

Panther Series MIMO LTE, MIMO WLAN and GNSS Vehicle Mount Antenna

Pulse Part Number GPSMB501



Pulse Panther Series is a roof mount antenna with five connectors, two each for LTE and WLAN and one for GNSS (GPS and GLONASS). This compact, aesthetically pleasing solution combines ideal radiation performance for today's demanding propagation environments with optimum isolation characteristics ensuring highest data rates possible.

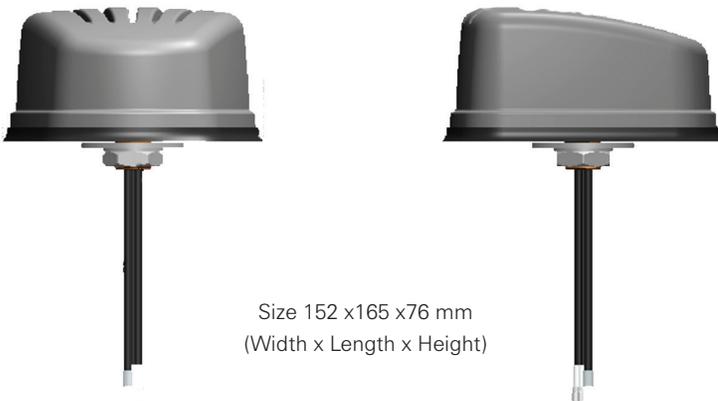
The GPSMB501 is a versatile antenna for modern technology equipped vehicles. The Panther antenna series is well-suited for Police, Ambulance, Fire and other public safety which may be transmitting camera video and other mission critical information either through the LTE and WLAN channels. Likewise commercial mass transit and tour bus operators benefit from entertainment transmission over high capacity LTE networks. Global positioning capability is supported via the integrated GNSS antennas which cover both the traditional GPS and the Russian Glonass satellite systems.

Features

- Supports MIMO Cellular LTE 698-960 MHz / 1695-2170 MHz / 2300-2700MHz / 2900-3600MHz
- Supports MIMO WiFi 2400-2500 MHz / 4900-5900MHz
- Supports GPS & GLONASS
- Direct Mount and optional Magnetic Mount features
- See GPSMBMM for magnetic mount details

Applications

- Telematics
- Location based services
- First Responders (Police, Ambulance, Fire)
- Government
- Energy (Utility Vehicles)
- Fleet Management



Confidential and Proprietary — Pulse Electronics — All Rights Reserved — 2015

This document contains confidential and proprietary information of Pulse Electronics, Inc. (Pulse) and is protected by copyright, trade secret and other state and federal laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything it may describe. Reproduction, disclosure or use without specific written authorization of Pulse is strictly forbidden. Information subject to change without notice.

San Diego, California
1 858 674 8100

Vancouver, Washington
1 360 944 7551

Europe
49 7032 7806 0

China
86 512 6807 9998

Panther Series MIMO LTE, MIMO WLAN and GNSS Vehicle Mount Antenna

Pulse Part Number GPSMB501

Electrical Specifications

Port 1 & 2 LTE Freq (MHz)	698-960 / 1695-2170 / 2300-2700 / 2900-3600
Port 3 & 4 WiFi Freq (MHz)	2400-2500 / 4900-5900
Port 5 GNSS Freq (MHz)	1565-1610
Nominal Impedance Ω	50
Port 1 & 2 LTE VSWR*	<1.5
Port 3 & 4 WiFi VSWR*	<1.4
Port 5 GNSS VSWR*	1.6
Port 1 & 2 LTE Gain** (dBi)	<2170 MHz 4 (\pm 2.5)
Port 1 & 2 LTE Gain** (dBi)	>2170 MHz 5 (\pm 2)
Port 3 & 4 WiFi Gain** (dBi)	<2500 MHz 4.5 (\pm 1.5)
Port 3 & 4 WiFi Gain** (dBi)	>4900 MHz 5 (\pm 2)
Port 5 GNSS RHCP Gain*** (dBic)	1.5 (\pm 2)
Connector Type & Gender	SMA
Cable Length (Feet/Meters)	17 / 5.18
Radiation Pattern Horizontal Plane	Omni
Vertical Plane	See chart
Port 1 & 2 LTE Polarization	Vertical
Port 3 & 4 WiFi Polarization	Vertical
Port 5 GNSS Polarization	RH-Circular
Port 1 & 2 LTE Isolation (dB)**	15
Port 1 & 2 LTE Envelope Correlation Coeff	< 0.2
Port 3 & 4 WiFi Isolation (dB)**	40
Port 3 & 4 WiFi Envelope Correlation Coeff	< 0.08

Measured in free space with 17-ft cable.

** Gain is measure on 2-ft ground plane with 4-inch cable

*** Passive gain

LNA Specifications

Gain (dB)	31 (\pm 1)
Noise Figure (dB)	2.5
Current Draw (mA)	8
Voltage (Vdc)	3-5

Environmental Specifications

Operating Temperature ($^{\circ}$C)	-40 / +85
---	-----------

Mechanical Specifications

Radome Material	ABS / PC
Color	Black
Ingress Protection	67
Weight (grams)	1250
Mounting	Direct or Magnetic options

Connector and cable length options are potentially available upon request.

San Diego, California
1 858 674 8100

Vancouver, Washington
1 360 944 7551

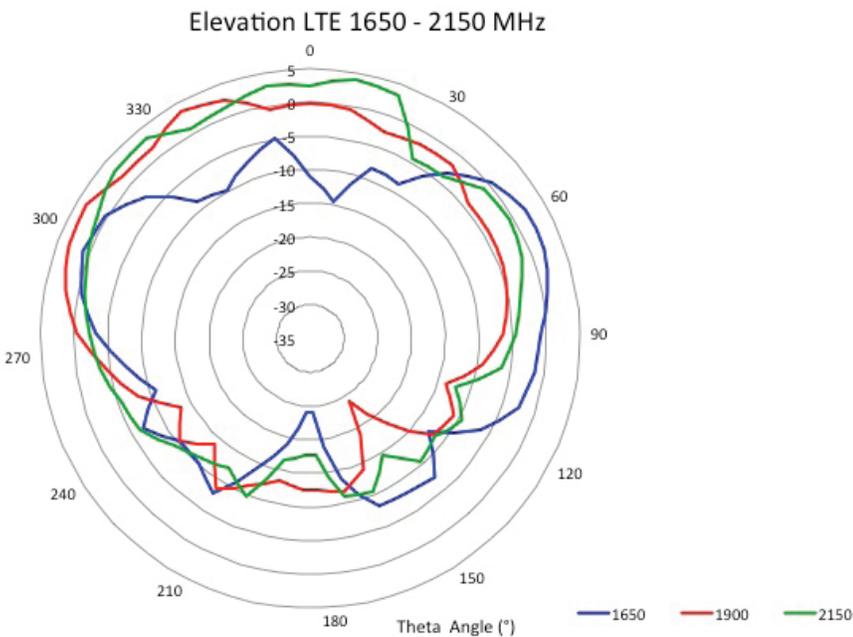
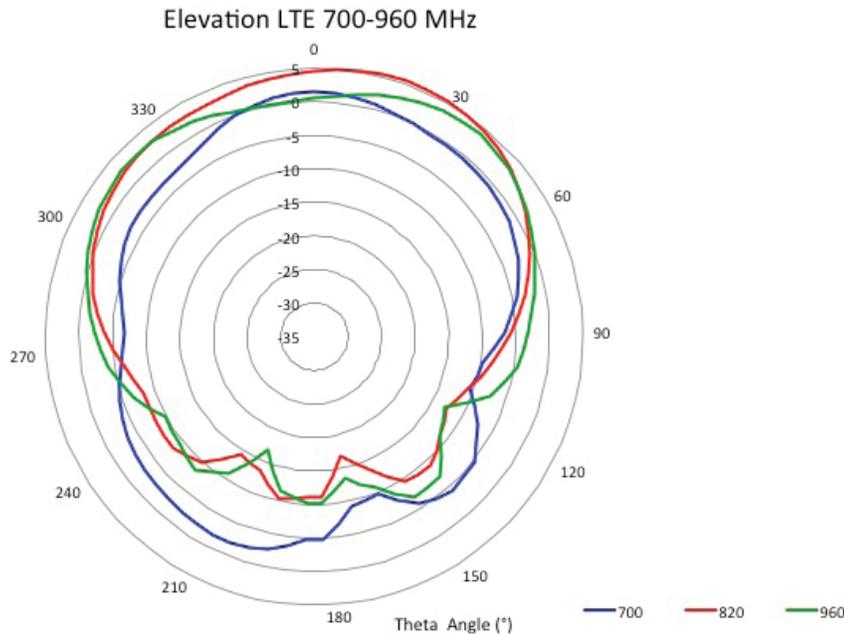
Europe
49 7032 7806 0

China
86 512 6807 9998

Panther Series MIMO LTE, MIMO WLAN and GNSS Vehicle Mount Antenna

Pulse Part Number GPSMB501

Typical Radiation Patterns



San Diego, California
1 858 674 8100

Vancouver, Washington
1 360 944 7551

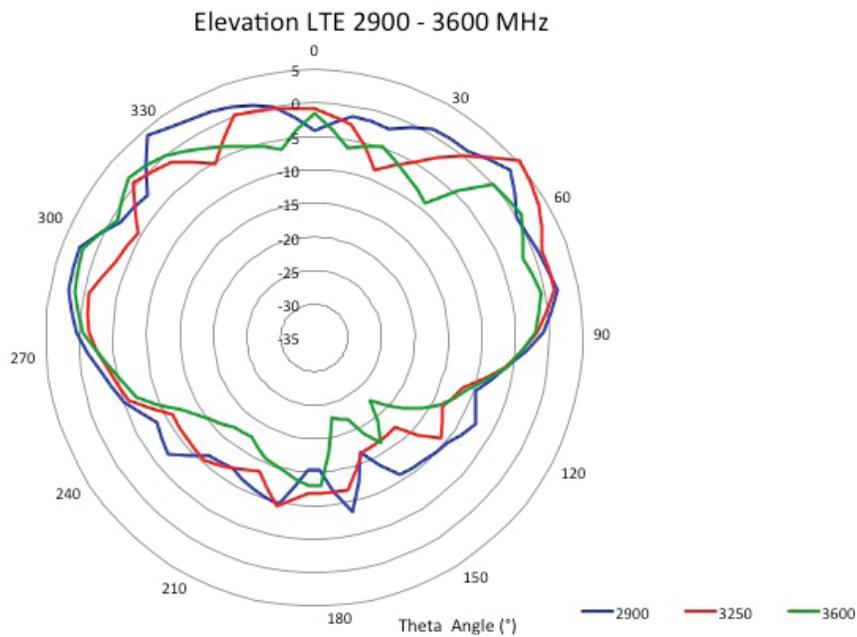
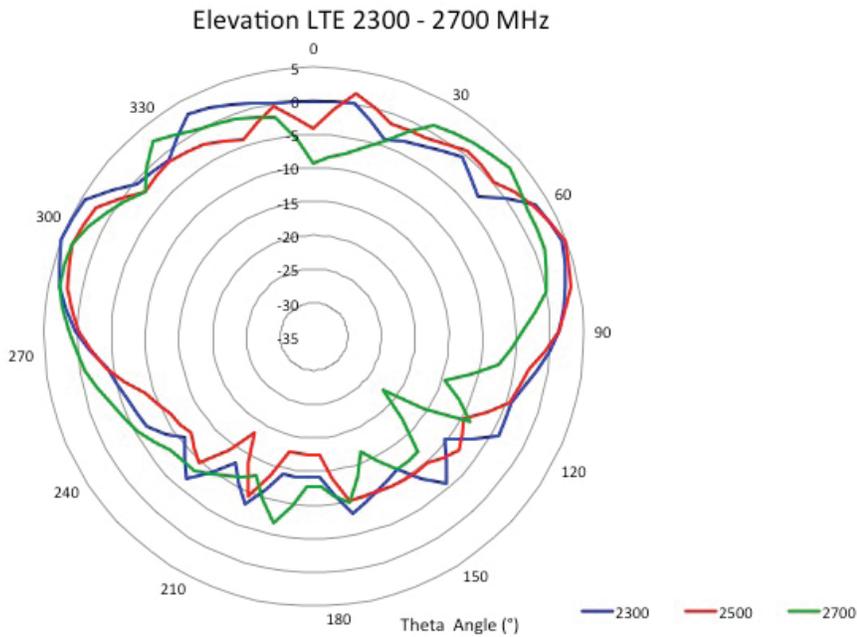
Europe
49 7032 7806 0

China
86 512 6807 9998

Panther Series MIMO LTE, MIMO WLAN and GNSS Vehicle Mount Antenna

Pulse Part Number GPSMB501

Typical Radiation Patterns



San Diego, California
1 858 674 8100

Vancouver, Washington
1 360 944 7551

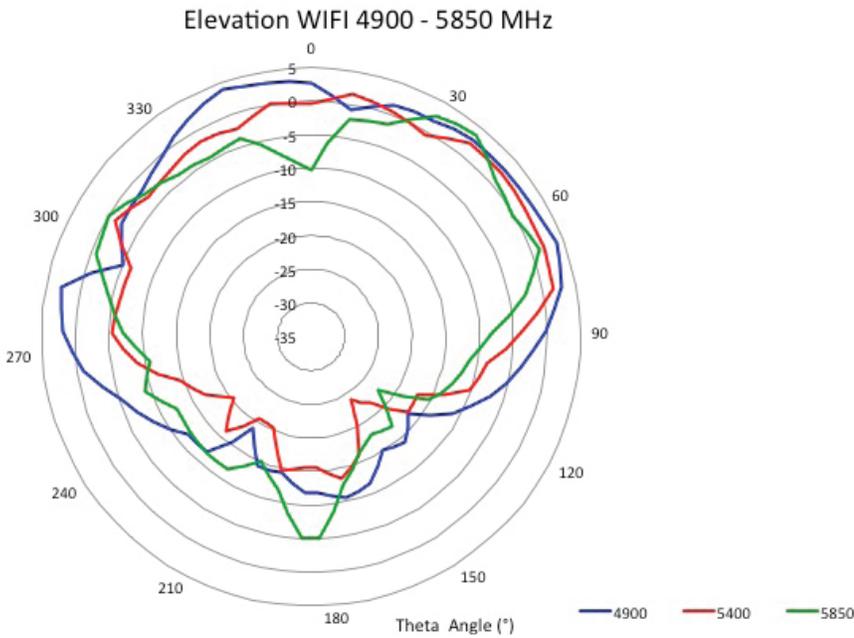
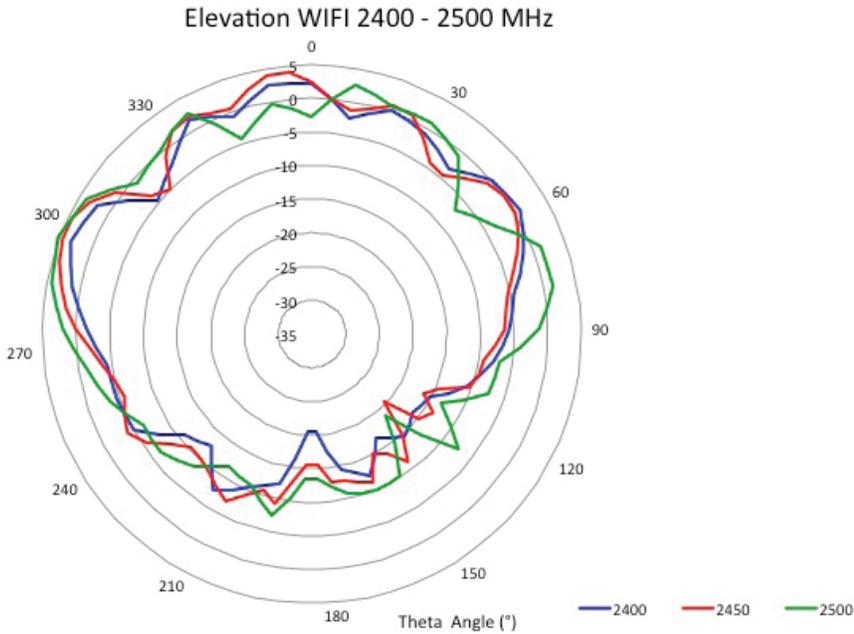
Europe
49 7032 7806 0

China
86 512 6807 9998

Panther Series MIMO LTE, MIMO WLAN and GNSS Vehicle Mount Antenna

Pulse Part Number GPSMB501

Typical Radiation Patterns



San Diego, California
1 858 674 8100

Vancouver, Washington
1 360 944 7551

Europe
49 7032 7806 0

China
86 512 6807 9998