



MOBILITY 20G

2x2 MIMO 5G-Ready Cellular Antenna System with GPS Receiver

Overview

- **Built for 5G**
 2x LTE/5G omni-directional antenna for the best performance.
- **Ultra-wide bandwidth**
 Wide frequency range (600-6000MHz) supports LTE and 5G connectivity.
- **Robust design**
 IP68 rated, rugged, low profile and durable housing in Black or White color options.
- **Easy installation**
 Ground plane is not required for installation. Simple panel, wall or pole installation for various applications.

Applications

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

6.1 dBi	↑↓ LTE	 GPS
IP 68	B71 Support	Built for 5G



TAA **COMPLIANT**

Specifications

Cellular

Antenna elements	2 elements
Cellular frequencies	1.0dBi: 617-960MHz 5.6dBi: 1710-2700MHz 6.1dBi: 3400-4200MHz 5.3dBi: 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 dB
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 (LTE / 5G)

Type	CFD-200
Loss	0.33 dB/m @ 900MHz 0.49 dB/m @ 2000MHz 0.55 dB/m @ 2500MHz 0.87 dB/m @ 5800MHz
Diameter	13/64" / 5.0mm
Jacket	Half matt PVC, UV resistant
Cellular Termination	QMA male, SMA male

Cable (GPS)

Type	RG-174
Loss	3.40 dB/m @ 1000 MHz 4.90 dB/m @ 1800 MHz
Diameter	0.1" / 2.7mm
Jacket	Half matt PVC, UV resistant
Cellular Termination	QMA male, SMA male

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

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Mounting

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

Mechanical

Product dimensions (Height)	1.42" / 36mm (spigot not included)
(Diameter)	5.12" / 130mm
Package dimensions	8.90"x8.46"x4.29" / 226x215x109mm
Radome material	UV stable PC

Package contents

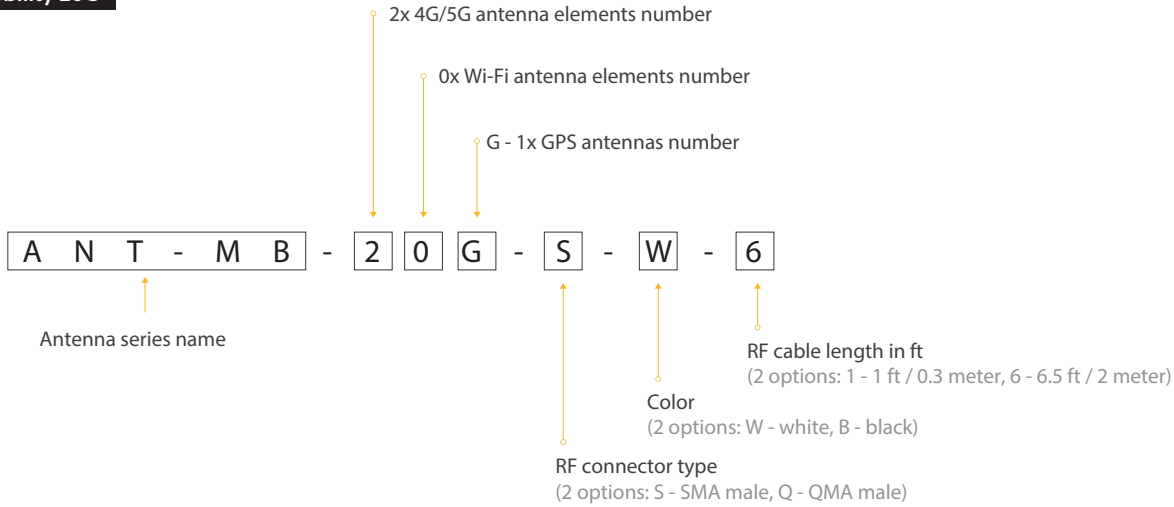
Antenna	Mobility 20G
Accessories	Wall/pole mount Double sided 3M adhesive pad (Diameter: 5.08" / 129 mm Thickness: 0.08" / 2 mm)

Environmental, compliance

IP rating	IP68
Operating temperature	-40° - 176°F / -40° - 80°C
Storage temperature	-40° - 176°F / -40° - 80°C
Compliance	RoHS, REACH, WHEE
Wind Survivability	137mph, 220 km/h
Enclosure flammability	UL 94 HB
Cable flammability	UL 758 (VW-1)
UV resistance	UL 746C (F1 long-term UV exposure)
Salt Spray	MIL-STD 810F/ASTM B117

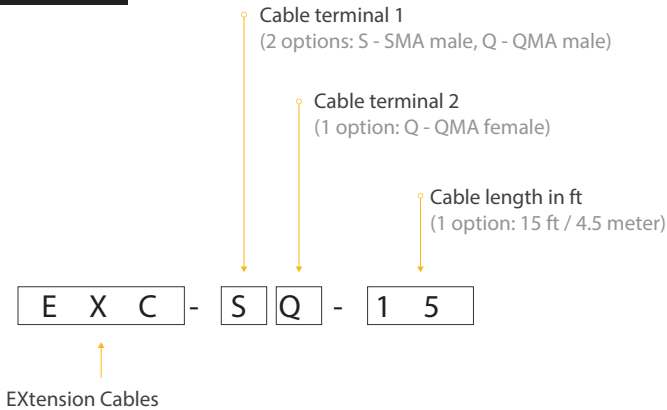
Ordering information

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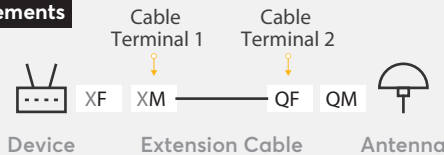


Product Code	Description
ANT-MB-20G-S-W-6	2xLTE/5G, 1xGPS 600-6000MHz, IP68, SMA male, White, 6.5 ft / 2m
ANT-MB-20G-S-B-6	2xLTE/5G, 1xGPS 600-6000MHz, IP68, SMA male, Black, 6.5 ft / 2m
ANT-MB-20G-Q-W-1	2xLTE/5G, 1xGPS 600-6000MHz, IP68, QMA male, White, 1 ft / 0.3m
ANT-MB-20G-Q-B-1	2xLTE/5G, 1xGPS 600-6000MHz, IP68, QMA male, Black, 1 ft / 0.3m

Extension cable



LTE/GPS elements

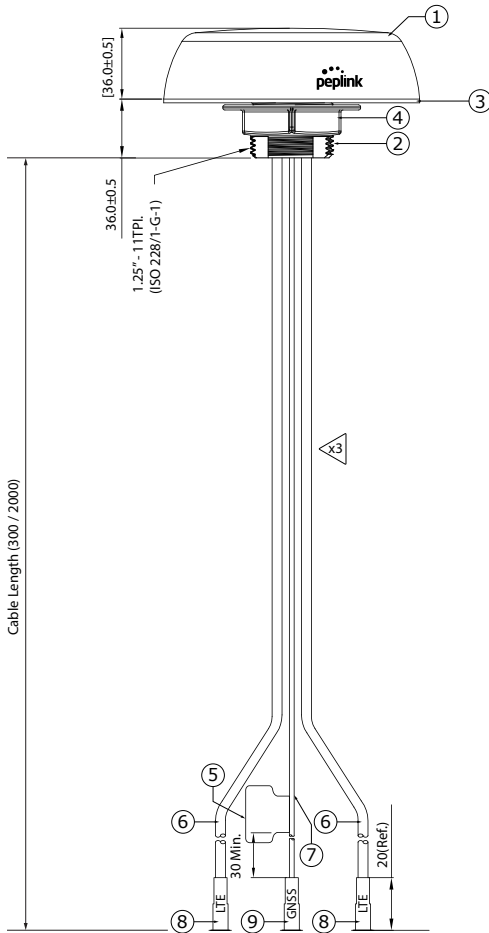


Product Code	Element type	Description
EXC-SQ-15	LTE/GPS elements	Extension coax cable, SMA male to QMA female connector, 15ft / 4.5m
EXC-QQ-15	LTE/GPS elements	Extension coax cable, QMA male to QMA female connector, 15ft / 4.5m

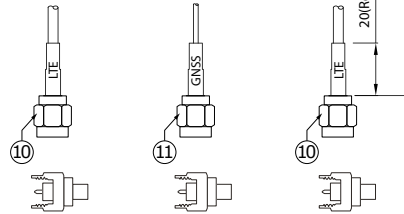
Technical drawing

(unit: mm)

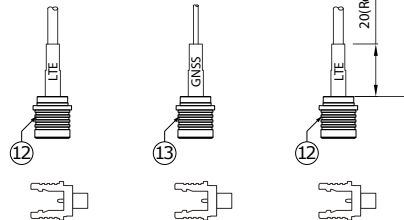
Antenna



SMA Male

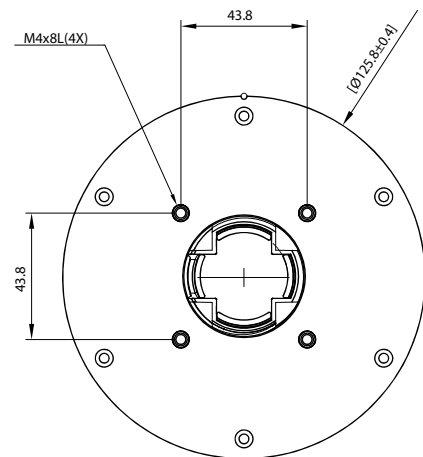


QMA Male



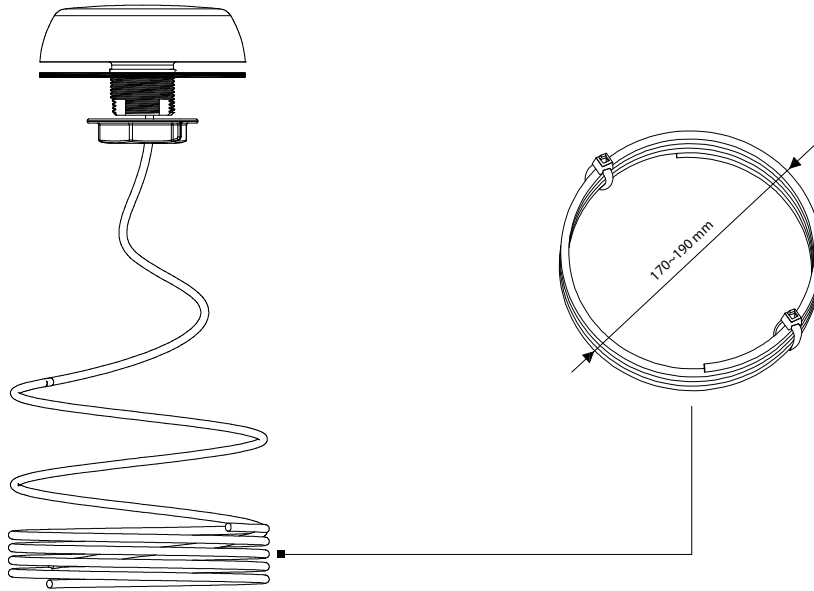
Index

No.	Description	Qty
1	Antenna top cover (PC+ABS)	1
2	Antenna bottom cover (PC+ABS)	1
3	Double sided 3M adhesive pad	1
4	Hexagon NUT (PC+ABS)	1
5	Label	1
6	Cable CFD-200 (4G/5G)	2
7	Cable RG-174 (GPS)	1
8	LTE/5G H.S. tube	2
9	GPS H.S. tube	1
10	LTE/5G antenna connector (SMA male)	2
11	GPS antenna connector (SMA male)	1
12	LTE/5G antenna connector (QMA male)	2
13	GPS antenna connector (QMA male)	1

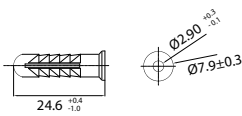


Technical drawing

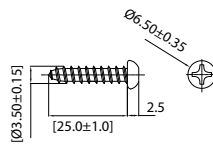
(unit: mm)



Mounting Set



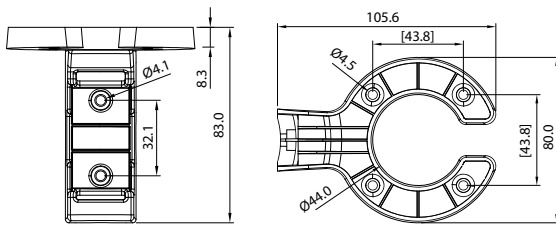
Plastic fixing for M3.5 screw
(2 pcs)



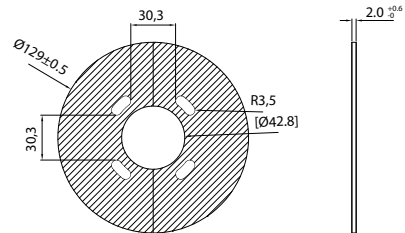
Tapping screws
(2 pcs, M3.5*24L)



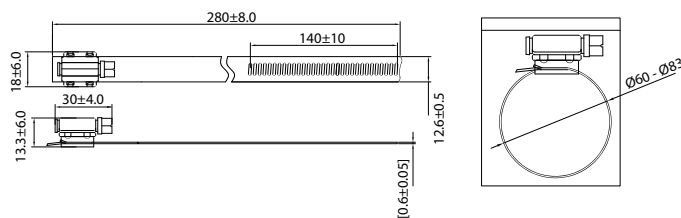
Screws
(4 pcs, M4*15L)



Mounting bracket

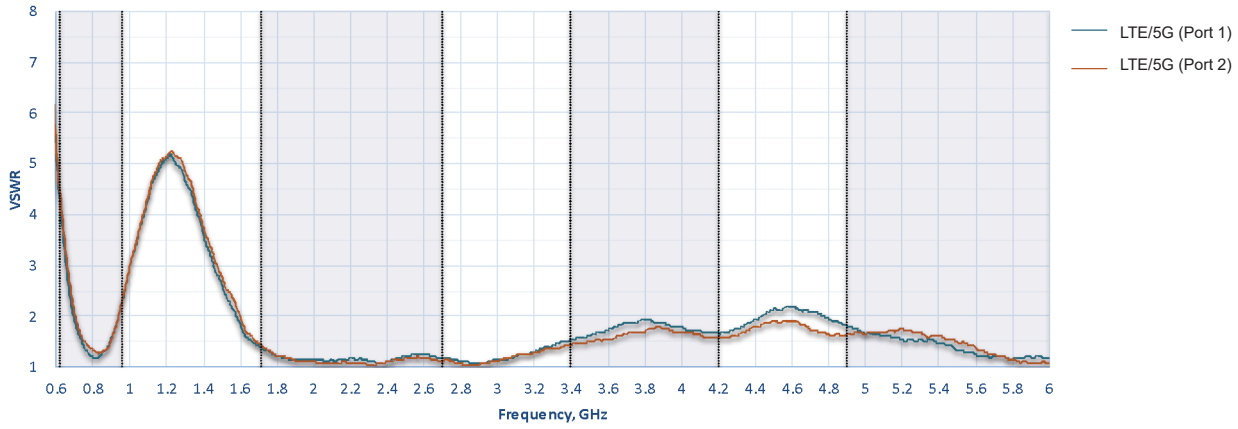


Double sided 3M adhesive pad

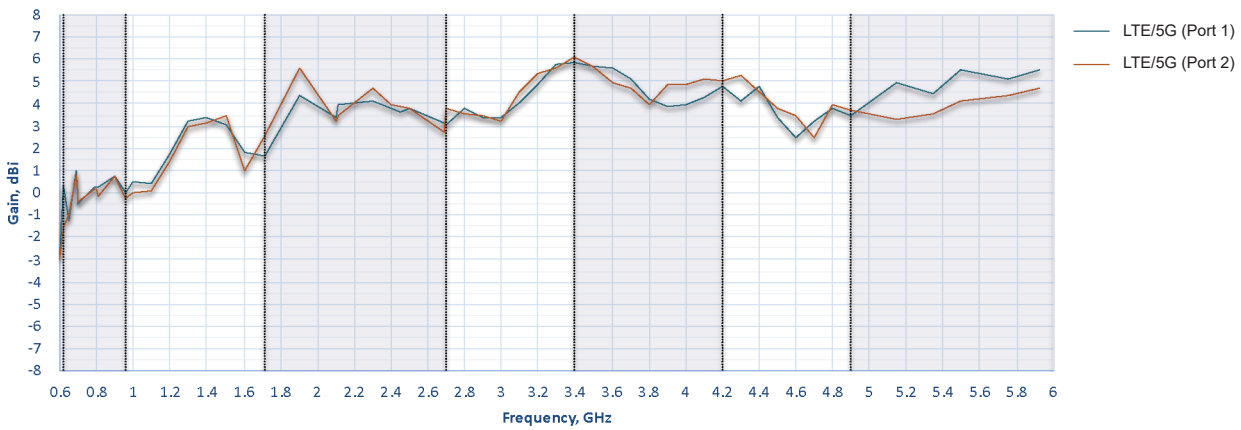


Hose clamp

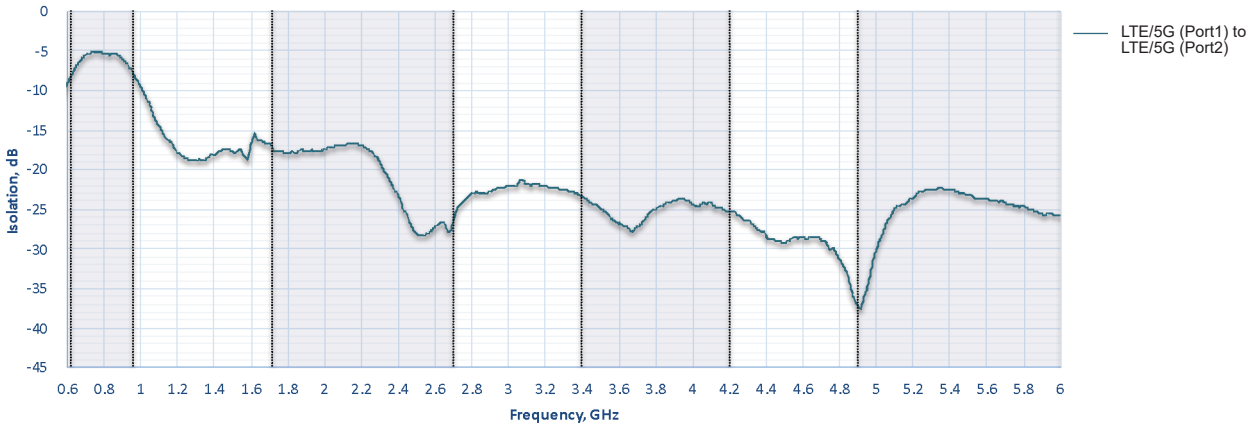
LTE/ 5G Antenna VSWR



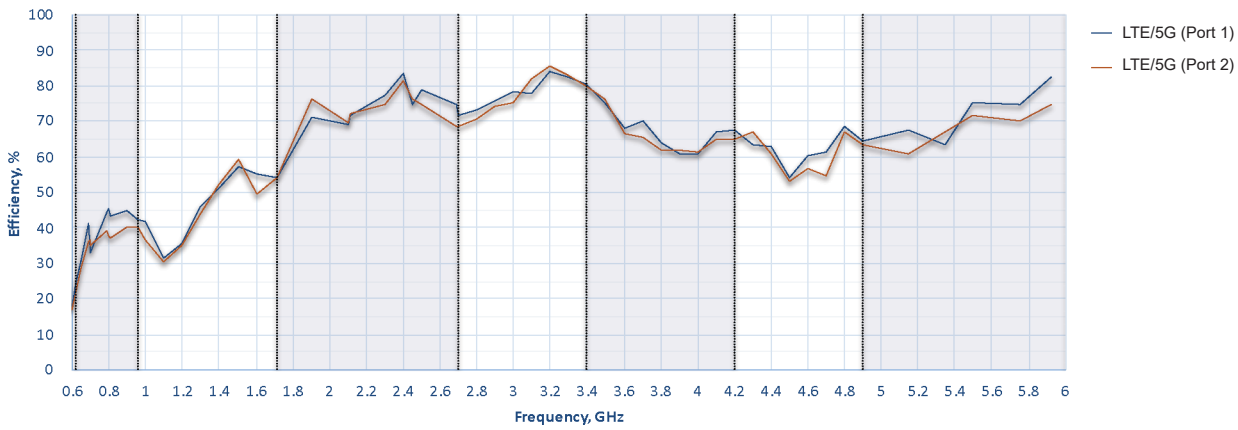
LTE/ 5G Antenna Gain



LTE/ 5G Antenna Isolation

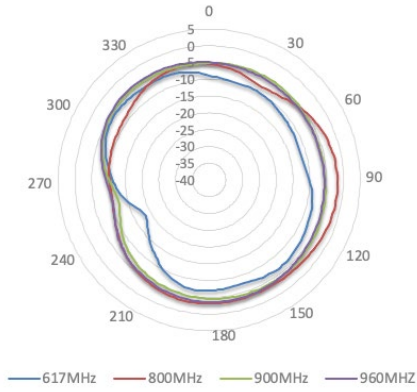


LTE/ 5G Antenna Efficiency

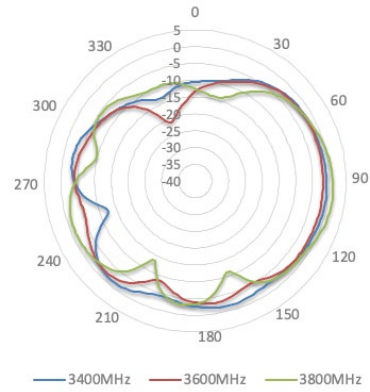


LTE/5G Antenna Radiation patterns (Azimuth)

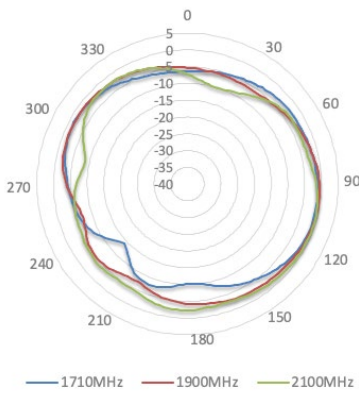
617-960 MHz



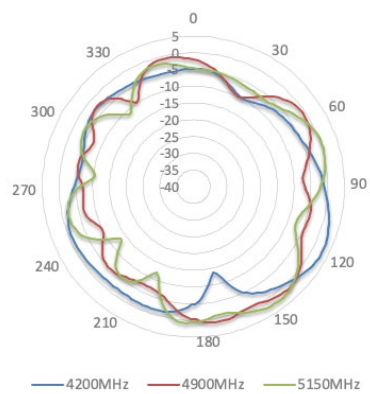
3400-3800 MHz



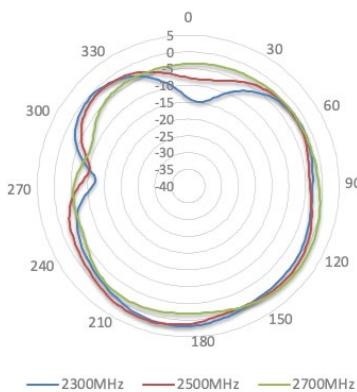
1710-2100 MHz



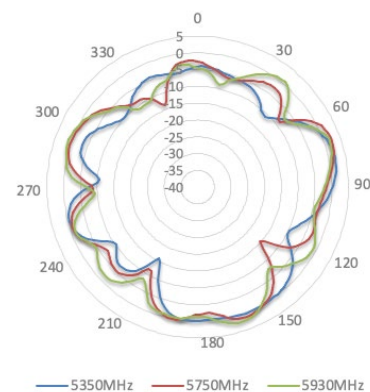
4200-5150 MHz



2300-2700 MHz



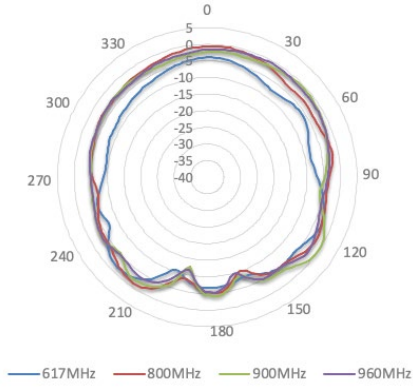
5350-5930 MHz



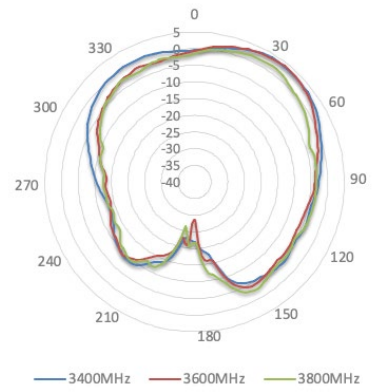
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LTE/5G Antenna Radiation patterns (Elevation 1)

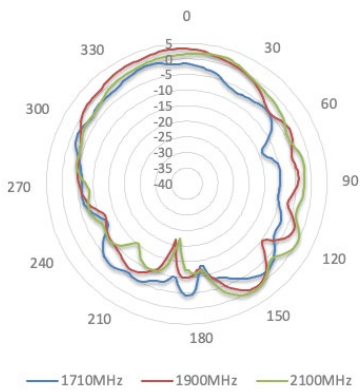
617-960 MHz



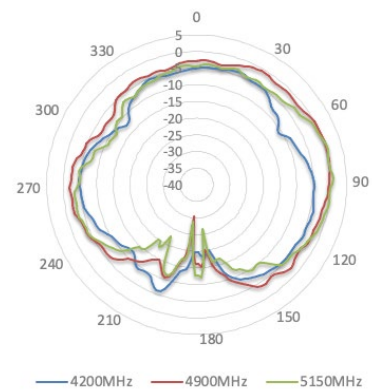
3400-3800 MHz



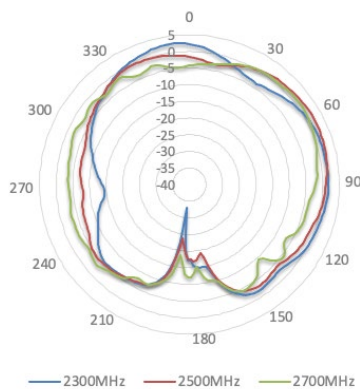
1710-2100 MHz



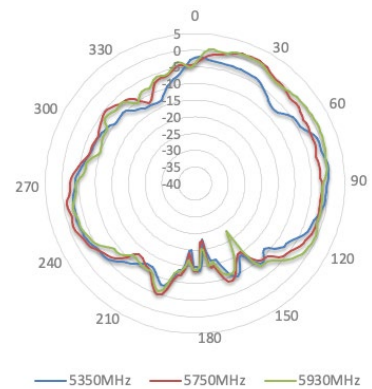
4200-5150 MHz



2300-2700 MHz



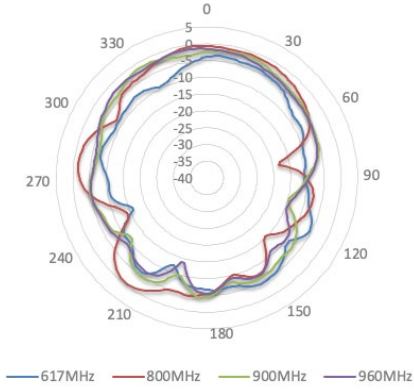
5350-5930 MHz



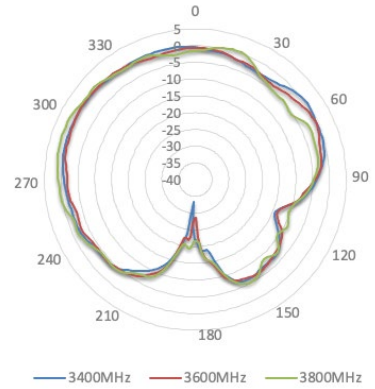
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LTE/5G Antenna Radiation patterns (Elevation 2)

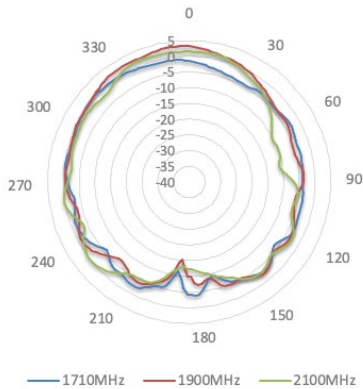
617-960 MHz



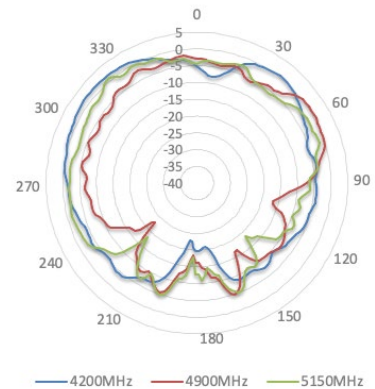
3400-3800 MHz



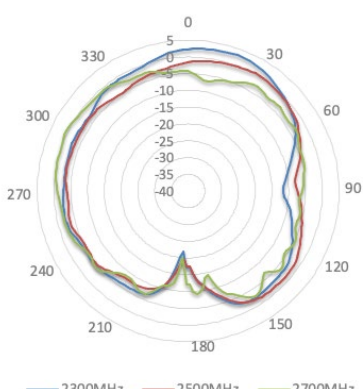
1710-2100 MHz



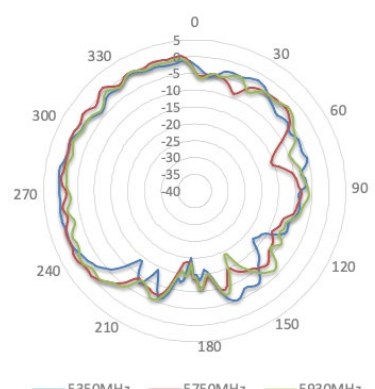
4200-5150 MHz



2300-2700 MHz



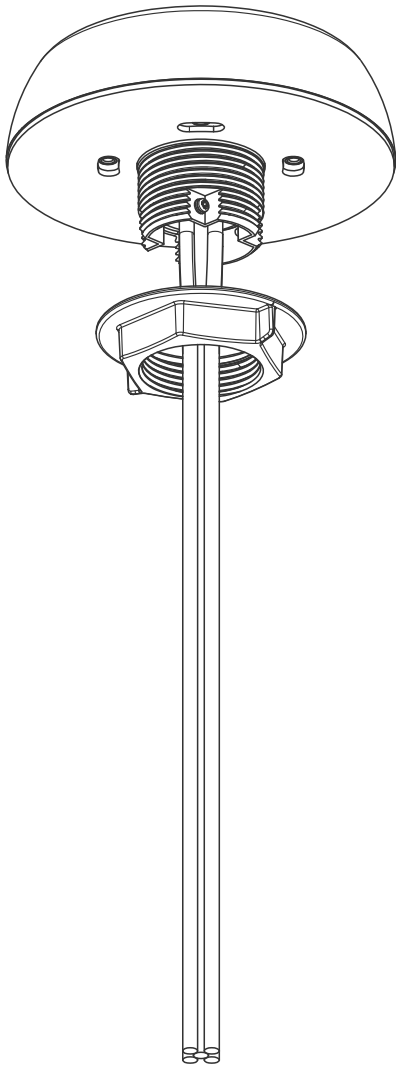
5350-5930 MHz



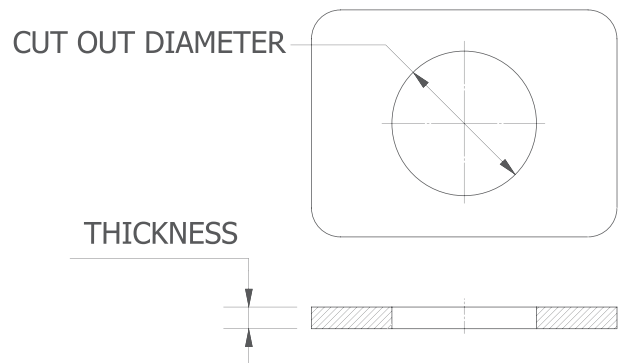
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Installation recommendation

Panel Mount



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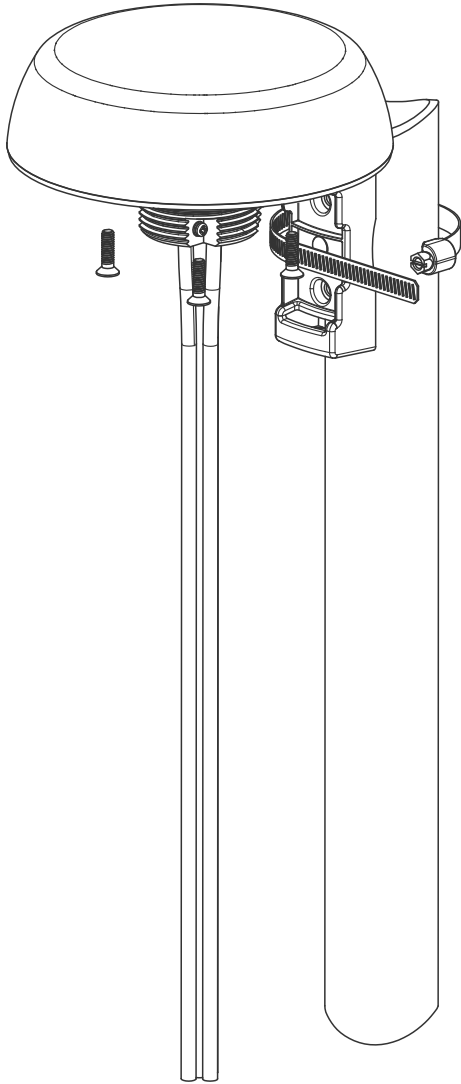


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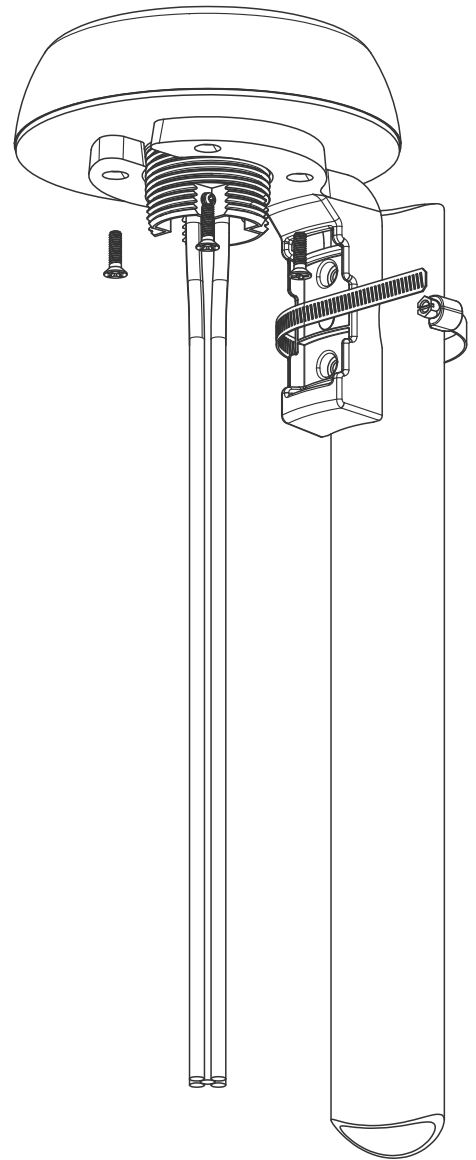
- Cover panel surface to protect the paint work. When drilling a hole, start with a small one, then increase it.
- Diameter of the cut out should be 1 11/16" / 43mm. Maximum allowed thickness of the panel - 15mm.
- After drilling, clean up the surface and apply some paint around the hole to prevent corrosion.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

Installation recommendation

Pole Mount

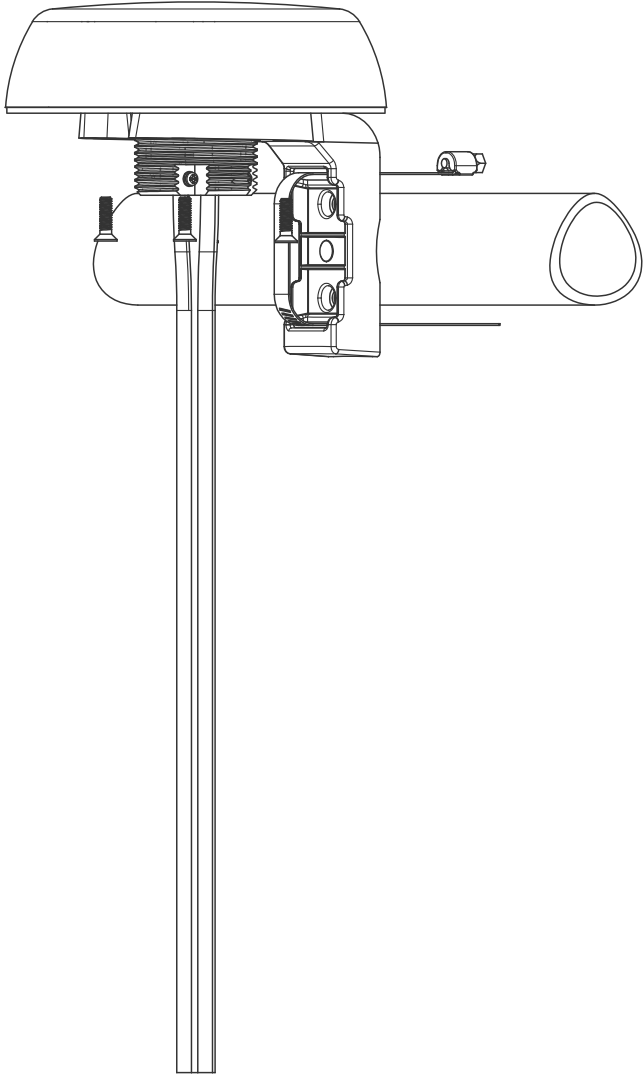


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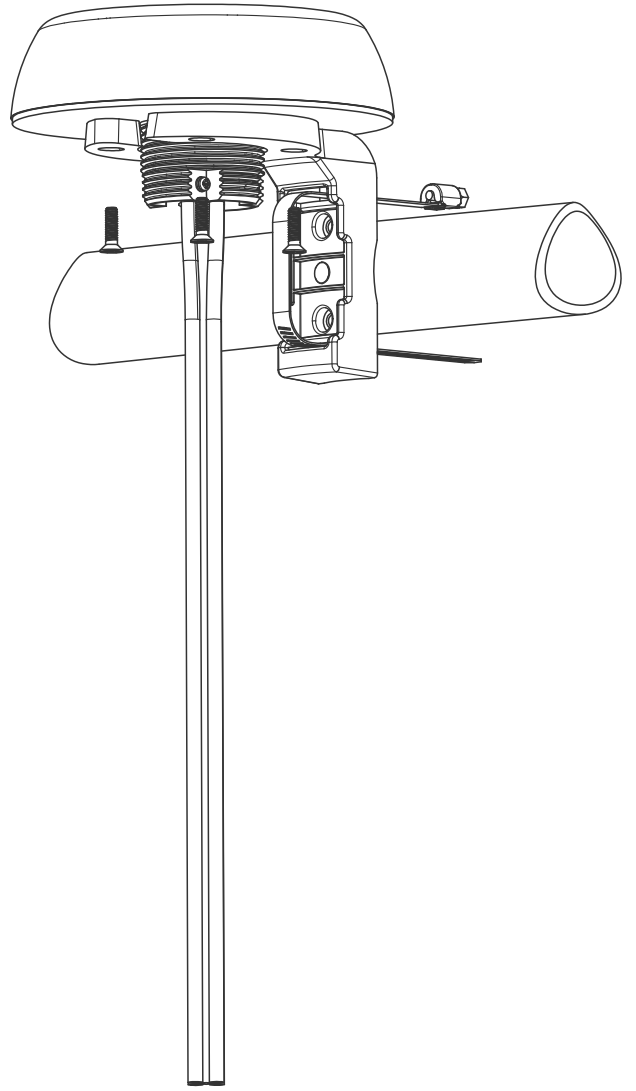


Installation recommendation

Horizontal Pole Mount

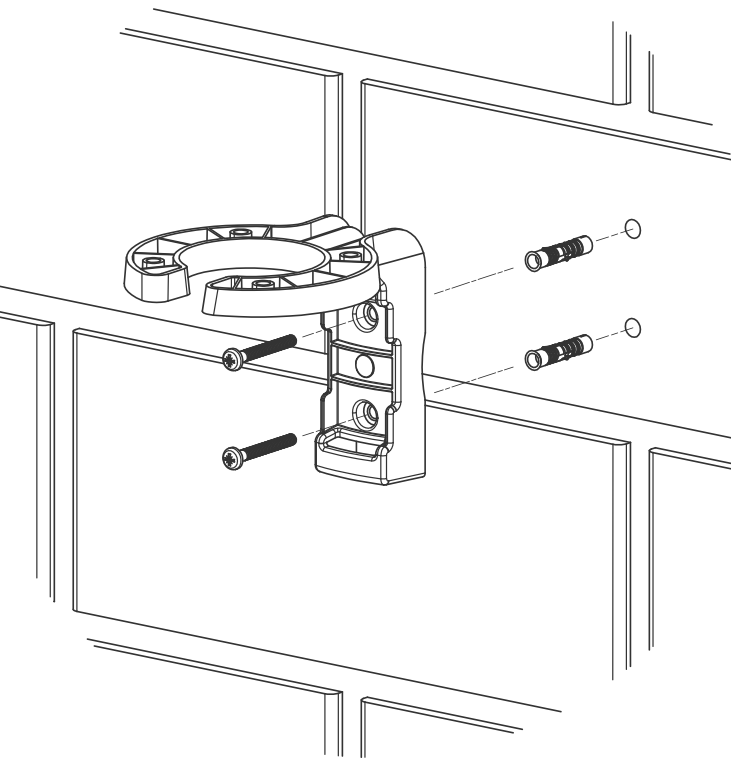


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Installation recommendation

Wall Mount



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