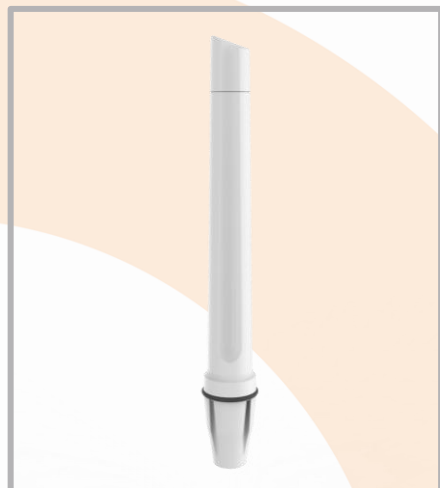


ANTENNAS | OMNI-496 SERIES

OMNI-DIRECTIONAL, MARINE & COASTAL ANTENNA

Dual-band Wi-Fi, 2400 – 2500 MHz, 3300 – 4200 MHz, 4900 – 7200 MHz; 10 dBi



- Dual-band Wi-Fi antenna for 2.4 GHz and 4.9 to 7.2 GHz
- Supports Wi-Fi/Wi-Fi6e/Wi-Fi7, 5G 3.3 – 4.2 GHz frequencies with a max gain of 8 dBi
- Compliant with IEEE 802.11ac/ax/be/ b/g/n 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



APPLICATION AREAS

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 802.11ax-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 across multiple frequency bands, i.e., 2.4 GHz, 3.3 to 4.2 GHz, and 5 to 7.2 GHz, offering excellent utilization of the radio spectrum. The antenna has a maximum gain of 7 dBi in the 2.4 GHz band and 10 dBi in the 5 GHz band, which offers the best performance with reliable connections. The antenna has an 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

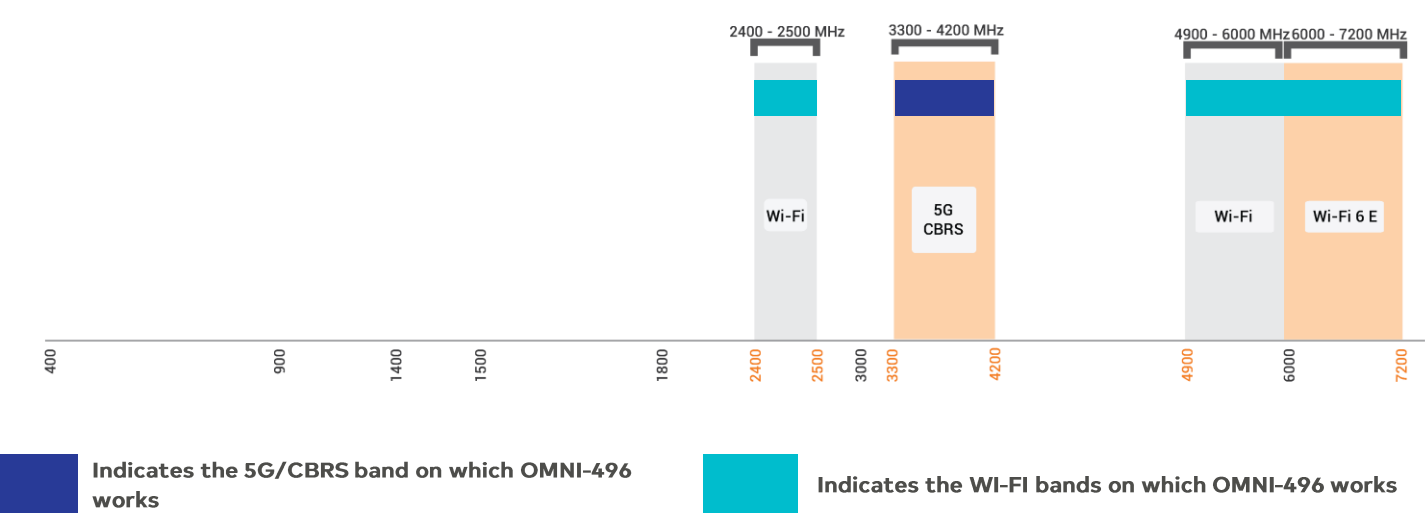
Application Areas

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



Frequency Bands

The OMNI-496 is an omni-directional antenna that works from 2400 – 2500 MHz 3300 – 4200 MHz and 4900 – 7200 MHz



Antenna Overview

	Wi-Fi DUALBAND
Ports	1
SISO / MIMO	SISO
Frequency Bands	2400 – 2500 MHz 3300 – 4200 MHz 4900 -7200 MHz
Polarisation	Linear Vertical
Peak Gain	10 dBi
Connector Type	N-Type (F)
Coax Cable Type	N/A
Coax Cable Length	N/A

*The connector is factory mounted to the antenna

Electrical Specifications

Frequency Bands:	2400 – 2500 MHz
	3300 – 4200 MHz
	4900 – 7200 MHz
Gain (Max):	7 dBi @ 2400 – 2500 MHz
	8 dBi @ 3300 – 4200 MHz
	10 dBi @ 4900 – 7200 MHz
VSWR:	<2:1
Feed Power Handling:	10 W
Input Impedance:	50 Ohm (nominal)
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-V2-01
EAN Number:	6009710925768

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 179-1C
Mounting Type:	Standard 1" -14 TPI marine mount & Wall/pole mount

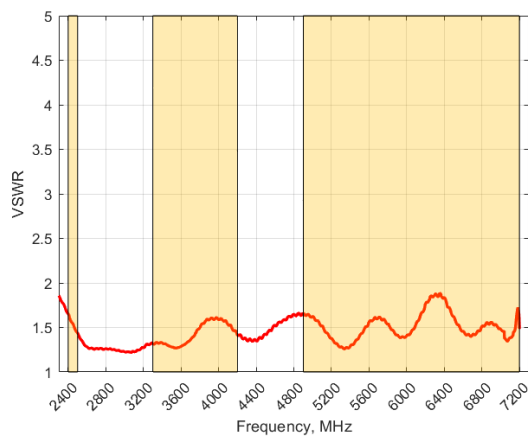
Environmental Specifications, Certification & Approvals

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 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 08
Product Safety & Environmental:	Complies with CE and RoHS standards



Antenna Performance Plots

VSWR



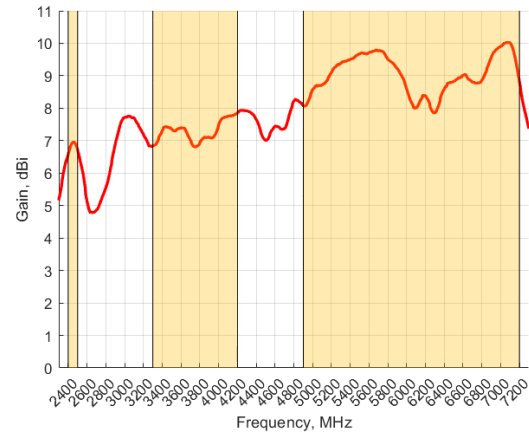
Voltage Standing Wave Ratio (VSWR)*

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 <2:1.

*VSWR measured without a cable.

GAIN (EXCLUDING CABLE LOSS)



Gain* in dBi

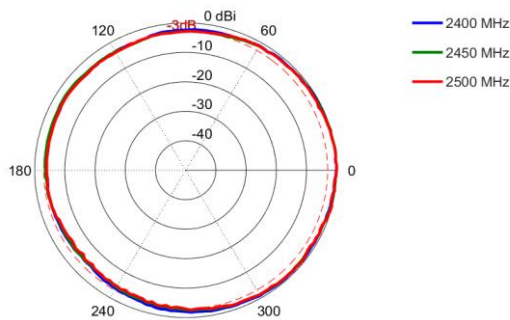
10 dBi is the peak gain across all bands from 2400 – 7200 MHz

Gain @ 2400 – 2500 MHz:	7 dBi
Gain @ 3300 – 4200 MHz:	8 dBi
Gain @ 4900 – 7200 MHz:	10 dBi

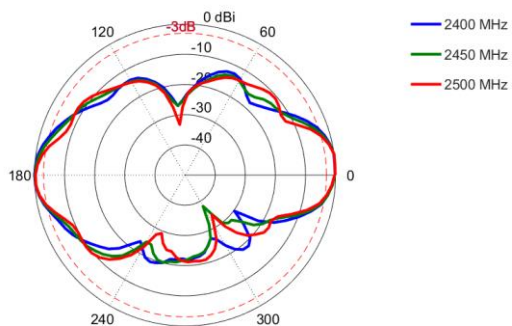
*Antenna gain measured with polarisation aligned standard antenna

Radiation Patterns

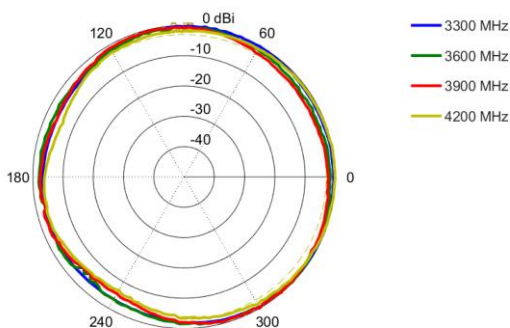
Azimuth: 2400 - 2500 MHz



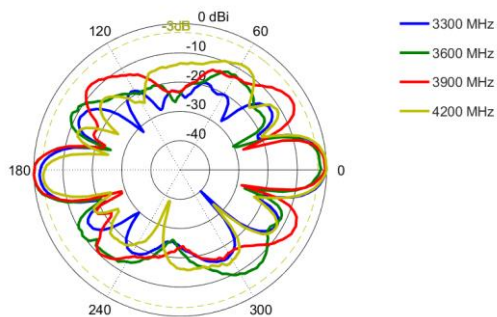
Elevation: 2400 - 2500 MHz



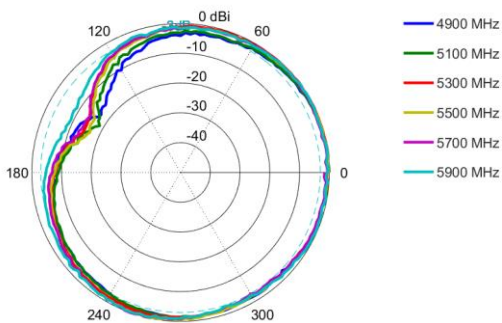
Azimuth: 3300 - 4200 MHz



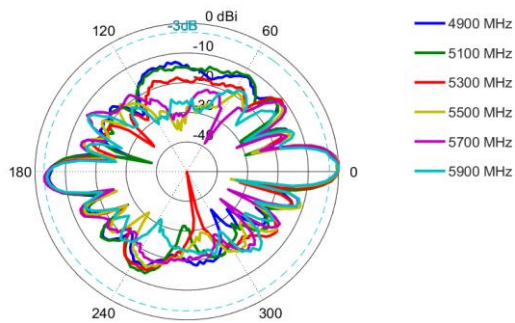
Elevation: 3300 - 4200 MHz



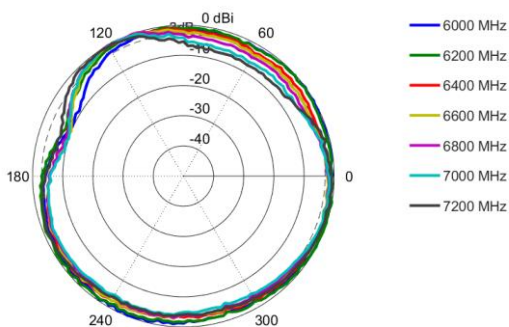
Azimuth: 4900 - 5900 MHz



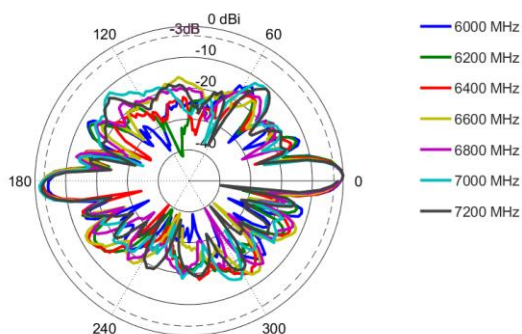
Elevation: 4900 - 5900 MHz



Azimuth: 6000 - 7200 MHz

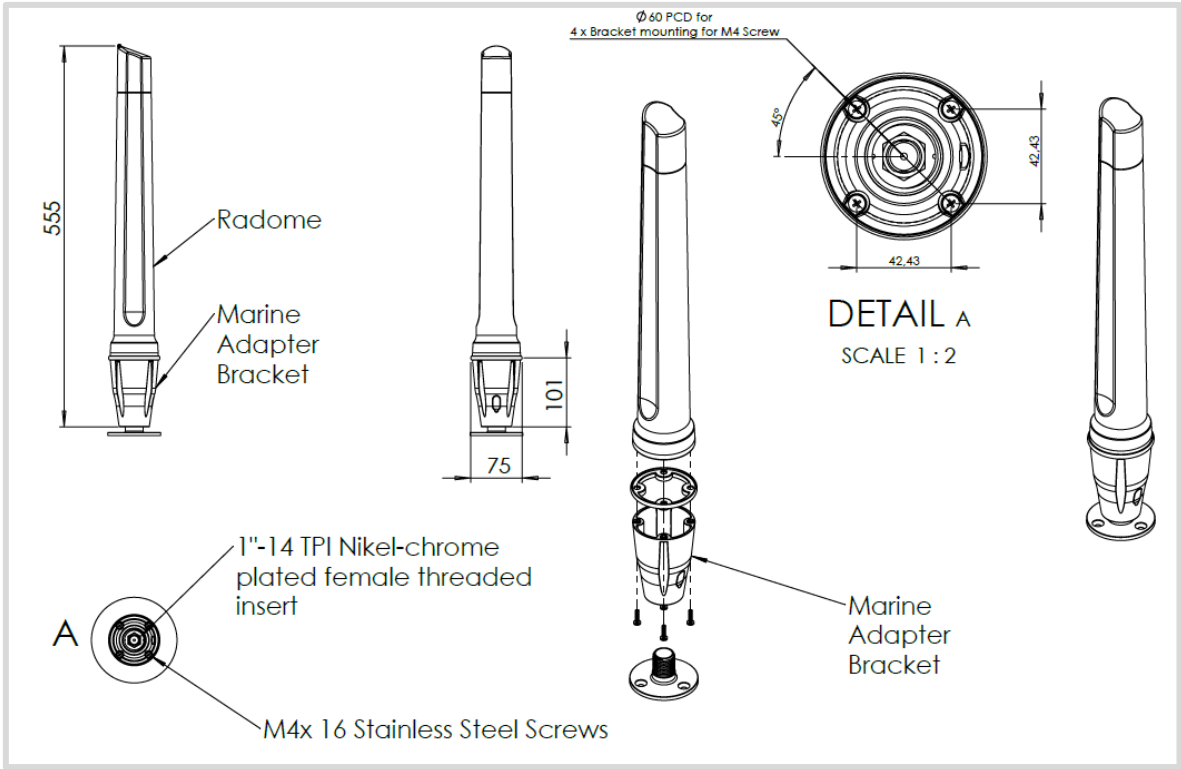


Elevation: 6000 - 7200 MHz

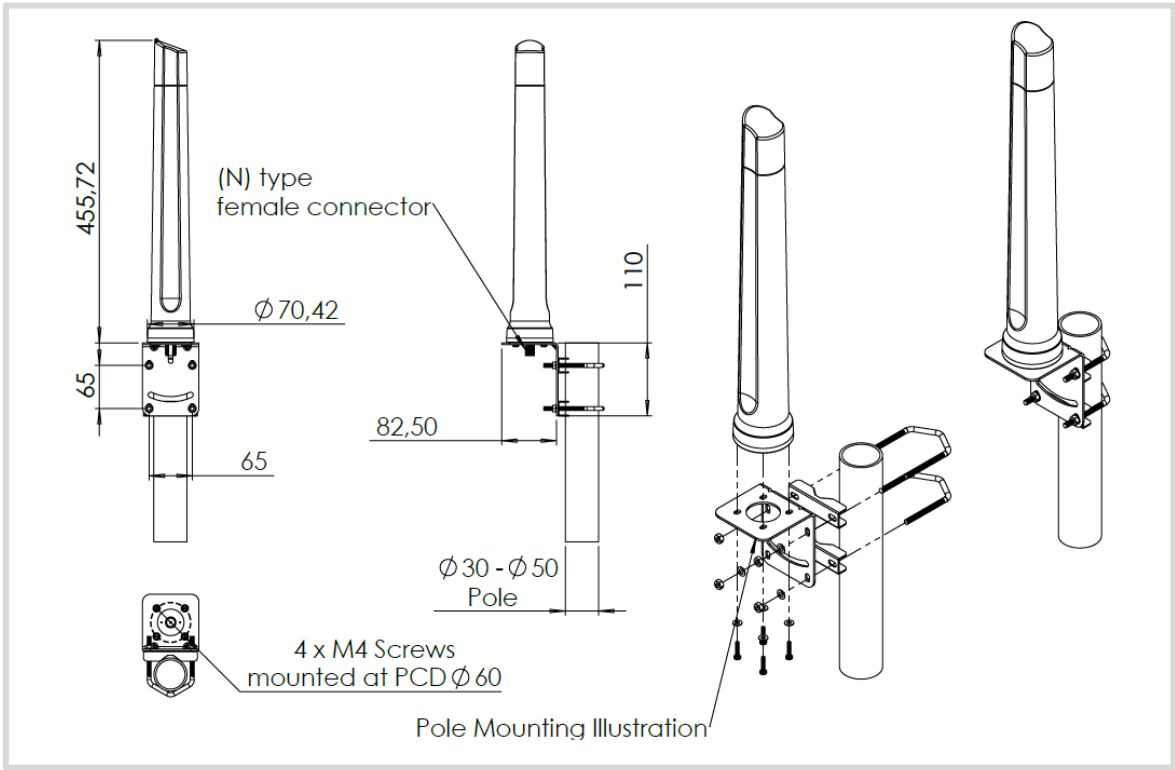


Technical Drawings

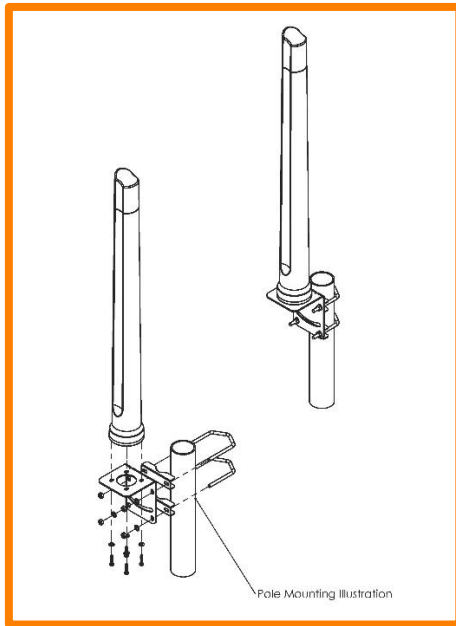
With Standard Marine Mounting:



With Standard L-Bracket Mounting:

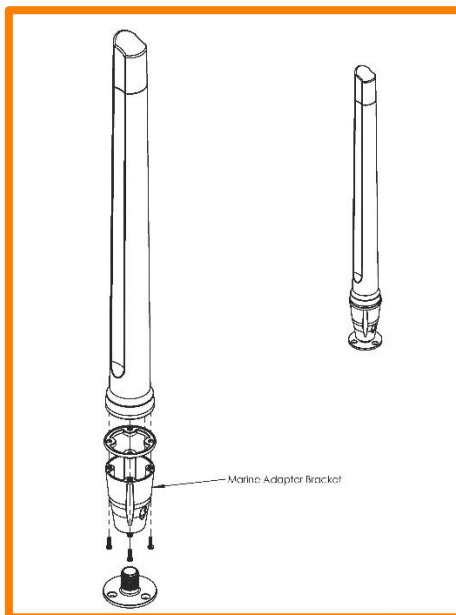


Mounting Options



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

Optional Accessories



BRKT-37

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



BRKT-38

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



BRKT-39

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

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: info@poynting.tech

International Email: sales-global@poynting.tech

Poynting Europe

Regus Business Center Neue Messe Riem
Kronstadter Straße 4
81677 München
Germany

Phone: +49 89 7453 9002

E-mail: sales-europe@poynting.tech

Poynting USA

1804 Owen Court, Suite 104,
Mansfield,
TX 76063
USA

Phone: +1 817 533-8130

E-mail: sales-us@poynting.tech