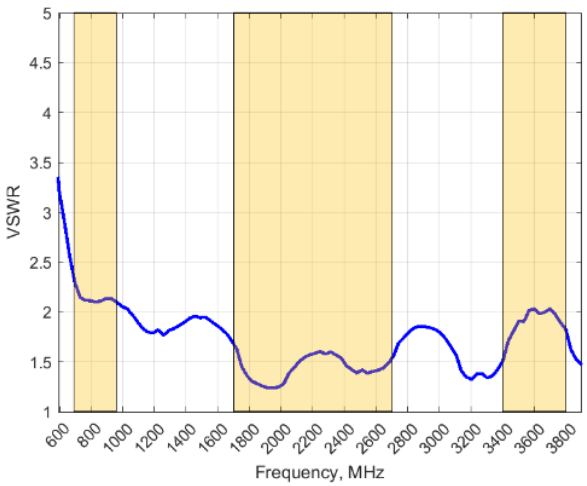
Antenna Performance Plots

VSWR



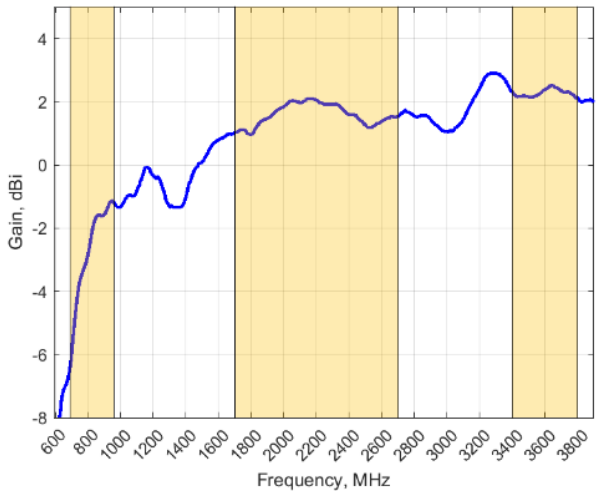
Voltage Standing Wave Ratio (VSWR)*

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

**Antenna VSWR measured with 2m low loss cable*

GAIN: (excluding cable loss)



Gain* in dBi

2dBi is the peak gain across all bands from 698 – 3800 MHz

Gain @ 698-960MHz	-1.5 dBi
Gain @ 1710-2700MHz	2 dBi
Gain @ 3400-3800MHz	2 dBi

**Antenna gain measured with polarisation aligned standard antenna*

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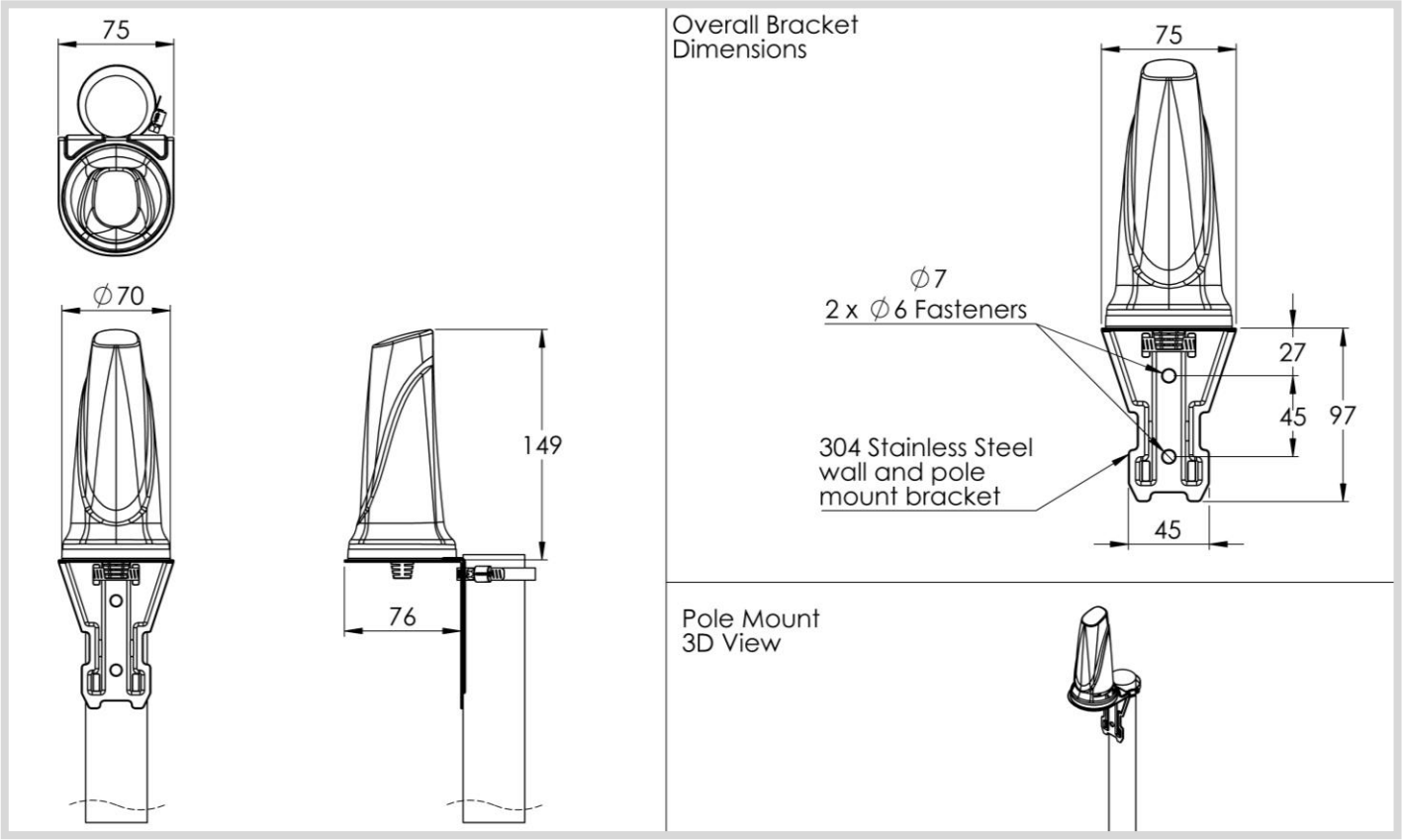
Technical Drawings



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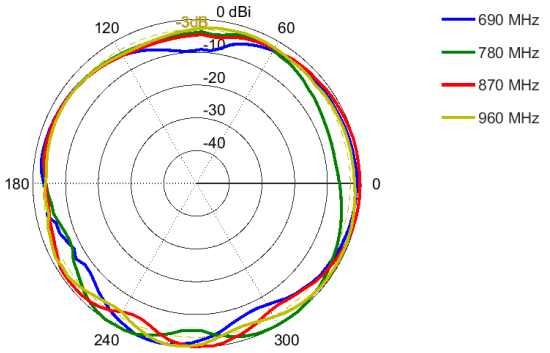
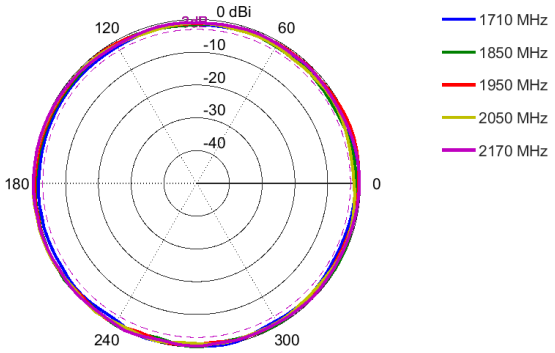
Radiation Patterns

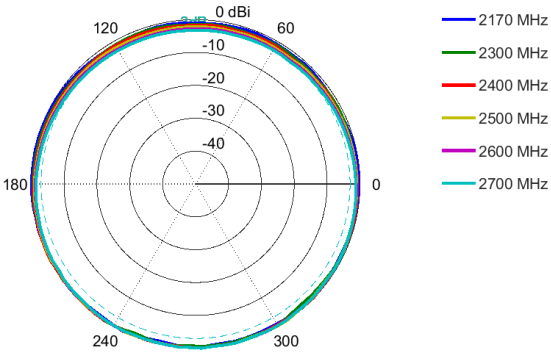
Azimuth (Top View): 690–960 MHz



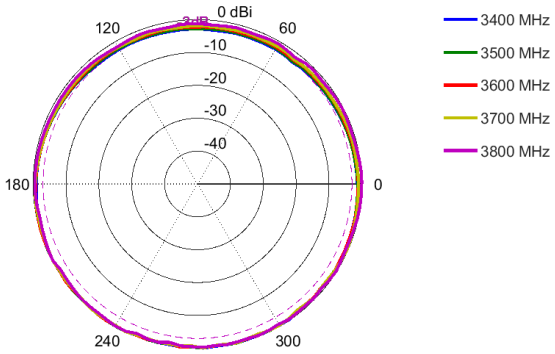
Azimuth (Top View): 1710–2170 MHz



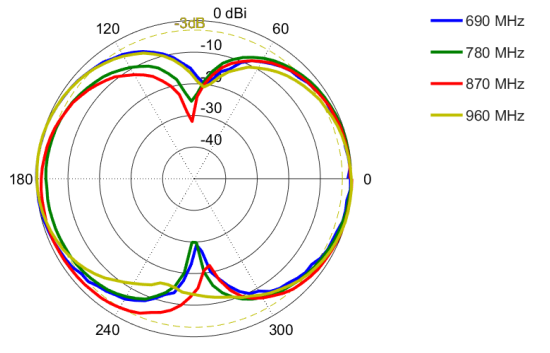
Azimuth (Top View): 2170–2700 MHz



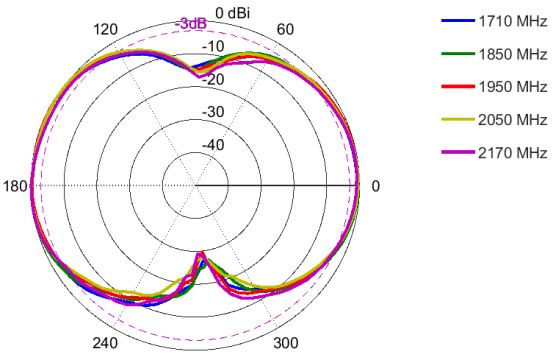
Azimuth (Top View): 3400–3800 MHz



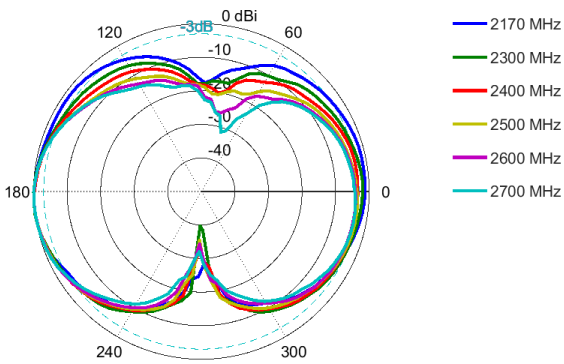
Elevation (Side View): 690–960 MHz



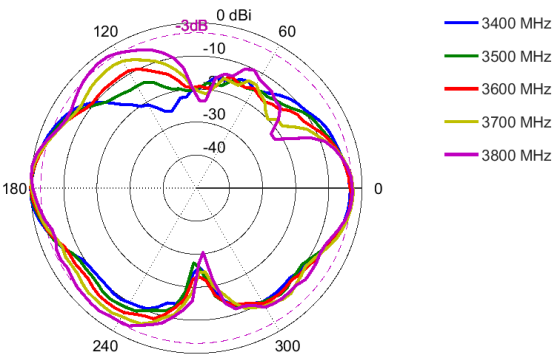
Elevation (Side View): 1710–2170 MHz



Elevation (Side View): 2170–2700 MHz



Elevation (Side View): 3400–3800 MHz



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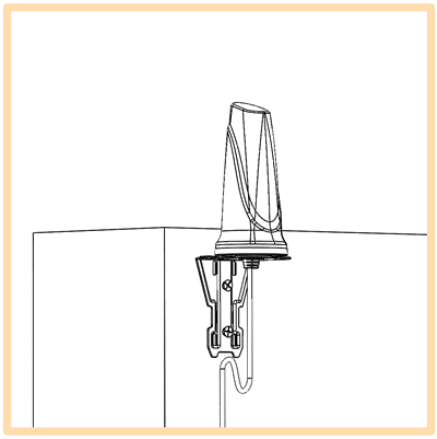
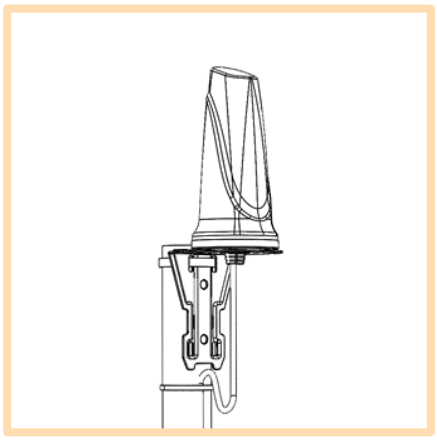
Mounting Options



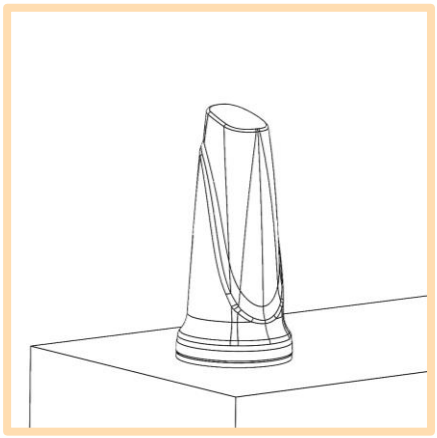
Wall/Cabinet Mount

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

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Optional Accessories

See accessories technical specifications on www.poynting.tech

Contact Poynting

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