Poynting

Making wireless happen

POYNTING ANTENNAS

PRODUCT SERIES OVERVIEW: OMNI-293 & OMNI-493

Version 1

www.poynting.tech

May 2021

POYNTING OMNI-293 & OMNI-493

Introducing one of the best LTE/5G Omni-directional antennas for RURAL & MARINE

NEW LINE-UP

MARINE & FIXED WIRELESS OMNIDIRECTIONAL

MARINE ANTENNAS

PUCK-Series

OMNI-403

OMNI-404

MIMO-3-V2-Series

OMNI-496

OMNI-291-V2

OMNI-402

MARINE ANTENNAS

PUCK-Series

OMNI-403

OMNI-404

MIMO-3-V2-Series

OMNI-496

OMNI-291-V2

OMNI-493

OMNI-402

MARINE ANTENNA RANGE: OVERVIEW

410 - 470 MHz
600 - 960 MHz
1710 - 2170 MHz
2300 - 2500 MHz
2500 - 2700 MHz
3400 - 3800 MHz
4400 - 5000 MHz
5000 - 6000 MHz
6000 - 7200 MHz

OMNI-403 (LTE)
OMNI-404 (LTE / 5G Ready)
OMNI-496 (Wi-Fi)
OMNI-291 (LTE)
OMNI-402 & OMNI-600 (2x2 MIMO LTE / 5G Ready)
OMNI-293 & OMNI-493 (LTE / 5G Ready)

New

LTE
4G/LTE
Refurbished
GSM 900
GSM 1700
GSM 1800
GSM (USA) PCS
3G - UMTS
3.5G - HSPA & HSPA +
CDMA2000
WCDMA
4G LTE
Wi-Fi
4G/LTE
Urban - Major Band
LTE
WIMAX
CBRS
Wi-Fi 6
Wi-Fi

410 470 600 690 700 800 900 960 1700 1710 1800 1900 2000 2100 2170 2200 2300 2400 2500 2600 2700 3000 3400 3800 4000 4400 5000 5400 7000 7200

FIXED WIRELESS OMNI ANTENNAS

PUCK-Series

OMNI-510

OMNI-280 Series

OMNI-297

MIMO-3-V2-Series

OMNI-121

OMNI-292

XPOL-1-5G

OMNI-600

FIXED WIRELESS OMNI ANTENNAS

PUCK-Series

OMNI-510

OMNI-280 Series

OMNI-297

MIMO-3-V2-Series

OMNI-121

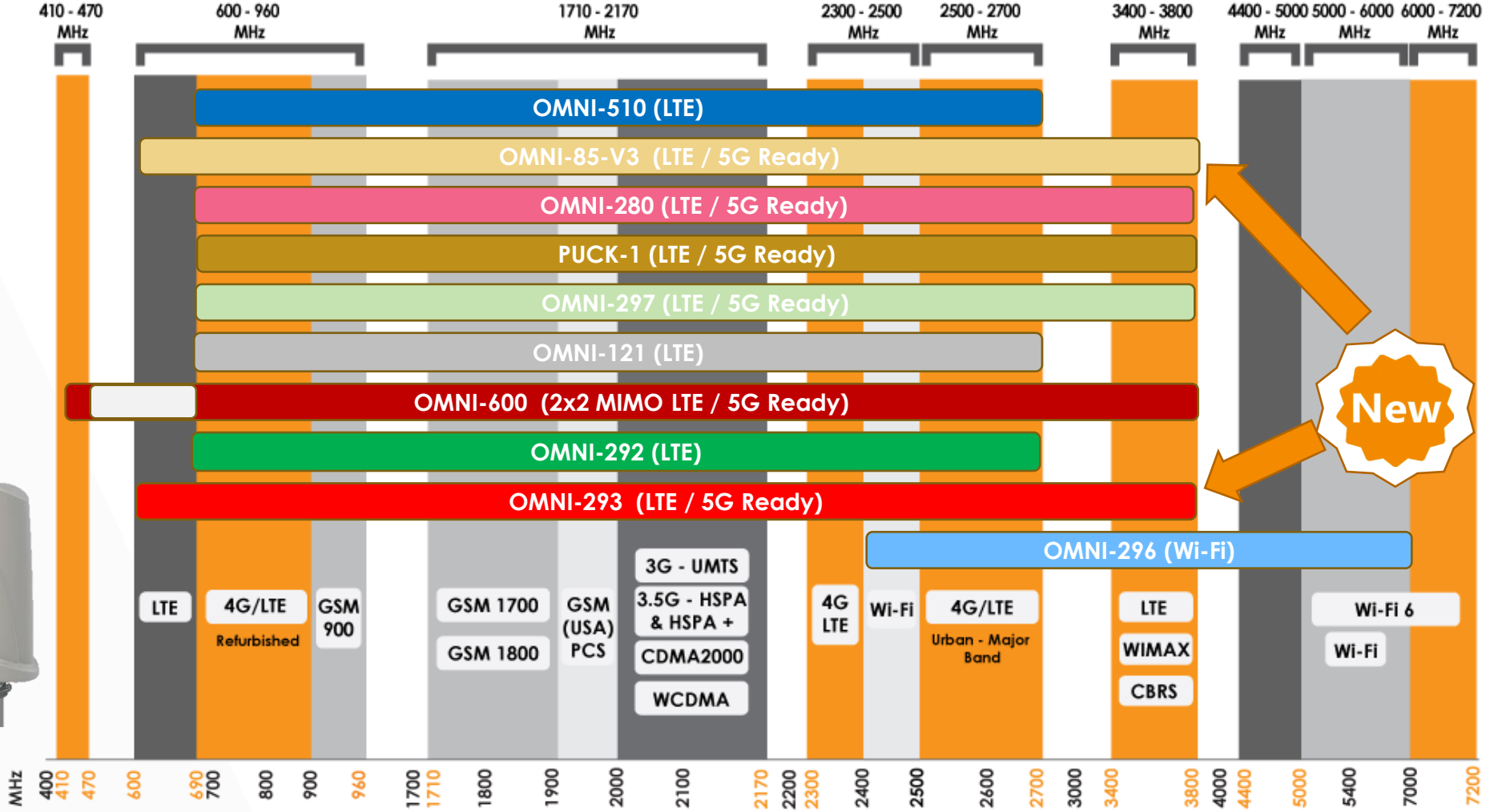
OMNI-292

OMNI-293

XPOL-1-5G

OMNI-600

OMNI ANTENNA RANGE: OVERVIEW



OMNI 293 & 493

DETAILED ANALYSIS

POYNTING OMNI-293 & OMNI-493

POYNTING OMNI-293 & OMNI-493

617 – 698 MHz;
1710 – 2700 MHz;
3400 – 3800 MHz

5G Ready

4G/LTE Antenna

LTE Band 71;
617 – 698 MHz

Omni-Directional

- Designed for rural and marine applications
- Single-Input-Single-Output (SISO) antennas
- **Truly omni-directional** radiation pattern for optimum coverage
- Frequency Band: **617 – 3800 MHz**
  - Covers Band 71 (617 – 698 MHz), for future proof implementation
- Peak Gain: **9 dBi**
- Waterproof & Dustproof
  - OMNI-293 rural antenna complies with **IP65** rating
  - OMNI-493 marine antenna complies with **IP68** rating
- Variety of mounting options available for marine applications
- Connector Type: N-Type (female)

Rural/Farm

Urban

Marine

Coastal

Tuned on lower frequencies

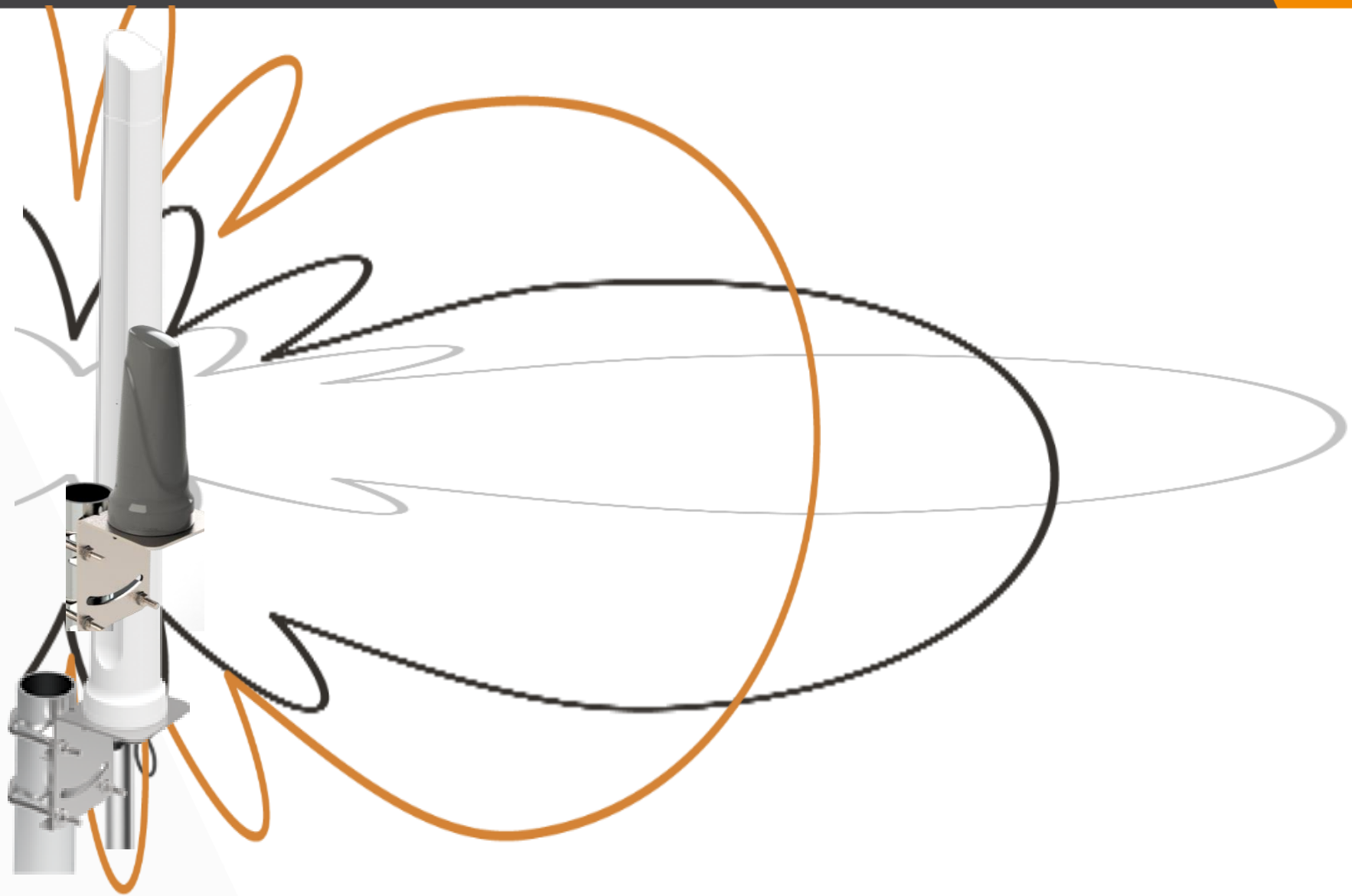
RADIO PROPAGATION AND SELECTED FREQUENCIES

700 / 850 / 900 MHz

1800 / 2100 MHz

3500 MHz

GAIN AND IT'S IMPACT ON BEAMWIDTH



OMNI-293 VERTICALS

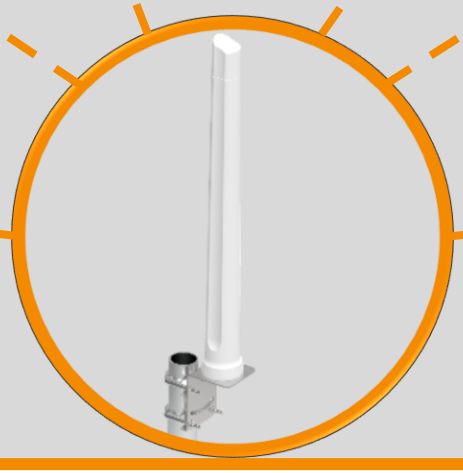
Commercial & Industrial

Farming & Agricultural

Urban

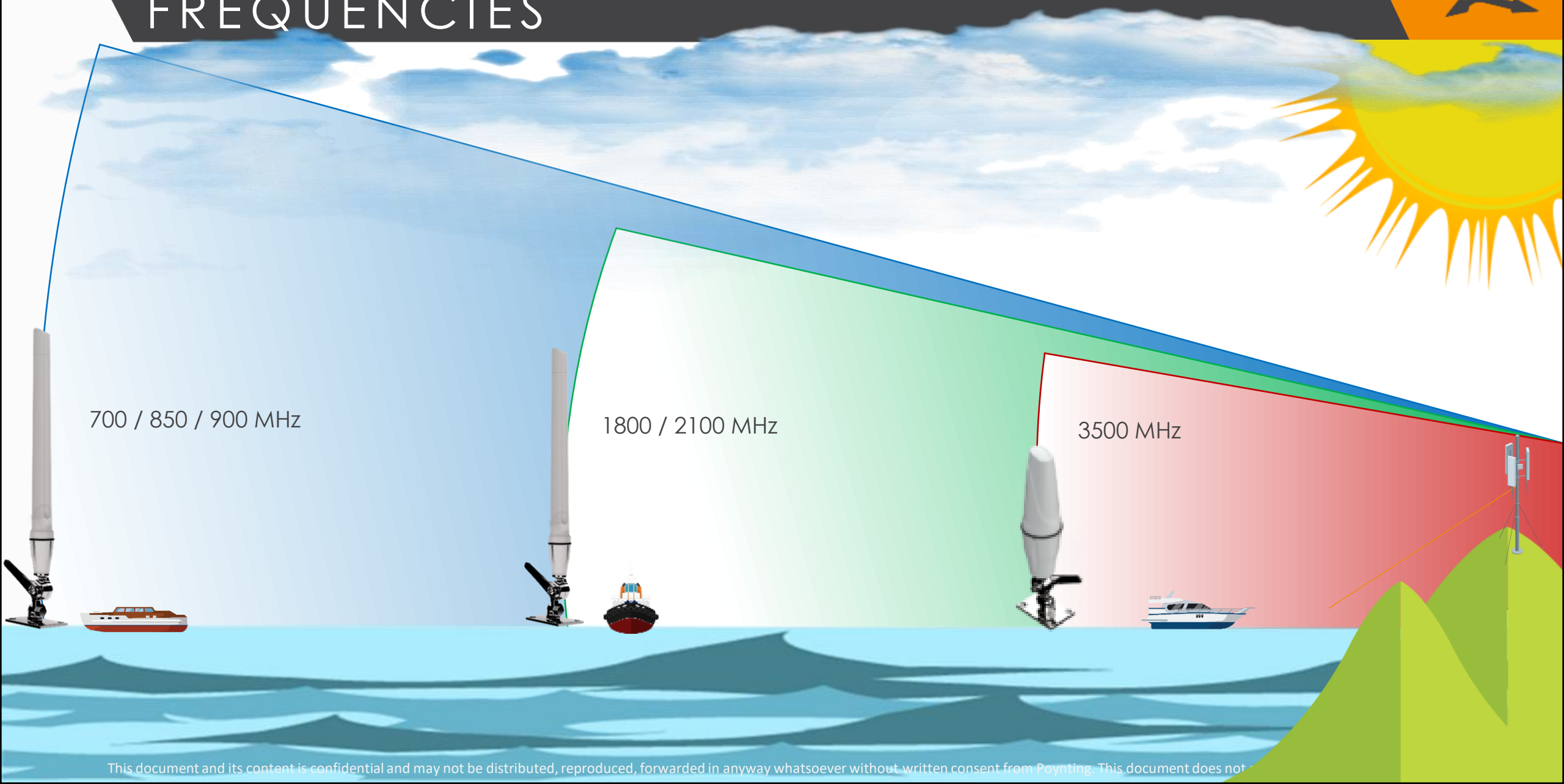
Rural

Mining & Tunnelling

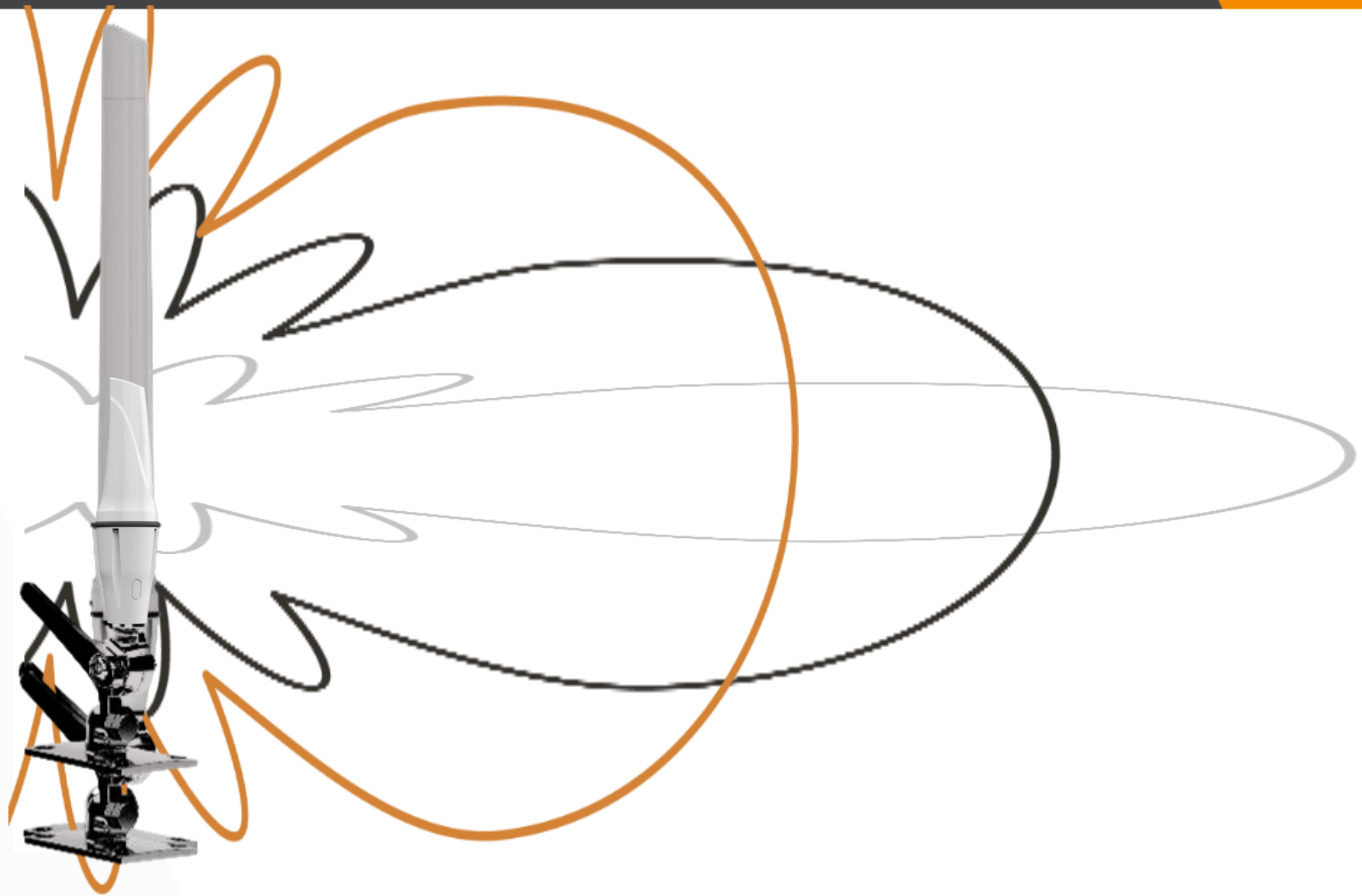


IoT, M2M & Smart Meters

RADIO PROPAGATION AND SELECTED FREQUENCIES



GAIN AND IT'S IMPACT ON BEAMWIDTH



OMNI-493 SELECTED VERTICALS

Super Yachts, Sailing- & Motorboats etc.

Coastal Areas

Marinas

Offshore / Windfarms

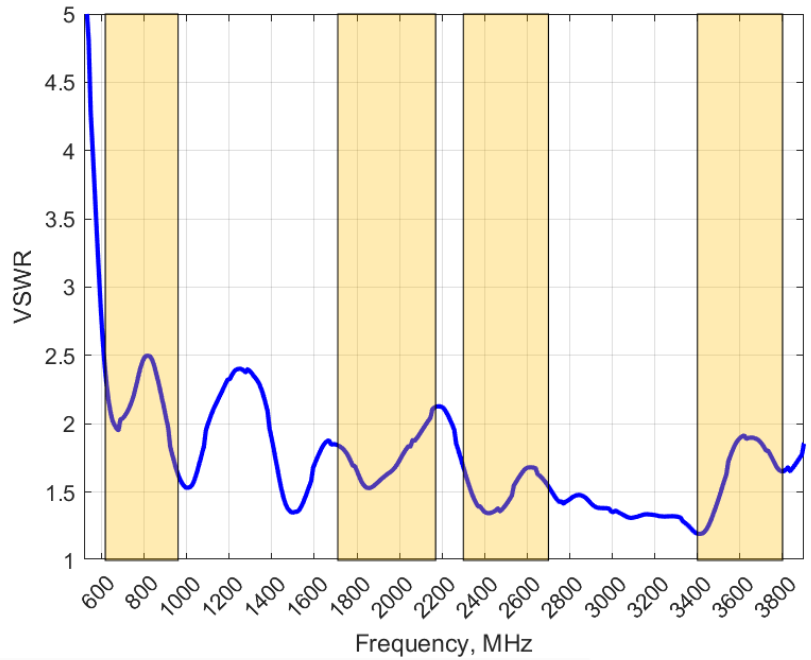
Commercial vessels, cruiseships etc.

High Humid Areas

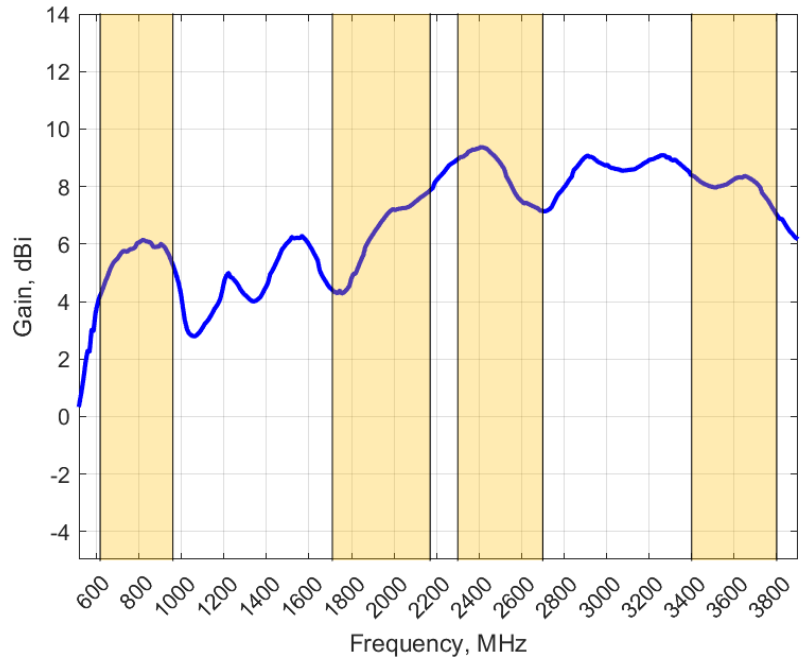
OMNI-293 & OMNI-493 MEASURED RESULTS

Antenna	Frequency Band	VSWR	Peak Gain in Band	Dimensions
OMNI-293 & OMNI-493	617 – 3800 MHz	< 2:1 (over 90% of band)	• 6 dBi @ 617 – 960 MHz • 9 dBi @ 1710 – 2700 MHz • 8 dBi @ 3400 – 3800 MHz	750 x Ø 75 mm²

VSWR*



Gain*

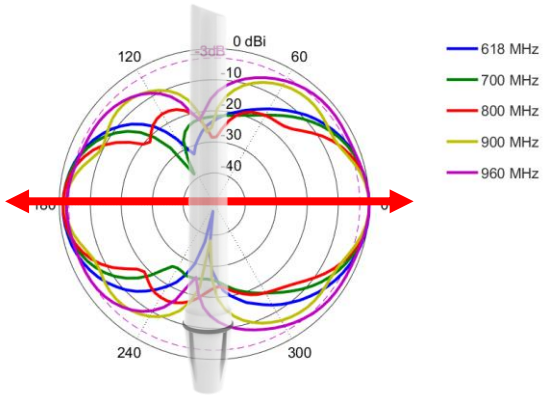


** Please note that these are preliminary results. Final results will be made available with the TS document upon release.*

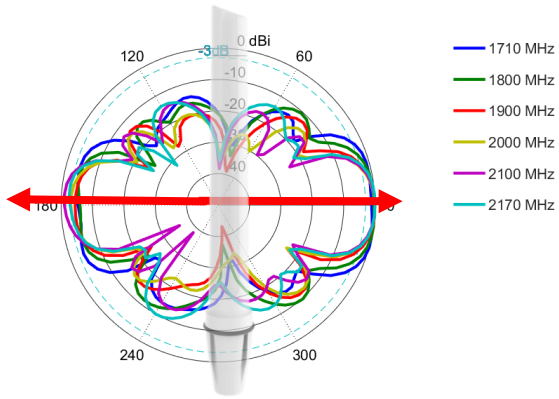
MEASURED RADIATION PATTERNS

Side View

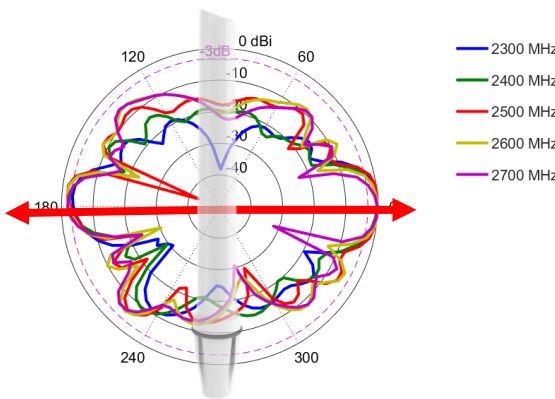
Elevation: 617 – 960 MHz



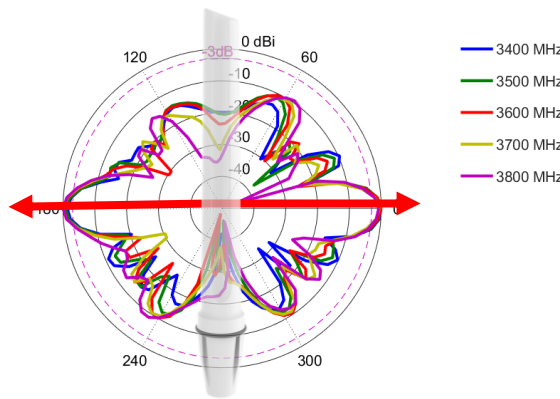
Elevation: 1710 – 2170 MHz



Elevation: 2300 - 2700 MHz

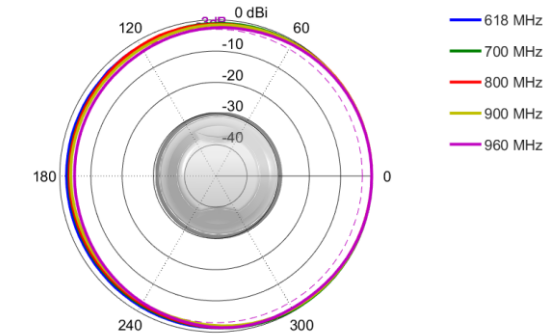


Elevation: 3400 – 3800 MHz

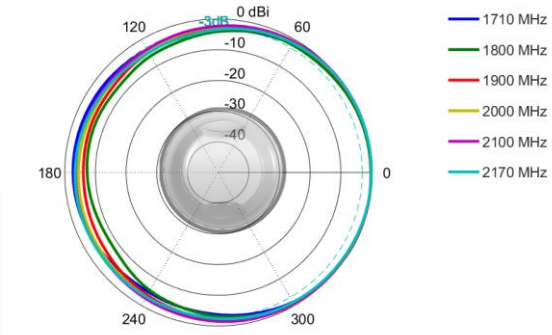


Top View

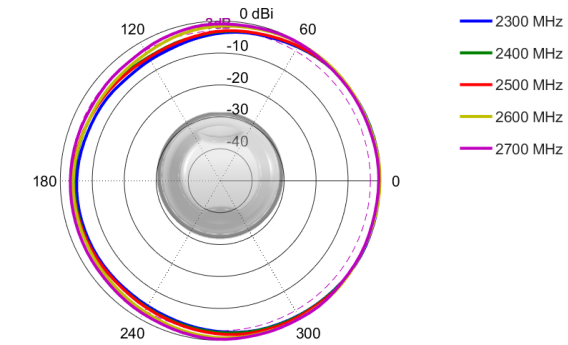
Azimuth: 617 – 960 MHz



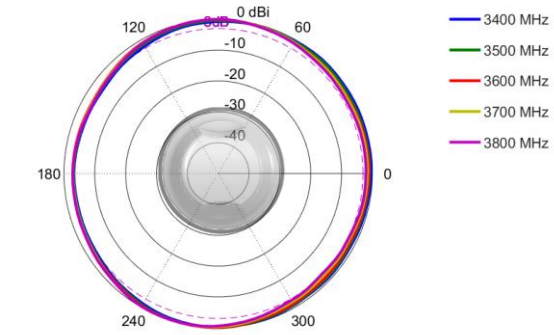
Azimuth: 1710 – 2170 MHz



Azimuth: 2170 - 2700 MHz



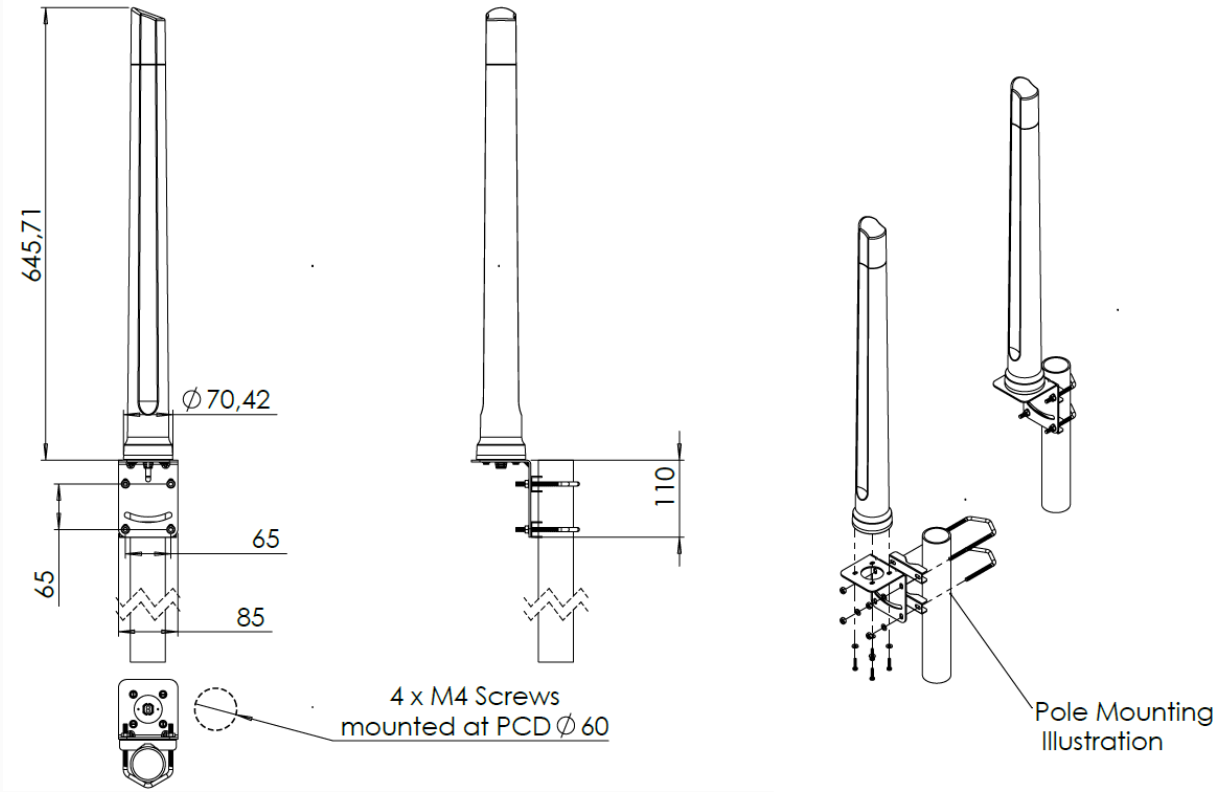
Azimuth: 3400 – 3800 MHz



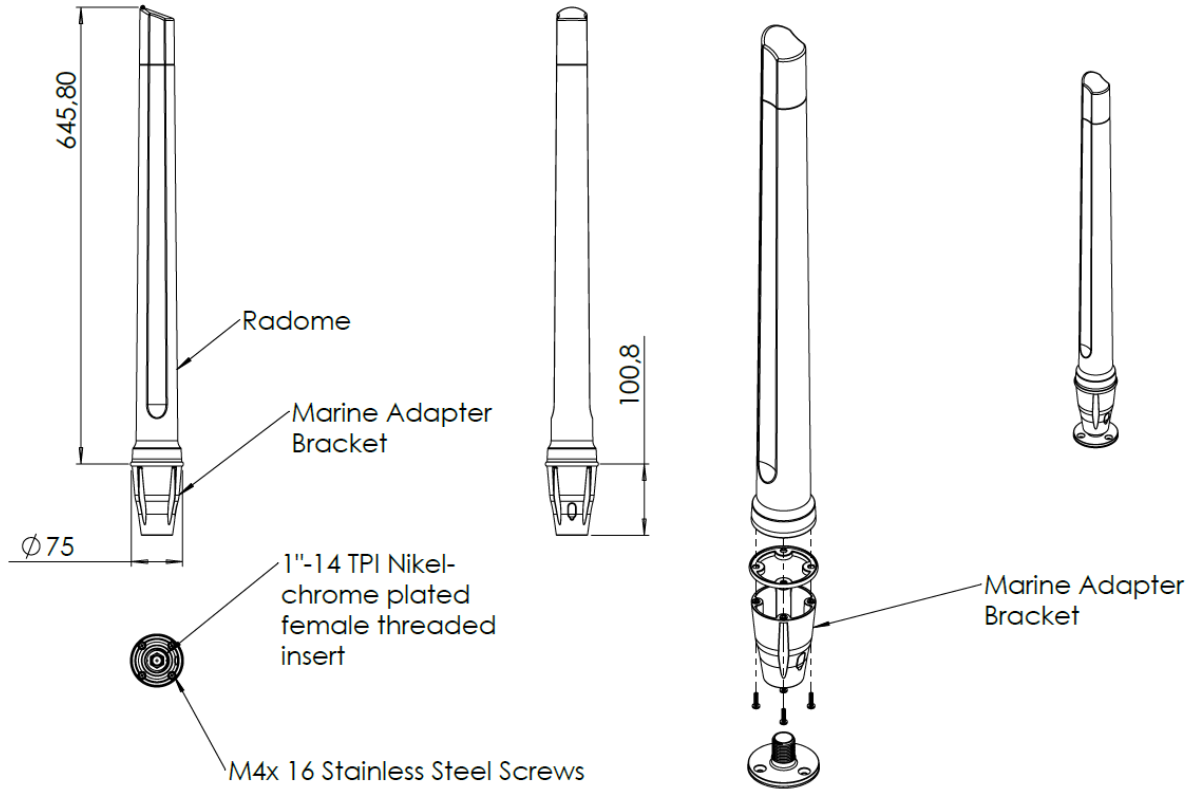
Constant omni pattern across all frequency bands

MECHANICAL DATA

OMNI-293



OMNI-493



Rural & Urban Applications

Marine & Coastal Applications

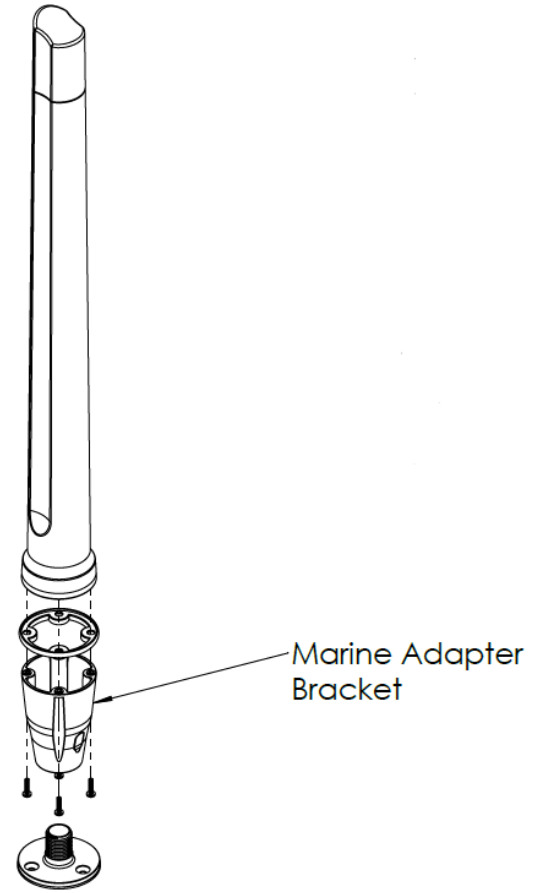
MOUNTING OPTIONS FOR THE OMNI-493

Bracket Models	Description
BRKT-037	Marine flat mount antenna bracket; stainless steel
BRKT-038	Marine ratchet rail mount antenna bracket; stainless steel
BRKT-039	Heavy duty marine mount antenna; stainless steel

BRKT-37

BRKT-38

BRKT-39



OMNI-293/-493 VS THE OLDER BROTHERS

OMNI-292 VS. OMNI-293

OMNI-292

690-2700MHz
SISO
8 dBi Gain
IP65

OMNI-293

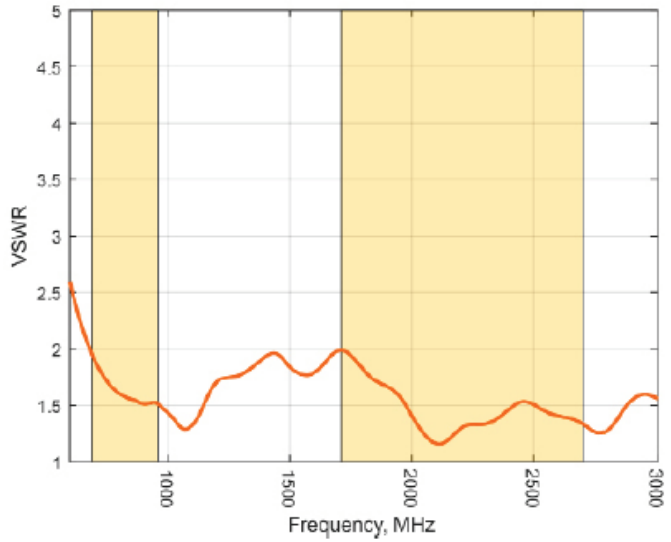
619-3800MHz
SISO
9 dBi Gain
IP65

Band 71, 5G & 1400 MHz

292 VS. 293 VSWR COMPARISON

OMNI-292:

VSWR

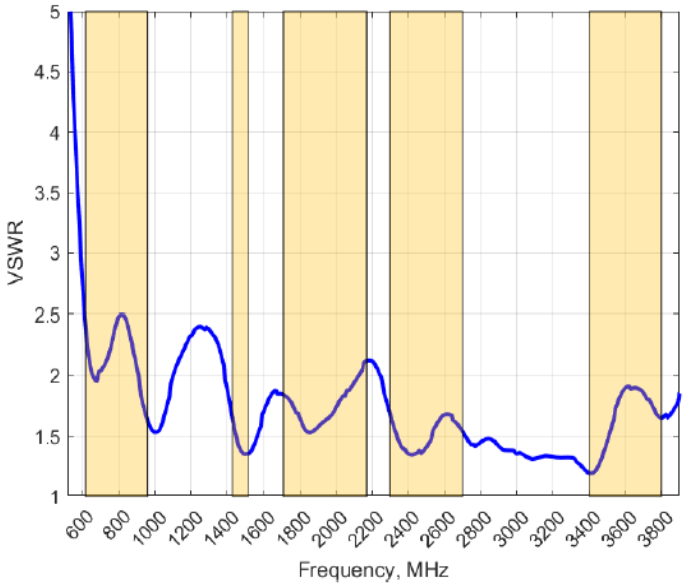


Voltage Standing Wave Ratio (VSWR)

VSWR of 2 : 1 or better

OMNI-293:

VSWR



Voltage Standing Wave Ratio (VSWR)

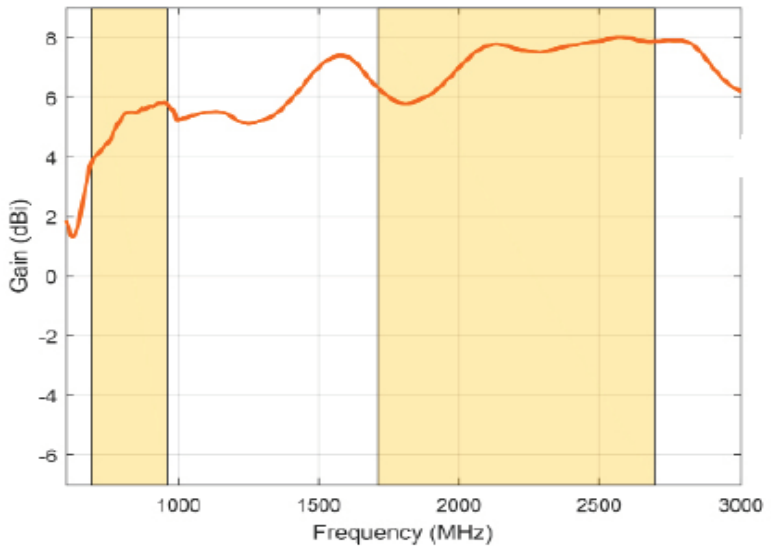
VSWR of 2.5 : 1 or better

VSWR IS OPTIMISED FOR BEST EFICIENCY AND PERFORMANCE

292 VS. 293 GAIN COMPARISON

OMNI-292:

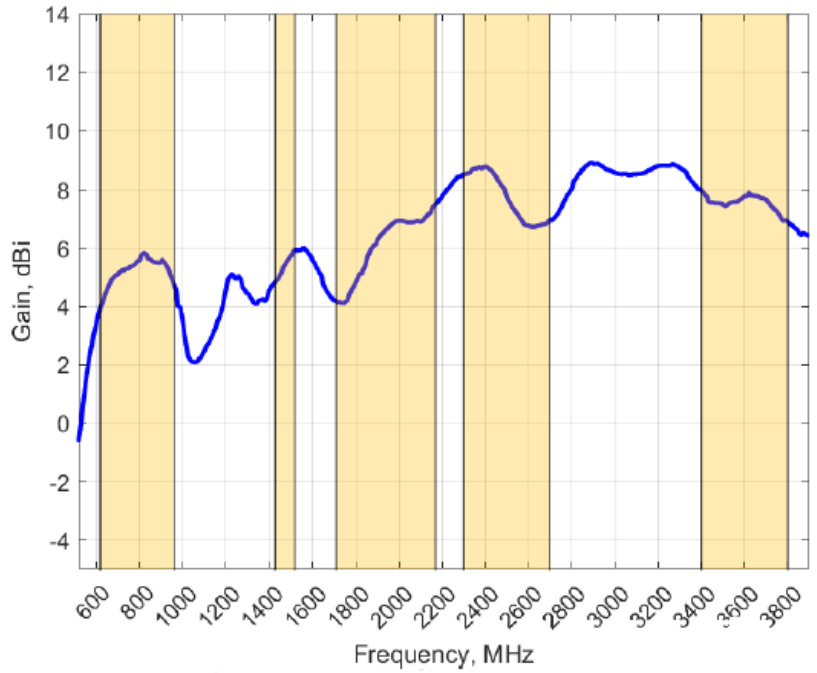
GAIN (EXCLUDING CABLE LOSS)



8dBi Max Gain @ 690-2700 MHz

OMNI-293:

GAIN (EXCLUDING CABLE LOSS)



Gain* in dBi

9dBi Max Gain @ 617-3800 MHz

OMNI-293 IS FULLY FUTURE PROOF

OMNI-292 VS. OMNI-293

OMNI- 292

- Wide band LTE 698–2700MHz omni antenna
- 8dBi, SISO unit, N-type connector
- Compatible with 4G, 3G and 2G technologies, supports 2.4 GHz Wi-Fi
- Suitable for fixed installations in urban and rural environments, but also a good fit for machine to machine (M2M) applications
- IP 65 rating

OMNI- 293

- 617 – 3800 LTE/5G ultra wide band omni antenna
- 9dBi, SISO unit, N-type connector
- Tuned on lower frequencies for optimal performance in the out back
- Robust, all weather proof for harsh conditions. UV stable & salt water resistant.
- IP65 rating

Conclusions

- So far the ONI-292 is the best performing antenna on the market. The OMNI-293 is suitable for 5G applications and anticipates the future needs for Band 71
- The performance of both antennas is really close and best of breed
- Make no compromise on quality, chose either one:
  - LTE: OMNI-292
  - LTE+5G: OMNI-293
- Future-proofness is the key argument

OMNI-291 VS. OMNI-493

OMNI-291

452-2700MHz
SISO
7 dBi Gain
IP68

CDMA 450 ICE Network

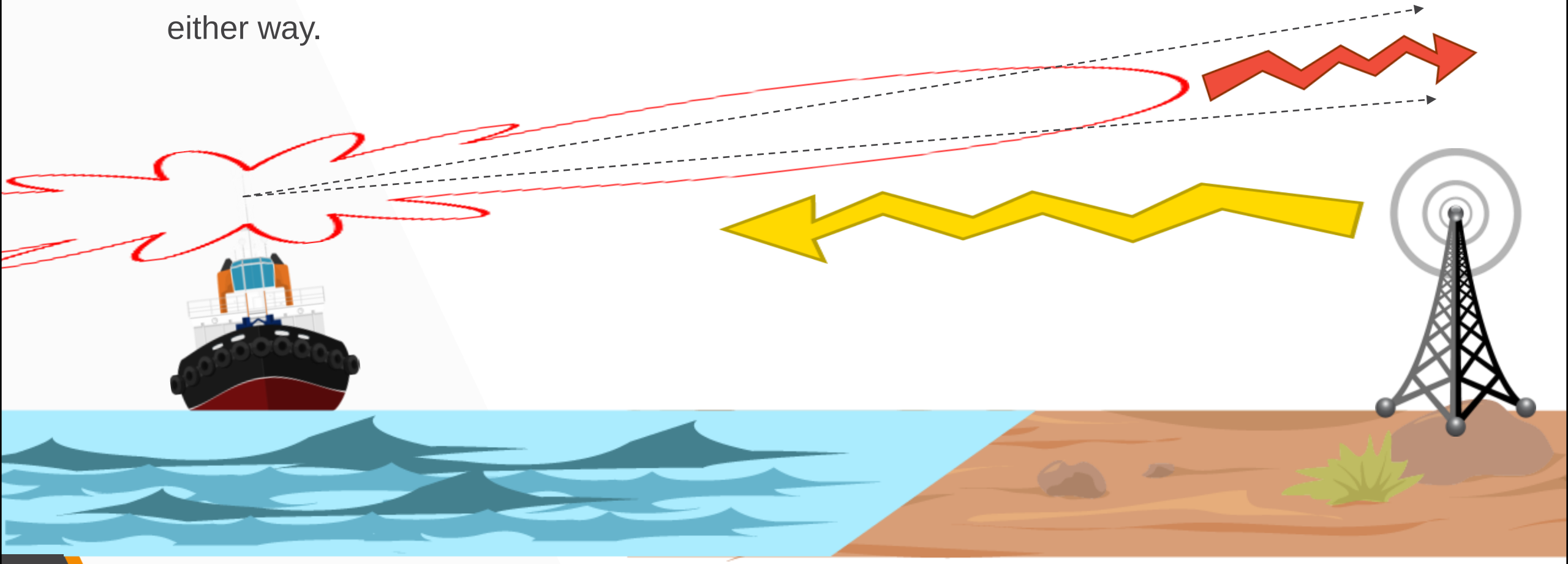
OMNI-493

619-3800MHz
SISO
9 dBi Gain
IP68

Band 71, 5G & 1400 MHz

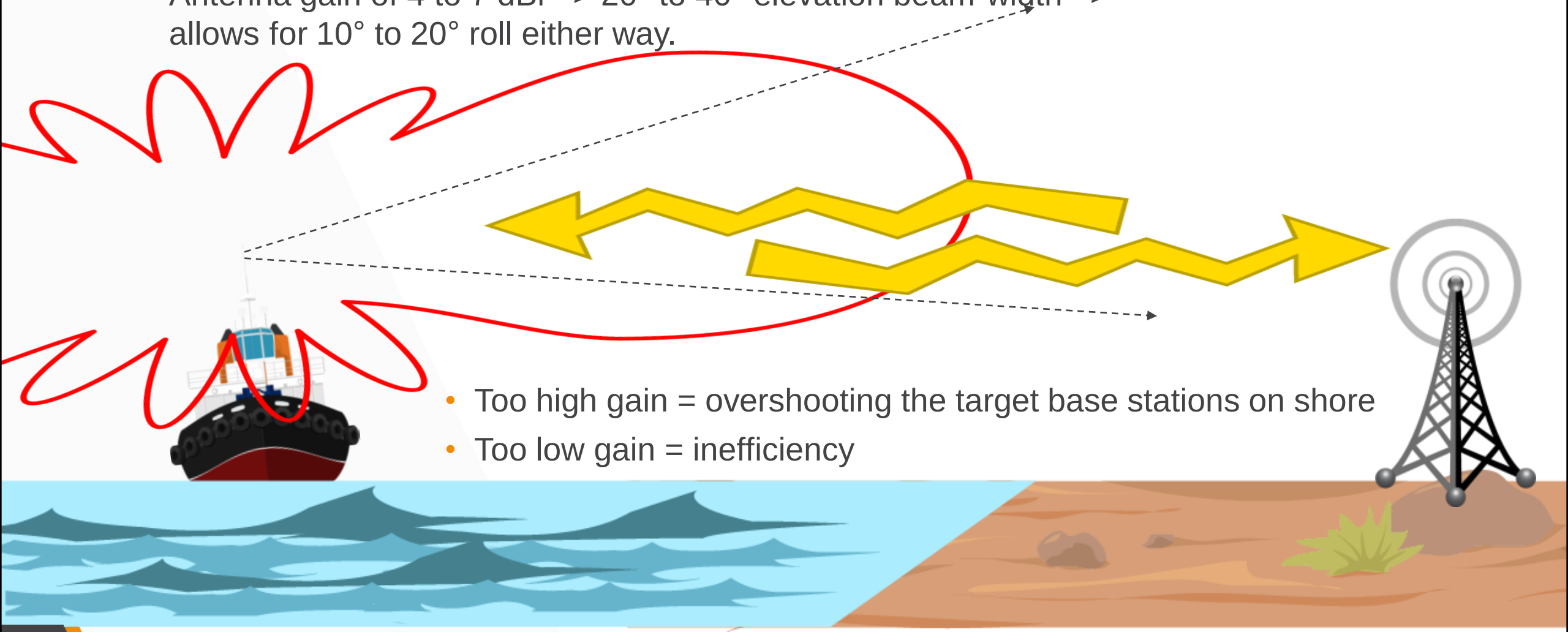
GAIND AND IT'S IMPACT ON BEAMWIDTH – HIGH GAIN ANTENNA EXAMPLE

- A ship rolls to 10° on moderate seas, either way, sometime more (vessel and sea conditions)
- Antenna Gain of 9 dBi => 12° Antenna elevation beam-width => allows for +6° roll and -6° roll either way.



GAIND AND IT'S IMPACT ON BEAMWIDTH – MEDIUM GAIN ANTENNA EXAMPLE

- Antenna gain of 4 to 7 dBi => 20° to 40° elevation beam-width => allows for 10° to 20° roll either way.



- Too high gain = overshooting the target base stations on shore
- Too low gain = inefficiency

291 VS. 493 RADIATION DIAGRAM

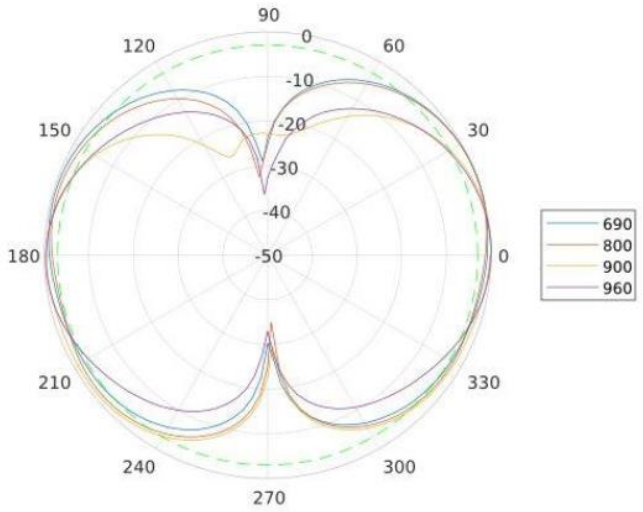
OMNI-291

452-2700MHz
SISO
7 dBi Gain
IP68

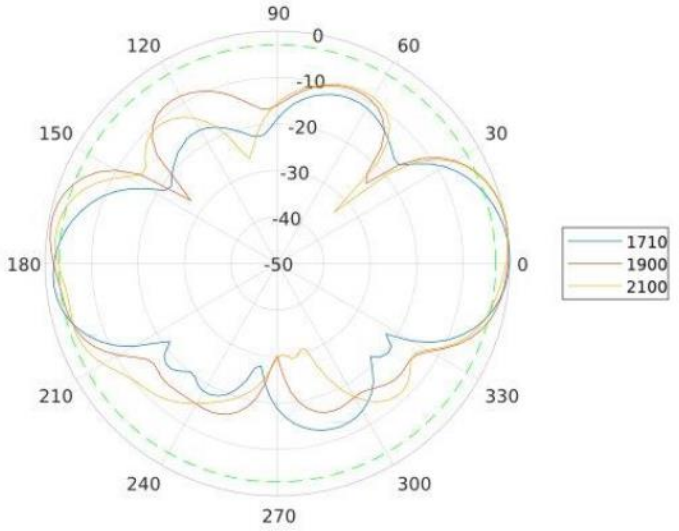
OMNI-493

619-3800MHz
SISO
9 dBi Gain
IP68

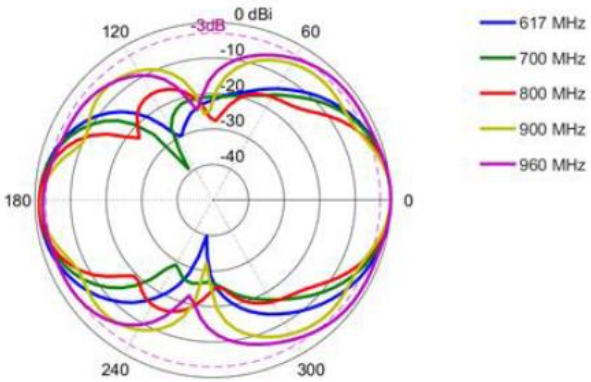
Elevation (Side View): 690 – 960 MHz



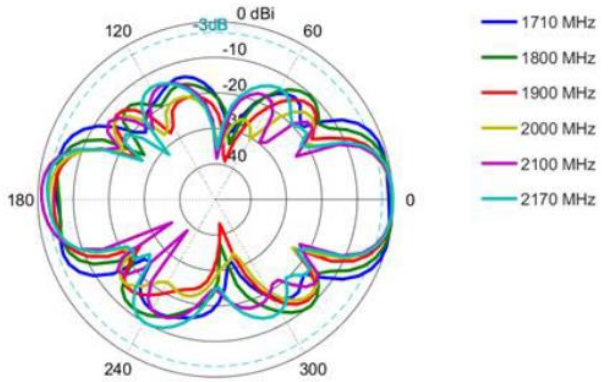
Elevation (Side View): 1710 – 2100 MHz



Elevation: 617 – 960 MHz



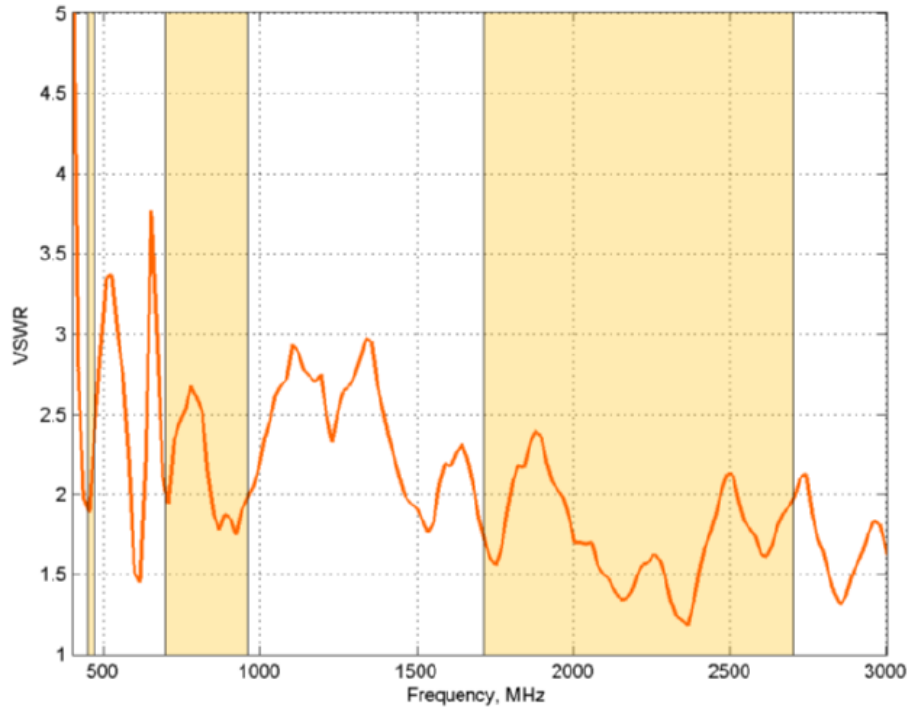
Elevation: 1710 – 2170 MHz



291 VS. 493 VSWR COMPARISON

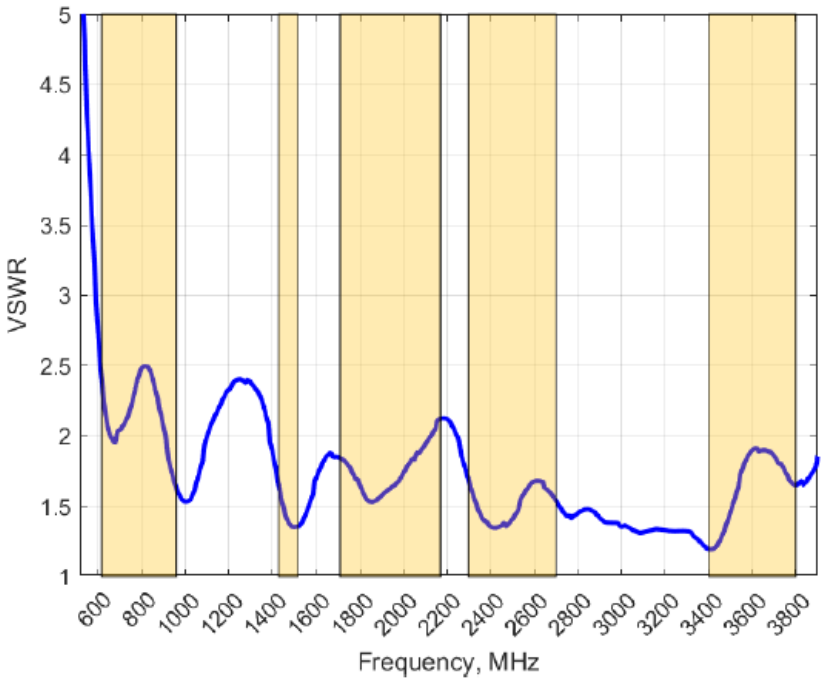
OMNI-291

VSWR



OMNI-493:

VSWR



VSWR IS OPTIMISED FOR BEST EFFICIENCY AND PERFORMANCE

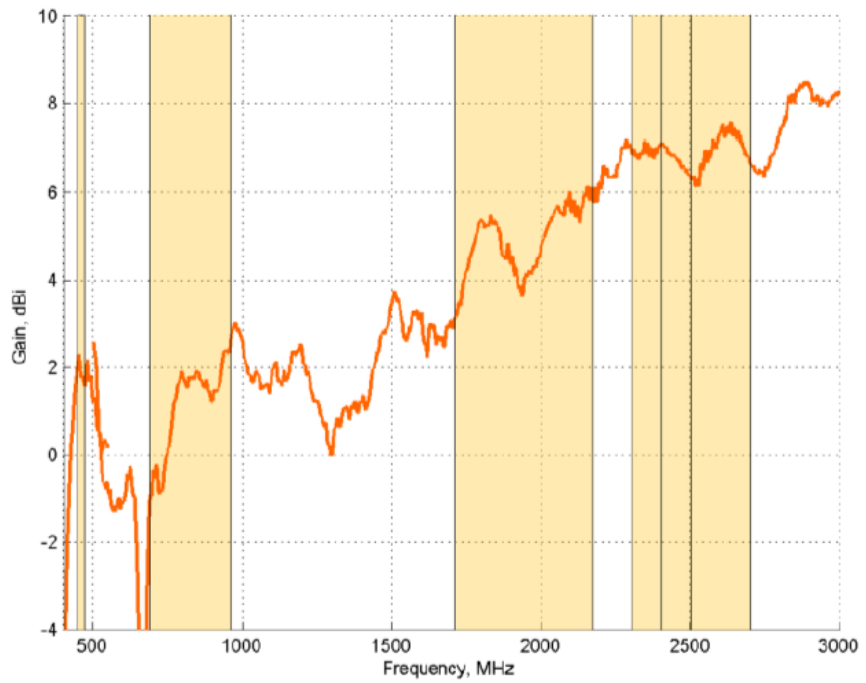
VSWR of 2.5 : 1 or better

VSWR of 2.5 : 1 or better

291 VS. 493 GAIN COMPARISON

OMNI-291:

GAIN (EXCLUDING CABLE LOSS)

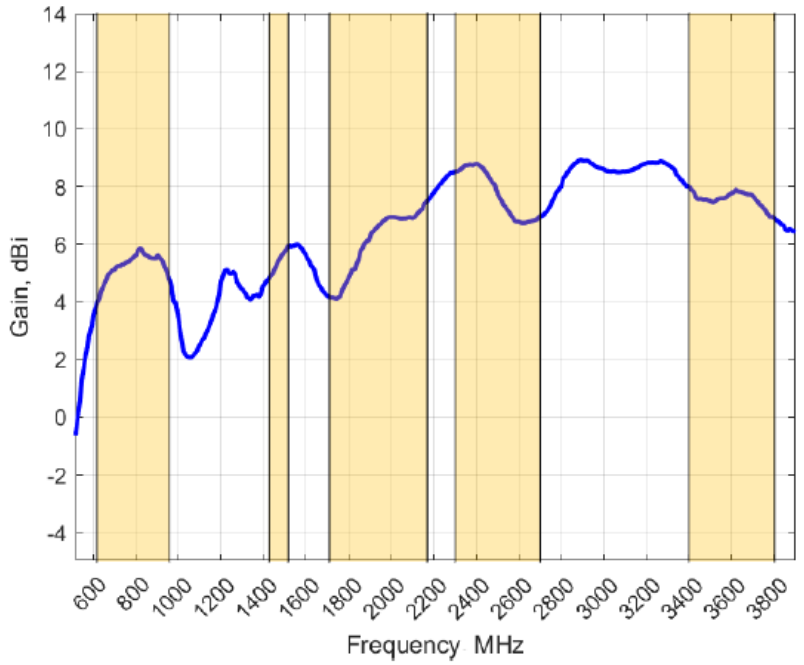


Gain* in dBi

7dBi Max Gain @ 690-2700 MHz

OMNI-493:

GAIN (EXCLUDING CABLE LOSS)



Gain* in dBi

9dBi Max Gain @ 617-3800 MHz

OMNI-493 OVERALL PERFORMS MUCH BETTER ON THE MOST IMPORTANT FREQUENCIES AT SEA

OMNI-291 VS. OMNI-493

OMNI- 291

- Excellent balanced gain across all frequencies, including LTE & CDMA 450Mhz bands.
- 7dBi, SISO unit, N-type connector
- Suitable for ICE in the Nordics
- Robust, all weather proof for harsh conditions at sea. UV stable & saltwater resistant enclosure for marine
- IP68 rating

OMNI- 493

- Excellent balanced gain across all frequencies. Includes Band 71 (617 – 698 MHz) & 5G bands 42/43/48/49/52 (3.4 – 3.8 GHz),
- 9dBi, SISO unit, N-type connector
- Tuned on lower frequencies for optimal performance far out at sea
- Robust, all weather proof for harsh conditions at sea. UV stable & saltwater resistant enclosure for marine
- IP68 rating

Conclusions

- OMNI-291 was currently the No.1 go-to cellular marine antenna in the world.
- Great performance in All Weather conditions, but you felt we could still improve
- OMNI-493 offers much better performance on the lower frequencies and therefore will support best connectivity far out at sea.
- The OMNI-493 5G Bands and Band 71 will also secure future European new frequencies

APPLICATION AREAS

WHY PURCHASE THESE ANTENNAS?

THE WRAP-UP

KEY SELLING POINTS

- Future proof implementations: Covers Band 71 (617 – 698 MHz) & 5G bands 42/43/48/49/52 (3.4 – 3.8 GHz)
- Exceptional omni-directional patterns throughout the entire frequency band.
    - Consistent, stable & reliable connection for remote and closer locations
- High efficiency due to well matched antenna design providing unique performance throughout the whole band which is superb for carrier aggregation

Marine specific arguments

- Exceptional performance from 617 – 960 MHz (6 dBi). The medium gain and the opening angle are optimised in the direction where we may expect base stations. Even at rougher seas we will stay connected!
- When docked-in at harbour or ports, the higher frequencies are optimised to transfer large packages of data. The narrower vertical beamwidth combined with the high gain support best connectivity
- The above leads to higher throughput and significant cost reductions

OUR BEST ALL-ROUND LTE/5G OMNI-DIRECTIONAL ANTENNAS.

PRICING & AVAILABILITY

AVAILABILITY & RELEASE

Estimated availability to the market:

- OMNI-293: Beginning of June 2021
- OMNI-493: Beginning of June 2021

Pricing:

OMNI-293, A-OMNI-0293-V1-01

164.90 Euro *MSRP

- Ultra-Wide Omni-directional Urban & Rural area LTE/5G & Wi-Fi antenna, 617- 3800 MHz., max. Gain: 9 dBi, N-Type-f connector

OMNI-493, A-OMNI-0493-V1-01

254.90 Euro *MSRP

- Ultra-Wide Omni-directional Marine & Coastal LTE/5G & Wi-Fi antenna, 617- 3800 MHz., max. Gain: 9dBi with Marine Mount, N-Type F Brilliant White,

*regular sales conditions apply. All pricing excl. VAT & based on FCA Nijmegen, NL.


We will now take your orders

Poynting
Making wireless happen

Thank you!

Hugo Carvalho

Sales Account Manager

+351 917 790 639

Hugo.Carvalho@poynting.co.za

Reach me in your preferred language: