

Multi-Function MiMo Antenna

L[G]AMFR-7-27-[X]24-58

PANORAMA ANTENNAS



Low Profile Design

MiMo 5G/4G/3G/2G + Single or 2x2 MiMo 2.4/ 5GHz

Optional GPS/GNSS

Flame Retardant Cables Compliant with UN ECE118.

The L[G]AM has a compact housing that contains 2x2 MiMo antenna function for 5G/4G/3G/2G and either single or 2x2 MiMo antenna function for 2.4/5GHz.

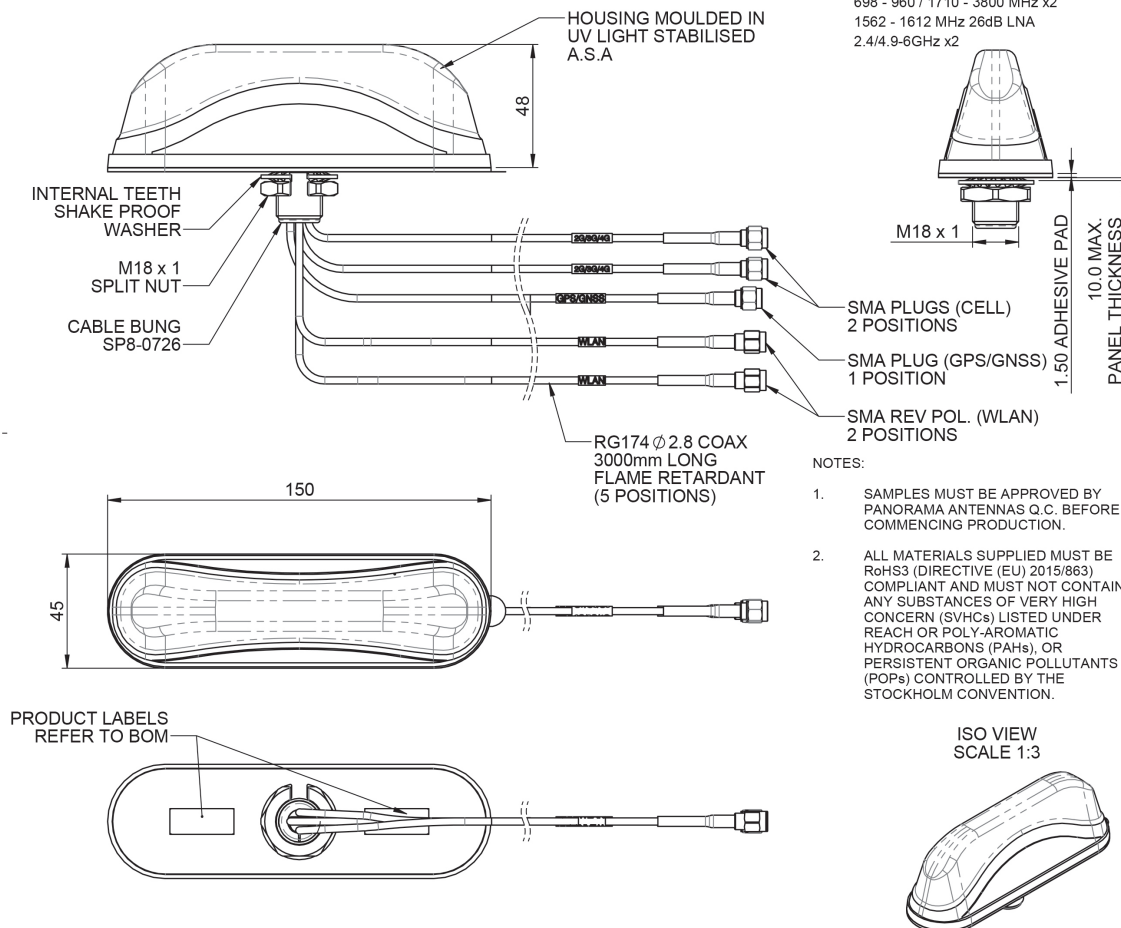
The LGAM version also includes an active antenna for GPS/GLONASS/Galileo/BeiDou with 26dB gain LNA.

This antenna range is ideal for vending machines, payment terminals and other M2M or IoT applications. The L[G]AMFR variants are fitted with flame retardant cable compliant to UN ECE R118.



Technical Drawing

L[G]AMFR-7-27-24-58 Shown



Multi-Function MiMo Antenna

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Product Data

Part No.

LPAMFR-7-27-24-58

LPAMFR-7-27-S24-58

LGAMFR-7-27-24-58

LGAMFR-7-27-S24-58

Electrical Data

Frequency Range (MHz)	Element 1 (G Version)		1562-1612		
	Elements 2 & 3		698-960, 1710-2170, 2500-3800		
	Elements 4 & 5		2300-2500 & 4900-6000		
Operational Bands	Elements 1 (G Version)		-	-	GPS/GNSS/Galileo/BeiDou
	Elements 2 & 3		5G/4G/3G/2G		
			2x cell		
	Elements 4 & 5		2.4 / 5.0GHz WiFi		
			2 x WiFi	1 x WiFi	2x WiFi
Peak gain: Isotropic*	Elements 2 & 3		2dBi (698-960MHz) 5dBi (1710-3800MHz)		
	Elements 4 & 5		4dBi (2.4GHz), 6dBi (5.0GHz)		
Isolation	Cellular		> 12dB		
(with 5m (16') of RG174 cable)	WiFi		> 20dB		
Typical Efficiency*	Elements 2 & 3		> 50%		
Correlation Co-efficient	Elements 2 & 3		< 0.2		
Polarisation	Vertical				
Pattern	Omni-directional				
Impedance	50Ω				
Max Input Power (W)	25W				

GPS/GNSS Data

Frequency Range (MHz)	1562-1612
VSWR	<2:1 ± 4MHz
Gain: LNA	26dB
Polarisation	Right Hand Circular
Operating Voltage	3-5V DC (fed via coax)
Current	Typical <20mA

Mechanical Data

Dimensions (mm)	Total Height	50 (2.2")
	Length	150 (5.9")
	Width	44 (1.47")
Operating Temp (°C)	-40° / +80°C (-40° / 176°F)	
Material	ASA	
Colour	Black	

Mounting Data

Fixing	Panel Mount 18mm (3/4") hole
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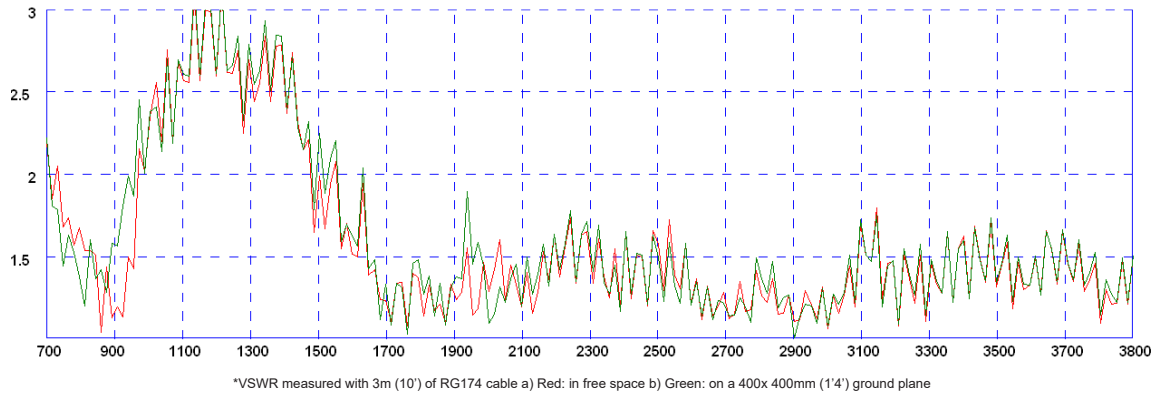
Cable Data

Cable Type - All Feeds		FR RG174 (UN ECE 118 Compliant)			
Dimensions (mm)	Diameter	2.8 (0.11")			
	Length	3000 (10')			
Termination	GPS/GNSS	SMA Plug		SMA Plug	
	2 x Cell	2 x SMA Plug			
	WiFi	2 x SMA Rev Pol Plug	1 x SMA Rev Pol Plug	2 x SMA Rev Pol Plug	1 x SMA Rev Pol Plug

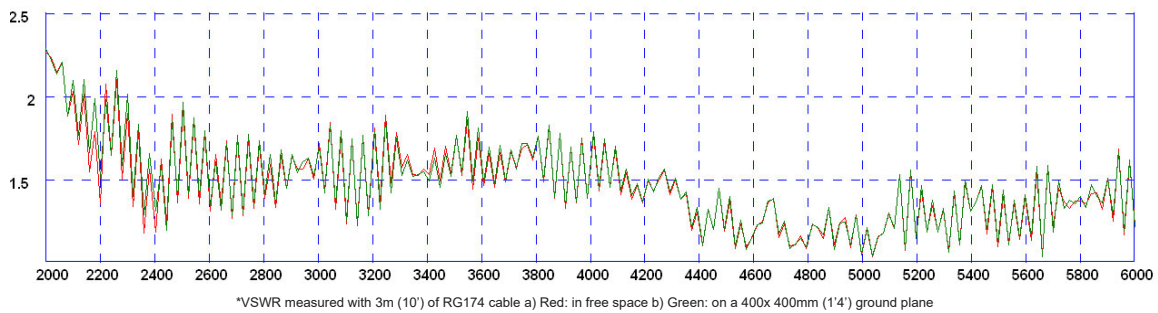
* without cable loss

Electrical Data - Cell

Typical VSWR - 4G/3G/2G Elements 2&3*



Typical VSWR - WiFi Elements 4&5*

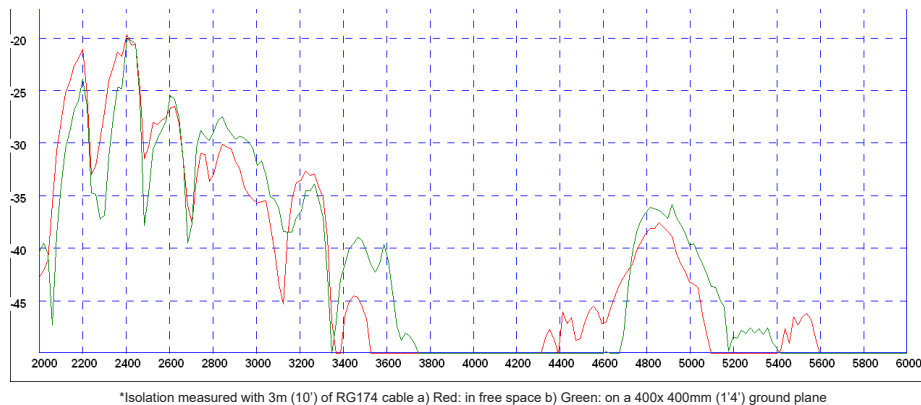


Isolation

Typical Isolation - Cellular Elements 2&3*

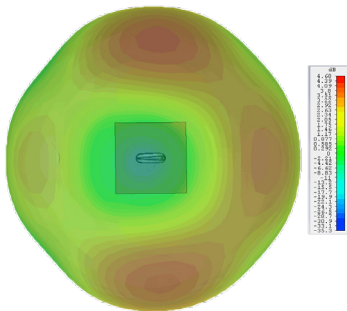


Typical Isolation - WiFi Elements 4&5*

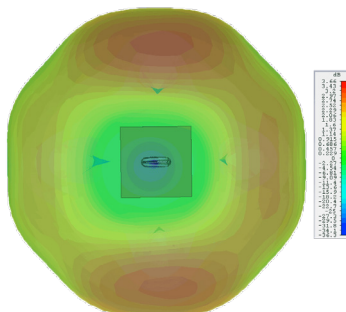


Typical 3D Radiation Patterns - Cell / LTE Elements 2&3

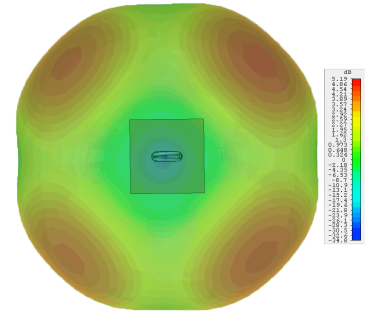
3D Gain Plot Top (700MHz)



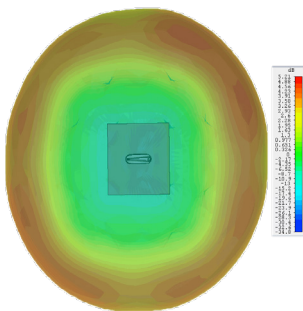
3D Gain Plot Top (800MHz)



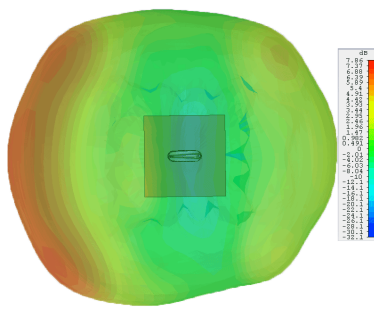
3D Gain Plot Top (900MHz)



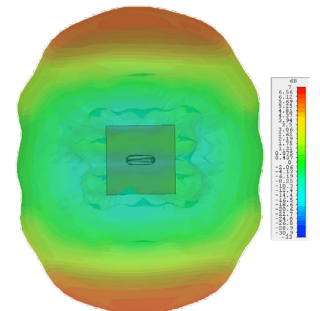
3D Gain Plot Top (1800MHz)



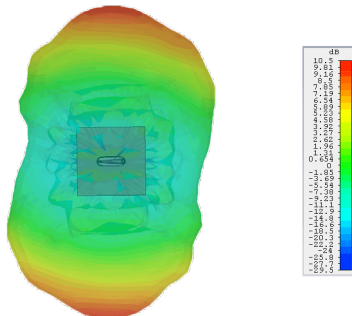
3D Gain Plot Top (2100MHz)



3D Gain Plot Top (2600MHz)

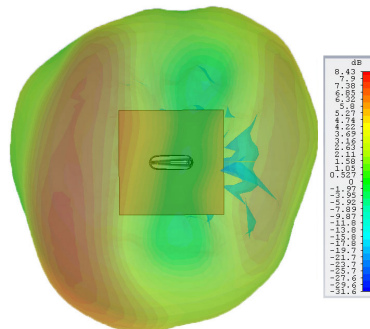


3D Gain Plot Top (3600MHz)

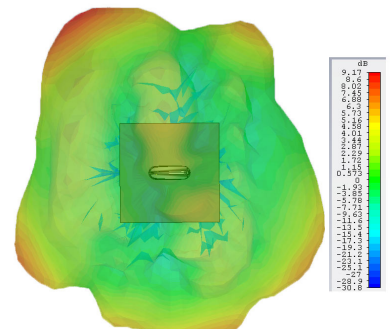


Typical 3D Radiation Patterns - Wifi Elements 4&5

3D Gain Plot Top (2.4GHz)



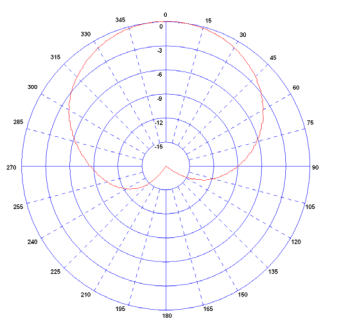
3D Gain Plot Top (5.4GHz)



*3D radiation patterns simulated in CST Microwave Studio on a 600x600mm (2' X2') ground plane with both elements fed together.

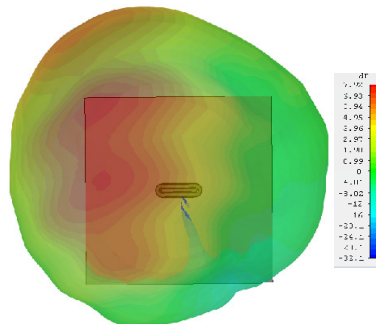
Typical Radiation Patterns - GPS/GNSS Element 1

Element 3: Typical E Plane Pattern

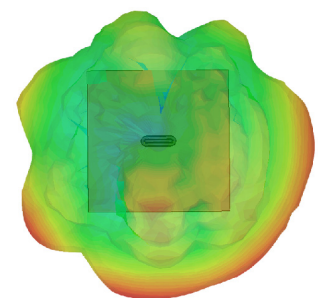


Typical 3D Radiation Patterns - Wifi Elements (Single Wifi)

3D Gain Plot Top (2.4GHz)



3D Gain Plot Top (5.4GHz)



*3D radiation patterns simulated in CST Microwave Studio on a 600x600mm (2' X2') ground plane with a single element feed.