

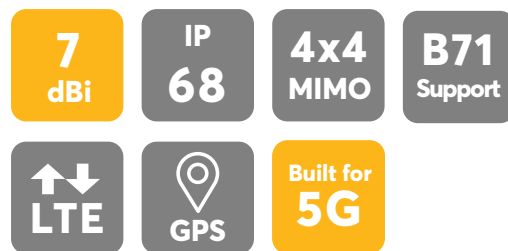


MOBILITY 40G

4x4 MIMO 5G Ready Cellular Antenna System with GPS antenna

Features

- 4x4 MIMO 5G ready cellular antenna system with GPS antenna
- Cellular frequencies 600-6000 MHz
- B71 Support
- Durable and UV-stable housing
- Black or white color options
- IP68 rated



TAA COMPLIANT

Overview

Antenna elements	4x LTE, 1x GPS
Cellular frequencies	0.3dBi@ 617-960MHz 5.1dBi@ 1710-2700MHz 5.8dBi@ 3400-4200MHz 7.0dBi@ 4900-6000MHz
Cellular bands	LTE bands B1 to B86 (except B31, B72, B73, B87, B88), 5G bands n1 to n99
GPS frequency bands	1.6dBi, LNA 28dB: 1561-1602MHz
IP rating	IP68
Dimensions (Height) (Diameter)	1.42" / 36mm (spigot not included) 5.12" / 130mm
Coax cable type	CFD-200 (4G/5G, Wi-Fi) RG-174 (GPS)
Connector Type	SMA male, QMA male, N-type male

Description

The Peplink Mobility 40G is a 5G ready multi-band antenna built for land-based mobile applications. It supports 4x4 MIMO for high bandwidth and solid reliability. It is also 5G ready and supports a wide range of global cellular frequencies. The GPS antenna is equipped with high gain LNA, making it ideal for location tracking.

The Mobility 40G has a solid housing made of UV stable plastic materials. Two color options are available (black and white) to fit different deployments. For easier installation, the antenna comes with different cable length options, available in SMA, QMA or N-type.

Applications

- Public Safety and mission critical connectivity
- Mobile healthcare
- Transportation Connectivity

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Mobility 40G



Specification

Cellular

Antenna elements	4 elements
Cellular frequencies	0.3dBi@ 617-960MHz 5.1dBi@ 1710-2700MHz 5.8dBi@ 3400-4200MHz 7.0dBi@ 4900-6000MHz
Cellular bands	LTE bands B1 to B86 (except B31, B72, B73, B87, B88), 5G bands n1 to n99
VSWR	< 2.5 over 85% of the band
Feed power handling	10W
Input impedance	50 Ω
Polarisation	Linear
Ground plane	Not required#

GPS

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

Cable

Type	CFD-200
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, QMA male, N-type male
Type	RG-174
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, QMA male, N-type male

Mobility 40G

Mounting

Supported types	Panel, wall, pole
Mounting hole	1 11/16" / 43mm
Max panel thickness	19/32" / 15mm

Mechanical

Product dimensions (Height) (Diameter)	1.42" / 36mm (spigot not included) 5.12" / 130mm
Packaged dimensions	8.90" x 8.46" x 4.29" / 226 x 215 x 109mm
Radome material	UV stable PC+ABS

Package contents

Antenna	Mobility 40G
Mounting	Mounting bracket Double sided 3M adhesive pad Diameter: 5.08" / 129mm Thickness: 0.08" / 2mm

Environmental, compliance

Cable flammability	UL 758 (VW-1)
Compliance	RoHS, REACH & WHEE
Enclosure flammability	UL 94 HB
IP rating	IP68
Operating temperature	-40° - 176°F / -40° - 80°C
Storage temperature	-40° - 176°F / -40° - 80°C
Salt Spray	MIL-STD 810F/ASTM 8117
UV resistance rating	UL 746C (F1, long-term UV exposure)
Wind Survival	235mph (379km/h)*

#All measurements stated in this document were obtained without a ground plane.

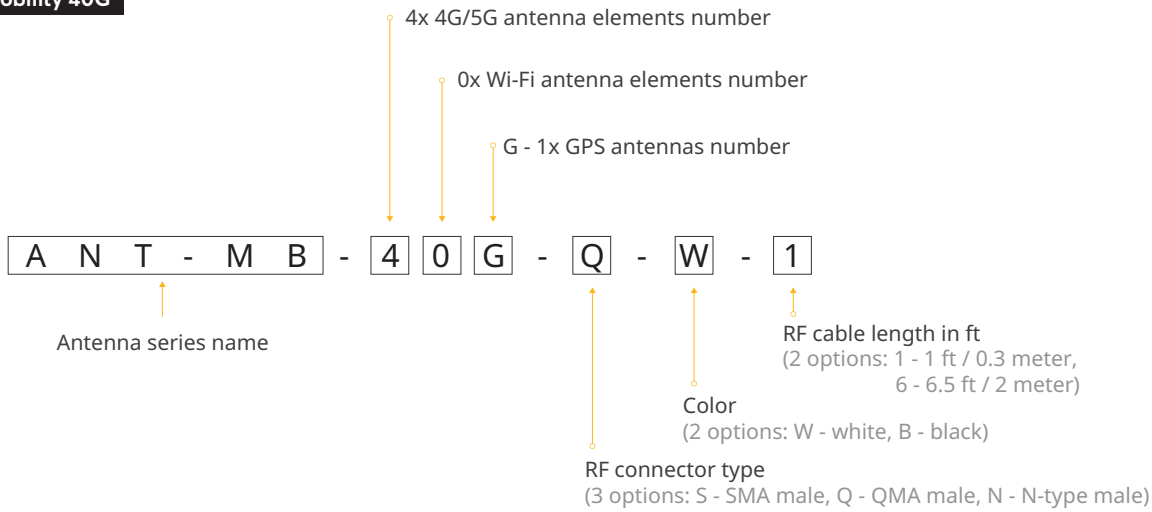
*Simulations using CATIA FEM (Finite Element Method) have shown that the Peplink Mobility 40G antenna can withstand wind speeds of up to 235mph (379km/h). However, installation under such extreme conditions require professional installation and adherence to additional safety measures consistent with industry best standards and practices to ensure the antenna remains securely in place and does not become detached. For high-wind environments, standing mounting methods such as the plastic nut or L-mount are not sufficient. The antenna must be flush mounted, securely glued and installed using special fixation components specifically designed to hold it firmly under heavy wind loads.



#All measurements stated in this document were obtained without a ground plane.

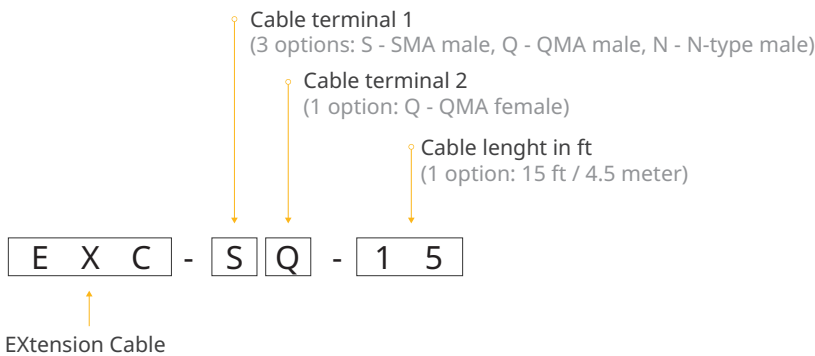
Ordering information

Mobility 40G

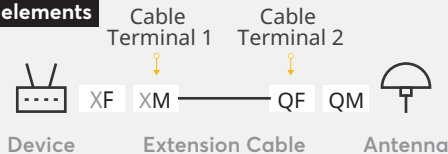


Product Code	Description
ANT-MB-40G-S-W-6	4xLTE, 1xGPS 600-6000MHz, IP68, SMA, White, 6.5ft / 2m
ANT-MB-40G-S-B-6	4xLTE, 1xGPS 600-6000MHz, IP68, SMA, Black, 6.5ft / 2m
ANT-MB-40G-Q-W-1	4xLTE, 1xGPS 600-6000MHz, IP68, QMA, White, 1 ft / 0.3m
ANT-MB-40G-Q-W-6	4xLTE, 1xGPS 600-6000MHz, IP68, QMA, White, 6.5ft / 2m
ANT-MB-40G-Q-B-1	4xLTE, 1xGPS 600-6000MHz, IP68, QMA, Black, 1 ft / 0.3m
ANT-MB-40G-Q-B-6	4xLTE, 1xGPS 600-6000MHz, IP68, QMA, Black, 6.5ft / 2m
ANT-MB-40G-N-W-6	4xLTE, 1xGPS 600-6000MHz, IP68, N-type, White, 6.5ft / 2m
ANT-MB-40G-N-B-6	4xLTE, 1xGPS 600-6000MHz, IP68, N-type, Black, 6.5ft / 2m
ANT-MB-40G-S-RA-B-1	4xLTE, 1xGPS 600-6000MHz, IP68, SMA Right Angle, Black, 1ft / 0.3m

Extension cable



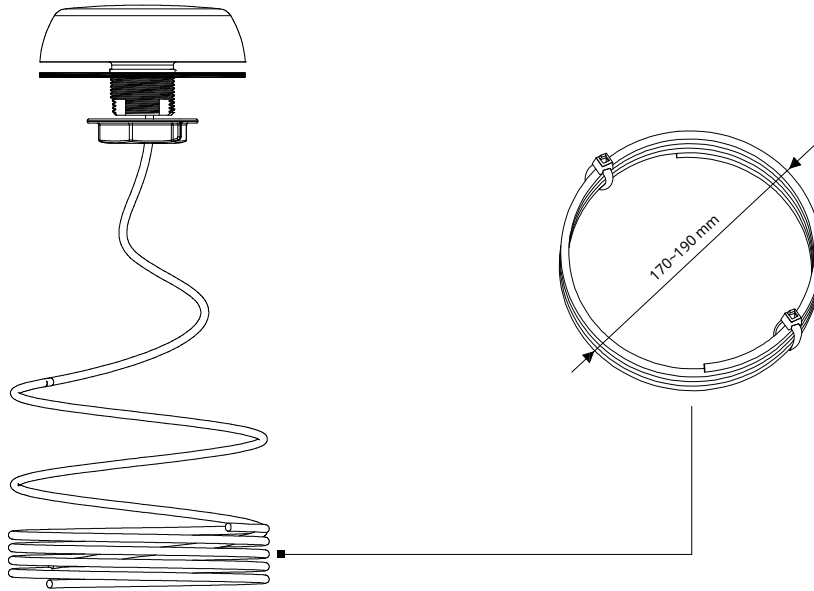
LTE/GPS elements



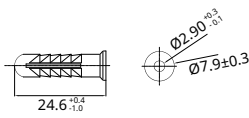
Product Code	Element type	Description
EXC-SQ-15	LTE/GPS elements	Extension coax cable, SMA male to QMA female connector, 15ft / 4.5m
EXC-QQ-15	LTE/GPS elements	Extension coax cable, QMA male to QMA female connector, 15ft / 4.5m
EXC-NQ-15	LTE/GPS elements	Extension coax cable, N-type male to QMA female connector, 15ft / 4.5m

Technical drawing

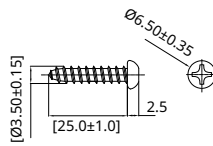
(unit: mm)



Mounting Set



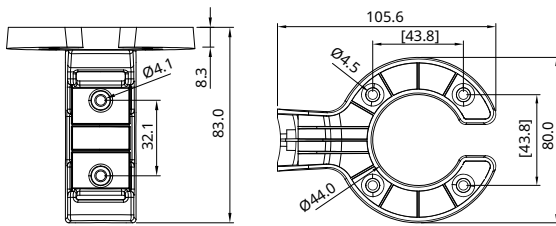
Plastic fixing for M3.5 screw
(2 pcs)



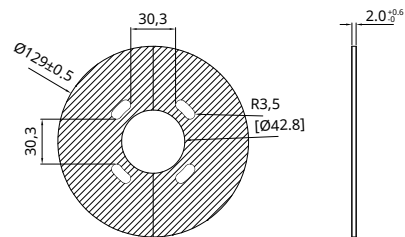
Tapping screws
(2 pcs, M3.5*24L)



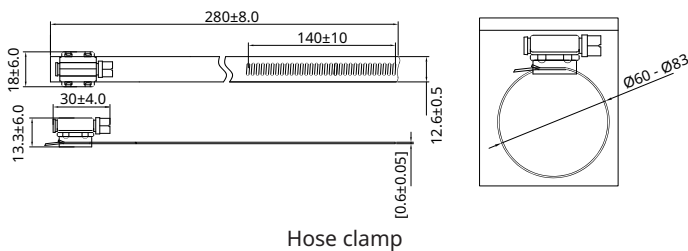
Screws
(4 pcs, M4*15L)



Mounting bracket

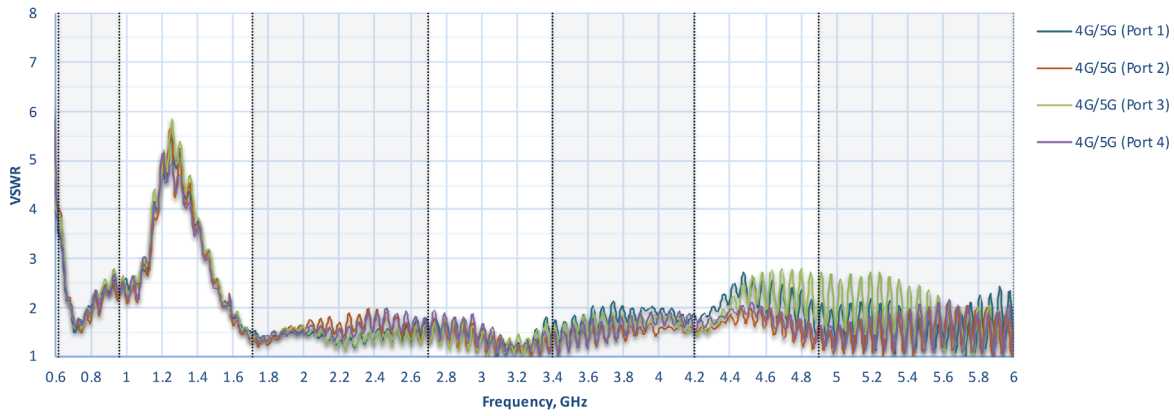


Double sided 3M adhesive pad

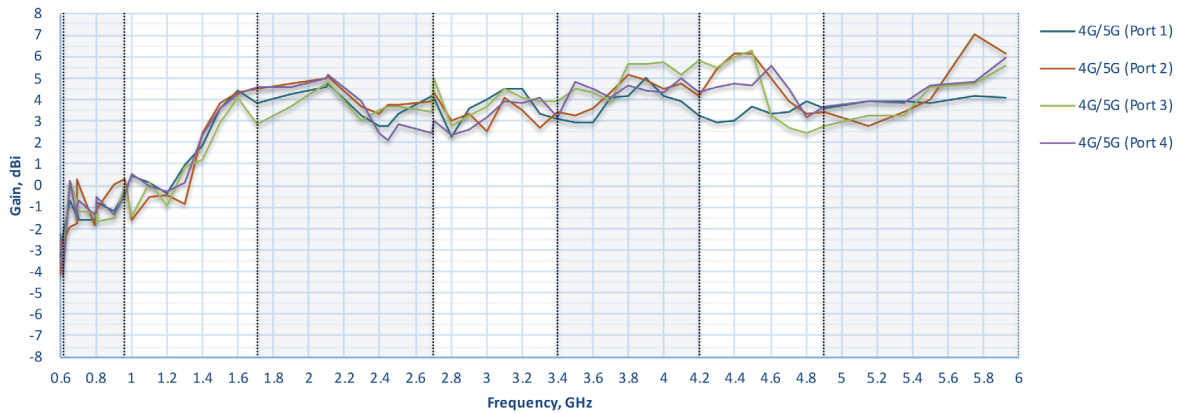


Hose clamp

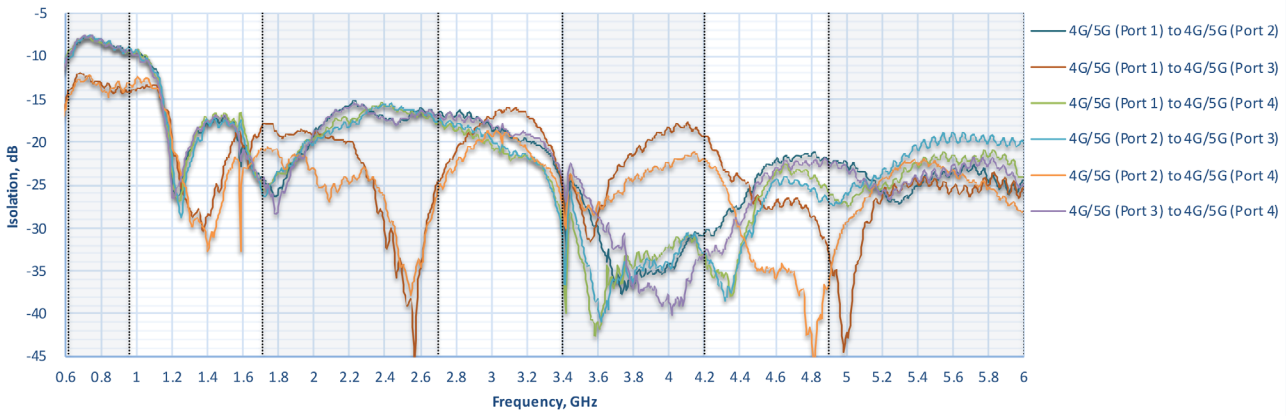
Cellular Antenna VSWR



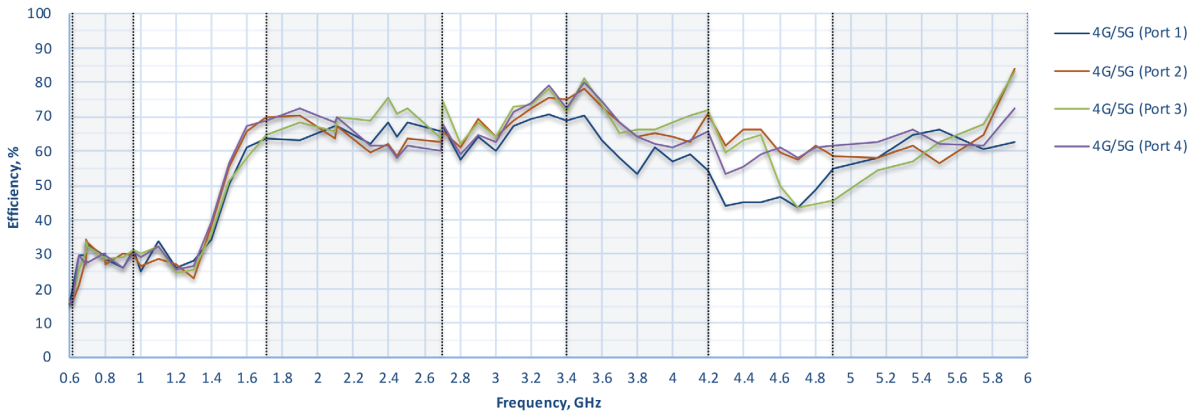
Cellular Antenna Gain



Cellular Antenna Isolation

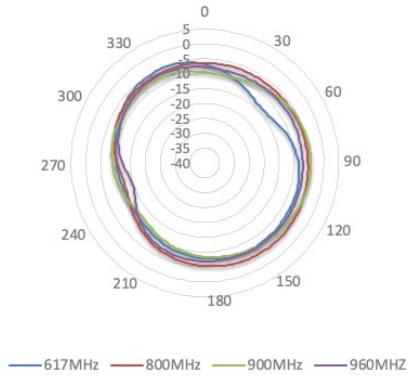


Cellular Antenna Efficiency

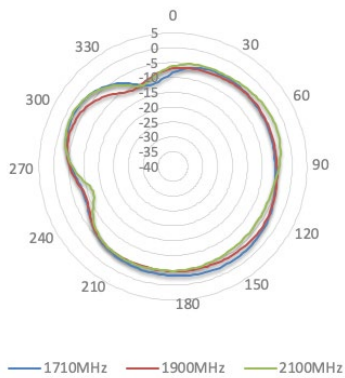


Radiation patterns (Azimuth)

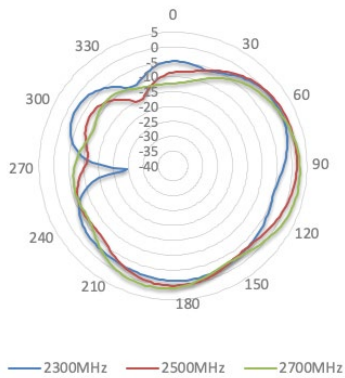
617-960 MHz



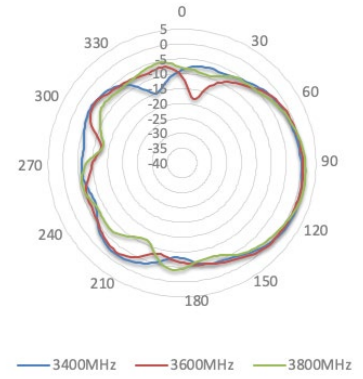
1710-2100MHz



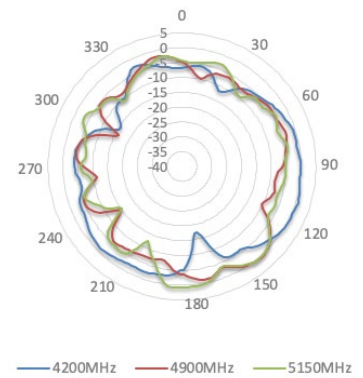
2300-2700 MHz



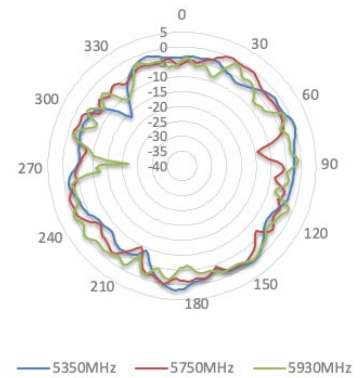
3400-3800 MHz



4200-5150 MHz



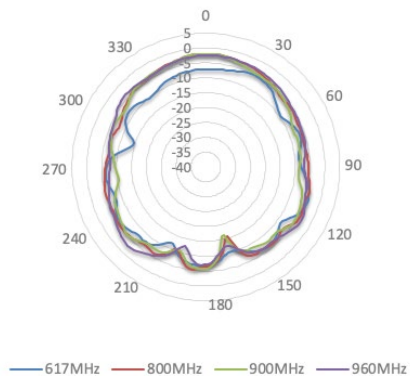
5350-5925 MHz



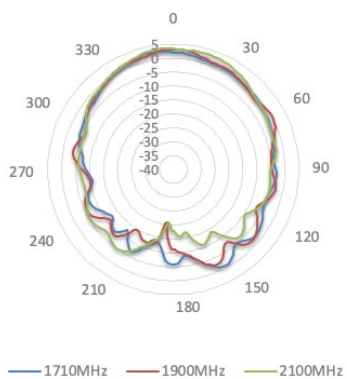
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Radiation patterns (Elevation 1)

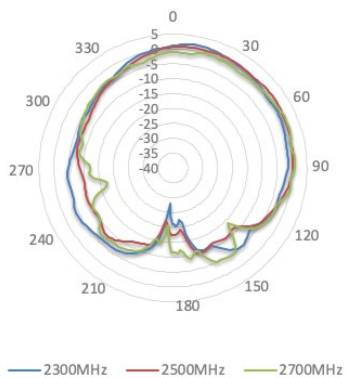
617-960 MHz



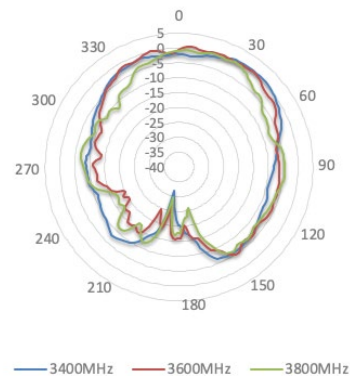
1710-2100MHz



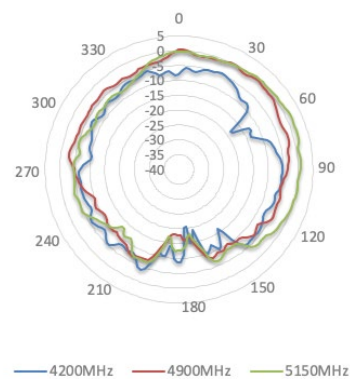
2300-2700 MHz



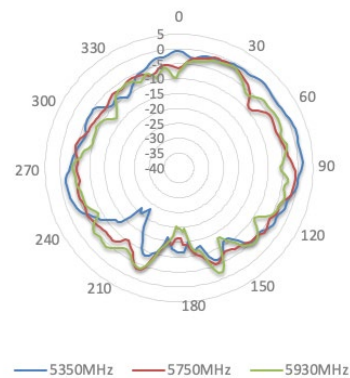
3400-3800 MHz



4200-5150 MHz



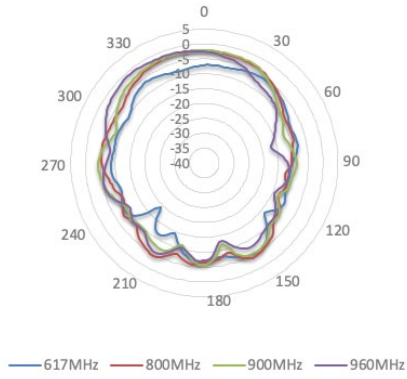
5350-5925 MHz



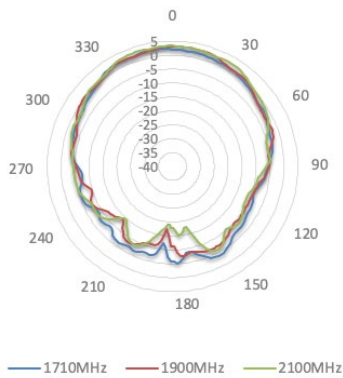
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Radiation patterns (Elevation 2)

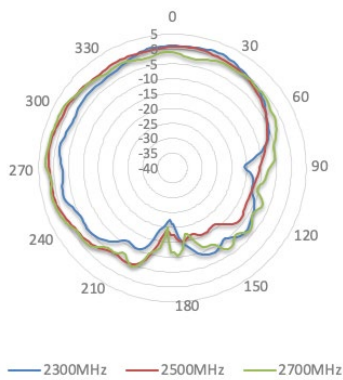
617-960 MHz



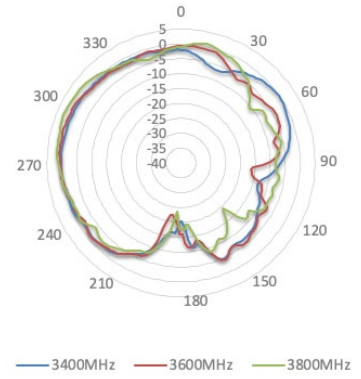
1710-2100MHz



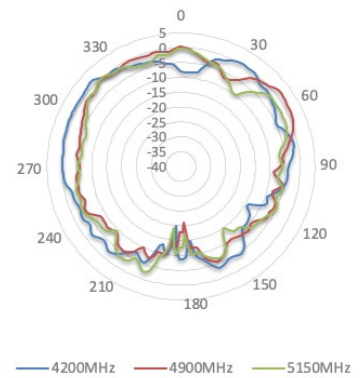
2300-2700 MHz



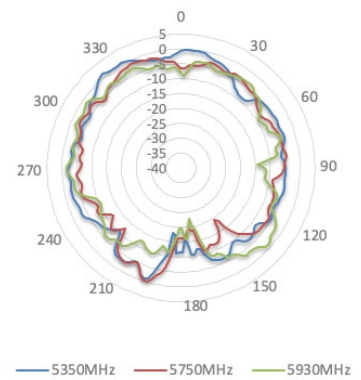
3400-3800 MHz



4200-5150 MHz



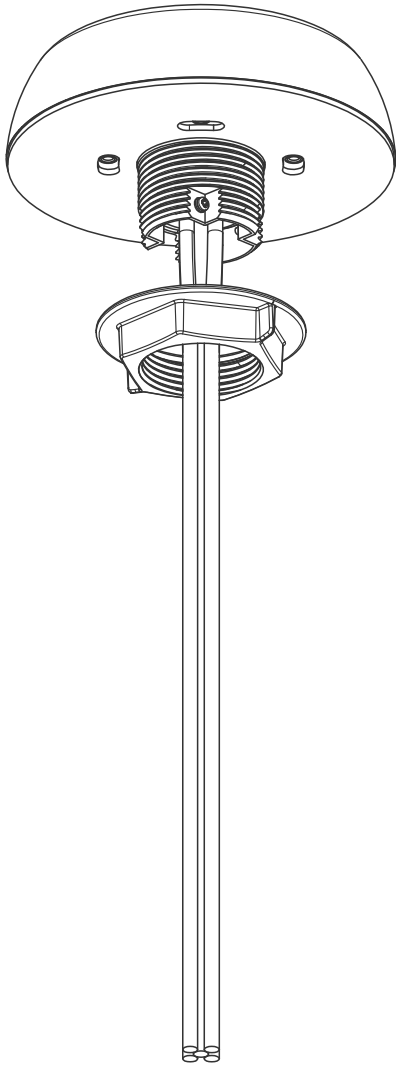
5350-5925 MHz



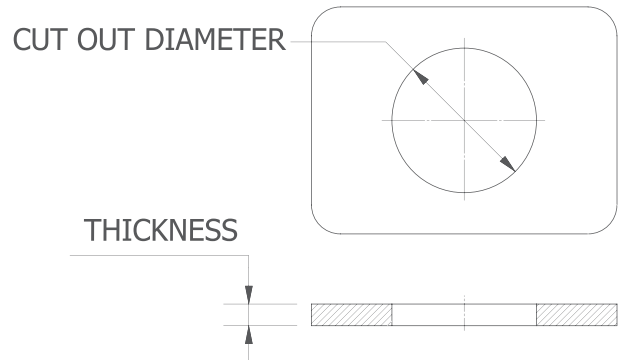
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Installation recommendation

Panel Mount



Mobility 40G

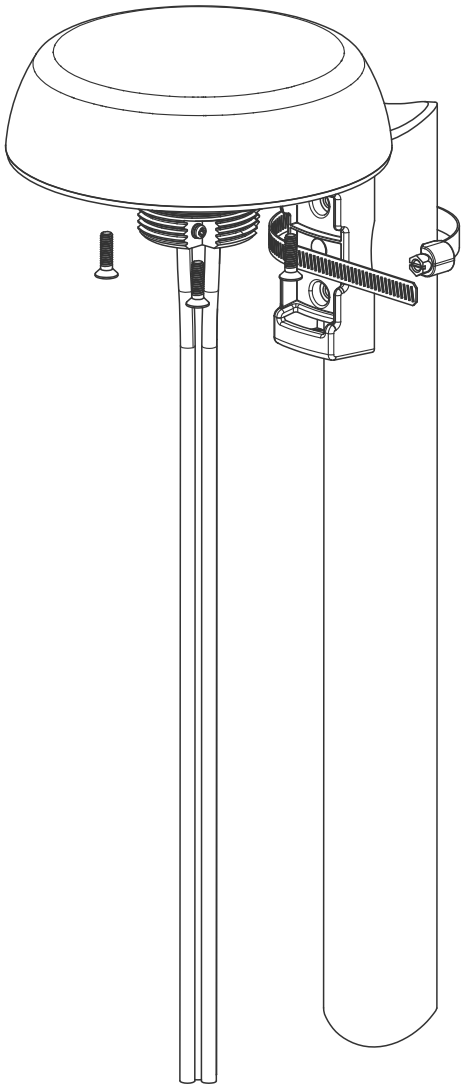


Notes

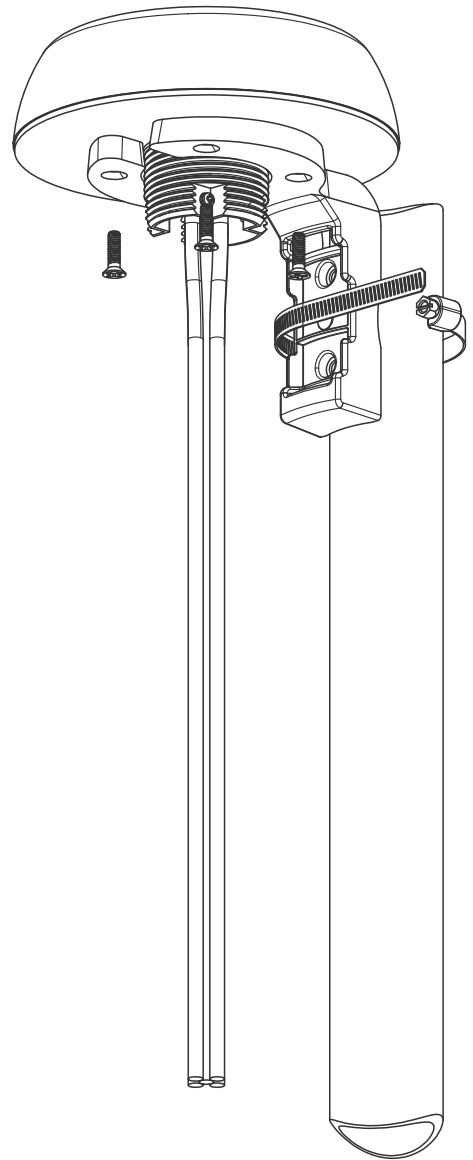
- Cover panel surface to protect the paint work. When drilling a hole, start with a small one, then increase it.
- Cut out diameter should be 1 11/16" / 43mm. Maximum allowed panel thickness - 15mm.
- After a drill clean up the surface and apply some paint around the hole to prevent corrosion. Attach the antenna.

Installation recommendation

Pole Mount

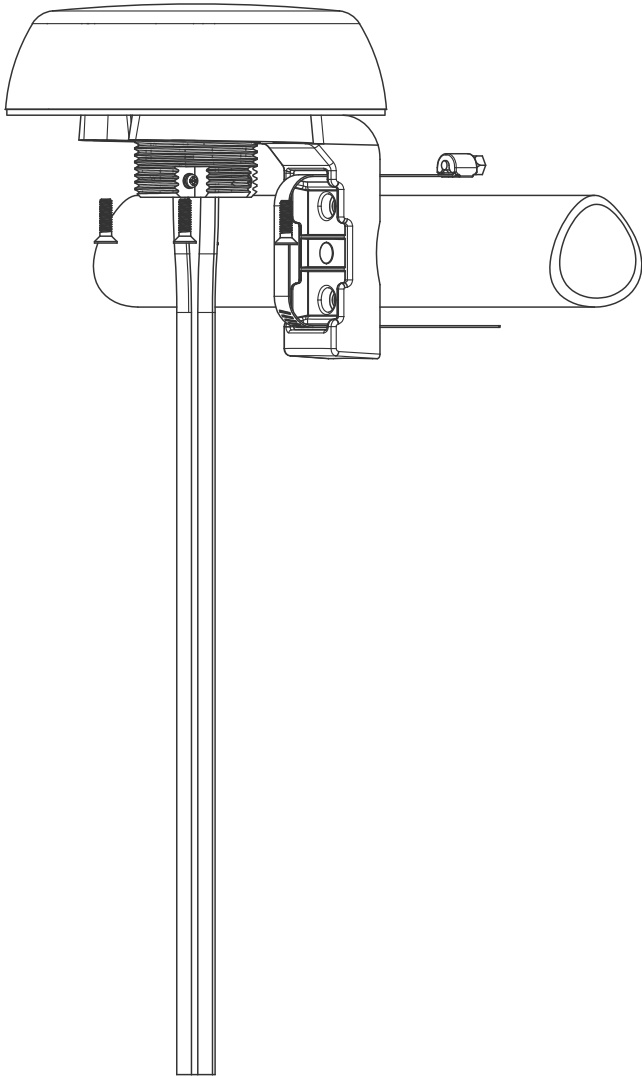


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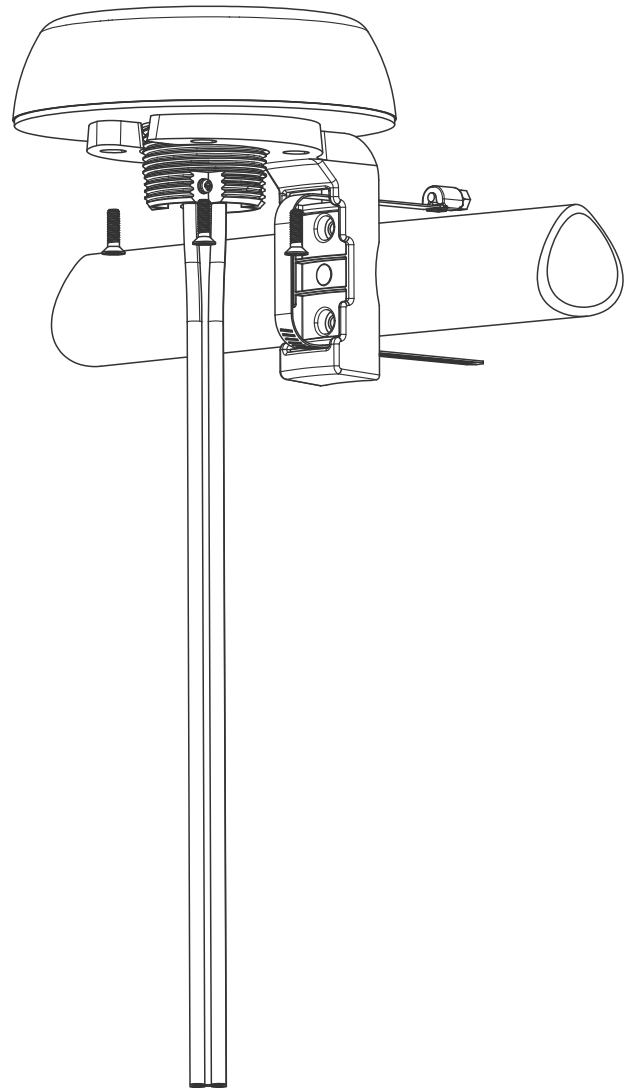


Installation recommendation

Horizontal Pole Mount



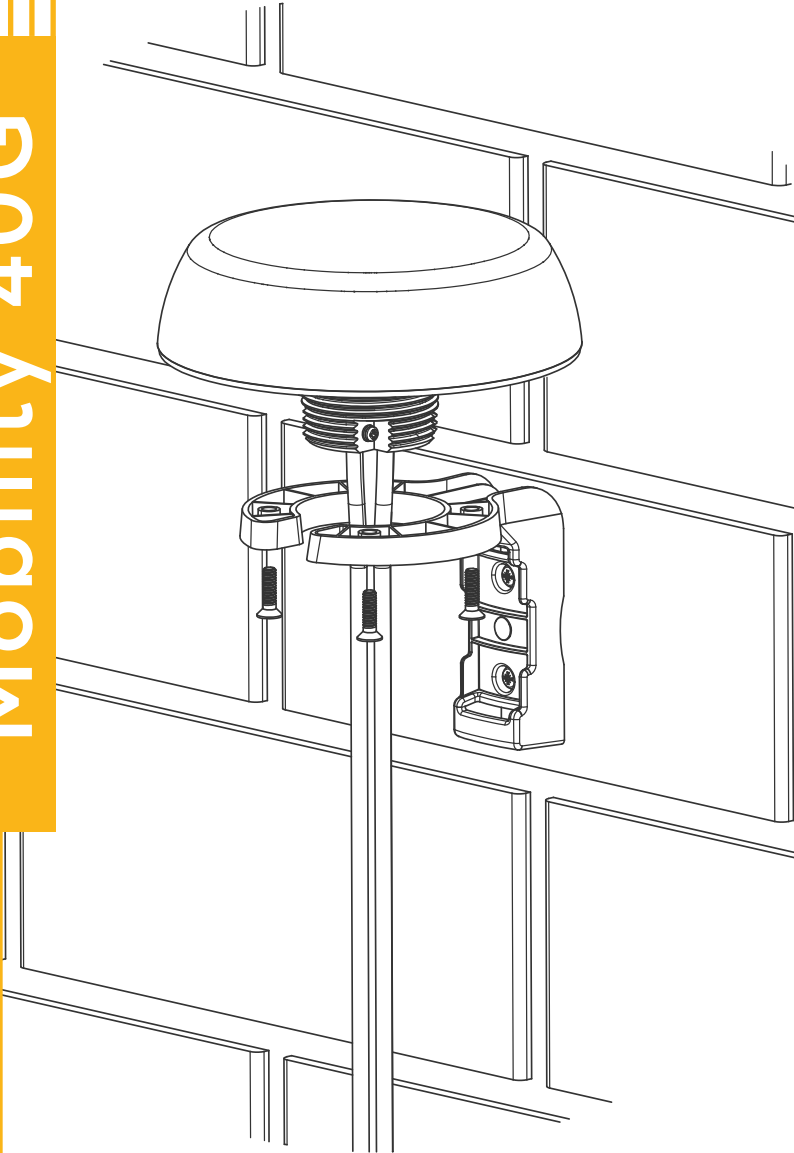
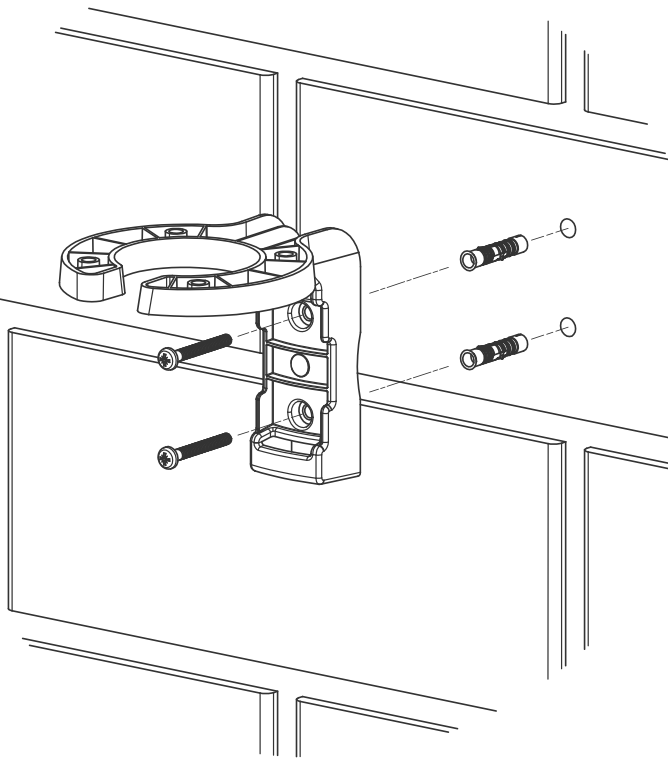
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Installation recommendation

Wall Mount

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Recommended Mounting Separation Guidelines

Purpose of Spacing Requirements

- Antenna Diversity (Same Radio): Reduces signal interference and improves performance.
- Antenna Coupling (Different Radios): Prevents mutual interference between adjacent systems.

Standard Industry Recommendations

- Marine antenna deployments typically follow these spacing standards:
 - Minimum: 1 wavelength apart
 - Optimal: 3 wavelengths apart

Why? Increasing distance reduces coupling and interference, enhancing overall system integrity.

Example Calculation — B71 Band (US)

- Frequency: 600–700 MHz
- Wavelength: ~0.50 meters (19.7 inches) at 600 MHz
- Minimum spacing: ~50 cm (~20")
- Preferred spacing: ~150 cm (~59") — that's the source of the 150 cm guideline

Radar Separation Consideration

In addition to following the above spacing, ensure that the Maritime 40G antenna is not mounted at the same horizontal level as radar units. Radars transmit at much higher power and can cause saturation of nearby antennas.

Best Practice:

- Vertically offset radar and Maritime 40G antennas.
- Maintain clear line-of-sight separation to avoid signal overload.