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Puma 401

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



Features

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

7 dBi | **IP 68** | **4x4 MIMO** | **B71 Support**

LTE | **GPS** | **5G ready**



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Ref. no: peplink-202006-v1
Specifications subject to change without notice.

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Overview

Antenna elements		4x LTE/5G, 1x GPS
Cellular frequency bands		0.3dBi@ 617-960MHz 5.1dBi@ 1710-2700MHz 5.8dBi@ 3400-4200MHz 7.0dBi@ 4900-6000MHz
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 (LTE/5G, Wi-Fi) RG-174 (GPS)
Connector Type		SMA male, QMA male, N-type male

Description

The Peplink Puma 401 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 receiver is equipped with high gain LNA, making it ideal for location tracking.

The Puma 401 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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Specification

Cellular

Antenna elements	4 elements
Cellular frequency bands	0.3dBi@ 617-960MHz 5.1dBi@ 1710-2700MHz 5.8dBi@ 3400-4200MHz 7.0dBi@ 4900-6000MHz
VSWR	< 2.5 over 85% of the band
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
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

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+ABS

Package contents

Antenna	Puma 401
Mounting	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 B117
UV resistance rating	UL 746C (F1, long-term UV exposure)
Wind Survival	220 km/h



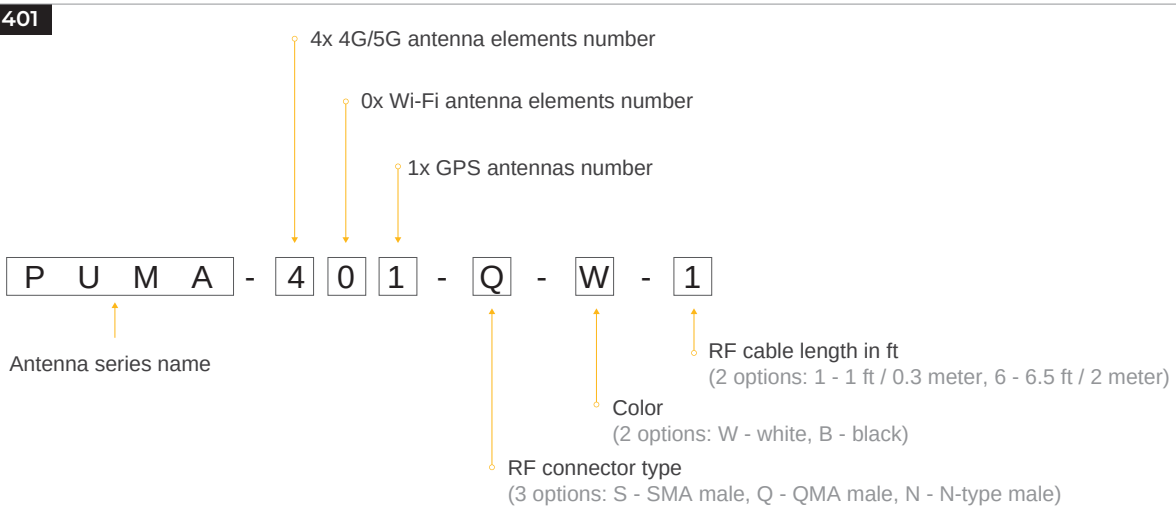
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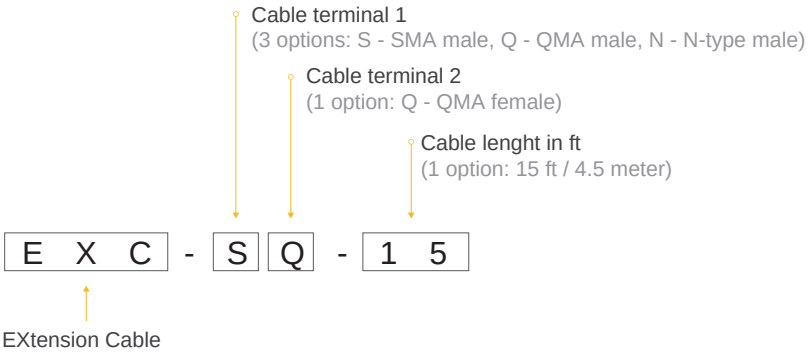
Ordering information

Puma 401

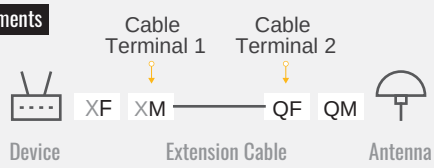


Product Code	Description
PUMA-401-S-W-6	4xLTE, 1xGPS 600-6000MHz, IP68, SMA, White, 6.5ft / 2m
PUMA-401-S-B-6	4xLTE, 1xGPS 600-6000MHz, IP68, SMA, Black, 6.5ft / 2m
PUMA-401-Q-W-1	4xLTE, 1xGPS 600-6000MHz, IP68, QMA, White, 1 ft / 0.3m
PUMA-401-Q-W-6	4xLTE, 1xGPS 600-6000MHz, IP68, QMA, White, 6.5ft / 2m
PUMA-401-Q-B-1	4xLTE, 1xGPS 600-6000MHz, IP68, QMA, Black, 1 ft / 0.3m
PUMA-401-Q-B-6	4xLTE, 1xGPS 600-6000MHz, IP68, QMA, Black, 6.5ft / 2m
PUMA-401-N-W-6	4xLTE, 1xGPS 600-6000MHz, IP68, N-type, White, 6.5ft / 2m
PUMA-401-N-B-6	4xLTE, 1xGPS 600-6000MHz, IP68, N-type, Black, 6.5ft / 2m

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

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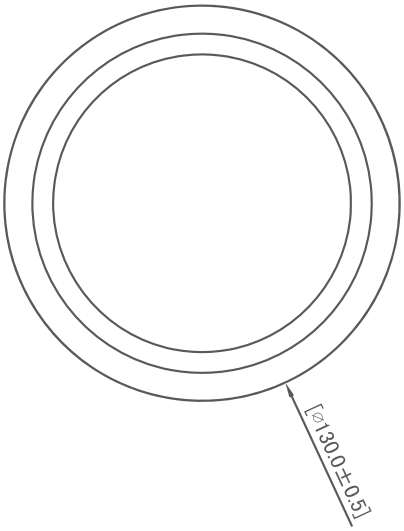
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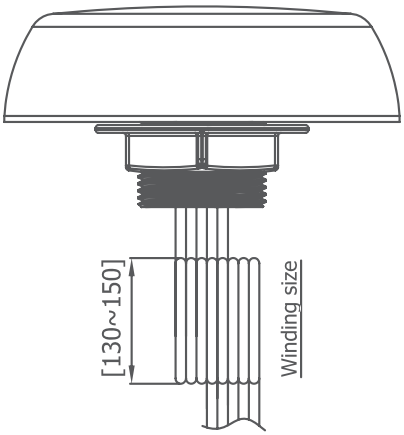
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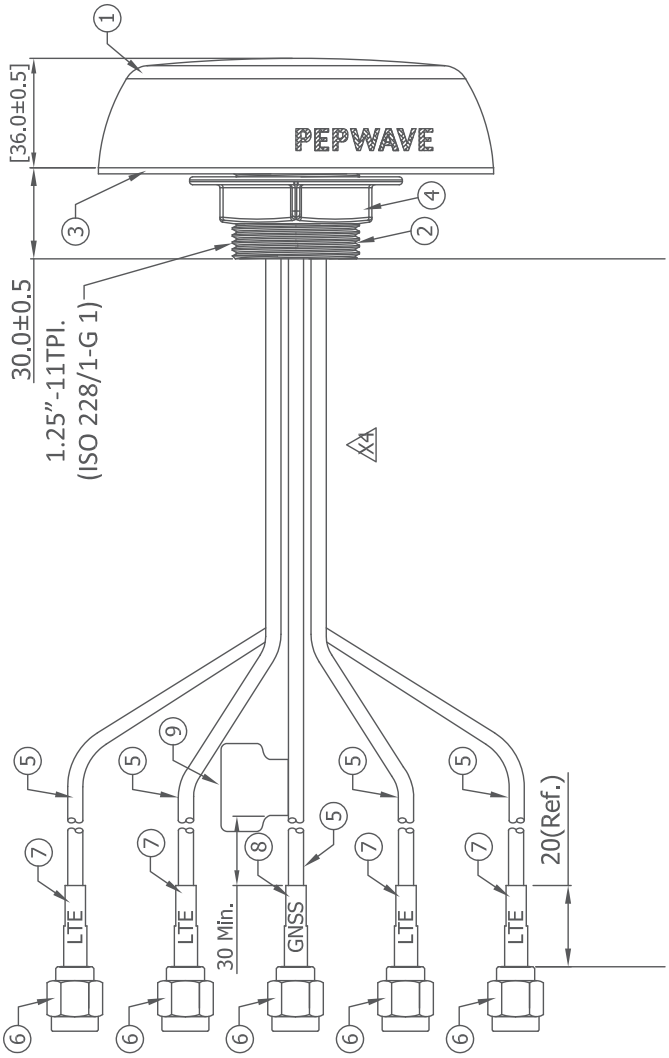
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Technical drawing







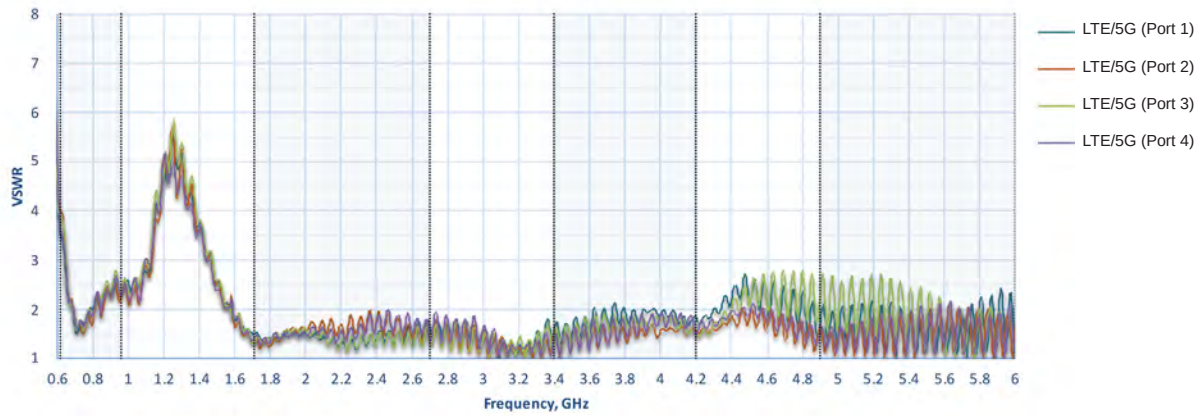
Index

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	Cable CFD-200 (LTE/5G)	5
6	4G/5G, GPS antenna connector	5
7	LTE cable marking	4
8	GPS cable marking	1
9	Label	1

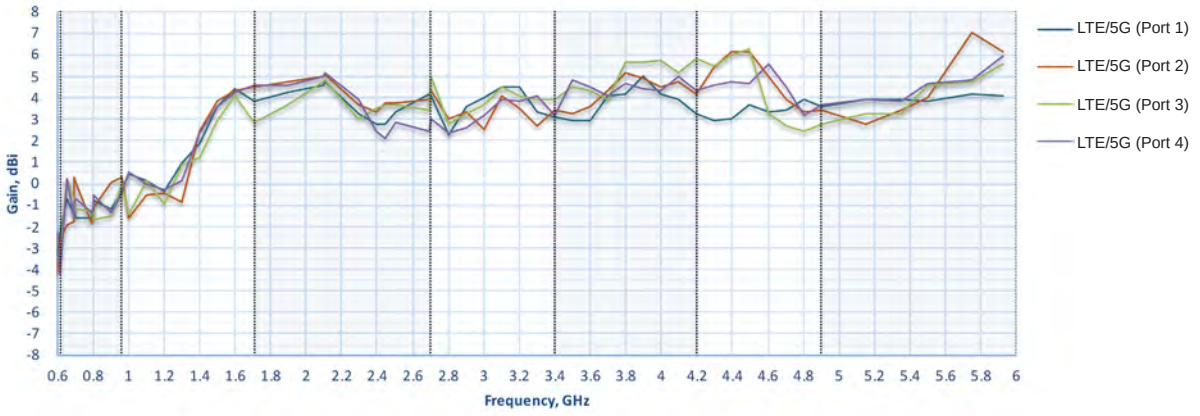
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LTE/5G Antenna VSWR

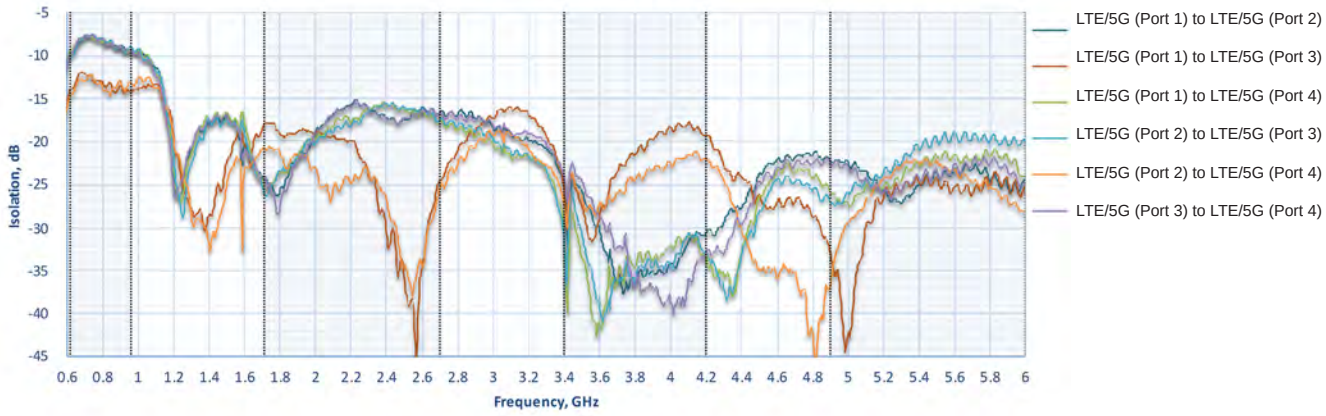


LTE/5G Antenna Gain

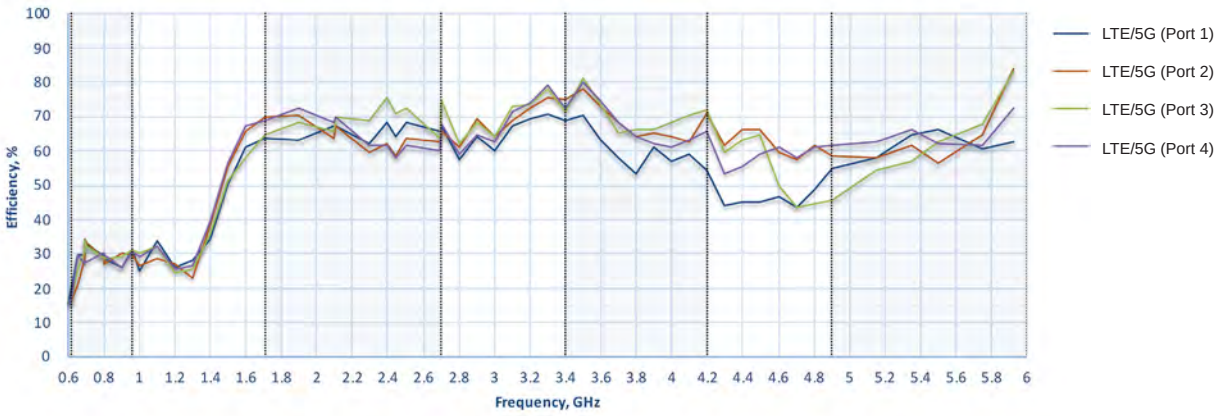


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LTE/5G Antenna Isolation



LTE/5G Antenna Efficiency



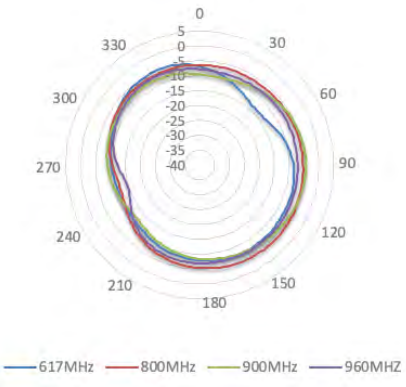
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LTE/5G Antenna Radiation patterns (Azimuth)

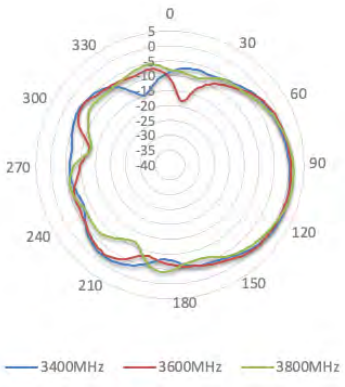
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617-960 MHz

617-

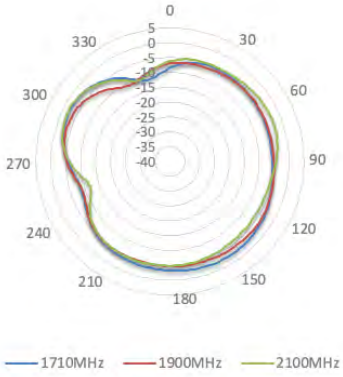


3400-3800 MHz

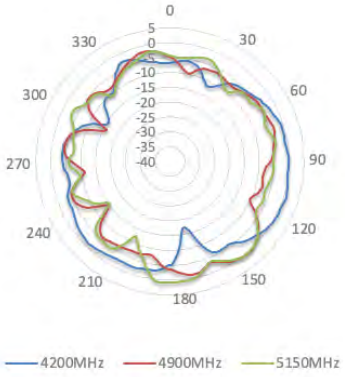


1710-2100MHz

1710-

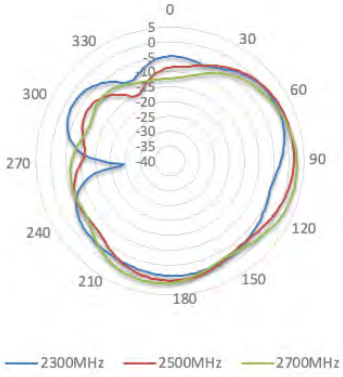


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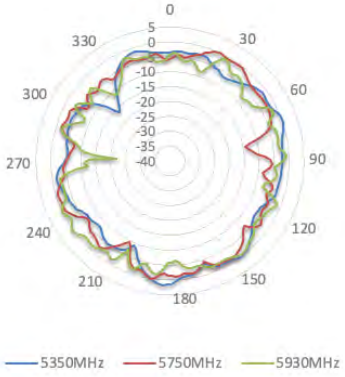


2300-2700 MHz

2300-



5350-5925 MHz

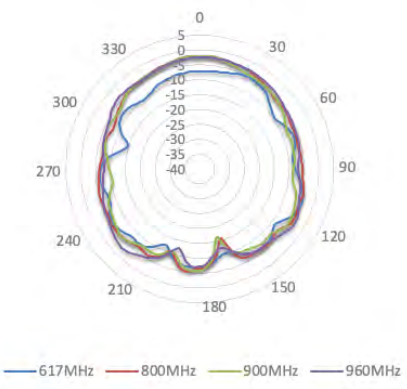


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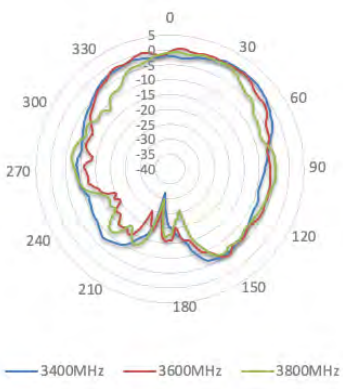
LTE/5G Antenna Radiation patterns (Elevation 1)

Puma 401

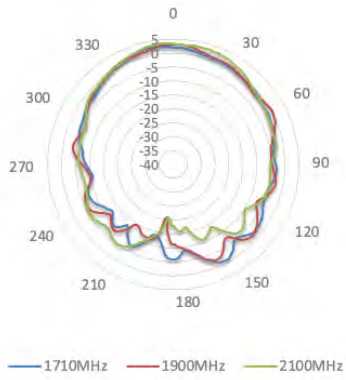
617-960 MHz



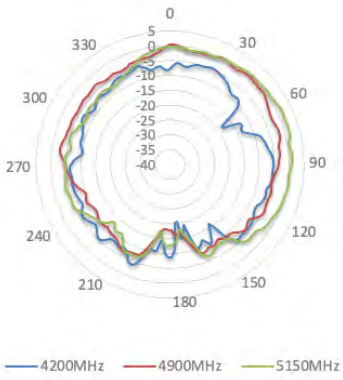
3400-3800 MHz



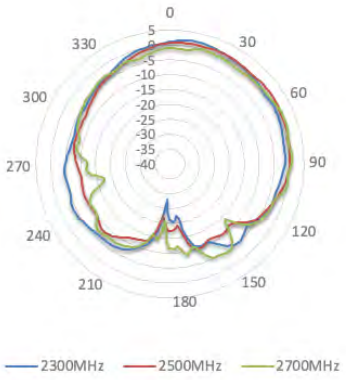
1710-2100MHz



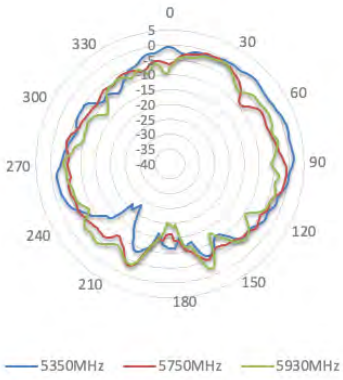
4200-5150 MHz



2300-2700 MHz



5350-5925 MHz

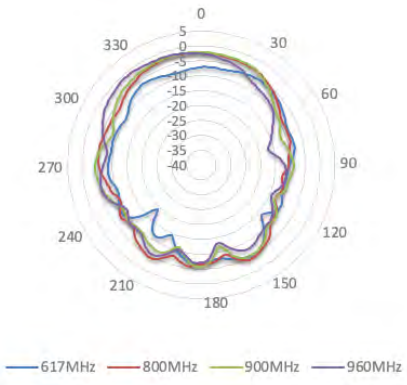


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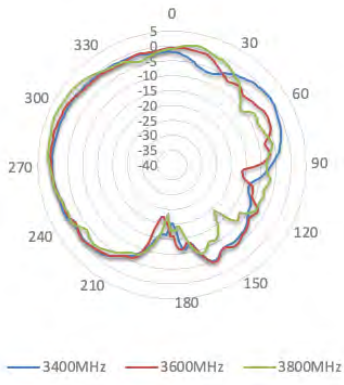
LTE/5G Antenna Radiation patterns (Elevation 2)

Puma 401

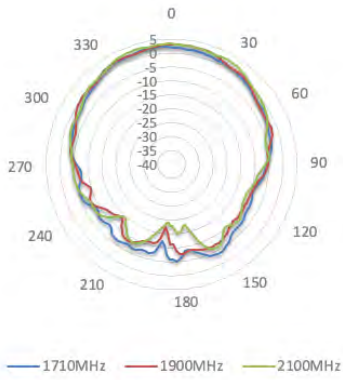
617-960 MHz



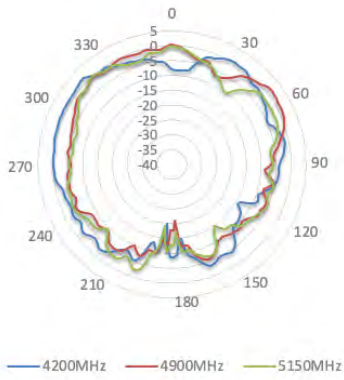
3400-3800 MHz



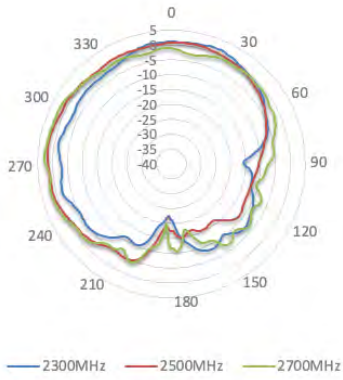
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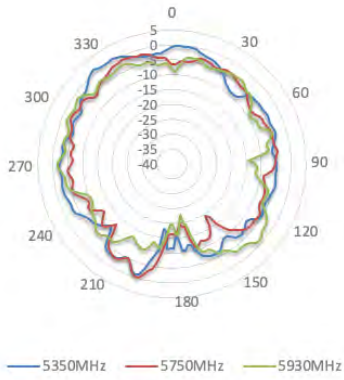
4200-5150 MHz



2300-2700 MHz



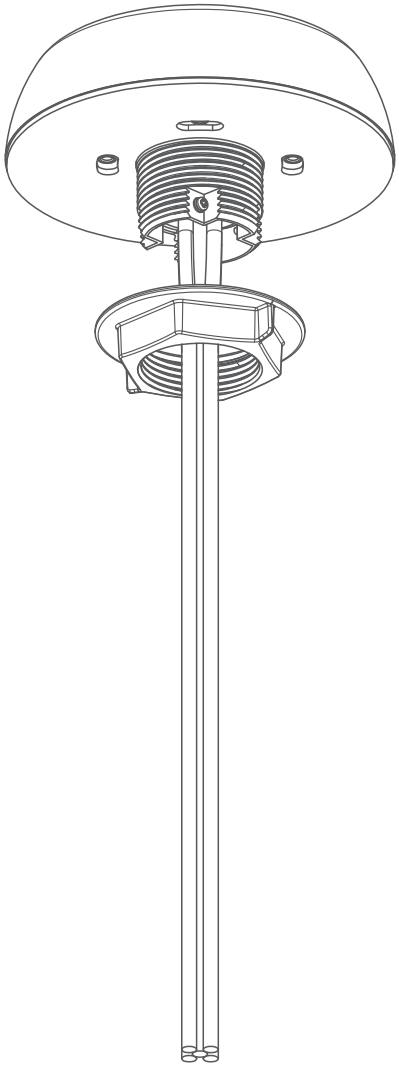
5350-5925 MHz



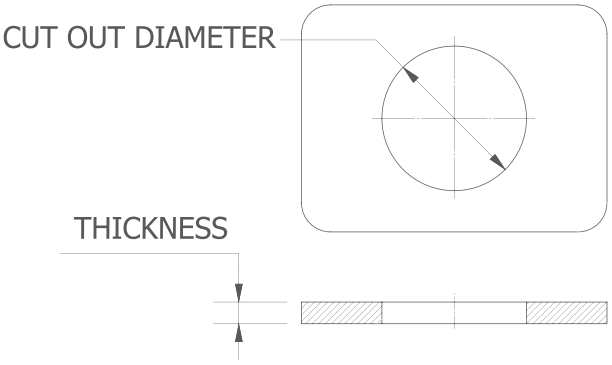
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Installation recommendation

Panel Mount



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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.

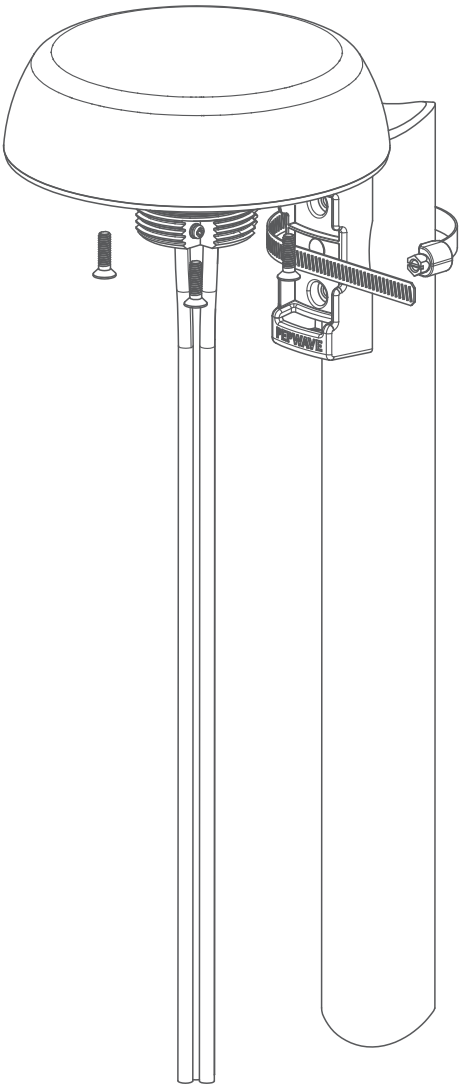
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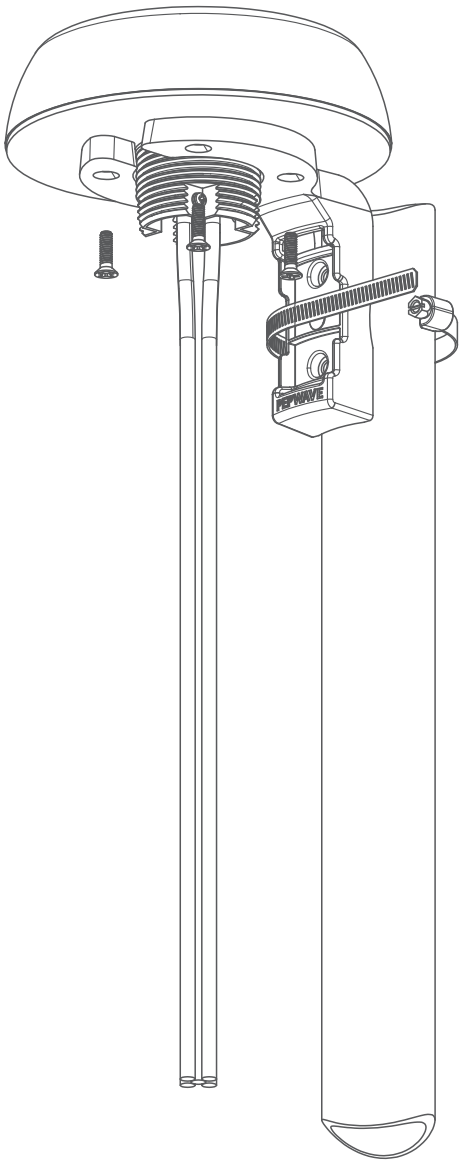
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Installation recommendation

Pole Mount

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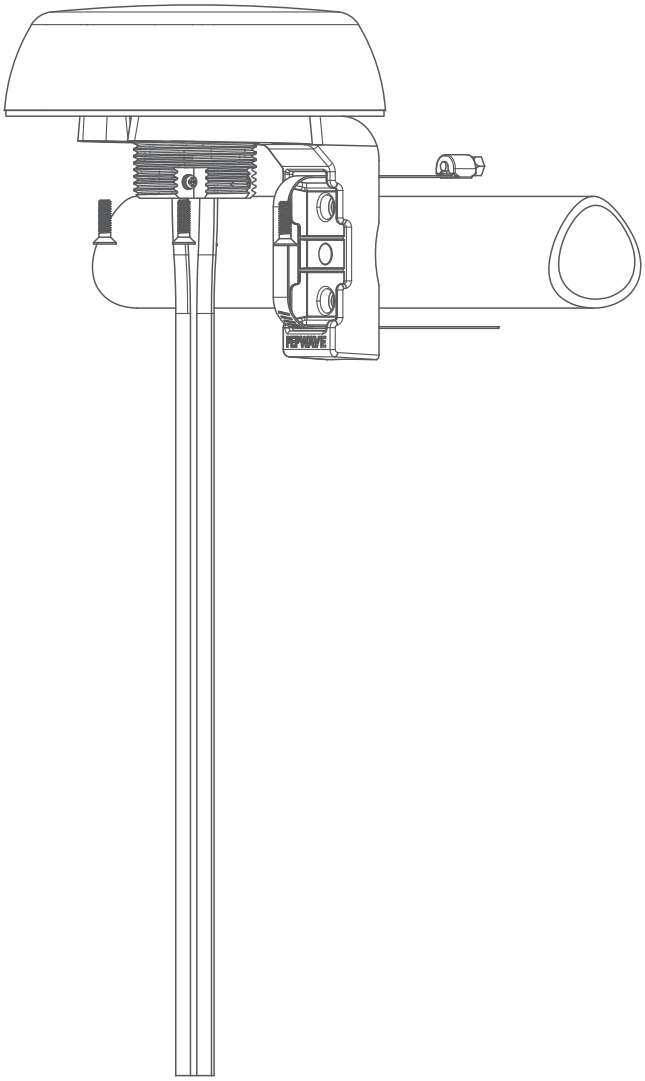


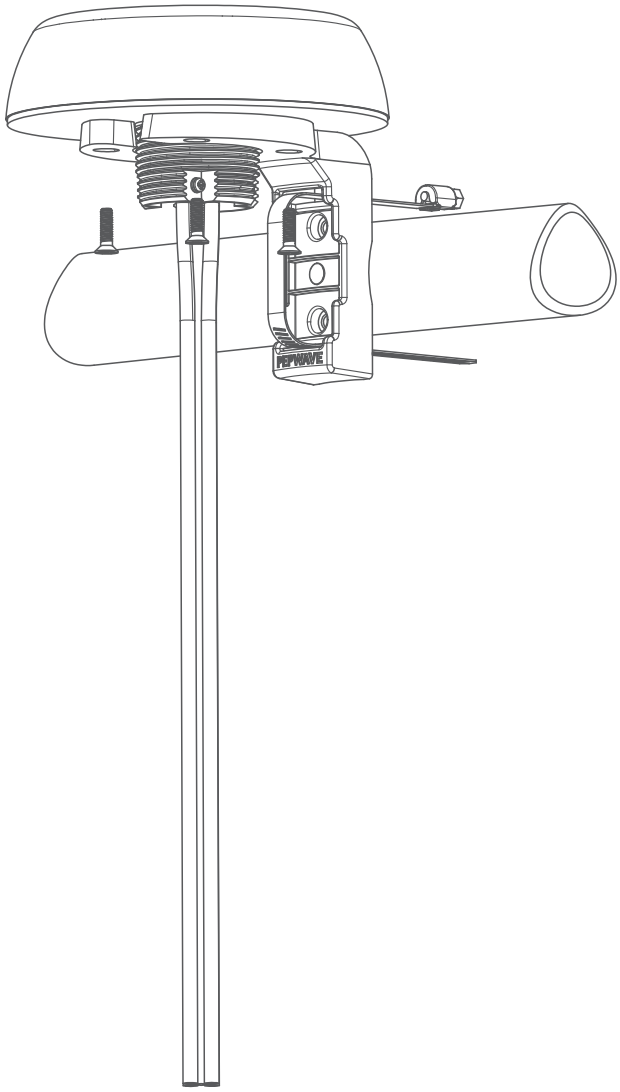
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Installation recommendation

Horizontal Pole Mount

Puma 401





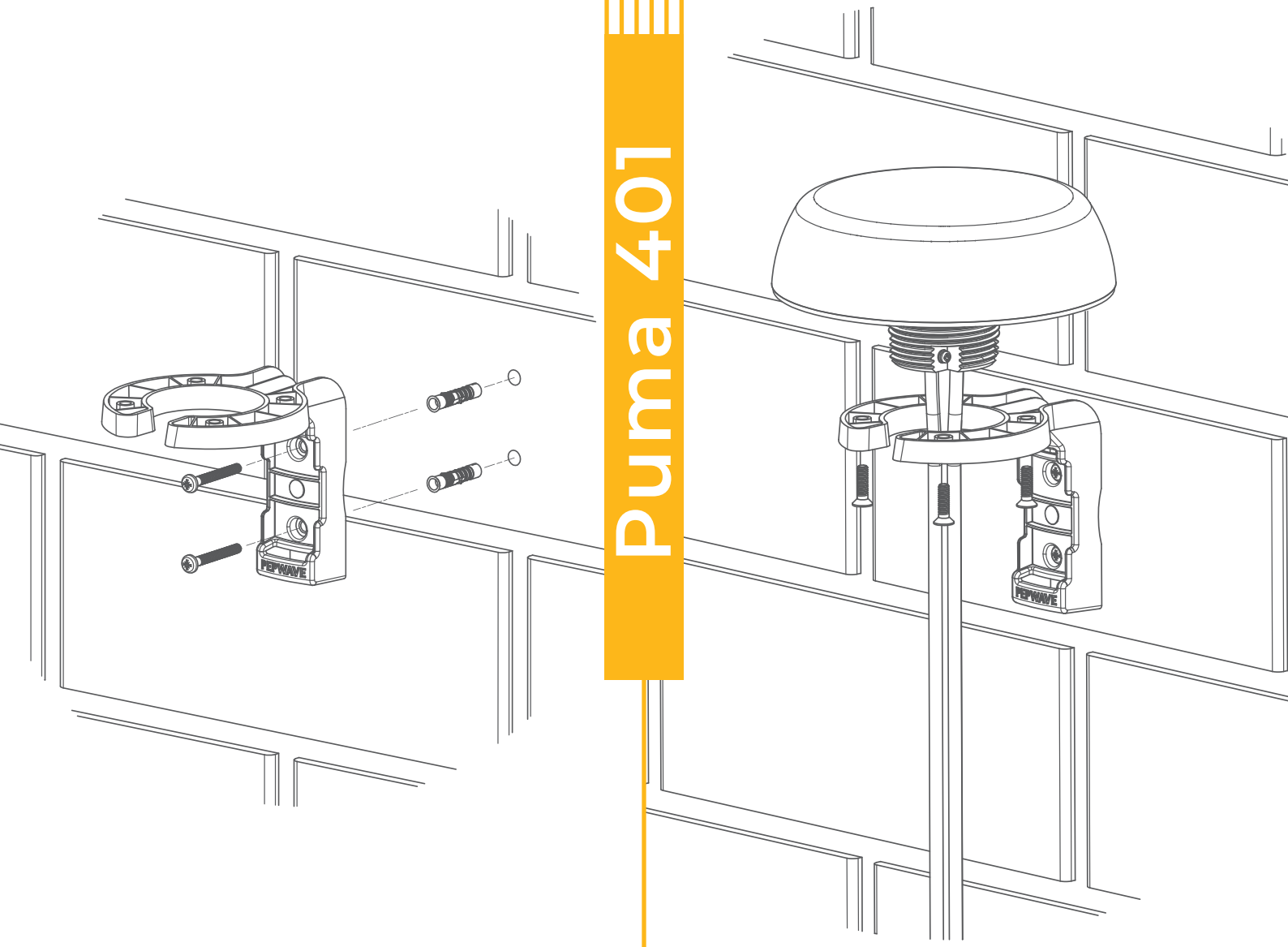
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Installation recommendation

Wall Mount

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