

# Mobility 82G

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## Built for **5G**

Omni-directional 8x8 MIMO mobile antenna for the best performance.

## Ultra Wide **Bandwidth**

Wide frequency range (600-6000MHz) supporting LTE and 5G connectivity in any location.

## Robust **Design**

IP67 rated, low profile and durable housing.



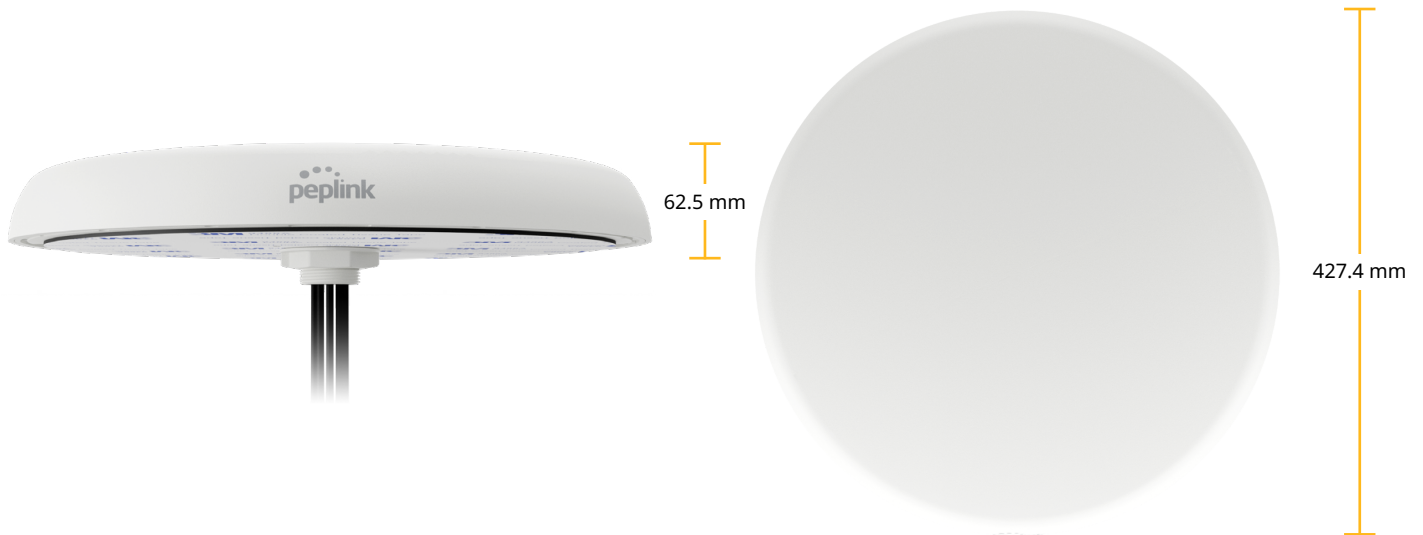
## Easy **Installation**

Surface, panel installation for various applications.



## Flexible **Applications**

- Public Safety & Mission Critical Connectivity
- Mobile Healthcare
- Transportation Connectivity



## Specifications

| Cellular                           |  | GPS                       |   |
|------------------------------------|--|---------------------------|---|
| <b>Antenna Elements</b>            | 8 elements   | <b>Frequency Range</b>    | 1575-1602 MHz   |
| <b>Peak Gain &amp; Frequencies</b> | 6.0dBi: 617-960MHz<br>7.1dBi: 1710-2700MHz<br>8.7dBi: 3400-4200MHz<br>8.8dBi: 5000-6000MHz | <b>Peak Gain</b>          | 1.2 dBiC: 1575MHz<br>2.0 dBiC: 1602MHz  |
| <b>VSWR</b>                        | < 2.5 over 95% of the band   | <b>VSWR</b>               | < 2.0   |
| <b>Feed Power Handling</b>         | 10W  | <b>Output Return Loss</b> | -10dB max   |
| <b>Input Impedance</b>             | 50 Ω   | <b>Gain: LNA</b>          | 29 ± 3 dB   |
| <b>Polarisation</b>                | Linear   | <b>Operating Voltage</b>  | 3.3 V   |
|                                    |  | <b>Power Consumption</b>  | 6 ±2 mA at 3.3 V  |
| WiFi                               |  | Cable (LTE/5G, Wi-Fi)     |   |
| <b>Antenna Elements</b>            | 2 elements<br>6.0dBi: 2400-2500MHz<br>7.4dBi: 5000-6000MHz                                 | <b>Type</b>               | CFD-200   |
| <b>VSWR</b>                        | < 2.0  | <b>Loss</b>               | 0.33 dB/m @ 900 MHz<br>0.49 dB/m @ 2000 MHz<br>0.55 dB/m @ 2500 MHz<br>0.87 dB/m @ 5800 MHz |
| <b>Feed Power Handling</b>         | 10W  | <b>Diameter</b>           | 0.2 in. / 5.0 mm  |
| <b>Input Impedance</b>             | 50 Ω   | <b>Jacket</b>             | Half matt PVC, UV resistant   |
| <b>Polarisation</b>                | Linear   | <b>Termination</b>        | QMA male, SMA male, RP-SMA male (Wi-Fi)   |

Specifications are subject to change without notice.

## Specifications

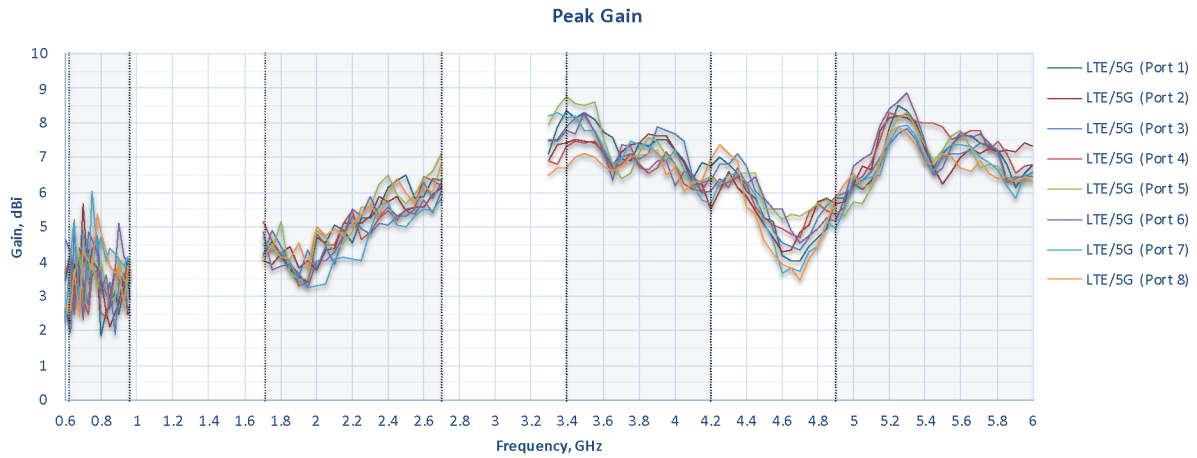
| Cable (GPS)                |   | Package Contents              |  |
|----------------------------|---|-------------------------------|--|
| <b>Type</b>                | RG-174  | <b>Antenna</b>                | MB-82G   |
| <b>Loss</b>                | 3.4 dB/m @ 1000 MHz<br>4.9 dB/m @ 1800 MHz  | <b>Accessories</b>            | Long and short thread<br>Double sided 3M adhesive pad<br>- Diameter: 15.2" / 386 mm<br>- Thickness: 0.08" / 2 mm |
| <b>Diameter</b>            | 0.1" / 2.7mm  |                               |  |
| <b>Jacket</b>              | Half matt PVC, UV resistant   |                               |  |
| <b>Termination</b>         | QMA male, SMA male  |                               |  |
| Mounting                   |   | Environmental, Compliance     |  |
| <b>Supported Types</b>     | Panel, surface (with additional mount)<br>magnetic (with additional mount)        | <b>IP Rating</b>              | IP67   |
| <b>Mounting Hole</b>       | 1.7" / 43mm   | <b>Operating Temperature</b>  | -40° - 176°F / -40° - 80°C   |
| <b>Max Panel Thickness</b> | up to 6.7" / 170mm  | <b>Storage Temperature</b>    | -40° - 176°F / -40° - 80°C   |
| Mechanical                 |   | <b>Compliance</b>             | ROHS, REACH, WEEE  |
| <b>Product Dimensions</b>  | 2.46" / 62.5 mm - Height<br>(spigot not included)<br>16.83" / 427.4 mm - Diameter | <b>Wind Survivability</b>     | 137mph (220km/h)   |
| <b>Packaged Dimensions</b> | 20.16" x 20.09" x 9.06"<br>512x510x230mm  | <b>Enclosure Flammability</b> | UL 94 HB   |
| <b>Radome Material</b>     | UV stable PC  | <b>Cable Flammability</b>     | UL 758 (VW-1)  |
|                            |   | <b>UV Resistance</b>          | UL 746C (F1 long-term UV exposure)   |
|                            |   | <b>Salt Spray</b>             | MIL-STD 810F/ASTM 8117   |

## Ordering Information

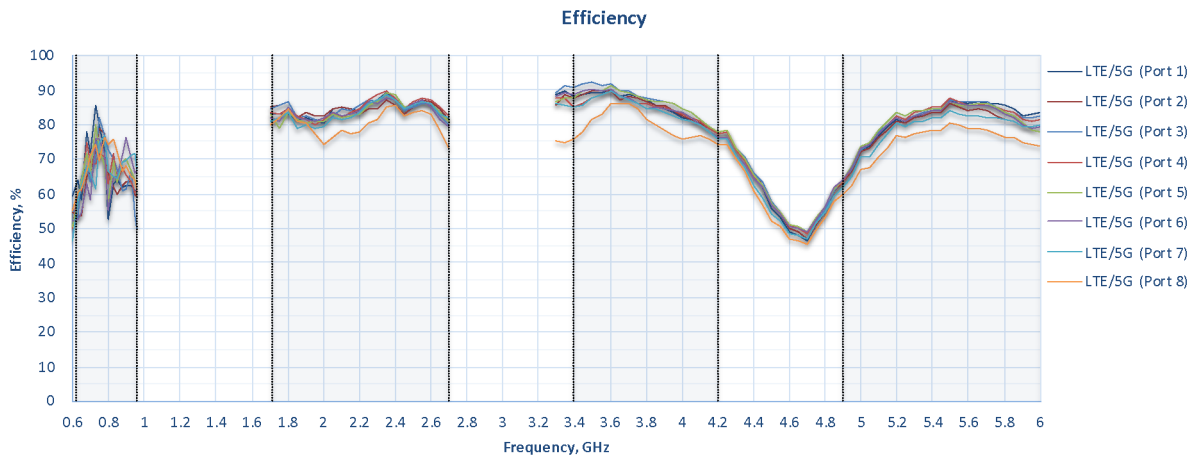
| Product Code     | Description  |
|------------------|--|
| ANT-MB-82G-S-W-6 | 8xLTE/5G, 2x Wi-Fi, 1xGPS 600-6000MHz, IP67, SMA (Cellular, GPS), RP-SMA (Wi-Fi), White, 6.5 ft / 2m |
| ANT-MB-82G-Q-W-6 | 8xLTE/5G, 2x Wi-Fi, 1xGPS 600-6000MHz, IP67, QMA (Cellular, GPS), RP-SMA (Wi-Fi), White, 6.5 ft / 2m |
| ACW-667          | Surface Mount for Mobility 82G   |
| ACW-668          | Magnetic Mount for Mobility 82G  |

## Graphs

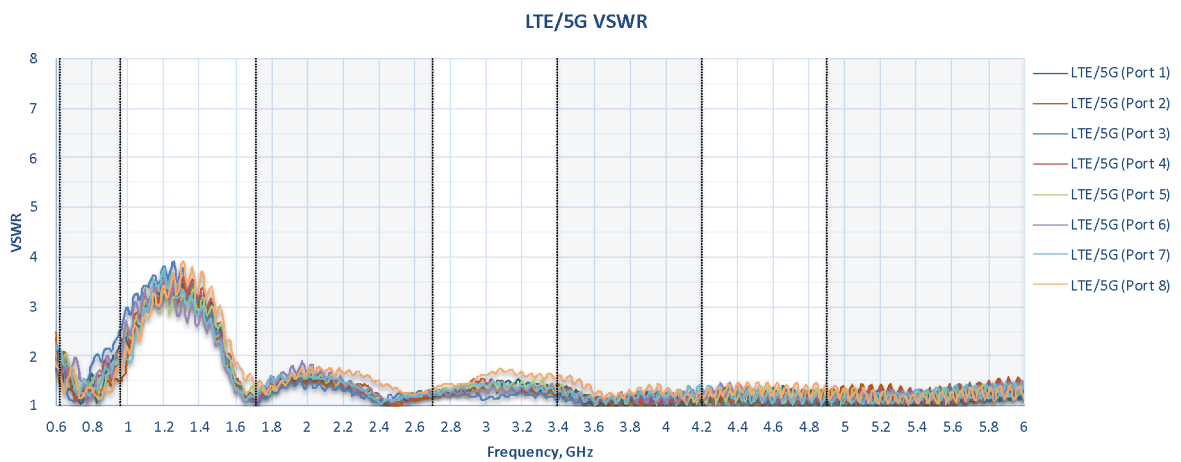
### LTE/5G Antenna Gain



### LTE/5G Antenna Efficiency

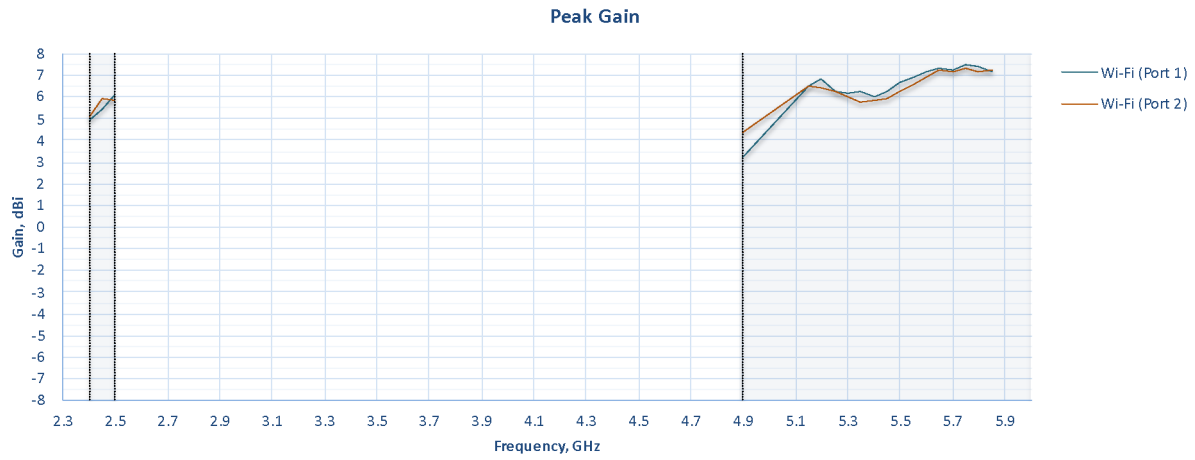


### LTE/5G Antenna VSWR

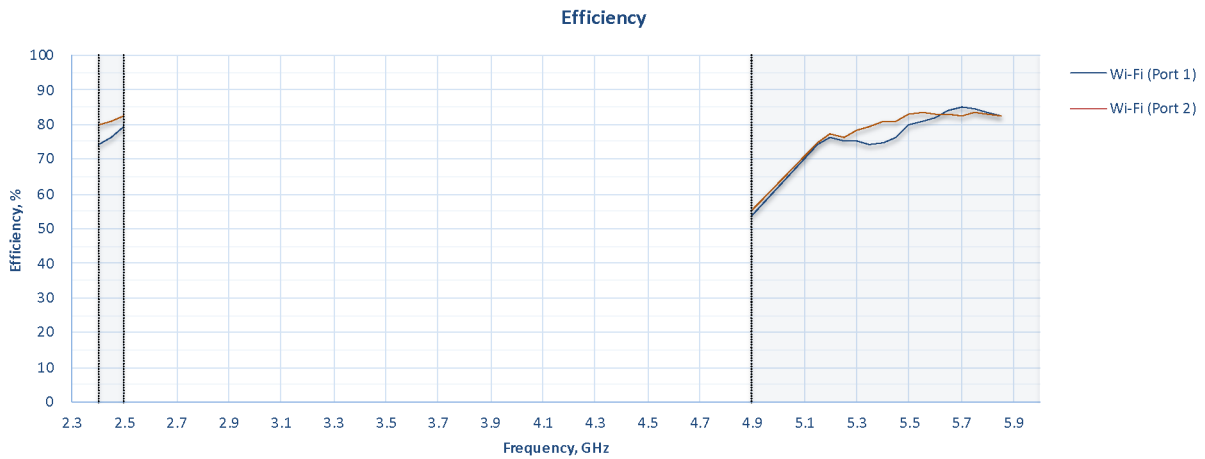


## Graphs

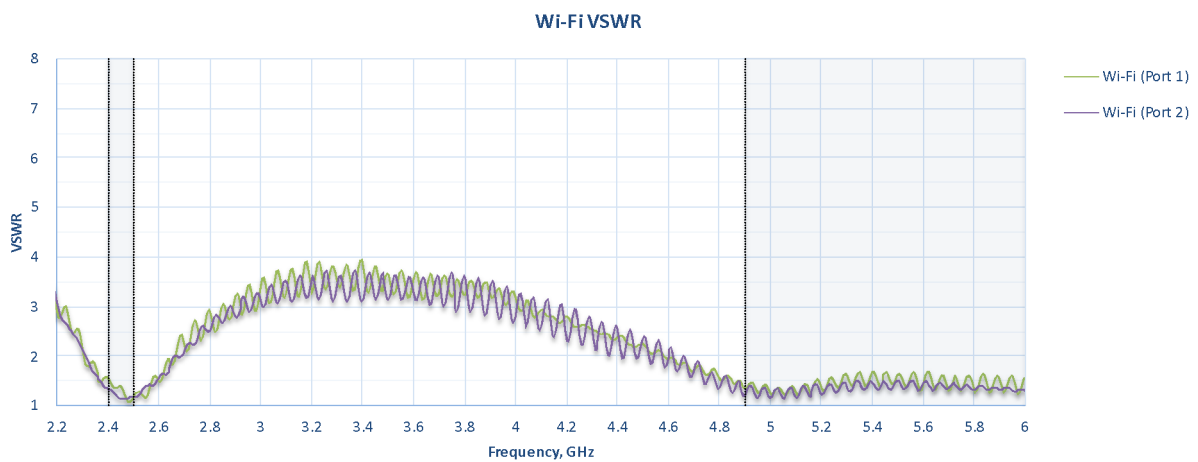
### Wi-Fi Antenna Gain



### Wi-Fi Antenna Efficiency



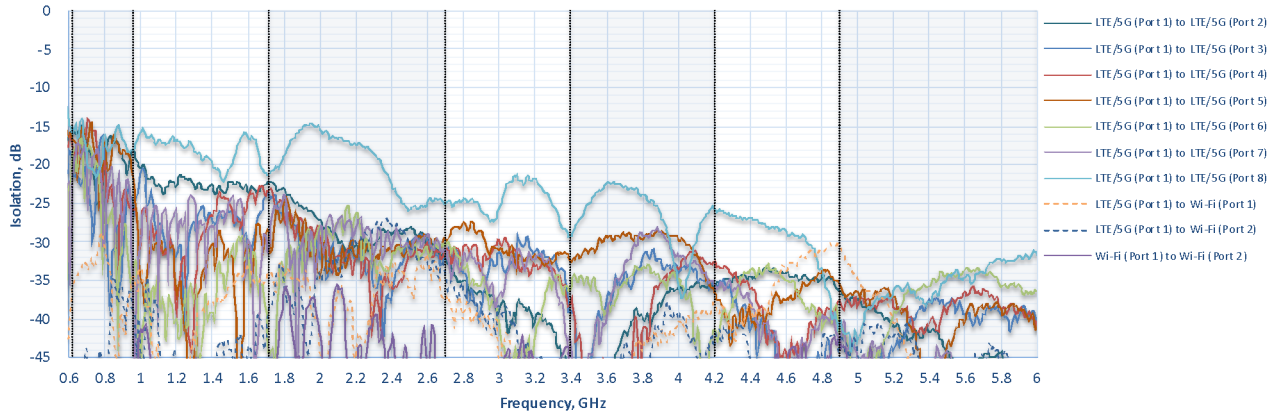
### Wi-Fi Antenna VSWR



## Graphs

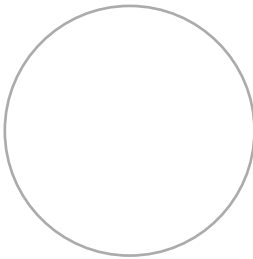
### LTE/5G & Wi-Fi Antenna Isolation

LTE/5G and Wi-Fi antenna elements isolation

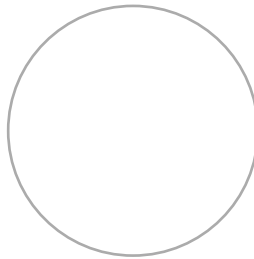


### Radiation Pattern - LTE Radiation Patterns (Azimuth)

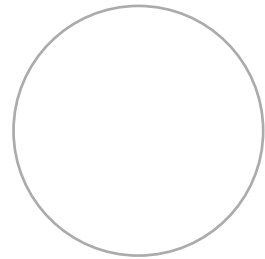
617-960 MHz



1710-2100MHz

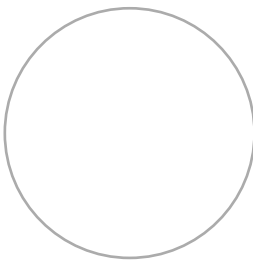


2300-2700 MHz

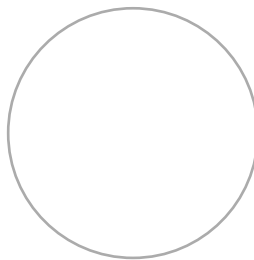


TBD

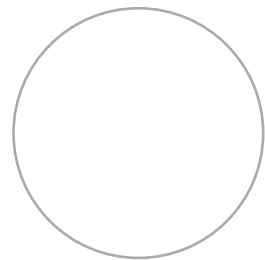
3400-3800 MHz



4200-5150 MHz



5350-5925 MHz

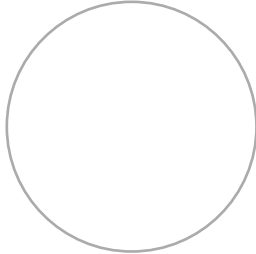




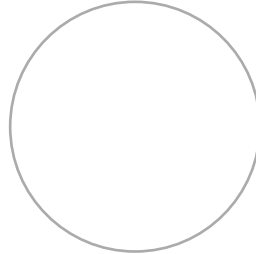
## Graphs

### Radiation Pattern - LTE Radiation Patterns (Elevation 1)

617-960 MHz

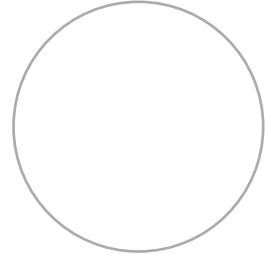


1710-2100MHz

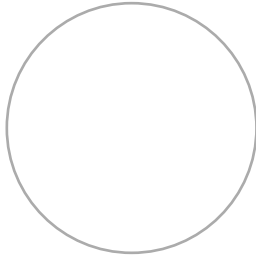


TBD

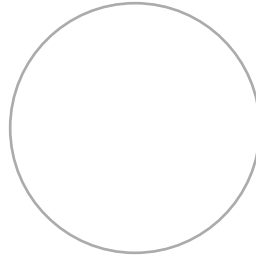
2300-2700 MHz



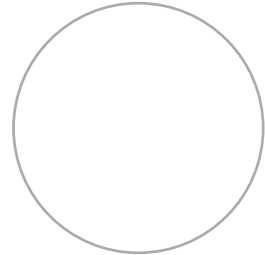
3400-3800 MHz



4200-5150 MHz

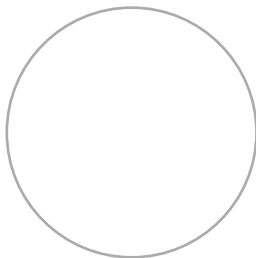


5350-5925 MHz

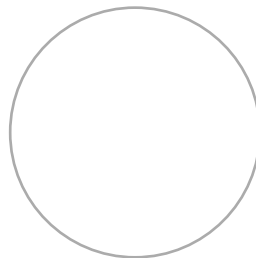


### Radiation Pattern - LTE Radiation Patterns (Elevation 2)

617-960 MHz

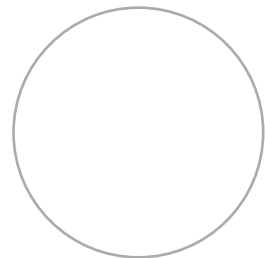


1710-2100MHz

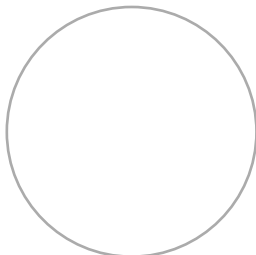


TBD

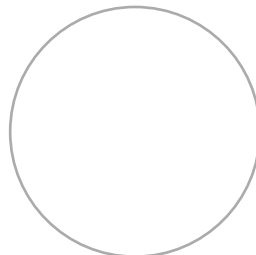
2300-2700 MHz



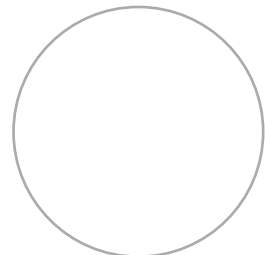
3400-3800 MHz



4200-5150 MHz



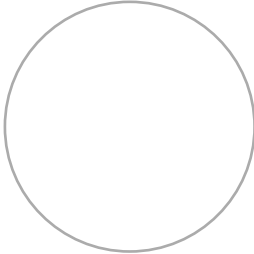
5350-5925 MHz



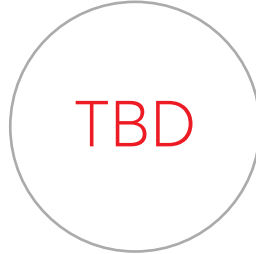
## Graphs

### Radiation Pattern - Wi-Fi Radiation Patterns (Azimuth)

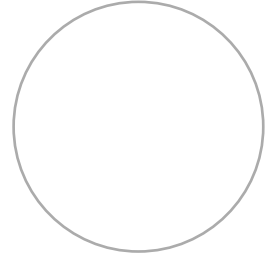
2400-2500 MHz



4900-5350 MHz

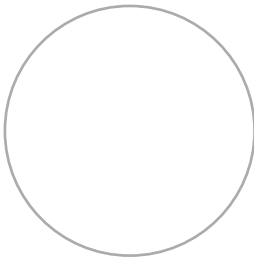


5550-5950 MHz

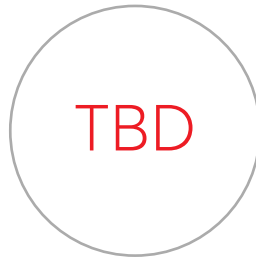


### Radiation Pattern - Wi-Fi Radiation Patterns (Elevation 1)

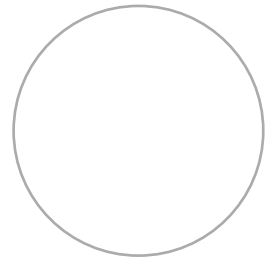
2400-2500 MHz



4900-5350 MHz

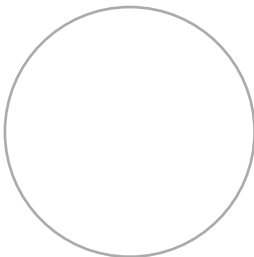


5550-5950 MHz

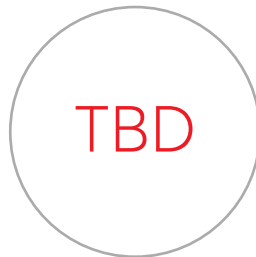


### Radiation Pattern - Wi-Fi Radiation Patterns (Elevation 2)

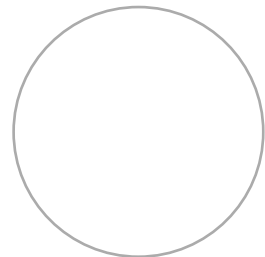
2400-2500 MHz



4900-5350 MHz

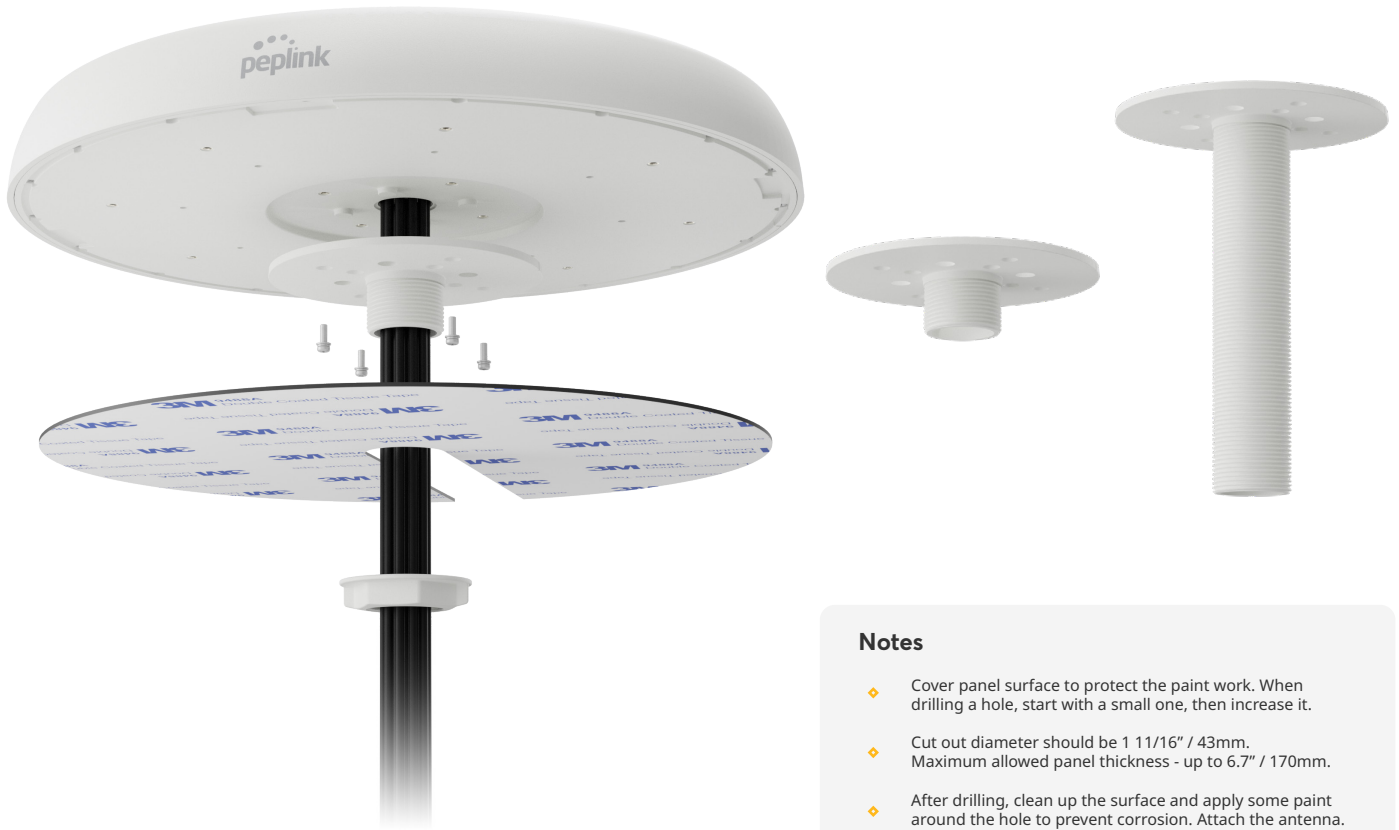


5550-5950 MHz



## Installation Recommendation

### Panel (Through Hole)



#### 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 - up to 6.7" / 170mm.
- ◆ After drilling, clean up the surface and apply some paint around the hole to prevent corrosion. Attach the antenna.

### Magnetic Mount



### Surface Mount

