OMNI-280

ANTENNAS | OMNI-280 SERIES

OMNI-DIRECTIONAL, WIDEBAND, LTE/5G READY ANTENNA

698 - 3800 MHz; 4 dBi

698 – 960 MHz; 1710 – 2700 MHz; 3400 – 3800 MHz | 4 dBi | Increase x Mb/s | Omni-Directional | Machine to Machine | 4G LTE | CBRS Band

5G Ready | 2.4 – 2.5 GHz | IoT | -40°C to +70°C | IP 65 | Fire Resistant

APPLICATION AREAS: Urban | Rural/Farm | IoT/Metering

- **Future proof omni-directional wideband LTE SISO antenna**
- **Backwards compatible with 2G, 3G technologies**
- **Improves mobile network subscriber's user experience**
- **Increased connectivity stability**
- **Weatherproof enclosure**
- **Pole, wall or magnetic mountable**

Product Overview

The OMNI-280 antenna provides an innovative solution for the signal enhancement of 4G/3G and 2G networks. It is a unique magnetic, wall- or pole-mountable, single polarised, full LTE band antenna that incorporates an ultra-wideband element in a single housing. This antenna is a cost-effective solution for enhancing signal reception and throughput. The OMNI-280-01 antenna increases signal reliability, ensures higher data throughput for users and provides a stable, high quality connection. This improves user experience and secures client retention. It is ideal for any application using the GSM network (LTE/HSPA/3G/EDGE/ GPRS).

Features

- Wideband frequency ranges from 698 to 3800 MHz
- Medium gain across frequency range
- Omni-directional radiation pattern for optimum coverage
- Magnetic, wall or pole mountable
- Lightweight
- Increase system transmission reliability

Application Areas

- M2M applications where machines and measurement devices need to be connected for real time monitoring and information transfer. (Telematics)
- Utilities for power and water metering.
- Security industry where cameras and other security equipment needs to be monitored.
- Retail point of sale equipment.
- Areas with poor data signal reception (indoor and outdoor).

Revised: August 2020

Regulatory Compliance: RoHS 2011/65/EU Compliant | ISO 9001:2015
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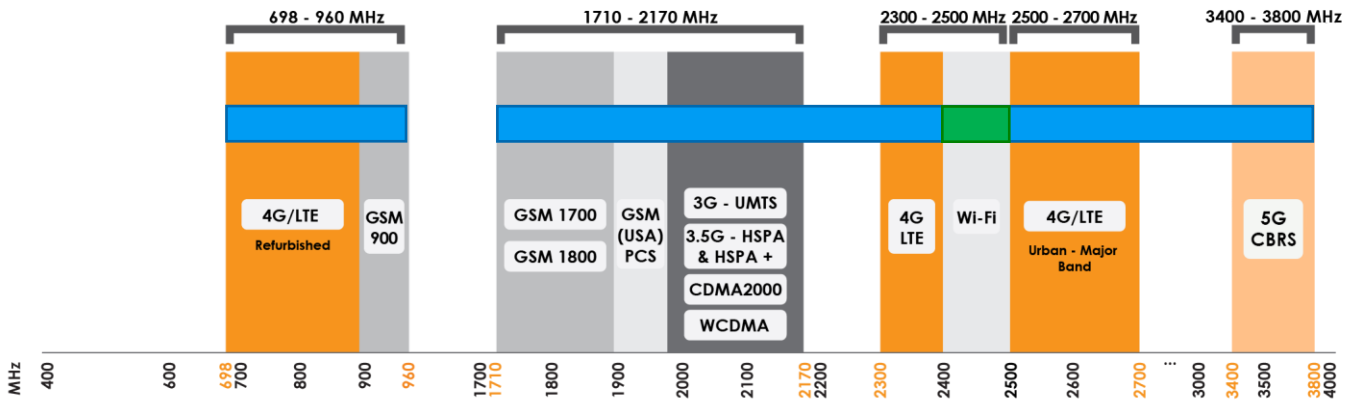
Frequency Bands

The OMNI-280 is a wide-band antenna that works from 698 – 960 MHz | 1710 – 2700 MHz | 3400 – 3800 MHz



Indicates the LTE bands on which **OMNI-280** works

Indicates the WI-FI bands on which **OMNI-280** works

Antenna Derivatives

Product Order Code (SKU)	OMNI-0280-01-V1	OMNI-0280-02-V1	OMNI-0280-08-V1
Ports	1	1	1
SISO / MIMO	SISO	SISO	SISO
Coax Cable Type	RG 58	RG 58	RG 58
Coax Cable Length	1 m	2 m	2 m
Connector Type	SMA (M)	SMA (M)	RA -SMA (M)
Product Weight	0.153kg	0.175kg	0.177kg
Packaged Weight	0.158kg	0.180kg	0.182kg
EAN	0707273470027	0707273469939	0707273470041

**The coax cables & connectors 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 dBi @ 698-960 MHz 3.5 dBi @ 1710-2700 MHz 4 dBi @ 3400-3800 MHz
VSWR:	<3:1 across 90% of the bands
Feed power handling:	10 W
Input impedance:	50 Ohm (nominal)
Polarisation:	Linear Vertical
Coax cable loss:	0.535 dB/m @ 900 MHz 0.79 dB/m @ 1800 MHz 0.97 dB/m @ 2400 MHz 1.1 dB/m @ 3000 MHz
DC short:	Yes

Product Box Contents

Antenna:	A-OMNI-0280
Mounting bracket:	Pole/Wall and Desk (Magnetic /Velcro) mount

Mechanical Specifications

Product dimensions	157 mm x 61 mm x 44 mm
Packaged dimensions:	250 mm x 150 mm x 50 mm
Radome material:	ABS (Halogen Free)
Radome colour:	Pantone Cool Gray 1C
Mounting Type:	Pole/Wall and Magnetic/Velcro adhesive

Environmental Specifications, Certification & Approvals

Wind Survival:	<120 km/h
Temperature Range (Operating):	-40°C to +70°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 +70°C
Enclosure Flammability Rating:	UL 94-HB
Impact resistance:	IK 08
Product Safety & Environmental:	Complies with CE and RoHS standards

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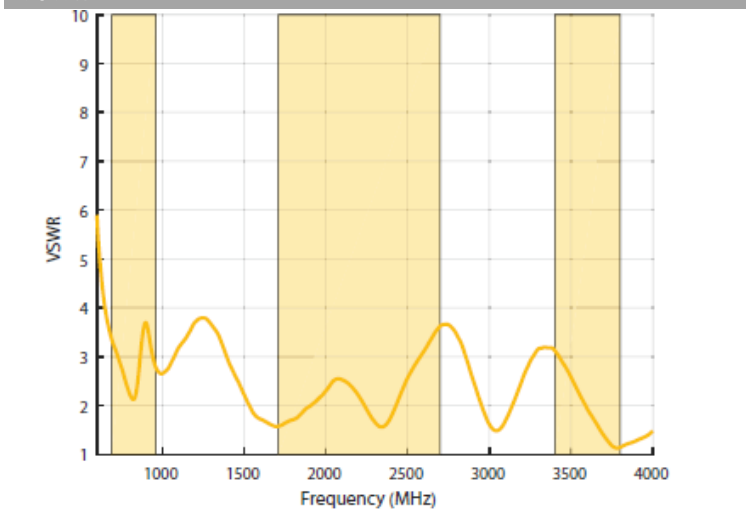
Antenna Performance Plots

VSWR

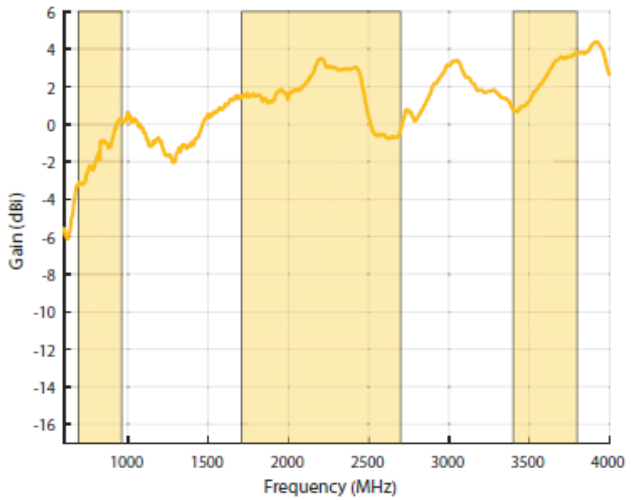


Voltage Standing Wave Ratio (VSWR)

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-280 delivers superior performance across all bands with a VSWR of 3:1 or better across 90% of the bands.

GAIN (EXCLUDING CABLE LOSS)



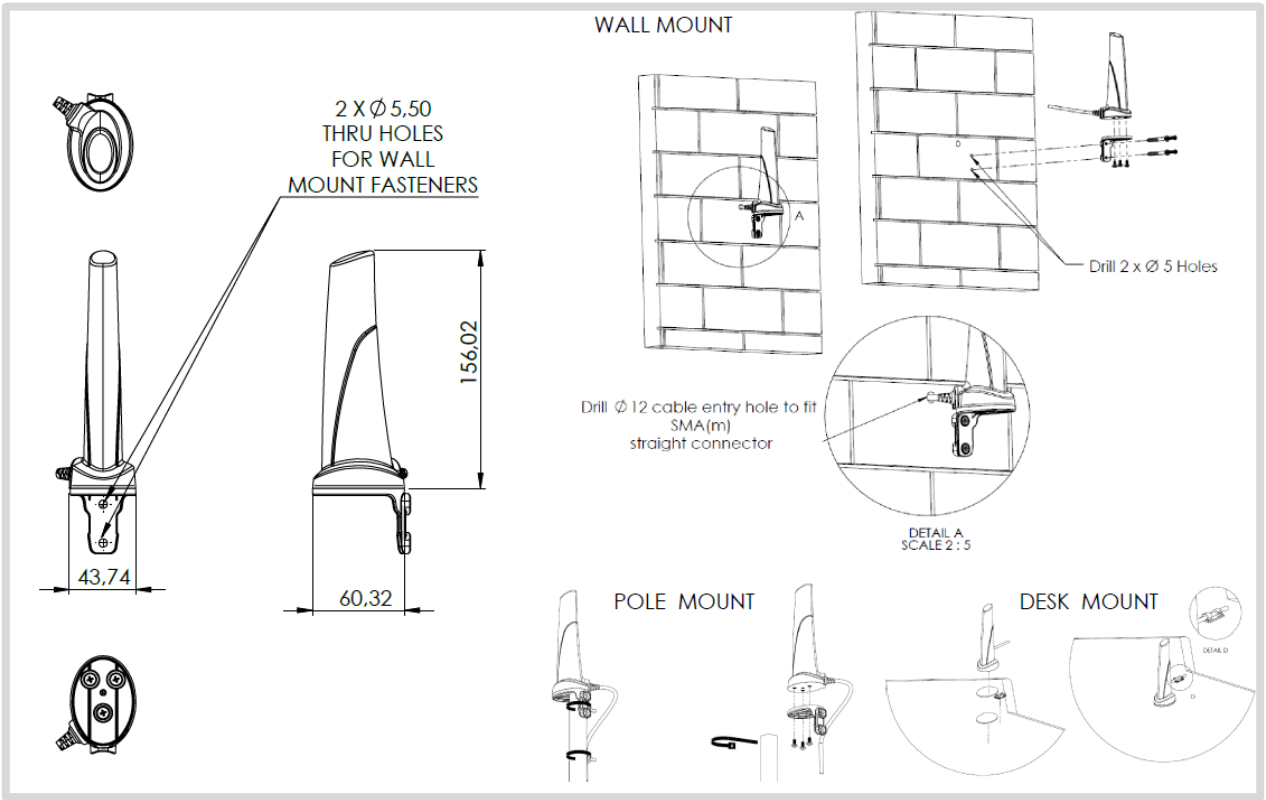
Gain* in dBi

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

Gain @ 698 – 960 MHz:	1 dBi
Gain @ 1710 – 2700 MHz:	3.5 dBi
Gain @ 3400 – 3800 MHz:	4 dBi

**Antenna gain measured with polarisation aligned standard antenna*

Technical Drawings



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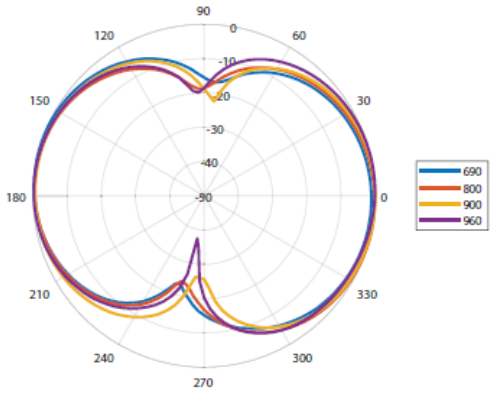
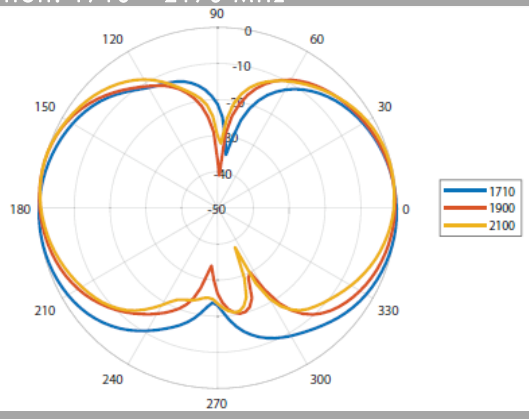
Radiation Patterns

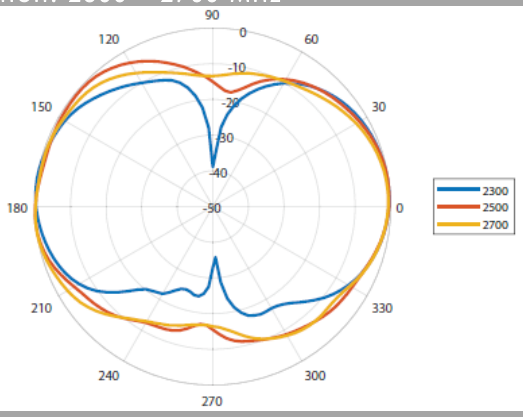
Elevation: 698 – 960 MHz



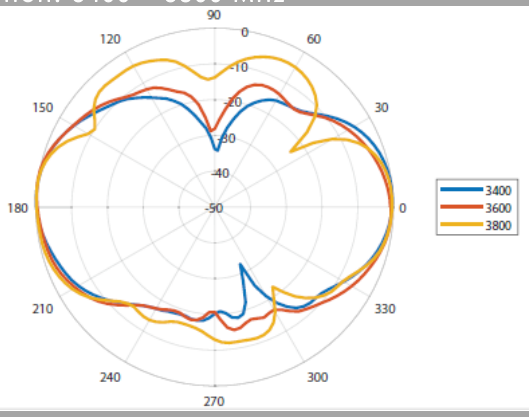
Elevation: 1710 – 2170 MHz



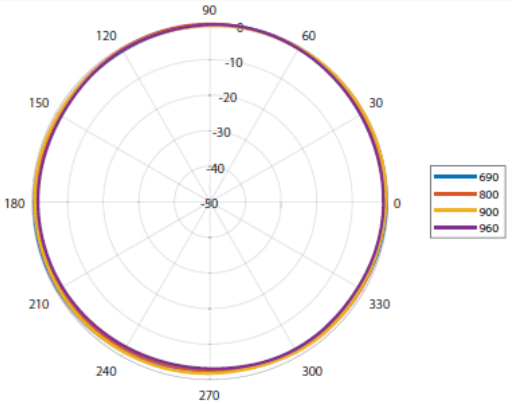
Elevation: 2300 – 2700 MHz



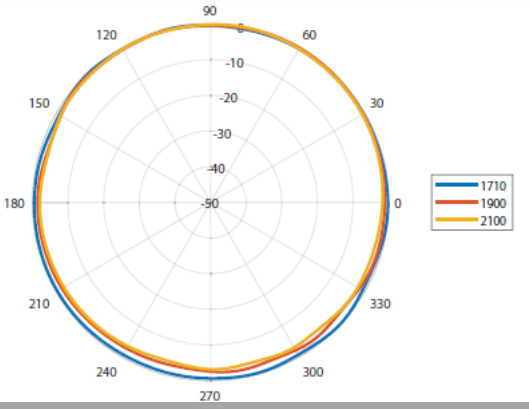
Elevation: 3400 – 3800 MHz



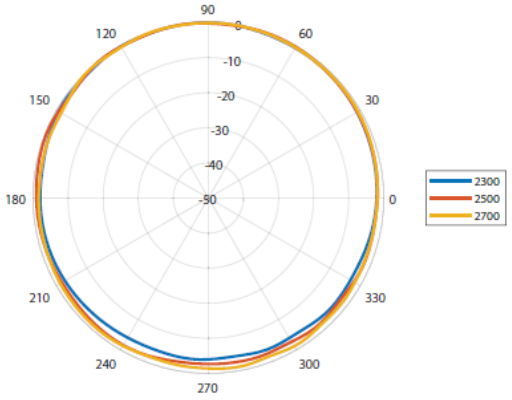
Azimuth: 698 – 960 MHz



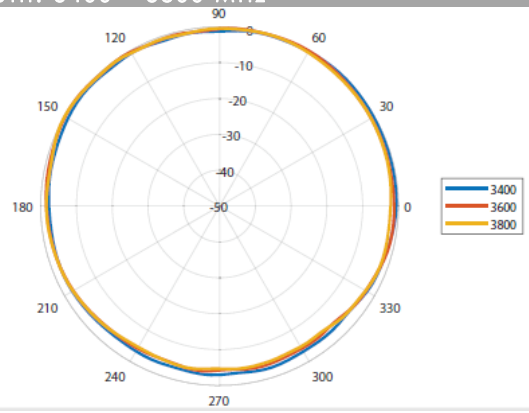
Azimuth: 1710 – 2170 MHz



Azimuth: 2300 – 2700 MHz



Azimuth: 3400 – 3800 MHz



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Mounting Options

Wall Mount

Pole/Wall Mounting bracket (included)

Desk/Surface Mount

Magnetic Base, Adhesive and Velcro(included)

For temporary and low mobility installations.

Pole Mount

Pole/Wall Mounting bracket (included)

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Additional Accessories

Various connectors available

See accessories technical specifications on 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

Poynting Europe
Regus Business Center Neue Messe Riem
Kronstadter Straße 4
81677 München
Germany
Phone: +49 89 208026538
E-mail: sales-europe@poynting.tech