

# VPJ69595B

Aftermarket fleet

Rugged LTE gateways

### "Trigger" 5-Port Under-Dash Antenna Cellular/Wi-Fi/GNSS

The innovative Trigger family of multiport/multiband antennas provide an excellent solution for transportation, aftermarket fleet, public safety and IoT applications. The incorporation of both vertically and horizontally polarized cellular radiating elements has shown to provide improved signal received power and signal received quality. These parameters are critical for high density urban environments as well as long distance remote rural conditions. This translates to more consistent connectivity and data throughput for your mobile data applications.

The VPJ series Trigger antenna is configured for two-port operation over the 3G/4G/5G/ ISM/CBRS bands and two-port operation over the low//high frequency Wi-Fi bands. An additional fifth port provides an active antenna for enabling GNSS global navigation services.

# FEATURES AND BENEFITS

- Unique V-Pol / H-Pol cellular elements ensure highest Dual axis bonding via VHB tape provides a rugged signal retention and data throughput
- Ideal for vehicle under-dash locations mounted to ventilation ducting

# **APPLICATIONS**

- Trucking
- FirstNet/Public safety
- Transportation/transit

#### ELECTRICAL SPECIFICATIONS

Antenna Model	VPJ69595B-92VC1 / VPJ69595B-92FAK			
Number of Ports	5			
Port Configuration	LTE (Cell) x2		Wi-Fi x2	
Operating Frequency (MHz)	698-960/1710-2620 2620-2700		2400-2500	4900-5900
Peak Gain (dBi)	5.0		5.0	
Efficiency - Typical (%)	50		40	
VSWR	<3.1:1			
Max Power - Ambient 25°C (W)	5			

mount to jarring vehicle movements.

MECHANICAL SPECIFICATIONS	
Dimensions – L x W x H– mm (inches)	132.3 x 59.3 x 123.4 (5.21 x 2.33 x 4.86)
Weight -g (lbs.)	225 (0.50)
Cable Type	LMR100 (or equivalent)
Mounting Tape (separate pack)	Double-sided foam tape (75 mm x 40 mm x 1.6 mm)
3M VHB 5962P	PC, UL94 - VO Rating, UV Stable
Radome Material	PC
Radome Color	Black
Radome Texture	MT11010

ENVIRONMENTAL SPECIFICATIONS			
Operating Environment	Vehicular under dash; outdoor rated		
Operating Temperature - °C (°F)	-40 to +85°C (-40 to +185°F)		
Storage Temperature – °C (°F)	-40 to +85°C (-40 to +185°F)		
Ingress Protection Rating	IP67		
Material Substance Compliance	RoHS		

# GNSS ANTENNA SPECIFICATIONS

Frequency of Operation (MHz)	1559 - 1606			
Band	BEIDOU	GPS	GLO	NASS
Frequency Band (MHz)	1561.098 ±2.046	1575.42 ±1.023	160	2 ±5
GNSS Passive Gain (dBic)	5			
GNSS Active Gain (dBic)	32			
DC Voltage (Vdc)	2.5 - 7V			
LNA Gain, Typ. @ room temp. (dB)	28 ±3			
Noise Figure @ room temp., Max (dB)	≤ 2.5			
Polarization	RHCP			
Nominal Impedance (Ohms)	50			
Current Consumption, Max @ room temp (mA)	8.5 ±3 (@ 3.0V)			
Out-of-band Signal Rejection Min @ room temp (dB)	698-960 MHz: > 80	1428-1511 MHz: > 80	1710-2700 MHz: > 80	4900-5800 MHz: > 70
Input Max Power (dBm)	-10			
Cable Type	RG174			

# **CONFIGURATION**

	CABLE LENGTH		CONNECTORS		
PART NUMBER	PIGTAIL	LTE/CELL (2X)	WI-FI (2X)	GNSS	COLOR
VPJ69595B-92VC1	914 mm (3 ft.)	SMA Male	RPSMA Male	SMA Male	Black
VPJ69595B-92FAK	914 mm (3 ft.)	Fakra Type D Jack (Purple)	Fakra Type I Jack (Beige)	Fakra Type C Jack (Blue)	Black

# **PACKAGING INFORMATION**

PACKAGE DIMENSIONS	MASTER CARTON	AIR PALLET	OCEAN PALLET
Number of Antennas	40	720	880
Height – cm (in.)	15.6 (6.1)	154.8 (60.9)	186.0 (73.2)
Length – cm (in.)	80 (31.5)	120 (47.2)	120 (47.2)
Width – cm (in.)	60 (23.6)	80 (31.5)	80 (31.5)
Shipping Weight - kg (lb.)	12.5 (27.6)	245 (540.1)	295 (650.4)

### **MECHANICAL DRAWING**

(18)

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PRODUCT LABEL

YELLOW LABEL

PURPLE LABEL

YELLOW LABEL

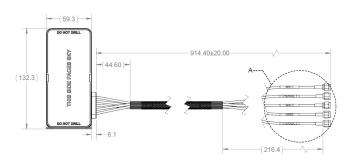
BLUE LABEL

PURPLE LABEL

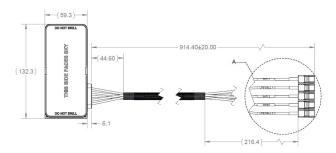
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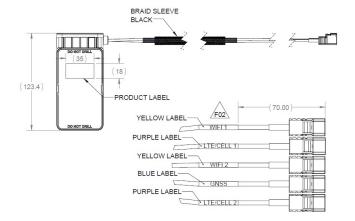
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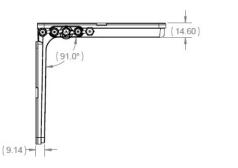
# VPJ69595B-92VC1











-( 70.00 )-

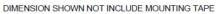
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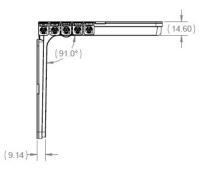
WIFI 1

CELL

WIFI 2

E/CELL 2 DETAIL A SCALE 1 : 1

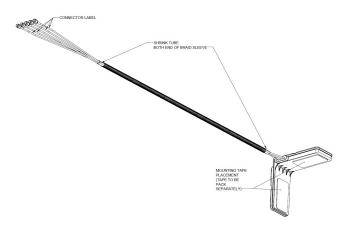




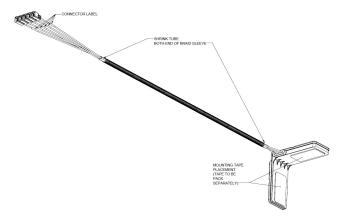
DIMENSION SHOWN NOT INCLUDE MOUNTING TAPE

### **MECHANICAL DRAWING**

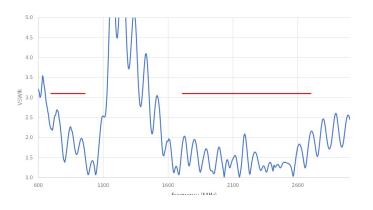
VPJ69595B-92VC1



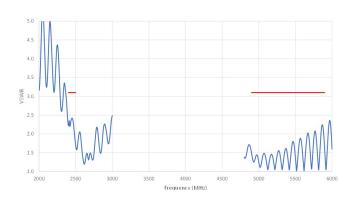
VPJ69595B-92FAK



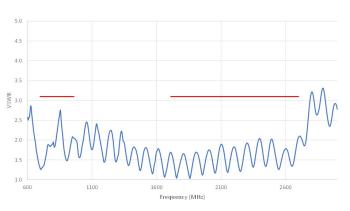




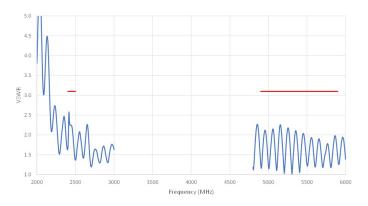




Cell 2

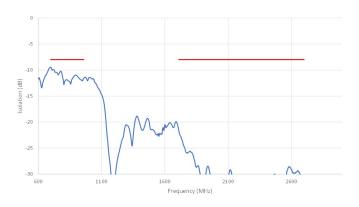


Wi-Fi/Bluetooth

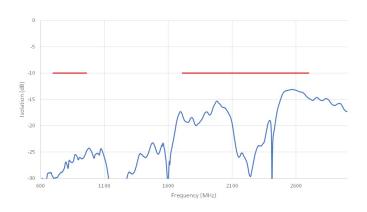


#### **ISOLATION**

Isolation, Cell 1 - Cell 2

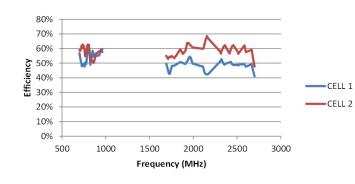


Isolation, Cell 1 - Wi-Fi/Bluetooth

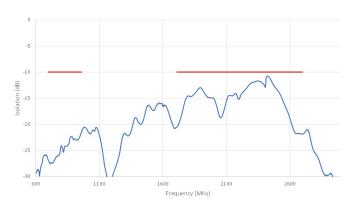


EFFICIENCY

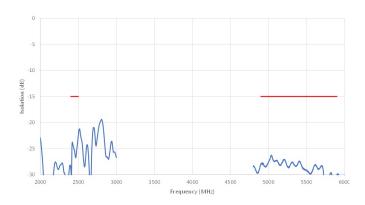




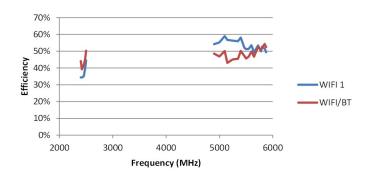
Isolation, Cell 1 - Wi-Fi 1



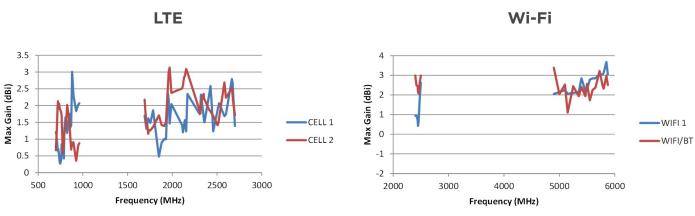
Isolation, Wi-Fi 1 - Wi-Fi/Bluetooth





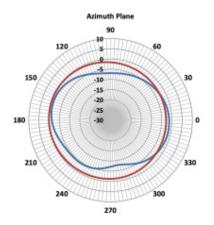


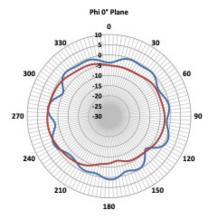
### **EFFICIENCY**

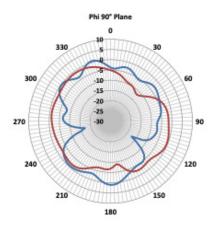


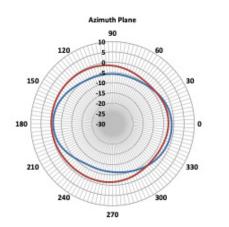
# **RADIATION PATTERNS - LTE ANTENNAS**

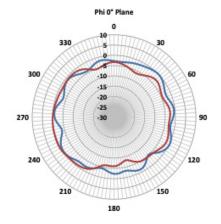


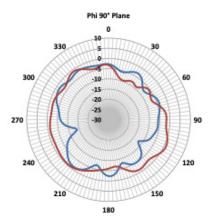


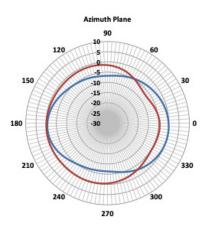


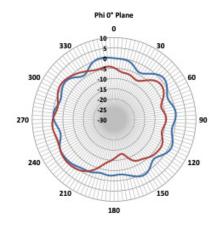


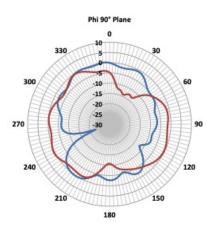




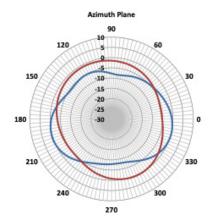


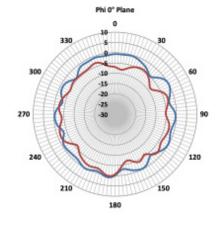


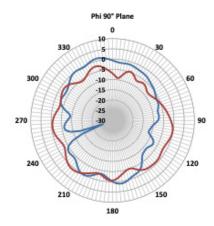


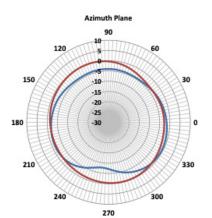


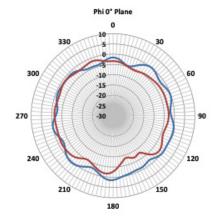
860 MHz

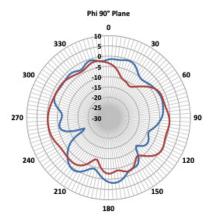


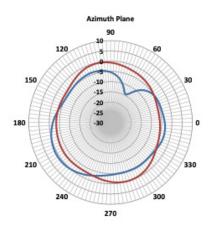


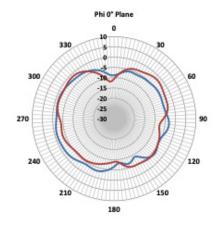


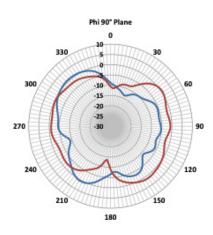




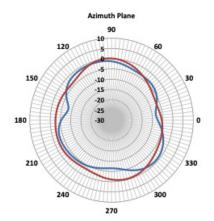


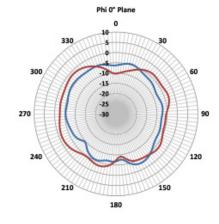


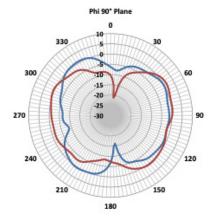


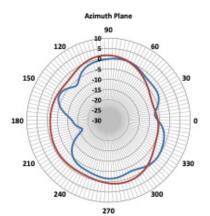


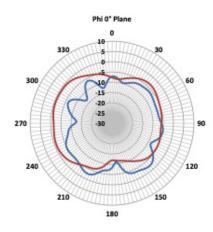
1880 MHz

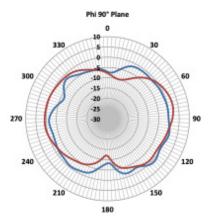


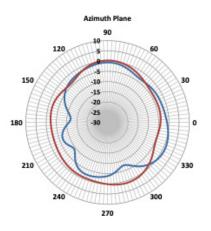


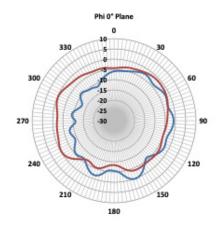


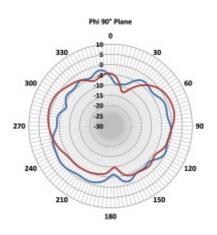




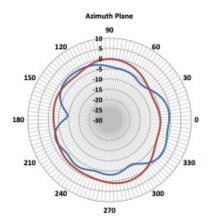


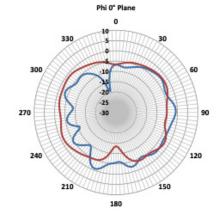


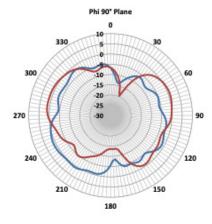


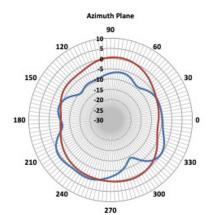


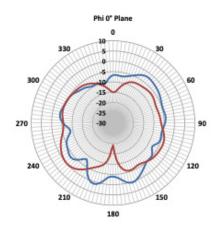
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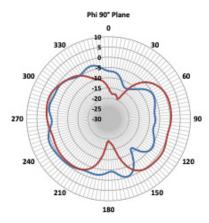




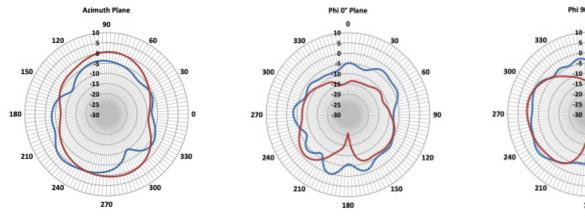


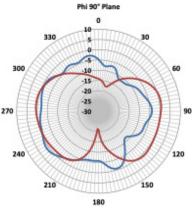




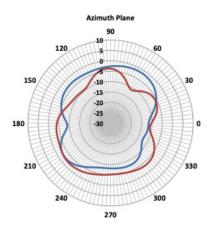




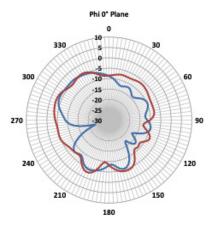


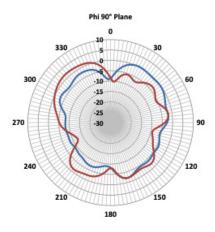


#### **RADIATION PATTERNS - WI-FI ANTENNAS**

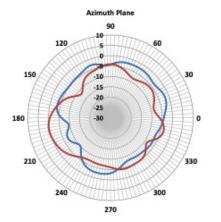


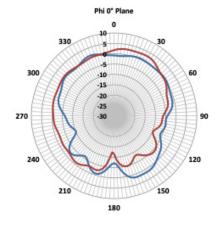
# 2450 MHz

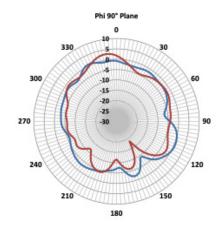




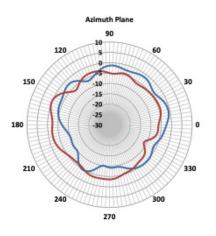
4900 MHz

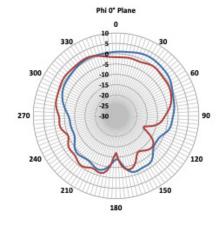


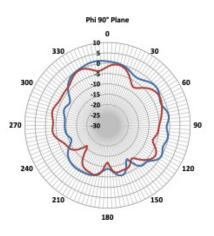




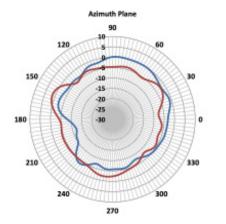
DATA AND DEVICES / VPJ69595B

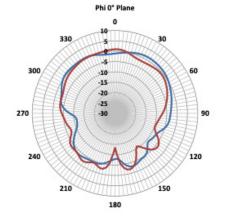


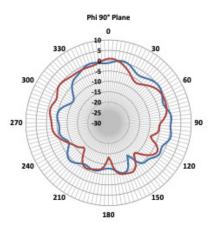




5875 MHz

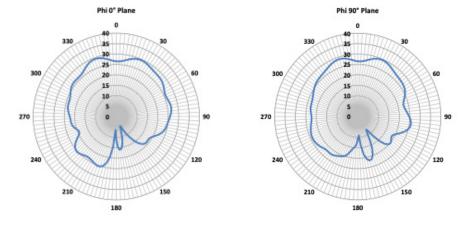




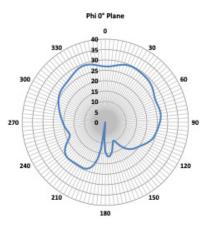


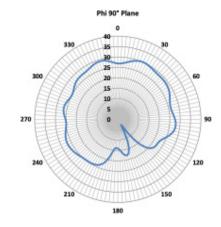
# **RADIATION PATTERNS - GNSS (RHCP) ANTENNAS**

1561.098 MHz



1575.42 MHz

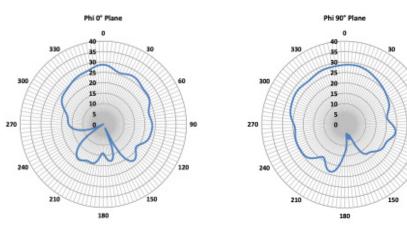




120

External Antennas is now part of

1602 MHz



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Netherlands:	+31(0)73-6246-999
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Original

11/21





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