OMNI-403

ANTENNAS | OMNI-403 SERIES

OMNI-DIRECTIONAL MARINE AND COASTAL LTE ANTENNA

698 - 2700 MHz; 5 dBi



698 – 960 MHz; 1710 – 2170 MHz; 2300 – 2700 MHz

5 dBi

Increase x Mb/s

Omni-Directional

4G LTE

IoT & M2M

2.4 – 2.5 GHz

-40°C to +80°C

Fire Resistant

IP 69K

Salt spray protection

- **Marine quality, low profile, and omni-directional LTE antenna**
- **Robust and all-weather proof for harsh conditions at sea**
- **Easy mounting with feed through a standard 1-inch marine adapter bracket included**
- **Various marine grade 316 stainless steel mounting brackets available optionally**
- **UV and saltwater protected against tempestuous weather conditions, with an IP 69K rating**

APPLICATION AREAS

Marine

Urban

Rural/Farm

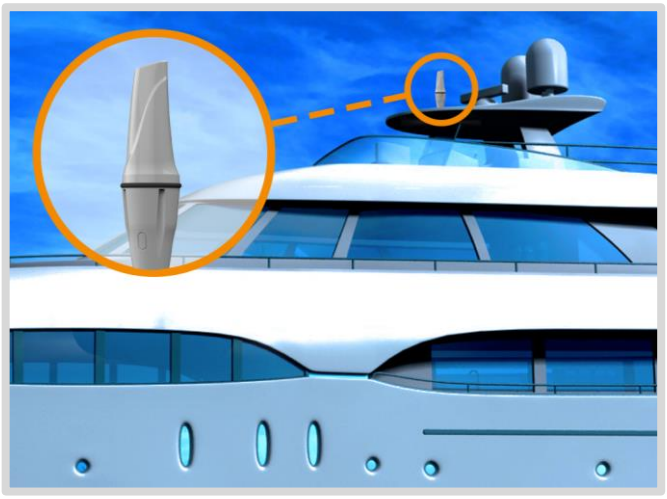
Vehicle

Product Overview

The OMNI-403 is a wideband LTE antenna with a smaller profile radome, which is specifically designed for adverse marine & coastal environments. This antenna covers all contemporary LTE operating frequencies with excellently balanced gain across all frequencies, enhancing LTE performance features, such as multi carrier aggregation (CA). The antenna is designed for superior pattern control over the entire frequency range, making the OMNI-403 an exceptional omni-directional antenna for its size and application. Poynting Antennas achieves this through a new antenna design using multiple diploes and a unique (patented) feed network. The antenna uses a standard 1-inch (14TPI) marine mount for simplified installation to most standard marine attachments.

Features

- Medium gain omni-directional antenna
- The antenna is purpose built for marine and coastal applications
- Fits directly to a standard 1-inch (14 TPI) marine mount
- UV and saltwater resistant
- Robust and weather resistant with IP 69K rating



Application Areas

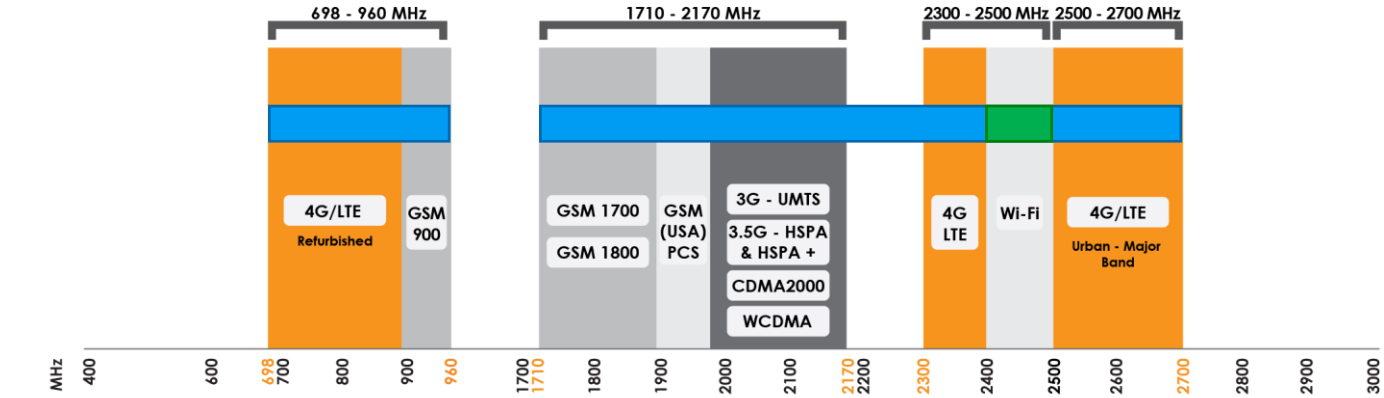
- Marine applications / Yachts / Boats / Ferries
- Enhanced LTE reception
- IoT and M2M applications
- Areas with poor data signal reception
- Improve data transmission connection reliability & stability

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Revised: July 2021

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

The OMNI-403 is an omni-directional antenna that works from 698 – 960 MHz and 1710 – 2700 MHz



Indicates the LTE bands on which **OMNI-403 works**

Indicates the WI-FI bands on which **OMNI-403 works**

Antenna Overview

	LTE
Ports	1
SISO / MIMO	SISO
Frequency Bands	698 – 2700 MHz
Polarisation	Linear Vertical
Peak Gain	5 dBi
Coax Cable Type	N/A
Coax Cable Length	N/A
Connector Type	N-Type (F)

**The connector is factory mounted to the antenna*

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Electrical Specifications

Frequency bands:	698 – 960 MHz 1710 – 2170 MHz 2300 – 2700 MHz
Gain (max):	2.8 dBi @ 698-960 MHz 5 dBi @ 1710-2170 MHz 4.5 dBi @ 2300-2700 MHz
VSWR:	<2:1
Feed power handling:	10 W
Input impedance:	50 Ohm (nominal)
DC short:	Path to ground

Product Box Contents

Antenna:	A-OMNI-0403
Mounting bracket:	1" (14 TPI) Marine Adapter (BRKT-40)

Ordering Information

Commercial name:	OMNI-403
Order product code:	A-OMNI-0403-V1-01
EAN number:	6009710920633

Mechanical Specifications

Product dimensions	252 mm x Ø75 mm (Incl. BRKT-40)
Packaged dimensions:	288 mm x 97 mm x 97 mm
Weight:	0.35 kg
Packaged weight:	0.50 kg
Radome material:	UV Stable Marine ASA
Radome colour:	Brilliant White Pantone P 179-1 C
Mounting Type:	Standard 1" -14 TPI Marine Mount

Environmental Specifications, Certification & Approvals

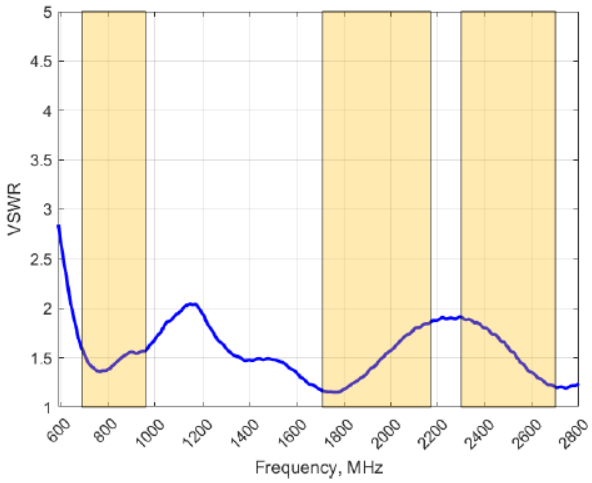
Wind Survival:	<190 km/h
Temperature Range (Operating):	-40°C to +80°C
Environmental Conditions:	Outdoor/Indoor
Water ingress protection ratio/standard:	IP 69K
Salt Spray:	MIL-STD 810F/ASTM B117
Operating Relative Humidity:	Up to 98%
Storage Humidity:	5% to 95% - non-condensing
Storage Temperature:	-40°C 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

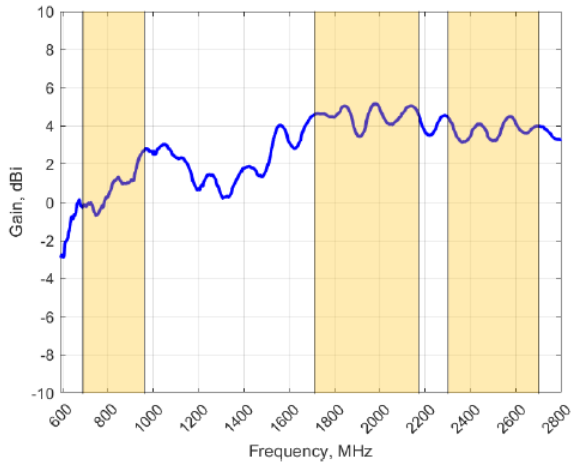


Voltage Standing Wave Ratio (VSWR)

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-403 delivers superior performance across all bands with a VSWR of 2:1 or better across 90% of the bands.

GAIN (EXCLUDING CABLE LOSS)



Gain* in dBi

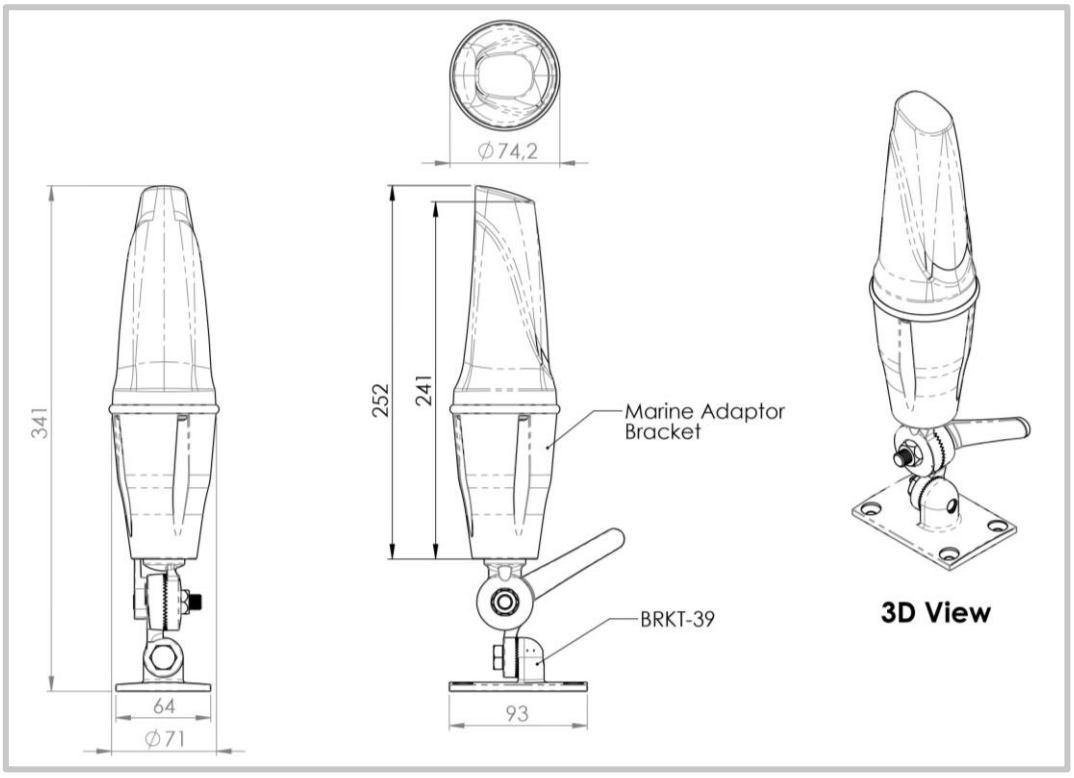
5 dBi is the peak gain across all bands from 698 – 2700 MHz

Gain @ 698 – 960 MHz:	2.8 dBi
Gain @ 1710 – 2170 MHz:	5 dBi
Gain @ 2300 – 2700 MHz:	4.5 dBi

**Antenna gain measured with polarisation aligned standard antenna*

Technical Drawings

With standard Marine Mounting and BRKT-39 (not included)

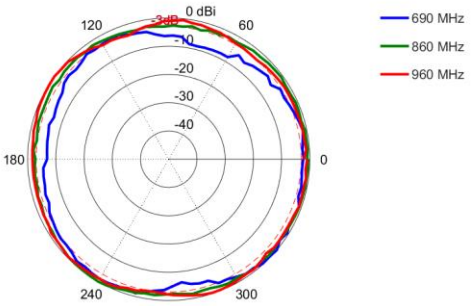


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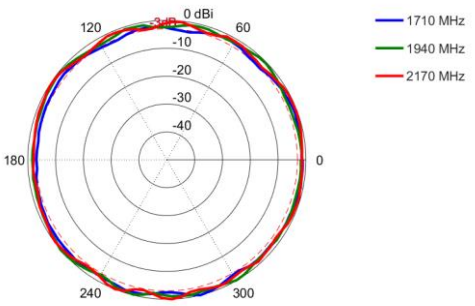
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Radiation Patterns

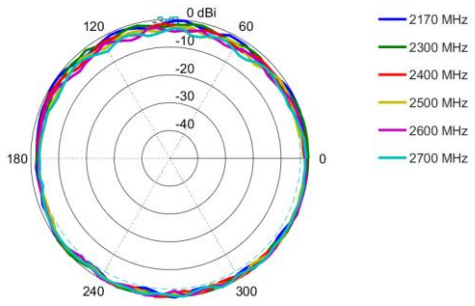
Azimuth: 698 – 960 MHz



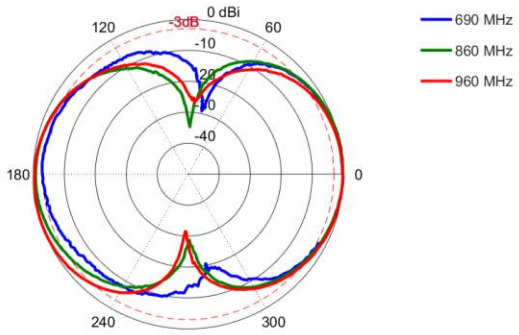
Azimuth: 1710 – 2170 MHz



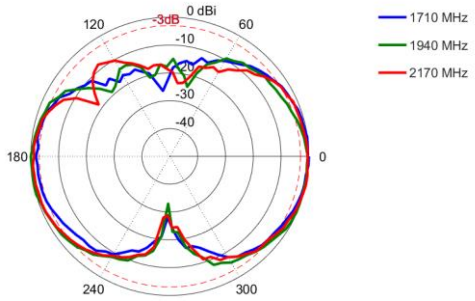
Azimuth: 2170 – 2700 MHz



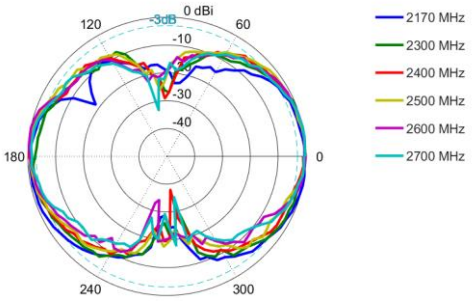
Elevation: 698 – 960 MHz



Elevation: 1710 – 2170 MHz



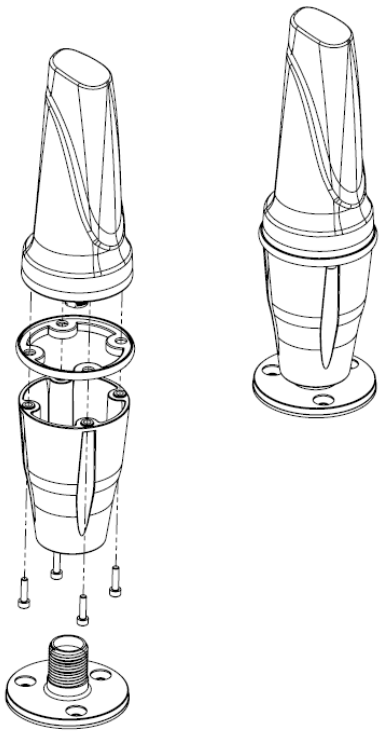
Elevation: 2170 – 2700 MHz



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Mounting Options



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)

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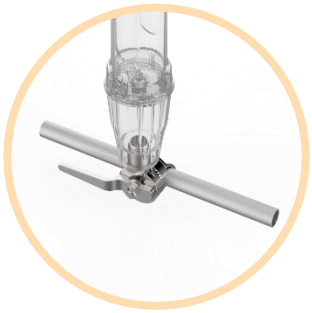
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Additional Accessories



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

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