VHP69273x22J

Vehicular 5-Port MIMO Antenna
698-960 MHz/1710-2700 MHz/2300-2700 MHz/4900-5900 MHz/GNSS

The Laird Connectivity vehicular five-port MIMO antenna covers the 698-960/1710-2700 MHz and 2300-2700/4900-5900 MHz frequency ranges with an added global navigational antenna. Configured with two 3G/4G ports and two dual band Wi-Fi ports and a fifth port configured with a GNSS navigational antenna.

Connector options include, but not limited to, SMA male connectors for 3G/4G LTE and GNSS ports with an RPSMA male connector for the Wi-Fi port. The housing incorporates a low-profile, rugged design that meets IP67, EN61373 Shock & Vibration and EN50155 Temperature and Humidity standards. The antenna also features high impact, UV-resistant polycarbonate plastic radome available in black or white.

APPLICATIONS

- FirstNet/Public Safety
- Passenger Fleet
- Commercial Vehicle Fleet
- Rail Transit

ELECTRICAL SPECIFICATIONS				
Number of Ports	3G/4G LTE – 2		Wi-Fi – 2	
Operating Frequency (MHz)	698-960	1710-2700	2300-2700	4900-5900
VSWR – Avg.**	<1.7:1	<1.6:1	<1.7:1	<1.4:1
VSWR – Max**	<2.0:1	<2.0:1	<2.0:1	<2.0:1
Gain – Peak (dBi)*	4.1	5.9	6.2	6.5
Gain Horizon 30° - Max (dBi)*	N/A	N/A	N/A	6.2
Typical Port-to-Port Isolation**	698-960	1710-2700	2300-2700	4900-5900
LTE 1 to LTE 2	>14	>26	>28	N/A
LTE 1 to Wi-Fi 1	>27	>18	>20	>31
LTE 1 to Wi-Fi 2	>26	>19	>23	>29
LTE 2 to Wi-Fi 1	>27	>19	>23	>28
LTE 2 to Wi-Fi 2	>26	>18	>20	>33
Wi-Fi 1 to Wi-Fi 2	N/A	N/A	>20	>29
Nominal Impedance (Ohms)	50			
Max Power - Ambient 25°C (W)	50			
Polarization	Vertical Linear			
Horizontal Plane 3 dB Beamwidth Port 1	Omnidirectional			

* Measured on 1 ft (30.48 cm) diameter ground plane

** Measured on 1 ft (30.48 cm) diameter ground plane and 17 ft (518 cm)

MECHANICAL SPECIFICATIONS	
Dimensions – diameter x height – mm (in.)	132 x 87 (5.20 x 3.4)
Weight – kg (lbs)	Approximately 1.16 (2.55)
Cable Type	LMR195M
Mounting	P- Mount
Radome and Base Plate Material	PC, UL94 - V0 Rating, UV Stable

ENVIRONMENTAL SPECIFICATIONS	
Operating Temperature – °C (°F)	-30 to +70 (-22 to +158)
Storage Temperature – °C (°F)	-40 to +85 (-40 to +185)
Shock and Vibration Tests	EN61373 Compliant
Temperature and Humidity Tests	EN50155 Compliant
Ingress Protection Rating	IP67
Material Substance Compliance	RoHS

GNSS ANTENNA SPECIFICATIONS:			
Model Number	VHP69273x22J		
Number of Ports	GNSS- 1		
Frequency Band (MHz)	Beidou	GPS	GLONASS
Frequency of Operation (MHz)	1561.098 ± 2.046	1.575.42 ± 1.023	1602.0 ± 5.0
Amplifier Gain (dB)	28 dB ± 3		
Nominal Impedance (Ohms)	50 Ω		
Output VSWR	< 2:1		
DC Voltage	2.5 - 7 Vdc		
Current Consumption, mA	8.5 ± 3 (at 3.0V)		
Input Max Power, dBm	-10		
Out of Band Rejection, dBc	> 80 (698- 960 MHz)	> 80 (1428- 2700 MHz)	> 70 (4900- 5800 MHz)
Working/Storage Temperature	-40°C - +85°C (-40°F - +185°F)		
Connector	SMA-Male		
Cable – Exposed Length	RG174-518.2 cm (17 ft.)		

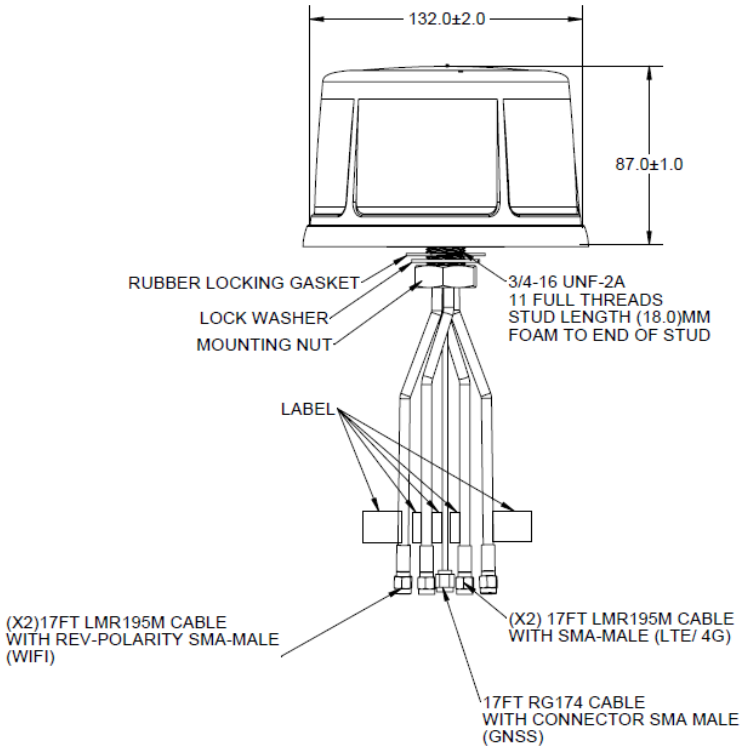
CONFIGURATION

PART NUMBER	CABLE LENGTH	CONNECTOR LTE PORTS	CONNECTOR Wi-Fi PORTS	COLOR	NAVIGATION
VHP69273B22J-518A	5.18m (17ft)	SMA Male	RPSMA Male	Black	GNSS
VHP69273W22J-518A	5.18m (17ft)	SMA Male	RPSMA Male	White	GNSS

PACKAGING INFORMATION

PACKAGE DIMENSIONS	CARTON	MASTER CARTON	AIR PALLET	OCEAN PALLET
Number of Antennas	4	8	192	240
Height- mm (in.)	305 (12.0)	305 (12.0)	1363 (53.66)	1668 (65.67)
Length- mm (in.)	525 (20.7)	525 (20.7)	1200 (47.24)	1200 (47.24)
Width- mm (in.)	132 (5.22)	265 (10.4)	800 (31.5)	800 (31.5)
Shipping Weight- kg (lb.)	5.0 (11)	10.1 (22.3)	255 (562)	316 (697)

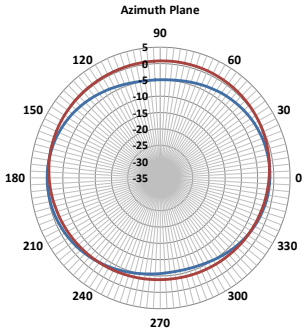
MECHANICAL DRAWING

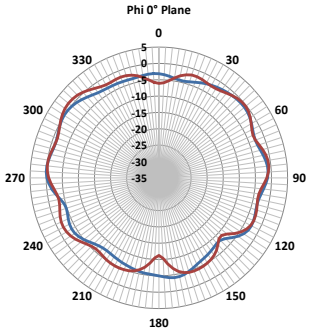


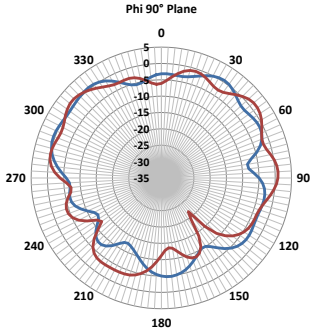
RADIATION PATTERNS- LTE/CELL PORTS

Port 1 Port 2

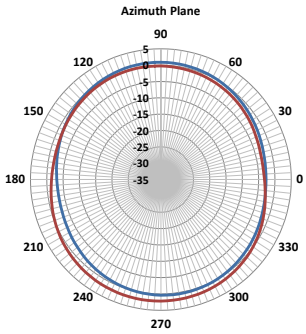
698 MHz

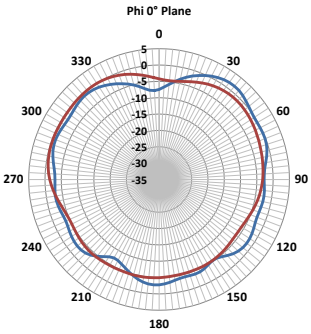


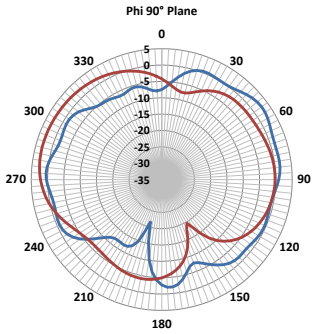




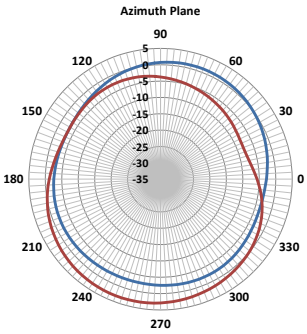
851 MHz

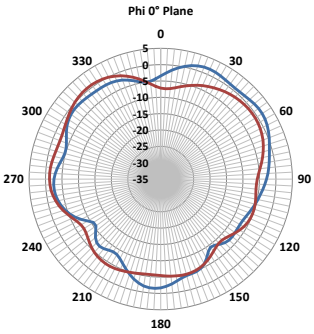


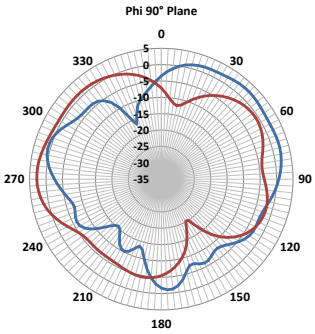




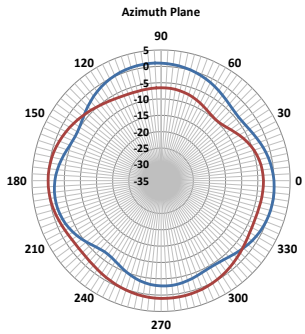
960 MHz

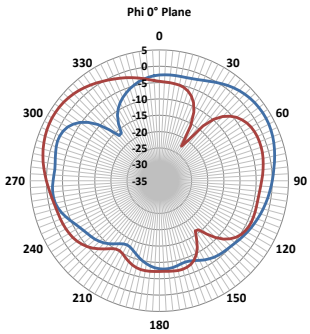


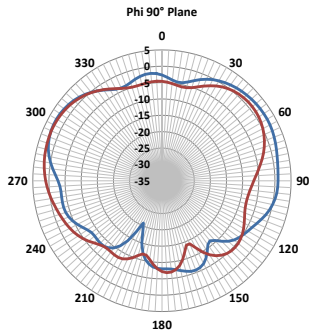




1710 MHz



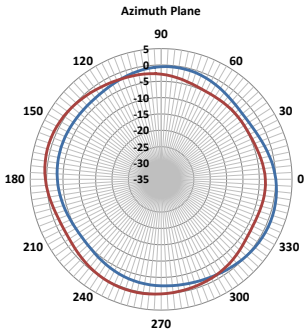


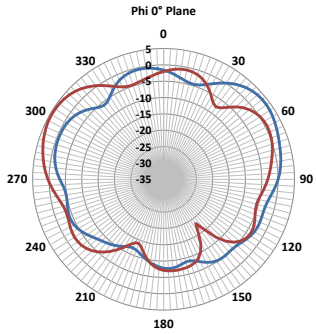


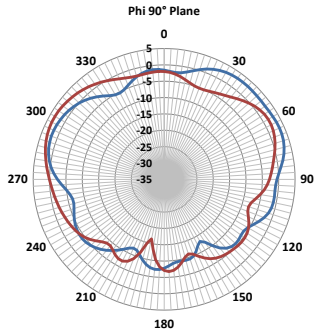
RADIATION PATTERNS- LTE/CELL PORTS

Port 1 Port 2

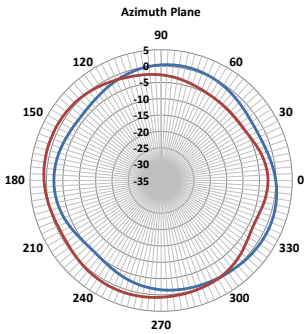
1880 MHz

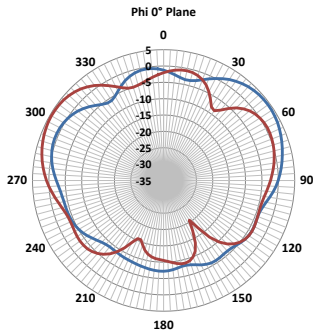


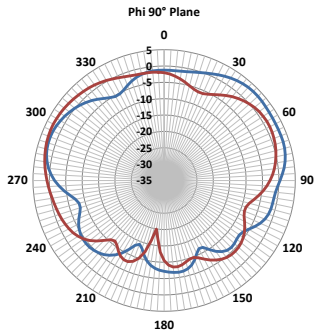




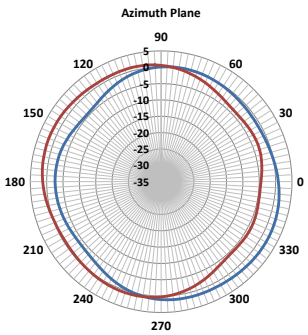
1930 MHz

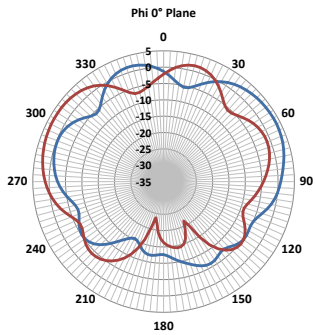


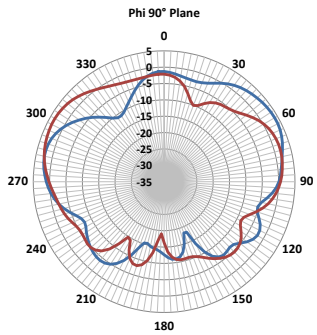




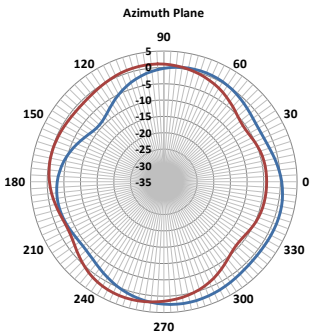
2170 MHz

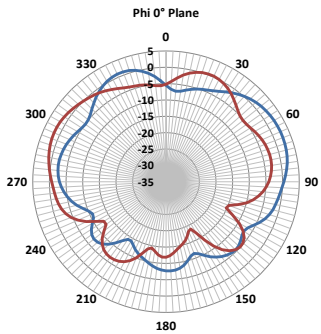


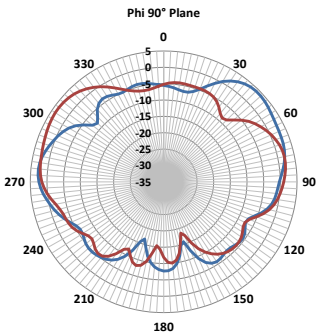




2310 MHz



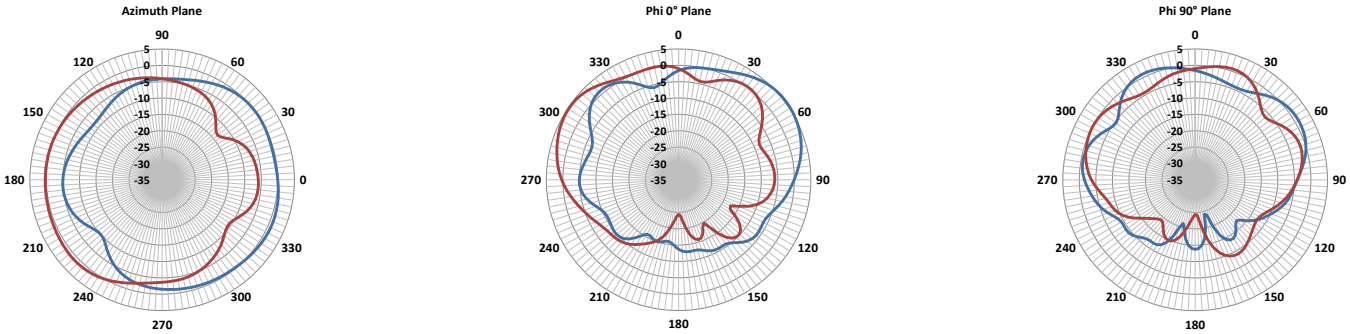




RADIATION PATTERNS- LTE/CELL PORTS

Port 1 Port 2

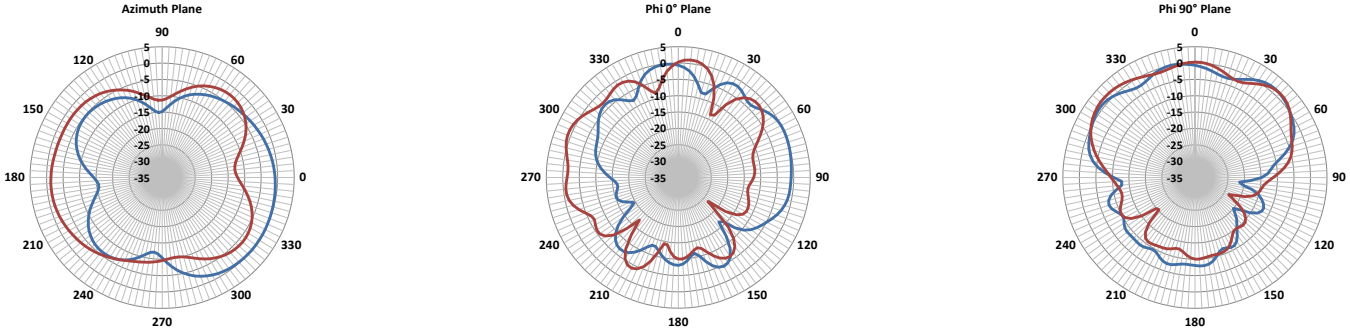
2700 MHz



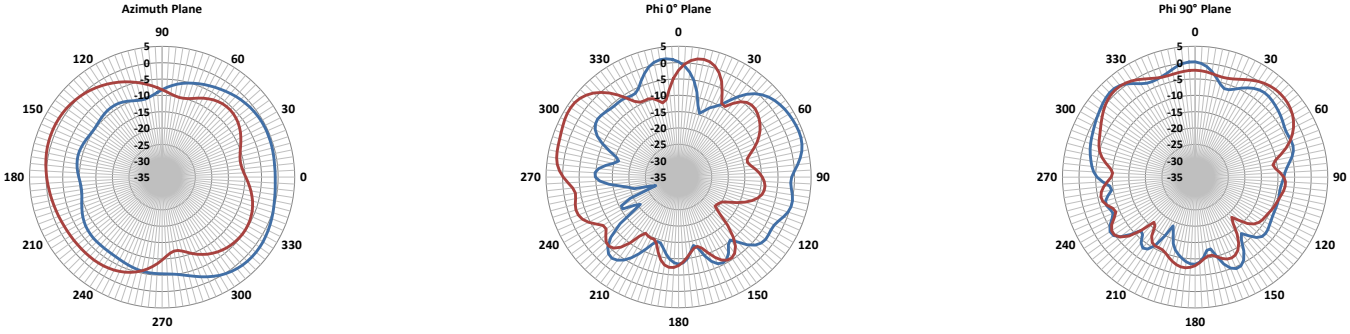
RADIATION PATTERNS- WIFI PORTS

Port 1 Port 2

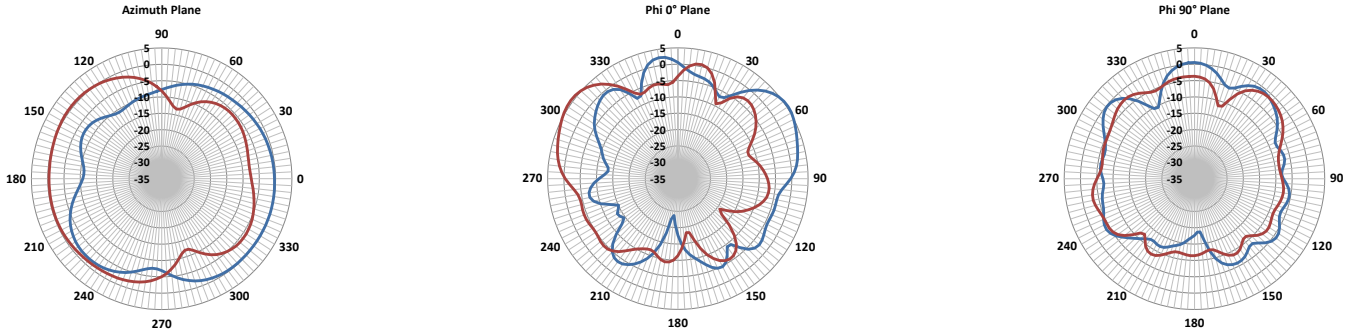
2300 MHz



2400 MHz



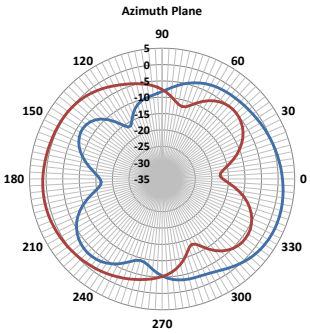
2500 MHz

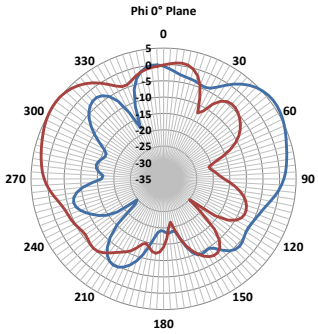


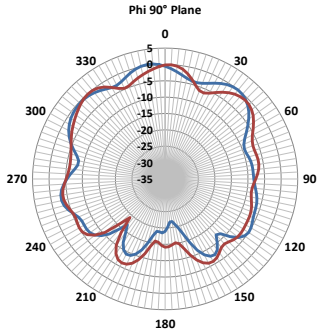
RADIATION PATTERNS- WIFI PORTS

Port 1 Port 2

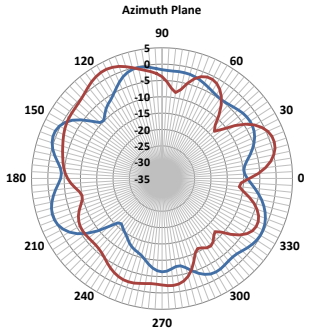
2700 MHz

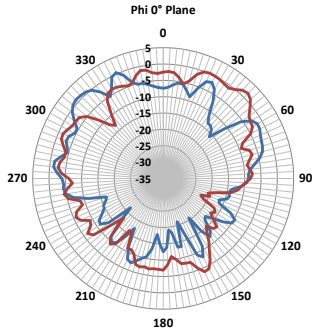


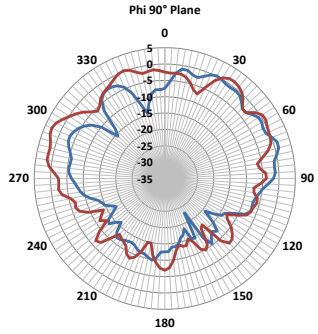




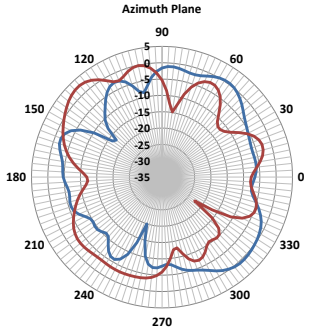
4900 MHz

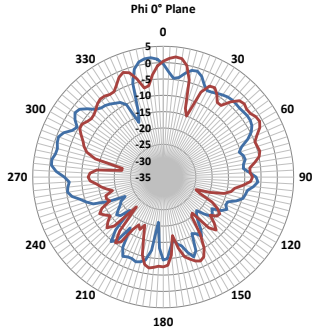


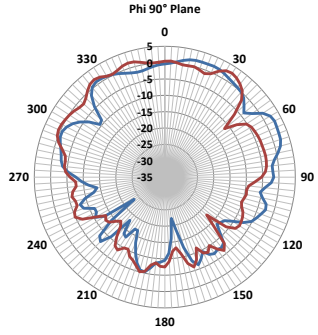




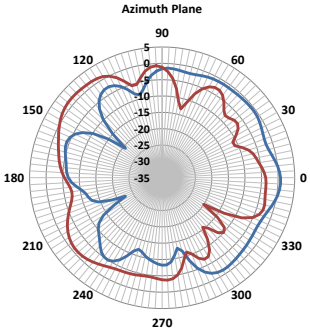
5470 MHz

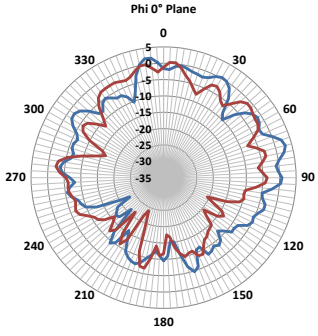


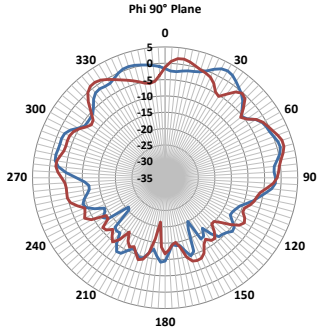




5725 MHz



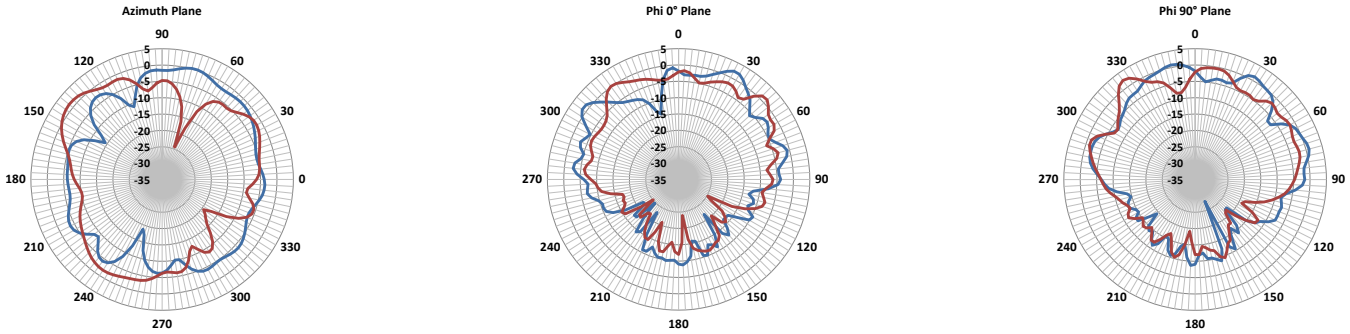




RADIATION PATTERNS- WIFI PORTS

Port 1 Port 2

5925 MHz



RoHS

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.

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