



The Gar VFP69383B22JN multiport/multiband antenna provides an excellent solution for Public Safety, Transportation and Aftermarket Fleet applications. Configured for 2-port MIMO operation over the 3G/4G/5G/ISM/CBRS bands and 2-port MIMO operation over the low/high frequency Wi-Fi bands. An additional 5<sup>th</sup> port provides an active antenna for enabling GNSS global navigation services.

#### FEATURES AND BENEFITS

- One single-hole mount/fixing- reduces vehicle damage and the cost of installation
- Attractive IP67 low profile aerodynamic housing
- Multiband/MIMO operation with GNSS navigation

#### APPLICATIONS

- FirstNet/Public Safety
- Transportation
- Aftermarket fleet
- 5G ready
- Rugged LTE Gateways
- Others

#### ELECTRICAL SPECIFICATIONS

Antenna Model	VFP69383B22JN						
Number of Ports	5						
Port Configuration	2x- 3G/4G/5G/ISM/CBRS (LTE/CELL)				2x- Wi-Fi (WIFI)		
Operating Frequency (MHz)	698-806	824-894	880-960	1690-3800	2400-2500	4900-6000	
Peak Gain* – Avg (dBi)	0.4	0.8	1.2	4.0	2.6	6.6	
Peak Gain* – Max (dBi)	1.6	1.4	1.5	7.2	3.1	7.5	
VSWR** – Avg	1.7	1.8	1.9	1.5	1.5	1.2	
VSWR** – Max	2.5	2.1	2.2	2.1	2.0		
Isolation LTE1 to LTE2 (dB)	-11	-13	-14	-18	-24	-33	
Isolation LTE1 to WIFI 1 (dB)	-36	-37	-39	-14	-14	-32	
Isolation LTE1 to WIFI 2 (dB)	-39	-38	-38	-14	-14	-35	
Isolation LTE2 to WFI 1 (dB)	-39	-42	-40	-14	-14	-32	
Isolation LTE2 to WIFI 2 (dB)	-34	-36	-38	-14	-14	-33	
Isolation WIFI 1 to WIFI 2 (dB)	-74	-75	-71	-30	-30	-38	
Isolation GNSS to LTE 1 (dB)	-68	-69	-71	-52	-55	-52	
Isolation GNSS to LTE 2 (dB)	-43	-41	-41	-46	-51	-54	
Isolation GNSS to WIFI 1 (dB)	-65	-68	-71	-47	-47	-52	
Isolation GNSS to WIFI 2 (dB)	-68	-69	-71	-52	-55	-52	
Azimuth Plane 3 dB Beamwidth	360°, Omnidirectional						
Nominal Impedance (Ohms)	50						
Polarization	Linear Vertical						
Max Power - Ambient 25°C (W)	30 (LTE/CELL) /10 (WIFI)						

#### MECHANICAL SPECIFICATIONS

Dimensions – L x W x H – mm (inches)	179 x 63 x 48 (7.04 x 2.48 x 1.69)
Weight – kg (lbs.)	1.1 kg (2.42 lbs)
Cable Type	LMR 100- pigtails, LMR 195- jumper cables
Mounting	P-Mount
Radome Material	PC, UL94-V0
Baseplate Material	Aluminum

#### ENVIRONMENTAL SPECIFICATIONS

Operating Environment	Outdoor Vehicle
Operating Temperature – °C (°F)	-30 to +70°C (-22 to +158°F)
Storage Temperature – °C (°F)	-40 to +85°C (-40 to +185°F)
Ingress Protection Rating	IP67
Rail Compliance Standards	EN61373 (Shock & Vibration), EN50155 (Temperature)
Material Substance Compliance	RoHS

**Notes:** (\*) – This parameter is based on a 30cm (1ft) cable length and 30cm (1ft) ground plane.

(\*\*) – This parameter is based on a 518cm (17ft) cable length and 30cm (1ft) ground plane.  
Antenna specifications are subject to change according to the ground plane size.

### GNSS ANTENNA SPECIFICATIONS

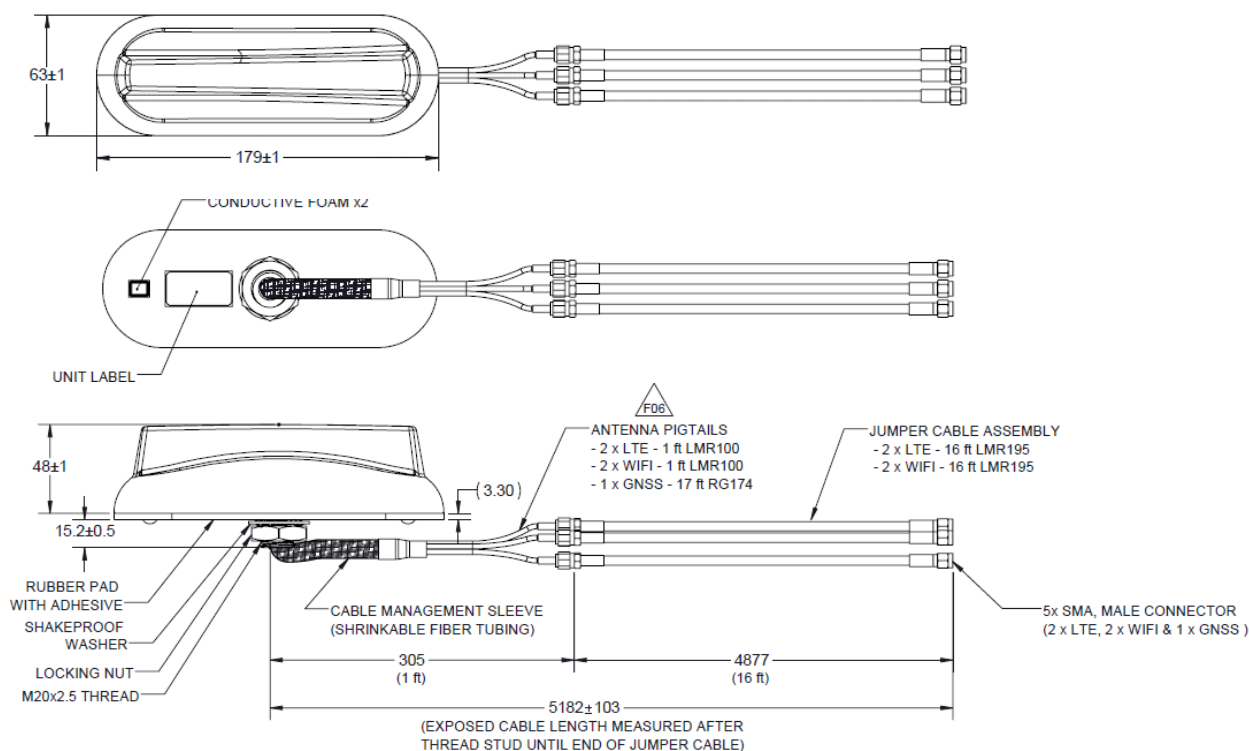
Frequency of Operation (MHz)	1559 - 1606		
Band	BEIDOU	GPS	GLONASS
Frequency Band (MHz)	1559.052 - 1563.144	1574.42 - 1576.42	1598.0625 - 1605.89
Absolute Gain (dBi)	2	2	2
LNA Gain, Typ. @ room temp. (dBi)	28 ± 3		
Noise Figure @ room temp., Max (dB)	≤ 2.5 @ 1575 MHz		
Max VSWR @ room temp.	2.0		
Polarization	RHCP		
Nominal Impedance (Ohms)	50		
DC Voltage (Vdc)	2.5- 7.0		
Current Consumption, Max @ room temp mA)	8.5 ± 3 @ 3.0V		
Out-of-band Signal Rejection Min @ room temp (dBc)	80 (@698-960MHz)	80 (@1428-2700 MHz)	70 (@4900-5800 MHz)
Input Max Power (dBm)	-10		
Cable Type	RG174		

### CONFIGURATION

PART NUMBER	CABLE LENGTH		CONNECTORS			COLOR
	PIGTAIL	JUMPER	LTE/CELL	WIFI	GNSS	
VFP69383B22JN-518J	0.3 m (1 ft)	4.9 m (16 ft)	SMA-male	SMA-male	SMA-male	Black
VFP69383B22JN-91L	0.91 m (1 ft)	-	SMA-male	RPSMA-male	SMA-male	Black

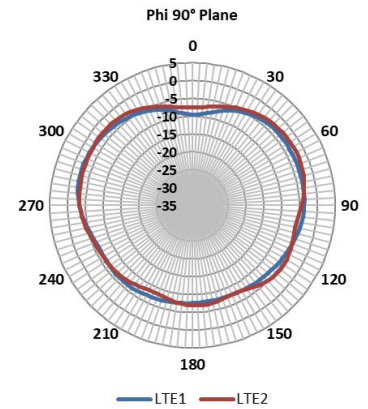
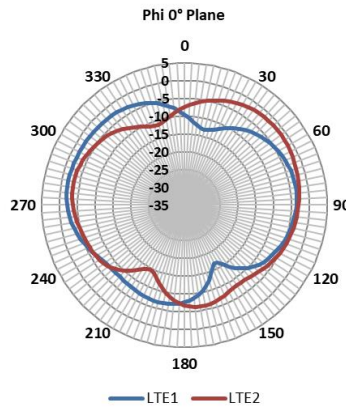
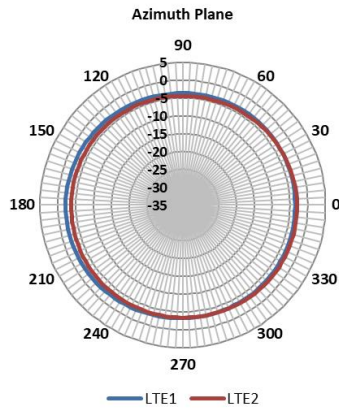
### PACKAGING INFORMATION

PACKAGED DIMENSIONS	CARTON	MASTER CARTON	AIR PALLET	OCEAN PALLET
Number of Antennas	1	4	140	196
Height – mm (in.)	130 (5.12)	235 (9.25)	1335 (52.56)	1813 (71.38)
Length – mm (in.)	222 (8.74)	543 (21.38)	1200 (47.24)	1200 (47.24)
Width – mm (in.)	222 (8.74)	232 (9.13)	800 (31.5)	800 (31.5)
Shipping Weight – kg (lb.)	1.35 (2.98)	5.85 (12.89)	217 (478.4)	299 (659.18)

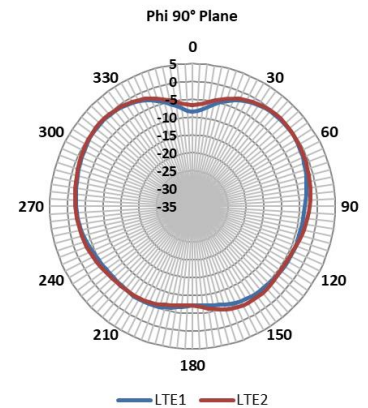
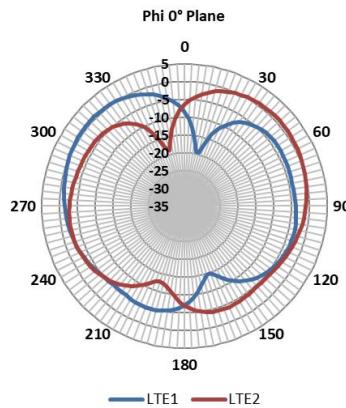
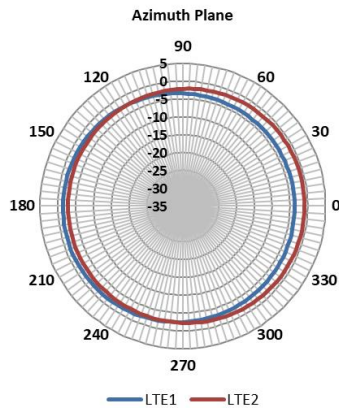


RADIATION PATTERNS - LTE ANTENNAS

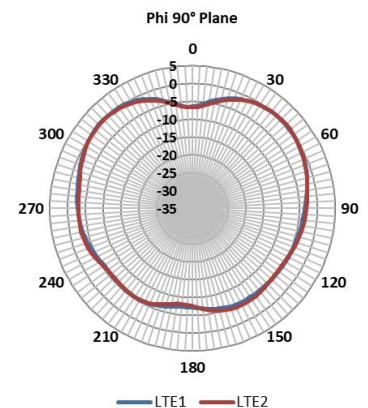
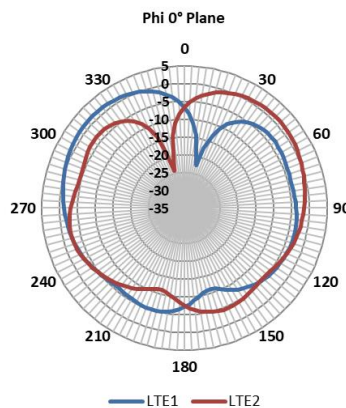
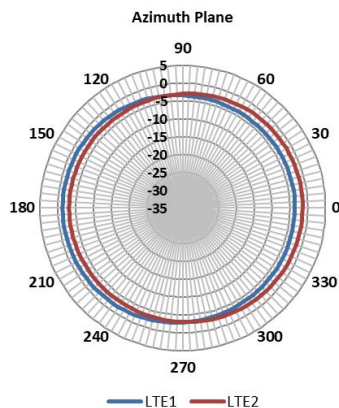
698 MHz



880 MHz

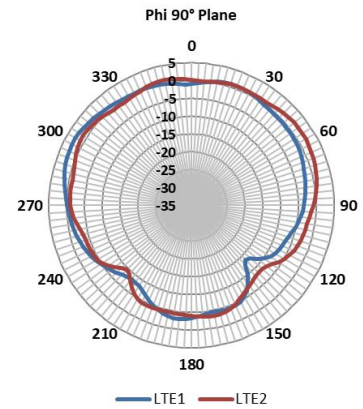
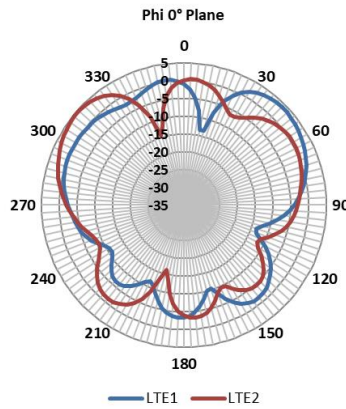
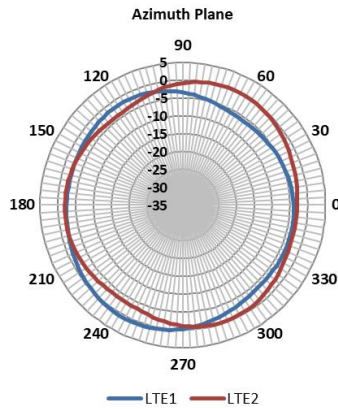


960 MHz

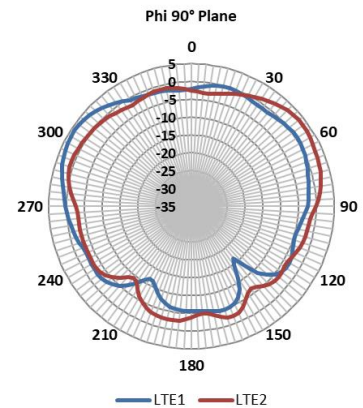
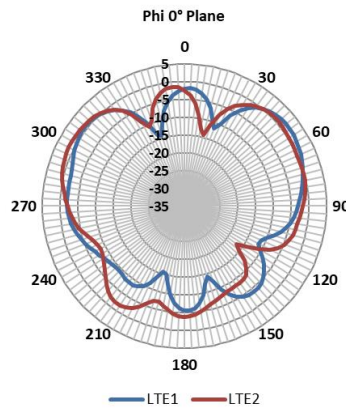
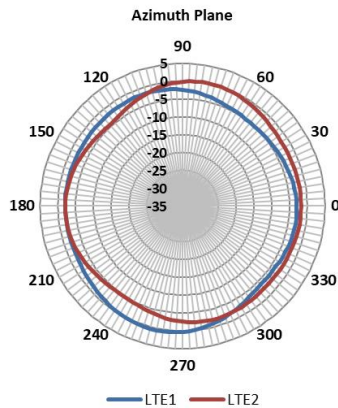


RADIATION PATTERNS - LTE ANTENNAS

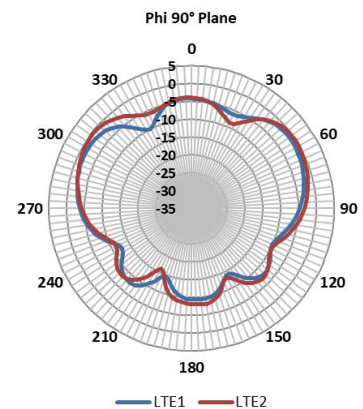
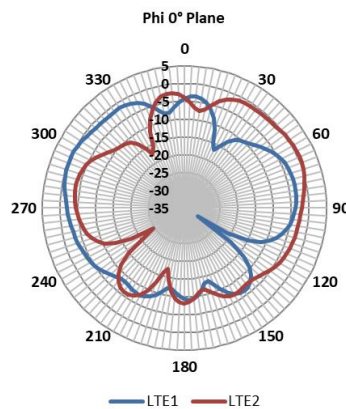
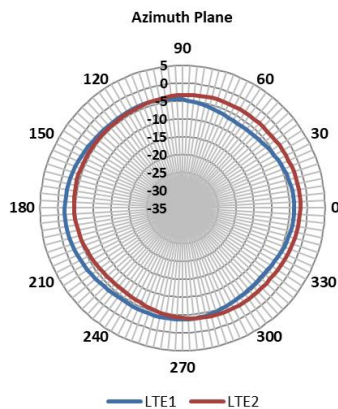
1690 MHz



1850 MHz



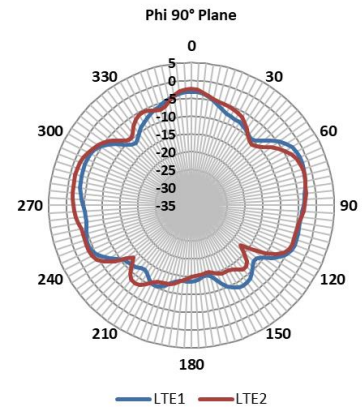
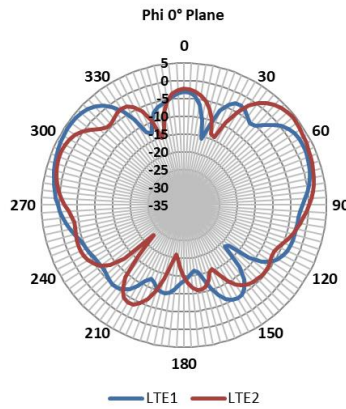
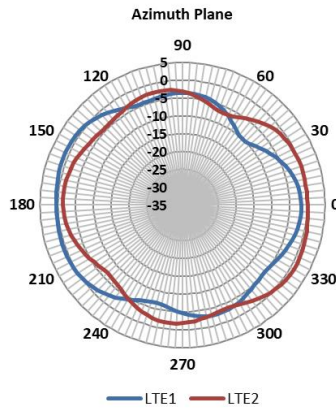
2170 MHz



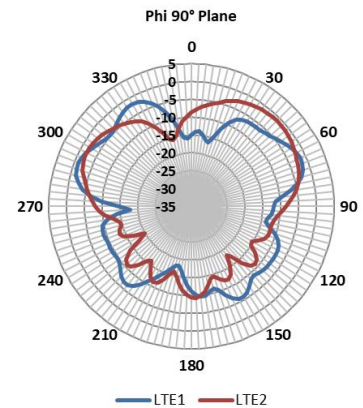
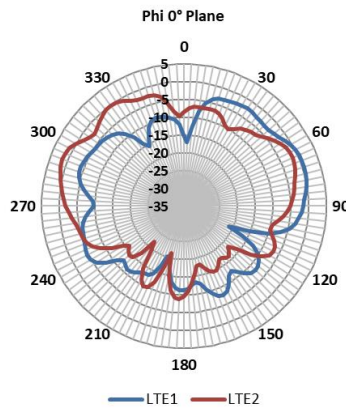
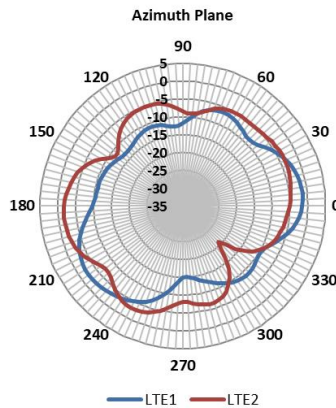


## RADIATION PATTERNS - LTE ANTENNAS

### 2700 MHz

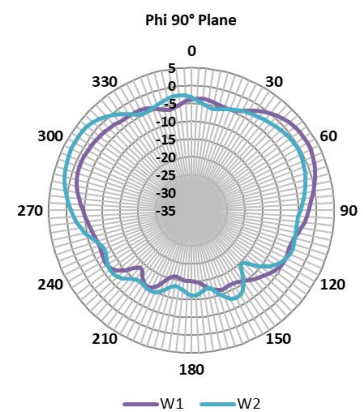
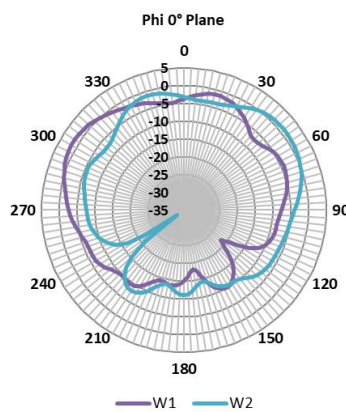
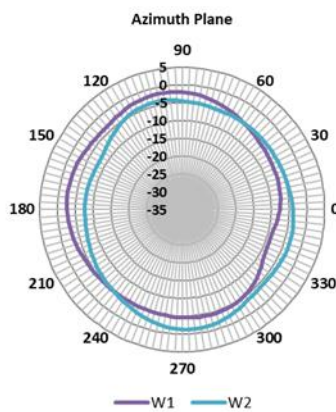


### 3800 MHz

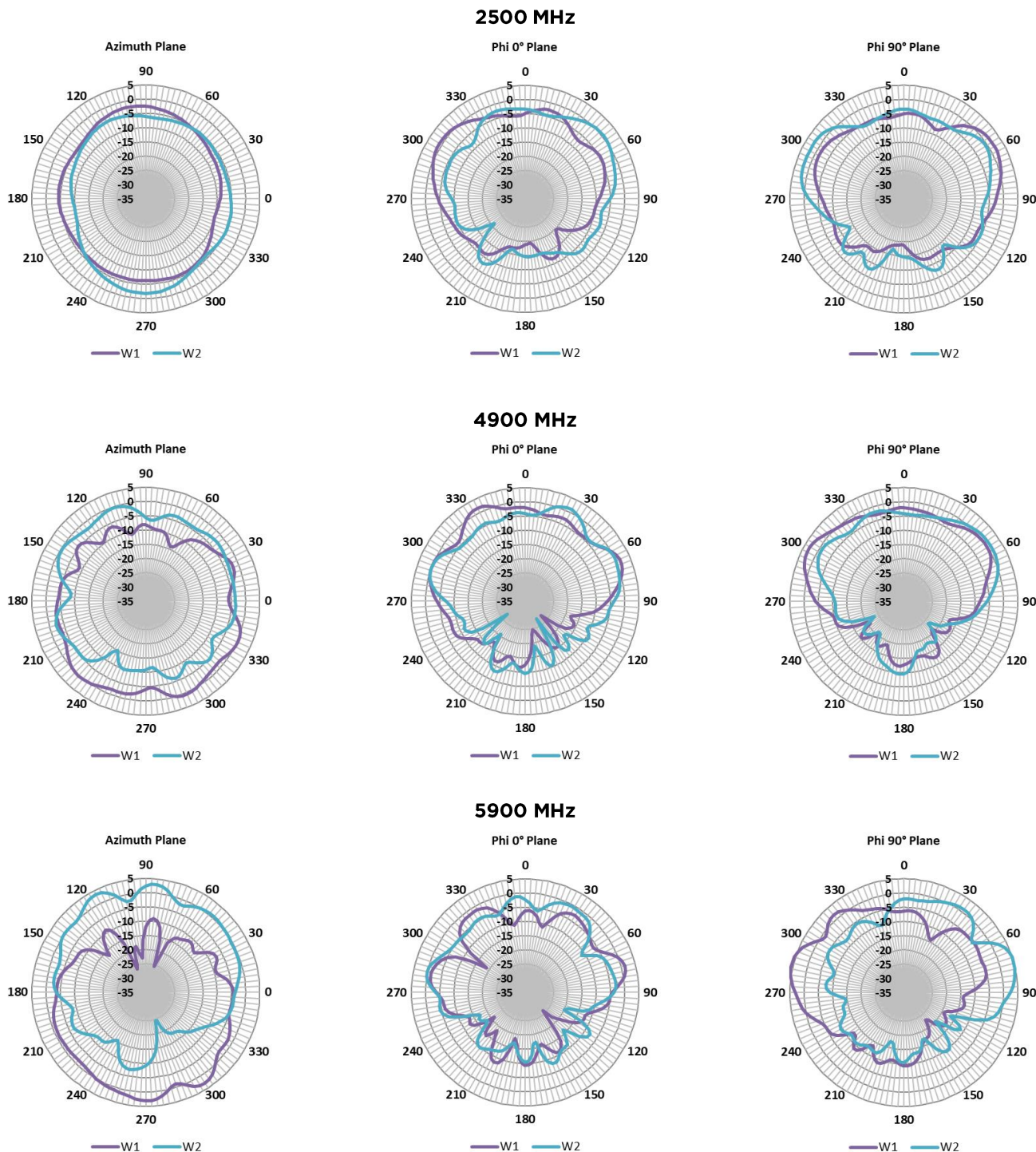


## RADIATION PATTERNS - WI-FI ANTENNAS

### 2400 MHz



### RADIATION PATTERNS - WI-FI ANTENNAS



Laird warrants to the original end user customer of its products that its products are free from defects in material and workmanship. Subject to conditions and limitations Laird will, at its option, either repair or replace any part of its products that prove defective because of improper workmanship or materials. This limited warranty is in force for the useful lifetime of the original end product into which the Laird product is installed. Useful lifetime of the original end product may vary but is not to exceed five (5) years from the original date of the end product purchase.

Any information furnished by Laird Inc. and its agents is believed to be accurate and reliable. All specifications are subject to change without notice. Responsibility for the use and application of Laird materials rests with the end user, since Laird and its agents cannot be aware of all potential uses. Laird makes no warranties as to the fitness, merchantability or suitability of any Laird materials or products for any specific or general uses. Laird shall not be liable for incidental or consequential damages of any kind. All Laird products are sold pursuant to the Laird Terms and Conditions of sale in effect from time to time, a copy of which will be furnished upon request.

© Copyright 2019 Laird Inc. All Rights Reserved. Laird, Laird Technologies, the Laird Logo, and other marks are trademarks or registered trademarks of Laird Inc. or an affiliate company thereof. Other product or service names may be the property of third parties. Nothing herein provides a license under any Laird or any third party intellectual property rights.

sales@lairdconnect.com  
support@lairdconnect.com  
www.lairdconnect.com

