



VMJ24493

Vehicular 3-Port MIMO Antenna 2400-2500 MHz/4900-6000 MHz/GNSS

The Laird Connectivity ground plane independent three-port MIMO antenna covers the 2400 to 2500 MHz and 4900 to 6000 MHz frequency ranges with an added global navigational antenna. Configured with two dual band Wi-Fi ports and a third port configured with a GNSS navigational antenna, the antenna is well suited for global applications where the need for Wi-Fi coverage is required.

Connector options include, but not limited to, a SMA male connector for the GNSS port and RPSMA male connectors for the Wi-Fi ports. The housing incorporates a low-profile, rugged design that conforms to IP67 standards. The antenna also features high impact, UV-resistant polycarbonate plastic radome available in black or white.

APPLICATIONS

- Passenger Fleet
- Commercial Vehicle Fleet
- Kiosk/Vending/Utilities
- Commercial Industrial

ELECTRICAL SPECIFICATION

Antenna Model	VMJ24493x	
Number of Ports	3	
Port Configuration (Label)	2x- WIFI, 1x-GNSS	
Operating Frequency (MHz)	2400-2500	4900-6000
Peak Gain - Average* (dBi)	4.7	6.3
Peak Gain - Max* (dBi)	5.1	6.9
Efficiency- Average* (%)	71	67
Efficiency, Max* (%)	76	71
VSWR- Average**	1.3	1.4
VSWR- Max**	2.0	2.0
Isolation** WIFI 1 to WIFI 2 (dB)	-20	-20
Nominal Impedance (Ohms)	50	
Max Power - Ambient 25°C (W)	50	
Polarization	Vertical Linear	
Horizontal Plane 3 dB Beamwidth	Omnidirectional	

* Measured on 1 ft (30.48 cm) diameter ground plane and 1ft (30.48 cm) of coaxial cable

** Measured on 1 ft (30.48 cm) diameter ground plane and 17 ft (51.8 cm) of coaxial cable Antenna specification is subjected to change according to the ground plane size

MECHANICAL SPECIFICATION

Dimensions – diameter x height – mm (in.)	127 x 38.5 (5.0 x 1.52)
Weight – kg (lbs)	0.58 (1.29)
Cable Type	LMR240
Mounting	P- Mount
Radome and Base Plate Material	PC, UL94 - V0 Rating, UV Stable

ENVIRONMENTAL SPECIFICATION

Operating Temperature – °C (°F)	-40 to +80 (-40 to +176)
Storage Temperature – °C (°F)	-40 to +85 (-40 to +185)
Ingress Protection Rating	IP67
Material Substance Compliance	RoHS

CONFIGURATION

PART NUMBER	CABLE LENGTH	CONNECTOR GNSS	CONNECTOR WI-FI PORT	COLOR	NAVIGATION
VMJ24493B-518RSMM	5.18m (17ft)	SMA Male	RPSMA Male	Black	GNSS
VMJ24493W-518RSMM	5.18m (17ft)	SMA Male	RPSMA Male	White	GNSS

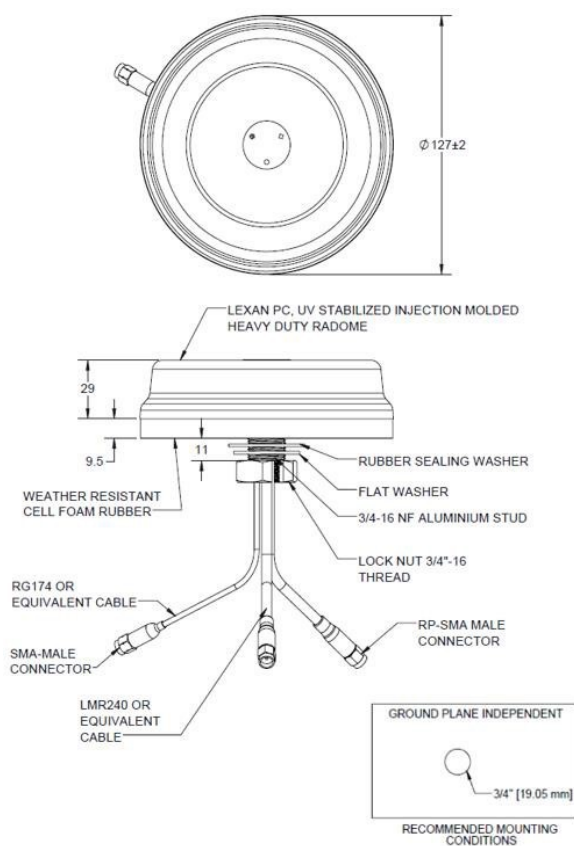
GNSS ANTENNA SPECIFICATION

Model Number	VMJ24493x		
Number of Ports	1x- GNSS		
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- 1511 MHz) 50 @ (1627- 1638 MHz), 80 @ (1710- 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.)		

PACKAGE INFORMATION

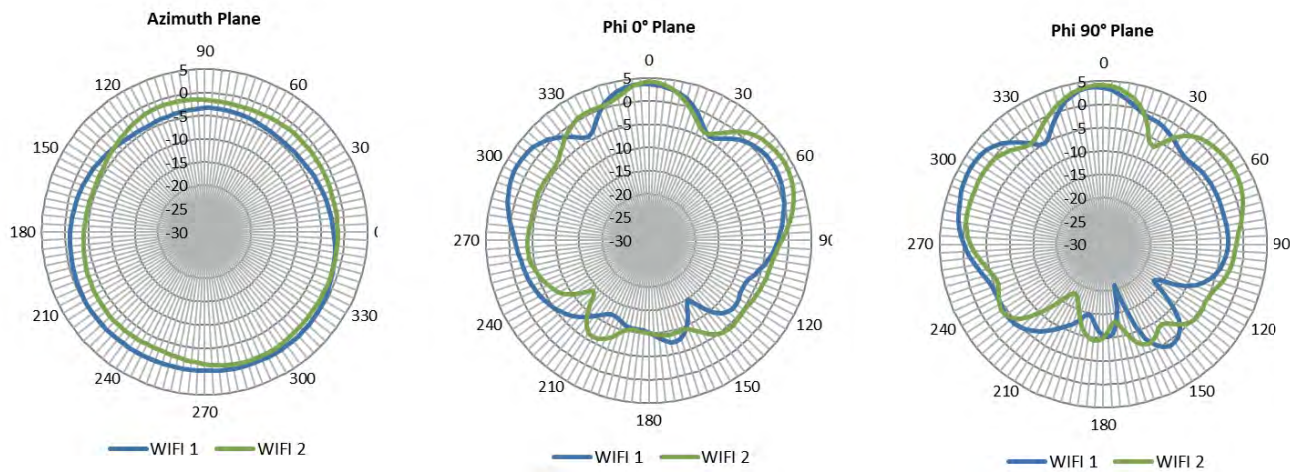
PACKAGE DIMENSIONS	CARTON	MASTER CARTON	AIR PALLET	OCEAN PALLT
Number of Antennas	1	4	96	120
Height- mm (in.)	125 (4.92)	305 (12.0)	1363 (53.66)	1668 (65.67)
Length- mm (in.)	290 (11.4)	525 (20.7)	1200 (47.24)	1200 (47.24)
Width- mm (in.)	255 (10.0)	265 (10.4)	800 (31.5)	800 (31.5)
Shipping Weight- kg (lb.)	1.2 (2.6)	5.6 (12)	146 (322)	180 (397)

MECHANICAL DRAWING

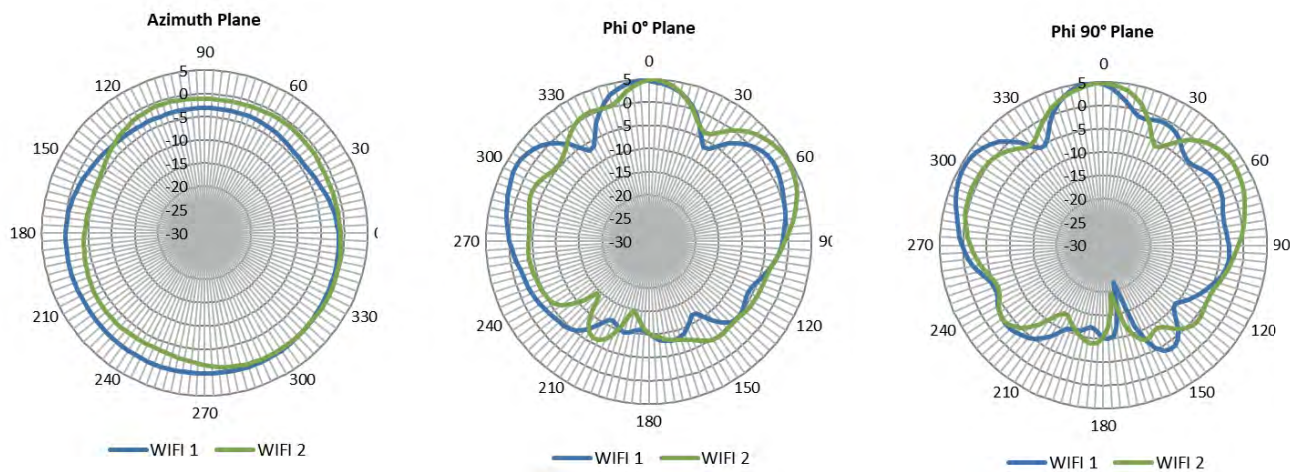


RADIATION PATTERNS- WIFI PORTS

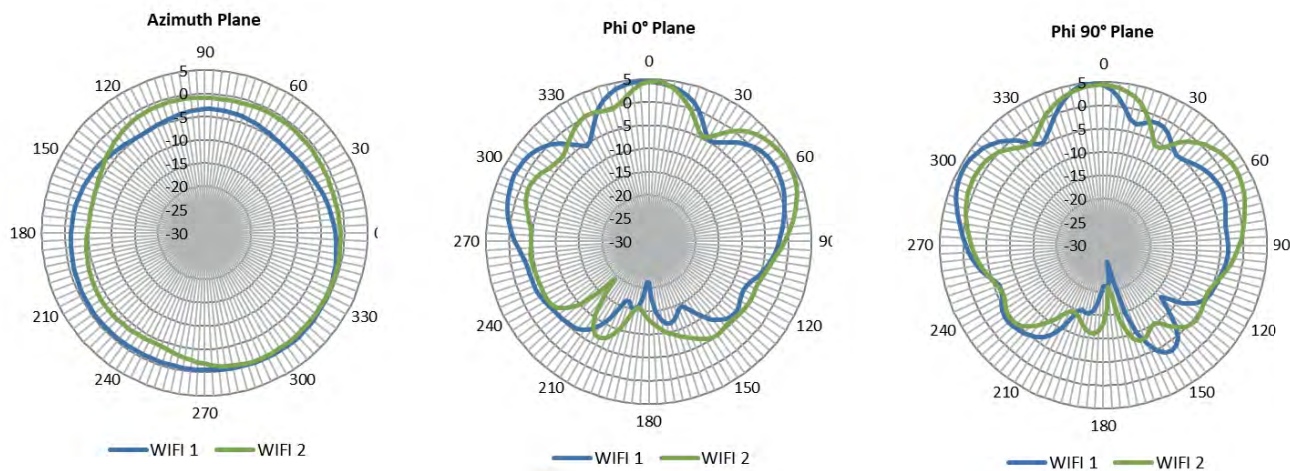
2400 MHz



2450 MHz

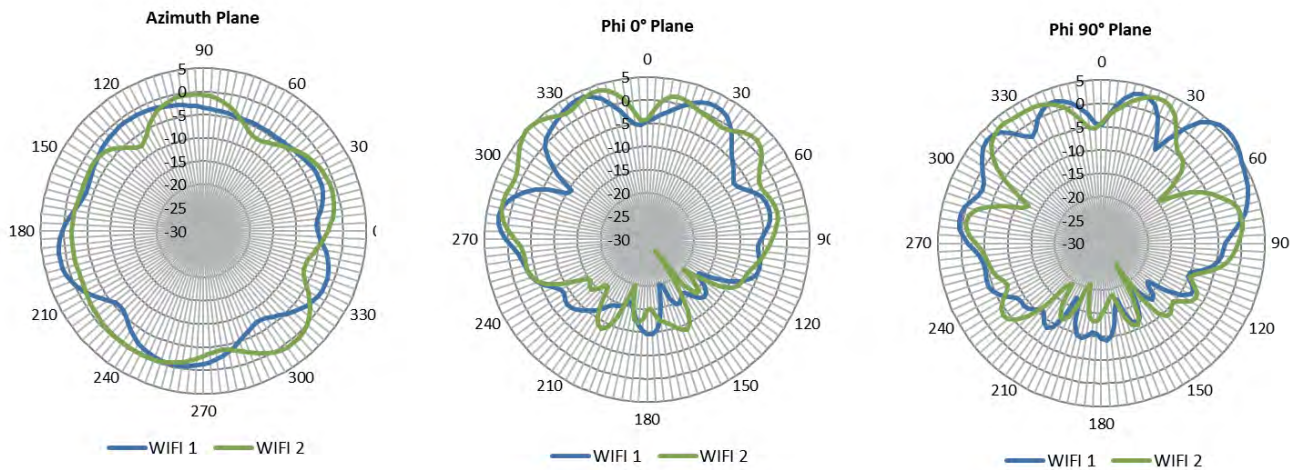


2500 MHz

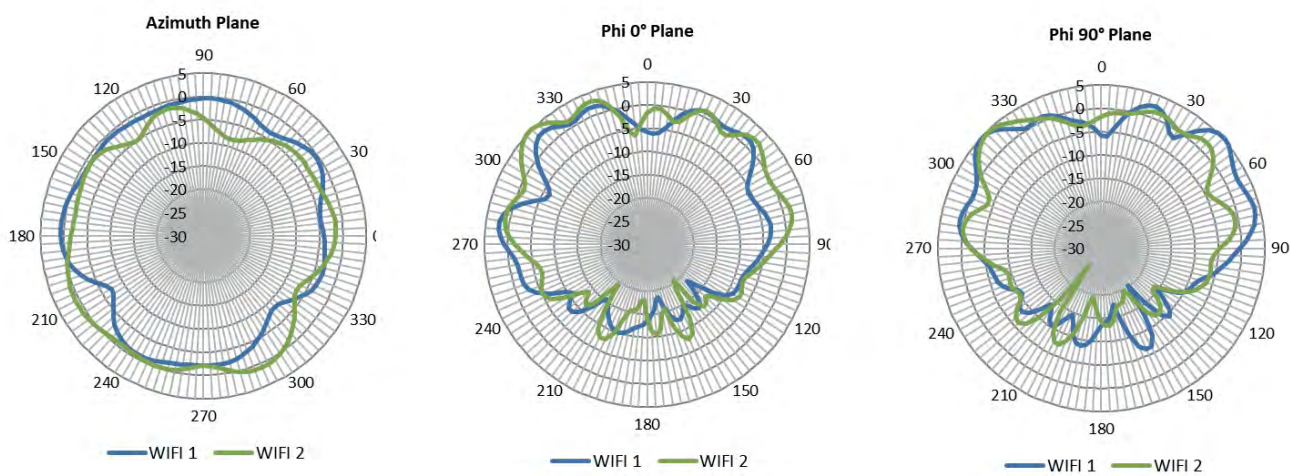


RADIATION PATTERNS- WIFI PORTS

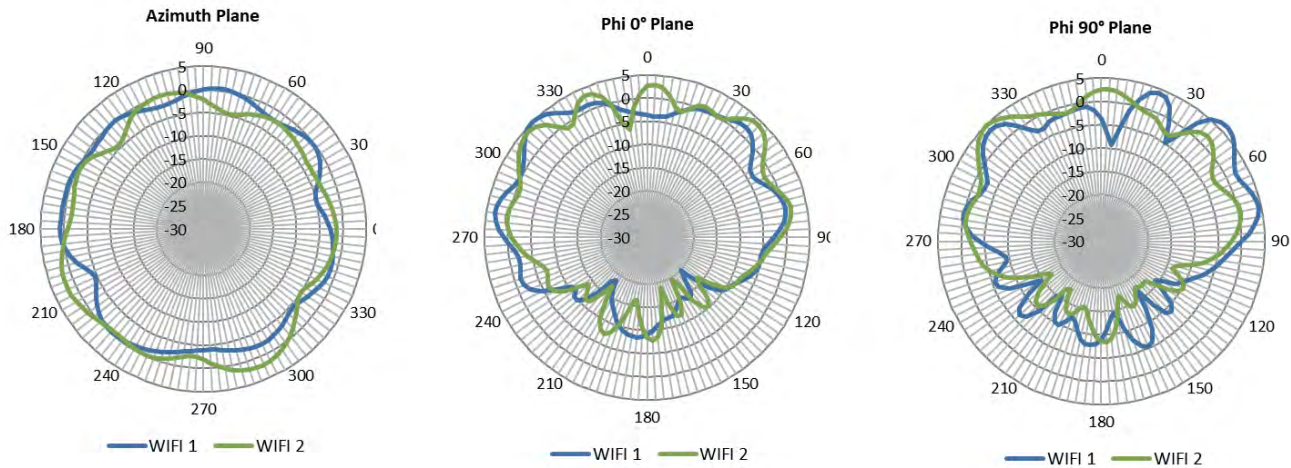
4900 MHz



5470 MHz

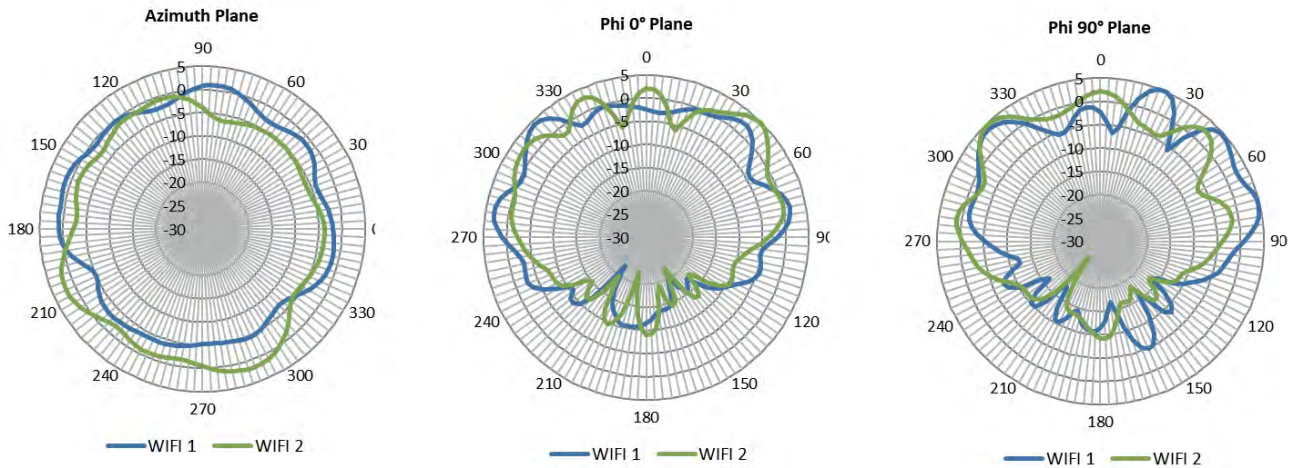


5725 MHz



RADIATION PATTERNS- WIFI PORTS

5900 MHz



TE TECHNICAL SUPPORT CENTER

USA:	+1 (800) 522-6752
Canada:	+1 (905) 475-6222
Mexico:	+52 (0) 55-1106-0800
Latin/S. America:	+54 (0) 11-4733-2200
Germany:	+49 (0) 6251-133-1999
UK:	+44 (0) 800-267666
France:	+33 (0) 1-3420-8686
Netherlands:	+31 (0) 73-6246-999
China:	+86 (0) 400-820-6015

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