



MOBILITY 42G

7-in-1 Cellular & Wi-Fi Antenna System with GPS Receiver

Overview

- **Built for 5G**
Omni-directional 4x4 MIMO mobile antenna for the best performance.
- **C-Band support**
Exceptional performance in 3.3 and 4.2 GHz frequency range allowing to get a massive throughout speed boost.
- **Ultra wide bandwidth**
Wide frequency range (600-6000MHz) supporting LTE and 5G
- **Wi-Fi**
2x2 MIMO dual band (2.4GHz & 5GHz) high gain omnidirectional antennas
- **Robust design**
IP68 rated, low profile and durable housing in Black or White color options.

Applications

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

8.2
dBi

↑↓
LTE

Wi-Fi

GPS

IP
68

B71
Support

Built for
5G

C-
Band
Support



TAA COMPLIANT



Specification

Cellular

Antenna elements	4 elements
Cellular frequencies [#]	4.4dBi@617-960MHz 7.8dBi@1710-2700MHz 7.9dBi@3400-4200MHz 8.2dBi@5000-6000MHz
Cellular bands	LTE bands B1 to B86 (except B31, B72, B73, B87, B88), 5G bands n1 to n99
VSWR	< 2.5 over 95% of the band
Feed power handling	10W
Input impedance	50 Ω
Polarisation	Linear
Ground plane	Not required

Wi-Fi

Antenna elements	2 elements
Peak Gain & Frequencies	5.0dBi: 2400-2500MHz 7.5dBi: 5000-6000MHz
VSWR	< 2.5
Feed power handling	10W
Input impedance	50 Ω
Polarisation	Linear

GPS

Frequency range	1561-1602 MHz
Peak Gain & Frequencies	0.5dBi@1575MHz 1.6dBi@1602MHz
VSWR	< 2 dB
Output return loss	10dB max
LNA Gain	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, Wi-Fi)

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	0.2" / 5.0mm
Jacket	Half matt PVC, UV resistant
Cellular Termination	QMA male, SMA male
Wi-Fi Termination	QMA male, RP-SMA male

[#] Measured peak Gain on 600x600mm (23.6"x23.6") ground plane excluding cable loss.

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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) (Diameter)	2.28" / 58mm (spigot not included) 8.19" / 208mm
Packaged dimensions	9.09" x 8.50" x 6.14" 231 x 216 x 156 mm
Radome material	UV stable PC

Package contents

Antenna	Mobility 42G
Accessories	Wall/pole mount Double sided 3M adhesive pad (Diameter: 8.19" / 208 mm Thickness: 0.08" / 2 mm)

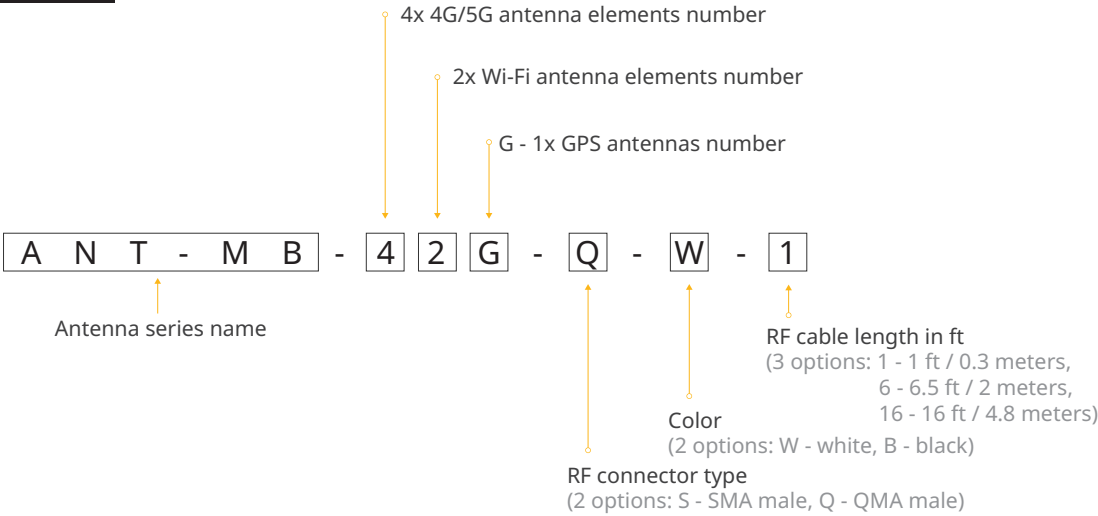
Environmental, compliance

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 [^]	167mph, 268 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

[^] The plastic mounting bracket included in the package is not designed to withstand wind loads. For high wind areas, use of the Stainless Steel L-mount (ACW-882) is recommended.

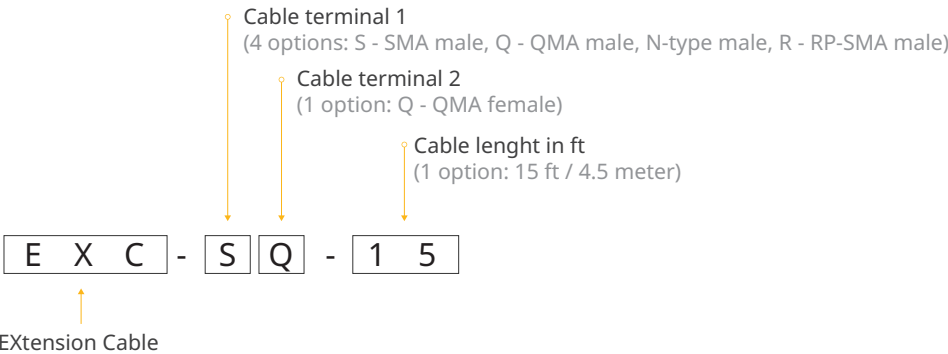
Ordering Information

Mobility 42G



Product Code	Description
ANT-MB-42G-S-W-1	4xLTE/5G, 2x Wi-Fi, 1xGPS 600-6000MHz, IP68, SMA male (Cellular, GPS), RP-SMA male (Wi-Fi), White, 1 ft / 0.3m
ANT-MB-42G-S-B-1	4xLTE/5G, 2x Wi-Fi, 1xGPS 600-6000MHz, IP68, SMA male (Cellular, GPS), RP-SMA male (Wi-Fi), Black, 1 ft / 0.3m
ANT-MB-42G-S-W-6	4xLTE/5G, 2x Wi-Fi, 1xGPS 600-6000MHz, IP68, SMA male (Cellular, GPS), RP-SMA male (Wi-Fi), White, 6.5 ft / 2m
ANT-MB-42G-S-B-6	4xLTE/5G, 2x Wi-Fi, 1xGPS 600-6000MHz, IP68, SMA male (Cellular, GPS), RP-SMA male (Wi-Fi), Black, 6.5 ft / 2m
ANT-MB-42G-S-W-16	4xLTE/5G, 2x Wi-Fi, 1xGPS 600-6000MHz, IP68, SMA male (Cellular, GPS), RP-SMA male (Wi-Fi), White, 16 ft / 4.8m
ANT-MB-42G-Q-W-1	4xLTE/5G, 2x Wi-Fi, 1xGPS 600-6000MHz, IP68, QMA male, White, 1 ft / 0.3m
ANT-MB-42G-Q-W-6	4xLTE/5G, 2x Wi-Fi, 1xGPS 600-6000MHz, IP68, QMA male (Cellular, GPS), RP-SMA male (Wi-Fi), White, 6.5 ft / 2m
ANT-MB-42G-Q-B-1	4xLTE/5G, 2x Wi-Fi, 1xGPS 600-6000MHz, IP68, QMA male, Black, 1 ft / 0.3m
ANT-MB-42G-Q-B-6	4xLTE/5G, 2x Wi-Fi, 1xGPS 600-6000MHz, IP68, QMA male (Cellular, GPS), RP-SMA male (Wi-Fi), Black, 6.5 ft / 2m

Extension cable



LTE/GPS elements			Wi-Fi elements		
	Cable Terminal 1	Cable Terminal 2		Cable Terminal 1	Cable Terminal 2
XF	XM	QF	RF	RM	QF
QM		QM			QM
Device	Extension Cable		Device	Extension Cable	
					
		Antenna			Antenna
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			
EXC-RQ-15	Wi-Fi elements	Extension coax cable, RP-SMA male to QMA female connector, 15 ft / 4.5m			



Featured Add-on

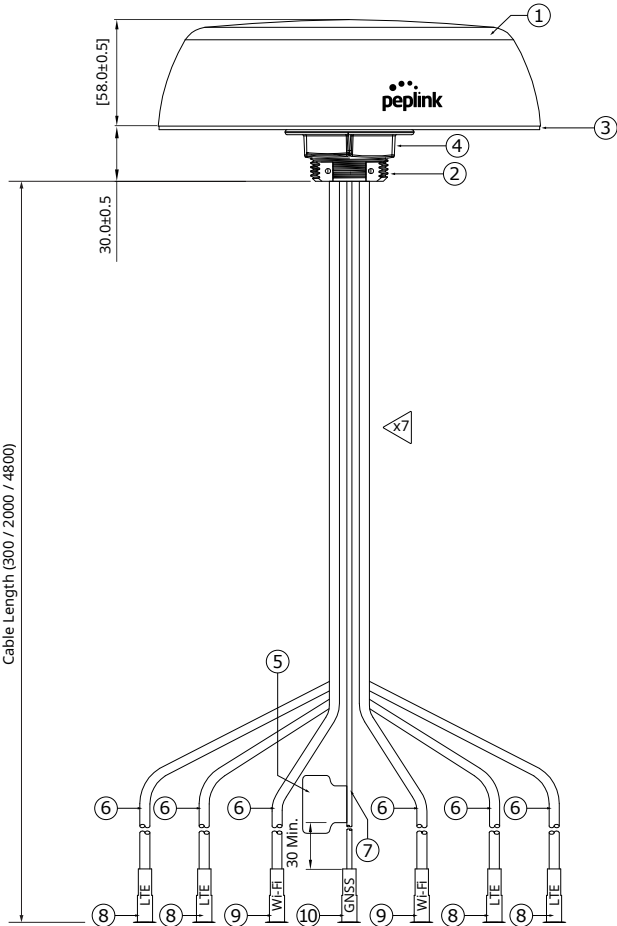
Product Code	Description
ACW-661	3M Double-sided Adhesive Antenna Mounting Gasket
ACW-881	Wall/pole L-mount Antenna mounting kit (white)
ACW-884	Wall/pole L-mount Antenna mounting kit (black)
ACW-651	Maritime 1" 14TPI Female to Mobility Antenna thread
ACW-653	Maritime 1 1/4" 11TPI male adapter
ACW-882	Stainless Steel L-Mount Kit for Mobility 42G

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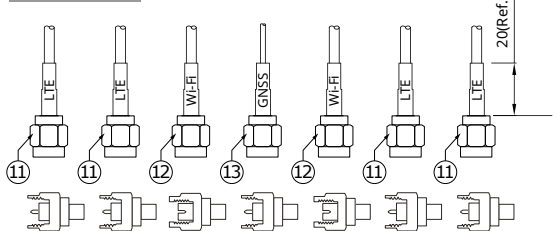
Technical drawing

(unit: mm)

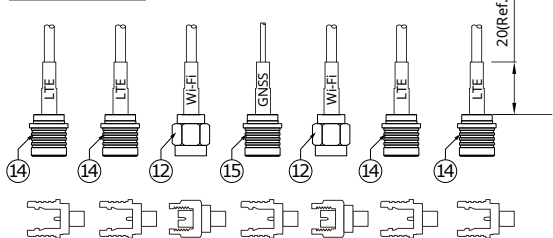
Antenna



SMA Male

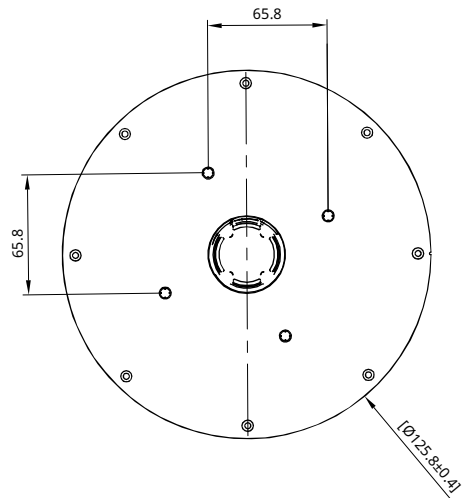


QMA Male



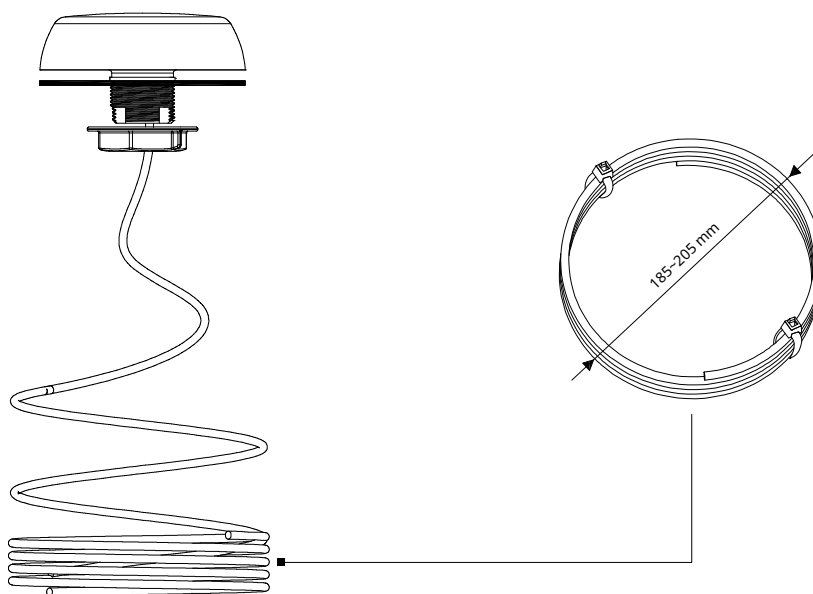
Index

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	Label	1
6	Cable CFD-200 (4G/5G, Wi-Fi)	6
7	Cable RG-174 (GPS)	1
8	LTE/5G H.S. tube	4
9	Wi-Fi H.S. tube	2
10	GPS H.S. tube	1
11	LTE/5G antenna connector (SMA male)	4
12	Wi-Fi antenna connector (RP-SMA male)	2
13	GPS antenna connector (SMA male)	1
14	LTE/5G antenna connector (QMA male)	4
15	GPS antenna connector (QMA male)	1

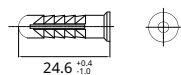


Technical drawing

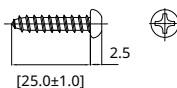
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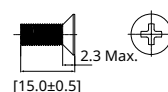
Mounting Set



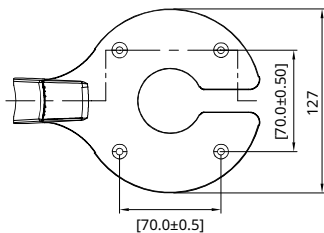
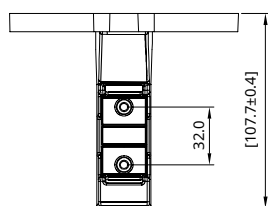
Plastic fixing for M3.5 screw
(2 pcs)



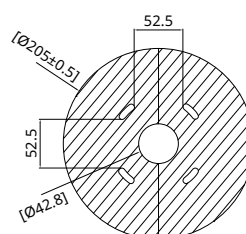
Tapping screws
(2 pcs, M3.5*24L)



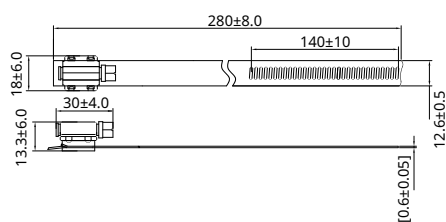
Screws
(4 pcs, M4*P0.7*15L)



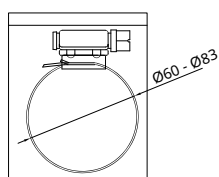
Mounting bracket



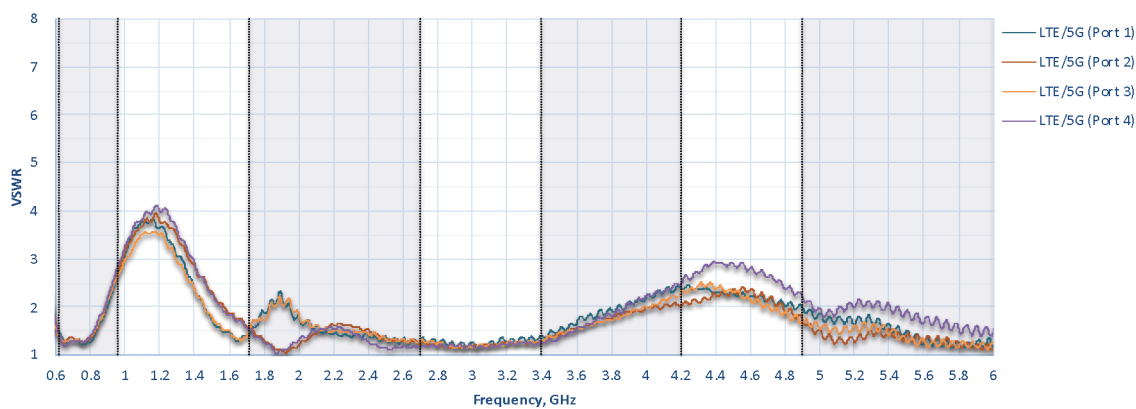
Double sided 3M adhesive pad



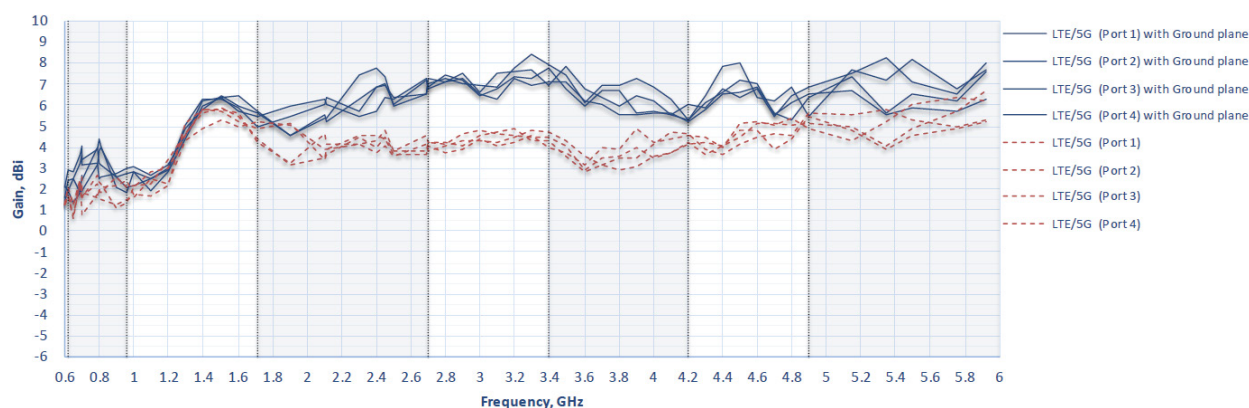
Hose clamp



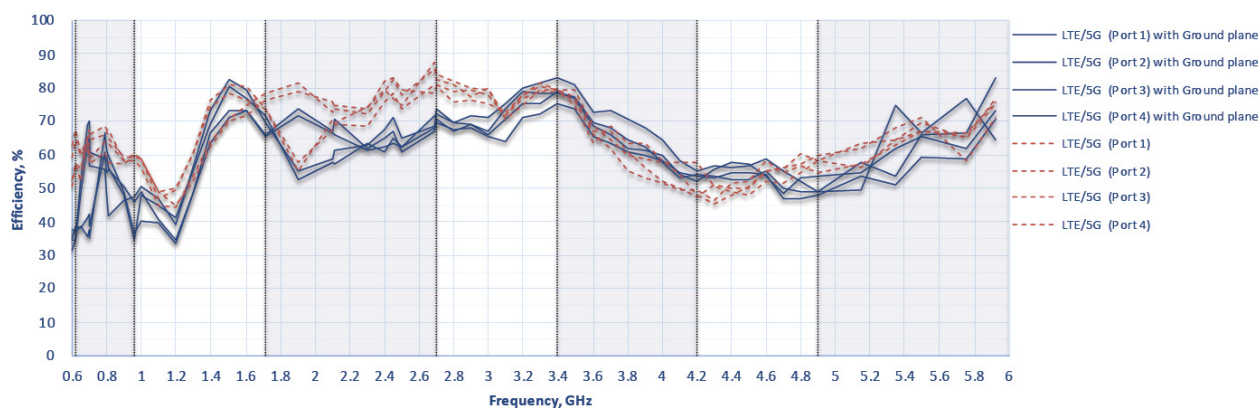
Cellular Antenna VSWR



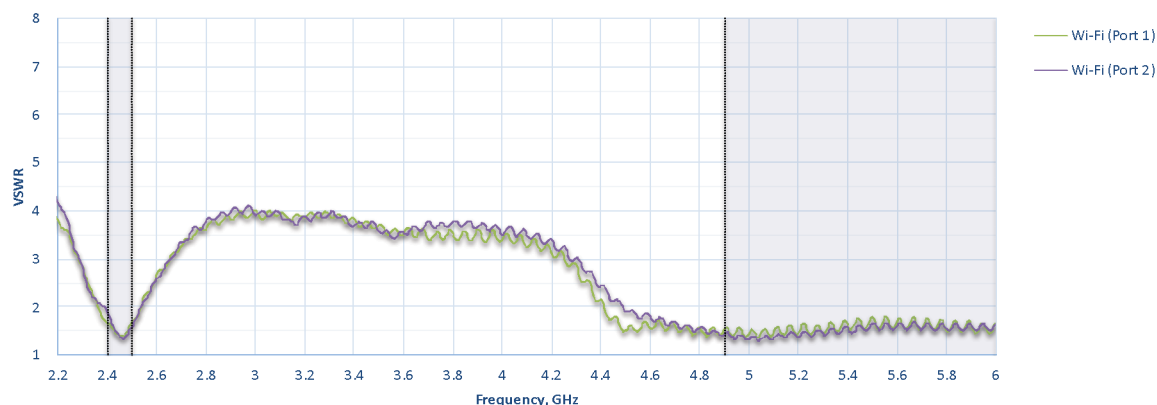
Cellular Antenna Gain



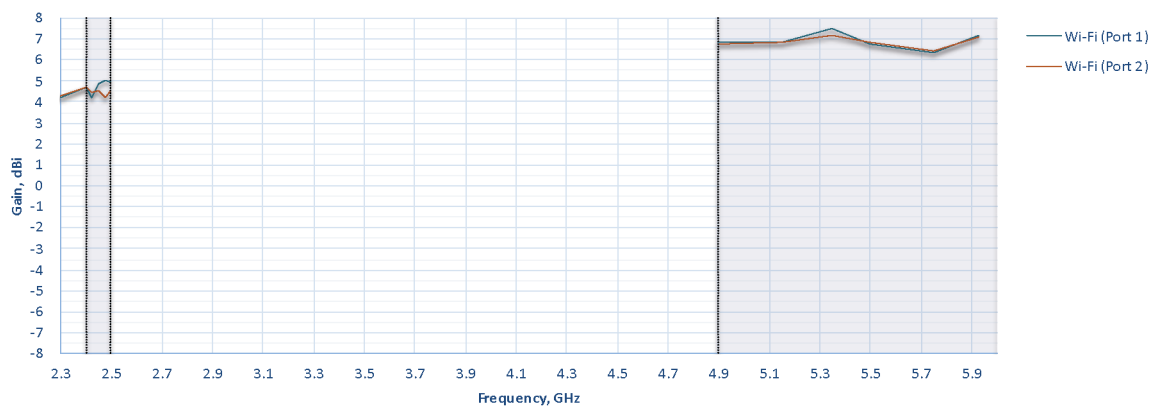
Cellular Antenna Efficiency



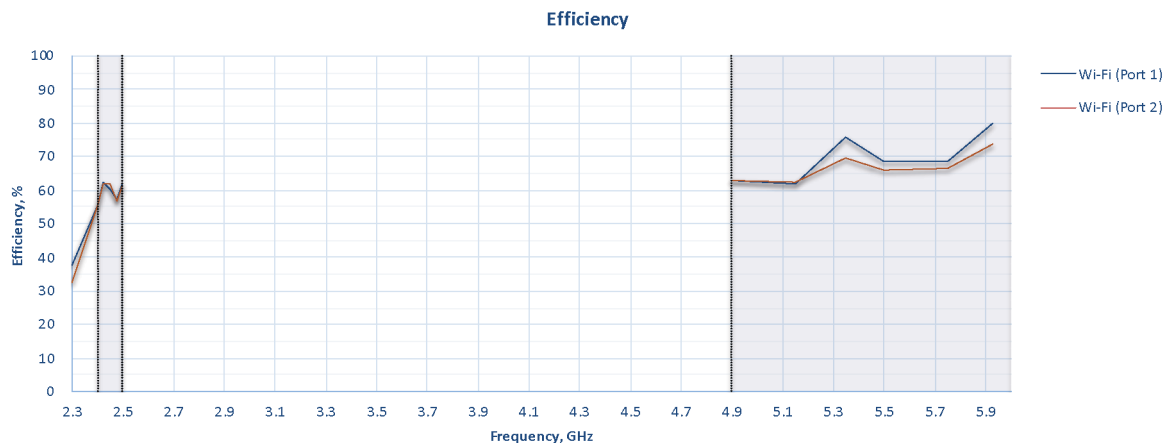
Wi-Fi Antenna VSWR



Wi-Fi Antenna Gain

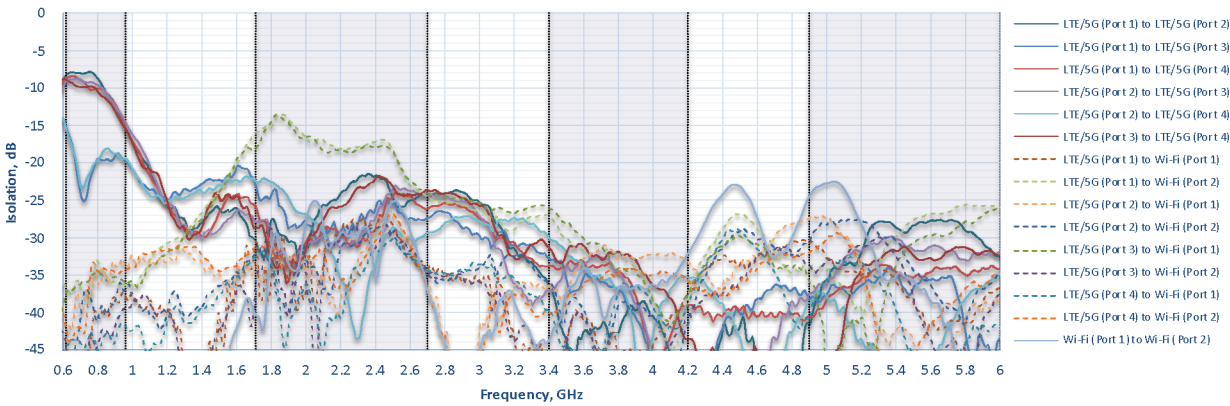


Wi-Fi Antenna Efficiency





Antenna Isolation

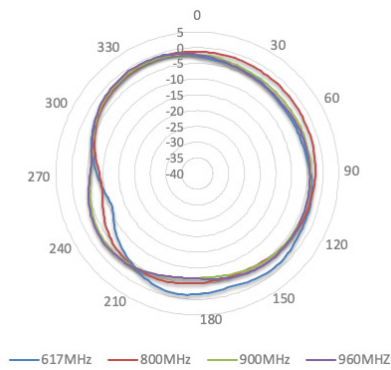


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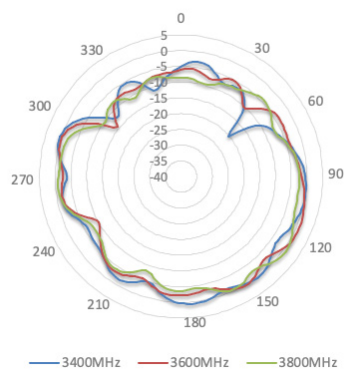


LTE Radiation Patterns (Azimuth)

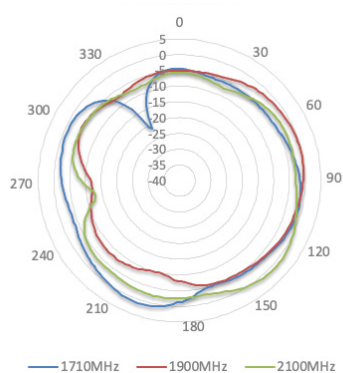
617-960 MHz



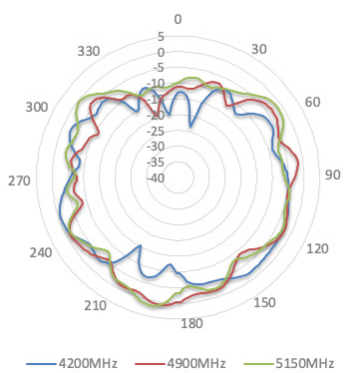
3400-3800 MHz



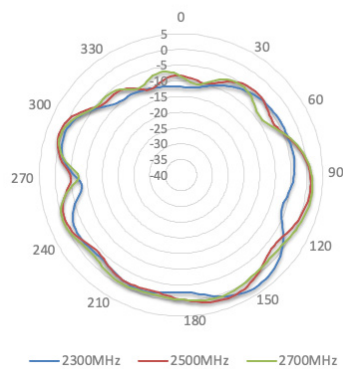
1710-2100MHz



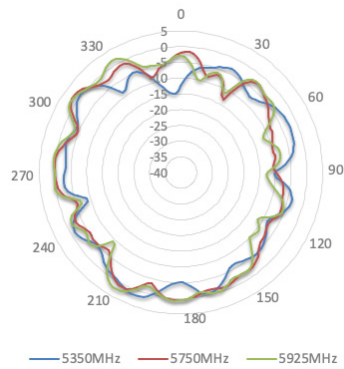
4200-5150 MHz



2300-2700 MHz



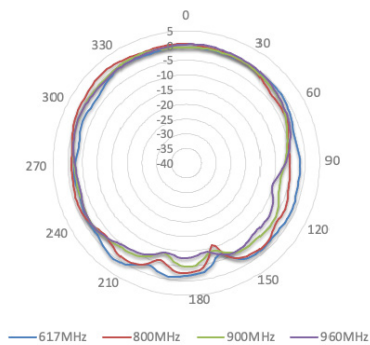
5350-5925 MHz



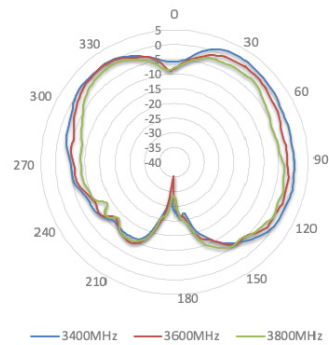
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LTE Radiation Patterns (Elevation 1)

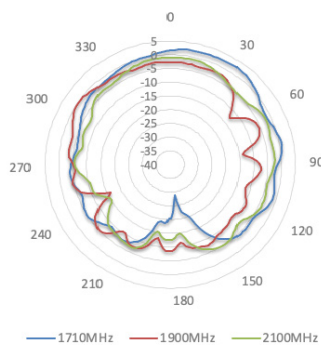
617-960 MHz



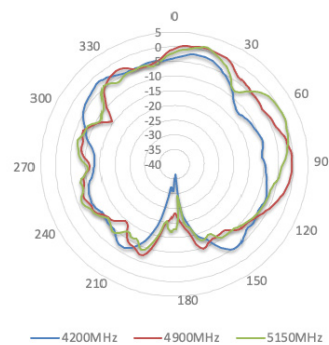
3400-3800 MHz



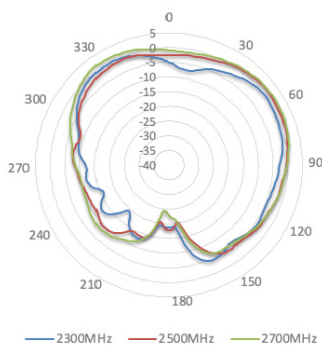
1710-2100MHz



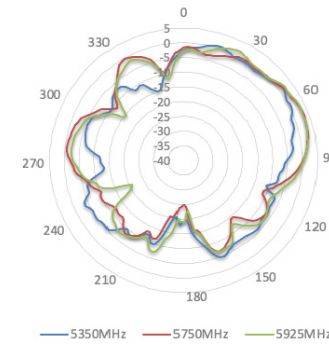
4200-5150 MHz



2300-2700 MHz



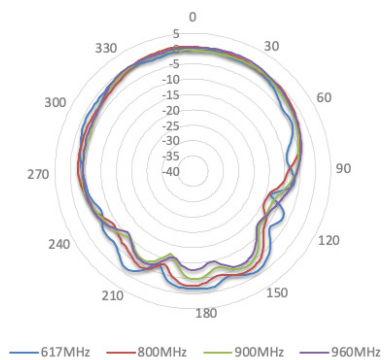
5350-5925 MHz



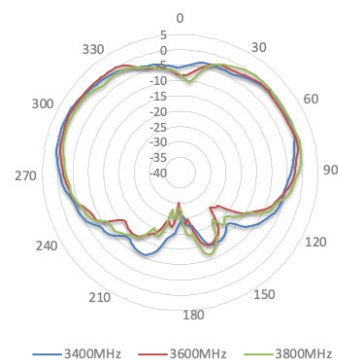
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LTE Radiation Patterns (Elevation 2)

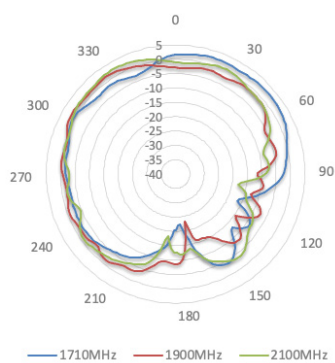
617-960 MHz



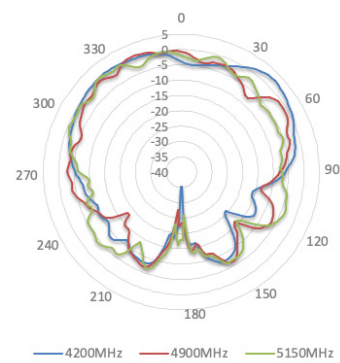
3400-3800 MHz



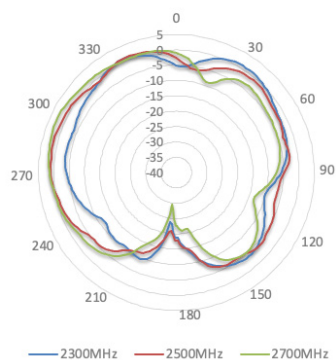
1710-2100MHz



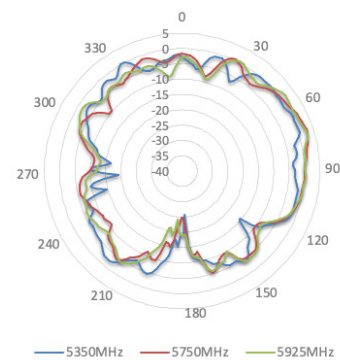
4200-5150 MHz



2300-2700 MHz



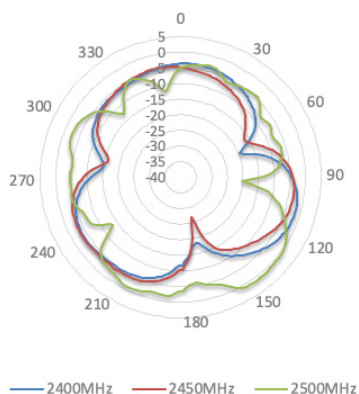
5350-5925 MHz



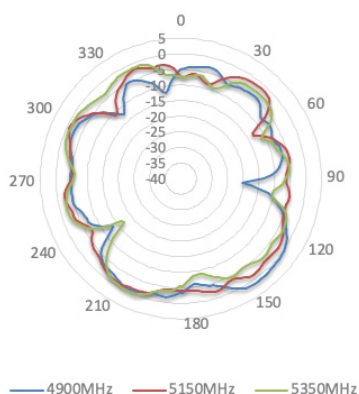
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Wi-Fi Radiation Patterns (Azimuth)

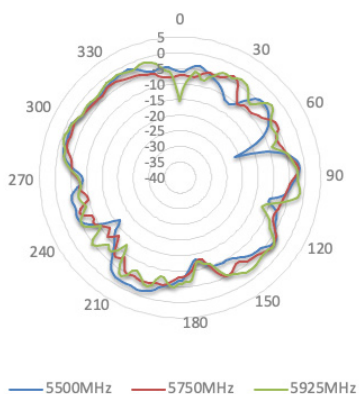
2400-2500 MHz



4900-5350 MHz

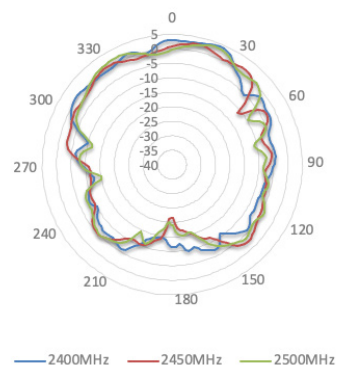


5550-5950 MHz

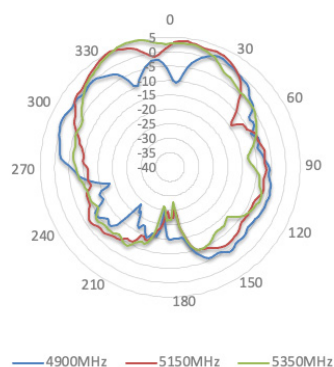


Wi-Fi Radiation Patterns (Elevation 1)

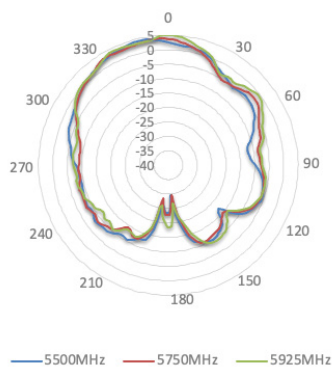
2400-2500 MHz



4900-5350 MHz



5550-5950 MHz

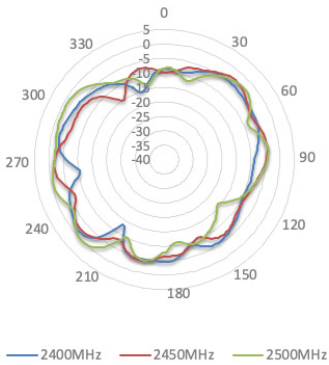


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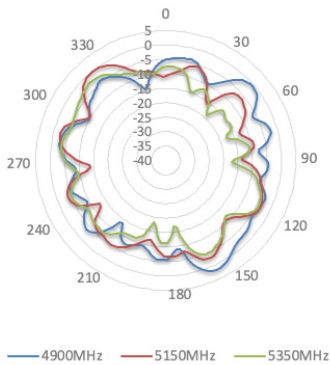


Wi-Fi Radiation Patterns (Elevation 2)

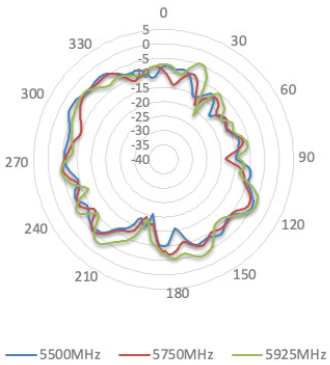
2400-2500 MHz



4900-5350 MHz



5550-5950 MHz



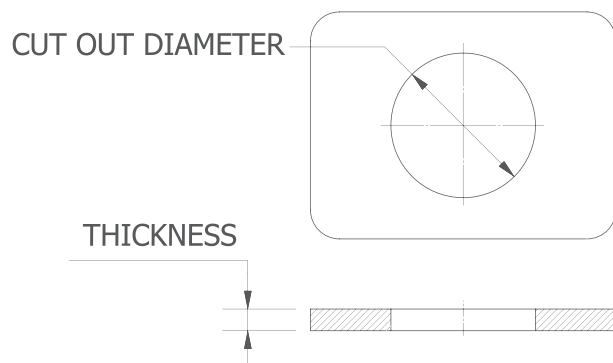
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Installation Recommendation

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 - 19/ 32" / 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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