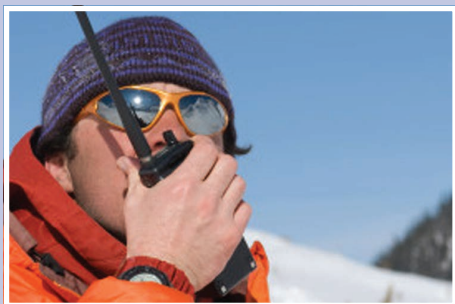
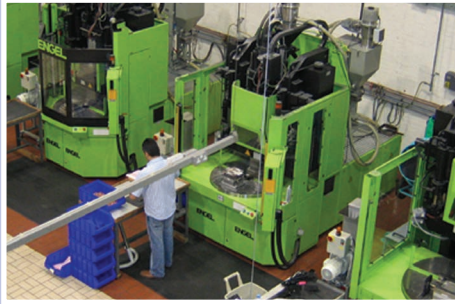




Product Data Sheet

LGMM-7-27-24-58

Low profile MiMo LTE & cellular antenna
with MiMo WiFi and GPS

C/Note	Doc Issue	Date	Approval
01019	3	04.06.2013	J.J.

PANORAMA  ANTENNAS

LTE MIMO Antenna

Low Profile MIMO Antenna with GPS



LGMM-7-27-24-58

Rugged low profile design

2x Wideband LTE/cellular elements

2x 2.4 & 4.9-6GHz Wifi/WIMAX Elements

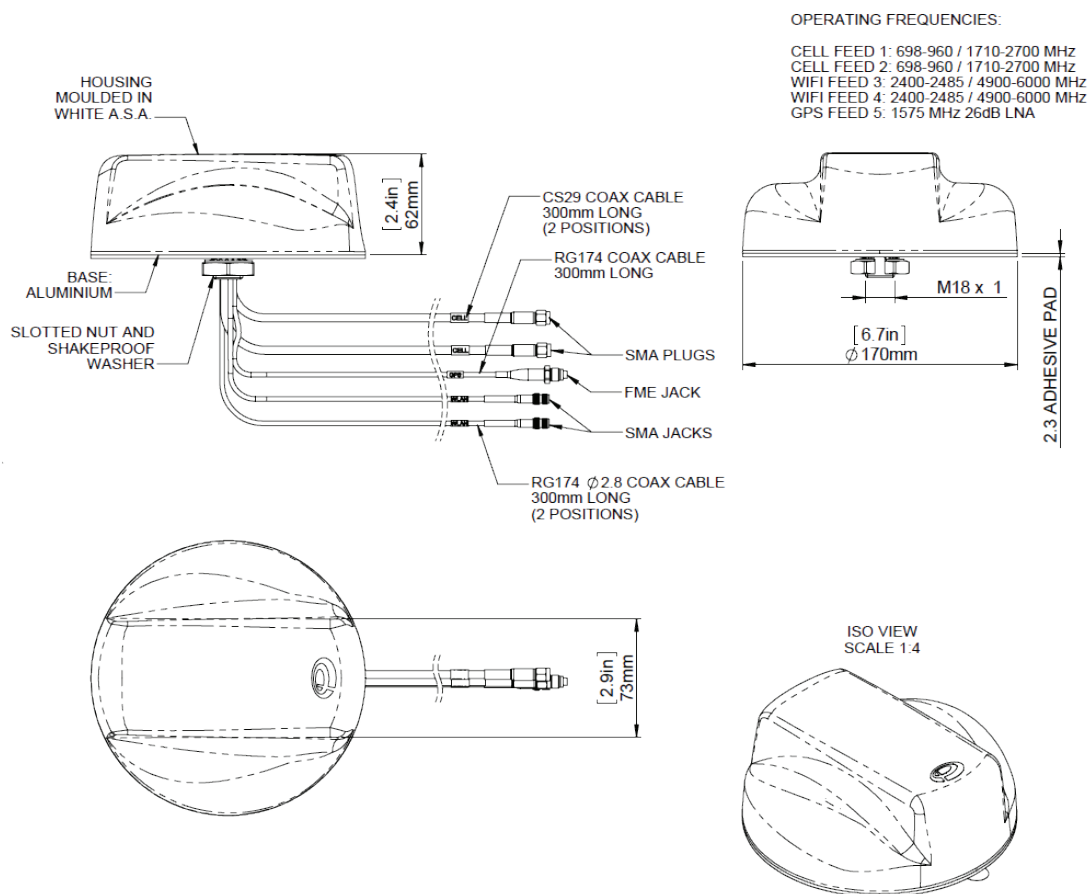
Integrated GPS antenna

The Panorama LGMM low profile MIMO antenna range has been designed to support the new generation of vehicular LTE routers.

The antenna enclosure contains five isolated high performance antenna elements; two ultra-wideband elements covering 698-2700MHz support MiMo/diversity at cellular/LTE frequencies and two dual band elements covering 2.3-2.7 & 4.9-6GHz support MIMO/diversity operation for WIFI and WiMAX. The LGMM also contains a high performance GPS antenna with an integrated 26dB gain LNA and high quality filtering to combat noise.

The antenna does not require a metallic ground plane, and maintains a high level of performance even when mounted on a non-metallic surface.

Technical Drawing



LTE MIMO Antenna

Low Profile MIMO Antenna with GPS

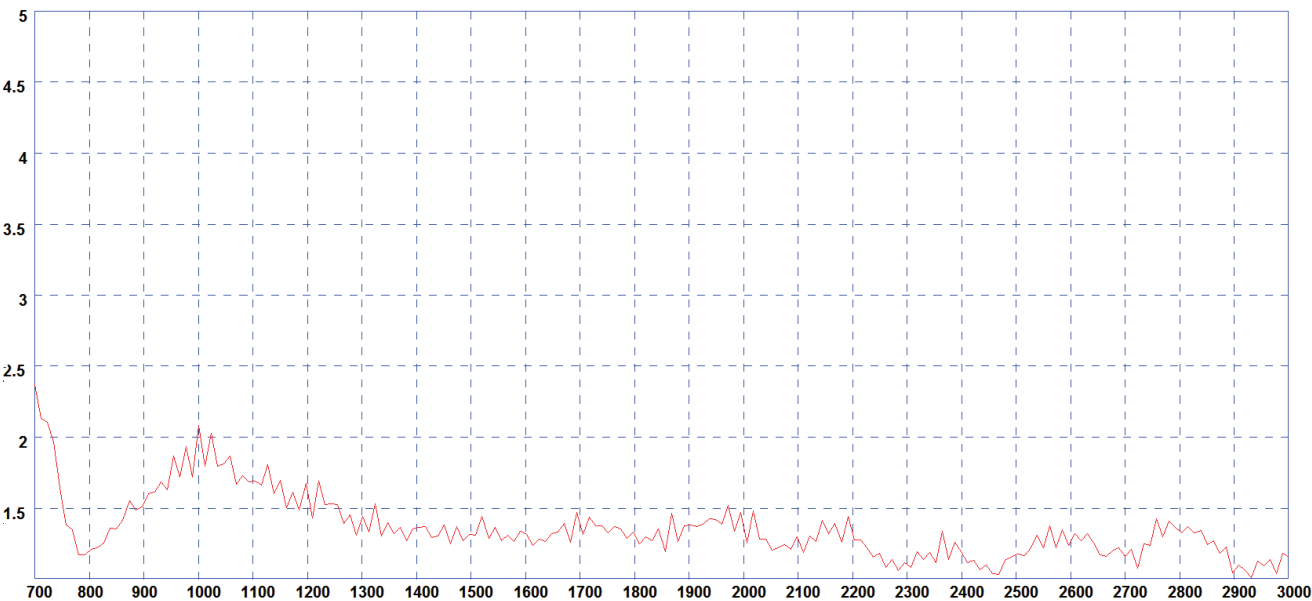
Part No.		
LGMM-7-27-24-58		
Electrical Data		
Frequency Range (MHz)	Elements 1 & 2	698-960 / 1700-2700
	Elements 3 & 4	2.3-2.7 / 4.9-6GHz
Operational Bands	Elements 1 & 2	LTE / Cellular
	Elements 3 & 4	WIFI / WIMAX
Peak Gain: Isotropic	Elements 1 & 2 -698-960	2.3dBi
	Elements 1 & 2 -1700-2700	5dBi
	Elements 3 & 4	2dBi
VSWR	Elements 1 & 2	< 2.5:1
	Elements 3 & 4	< 2:1
Isolation (in free space)	Elements 1 & 2	> 15dB
	Elements 3 & 4	> 20dB
Polarisation		Vertical
Impedance		50Ω
Max Input Power (W)		50
GPS Data		
Frequency Range (MHz)		1575
VSWR		<2.0:1 ± 4MHz
Gain: LNA		26dB
Polarisation		Right Hand Circular
Operating Voltage		3 - 7V DC (fed via coax)
Current		Typical 14mA
Mechanical Data		
Dimensions	Height	2.4" (82mm)
	Diameter	6.7" (176mm)
Operating Temp		-22° / 176°F (-30° / +80°C)
Material		A.S.A & diecast aluminium
Colour		White
Mounting Data		
Mounting type		Panel mount
Max panel thickness		0.236"(6mm)
Mounting hole		3/4" (19mm)
Cable Data		
GPS Cable	Type	RG174
	Diameter	0.11" (2.8mm)
	Length	1' (0.3m)
	Termination	FME (female)
Cell / LTE Cables x2	Type	CS29 (double shielded RG58)
	Diameter	0.2"(5mm)
	Length	1' (0.3m)
	Termination	SMA (male)
WIFI / WiMAX Cables x2	Type	RG174
	Diameter	0.11" (2.8mm)
	Length	1' (0.3m)
	Termination	SMA (female)

We recommend the customer uses Panorama C29 type coax for LTE and C32 type coax WLAN.

LTE MIMO Antenna

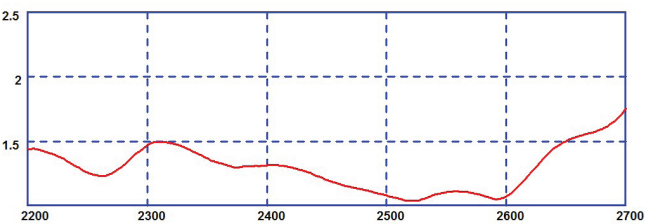
Low Profile MIMO Antenna with GPS

Typical VSWR cellular / LTE elements*

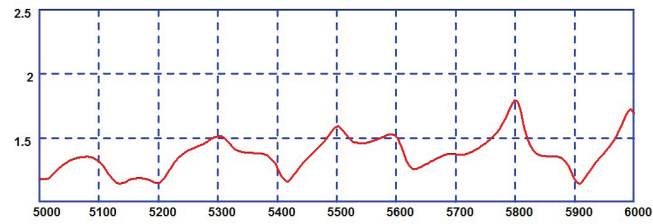


* VSWR measured in free space with 4.5m (15') of CS29 cable.

Typical VSWR WIFI elements 2.4GHz*

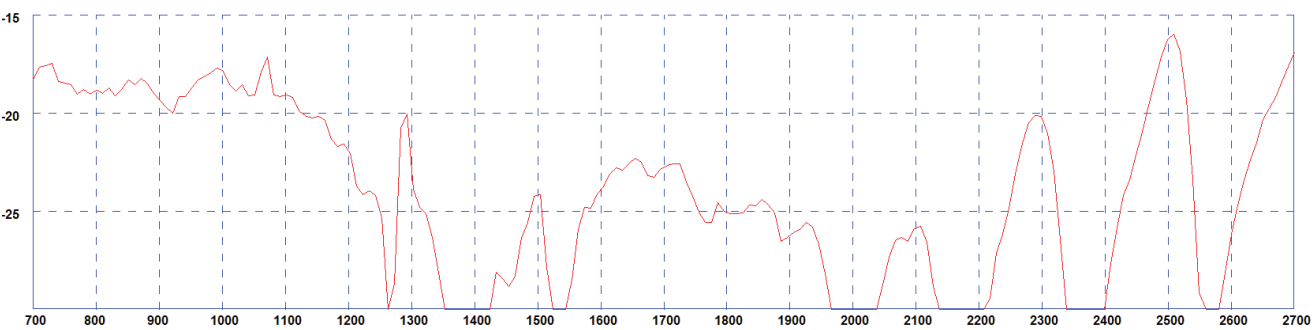


Typical VSWR WIFI elements 5GHz*



* VSWR measured with 5m (17') of cable.

Typical Isolation cellular / LTE elements*

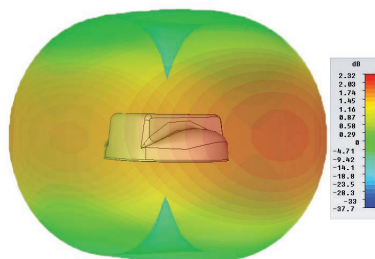


* Isolation measured in free space with 300mm (1') of cable.

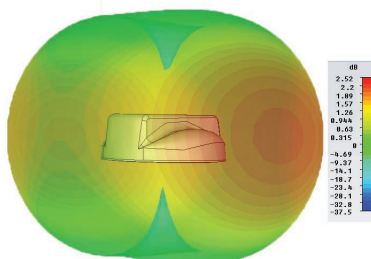
LTE MIMO Antenna

Low Profile MIMO Antenna with GPS

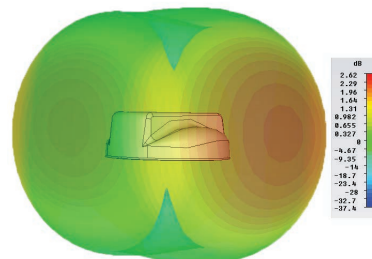
Typical 3D Pattern - Elements 1&2 700MHz



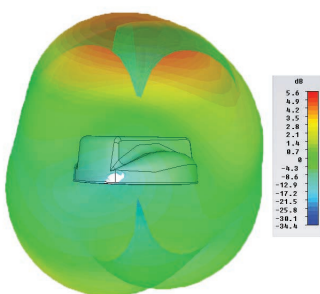
Typical 3D Pattern - Elements 1&2 800MHz



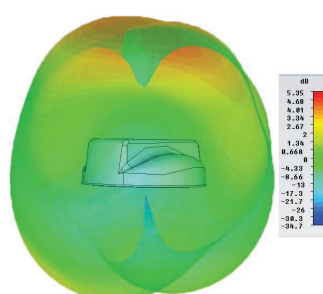
Typical 3D Pattern - Elements 1&2 900MHz



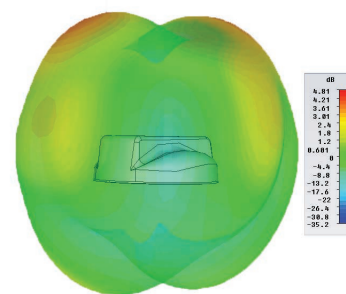
Typical 3D Pattern - Elements 1&2 1800MHz



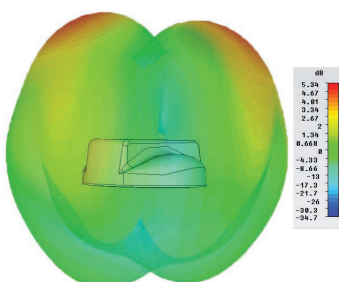
Typical 3D Pattern - Elements 1&2 1900MHz



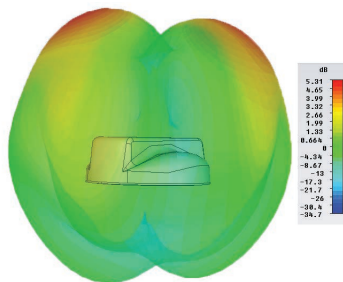
Typical 3D Pattern - Elements 1&2 2100MHz



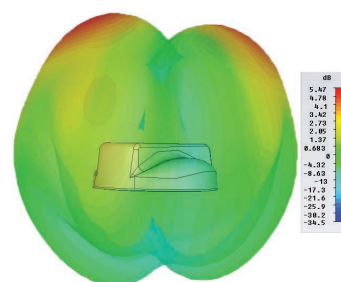
Typical 3D Pattern - Elements 1&2 2400MHz



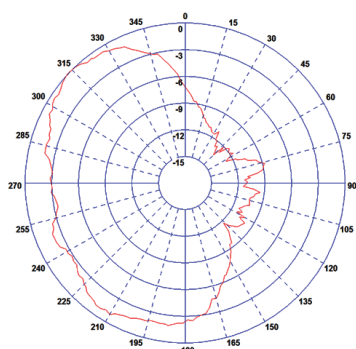
Typical 3D Pattern - Elements 1&2 2500MHz



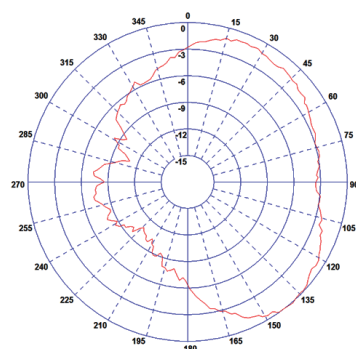
Typical 3D Pattern - Elements 1&2 2600MHz



Typical H-Plane - Element 3 2450 MHz



Typical H-Plane - Element 4 2450MHz



N.B. All pattern and gain measurements taken in free space without additional ground plane.

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Waiver: The data given above is indicative of the performance of the product/s under particular conditions and does not imply a guarantee of performance. These specifications are subject to change without notice.

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