OMNI-496

ANTENNAS | OMNI-496 SERIES

OMNI-DIRECTIONAL, MARINE & COASTAL ANTENNA

Dual-band Wi-Fi, 2400 - 2500 MHz, 3400 - 3800 MHz, 5000 - 6000 MHz; 7.5 dBi

2400 -2500 MHz; 3400 - 3800 MHz; 5000 - 6000 MHz

7.5 dBi

Increase x Mb/s

Omni-Directional

IoT

Machine to Machine

5G Ready

2.4 - 2.5 GHz 5.0 - 6.0 GHz

IP 68

-40°C to +80°C

Fire Resistant

CBRS Band

APPLICATION AREAS

Urban

Rural/Farm

Marine

Transportation

- **Dual band 2.4 GHz and 5 GHz Wi-Fi antenna**
- **Supports Wi-Fi/WiMAX/LTE 3.4 – 3.8 GHz frequencies with a max gain of 7.5 dBi**
- **Compliant with IEEE 802.11a, 802.11b, 802.11g, 802.11n, 802.11ac wireless standards**
- **Easy mounting with feed through 1-inch marine standard mount**
- **Robust and all-weather proof (IP 68)**
- **Various 316 stainless steel mounting brackets available optionally**
- **UV and saltwater protected against tempestuous weather conditions**

Product Overview

The OMNI-496 is a dual-band Wi-Fi omni-directional antenna, developed by Poynting Antennas. The antenna can connect to any Wi-Fi access point whether it is older Wi-Fi technology or new dual band 802.11ac enabled Wi-Fi technology. The antenna can resolve channel saturation and provide the ultimate in Wi-Fi performance and flexibility. The OMNI-496 is an IP68 marine version of its urban, industrial & commercial counterpart; the OMNI-296. The antenna operates in two frequency bands 2.4 GHz and 5 GHz, offering excellent utilization of the radio spectrum. The antenna has a maximum gain of 6 dBi at 2.4 GHz band and 7.5 dBi in the 5 GHz band, which offers the best performance with reliable connections. The antenna has a N-Type female connector at its base which can be terminated to a cable of the desired type and length.

Features

- Operational in the 2.4 GHz and 5 GHz Wi-Fi bands
- Medium gain omni-directional antenna
- Purpose built antenna for marine and coastal applications
- Lightweight
- UV and saltwater resistant
- Robust and weather resistant

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

Revised: August 2020

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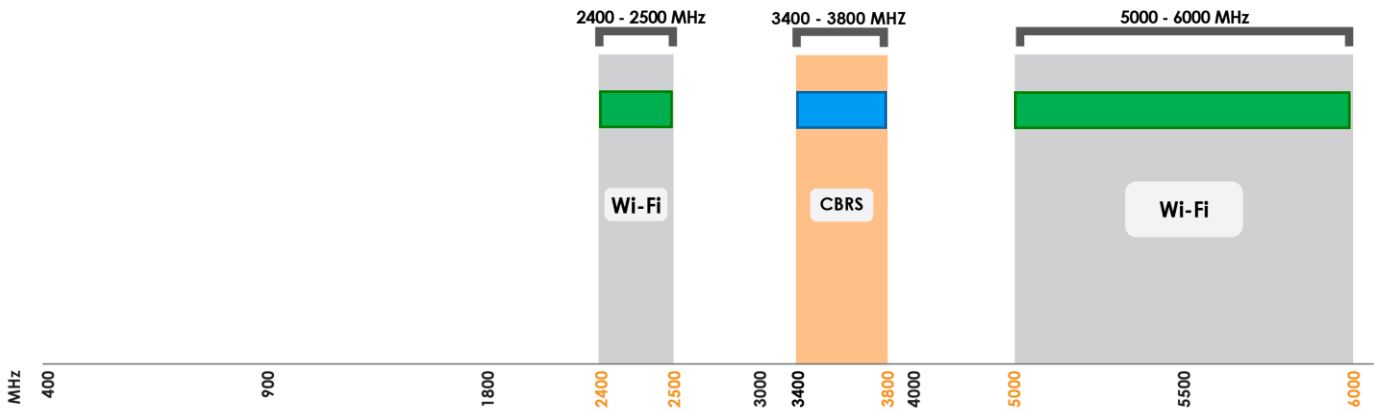
Frequency Bands

The OMNI-496 is an omni-directional antenna that works from 2400 -2500 MHz | 3400 - 3800 MHz | 5000 - 6000 MHz



Indicates the 5G/CBRS band on which **OMNI-496** works

Indicates the WI-FI bands on which **OMNI-496** works

Antenna Overview

	Wi Fi DUALBAND
Ports	1
SISO / MIMO	SISO
Frequency Bands	2400 – 2500, 3400 – 3800 & 5000 -6000 MHz
Polarisation	Linear Vertical
Peak Gain	7.5 dBi
Coax Cable Type	N/A
Coax Cable Length	N/A
Connector Type	N-Type (F)

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Electrical Specifications

Frequency bands:	2400 -2500 MHz 3400 - 3800 MHz 5000 - 6000 MHz
Gain (max):	6 dBi @ 2400-2500 MHz 7 dBi @ 3400-3800 MHz 7.5 dBi @ 5000-6000 MHz
VSWR:	≤2.5:1
Feed power handling:	10 W
Input impedance:	50 Ohm (nominal)
Coax cable loss:	Optional cable dependant
DC short:	Yes

Product Box Contents

Antenna:	A-OMNI-0496
Mounting bracket:	Marine Adapter (1" -14 TPI) & L-bracket (Ø30-50mm Pole)

Ordering Information

Commercial name:	OMNI-496
Order product code:	A-OMNI-0496-V1
EAN number:	6009880915156

Mechanical Specifications

Product dimensions	560 mm x 75 mm (Incl. BRKT-40)
Packaged dimensions:	580 mm x 95 mm x 95 mm
Weight:	0.57 kg
Packaged weight:	1.3 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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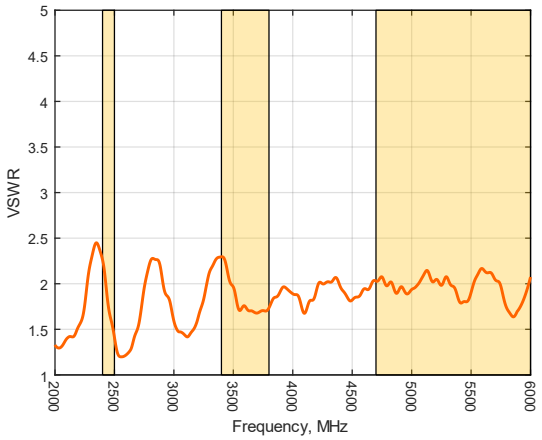
Antenna Performance Plots

VSWR

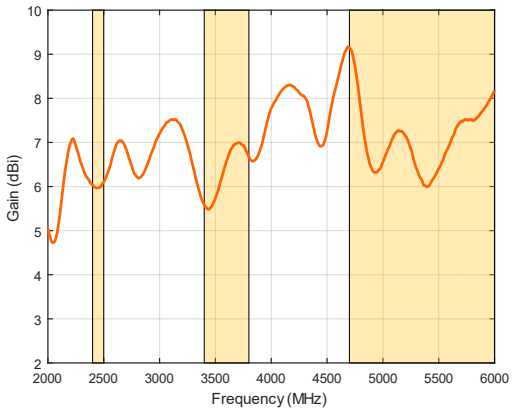


Voltage Standing Wave Ratio (VSWR)

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-496 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

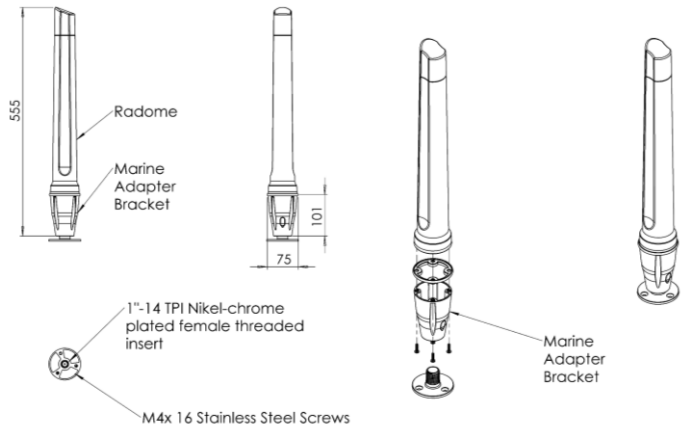
7.5 dBi is the peak gain across all bands from 2400 – 6000 MHz.

Gain @ 2400 -2500 MHz:	6 dBi
Gain @ 3400 - 3800 MHz:	7 dBi
Gain @ 5000 - 6000 MHz:	7.5 dBi

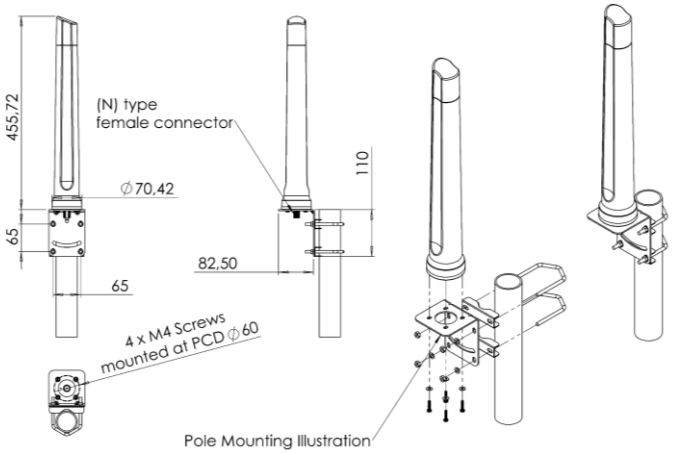
**Antenna gain measured with polarisation aligned standard antenna*

Technical Drawings

With Standard Marine Mounting:



With Standard L-Bracket Mounting:



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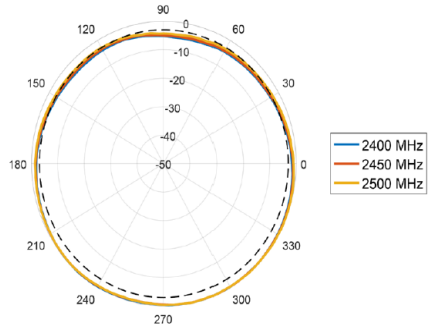
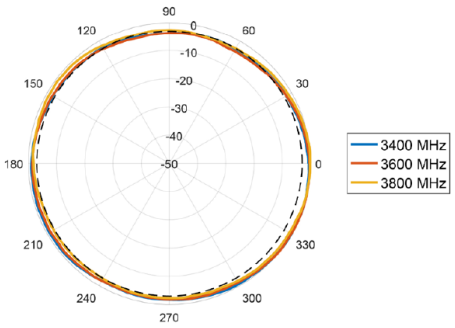
Radiation Patterns

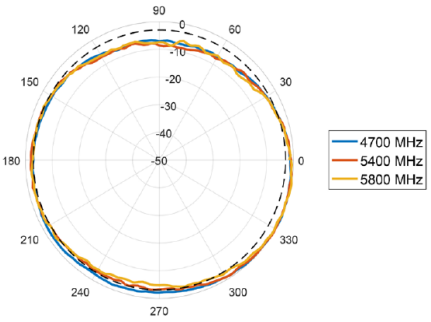
Azimuth (Top View): 2400 -2500 MHz



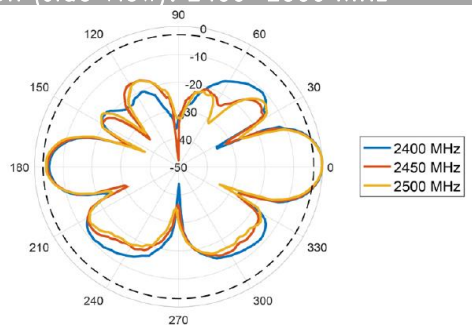
Azimuth (Top View): 3400 - 3800 MHz



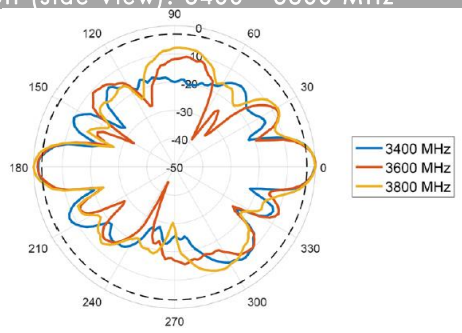
Azimuth (Top View): 5000 - 6000 MHz



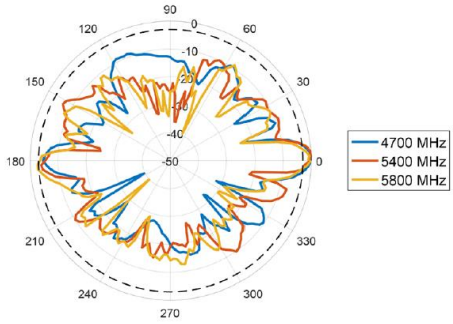
Elevation (Side View): 2400 -2500 MHz



Elevation (Side View): 3400 - 3800 MHz



Elevation (Side View): 5000 - 6000 MHz



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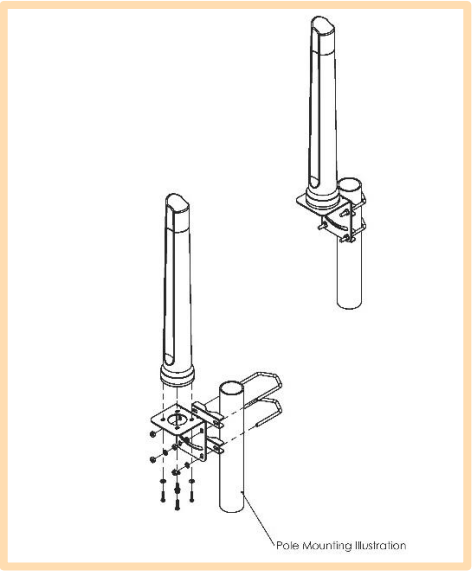
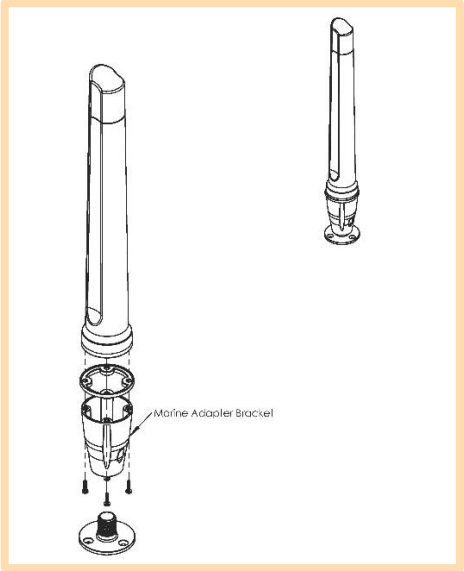
Mounting Options



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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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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