

# MARITIME ANTENNA

## Maritime 20G

### Overview

- **Designed for Maritime Applications**  
IP68 rated, durable and UV-stable housing an omnidirectional antenna for the best signal reception.
- **Designed for 5G**  
Optimal gain, 2x2 MIMO antenna configuration for the best performance for maritime installations.
- **Ultra-wide bandwidth**  
Wide frequency range (410-6000MHz) for supporting LTE and 5G connectivity.
- **Easy installation**  
Supports standard maritime 1" 14 TPI thread mount and also has an L-shape mount for non-standard installations.
- **Wi-Fi bands**  
The antenna is designed for cellular bands but also covers both 2.4 & 5GHz Wi-Fi frequencies. To use the antennas for Wi-Fi, you will require an SMA to RP-SMA adapter.

### Applications

- Maritime

### Contact Us

[maritime@peplink.com](mailto:maritime@peplink.com)

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7  
dBi

IP  
68

2x2  
MIMO

↑↓  
LTE

GPS

Built  
for  
5G

**TAA** COMPLIANT

## Specification

### Cellular

<b>Antenna elements</b>	2 elements
<b>Cellular frequency bands &amp; Gain</b>	3.2dBi: 410-470MHz 5.4dBi: 617-960MHz 4.9dBi: 1710-2700MHz 6.2dBi: 3400-4200MHz 6.8dBi: 4900-6000MHz
<b>VSWR</b>	<2.5: 410-470MHz <3.0: 617-960MHz <2.5: 1710-6000MHz
<b>Max feed power handling</b>	10W
<b>Input impedance</b>	50 Ω
<b>Polarisation</b>	Linear

### GPS

<b>Frequency range</b>	1561-1602 MHz
<b>Peak gain</b>	0.5dBi@1575MHz 1.6dBi@1602MHz
<b>VSWR</b>	< 2.5
<b>Output return loss</b>	10dB max
<b>LNA gain</b>	28 ±3dB
<b>Noise figure</b>	1.5dB max at 3.3V
<b>Operating Voltage</b>	3.3V
<b>Power consumption</b>	8.5mA ±2.5m at 3.3V

### Cable (LTE/5G)

<b>Type</b>	CFD-200
<b>Length</b>	6'7" / 2m
<b>Loss</b>	0.33 dB/m @ 900 MHz 0.49 dB/m @ 2000 MHz 0.55 dB/m @ 2500 MHz 0.87 dB/m @ 5800 MHz
<b>Diameter</b>	13/64" / 5.0mm
<b>Jacket</b>	Half matt PVC, UV resistant
<b>Termination</b>	SMA male, N-type female

### Cable (GPS)

<b>Type</b>	RG-174
<b>Length</b>	6'7" / 2m
<b>Loss</b>	3.4 dB/m @ 1000 MHz 4.9 dB/m @ 1800 MHz
<b>Diameter</b>	0.1" / 2.7mm
<b>Jacket</b>	Half matt PVC, UV resistant
<b>Termination</b>	SMA male, N-type female

\*The maritime mount set is not included.  
Specifications subject to change without notice.

# Maritime 20G

### Mounting

<b>Supported types</b>	Standard Maritime 1" 14 TPI thread Pole and wall mounting Pole diameter: 1-2" (25-50mm)
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### Mechanical

<b>Product dimensions (Diameter) (Height)</b>	3.78" / 96mm 19.04" / 483.5 mm
<b>Packaged dimensions</b>	26.3" x 6.0" x 6.1" 668 x 153 x 155 mm
<b>Housing material</b>	UV stable PC

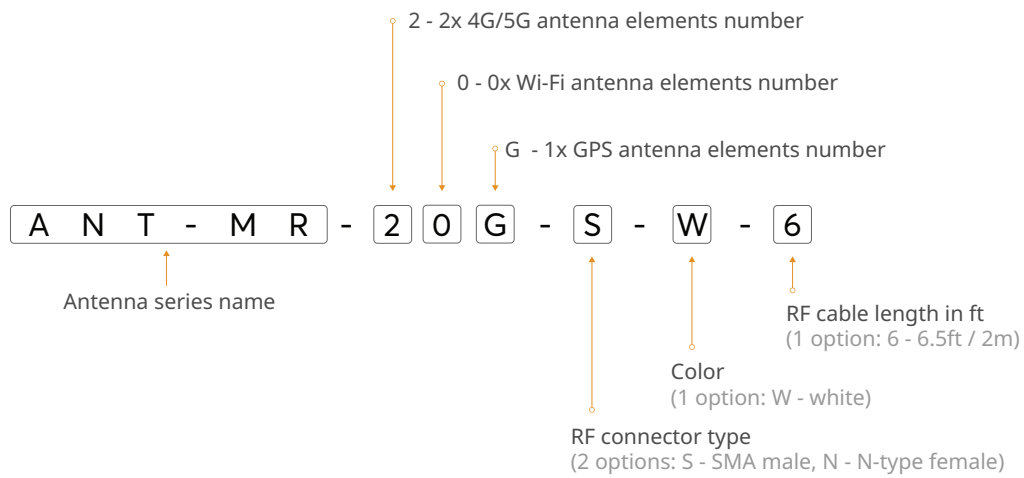
### Package contents

<b>SKU</b>	ANT-MR-20G-S-W-6
<b>Antenna</b>	Maritime Antenna 20G (SMA connectors)
<b>Accessories</b>	Maritime mount set L-shape mount set
<b>SKU</b>	ANT-MR-20G-N-W-6
<b>Antenna</b>	Maritime Antenna 20G (N-type connectors)
<b>Accessories*</b>	L-shape mount set

### Environmental & Compliance

<b>IP rating</b>	IP68
<b>Operating temperature</b>	-40° - 176°F / -40° - 80°C
<b>Storage temperature</b>	-40° - 176°F / -40° - 80°C
<b>Compliance</b>	ROHS, REACH, WEEE
<b>Wind survivability</b>	100mph / 160km/h
<b>Salt Spray</b>	MIL-STD 810F/ASTM B117

## Ordering Information



### Product Code

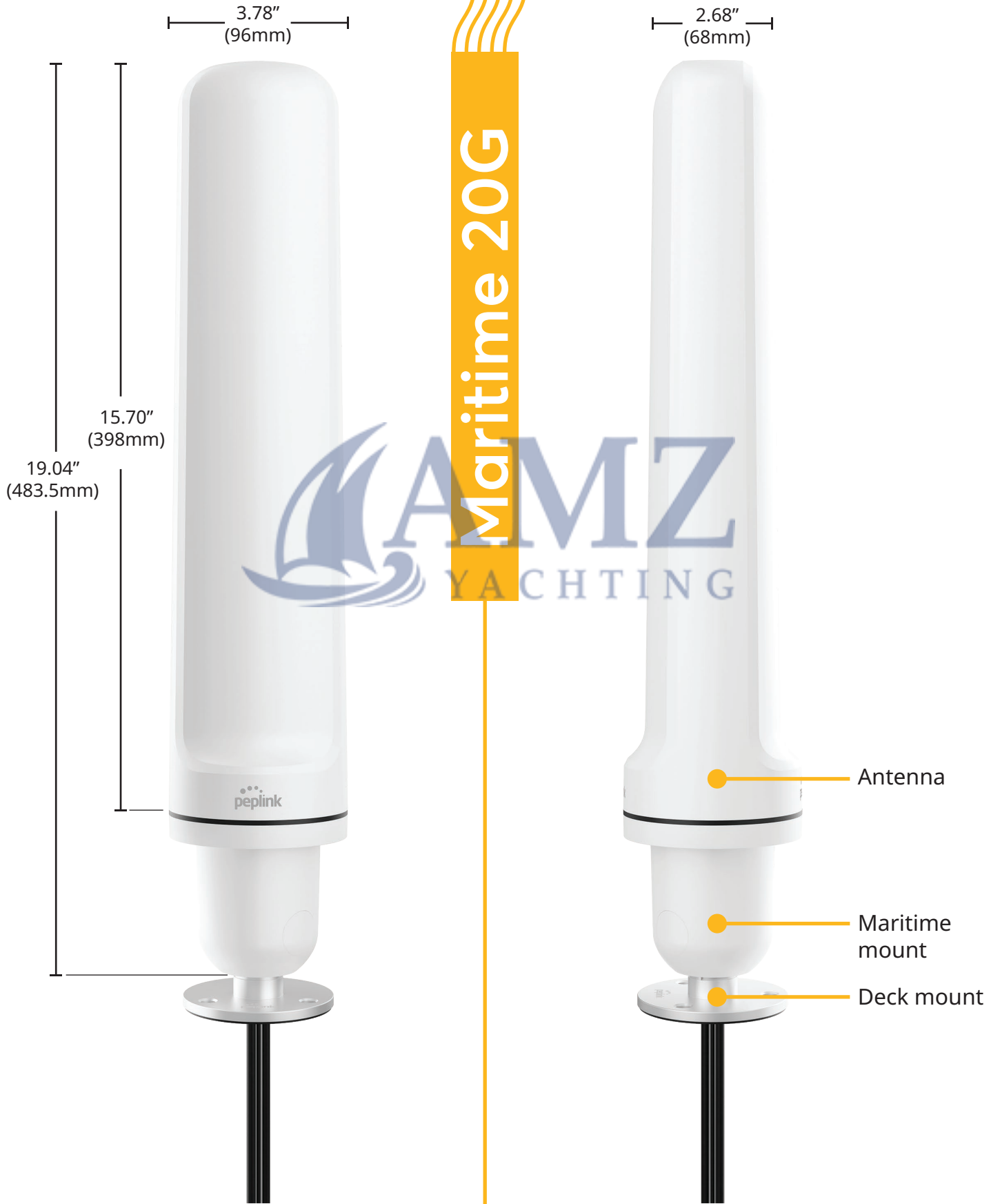
ANT-MR-20G-S-W-6  
ANT-MR-20G-N-W-6

### Description

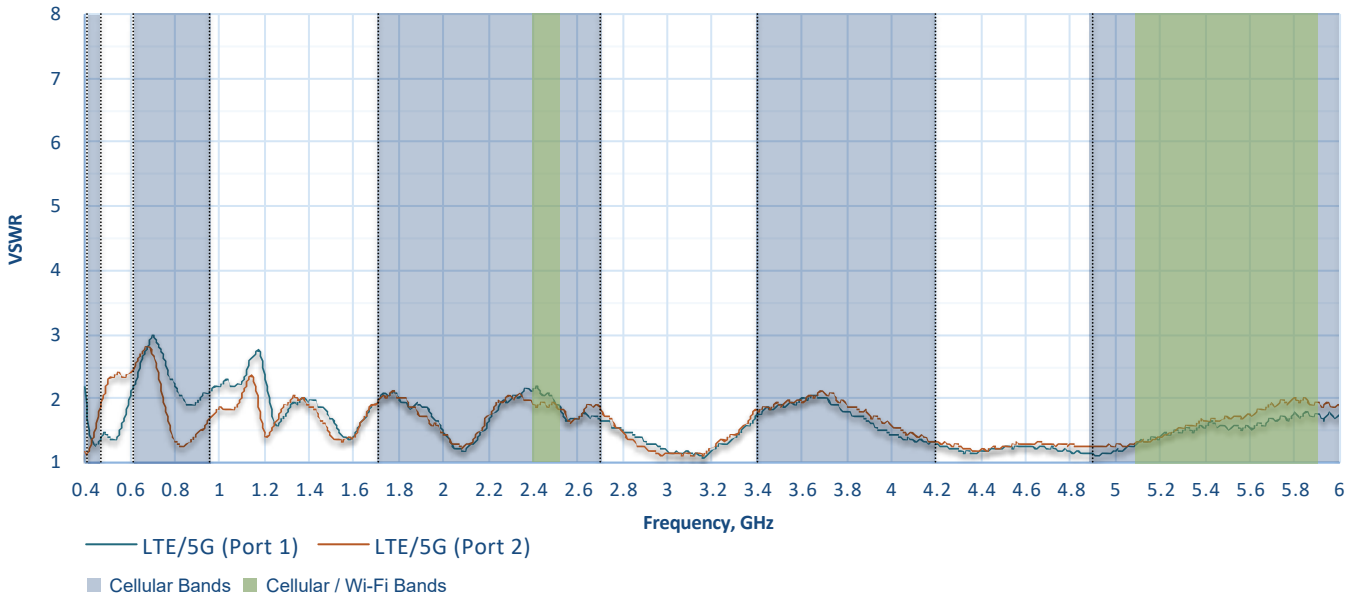
2x LTE/5G, 1x GPS 410-6000MHz, IP68, SMA male, White, 6.5ft / 2m  
2x LTE/5G, 1x GPS 410-6000MHz, IP68, N-Type female, White, 6.5ft / 2m



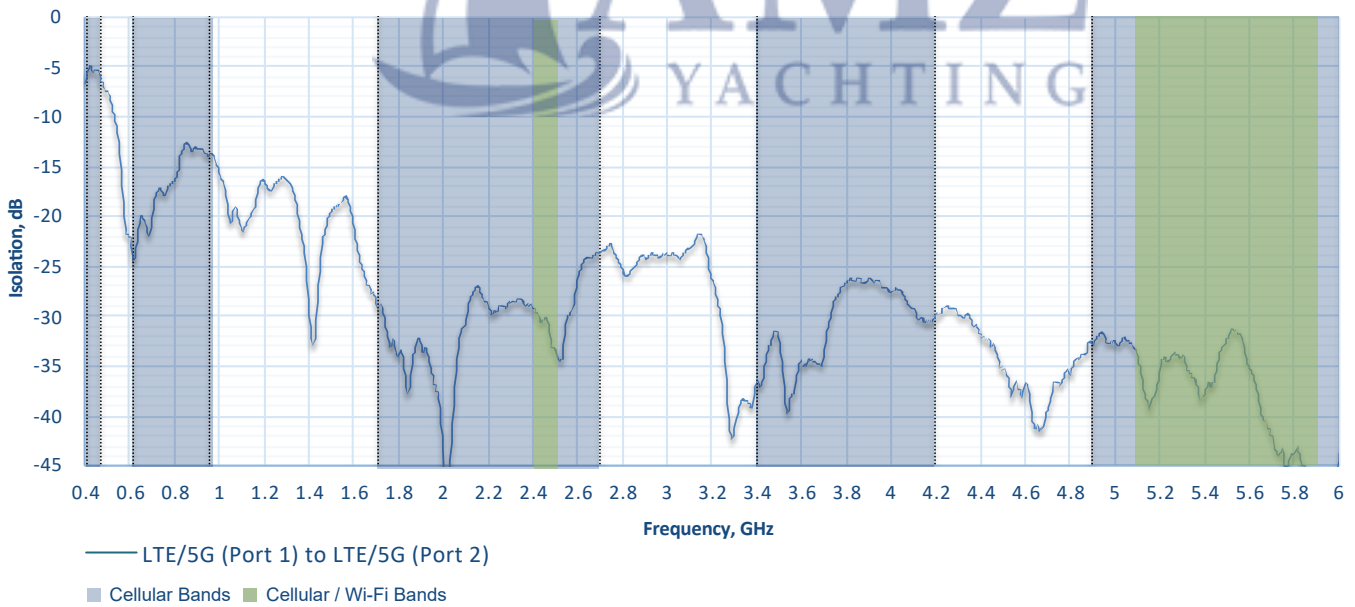
Technical Drawing



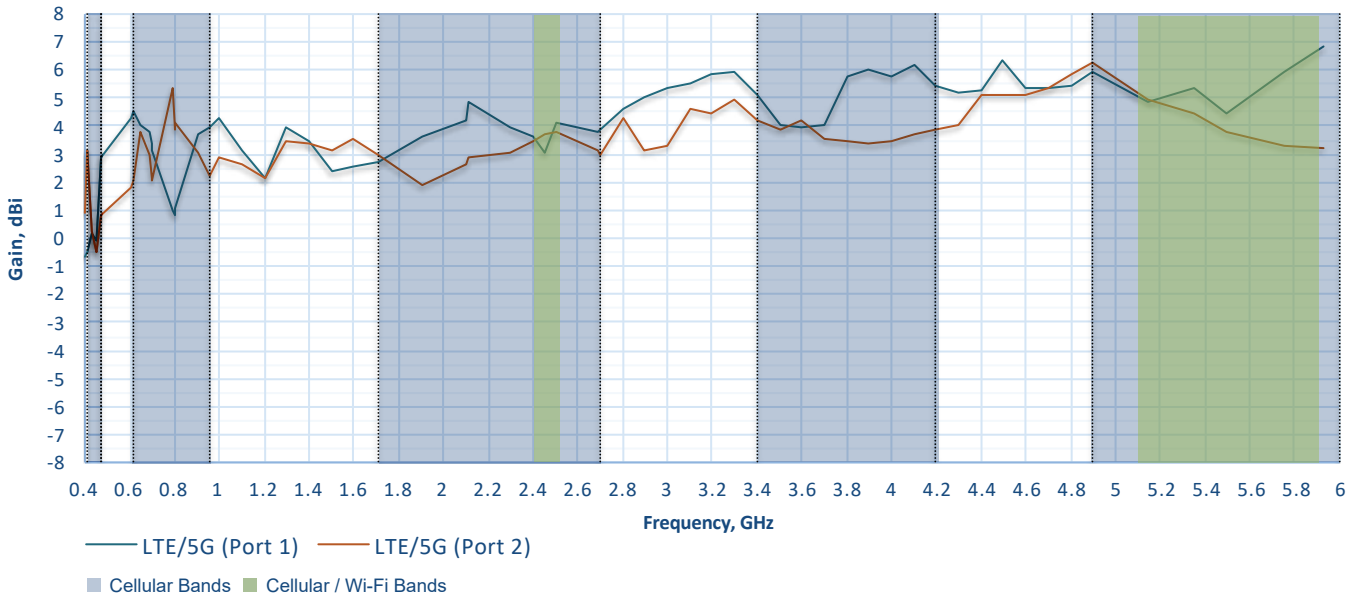
## Cellular Antenna VSWR



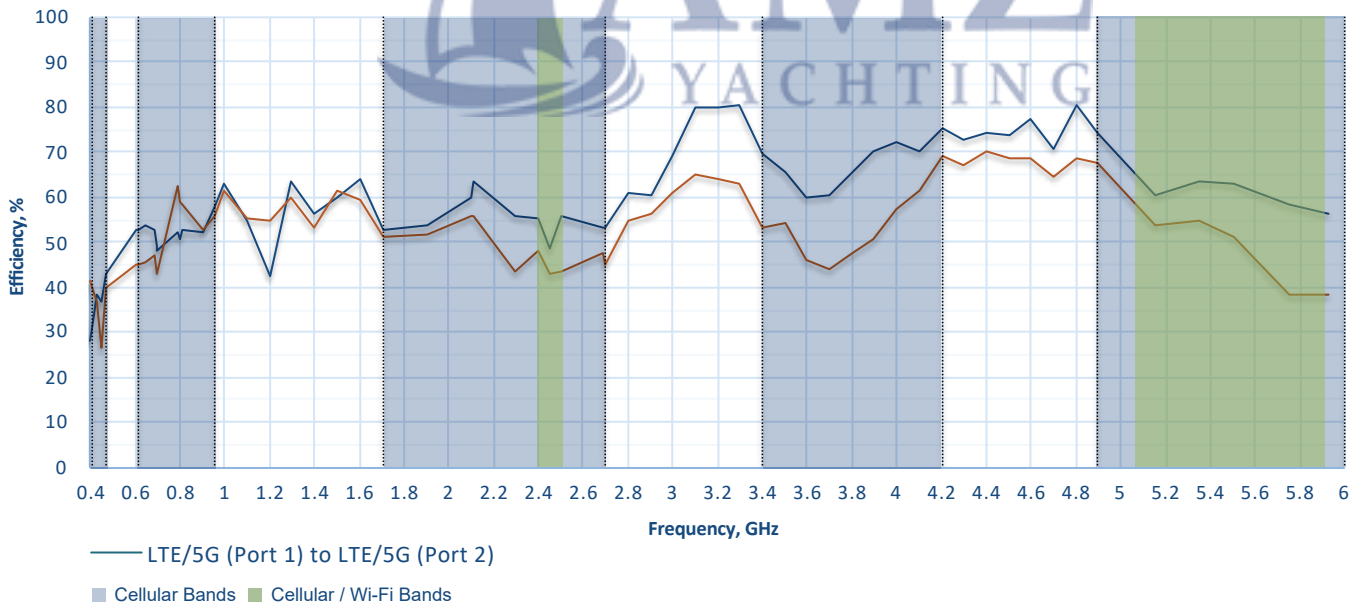
## Cellular Antenna Element Isolation



## Cellular Antenna Gain

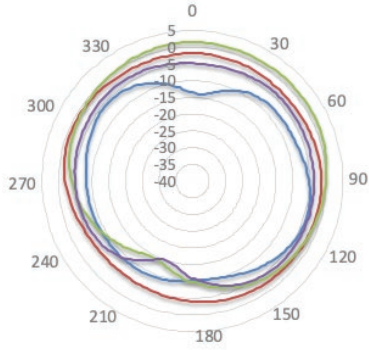


## Cellular Antenna Efficiency



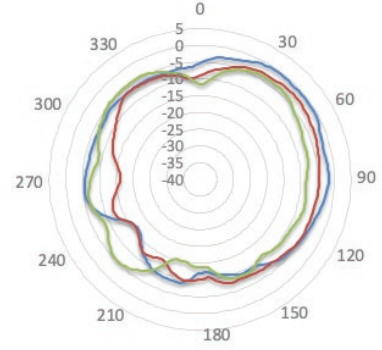
## Radiation Patterns (Azimuth)

430-960 MHz



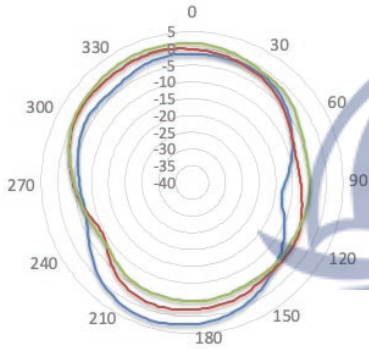
— 430MHz — 617MHz — 800MHz — 960MHz

3400-3800 MHz



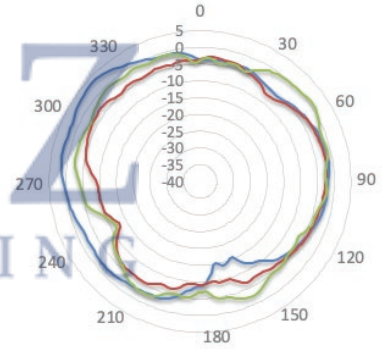
— 3400MHz — 3600MHz — 3800MHz

1710-2100 MHz



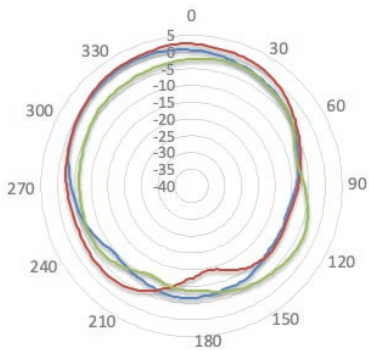
— 1710MHz — 1900MHz — 2100MHz

4200-5150 MHz



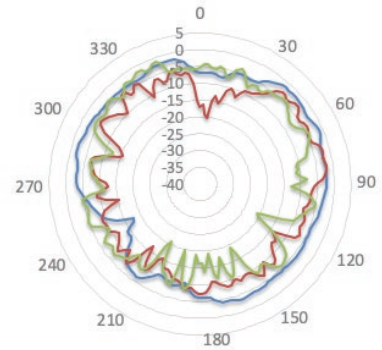
— 4200MHz — 4900MHz — 5150MHz

2300-2700 MHz



— 2300MHz — 2500MHz — 2700MHz

5350-5930 MHz

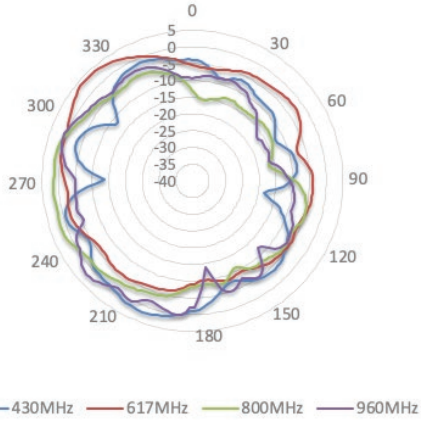


— 5350MHz — 5750MHz — 5930MHz

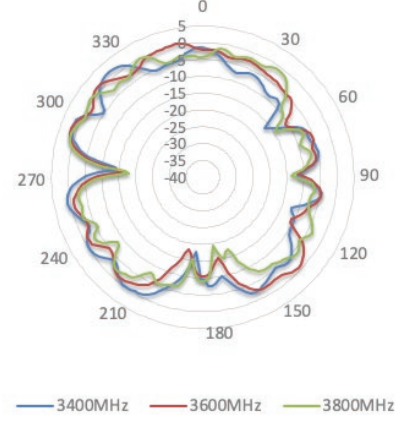
Maritime Antenna 20G

## Radiation Patterns (Elevation 1)

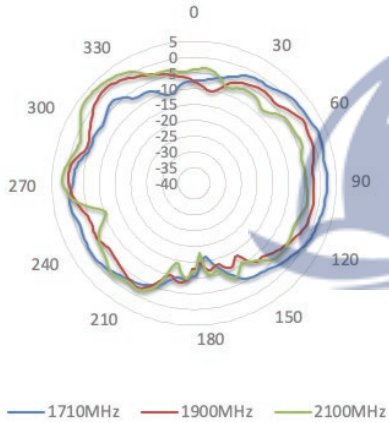
430-960 MHz



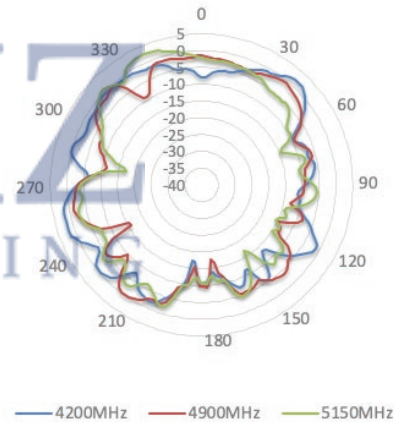
3400-3800 MHz



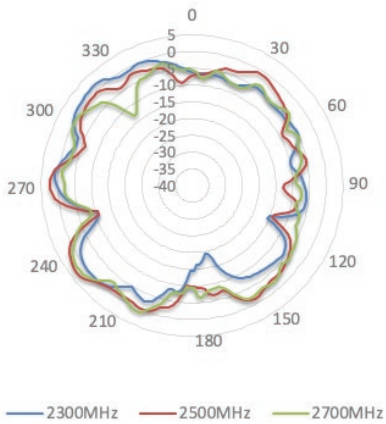
1710-2100 MHz



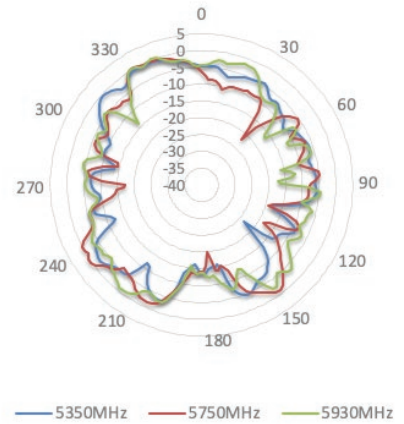
4200-5150 MHz



2300-2700 MHz



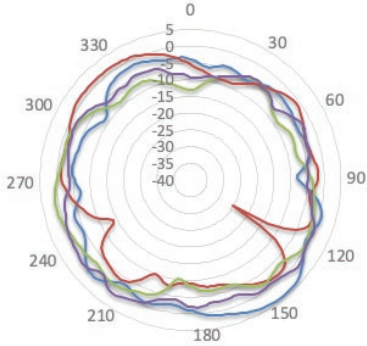
5350-5930 MHz



Maritime Antenna 20G

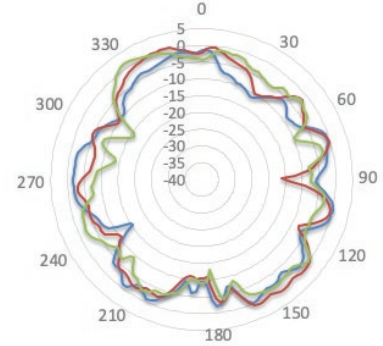
## Radiation Patterns (Elevation 2)

430-960 MHz



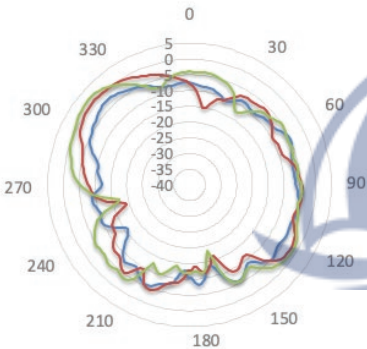
— 430MHz — 617MHz — 800MHz — 960MHz

3400-3800 MHz



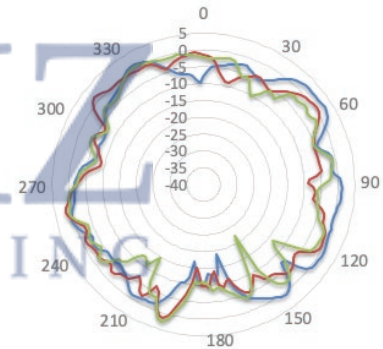
— 3400MHz — 3600MHz — 3800MHz

1710-2100 MHz



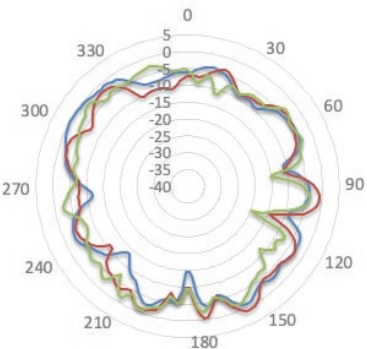
— 1710MHz — 1900MHz — 2100MHz

4200-5150 MHz



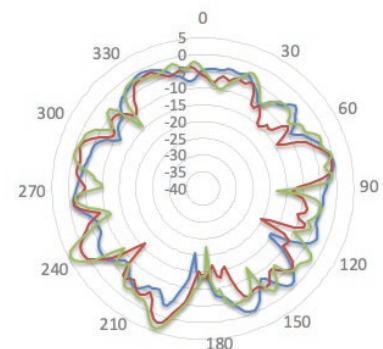
— 4200MHz — 4900MHz — 5150MHz

2300-2700 MHz



— 2300MHz — 2500MHz — 2700MHz

5350-5930 MHz

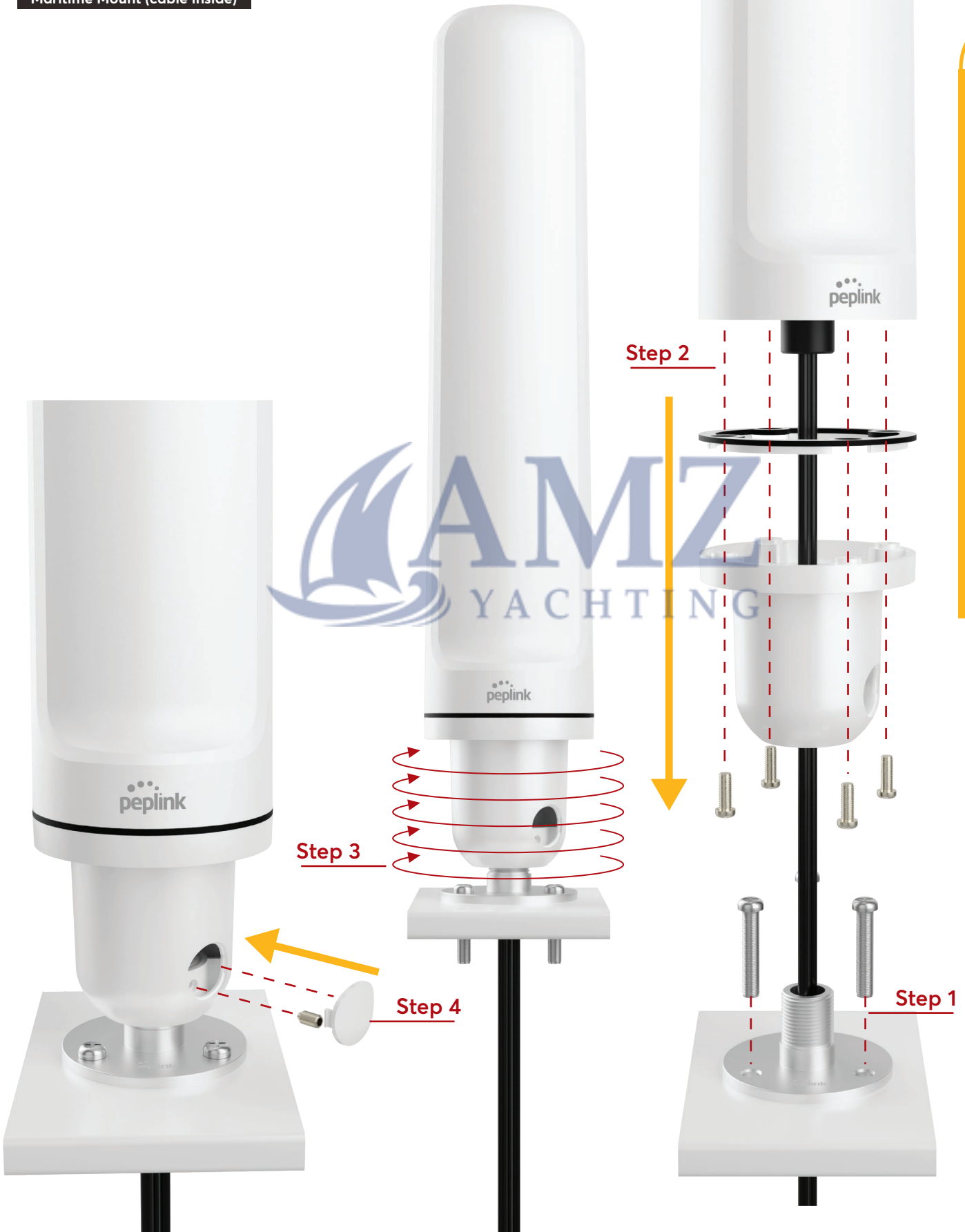


— 5350MHz — 5750MHz — 5930MHz

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## Installation Recommendation

Maritime Mount (cable inside)

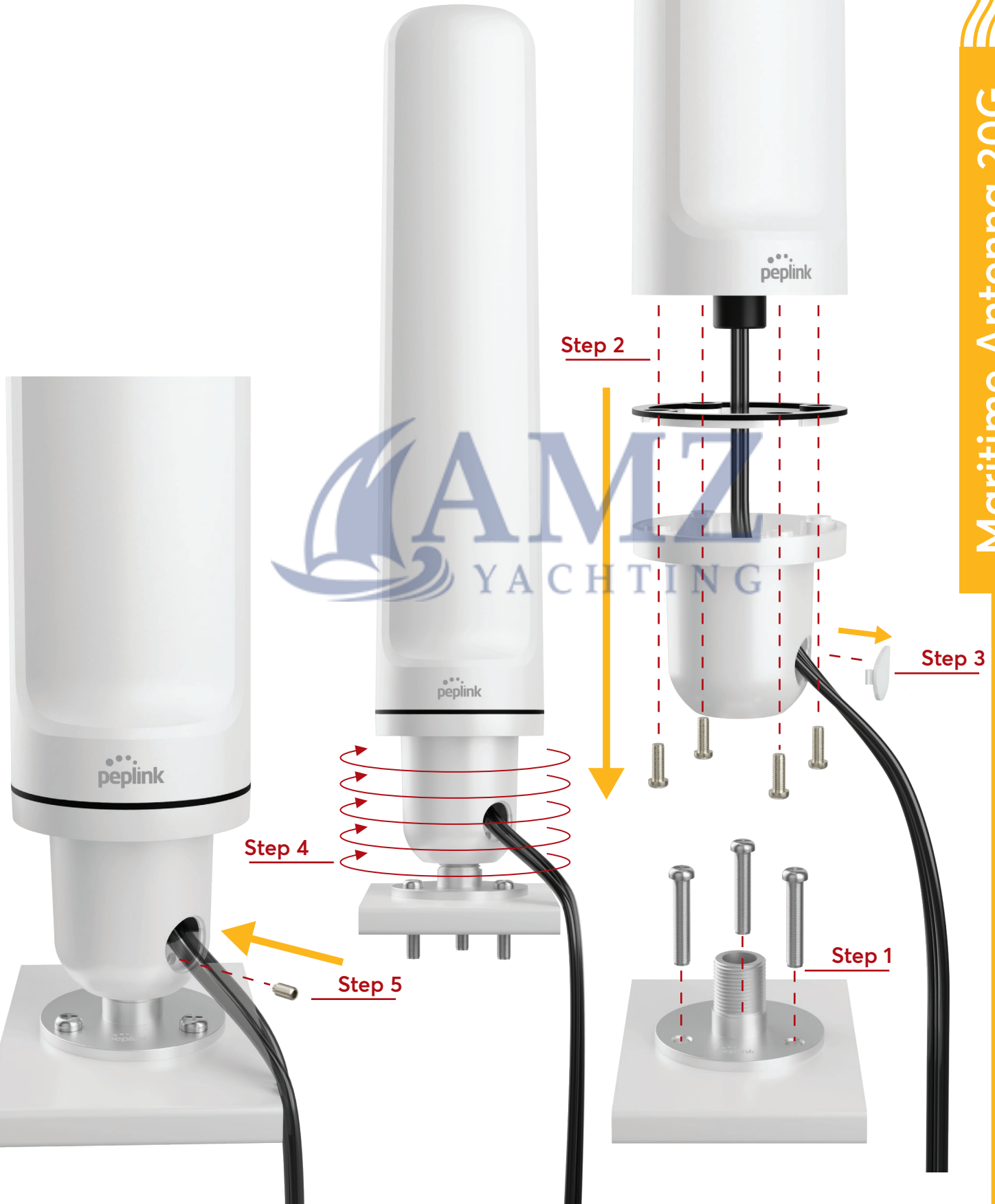


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## Installation Recommendation

Maritime Mount (cable outside)

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## Installation Recommendation

L-shape Mount (horizontal pole)



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## Installation Recommendation

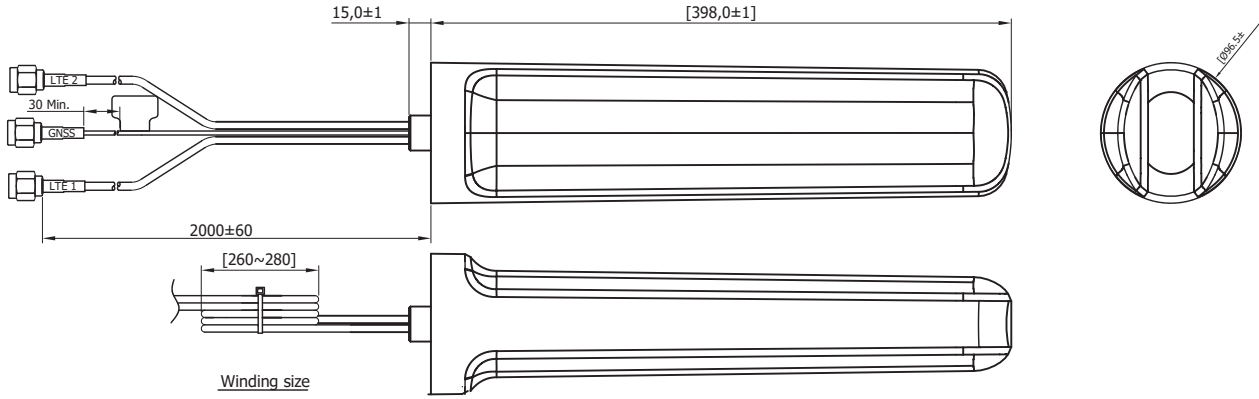
L-shape Mount (vertical pole)



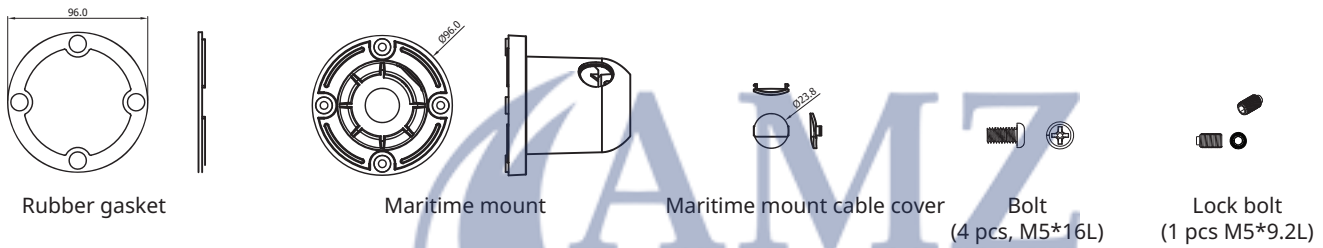
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## Packing List Information (ANT-MR-20G-S-W-6)

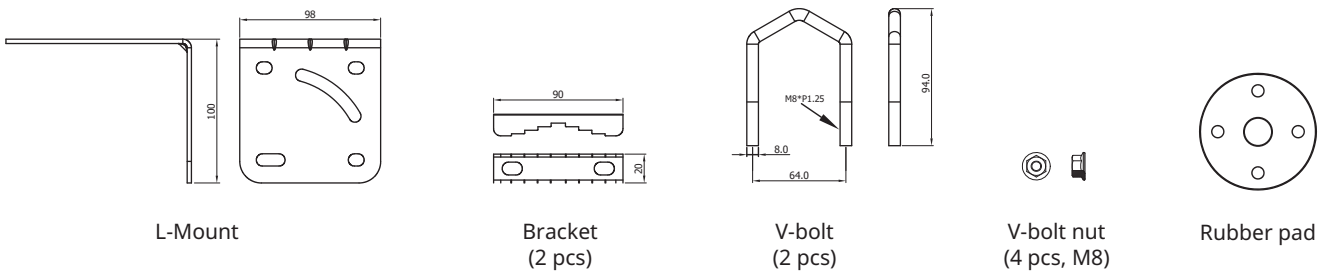
### Antenna



### Maritime Mount Set

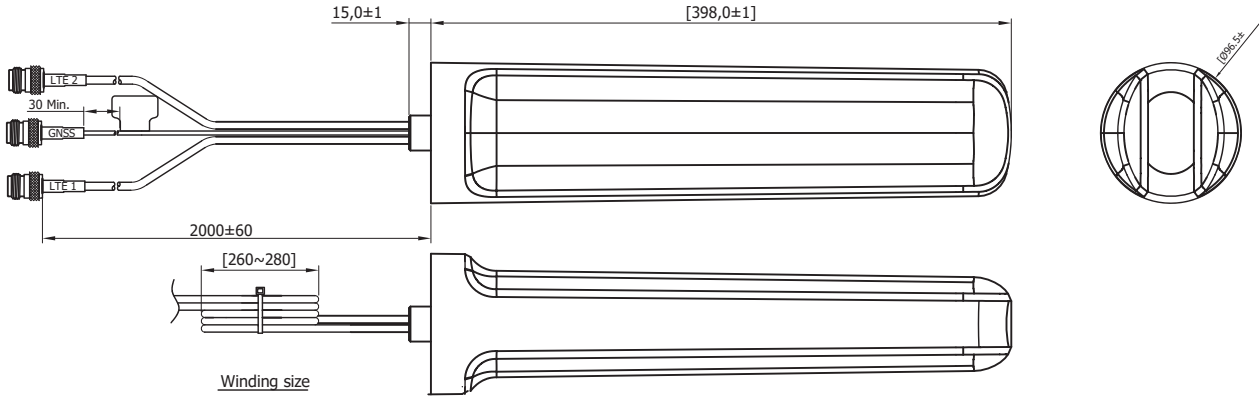


### L-Mount Set

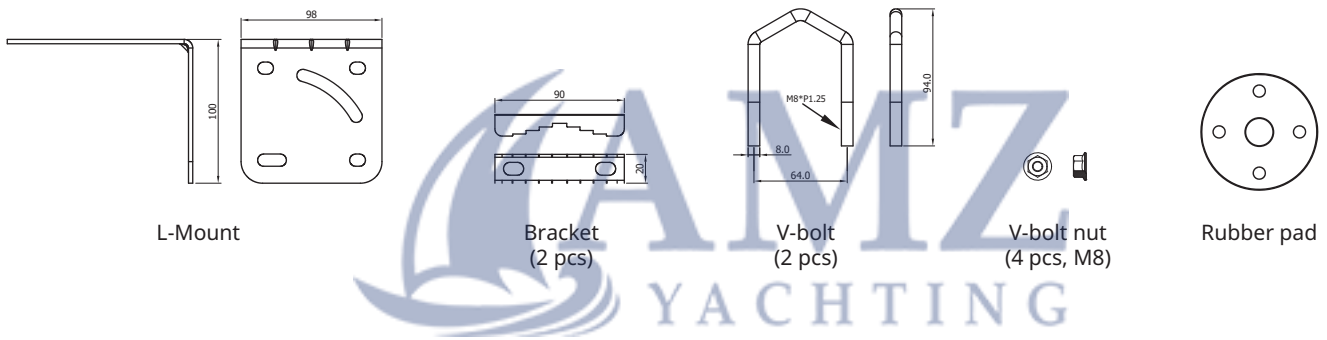


## Packing List Information (ANT-MR-20G-N-W-6)

### Antenna



### L-Mount Mount Set



Maritime Antenna 20G

## Scenario 1

MBX Mini connected (Cellular) to MR-20G (SMA type) antenna with extension cables

ANT-MR-20G-S-W-6 antenna

Cable length 6.5 ft / 2m

SMA male

Adapter SMA female to N-type female

N-type male

EXC-NN-30, Low loss-extension cable

Cable length 30ft / 9m

N-type female

N-type male

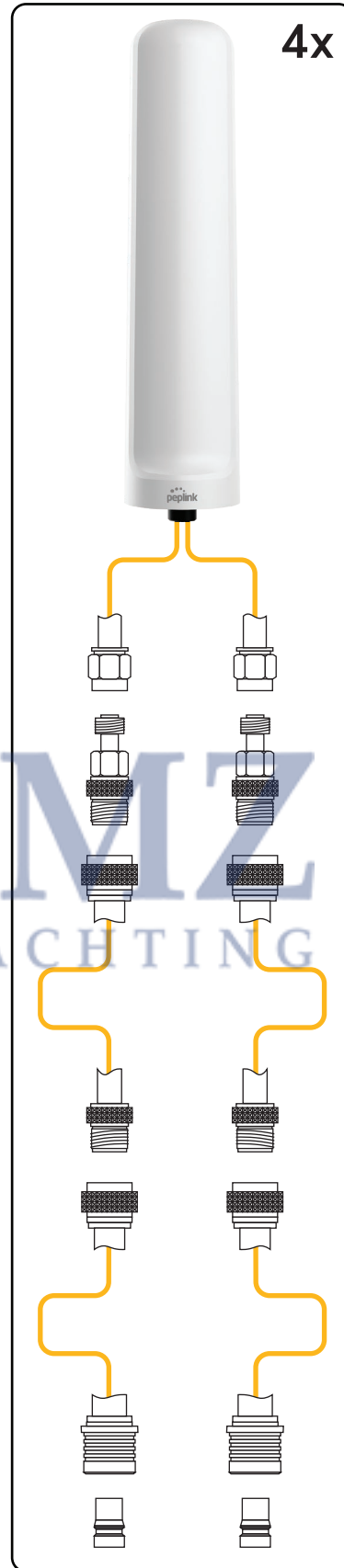
EXC-NQM-1, pigtail cable

Cable length 1ft / 30cm

QMA male

QMA female

MBX Mini



## Scenario 2

MBX Mini connected (Cellular) to MR-20G (N-type) antenna with extension cables

ANT-MR-20G-N-W-6 antenna

Cable length 6.5 ft / 2m

N-type female

N-type male

EXC-NN-30, Low loss extension cable

Cable length 30ft / 9m

N-type female

N-type male

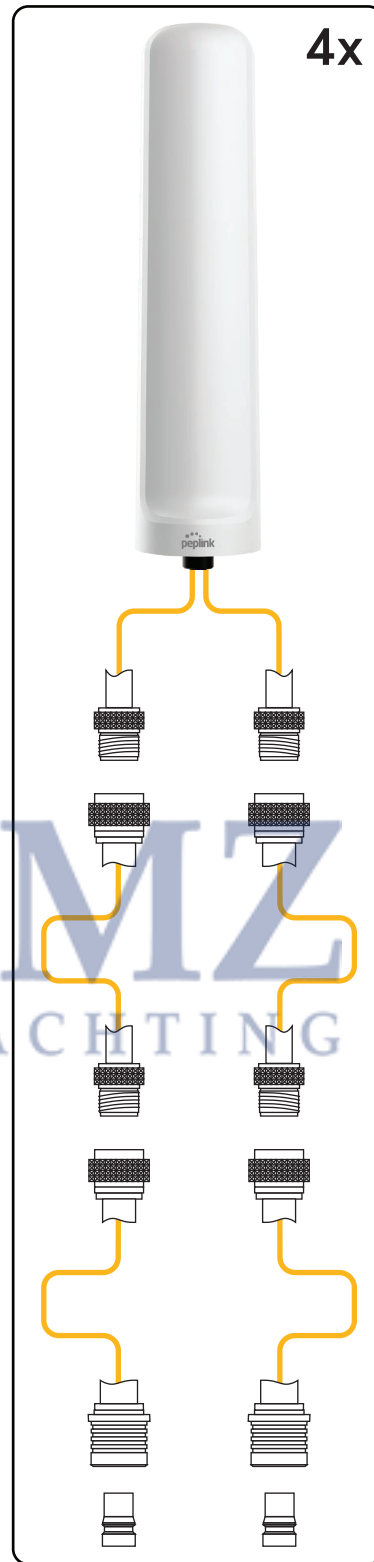
EXC-NQM-1, pigtail cable

Cable length 1ft / 30cm

QMA male

QMA female

MBX Mini



4x

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### Scenario 3

BR1 Pro 5G connected (Cellular) to MR-20G (SMA type) antenna with extension cables

ANT-MR-20G-S-W-6 antenna

Cable length 6.5 ft / 2m

SMA male

Adapter SMA female to N-type female

N-type male

EXC-NN-30, Low loss-extension cable

Cable length 30ft / 9m

N-type female

N-type male

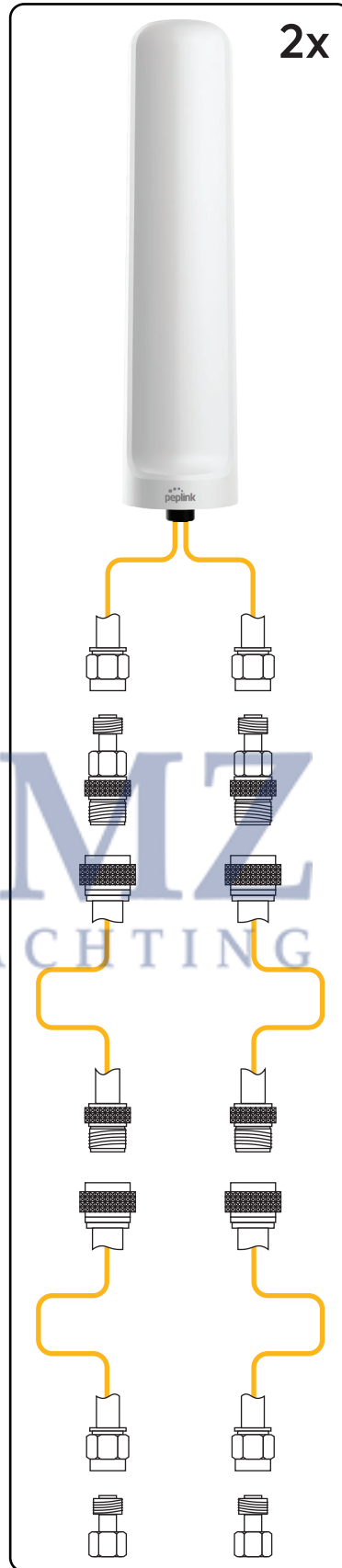
EXC-NSM-1, pigtail cable

Cable length 1ft / 30cm

SMA male

SMA female

BR1 Pro 5G



## Scenario 4

BR1 Pro 5G connected (Wi-Fi) to MR-20G (SMA type) antenna with extension cables

ANT-MR-20G-S-W-6 antenna

Cable length 6.5 ft / 2m

SMA male

Adapter SMA female to N-type female

N-type male

EXC-NN-30, Low loss extension cable

Cable length 30ft / 9m

N-type female

N-type male

EXC-NSM-1, pigtail cable

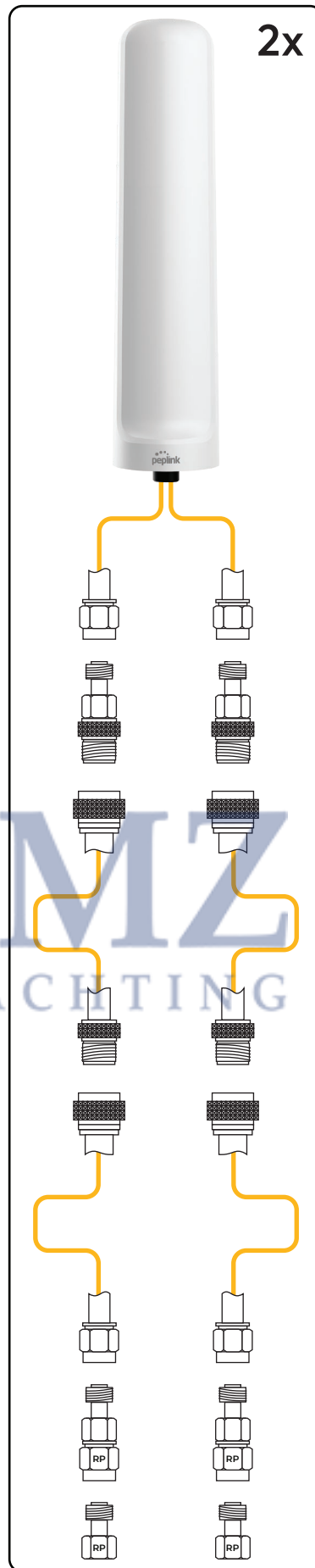
Cable length 1ft / 30cm

SMA male

Adapter SMA female to RP-SMA male

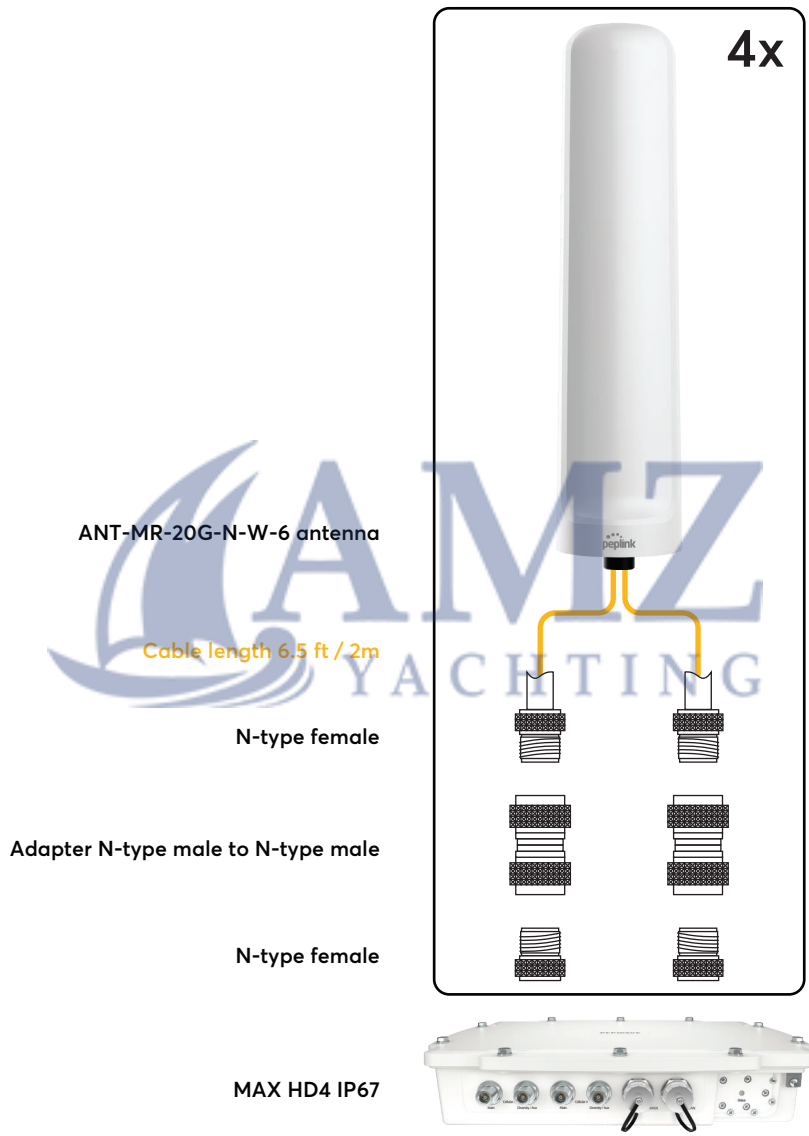
RP-SMA female

BR1 Pro 5G



## Scenario 5

MAX HD4 IP67 connected (Cellular) to MR-20G (N-type) antenna with extension cables



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