

# 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

## Specification

### Cellular

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

### GPS

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

### Cable (LTE/5G)

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

### Cable (GPS)

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

# Maritime 20G

### Mounting

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

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

### Package contents

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

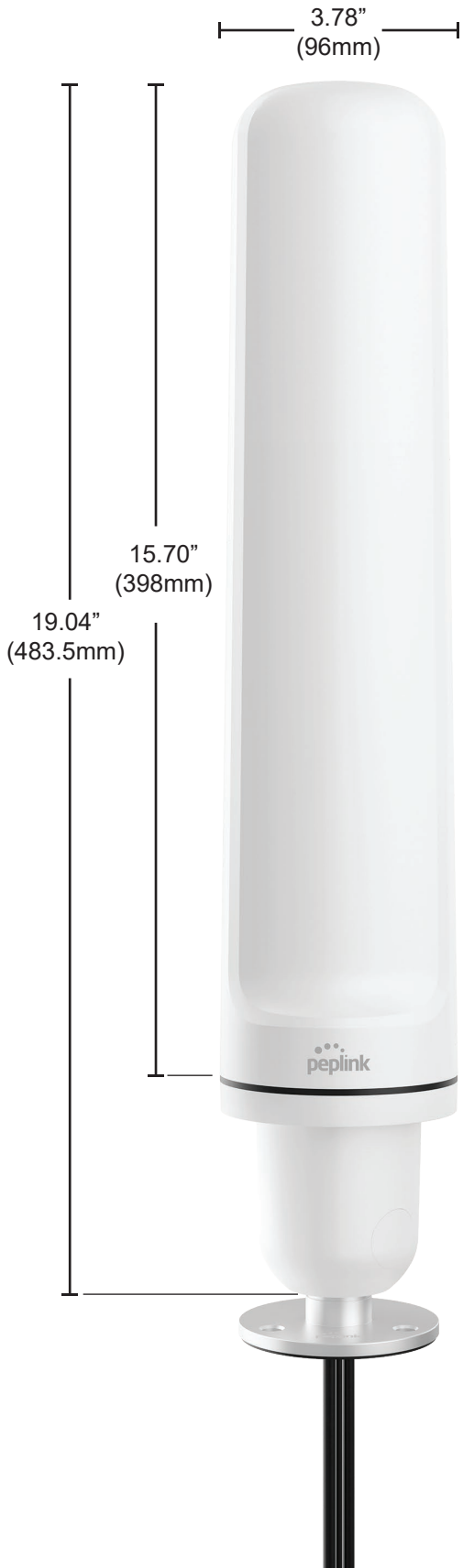
### Environmental & Compliance

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

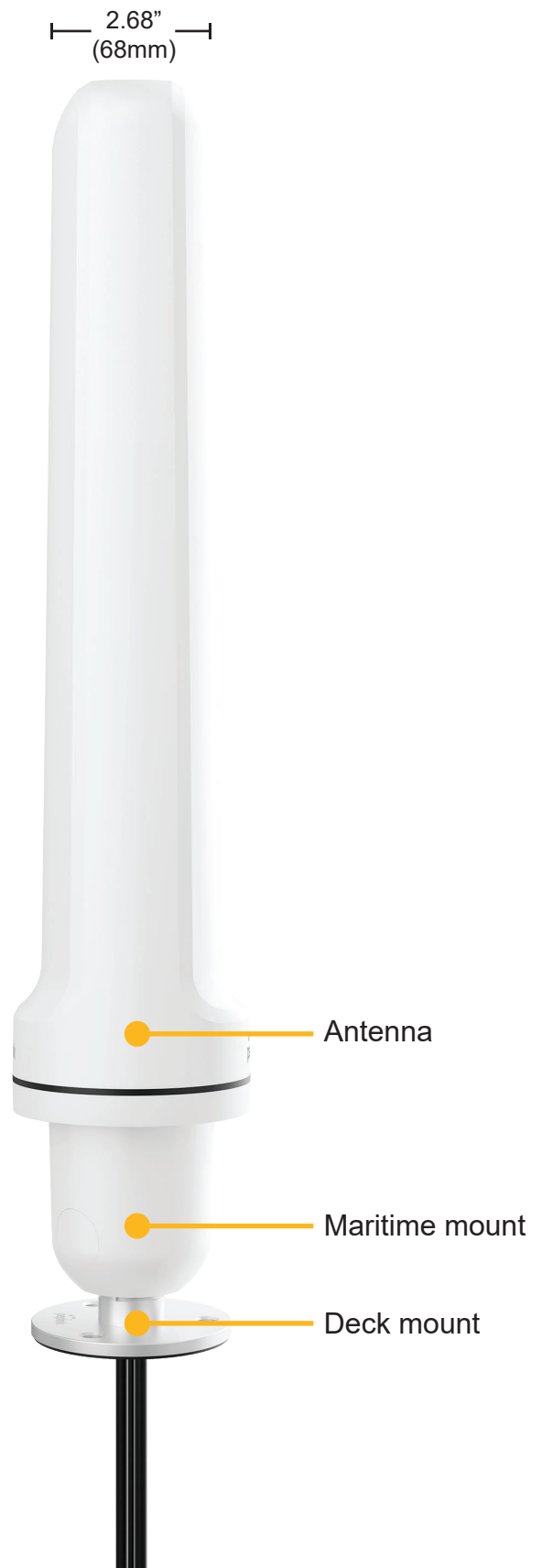
## Ordering Information

Product Code	ANT-MR-20G-S-W-6
Description	2x LTE/5G, 1x GPS 410-6000MHz, IP68, SMA male, White, 6.5 ft / 2m
Product Code	ANT-MR-20G-N-W-6
Description	2x LTE/5G, 1x GPS 410-6000MHz, IP68, N-Type female, White, 6.5 ft / 2m

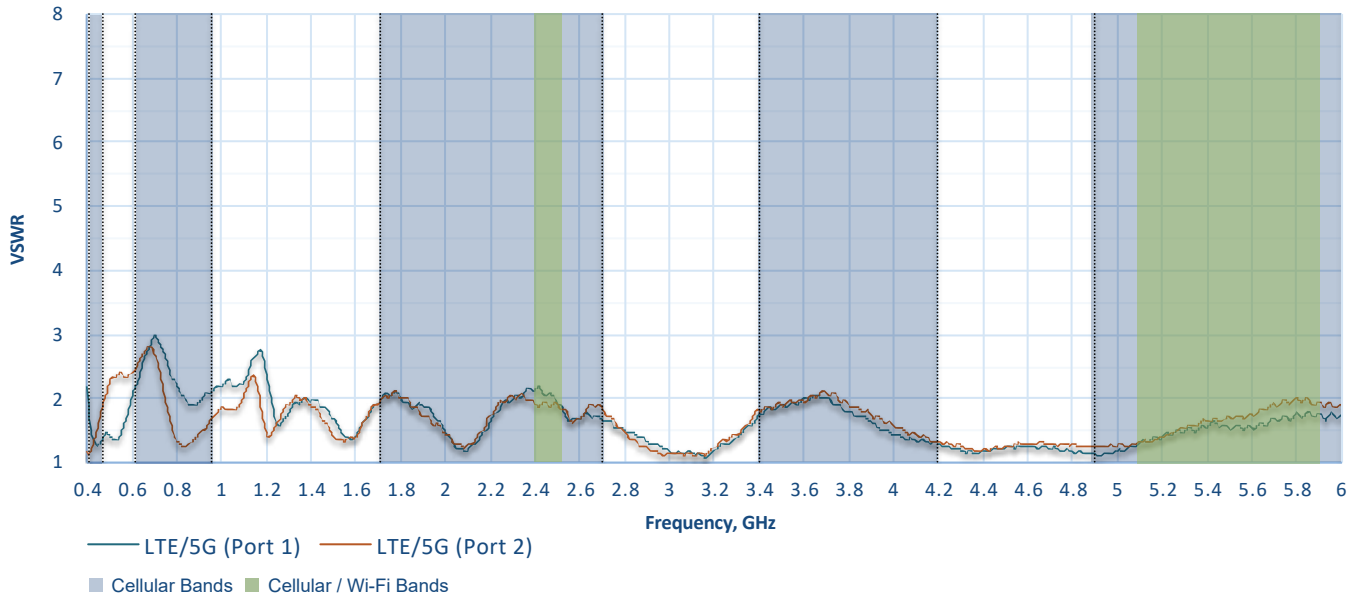
Technical Drawing



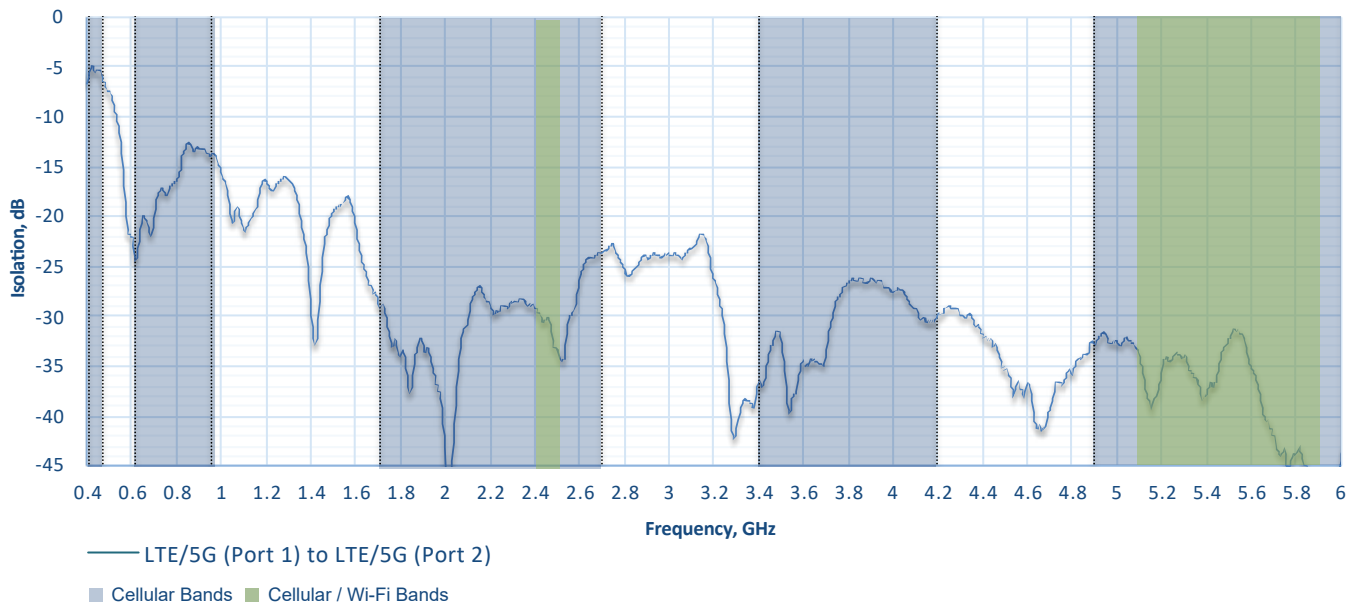
Maritime 20G



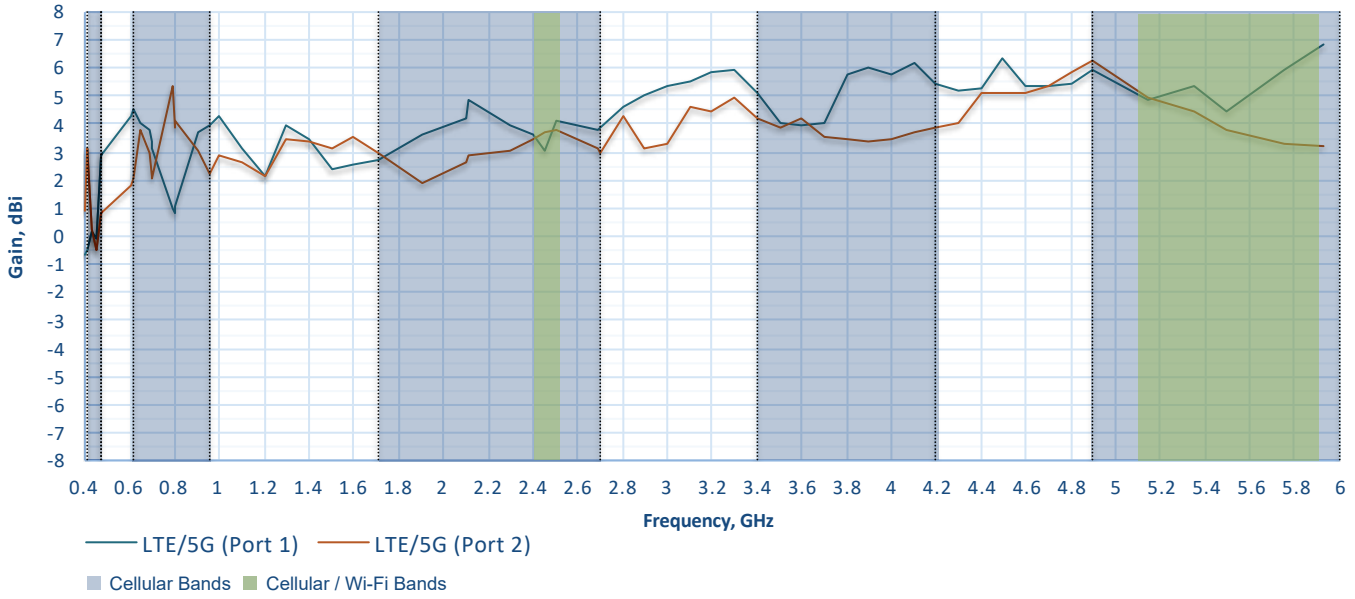
## Cellular Antenna VSWR



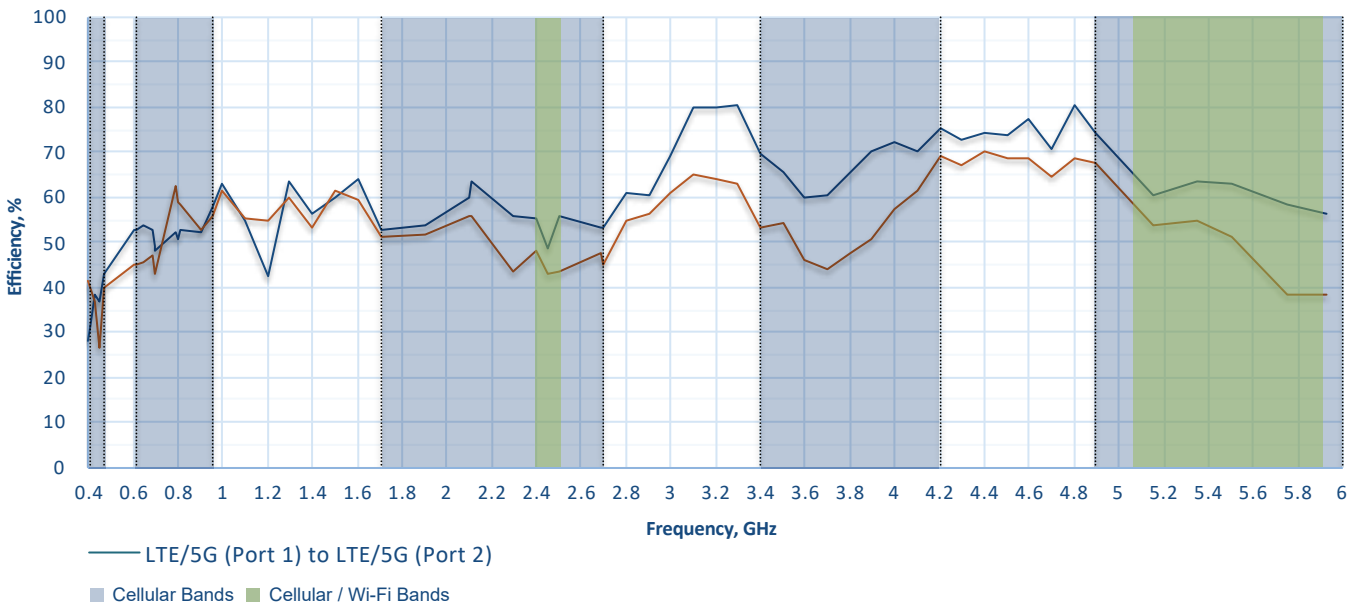
## Cellular Antenna Element Isolation



## Cellular Antenna Gain

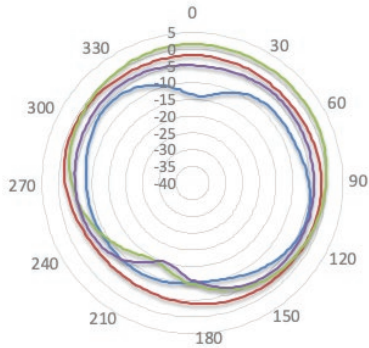


## Cellular Antenna Efficiency



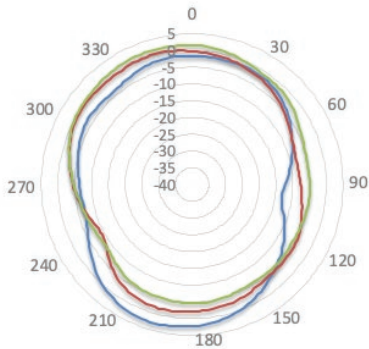
## Radiation Patterns (Azimuth)

430-960 MHz



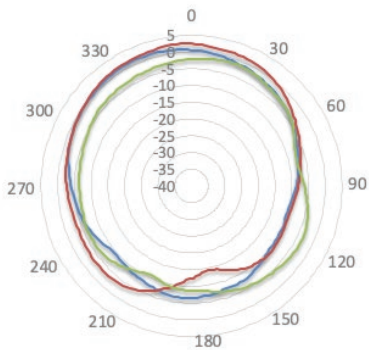
— 430MHz — 617MHz — 800MHz — 960MHz

1710-2100 MHz



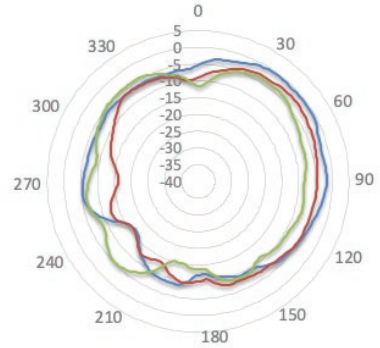
— 1710MHz — 1900MHz — 2100MHz

2300-2700 MHz



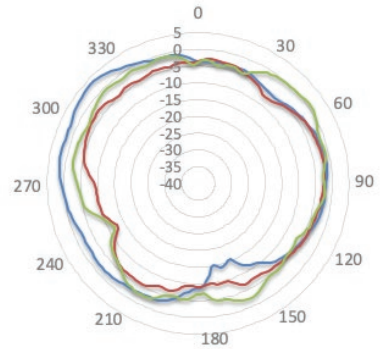
— 2300MHz — 2500MHz — 2700MHz

3400-3800 MHz



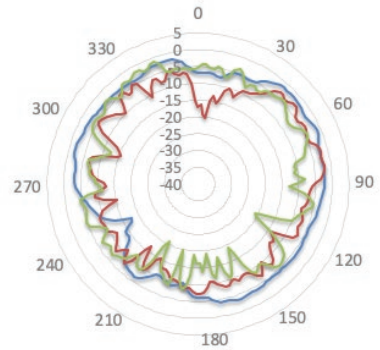
— 3400MHz — 3600MHz — 3800MHz

4200-5150 MHz



— 4200MHz — 4900MHz — 5150MHz

5350-5930 MHz

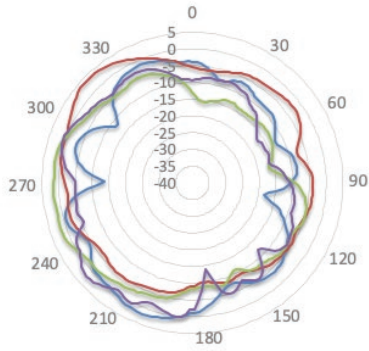


— 5350MHz — 5750MHz — 5930MHz

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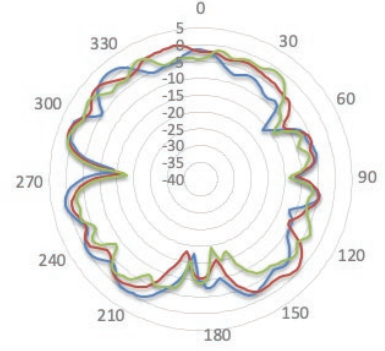
## Radiation Patterns (Elevation 1)

430-960 MHz



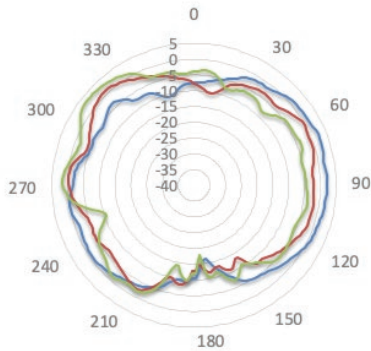
— 430MHz — 617MHz — 800MHz — 960MHz

3400-3800 MHz



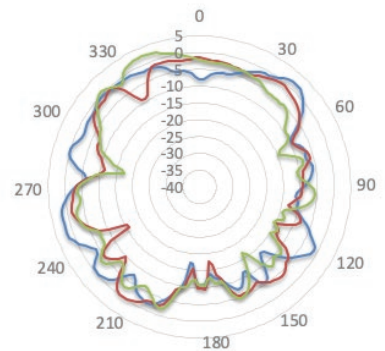
— 3400MHz — 3600MHz — 3800MHz

1710-2100 MHz



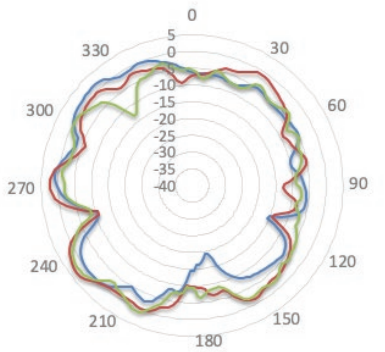
— 1710MHz — 1900MHz — 2100MHz

4200-5150 MHz



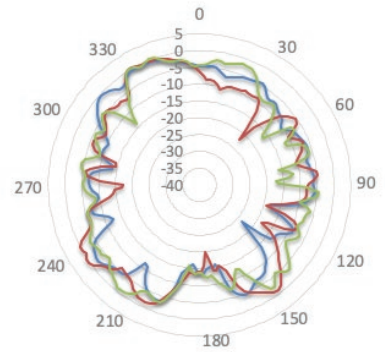
— 4200MHz — 4900MHz — 5150MHz

2300-2700 MHz



— 2300MHz — 2500MHz — 2700MHz

5350-5930 MHz

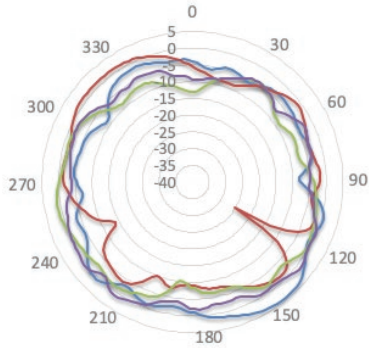


— 5350MHz — 5750MHz — 5930MHz

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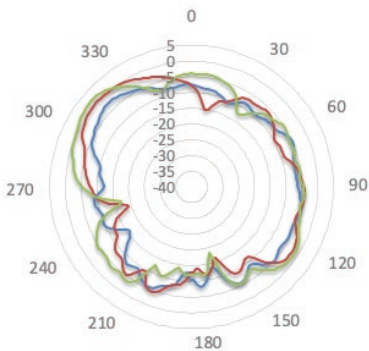
## Radiation Patterns (Elevation 2)

430-960 MHz



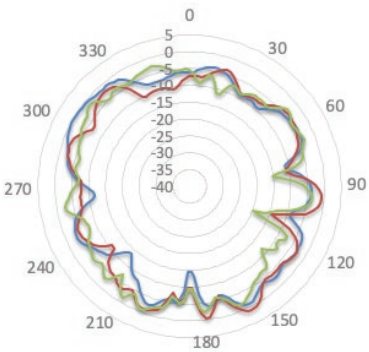
— 430MHz — 617MHz — 800MHz — 960MHz

1710-2100 MHz



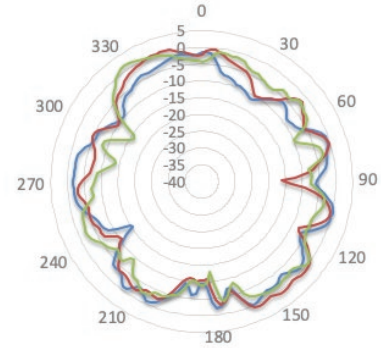
— 1710MHz — 1900MHz — 2100MHz

2300-2700 MHz



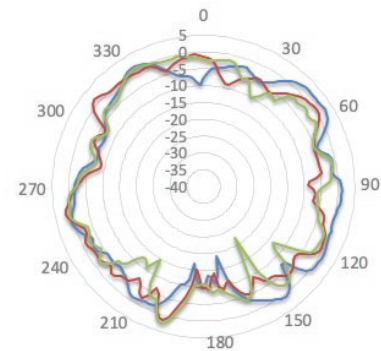
— 2300MHz — 2500MHz — 2700MHz

3400-3800 MHz



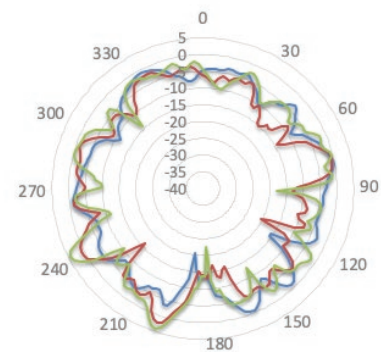
— 3400MHz — 3600MHz — 3800MHz

4200-5150 MHz



— 4200MHz — 4900MHz — 5150MHz

5350-5930 MHz



— 5350MHz — 5750MHz — 5930MHz

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## Installation Recommendation

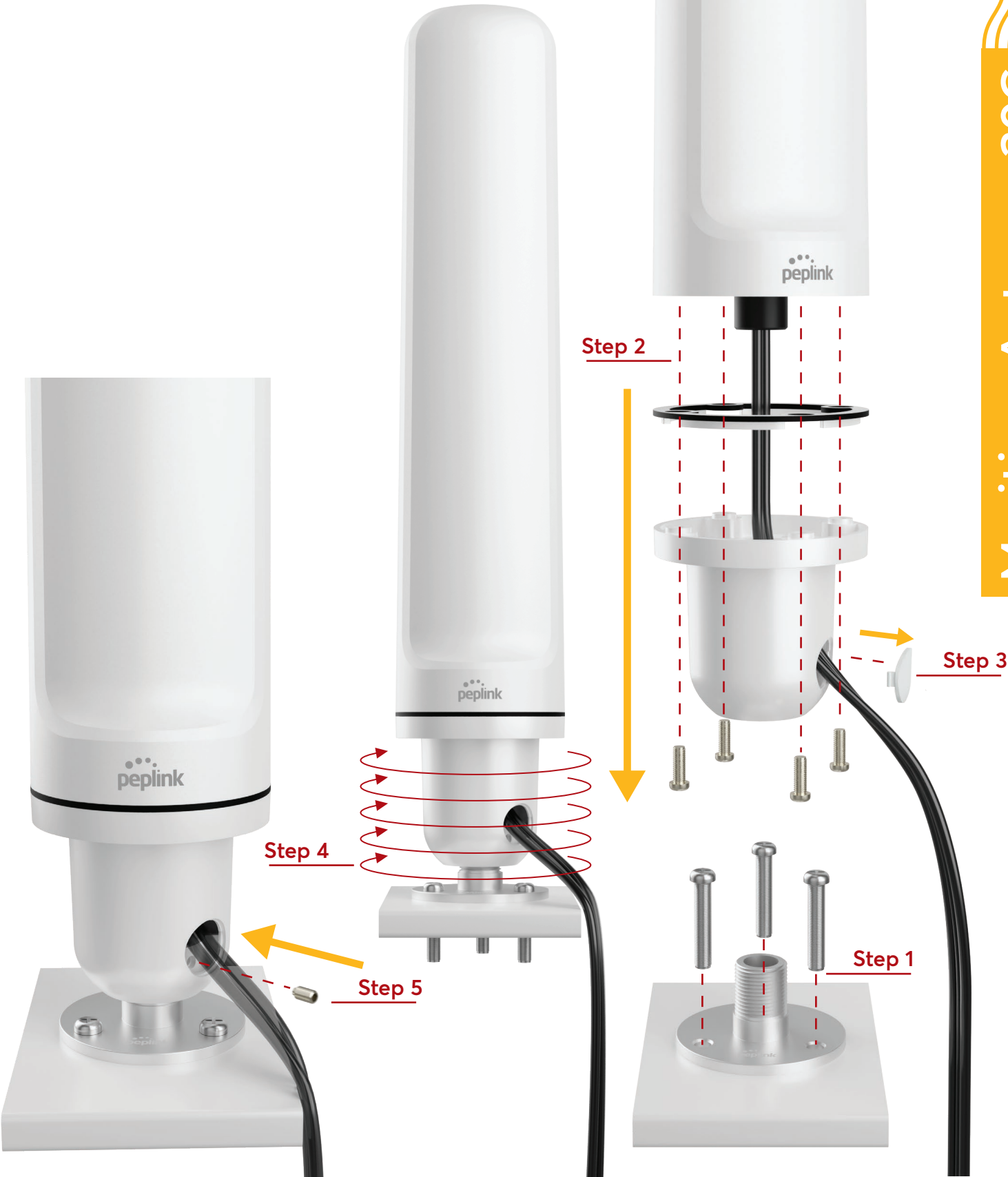
Maritime Mount (cable inside)



## Installation Recommendation

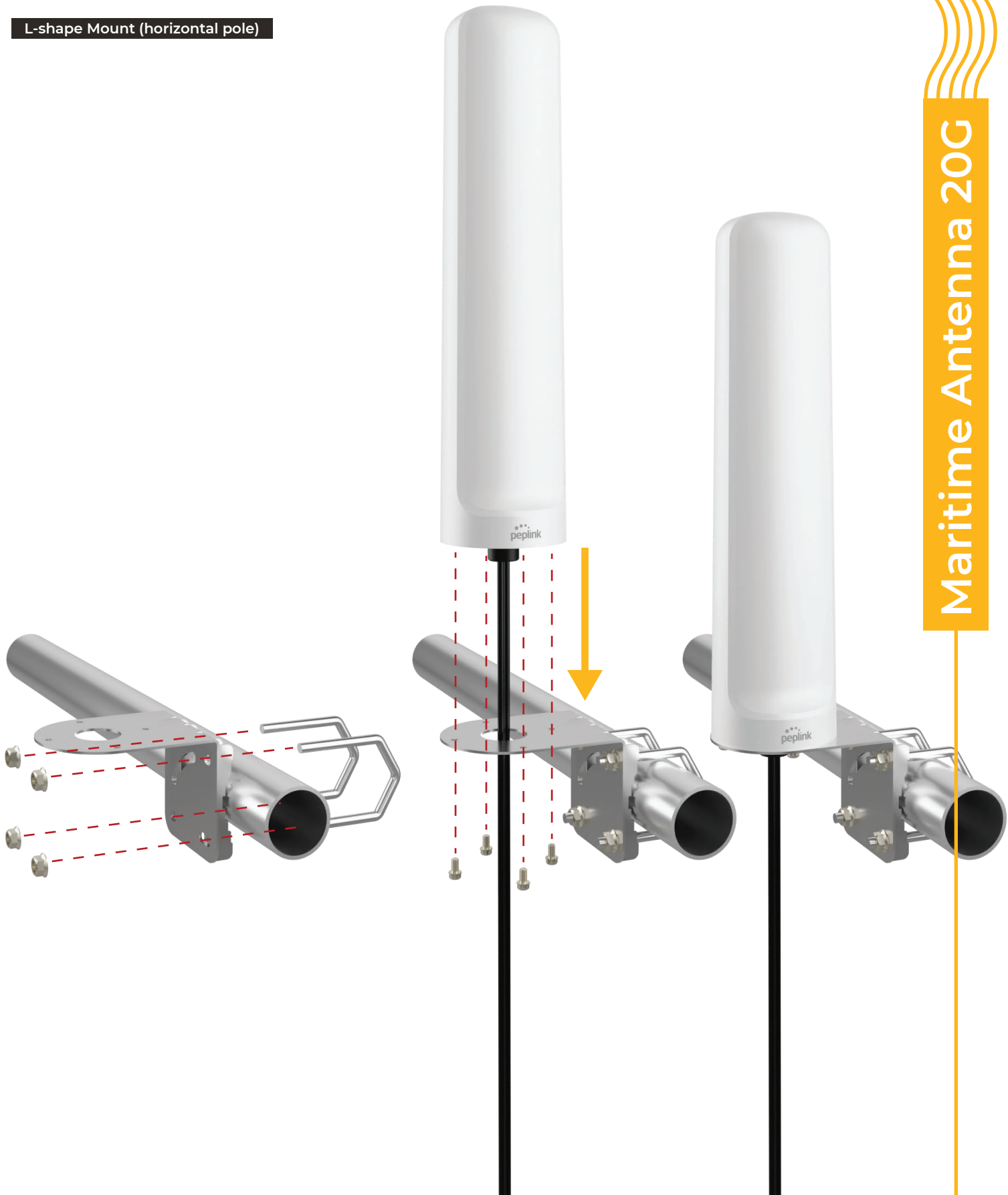
Maritime Mount (cable outside)

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## Installation Recommendation

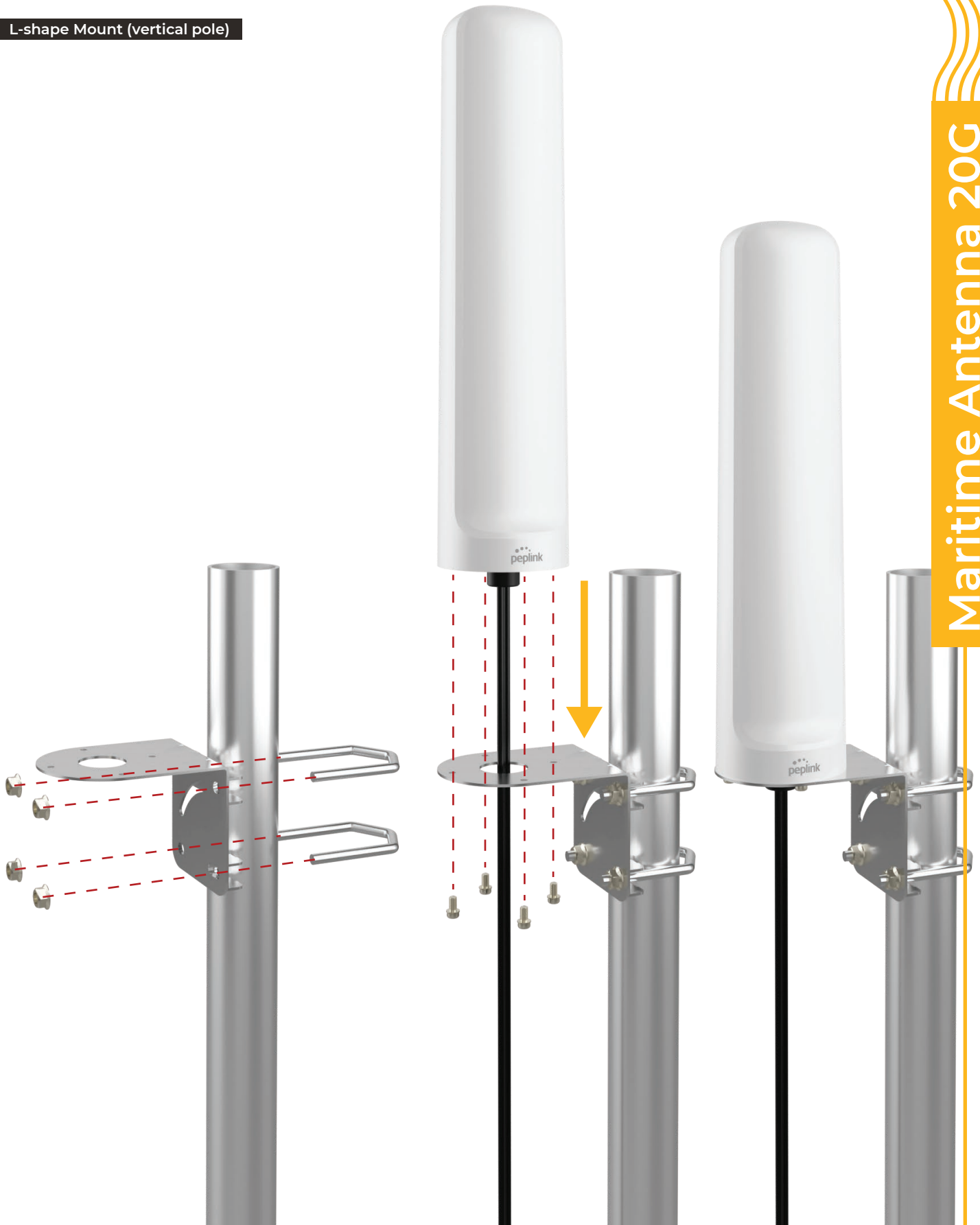
L-shape Mount (horizontal pole)



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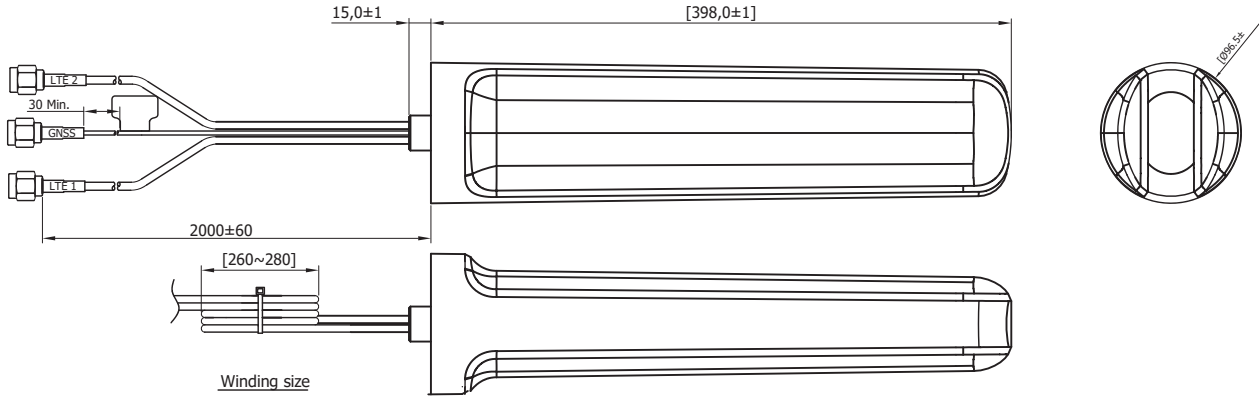
## Installation Recommendation

L-shape Mount (vertical pole)

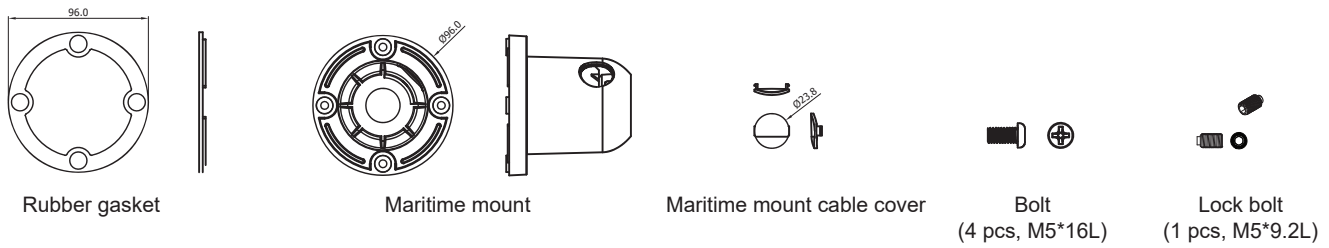


Packing List Information (ANT-MR-20G-S-W-6)

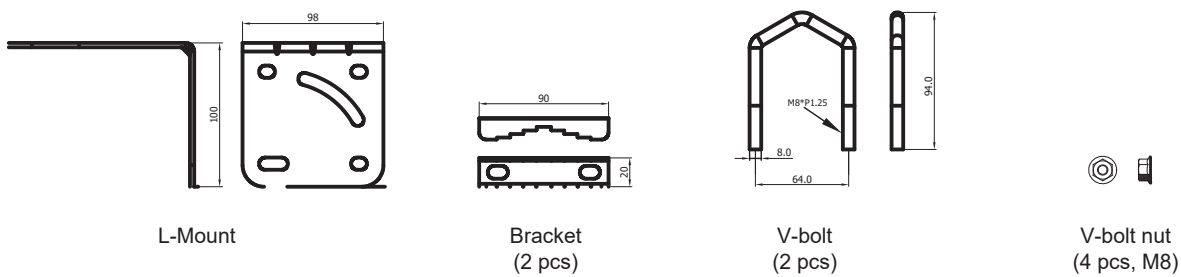
Antenna



Maritime Mount Set



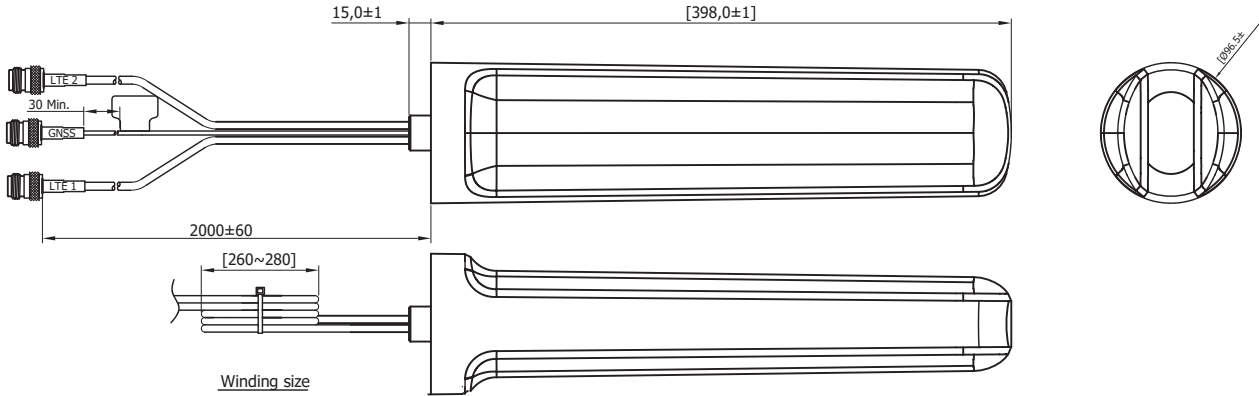
L-Mount Mount Set



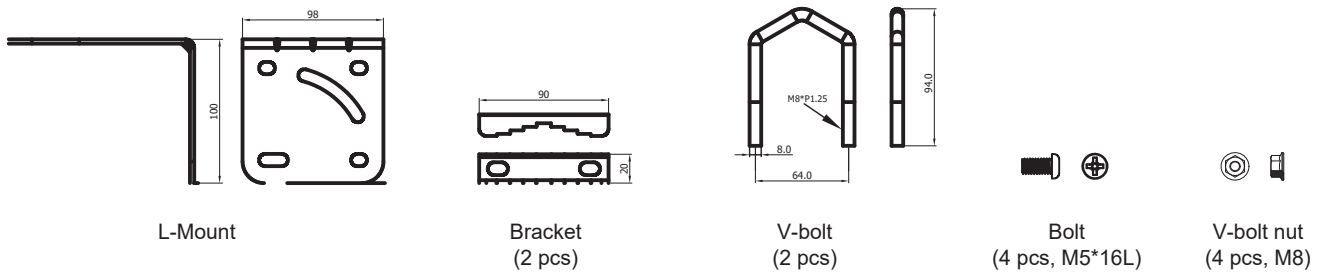
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Packing List Information (ANT-MR-20G-N-W-6)

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

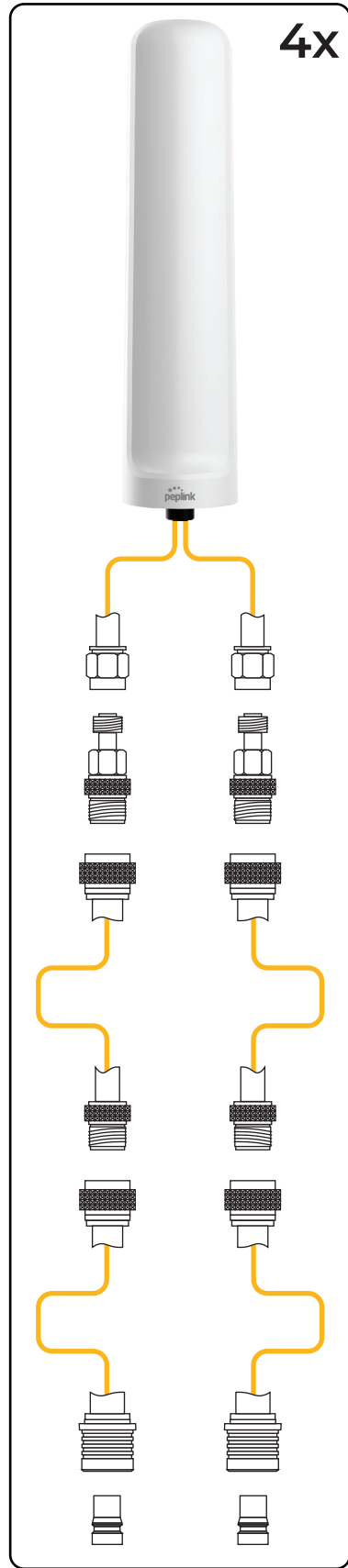
EXC-NQM-1, pigtail cable

Cable length 1ft / 30cm

QMA male

QMA female

MBX Mini



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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

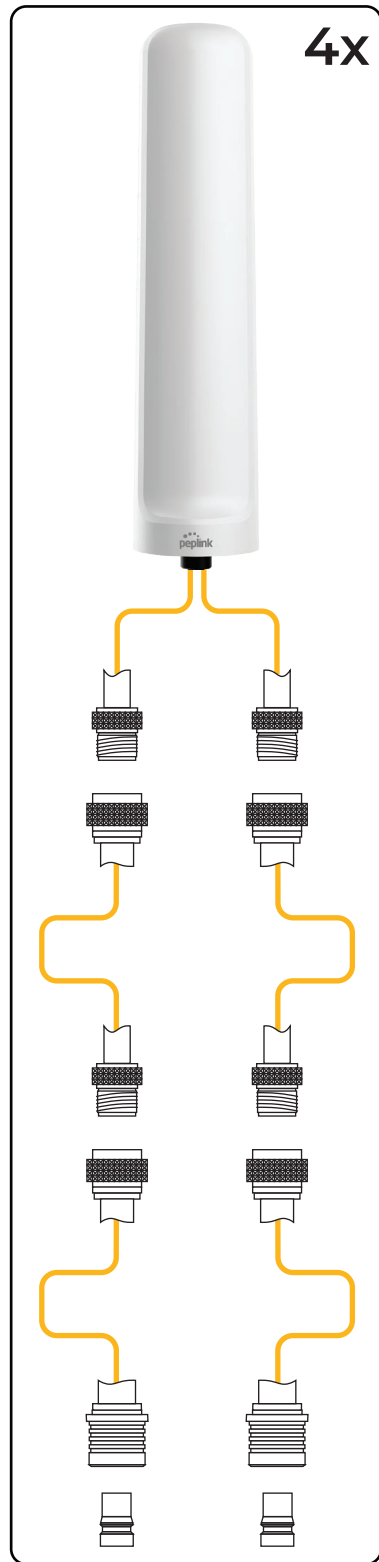
EXC-NQM-1, pigtail cable

Cable length 1ft / 30cm

QMA male

QMA female

MBX Mini



Maritime Antenna 20G





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

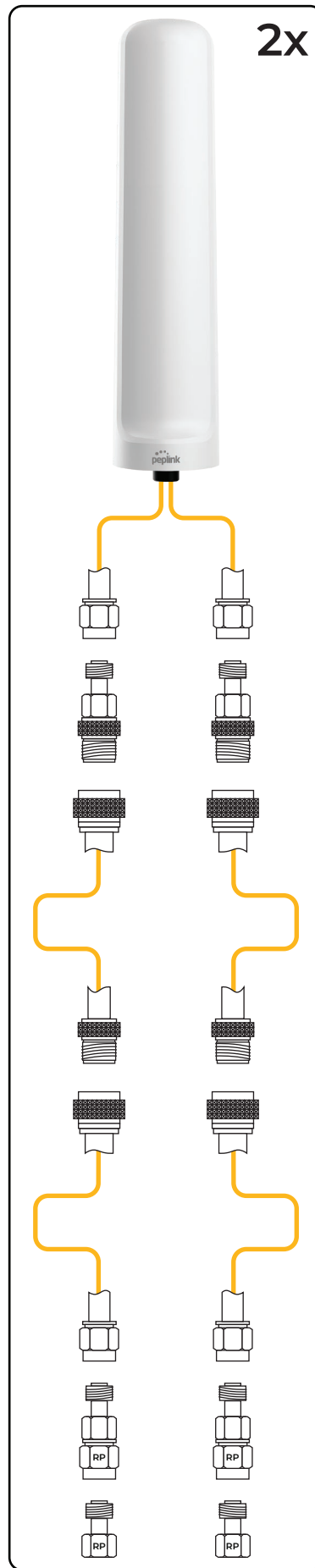
Cable length 1ft / 30cm

SMA male

Adapter SMA female to RP-SMA male

RP-SMA female

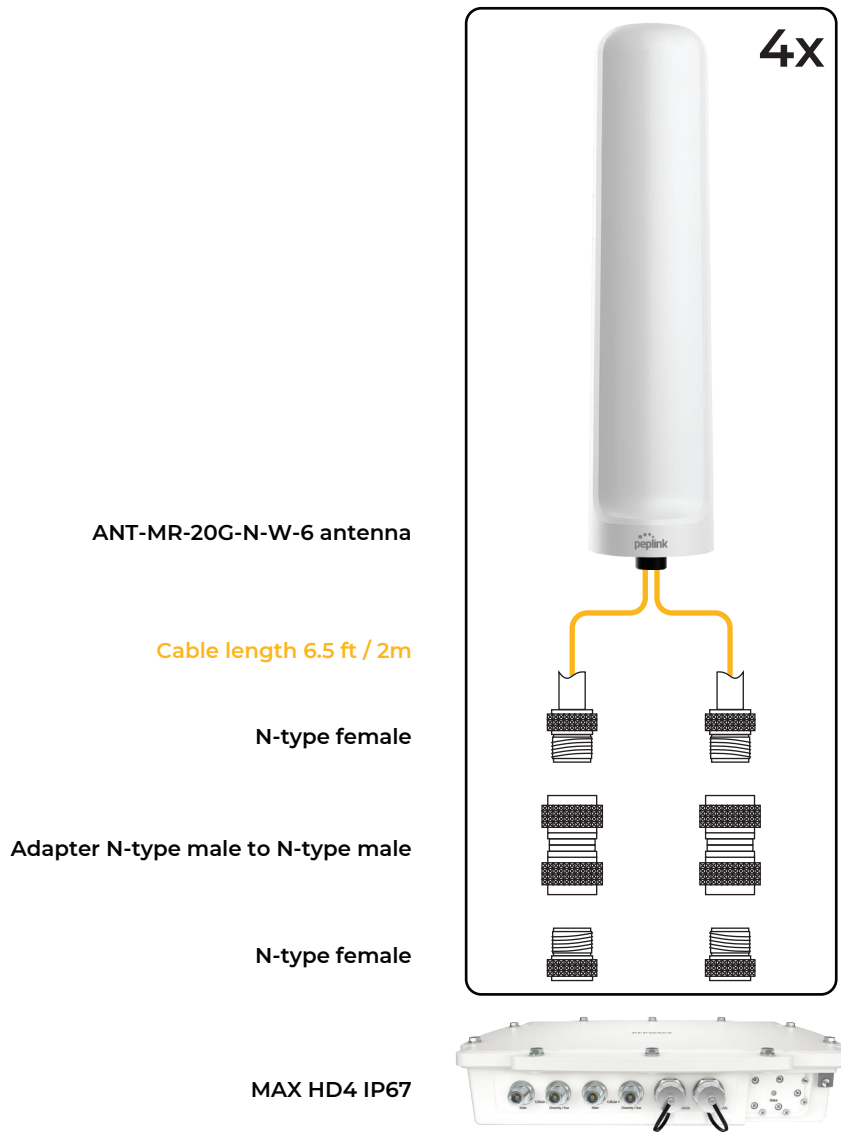
BR1 Pro 5G



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Scenario 5

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



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