

Multifunction MiMo Antenna

L[G]PAM-7-27-24-58



Low Profile Design
 MiMo 4G/3G/2G + MiMo 2.4/4.9-6GHz
 Optional GPS/GNSS

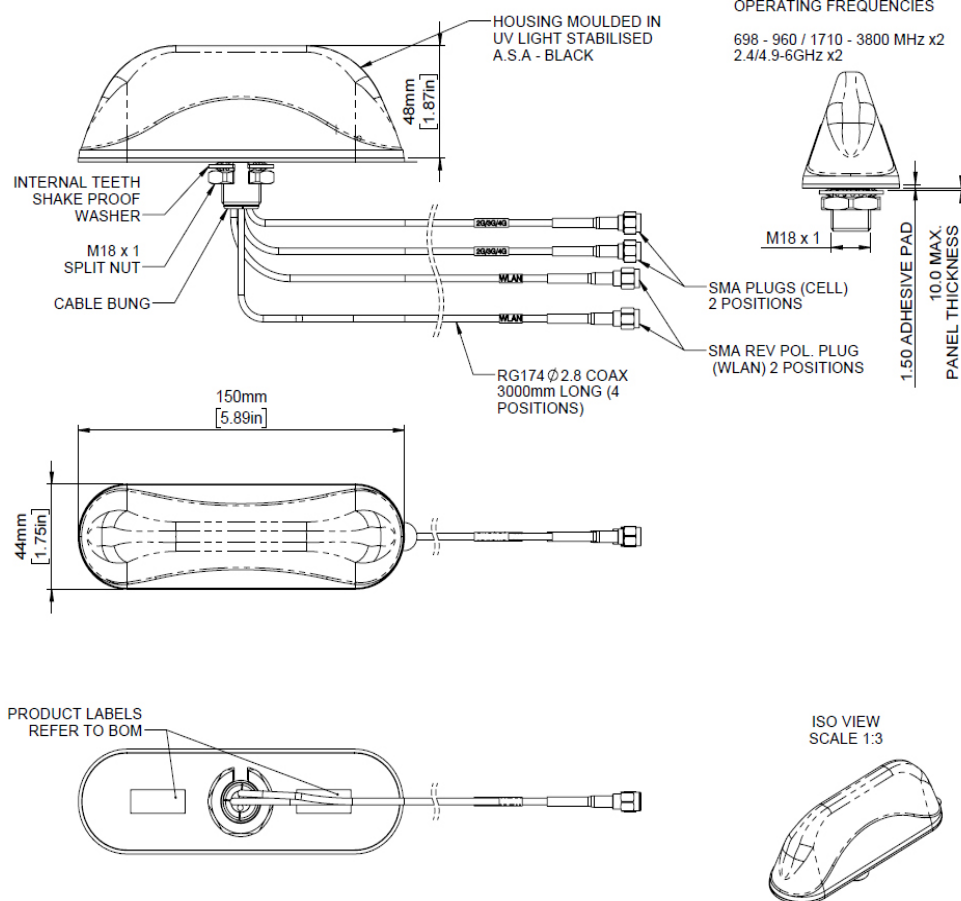
The L[G]PAM has a compact housing that contains 2x2 MiMo antenna function for 4G/3G/2G and 2x2 MiMo antenna function for 2.4/5.8GHz WiFi.

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

This antenna range is ideal for vending machines, payment terminals and other M2M type applications.

Technical Drawing

LPAM-7-27-24-58 shown



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Product Data

Part No.		LPAM-7-27-24-58	LGAM-7-27-24-58
Electrical Data			
Frequency Range (MHz)	Element 1	-	1562-1612
	Elements 2 & 3	698-960, 1710-2170, 2500-3800	
	Elements 4 & 5	2300-2500 & 4900-6000	
Operational Bands	Element 1	-	GPS/GNSS/Galileo/BeiDou
	Elements 2 & 3	4G/3G/2G	
	Elements 4 & 5	2.4 / 5.0GHz WiFi	
Peak gain: Isotropic*	Elements 2 & 3	2dBi (698-960MHz) 5dBi (1710-3800MHz)	
	Elements 4 & 5	4dBi (2.4GHz), 6dBi (5.8GHz)	
Isolation <small>(with 5m (16') of RG174 cable)</small>	Cellular	>12dB	
	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)	Internal elements 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 Info			
Fixing	Panel Mount		
Hole Size (mm)	19 (3/4")		
Cable Data			
Cable Type - All Feeds	RG174		
Dimensions (mm)	Diameter	2.8 (0.11")	
	Length	3000 (10')	
	GPS/GNSS	-	SMA Plug
Termination	2 x 4G/3G/2G	2 x SMA plug	
	2 x WiFi	2 x SMA Rev Pol Plug	

* without cable loss

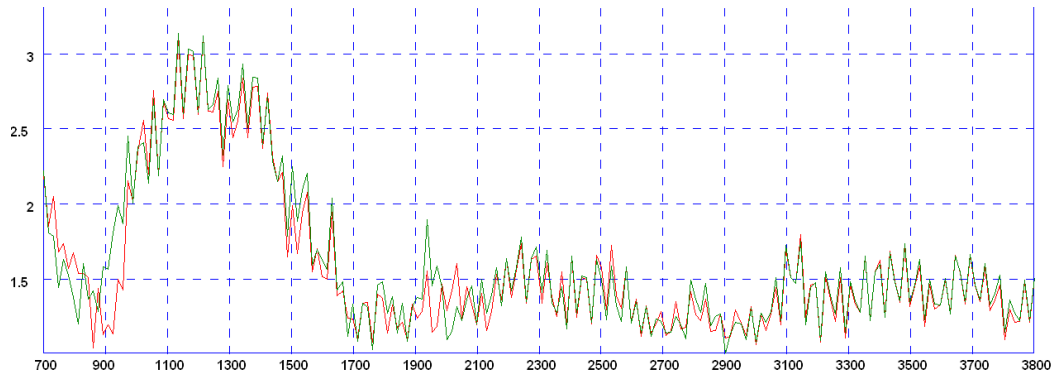
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Electrical Data

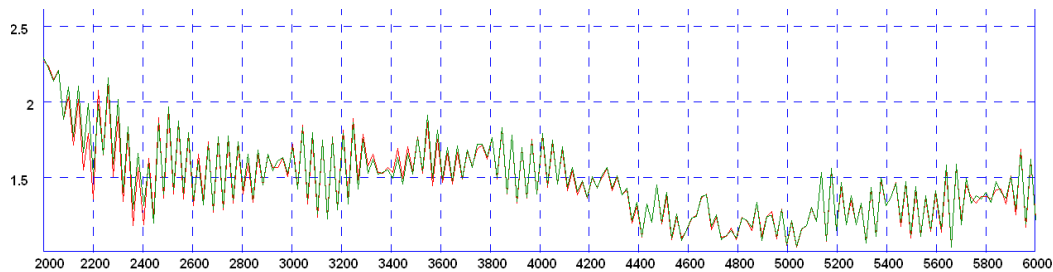
VSWR

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



*VSWR measured with 3m (10') of RG174 cable a) Red: in free space b) Green: on a 400x 400mm (1'4') ground plane

Typical VSWR - WiFi Elements 4&5*



*VSWR measured with 3m (10') of RG174 cable a) Red: in free space b) Green: on a 400x 400mm (1'4') ground plane

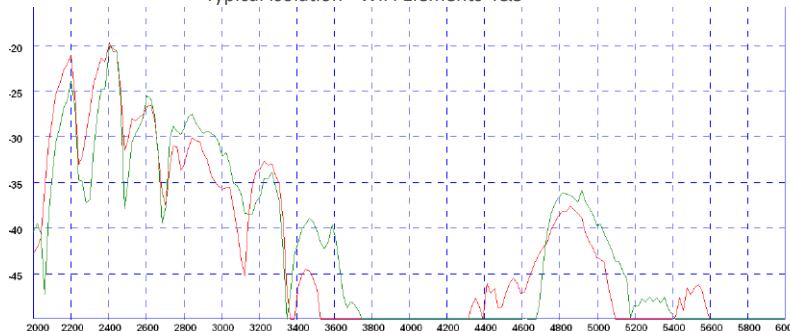
Isolation

Typical Isolation - Cellular Elements 2&3*



*Isolation measured with 3m (10') of RG174 cable a) Red: in free space b) Green: on a 400x 400mm (1'4') ground plane

Typical Isolation - WiFi Elements 4&5*



*Isolation measured with 3m (10') of RG174 cable a) Red: in free space b) Green: on a 400x 400mm (1'4') ground plane

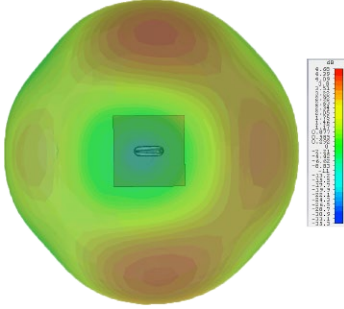
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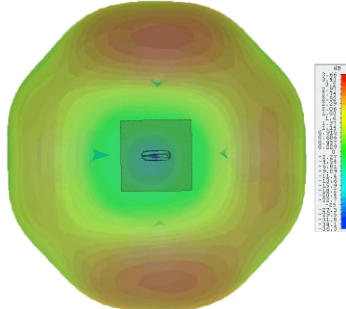
Electrical Data

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

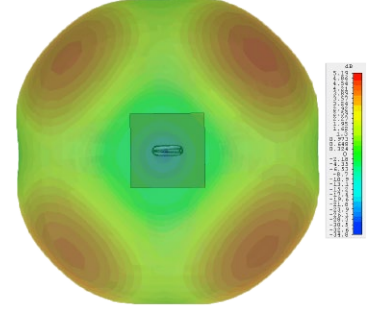
3D Gain Plot Top (700MHz)



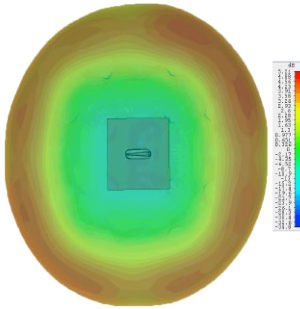
3D Gain Plot Top (800MHz)



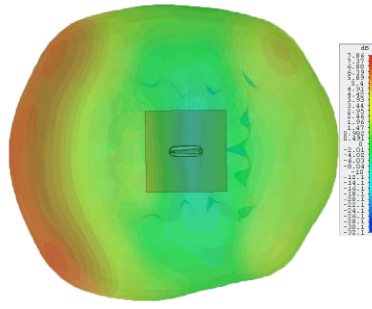
3D Gain Plot Top (900MHz)



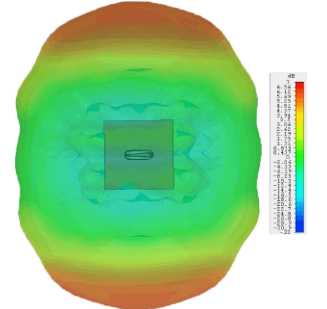
3D Gain Plot Top (1800MHz)



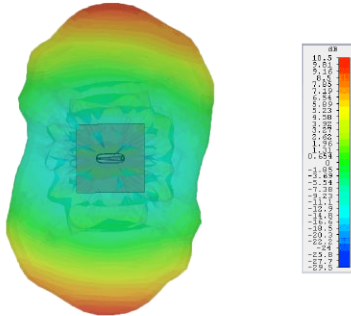
3D Gain Plot Top (2100MHz)



3D Gain Plot Top (2600MHz)

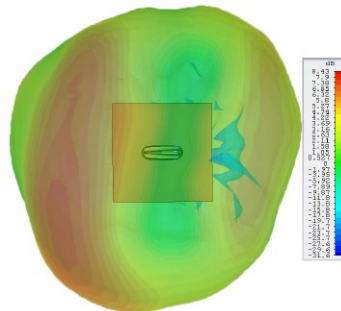


3D Gain Plot Top (3600MHz)

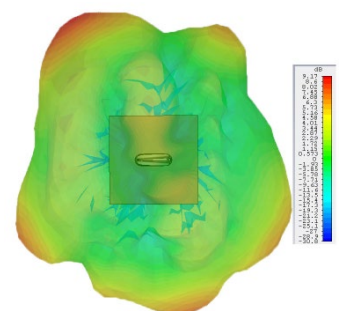


Typical 3D Radiation Patterns - Wifi Elements 4&5

3D Gain Plot Top (2.4GHz)



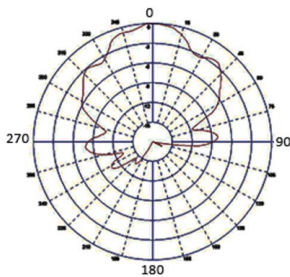
3D Gain Plot Top (5.4GHz)



*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



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