Product Data Sheet

LGMTM-7-27-24-58

Low profile MiMo LTE & cellular antenna
with 3x3 MiMo WiFi and GPS

C/Note	Doc Issue	Date	Approval
01019	1	16.12.2013	J.J.

PANORAMA ANTENNAS

LTE MIMO Antenna

Low Profile MIMO Antenna with GPS

LGMTM-7-27-24-58

Rugged low profile design

2x Wideband LTE/cellular elements

3x 2.4 & 4.9-6GHz Wifi/WIMAX Elements

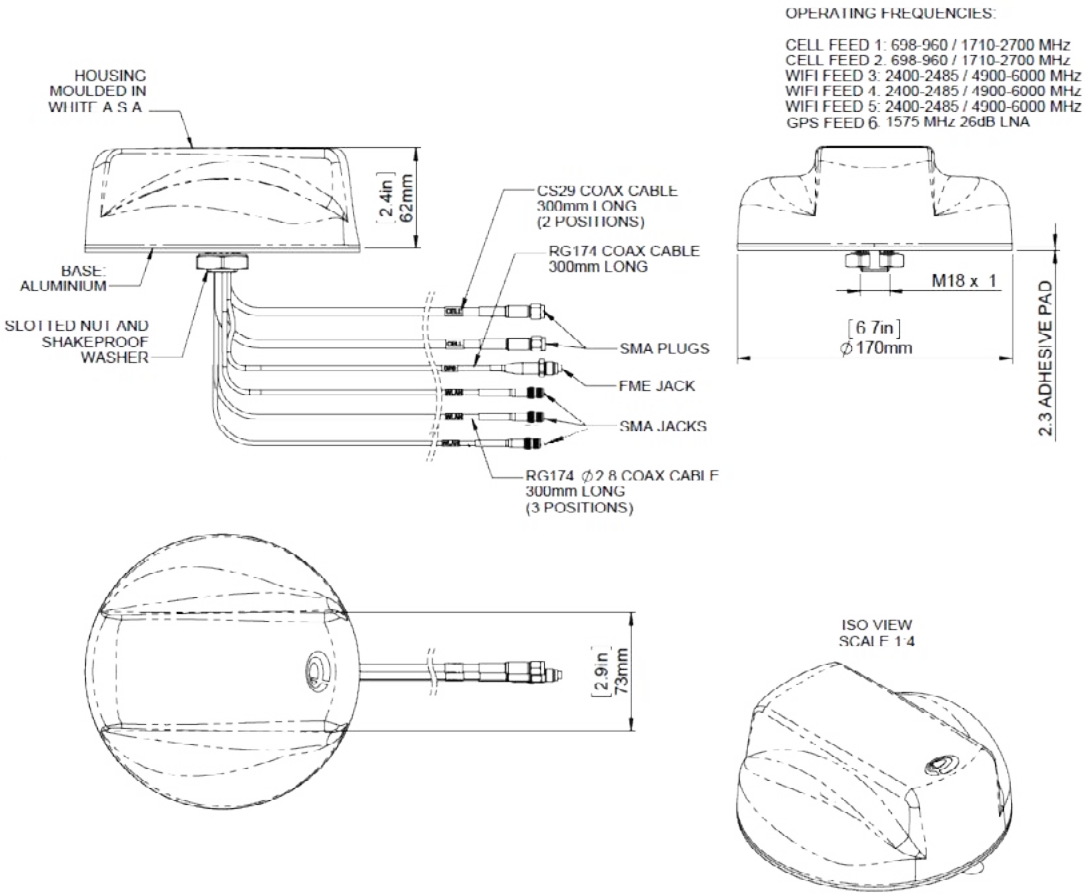
Integrated GPS antenna

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

The antenna enclosure contains six isolated high performance antenna elements; two ultra-wideband elements covering 698-2700MHz support MiMo/diversity at cellular/LTE frequencies and three 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

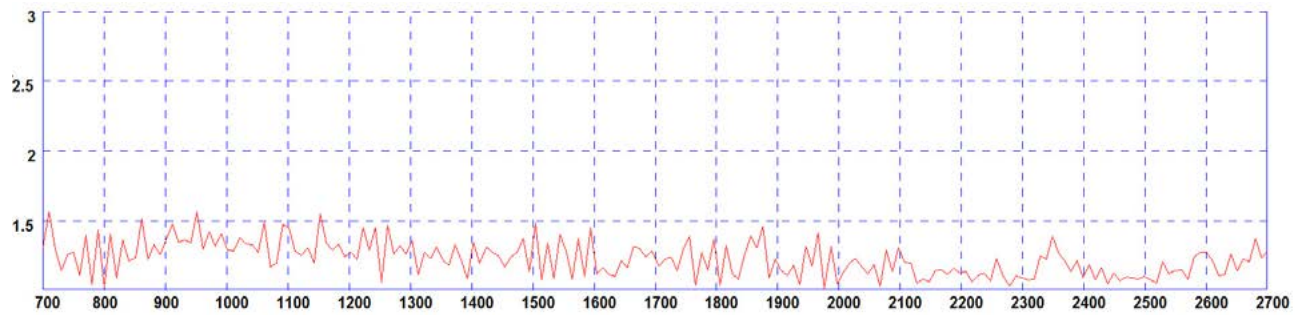
Low Profile MIMO Antenna with GPS

Part No.			
		LGMTM-7-27-24-58	LGMTMB-7-27-24-58
Electrical Data			
Frequency Range (MHz)	Elements 1 & 2	698-960 / 1700-2700	
	Elements 3, 4 & 5	2.3-2.7 / 4.9-6GHz	
Operational Bands	Elements 1 & 2	LTE / Cellular	
	Elements 3, 4 & 5	WIFI / WIMAX	
Peak Gain: Isotropic	Elements 1 & 2 -698-960	2.3dBi	
	Elements 1 & 2 -1700-2700	5dBi	
	Elements 3, 4 & 5	2dBi	
VSWR	Elements 1 & 2	< 2.5:1	
	Elements 3, 4 & 5	< 2:1	
Isolation (in free space)	Elements 1 & 2	> 15dB	
	Elements 3, 4 & 5	> 15dB	
Polarisation		Vertical	
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 - 5V DC (fed via coax)	
Current		Typical 15mA	
GPS Approvals		EN 301 489-1 V1.8.1 (2008-04), EN 300 440-1 V1.6.1 (2010-08), EN60950-1	
Automotive Type Approval		E11 - 048304	
Mechanical Data			
Dimensions	Height	2.4” (62mm)	
	Diameter	6.7” (176mm)	
Operating Temp		-22°/ 176°F (-30° / +80°C)	
Material		A.S.A & diecast aluminium	
Colour		White	Black
Ingress protection		IP66 (Certificate No. 45214)	
Mounting Data			
Mounting type		Panel mount	
Max panel thickness		0.27”(7mm)	
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 x3	Type	RG174	
	Diameter	0.11” (2.8mm)	
	Length	1’ (0.3m)	
	Termination	SMA (female)	

LTE MIMO Antenna

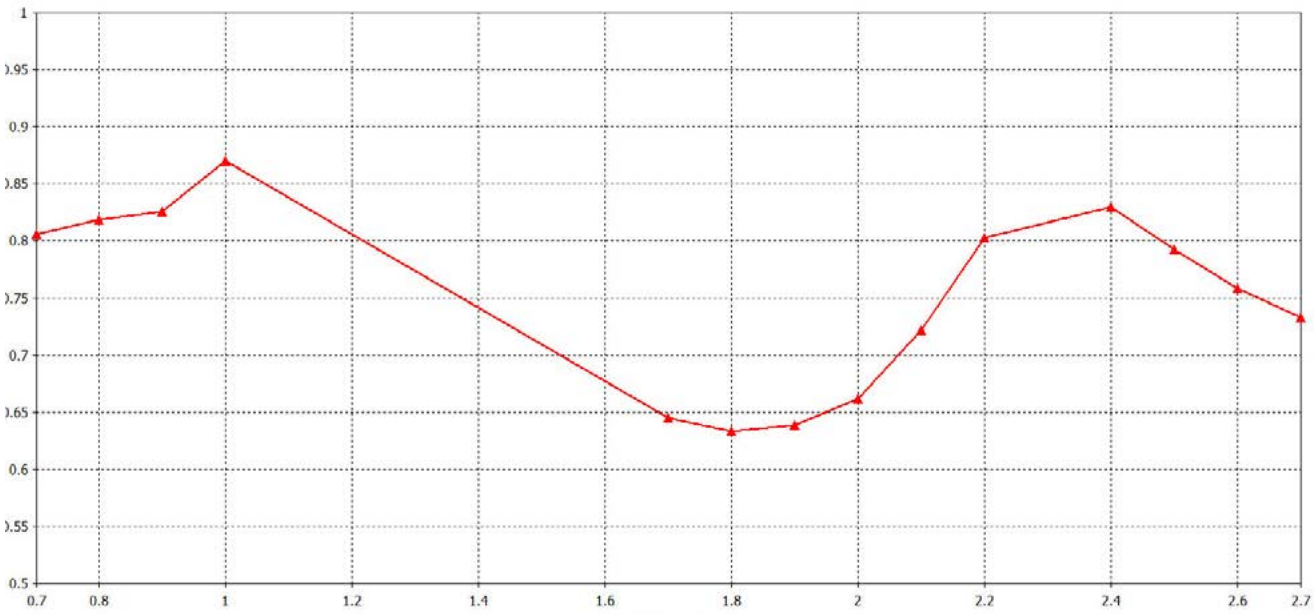
Low Profile MIMO Antenna with GPS

Typical VSWR (Elements 1 & 2)*



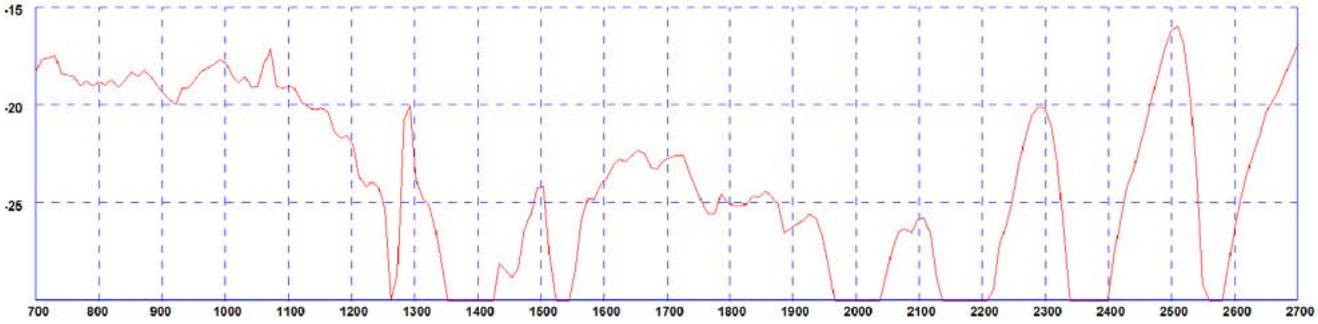
* VSWR measured with 5m (16') of cable.

Typical Total Efficiency (Elements 1 & 2)*



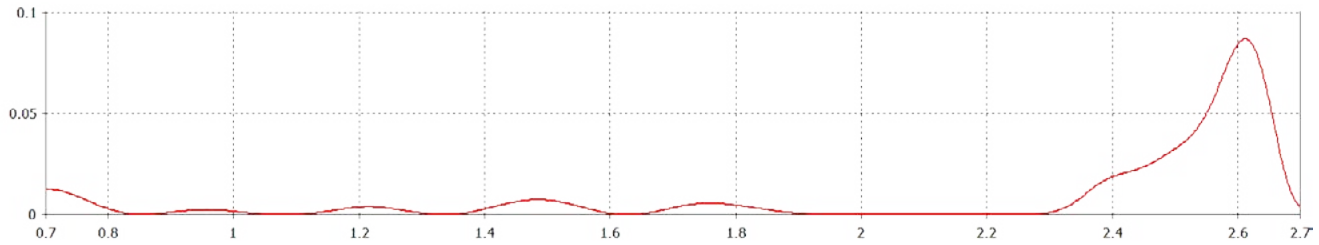
* Total efficiency does not include cable loss

Typical Isolation (elements 1 & 2)*



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

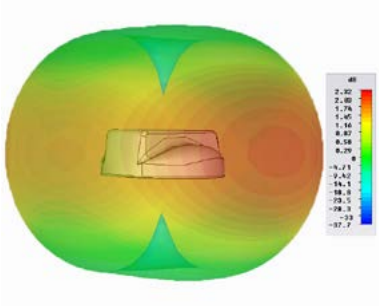
Correlation Coefficient (elements 1 & 2)



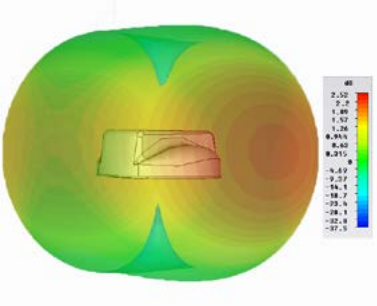
LTE MIMO Antenna

Low Profile MIMO Antenna with GPS

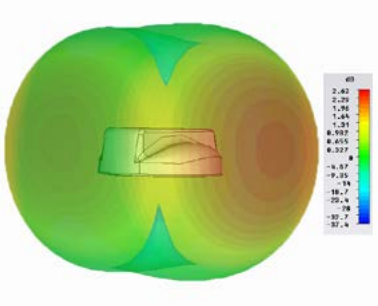
Typical 3D Pattern - Elements 1&2 700MHz



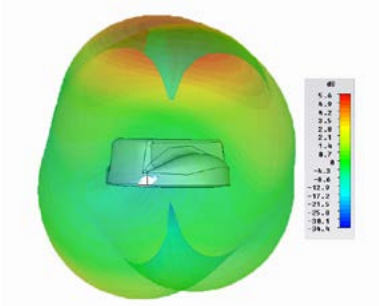
Typical 3D Pattern - Elements 1&2 800MHz



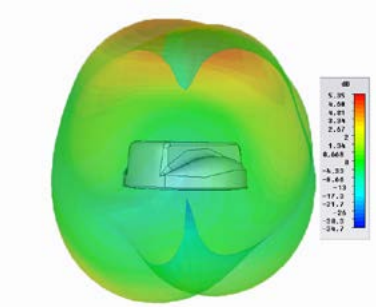
Typical 3D Pattern - Elements 1&2 900MHz



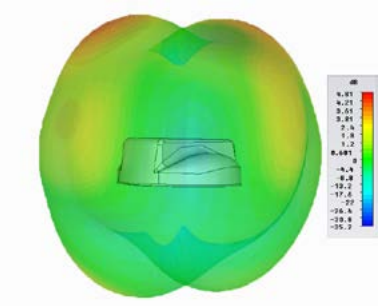
Typical 3D Pattern - Elements 1&2 1800MHz



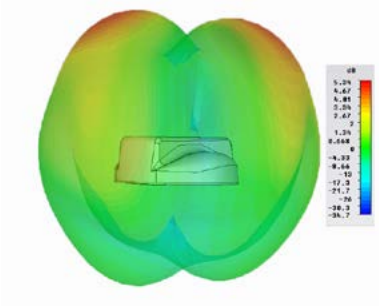
Typical 3D Pattern - Elements 1&2 1900MHz



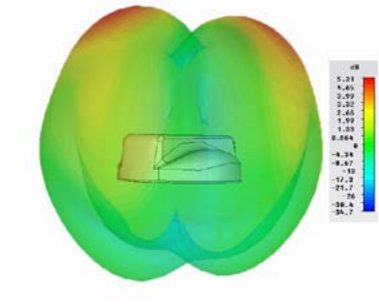
Typical 3D Pattern - Elements 1&2 2100MHz



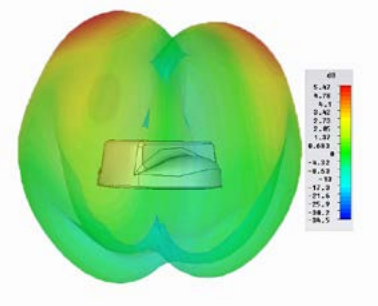
Typical 3D Pattern - Elements 1&2 2400MHz



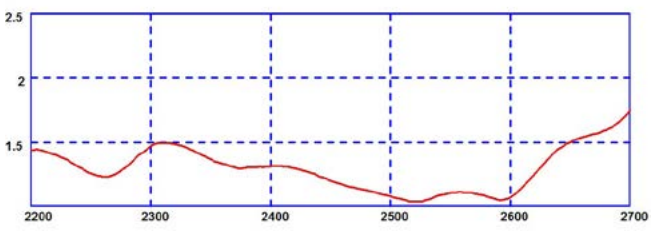
Typical 3D Pattern - Elements 1&2 2500MHz



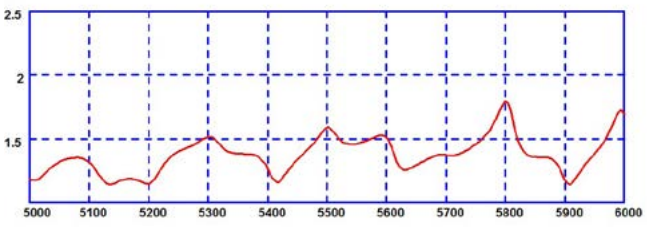
Typical 3D Pattern - Elements 1&2 2600MHz



Typical VSWR WIFI (elements 3,4 & 5) 2.4GHz*



Typical VSWR WIFI (elements 3, 4 & 5) 5GHz*



* VSWR measured with 5m (17') of CS32 cable.

Panorama Antennas Ltd
Frogmore, London, SW18 1HF, United Kingdom

T: +44 (0)20 8877 4444
F: +44 (0)20 8877 4477

E: sales@panorama-antennas.com
www.panorama-antennas.com

PANORAMA ANTENNAS