OMNI-291

ANTENNAS | OMNI-291 SERIES

OMNI DIRECTIONAL, MARINE & COASTAL LTE ANTENNA

450 - 2700 MHz, 7 dBi (Marine White)



450 – 470 MHz; 698 – 960 MHz; 1710 – 2700 MHz | 7 dBi | Increase x Mb/s | Omni-Directional | Machine to Machine | 450 – 470 MHz

4G LTE | 2.4 – 2.5 GHz | IoT | IP 68 | -40°C to +80°C | Fire Resistant

- **High performance omni-directional marine antenna**
- **Easy mounting with feed through 1-inch marine standard adapter bracket included**
- **Robust and all-weather proof for harsh conditions at sea (IP 68)**
- **Various 316 stainless steel mounting brackets available optionally**
- **UV and saltwater protected against tempestuous weather conditions**

APPLICATION AREAS: Urban, Rural/Farm, Marine, Transportation

Product Overview

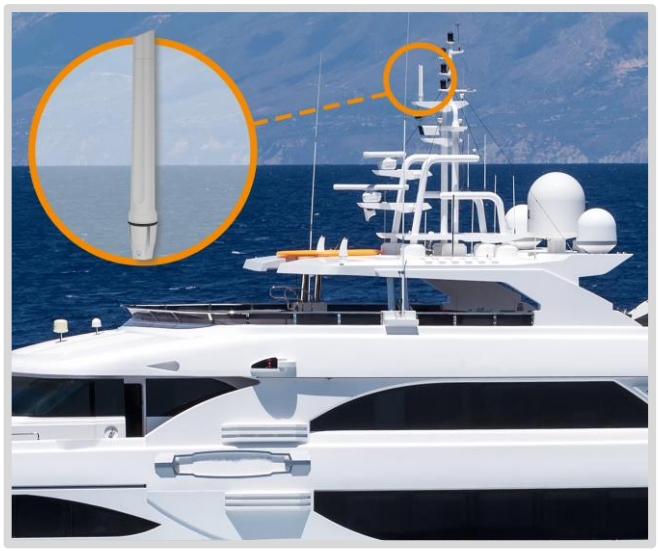
The OMNI-291 is a high-performance marine antenna. This antenna uses a standard 1-inch (14 TPI) marine mount for simplified installation to most marine attachments. The ultra-wide frequency band covers all contemporary LTE operating frequencies with excellent balanced gain across all frequencies, including the LTE & CDMA 450 MHz bands which are common requirements for marine applications. Higher frequencies are not compromised, and the antenna design allows Poynting to have superior pattern control over the entire frequency range making the OMNI-291 a true high performance omni-directional antenna. The OMNI-291 guarantees signal reception almost everywhere along the coast, allowing it to be usable in all parts of the world. Poynting Antennas achieves this through new antenna configuration using multiple dipoles and a uniquely (patented) feed network. The antenna is future proof as it covers the 450 MHz LTE frequency getting more and more popular in various regions and countries!

Features

- Medium gain omni-directional antenna
- Purpose built antenna for marine and coastal applications
- Lightweight
- UV and saltwater resistant
- Robust and weather resistant
- Operational in the 2.4 – 2.5 GHz Wi-Fi band

Application Areas

- Marine / Yachts / Boats / Ferries
- Enhanced LTE reception
- IoT and M2M
- Poor data signal reception
- Improve data transmission connection reliability & stability
- Wi-Fi applications

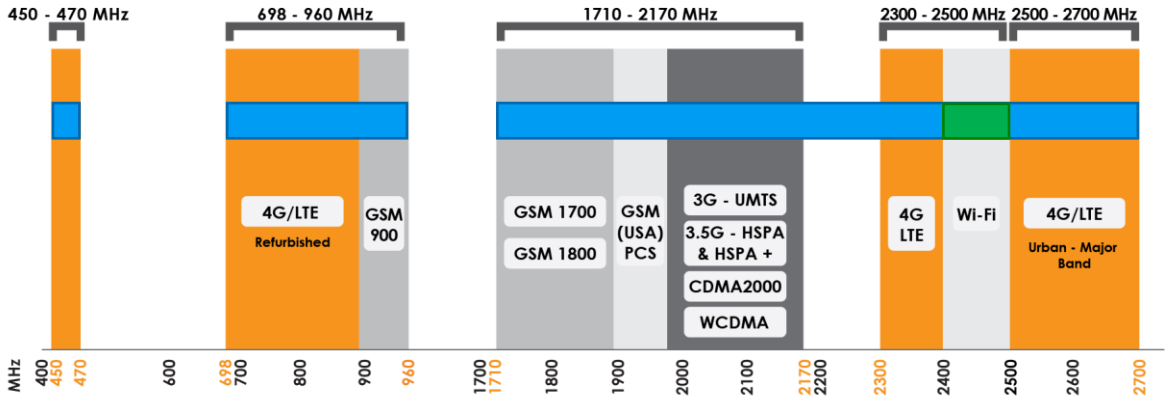


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Revised: June 2020

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

The OMNI-291 is an omnidirectional antenna that works from 450 – 470 MHz | 698 – 960 MHz | 1710 – 2700 MHz



Indicates the LTE bands on which **OMNI-291 works**

Indicates the WI-FI bands on which **OMNI-291 works**

Antenna Overview

	LTE
Ports	1
SISO / MIMO	SISO
Frequency Bands	450 – 2700 MHz
Polarisation	Linear Vertical
Peak Gain	7 dBi
Coax Cable Type	N/A
Coax Cable Length	N/A
Connector Type	N-Type (F)

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Electrical Specifications

Frequency bands:	450 – 470 MHz 698 – 960 MHz 1710 – 2700 MHz
Gain:	2 dBi @ 450 – 470 MHz 2.7 dBi @ 698 – 960 MHz 7 dBi @ 1710 – 2700 MHz
VSWR:	<2.5:1 over 90% of the band
Feed power handling:	10 W
Input impedance:	50 Ohm (nominal)
Polarisation:	Linear Vertical
Coax cable loss:	Optional, cable dependant
DC short:	Yes

Product Box Contents

Antenna:	A-OMNI-0291-V2
Mounting bracket:	Marine Adapter (1" -14 TPI) & L-bracket (Ø30-50mm Pole)

Ordering Information

Commercial name:	OMNI-291-V2
Order product code:	A-OMNI-0291-V2
EAN number:	6009880915132

Mechanical Specifications

Product dimensions	560 mm x 75 mm (Incl. Marine Bracket)
Packaged dimensions:	580 mm x 95 mm x 95 mm
Weight:	0.576 kg
Packaged weight:	1.245 kg
Radome material:	UV Stable Marine ASA
Radome colour:	Brilliant White Pantone P 179-1 C
Mounting Type:	Standard 1" -14 TPI marine mount & Wall/pole mount

Environmental Specifications, Certification & Approvals

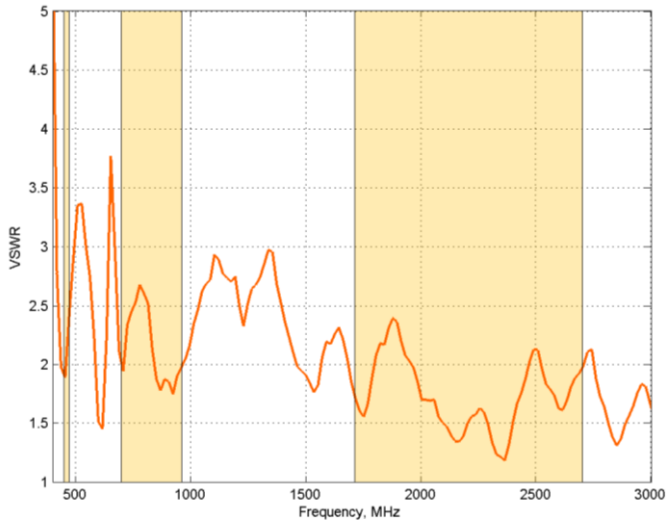
Wind Survival:	<186 km/h
Temperature Range (Operating):	-40°C to +80°C
Environmental Conditions:	Outdoor/Indoor
Water ingress protection ratio/standard:	IP 68
Salt Spray:	MIL-STD 810F/ASTM B117
Operating Relative Humidity:	Up to 98%
Storage Humidity:	5% to 95% - non-condensing
Storage Temperature:	-40°C to +80°C
Enclosure Flammability Rating:	UL 94-HB
Impact resistance:	IK 08
Product Safety & Environmental:	Complies with CE and RoHS standards

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Antenna Performance Plots

VSWR

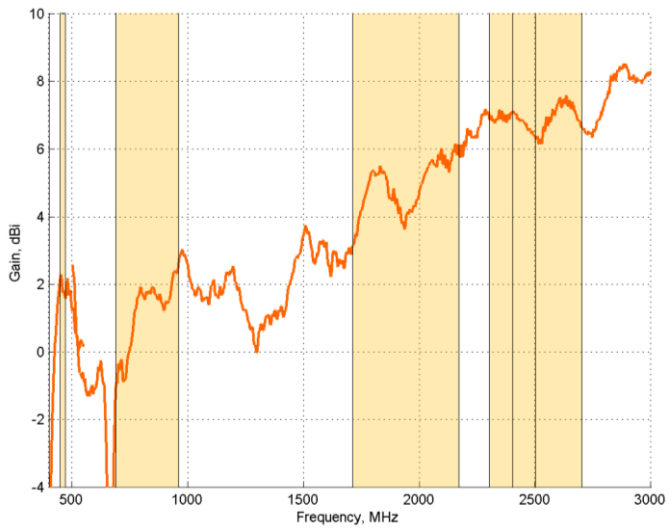


Voltage Standing Wave Ratio (VSWR)

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-291 delivers superior performance across all bands with a VSWR of 2.5:1 or better across 90% of the bands.

GAIN (EXCLUDING CABLE LOSS)



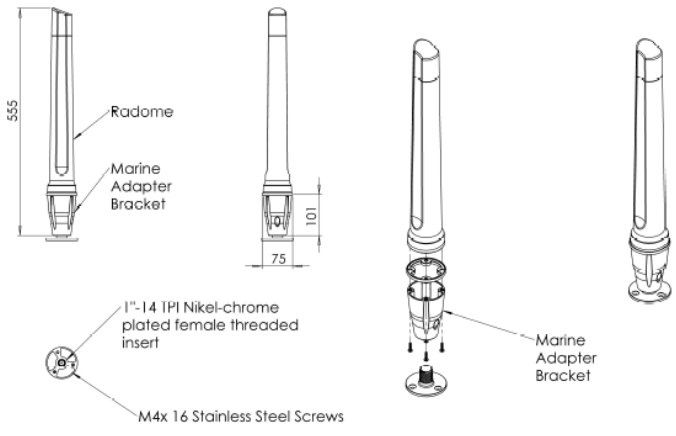
Gain* in dBi

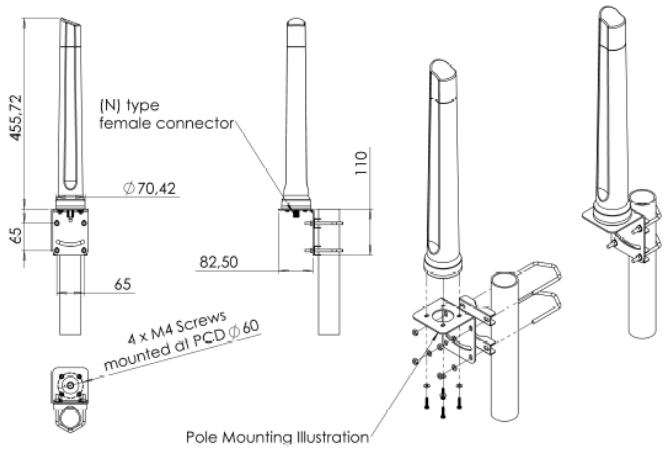
7 dBi is the peak gain across all bands from 450 – 2700 MHz

Gain @ 450 – 470 MHz:	2 dBi
Gain @ 698 – 960 MHz:	2.7 dBi
Gain @ 1710 – 2700 MHz:	7 dBi

**Antenna gain measured with polarisation aligned standard antenna*

Technical Drawings



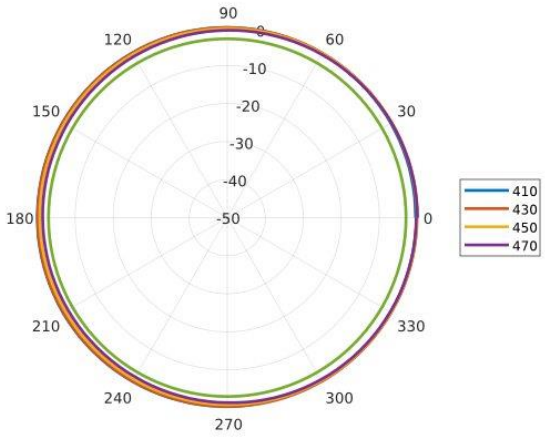


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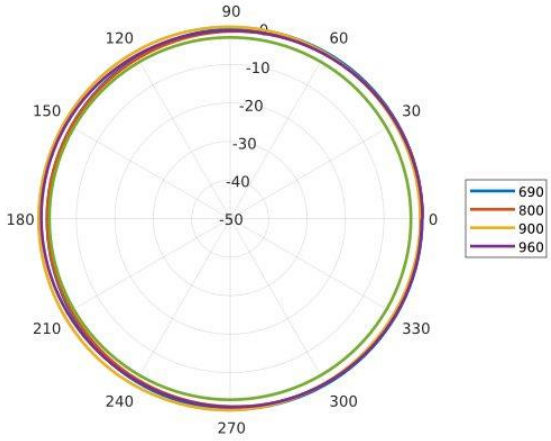
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Radiation Patterns

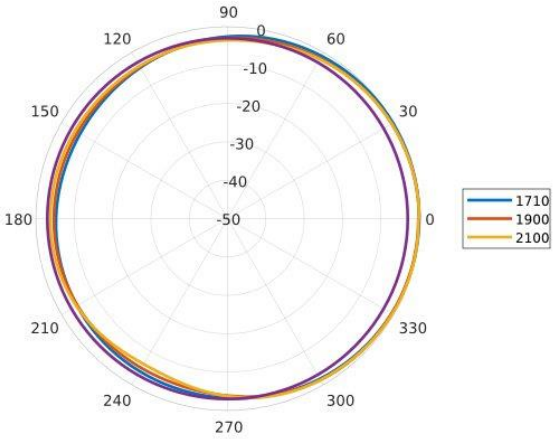
Azimuth (Top View): 410 – 470 MHz



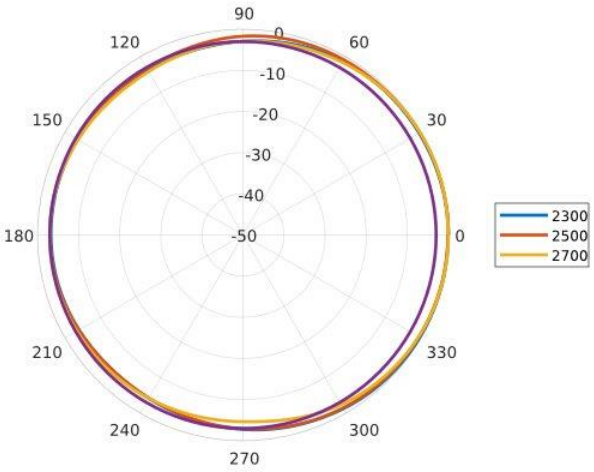
Azimuth (Top View): 690 – 960 MHz



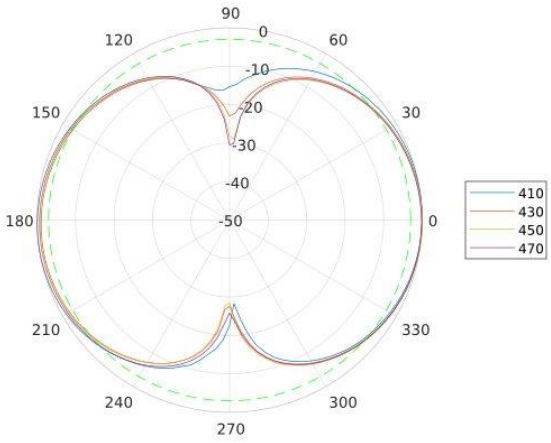
Azimuth (Top View): 1710 – 2100 MHz



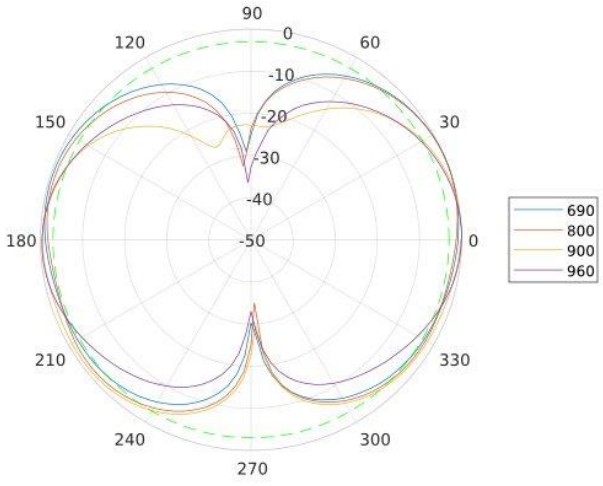
Azimuth (Top View): 2300 – 2700 MHz



Elevation (Side View): 410 – 470 MHz



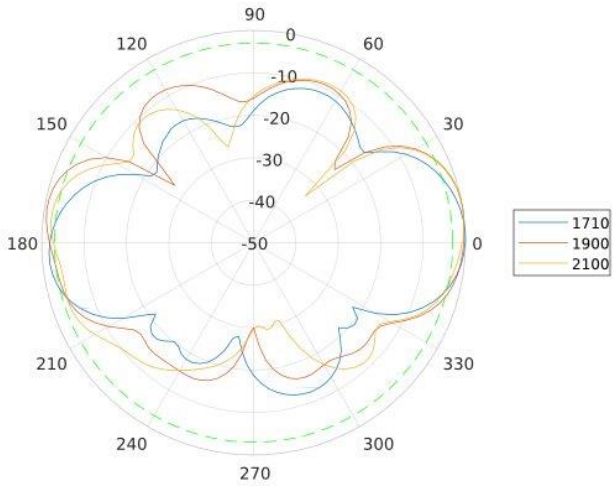
Elevation (Side View): 690 – 960 MHz



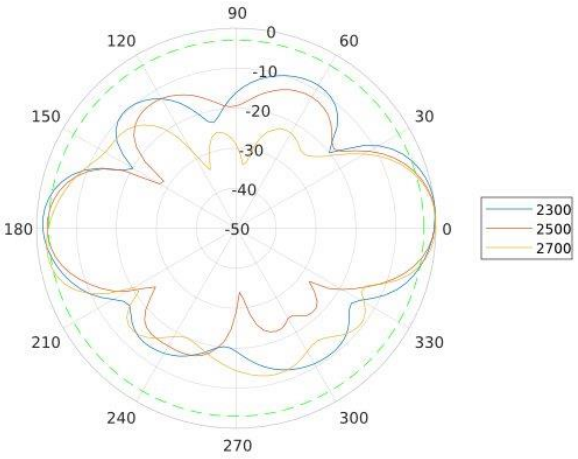
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Elevation (Side View): 1710 – 2100 MHz



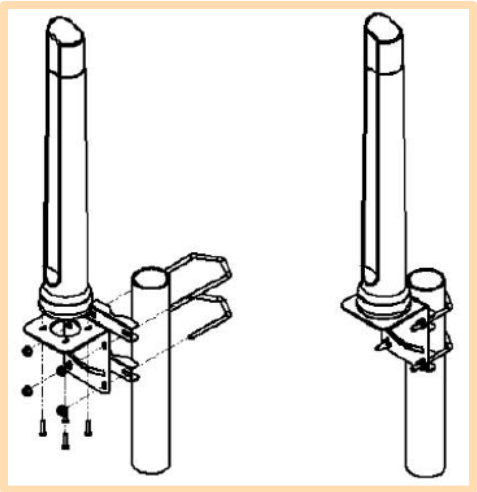
Elevation (Side View): 2300 – 2700 MHz



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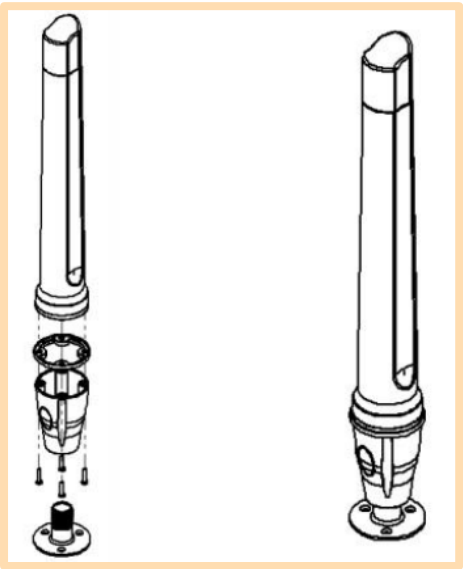
Mounting Options



Pole Mount

L-Bracket 316 Stainless Steel – included

(for Ø 30-50mm pole)



Marine Bracket Mount

1" -14 TPI female adapter – included

Mounts to standard marine brackets:

- BRKT-37: Flat Mount - Optional
- BRKT-38: Ratchet Mount - Optional
- BRKT-39: Rail Mount - Optional

See Optional Accessories below

Also available: BRKT-41 with 1.25" – 11TPI female adapter (Optional)

See Accessories below

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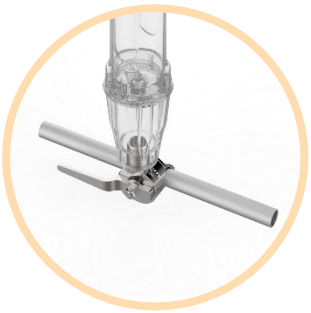
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Additional Accessories



BRKT-37

Marine flat mount antenna bracket 1"-14TPI 316 Stainless Steel



BRKT-38

Marine ratchet rail mount antenna bracket 1"-14TPI 316 Stainless Steel



BRKT-39

Heavy duty marine mount antenna bracket 1"-14TPI 316 Stainless Steel

See accessories technical specifications on www.poynting.tech

Contact Poynting

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