

# MiMo 4G/5G Dome Combination Antenna Range

L[G]M[X]M[X]-6-60[-24-58]



- Low Profile 2x2 4G/5G MiMo
- Up to 6x6 MiMo Dual Band WiFi 6E
- Optional GPS/GNSS Active Antenna 26dB LNA

The L[G]M[X]M[X]-6-60[-24-58] range has been designed to provide 2x2 4G/5G MiMo performance from 617-960/1710-6000MHz in a robust low profile package. The flexible platform allows the main elements to be combined with a number of other functions including GPS/GNSS and up to 6x6 MiMo WiFi 2.4/4.9-7.2GHz.

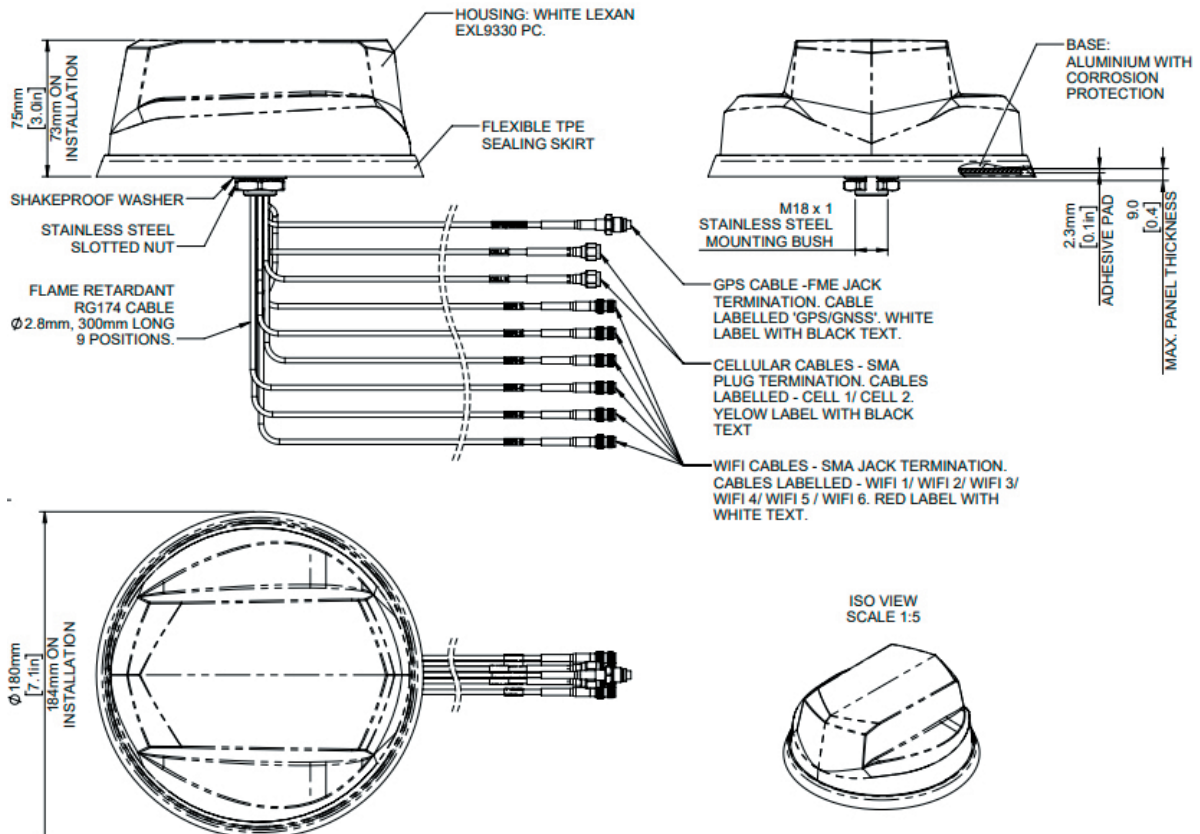
The antenna is designed to be panel mounted and can be fitted on a conductive or non- conductive panel. Supplied with integrated flame retardant RG174 cables (Compliant to UN ECE R118 and EN45545-2) and a halogen free flame retardant radome the antenna is suitable for many environments and applications.

The LGM variants have an integrated GPS/GNSS module supporting GPS, Glonass, Galileo and Compass with 26dB LNA gain. This GPS module features advanced filtering for LTE B13/14 designed to minimise potential in band interference.

The antenna is available with a black or white radome which meets IK10 for vandal resistance and IP69K for ingress protection.

## Technical Drawing

LGMHM-6-60-24-58 Shown



# MiMo 4G/5G Dome Combination Antenna Range

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PANORAMA ANTENNAS

## Product Data

### Part No.

LGMHM-6-60-24-58 LGMHMB-6-60-24-58 LGMQM-6-60-24-58 LGMQMB-6-60-24-58

### Electrical Data

Frequency Range (MHz)	4G/5G Elements	2x 617-960 / 1710-6000		
	WiFi Elements	6x 2.4/4.9-7.2GHz		4x 2.4/4.9-7.2GHz
Peak Gain: Isotropic : All Elements Fed	4G/5G Elements	617-960MHz	5	
		1710-3800MHz	9	
		4900-6000MHz	10	
	WiFi Elements	2.4GHz	8	
		4.9-7.2GHz	10	
Typical Efficiency	4G/5G Elements	>70%		
	WiFi Elements	>80%		
Isolation	4G/5G Elements	>12dB		
	Wifi Elements	>20dB		
Correlation Co-efficient	4G/5G Elements	< 0.1		
	WiFi Elements	<0.1		
Nominal Impedance	50Ω			

### GPS/GNSS Data

Frequency Range (MHz)	1562-1612			
VSWR	<2.0:1 ± 4MHz			-
Gain: LNA	26dB			
Out of band rejection	>40dB (@ > +/- 100MHz f)			
Typical Noise Figure	-2.7dB			
Notch Filter rejection @787MHz	23dBm			
Operating Voltage	3 - 5V DC			
Typical Current (mA)	15			

### Mechanical Data

Dimensions (mm)	Height	75 (3")			
	Diameter	180 (7.1")			
Operating Temp	-40° / +80°C (-40° / +176°F)				
Colour	White	Black	White	Black	
Ingress Protection	IP69K				

### Mounting Data

Mounting type	Panel mount
Max panel thickness (mm)	7 (0.27")
Mounting hole (mm)	19 (3/4")

### Cable Data

	Type	RG174 -FR (UN ECE R118 Compliant)
All Cables	Diameter (mm)	2.8 (0.1")
	Length (m)	0.3 (1')

### Terminations

4G/5G	SMA (m)
WiFi	SMA (f)
GPS/GNSS	FME (f)

# MiMo 4G/5G Dome Combination Antenna Range

L[G]M[X]M[X]-6-60[-24-58]

PANORAMA ANTENNAS

## Product Data

### Part No.

LGTM-6-60-24-58 LGMTMB-6-60-24-58 LGMDM-6-60-24-58 LGMDB-6-60-24-58

### Electrical Data

Frequency Range (MHz)	4G/5G Elements	2x 617-960 / 1710-6000	
	WiFi Elements	3x 2.4/4.9-7.2GHz	2x 2.4/4.9-7.2GHz
Peak Gain: Isotropic : All Elements Fed	4G/5G Elements	617MHz-960MHz	5
		1710-3800MHz	9
		4900-6000MHz	10
	WiFi Elements	2.4GHz	8
		4.9-7.2GHz	10
Typical Efficiency	4G/5G Elements	>70%	
	WiFi Elements	>80%	
Isolation	4G/5G Elements	>12dB	
	Wifi Elements	>20dB	
Correlation Co-efficient	4G/5G Elements	< 0.1	
	WiFi Elements	<0.1	
Nominal Impedance		50Ω	

### GPS/GNSS Data

Frequency Range (MHz)	1562-1612
VSWR	<2.0:1 ± 4MHz
Gain: LNA	26dB
Out of band rejection	>40dB (@ > +/- 100MHz f)
Typical Noise Figure	-2.7dB
Notch Filter rejection @787MHz	23dBm
Operating Voltage	3 - 5V DC
Typical Current (mA)	15

### Mechanical Data

Dimensions	Height	75 (3")		
	Diameter	180 (7.1")		
Operating Temp		-40° / +80°C (-40° / +176°F )		
Colour	White	Black	White	Black
Ingress Protection		IP69K		

### Mounting Data

Mounting type	Panel mount
Max panel thickness (mm)	7 (0.27")
Mounting hole (mm)	19 (3/4")

### Cable Data

	Type	RG174 -FR (UN ECE R118 Compliant)
All Cables	Diameter (mm)	2.8 (0.1")
	Length (m)	0.3 (1')

### Terminations

4G/5G	SMA (m)
WiFi	SMA (f)
GPS/GNSS	FME (f)

# MiMo 4G/5G Dome Combination Antenna Range

L[G]M[X]M[X]-6-60[-24-58]

PANORAMA ANTENNAS

## Product Data

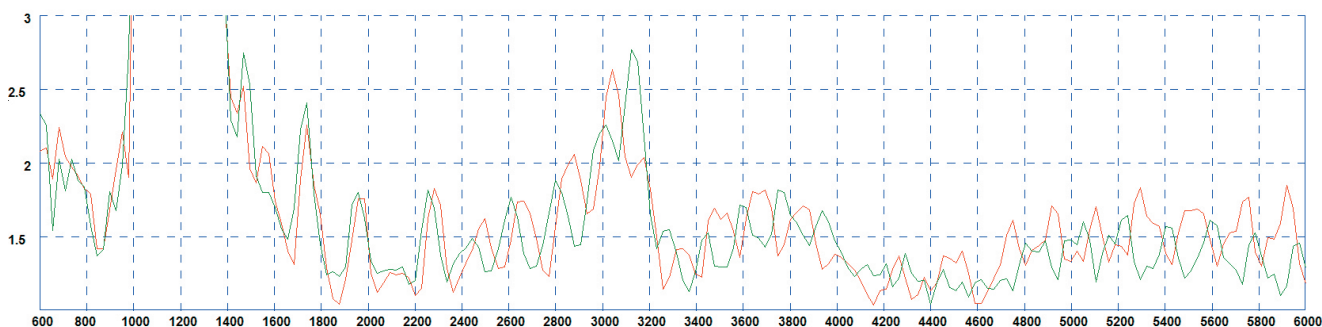
Part No.		LGMM-6-60	LGMMB-6-60	LPMM-6-60	LPMMB-6-60
<b>Electrical Data</b>					
Frequency Range (MHz)	4G/5G Elements	2x 617-960 / 1710-6000			
Peak Gain: Isotropic : All Elements Fed	617-960MHz	5			
	4G/5G Elements 1710-3800MHz	9			
	4900-6000MHz	10			
Typical Efficiency	4G/5G Elements	>70%			
Isolation	4G/5G Elements	>12dB			
Correlation Co-efficient	4G/5G Elements	< 0.1			
Nominal Impedance		50Ω			
<b>GPS/GNSS Data</b>					
Frequency Range (MHz)		1562-1612			-
VSWR		<2.0:1 ± 4MHz			-
Gain: LNA		26dB			-
Out of band rejection		>40dB (@ > +/- 100MHz f)			-
Typical Noise Figure		-2.7dB			-
Notch Filter rejection @787MHz		23dBm			-
Operating Voltage		3 - 5V DC			-
Typical Current (mA)		15			-
<b>Mechanical Data</b>					
Dimensions	Height	75 (3")			
	Diameter	180 (7.1")			
Operating Temp		-40° / +80°C (-40° / +176°F )			
Colour		White	Black	White	Black
Ingress Protection		IP69K			
<b>Mounting Data</b>					
Mounting type		Panel mount			
Max panel thickness (mm)		7 (0.27")			
Mounting hole (mm)		19 (3/4")			
<b>Cable Data</b>					
	Type	RG174 -FR (UN ECE R118 Compliant)			
All Cables	Diameter (mm)	2.8 (0.1")			
	Length (m)	0.3 (1')			
<b>Terminations</b>					
4G/5G		SMA (m)			
GPS/GNSS		FME (f)			-

# MiMo 4G/5G Dome Combination Antenna Range

L[G]M[X]M[X]-6-60[-24-58]

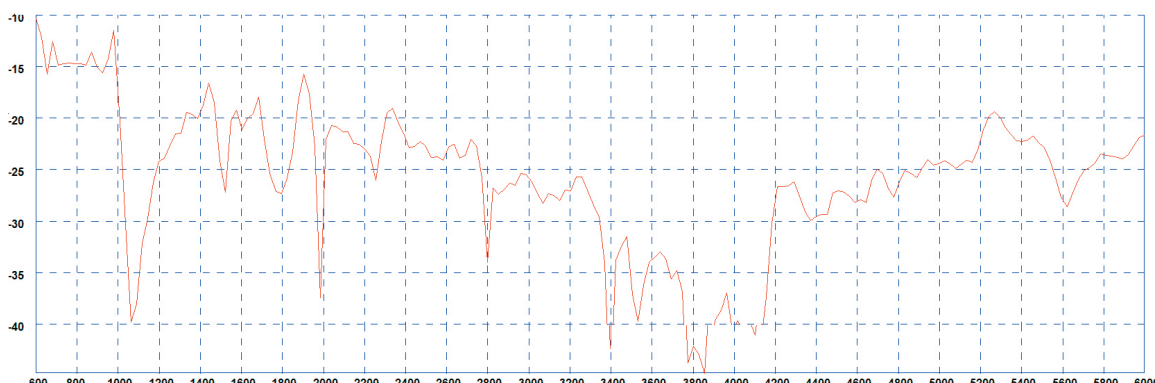
Electrical Data - Cell

Typical VSWR - 4G/5G Elements\*



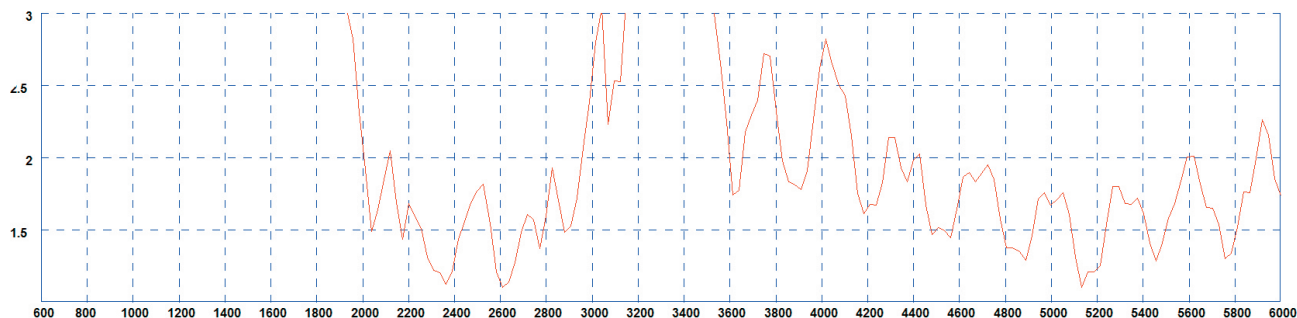
\* measured with 0.5m (1.5') of RG174 cable on a 600x600mm (2'x2') groundplane

Typical Isolation - 4G/5G Elements\*



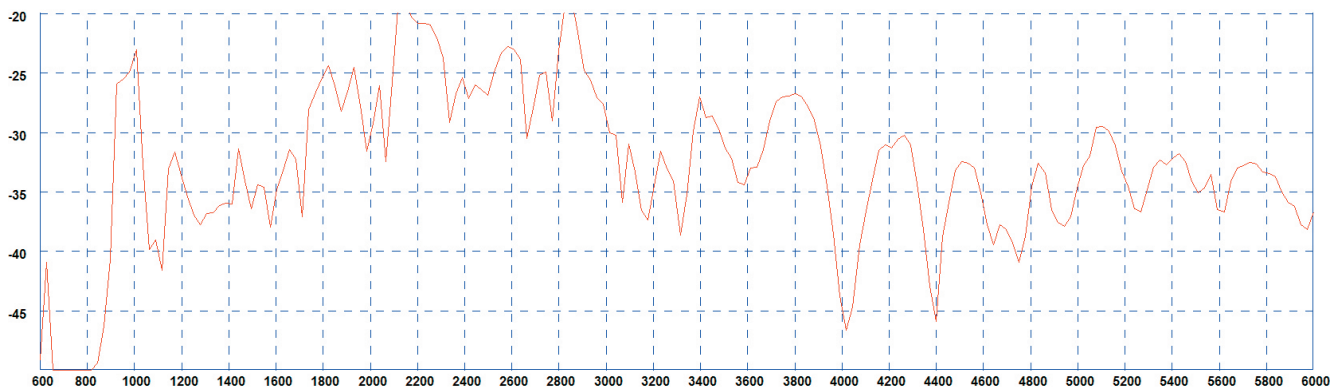
\* measured with 0.5m (1.5') of RG174 cable on a 600x600mm (2'x2') groundplane

Typical VSWR - WiFi Elements\*



\* measured with 0.5m (1.5') of RG174 cable on a 600x600mm (2'x2') groundplane

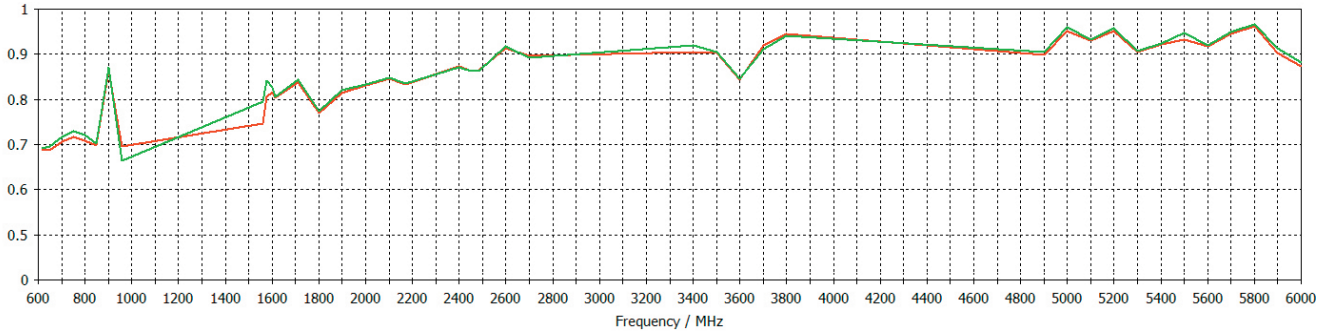
Typical Isolation - WiFi Elements\*



\* measured with 0.5m (1.5') of RG174 cable on a 600x600mm (2'x2') groundplane

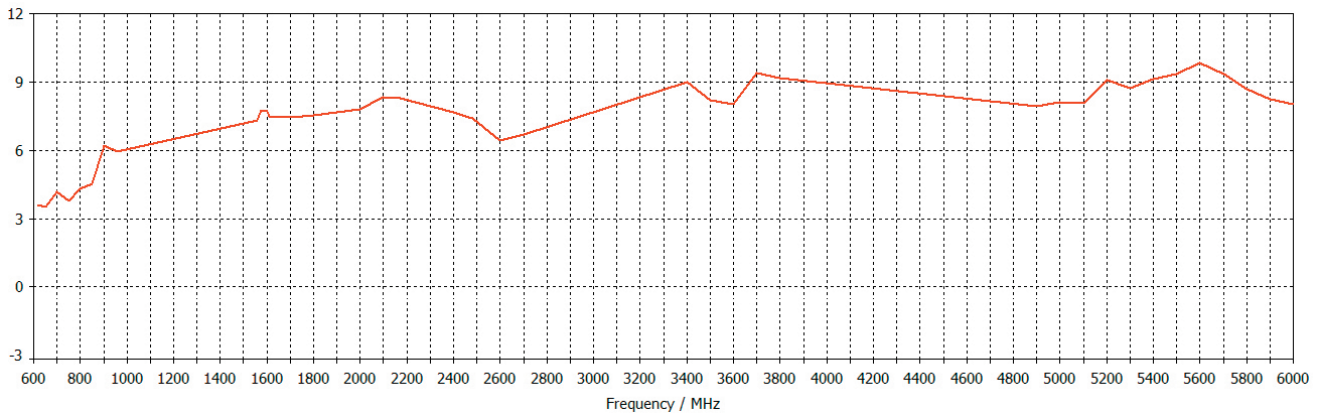


Typical Efficiency- 4G/5G Elements\*



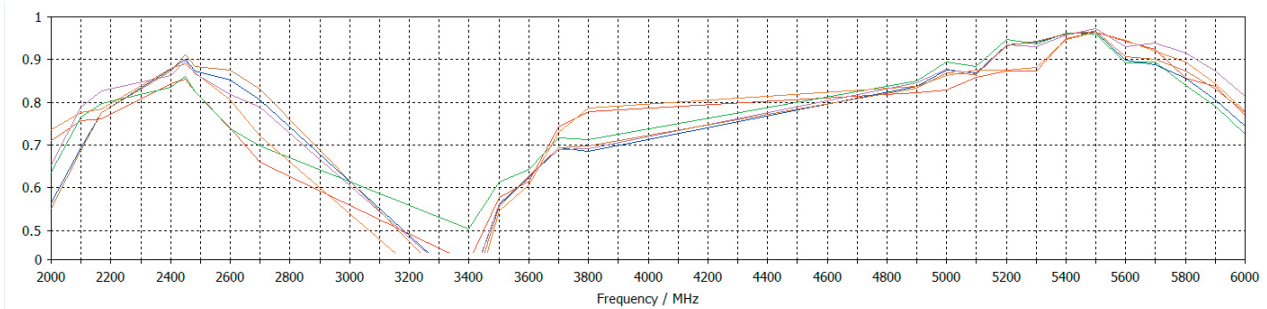
\* Efficiency modelled with CST Microwave Studio and ignores cable losses

Typical Peak Gain - 4G/5G Elements\*



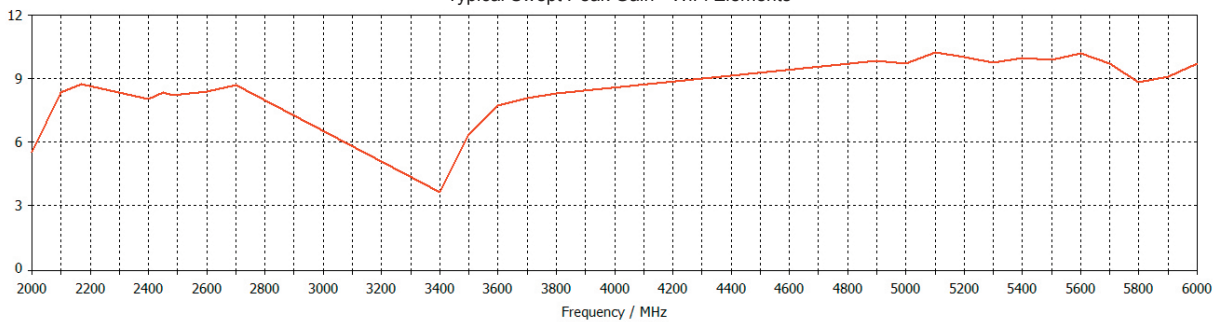
\*Swept peak gain modelled with all elements fed in CST Microwave Studio on a 600x600mm (2'x2') ground plane excluding cable loss

Typical Efficiency - WiFi Elements\*



\* Efficiency modelled with CST Microwave Studio and ignores cable losses

Typical Swept Peak Gain - WiFi Elements\*



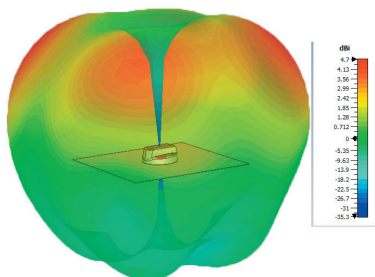
\*Swept peak gain modelled with all elements fed in CST Microwave Studio on a 600x600mm (2'x2') ground plane excluding cable loss

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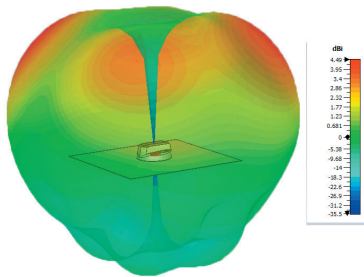
L[G]M[X]M[X]-6-60[-24-58]

## 4G/5G Pattern Data

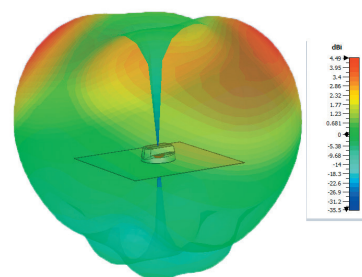
Typical 3D Pattern - 4G/5G Elements 617MHz



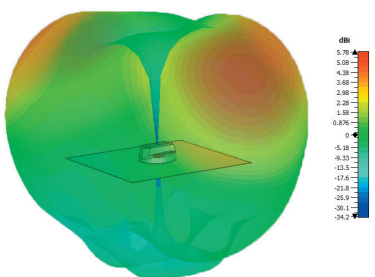
Typical 3D Pattern - 4G/5G Elements 700MHz



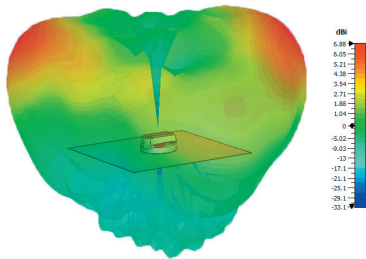
Typical 3D Pattern - 4G/5G Elements 800MHz



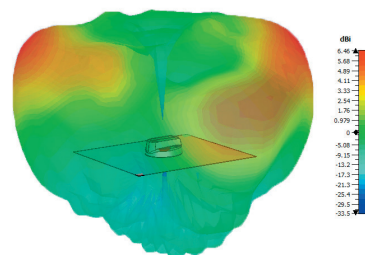
Typical 3D Pattern - 4G/5G Elements 900MHz



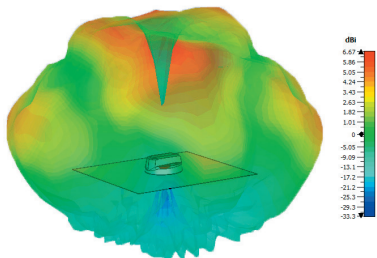
Typical 3D Pattern - 4G/5G Elements 1800MHz



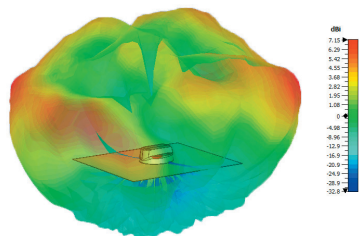
Typical 3D Pattern - 4G/5G Elements 2000MHz



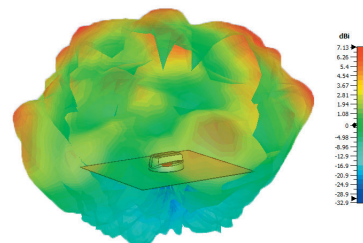
Typical 3D Pattern - 4G/5G Elements 2600MHz



Typical 3D Pattern - 4G/5G Elements 3600MHz

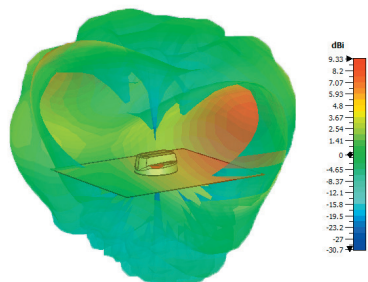


Typical 3D Pattern - 4G/5G Elements 5400MHz

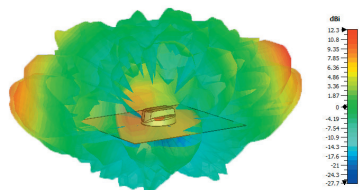


## WiFi Pattern Data

Typical 3D Pattern - WiFi Elements 2400MHz



Typical 3D Pattern - WiFi Elements 5400MHz



\*Patterns are LGMHM-6-60-24-58 modelled in CST Microwave Studio with all elements of each type fed.