# Multifunction MiMo Antena

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

PANORAMA ANTENNAS

## L[G]AM-7-27-[X]24-58

Low Profile Design

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

Optional GPS/GNSS

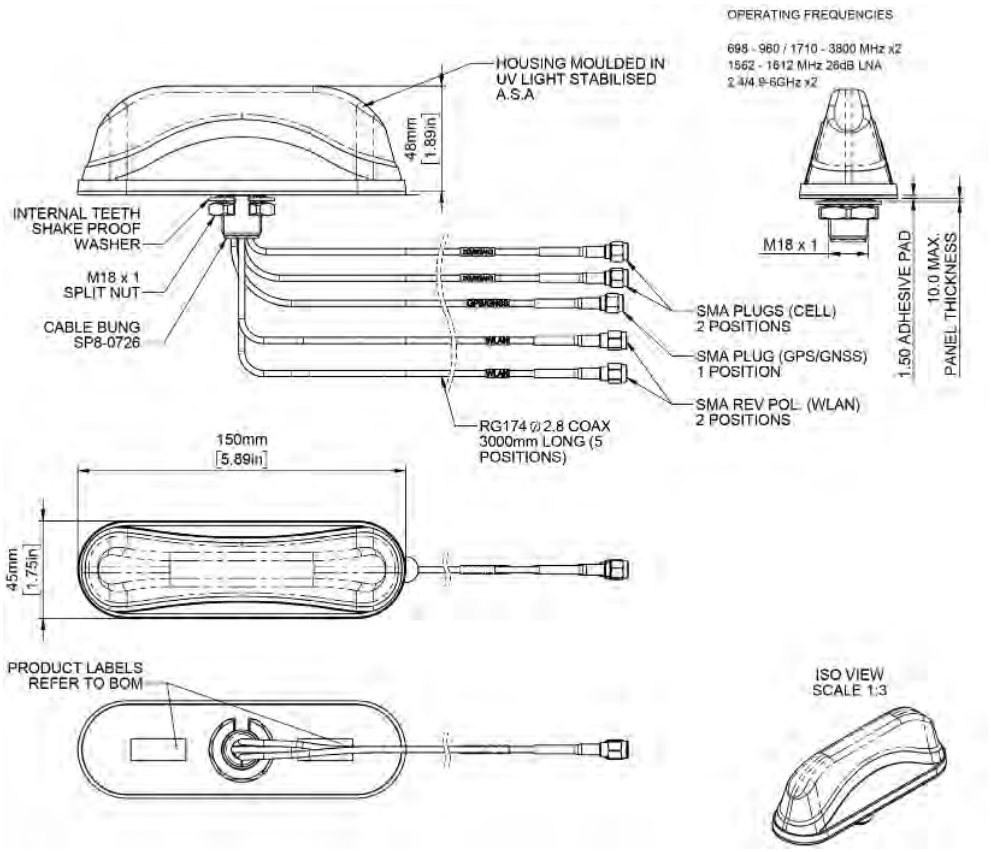
The L[G]PAM has a compact housing that contains 2x2 MiMo antenna function for 5G/4G/3G/2G and either single or 2x2 MiMo antenna function for 2.4/5GHz.

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.

## Technical Drawing

Part No. LGAM-7-27-24-58 shown

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Product Data

* without cable loss

| Part No. | | LPAM-7-27-24-58 | LPAM-7-27-S24-58 | LGAM-7-27-24-58 | LGAM-7-27-S24-58 |
|---|---|---|---|---|---|
| **Electrical Data** | | | | | |
| Frequency Range (MHz) | Elements 1 (G Version) | 1562-1612 | | | |
| | Element 2 & 3 | 698-960, 1710-2170, 2500-3800 | | | |
| | Elements 4 & 5 | 2300-2500 & 4900-6000 | | | |
| Operational Bands | Element 1 (G Version) | - | - | GPS/GNSS/Galileo/BeiDou | |
| | Elements 2 & 3 | 5G/4G/3G/2G | | | |
| | | 2x cell | | | |
| | Elements 4 & 5 | 2.4/5.0 GHz WiFi | | | |
| | | 2x WiFi | 1x WiFi | 2x WiFi | 1x WiFi |
| Peak Gain: Isotropic* | Elements 2 & 3 | 2dBi (698-960MHz) / 5dBi (1710-3800MHz) | | | |
| | Element 4 & 5 | 4dBi (2.4GHz) / 6dBi (5.0GHz) | | | |
| Isolation (with 5m (16') of RG174 cable) | 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) | | 1562-1612MHz | | | |
| VSWR | | <2:1 ± 4MHz | | | |
| Gain: LNA | | 26dB | | | |
| Polarisation | | Right Hand Circular | | | |
| Operating Voltage | | 3-5 DC (fed via coax) | | | |
| Current | | Typical <20 m A | | | |
| **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 | | | |
| Ingress Protection | | IP66 | | | |
| **Mounting Data** | | | | | |
| 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') | | | |
| Termination | GPS/GNSS | - | - | SMA Plug | SMA Plug |
| | 2x Cell | 2x SMA Plug | | | |
| | WiFi | 2x SMA Rev Pol Plug | 1x SMA Rev Pol Plug | 2x SMA Rev Pol Plug | 1x SMA Rev Pol Plug |

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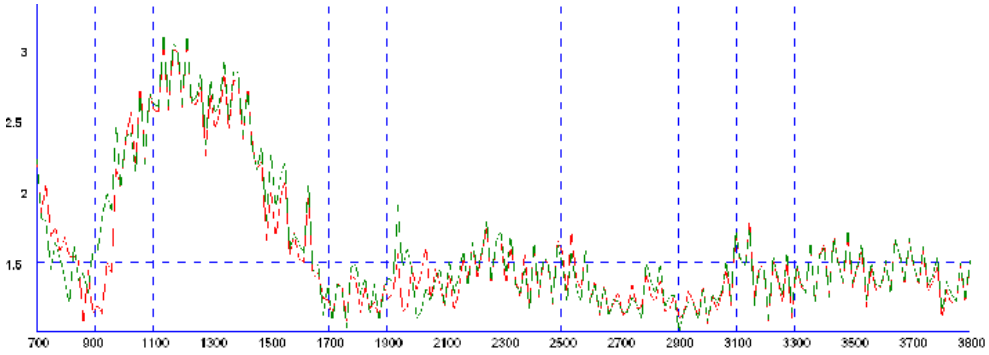
## Electrical Data

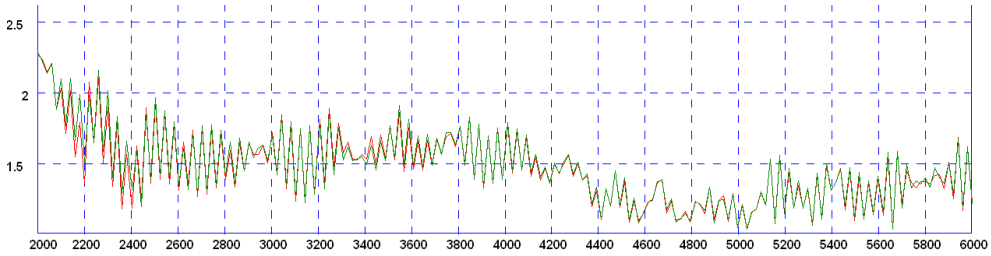
### VSWR

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 400x400mm (1'4") ground plane

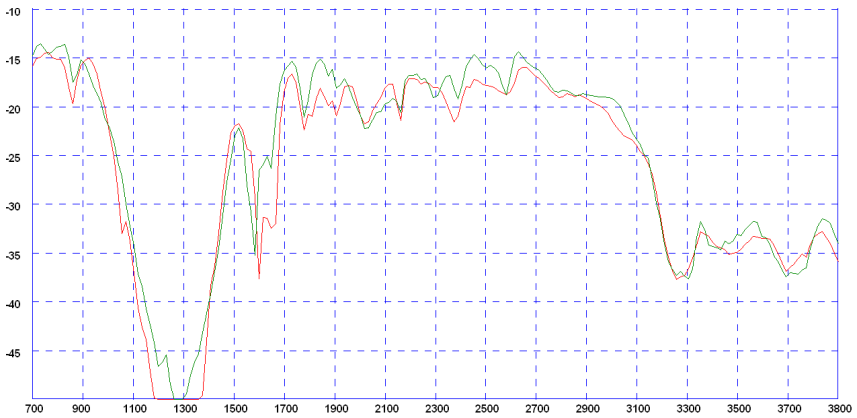
Typical VSWR - WiFi Elements 4&5




*VSWR measured with 3m (10') of RG174 cable a) Red: in free space b) Green: on a 400x400mm (1'4") ground plane

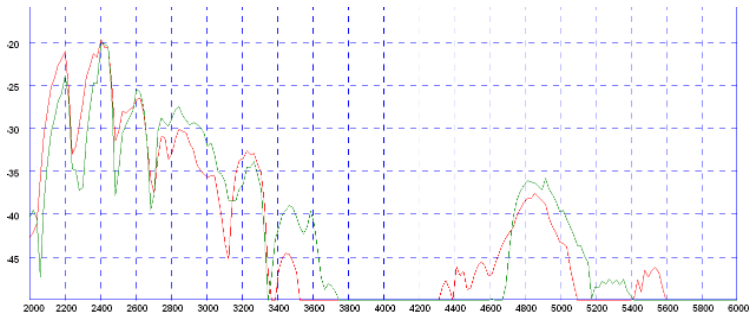
### Isolation

Typical Isolation - Cellular Elements 2&3*




*Isolation measured with 3m (10') of RG174 cable a) Red: in free space b) Green: on a 400x400mm (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 400x400mm (1'4") ground plane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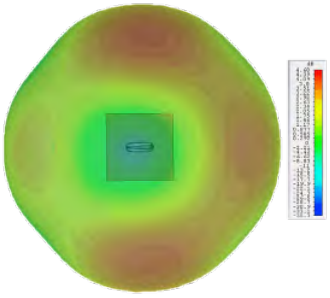
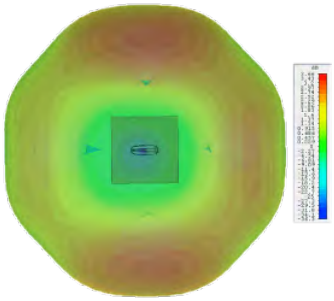
## Typical 3D Radiation Patterns - Cell / LTE Elements 2&3

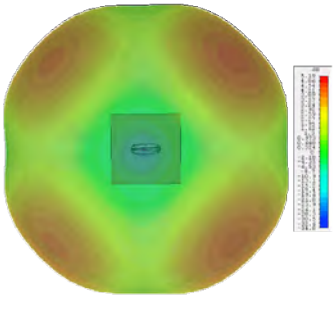
3D Gain Plot Top (700MHz)



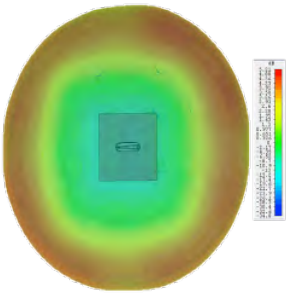
3D Gain Plot Top (800MHz)



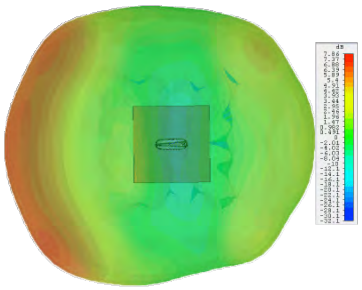
3D Gain Plot Top (900MHz)



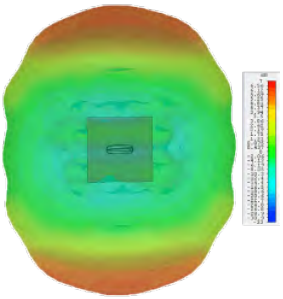
3D Gain Plot Top (1800MHz)



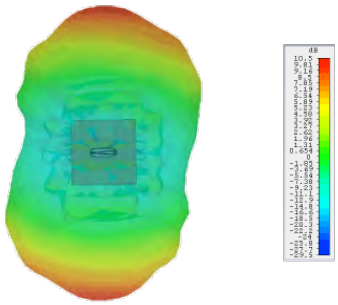
3D Gain Plot Top (2100MHz)



3D Gain Plot Top (2600MHz)



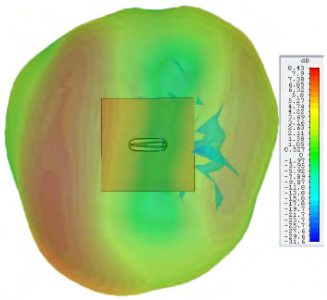
3D Gain Plot Top (3600MHz)



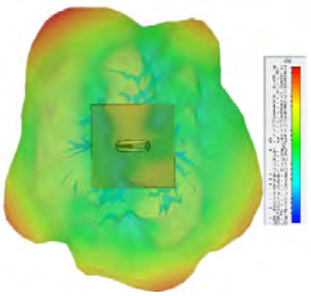
*3D radiation patterns simulated in CST Microwave Studio on a 600x600mm (2' X2') ground plane with both elements fed together.

## Typical 3D Radiation Patterns - Wifi Elements 4&5

3D Gain Plot Top (2.4GHz)

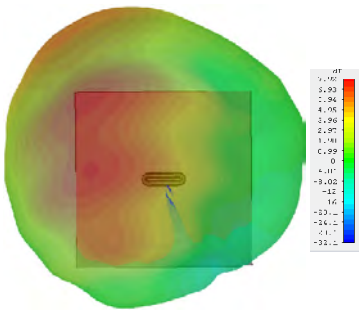


3D Gain Plot Top (5.4GHz)

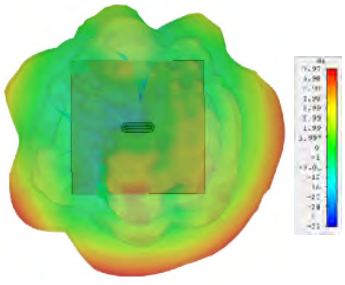


## Typical 3D Radiation Patterns - Wifi Elements (Single Wifi)

3D Gain Plot Top (2.4GHz)



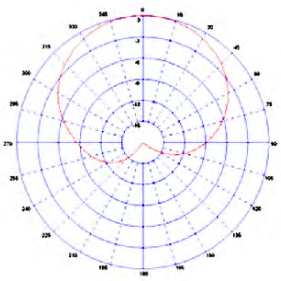
3D Gain Plot Top (5.4GHz)



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

## Typical Radiation Patterns - GPS/GNSS Element 1

Element 3: Typical E Plane Pattern

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