RISING CONNECTION

PRODUCT DATASHEET
MOBILITY 20G

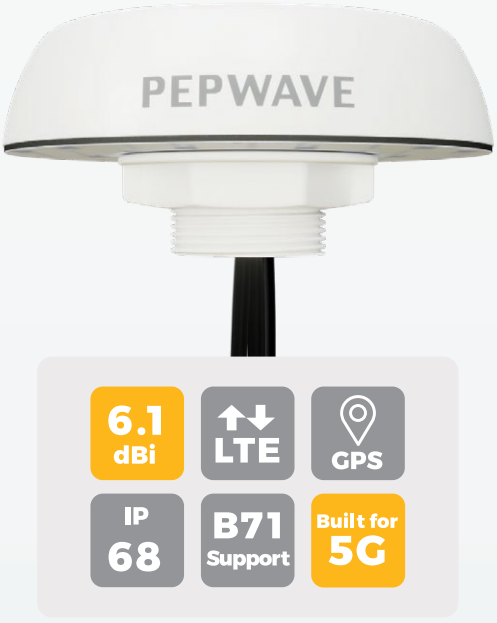
2x2 MIMO 5G Ready Cellular
Antenna System with GPS Receiver

peplink | PEPWAVE

MOBILITY 20G

OVERVIEW

- **Built for 5G**
  2x LTE/5G omni-directional antenna for the best performance.
- **Ultra wide bandwidth**
  Wide frequency range (600-6000MHz) supporting 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

PO Box 4107 Carlton NSW 2218 E-mail: info@risingconnection.com.au www.risingconnection.com.au ABN 50 161 068 042

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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:** < 2.5
- **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 (LTE / 5G)
- **Type:** CFD200
- **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:** 0.2" / 5.0mm
- **Jacket:** Half matt PVC, UV resistant
- **Cellular Termination:** QMA male, SMA male

Cable (GPS)
- **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:** QMA male, SMA male

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
- **Packaged dimensions:** 8.90" x 8.46" x 4.29" / 226 x 215 x 109mm
- **Radome material:** UV stable PC

Package contents
- **Antenna:** Mobility 20G
- **Mounting:** Wall/pole mount, Double sided 3M adhesive pad (Diameter: 5.08" / 129mm, Thickness: 0.08" / 2mm)

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 8117

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

ORDERING INFORMATION

MOBILITY 20G

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

EXTENSION CABLE

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

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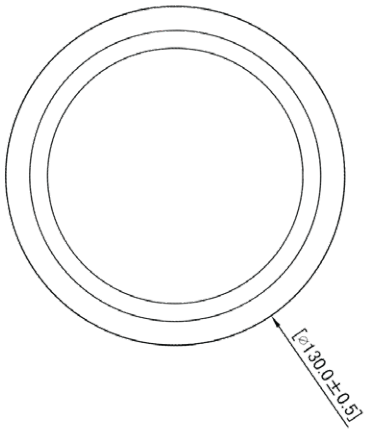
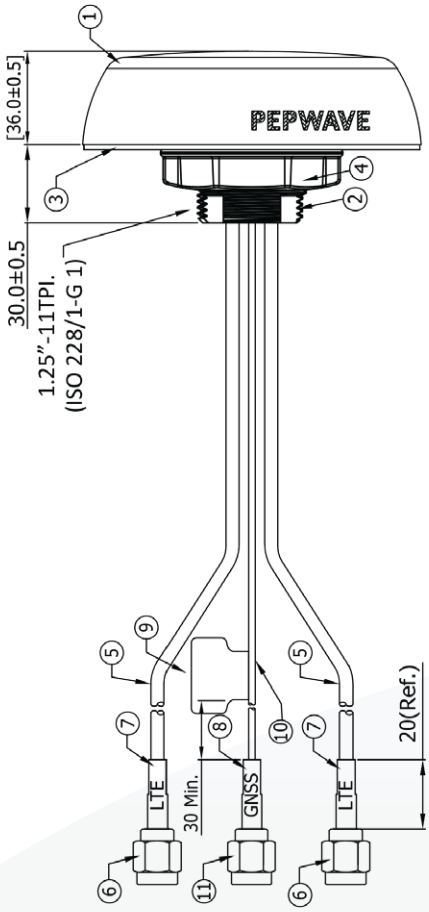
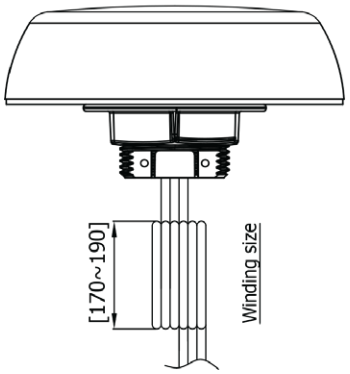
TECHNICAL DRAWING





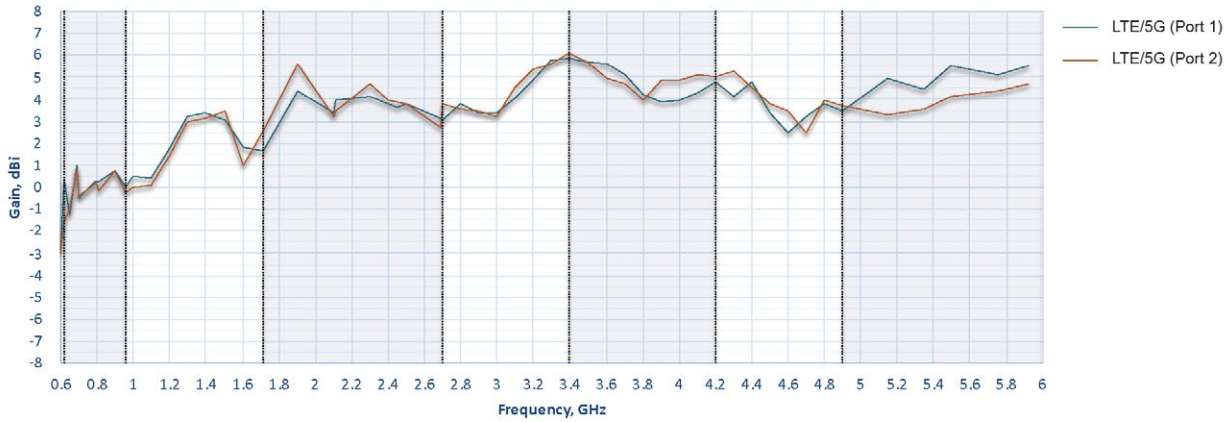


INDEX

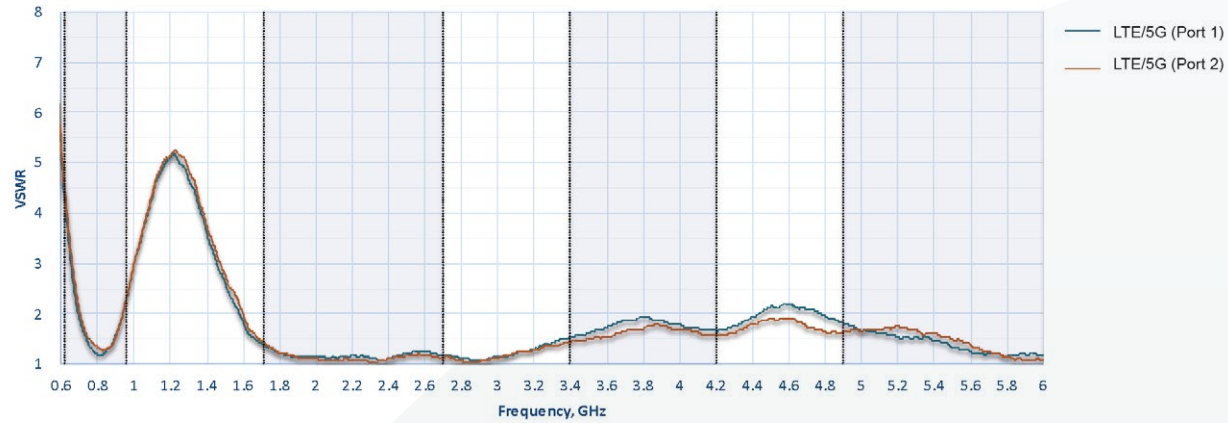
No.	Description	Qty
1	Antenna top cover (PC)	1
2	Antenna bottom cover (PC)	1
3	Double sided 3M adhesive pad	1
4	Hexagon NUT (PC)	1
5	Cable CFD-200 (LTE/5G)	2
6	LTE/5G antenna RF connector	2

No.	Description	Qty
7	LTE/5G cable marking	2
8	GPS cable marking	1
9	Label	1
10	Cable RG-174 (GPS)	1
11	GPS antenna RF connector	1

LTE/5G Antenna VSWR

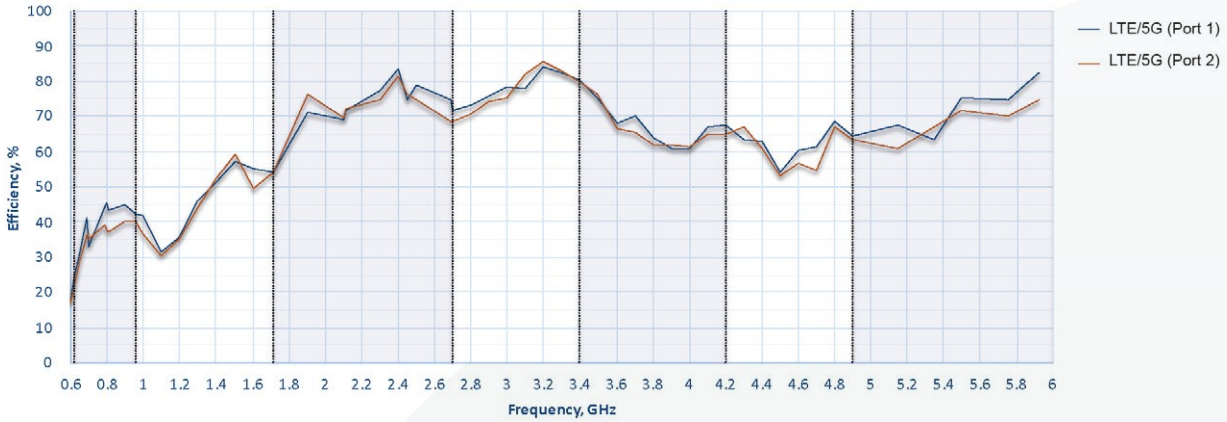


LTE/5G Antenna Gain



LTE/5G Antenna Isolation

LTE/5G Antenna Efficiency



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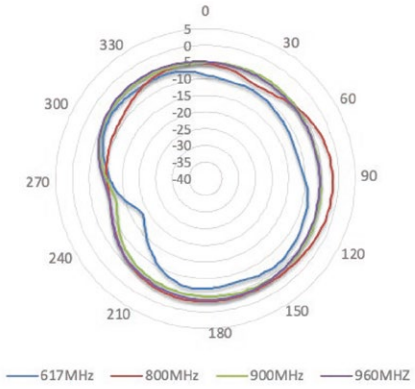
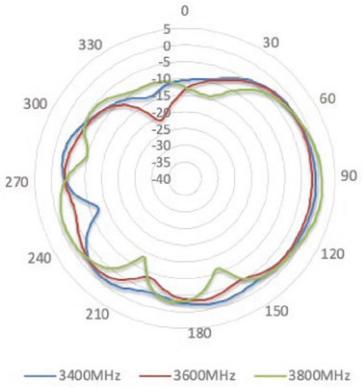
LTE/5G Antenna Radiation patterns (Azimuth)

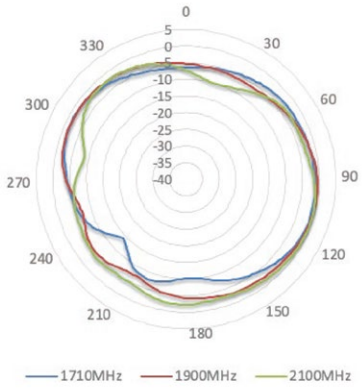
617-960 MHz



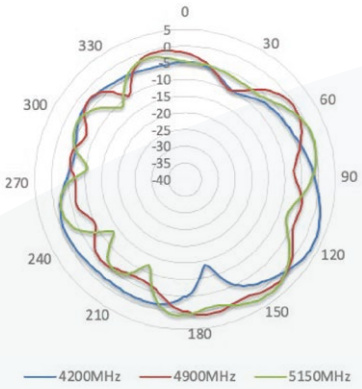
3400-3800 MHz



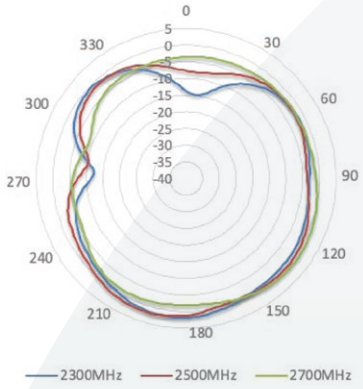
1710-2100 MHz



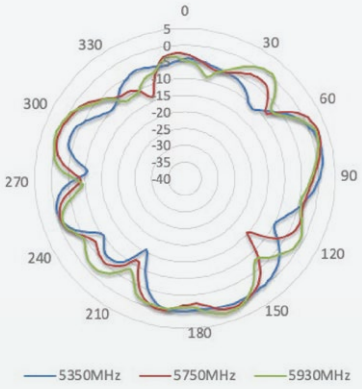
4200-5150 MHz



2300-2700 MHz



5350-5930 MHz



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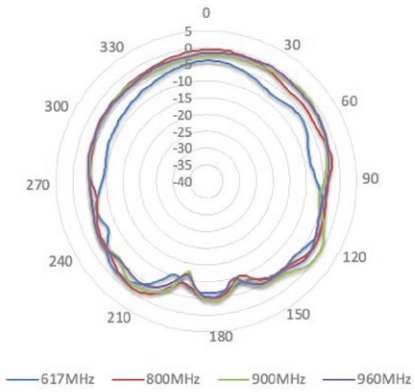
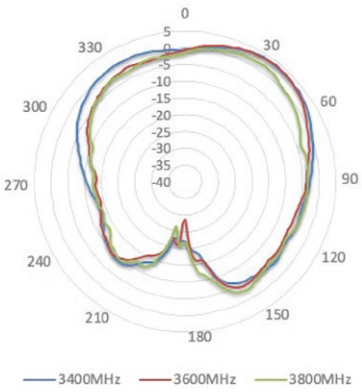
LTE/5G Antenna Radiation patterns (Elevation 1)

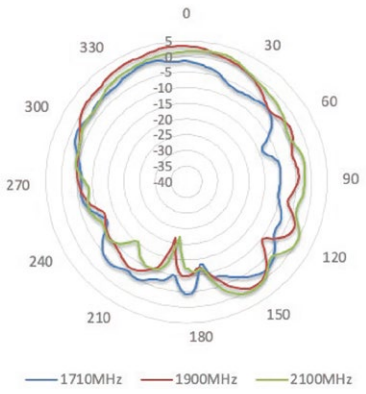
617-960 MHz



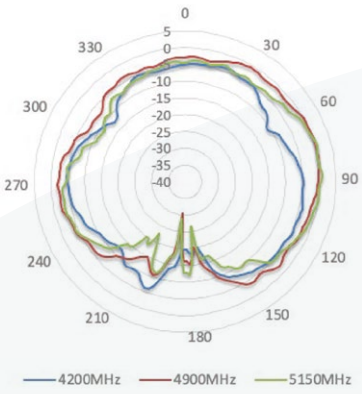
3400-3800 MHz



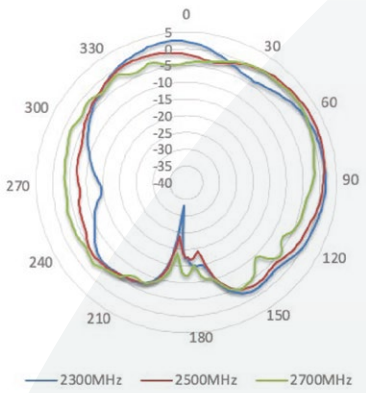
1710-2100 MHz



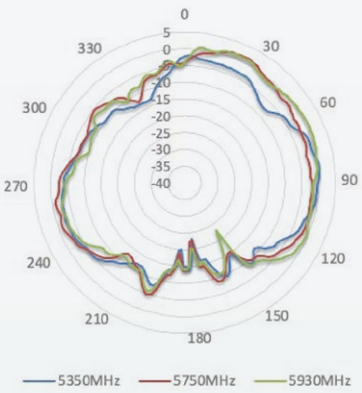
4200-5150 MHz



2300-2700 MHz



5350-5930 MHz



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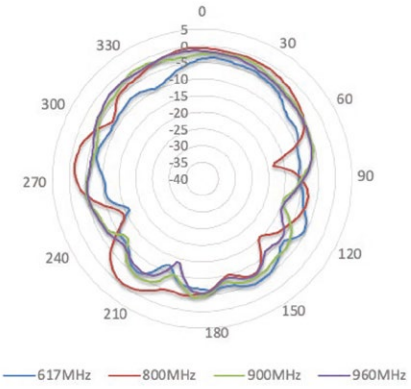
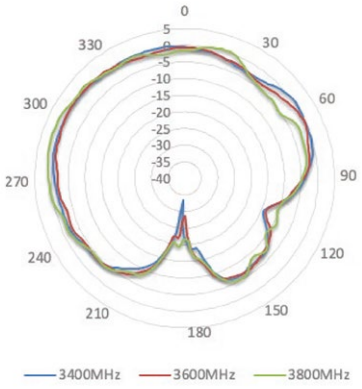
LTE/5G Antenna Radiation patterns (Elevation 2)

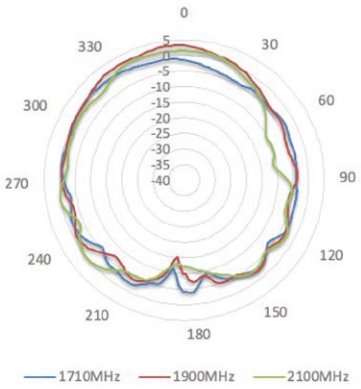
617-960 MHz



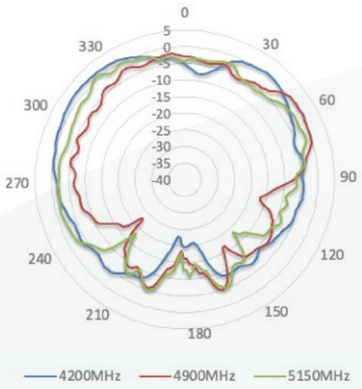
3400-3800 MHz



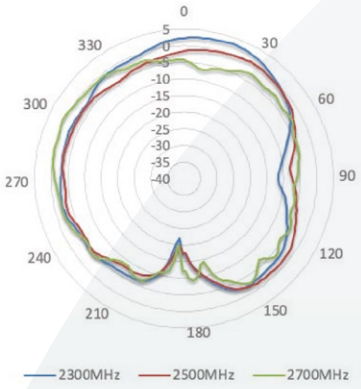
1710-2100 MHz



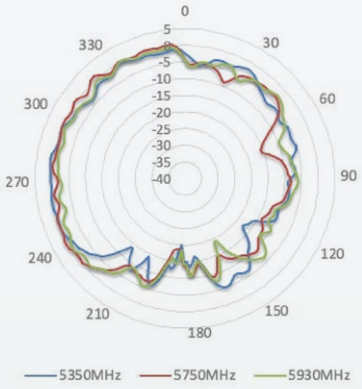
4200-5150 MHz



2300-2700 MHz



5350-5930 MHz



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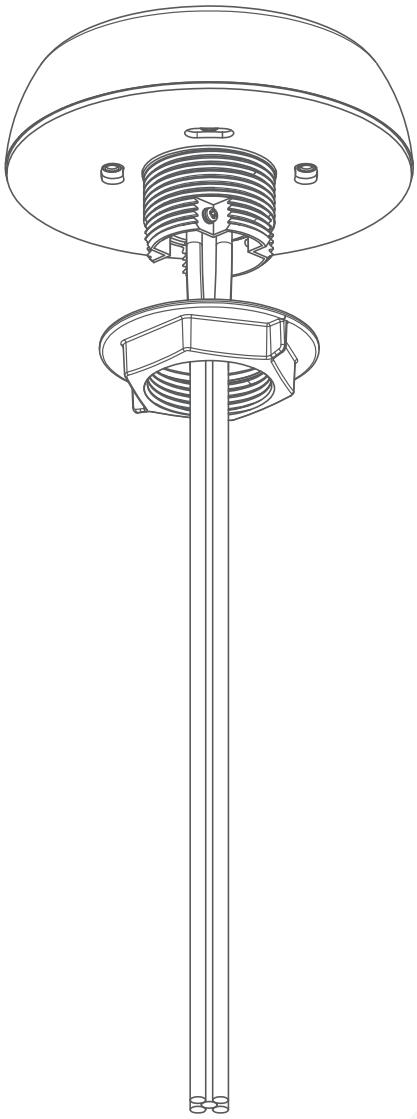
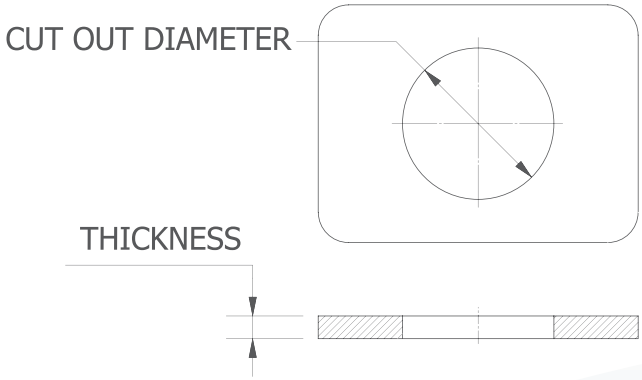
Panel Mount Installation Recommendation





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.

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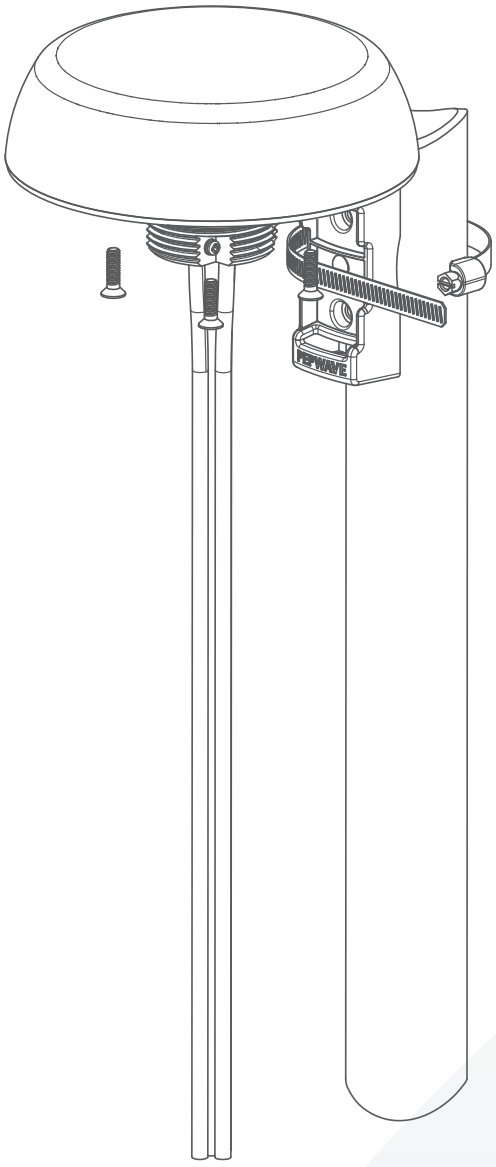
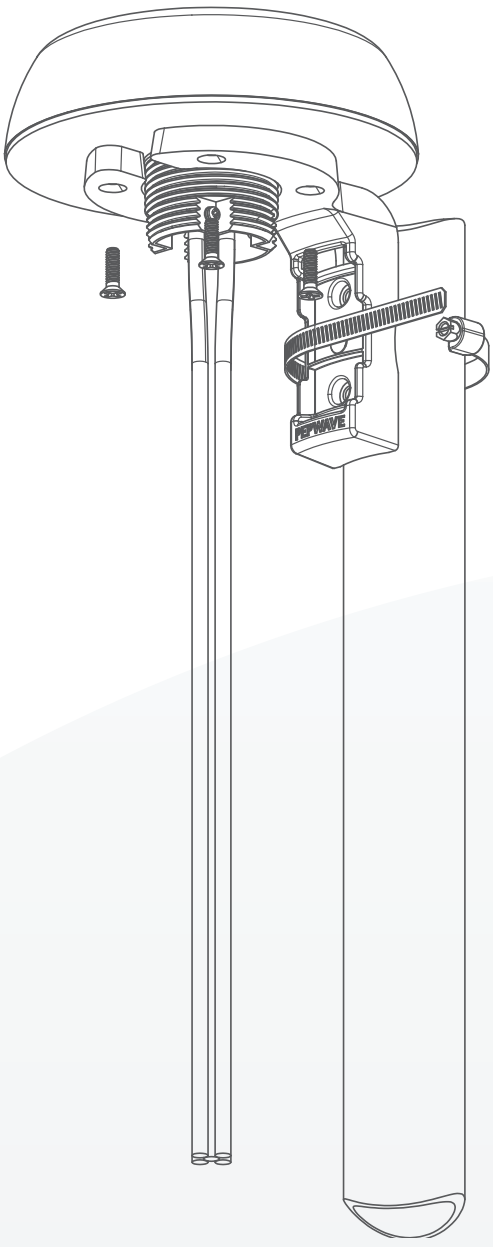
Pole Mount Installation Recommendation





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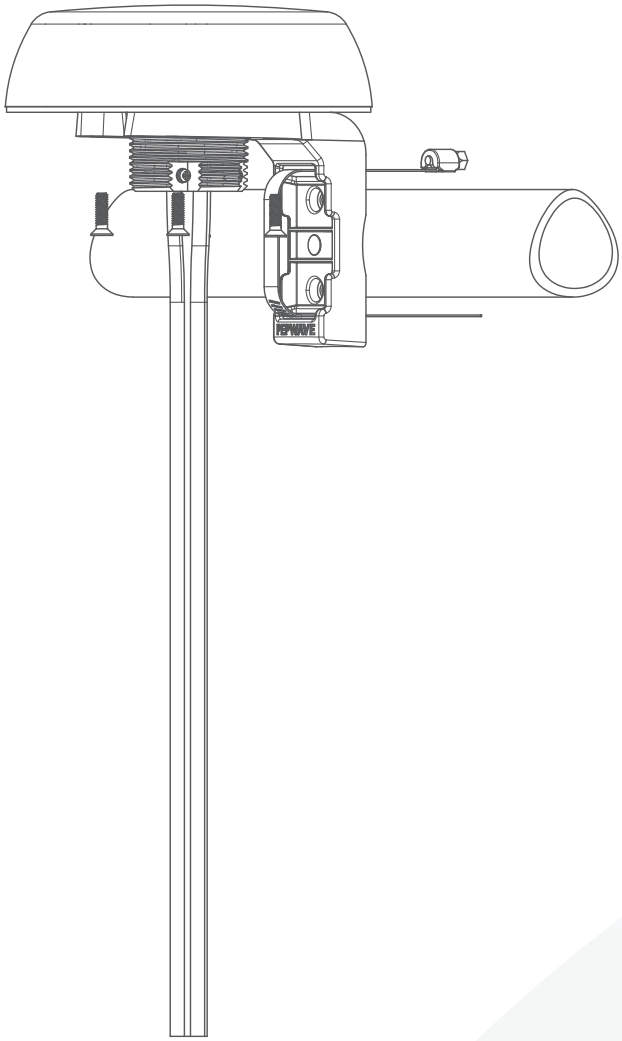
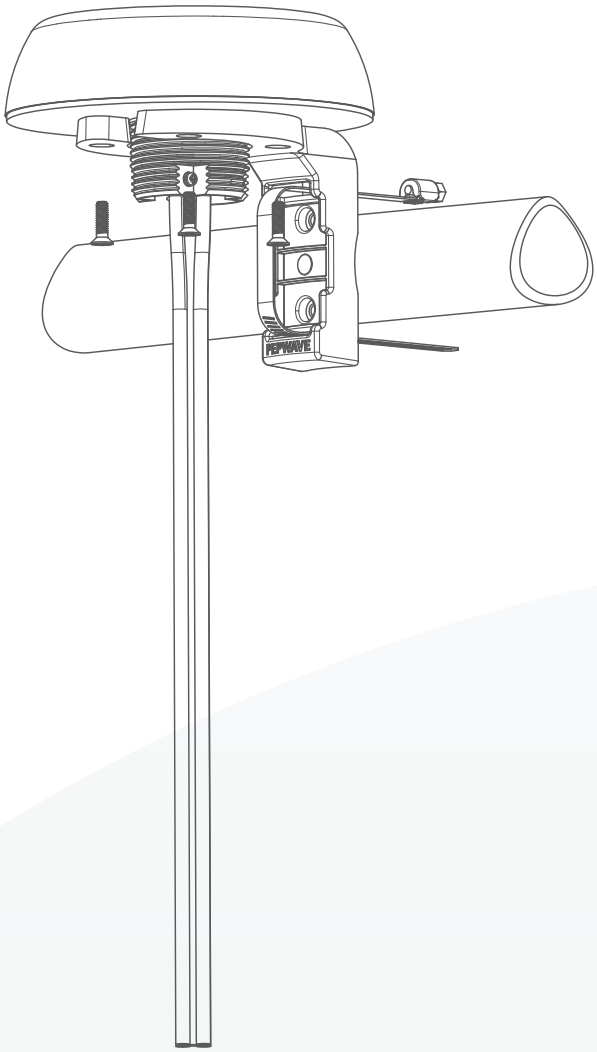
Horizontal Pole Mount Installation Recommendation





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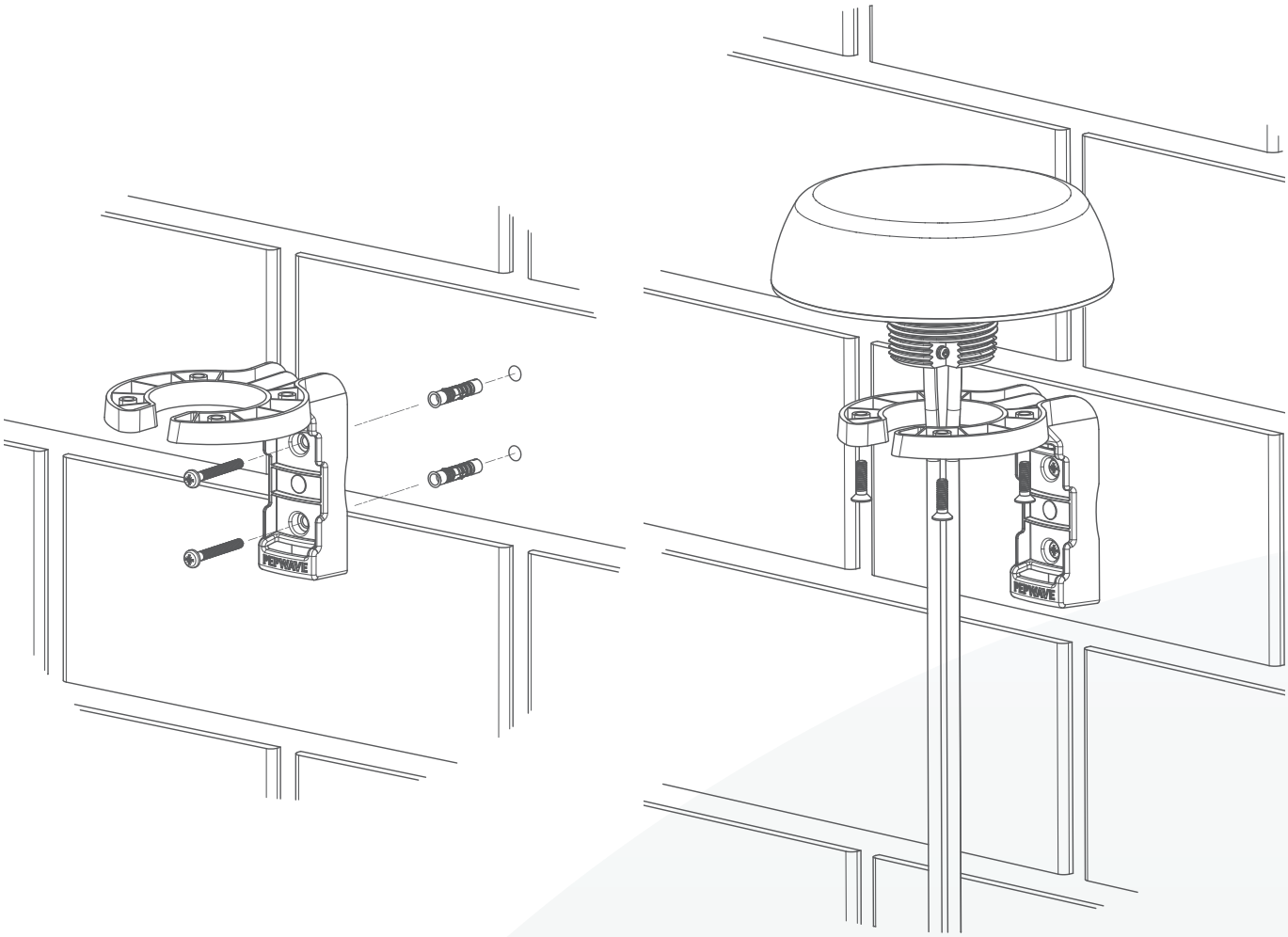
Wall Mount Installation Recommendation



Why Rising Connection is using equipment designed and built by Peplink?

- Industry leader in both ISP & Data Bonding across multiple technology platforms
- Reliable hardware from entry level professional equipment through to advanced Enterprises solutions
- Worldwide supported and local support here in Australia by fully trained technicians
- Reliable and secure redundancy paths for mission critical sites
- Designed for maximum possible business uptime

This demonstrates to Rising Connection that you will have the Quality, Reliability and Product Support.

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