



The Gar VFQ69383x21JN multiport/multiband antenna provides an excellent solution for public safety, transportation and aftermarket fleet applications. Configured for two-port operation over the 3G/4G/5G/ISM/CBRS bands and one-port operation over the low/high frequency Wi-Fi bands. An additional fourth 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/multiport operation with GNSS navigation

APPLICATIONS

- FirstNet/Public safety
- Transportation
- Aftermarket fleet
- 5G-ready
- Rugged LTE gateways
- Others

ELECTRICAL SPECIFICATIONS

Antenna Model	VFQ69383x21JN					
Number of Ports	4					
Port Configuration	2x- 3G/4G/5G/ISM/CBRS				1x- Wi-Fi	
Operating Frequency (MHz)	698-806	824-894	880-960	1690-3800	2400-2500	4900-6000
Peak Gain (*) – Avg (dBi)	0.2	0.6	1.1	3.8	2.4	6.4
Peak Gain (*) – Max (dBi)	1.2	1.1	1.8	7.4	3.1	7.0
VSWR (**) – Avg	<1.6:1	<1.6:1	<1.6:1	<1.3:1	<1.4:1	<1.3:1
VSWR (**) – Max	<2.0:1				<2.0:1	
Isolation (**) LTE1 to LTE2, dB	-15	-19	-17	-24	-	-
Isolation (**) LTE1 to WiFi, dB	-41	-43	-41	-20	-20	-45
Isolation (**) LTE2 to WiFi, dB	-50	-49	-49	-34	-34	-49
Isolation (**) WiFi to GNSS, dB	-	-	-	-	-28	-39
Isolation (**) LTE1 to GNSS, dB	-41	-42	-42	-27	-	-
Isolation (**) LTE2 to GNSS, dB	-42	-43	-42	-33	-	-
Azimuth Plane 3 dB Beamwidth	360°, Omnidirectional					
Nominal Impedance (Ohms)	50					
Polarization	Linear Vertical					
Max Power - Ambient 25°C (W)	10					

Notes: (*) – This parameter is based on a one-foot cable length and one-foot ground plane.

(**) – This parameter is based on a 17-foot cable length and one-foot ground plane.

Antenna specifications are subject to change according to the ground plane size.

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.)	0.60 kg (1.3 lbs)
Cable Type	LMR 100, Black
Mounting	P-Mount
Color	Black or White
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
Material Substance Compliance	RoHS

GNSS SPECIFICATIONS

Frequency of Operation (MHz)	1559 - 1606		
Band	BEIDOU	GPS	GLONASS
Frequency Band (MHz)	1561.098 ±2.046	1575.42 ±1.023	1602 ±5
Antenna Gain (dBi)	3.3	4.6	4.8
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)	3.3		
Operating Supply Voltage (Vdc)	2.5 - 7.0		
Current Consumption, Max @ room temp mA	20		
Out-of-band Signal Rejection Min @ room temp (dBc)	> 88	> 84	> 86
Input Max Power (dBm)	-33		
Cable Type	RG14		

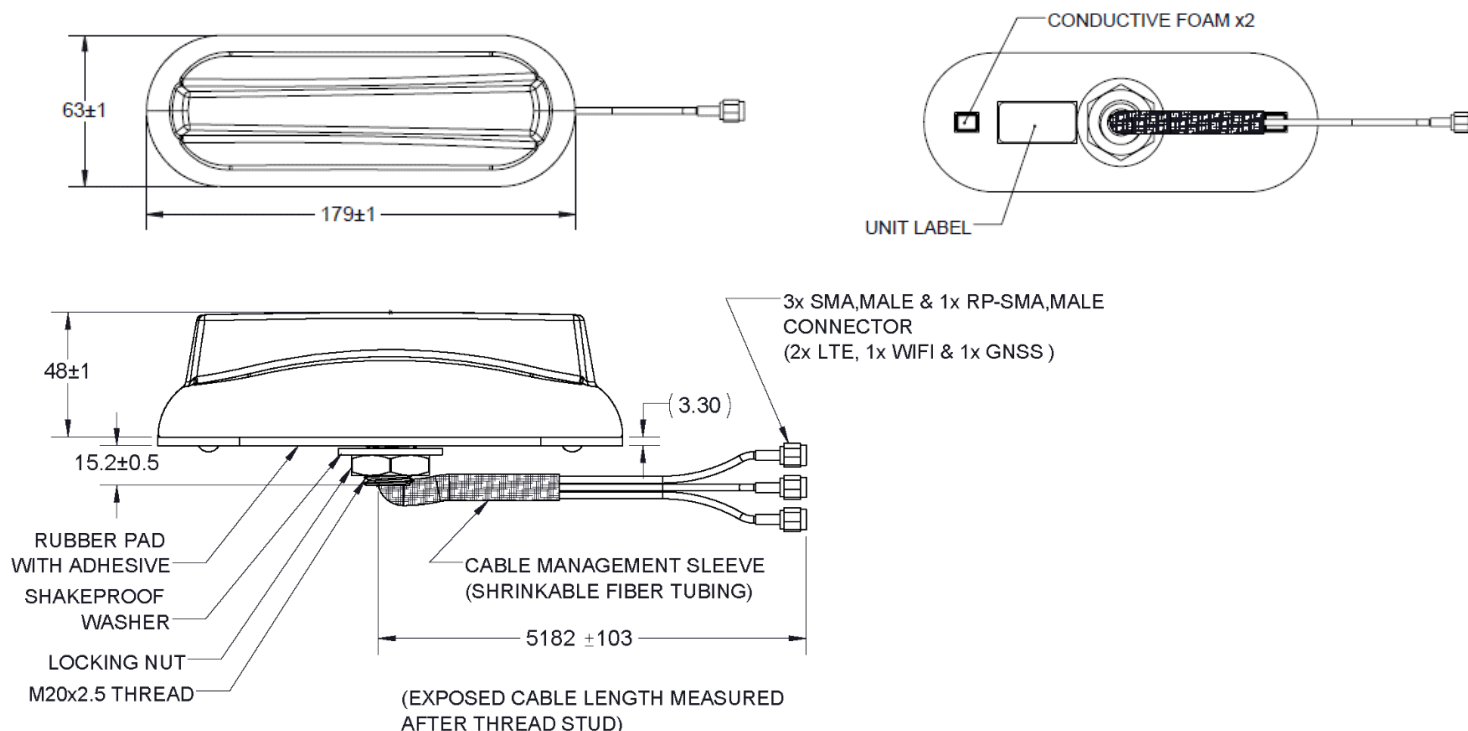
CONFIGURATION

PART NUMBER	CABLE LENGTH	CONNECTOR - LTE PORT	CONNECTOR - WI-FI PORT	CONNECTOR - GNSS PORT	COLOR
VFQ69383B21JN-518L	5.18 m (17.0 ft.)	SMA-male	RPSMA-male	SMA-male	Black
VFQ69383W21JN-518L	5.18 m (17.0 ft.)	SMA-male	RPSMA-male	SMA-male	White

PACKAGING INFORMATION

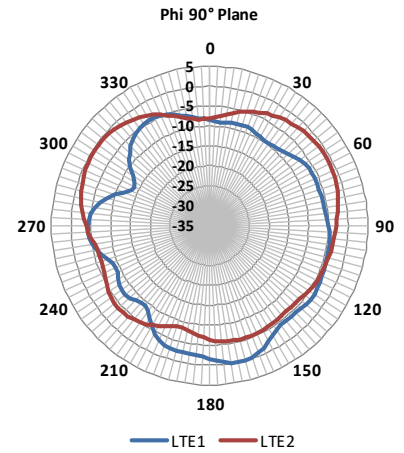
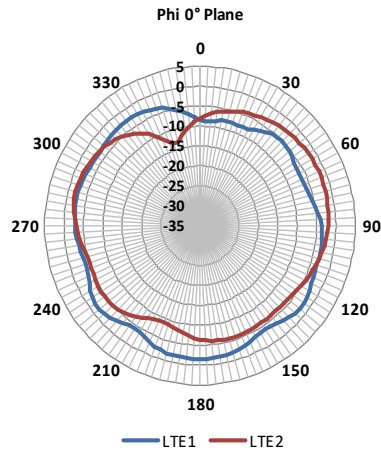
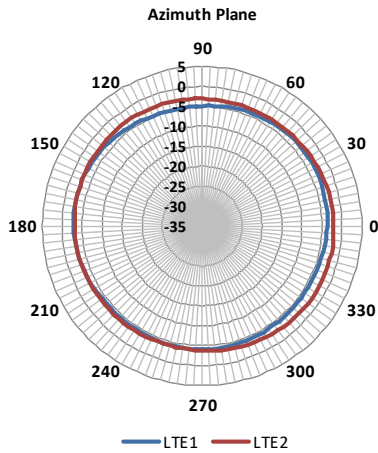
PACKAGED DIMENSIONS	CARTON	MASTER CARTON	AIR PALLET	OCEAN PALLET
Number of Antennas	1	8	192	240
Height – mm (in.)	135 (5.31)	295 (11.6)	1350 (53.15)	1650 (64.96)
Length – mm (in.)	245 (9.65)	520 (20.5)	1200 (47.24)	1200 (47.24)
Width – mm (in.)	120 (4.72)	260 (10.2)	800 (31.5)	800 (31.5)
Shipping Weight – kg (lb.)	0.73 (1.6)	6.6 (15)	177 (390)	217 (478)

MECHANICAL DRAWINGS

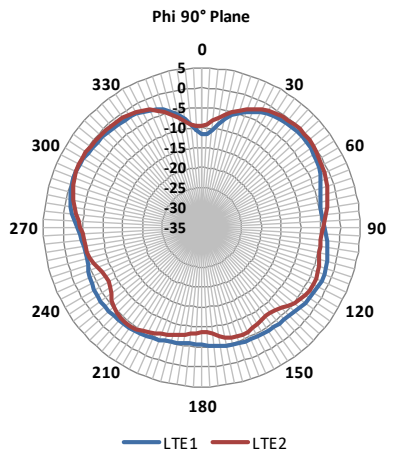
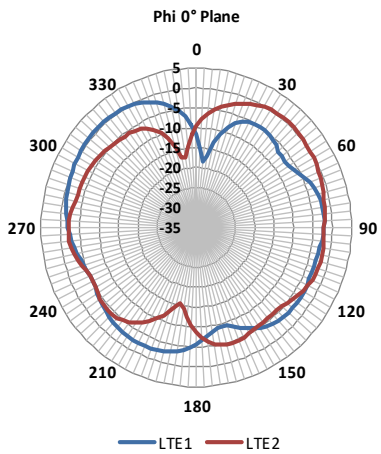
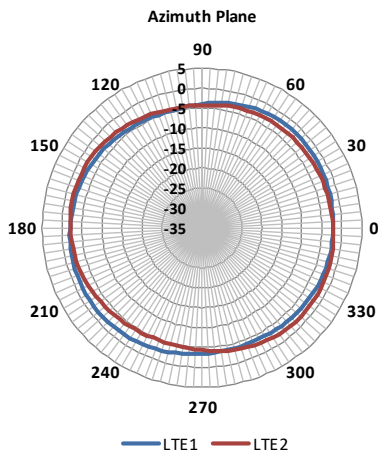


RADIATION PATTERNS - LTE ANTENNAS

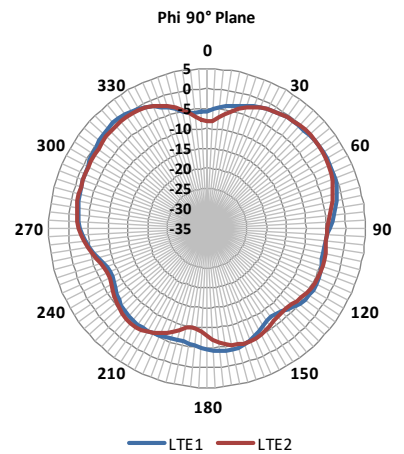
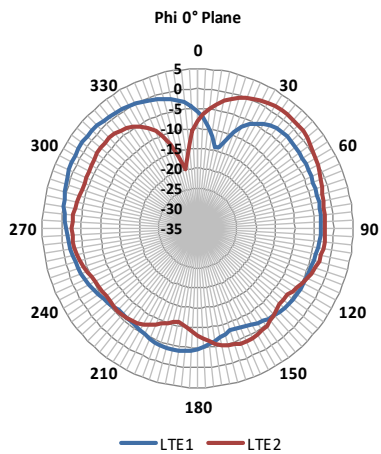
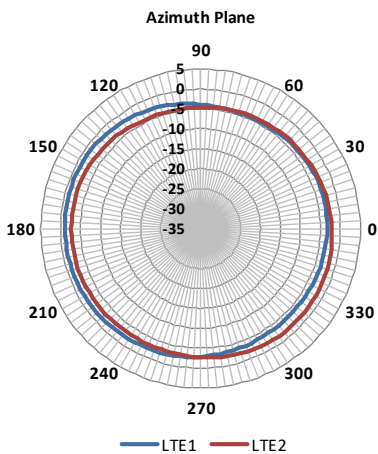
698 MHz



880 MHz

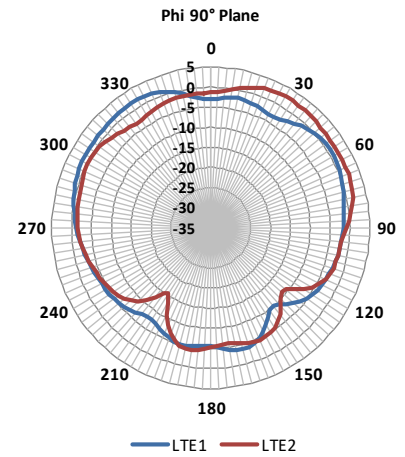
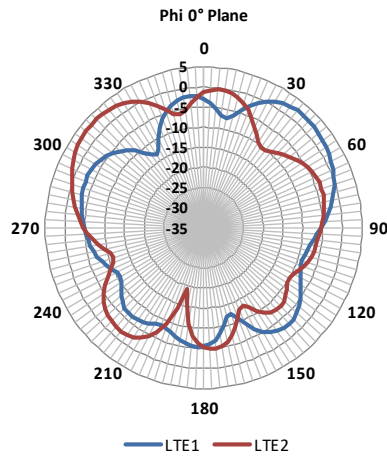
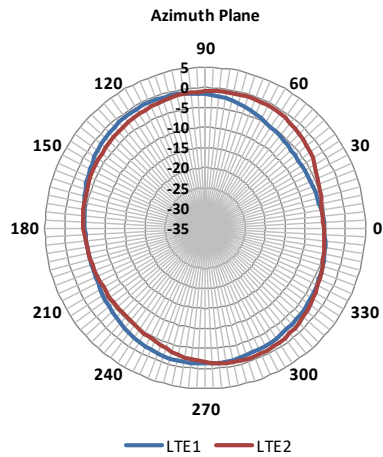


960 MHz

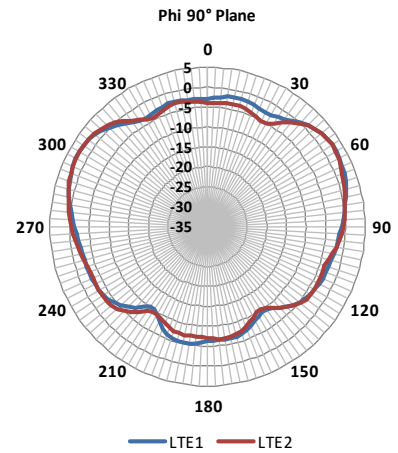
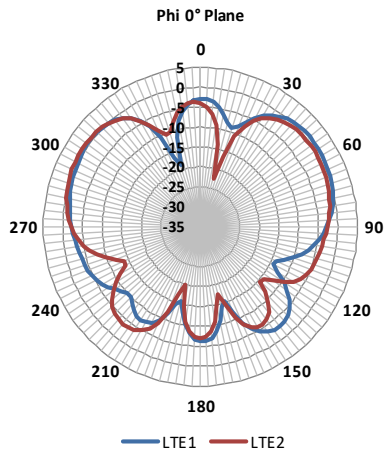
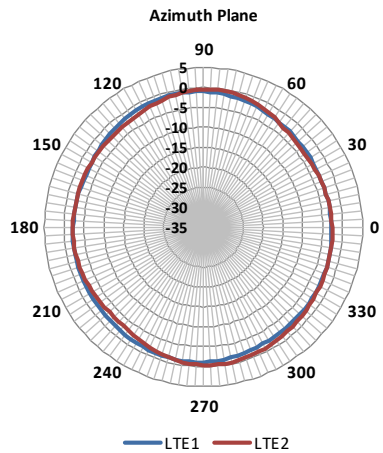


RADIATION PATTERNS - LTE ANTENNAS

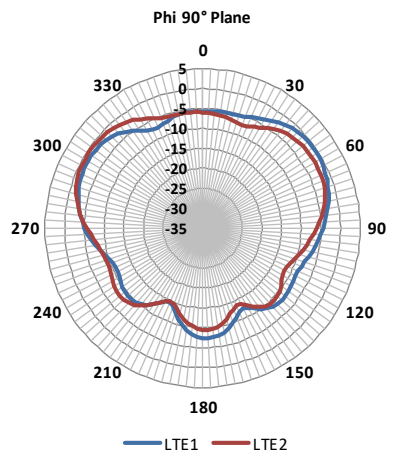
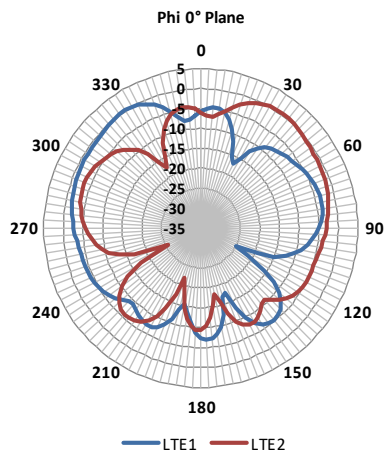
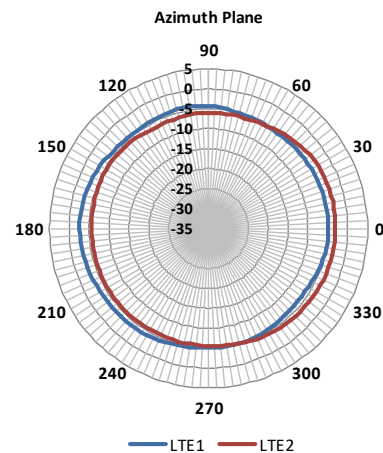
1690 MHz



1920 MHz

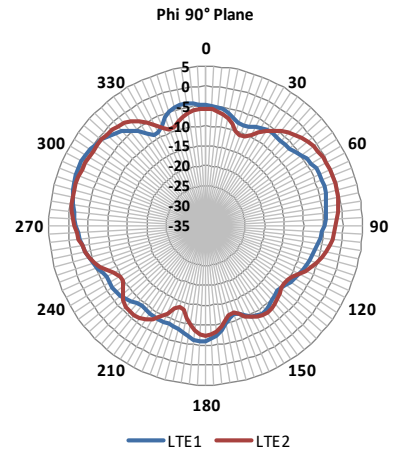
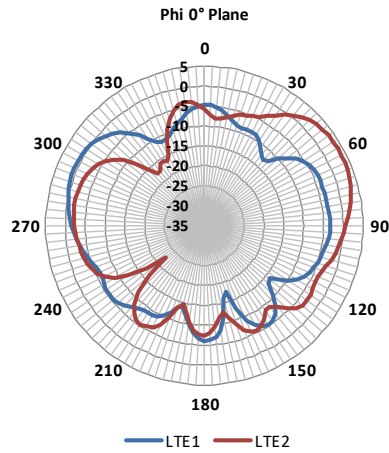
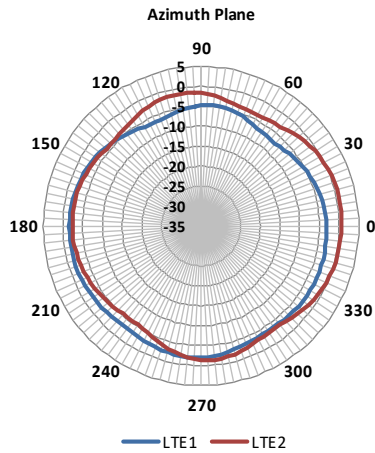


2110 MHz

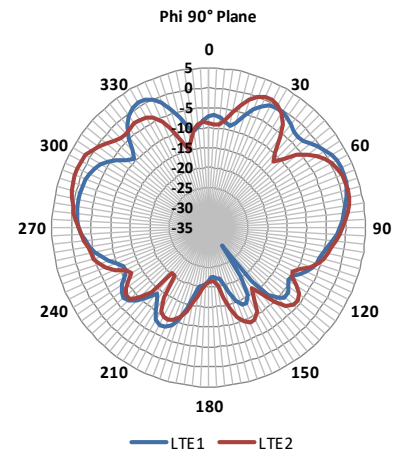
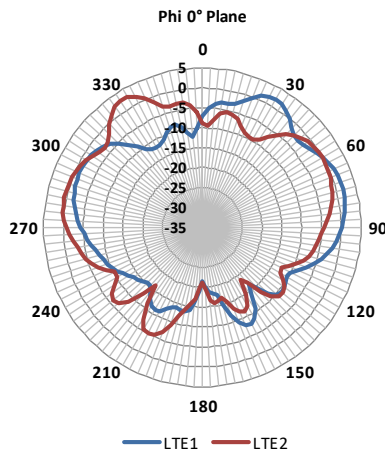
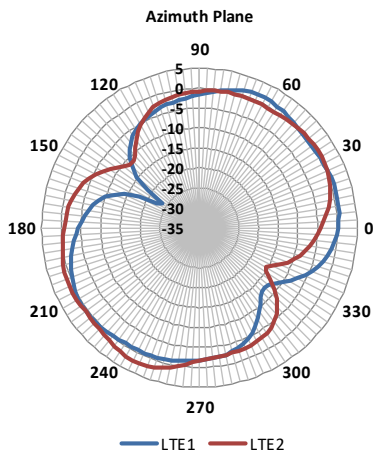


RADIATION PATTERNS - LTE ANTENNAS

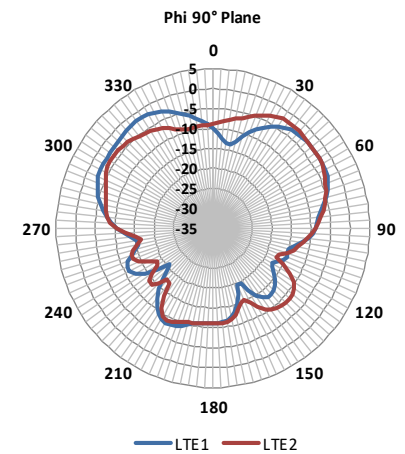
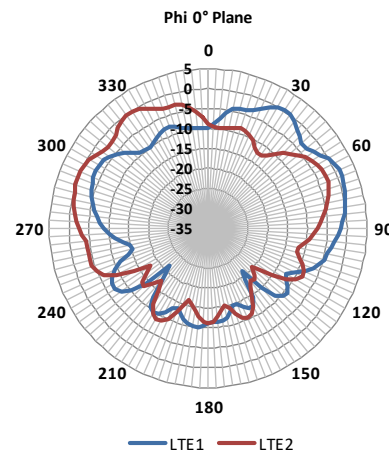
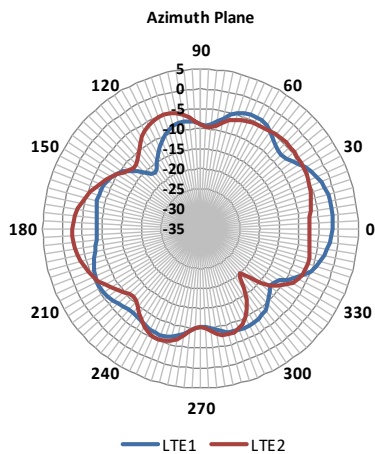
2400 MHz



3500 MHz

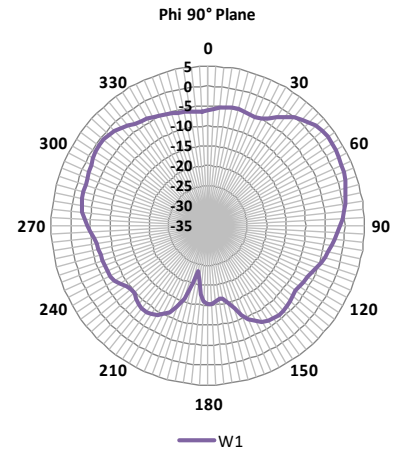
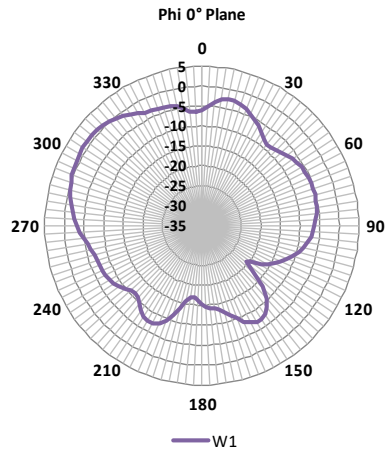
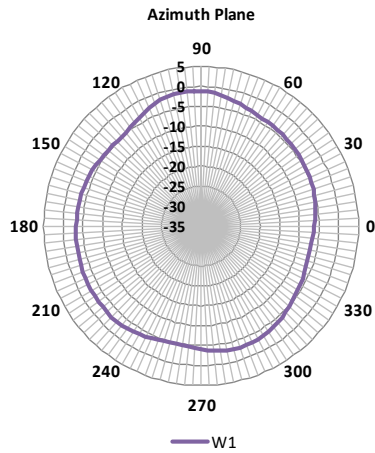


3800 MHz

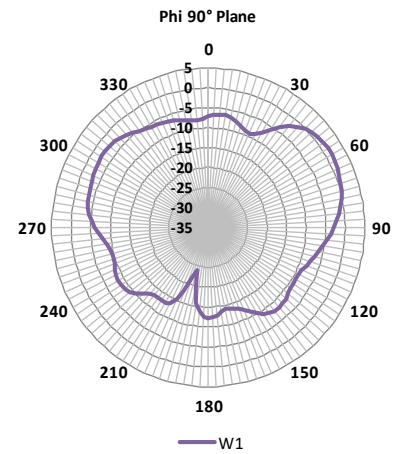
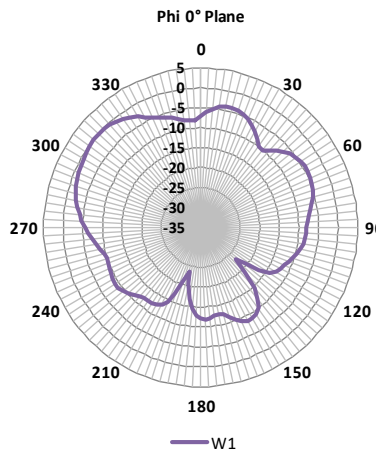
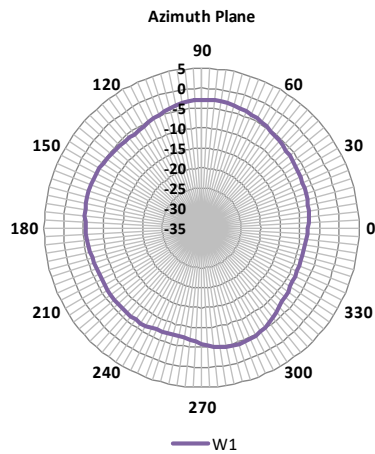


RADIATION PATTERNS - WI-FI ANTENNAS

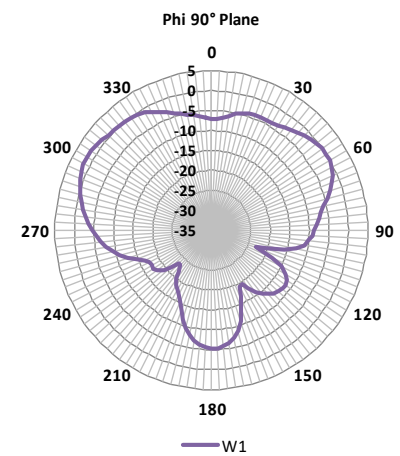
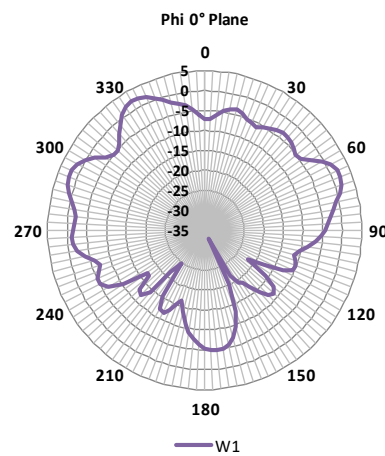
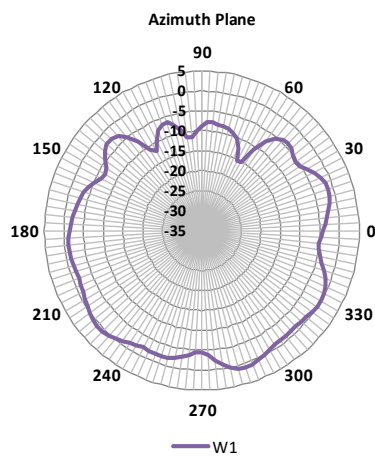
2400 MHz



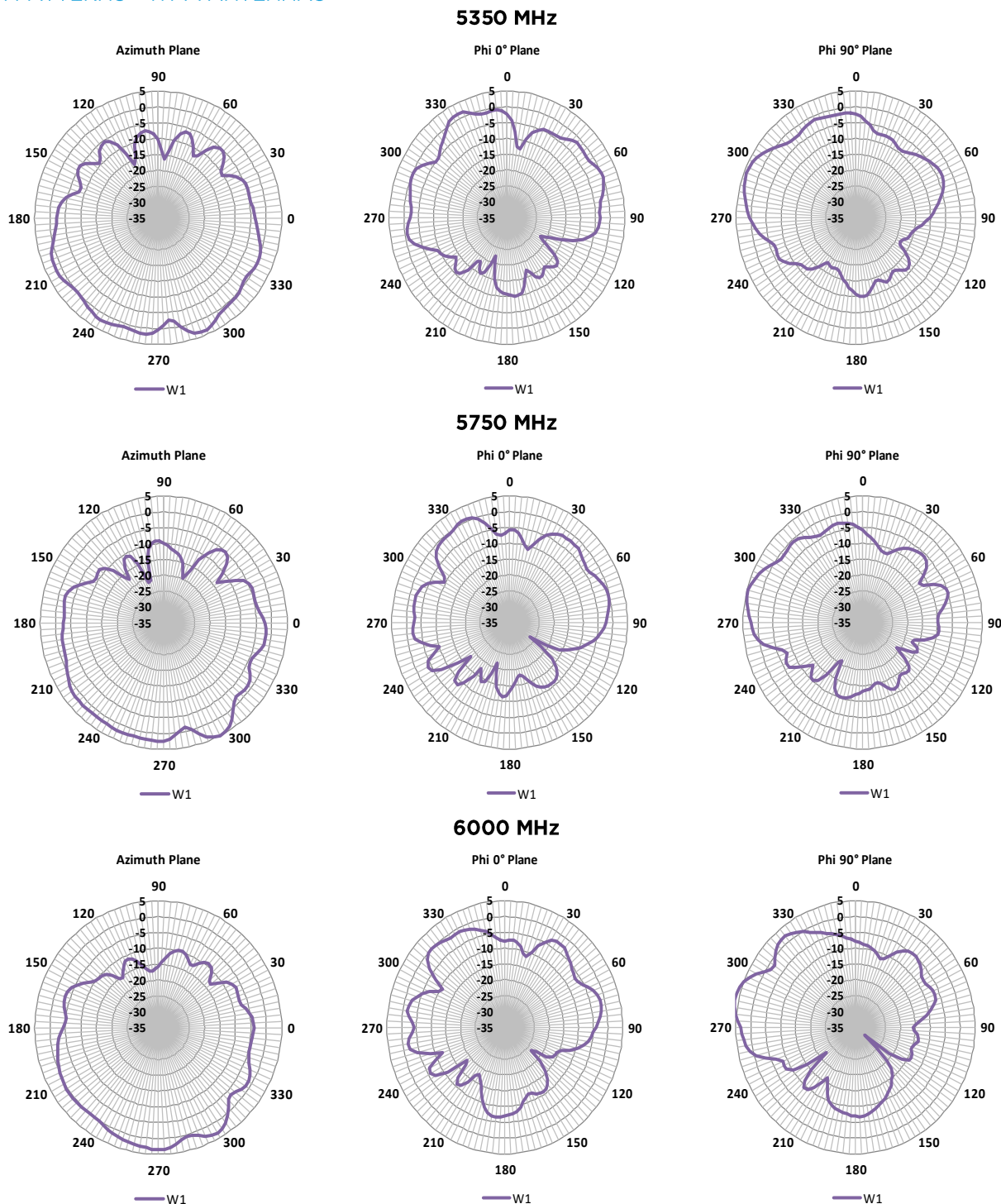
2500 MHz



4900 MHz



RADIATION PATTERNS - WI-FI ANTENNAS



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

