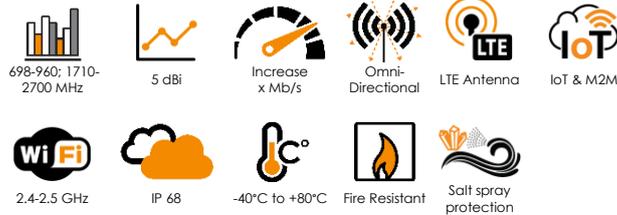


# OMNI-403

ANTENNAS | OMNI-403 SERIES

## OMNI DIRECTIONAL LTE ANTENNA MARINE & COASTAL 698MHZ – 2700MHZ ANTENNA



- **Marine quality, low profile, omni directional antenna**
- **Robust and all-weather proof for harsh conditions at sea**
- **Easy mounting with feed through a standard 1-inch marine adapter bracket which is included**
- **Various marine grade 316 stainless steel mounting brackets available optionally**
- **UV and saltwater protected against tempestuous weather Conditions**
- **Protected against water and dust ingress, IP68**
- **Suitable for 5G deployments up to 2700 MHz**



APPLICATION AREAS

### Product Overview

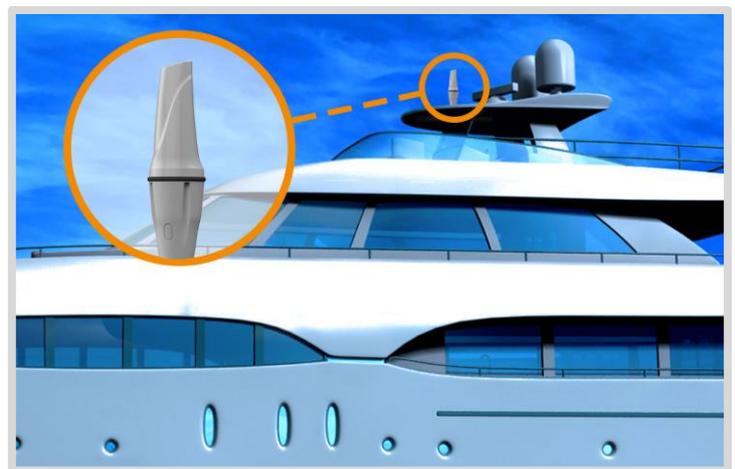
The OMNI-403 is a wide band LTE antenna with a smaller profile radome which is specifically designed for adverse marine & coastal environments. This antenna uses a standard 1-inch (14 TPI) marine mount for simplified installation to most standard marine attachments. The antenna is designed for superior 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 dipoles and a unique (patented) feed network. This antenna covers all contemporary LTE operating frequencies with excellently balanced gain across all frequencies, enhancing LTE performance features, such as a multi carrier aggregation (CA). This antenna is suitable on all 5G networks up to 2700 MHz.

### Features

- Medium gain omni-directional antenna
- The antenna is purpose-built for marine and coastal applications
- Fits directly to standard 1-inch (14 TPI) marine mount
- UV and salt-water resistant
- Robust and weather resistant

### Application Areas

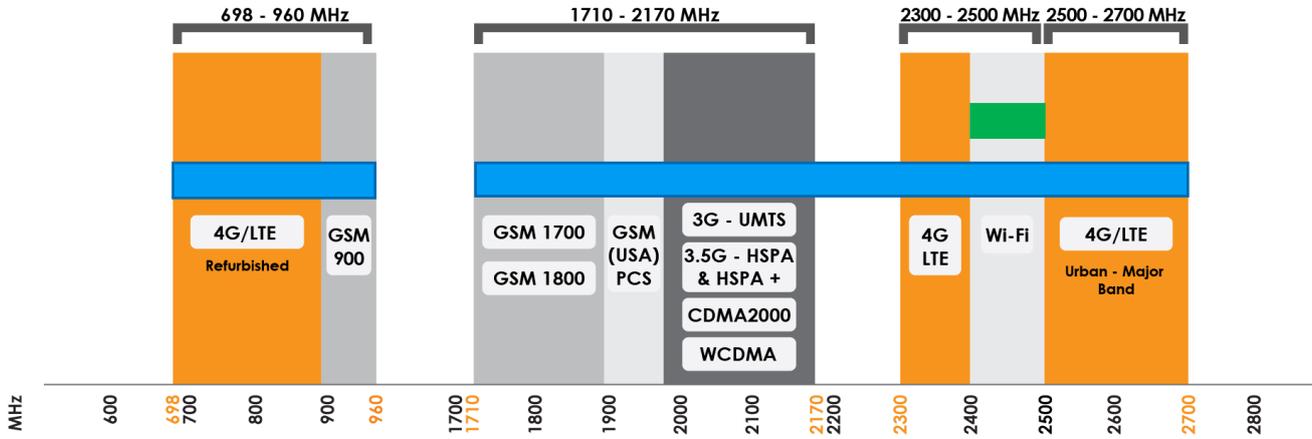
- Marine applications / Yachts / Boats / Ferries
- Enhanced LTE Reception
- IoT and M2M
- Poor data signal reception
- Improve data transmission connection reliability & stability



### OMNI-403

### Frequency bands

The OMNI-403 is a marine antenna that works from | 698-960 MHz | 1710-2700 MHz |



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

### Antenna Overview

Frequency Bands	698 MHz - 2700 MHz
Peak Gain	5 dBi
Connector Type	N-type female

## Electrical Specifications

Frequency bands:	698-960 MHz 1710-2700 MHz
Gain (max):	5 dBi
VSWR:	≤ 2:1
Feed power handling:	10 W
Input impedance:	50 Ohm (nominal)
Polarisation:	Linear Vertical
DC short:	Path to Ground

## Connector Type

Connector type:	N-type female*
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\*The connector is bulkhead mounted directly to the antenna

## 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:	± 250 mm x Ø75 mm (Incl. BRKT-40)
Packaged dimensions:	288mm x 97 mm x 97 mm
Weight:	0,35 Kg
Packaged weight:	0,50 Kg
Radome material:	UV Stable SAN Marine ASA
Radome colour:	Brilliant White Pantone P 179-1 C
Mounting Type:	Standard 1" -14 TPI marine mount

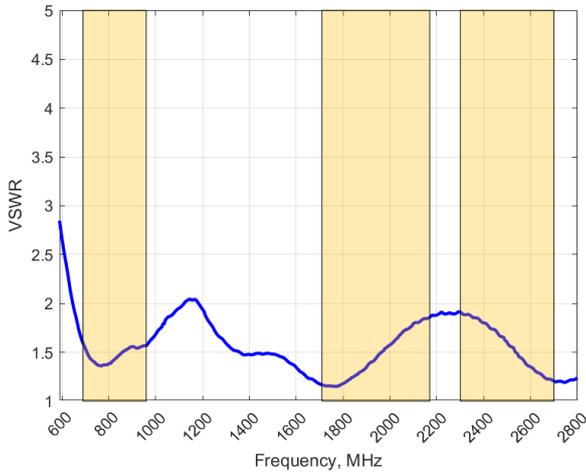
## Environmental Specifications, Certification & Approvals

Wind Survival:	<190 km/h
Temperature Range (Operating):	-40°C to +80°C
Environmental Conditions:	Outdoor/Indoor
Water ingress protection ratio/standard:	IP 68
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

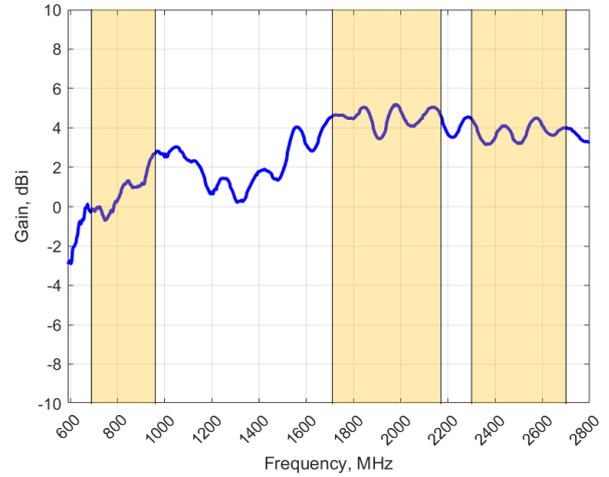


**Antenna Performance Plots**

**VSWR**



**GAIN: (excluding cable loss)**



**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

\*Antenna VSWR measured with 2m low loss cable

**Gain\* in dBi**

5dBi is the peak gain across all bands from 690-2700MHz

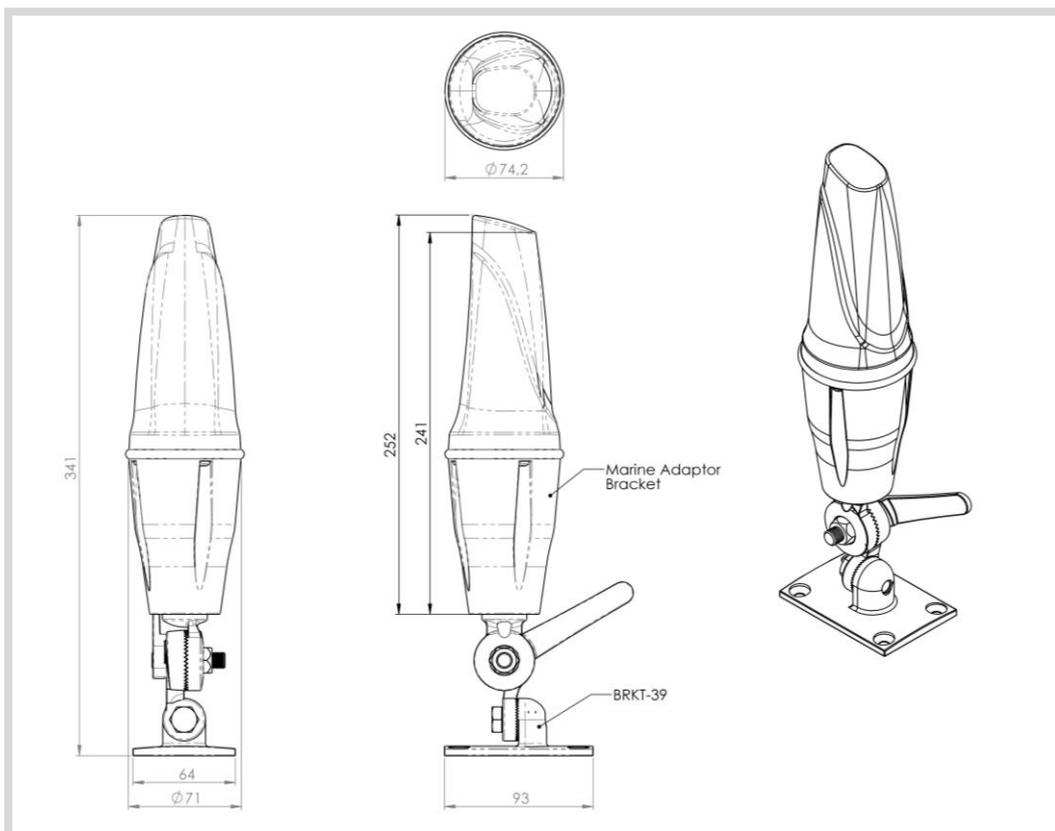
Gain @ 698-960MHz 2.8 dBi

Gain @ 1710-2700MHz 5 dBi

\*Antenna gain measured with polarisation aligned standard antenna

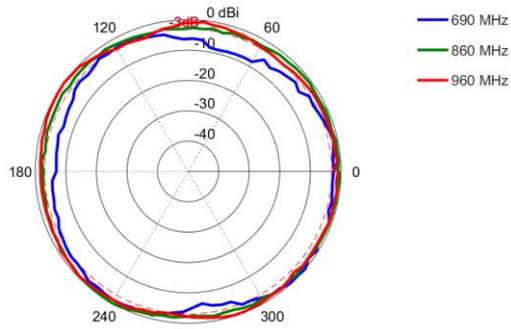
**Technical Drawings**

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

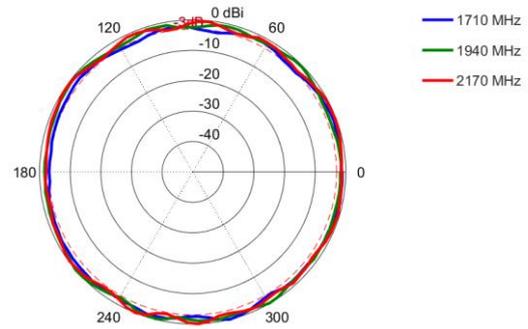


**Radiation Patterns**

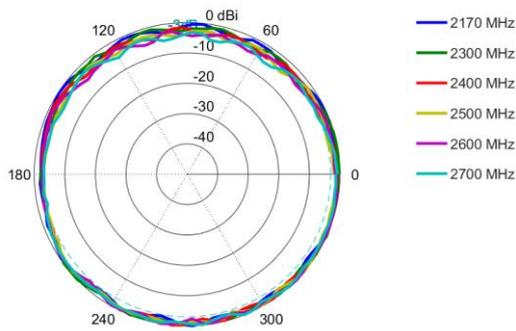
Azimuth (Top View): 690–960 MHz



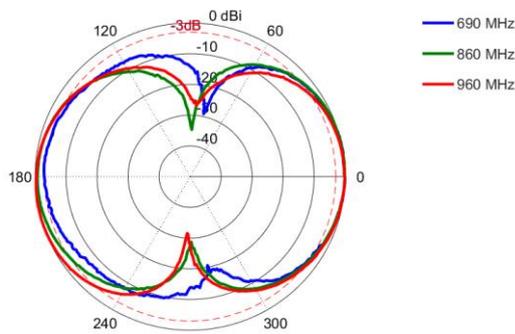
Azimuth (Top View): 1710–2100 MHz



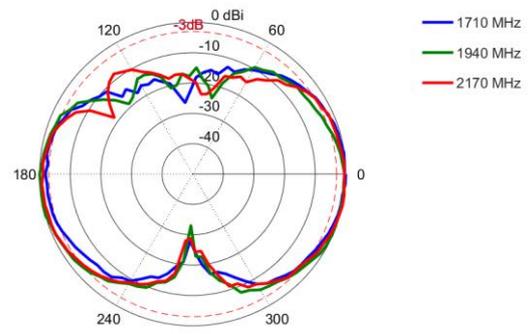
Azimuth (Top View): 2300–2700 MHz



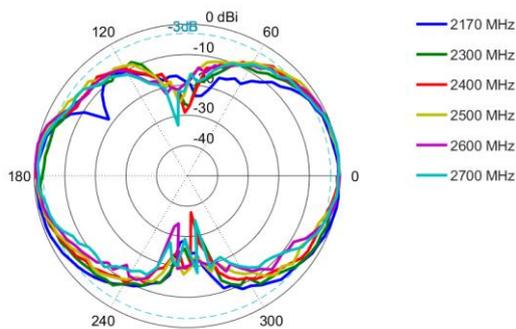
Elevation1 (Side View): 690–960 MHz



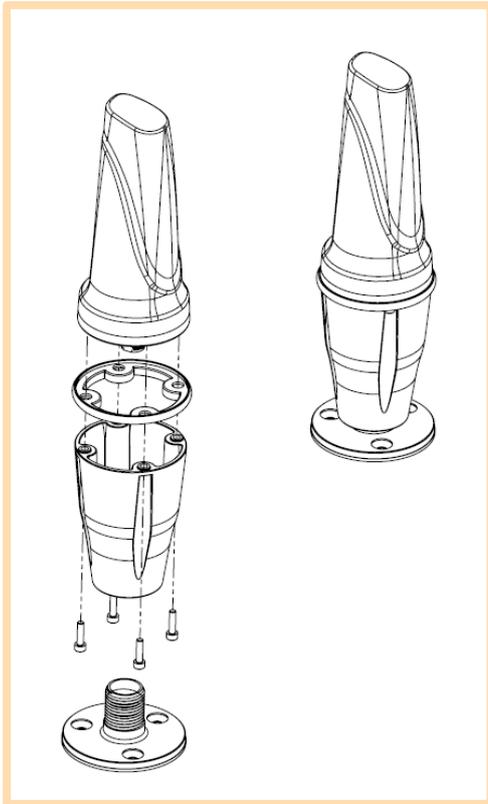
Elevation1 (Side View): 1710–2100 MHz



Elevation1 (Side View): 2300–2700 MHz



## 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" – 11 TPI female adapter (Optional)

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## Optional 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](http://www.poynting.tech)

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