

MiMo 4G/5G Dome Combination Antenna Range

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

PANORAMA ANTENNAS



- 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.

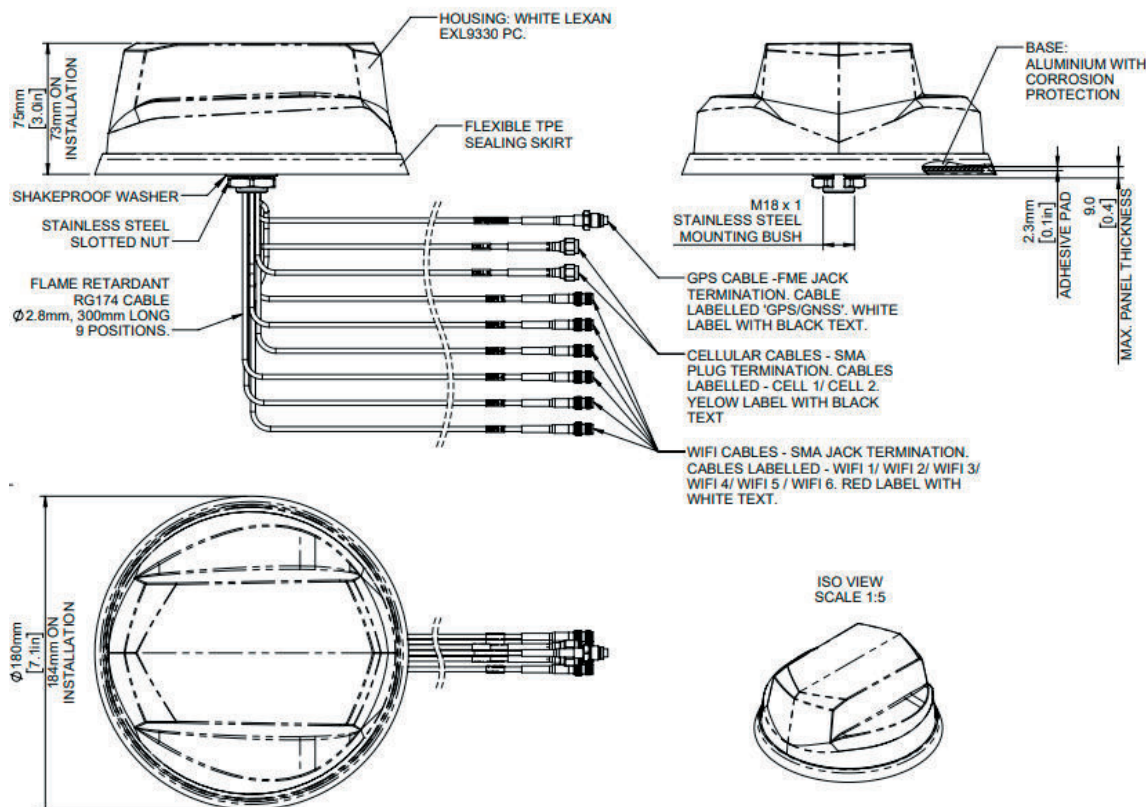
The antenna is designed to be panel mounted and can be fitted on a conductive or non-conductive panel. Supplied with integrated flame retardant RG174 cables (Compliant to UN ECE R118 and EN45545-2) and a halogen free flame retardant radome the antenna is suitable for many environments and applications.

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

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

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
Typical Efficiency		4.9-7.2GHz	10
	4G/5G Elements		>70%
Isolation	WiFi Elements		>80%
	4G/5G Elements		>12dB
Correlation Co-efficient	WiFi Elements		>20dB
	4G/5G Elements		< 0.1
Nominal Impedance	WiFi Elements		<0.1
			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)

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
W: www.panorama-antennas.com

L[G]M[X]M[X]-6-60[-24-58] 01/09/2021 V4

Waiver: The data given above is indicative of the performance of the product/s under particular conditions and does not imply a guarantee of performance. These specifications are subject to change without notice. Copyright © Panorama Antennas Ltd. All rights reserved.

MiMo 4G/5G Dome Combination Antenna Range

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

PANORAMA ANTENNAS

Product Data

Part No.

LGMTM-6-60-24-58 LGMTMB-6-60-24-58 LGMDM-6-60-24-58 LGMDMB-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
Typcal 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

All Cables	Type	RG174 -FR (UN ECE R118 Compliant)		
	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

Electrical Data

Frequency Range (MHz)	4G/5G Elements	2x 617-960 / 1710-6000
	617-960MHz	5
Peak Gain: Isotropic : All Elements Fed	4G/5G Elements	1710-3800MHz
	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

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)		
GPS/GNSS	FME (f)	-	

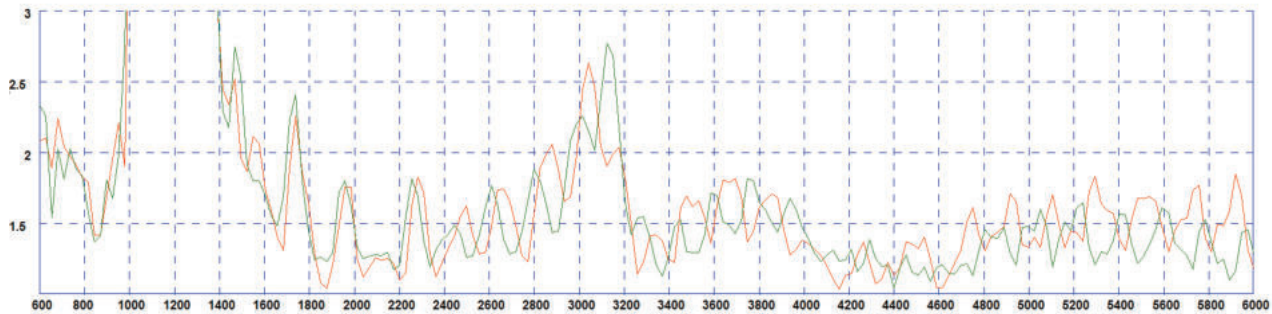
MiMo 4G/5G Dome Combination Antenna Range

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

PANORAMA ANTENNAS

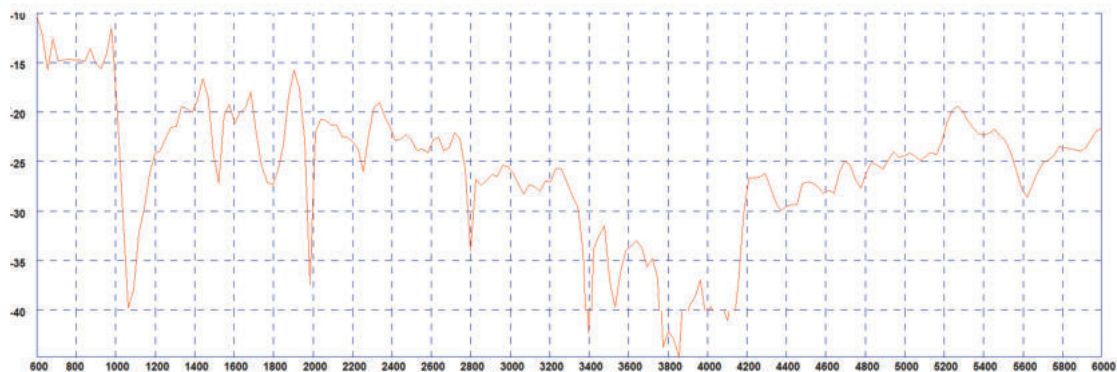
Electrical Data - Cell

Typical VSWR - 4G/5G Elements*



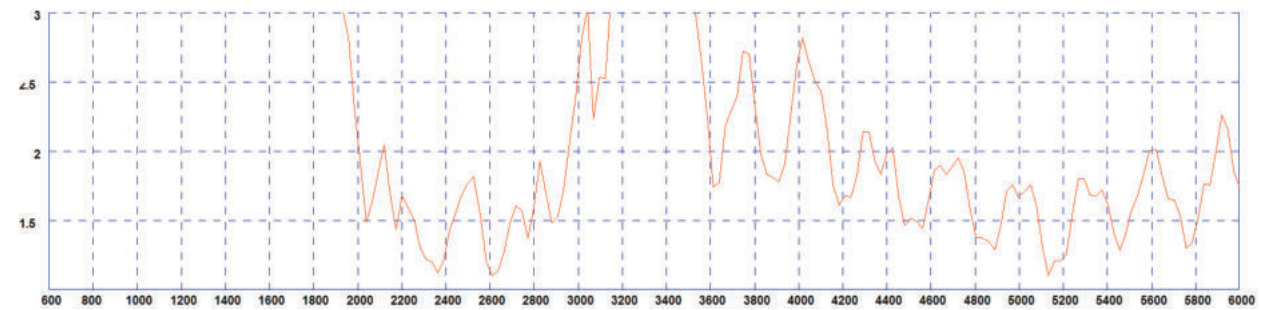
* measured with 0.5m (1.5') of RG174 cable on a 600x600mm (2'x2') groundplane

Typical Isolation - 4G/5G Elements*



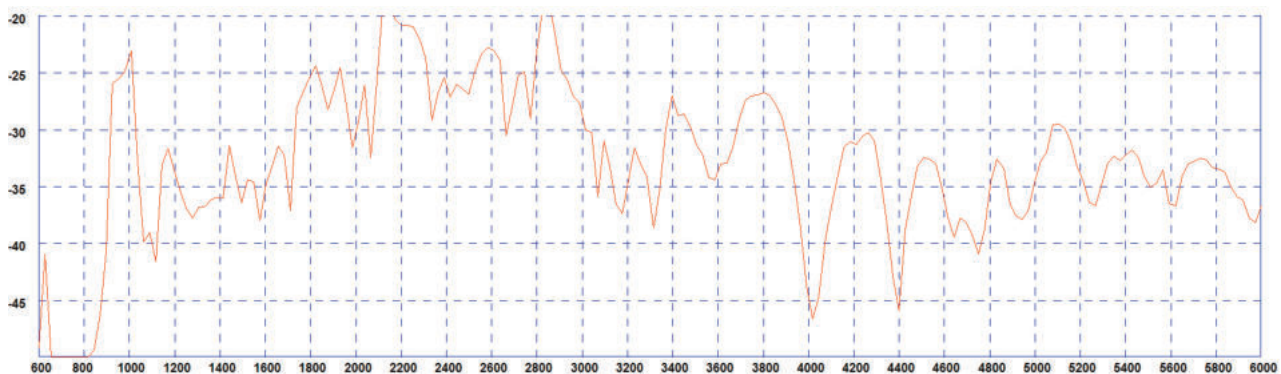
* measured with 0.5m (1.5') of RG174 cable on a 600x600mm (2'x2') groundplane

Typical VSWR - WiFi Elements*



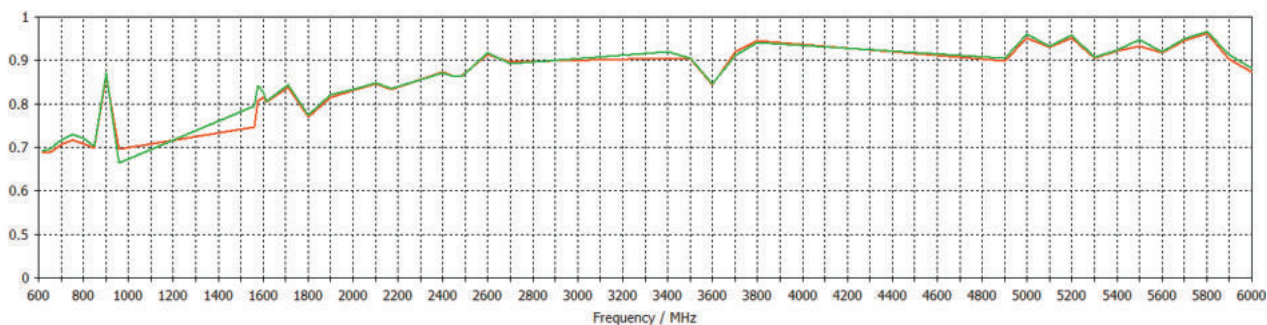
* measured with 0.5m (1.5') of RG174 cable on a 600x600mm (2'x2') groundplane

Typical Isolation - WiFi Elements*



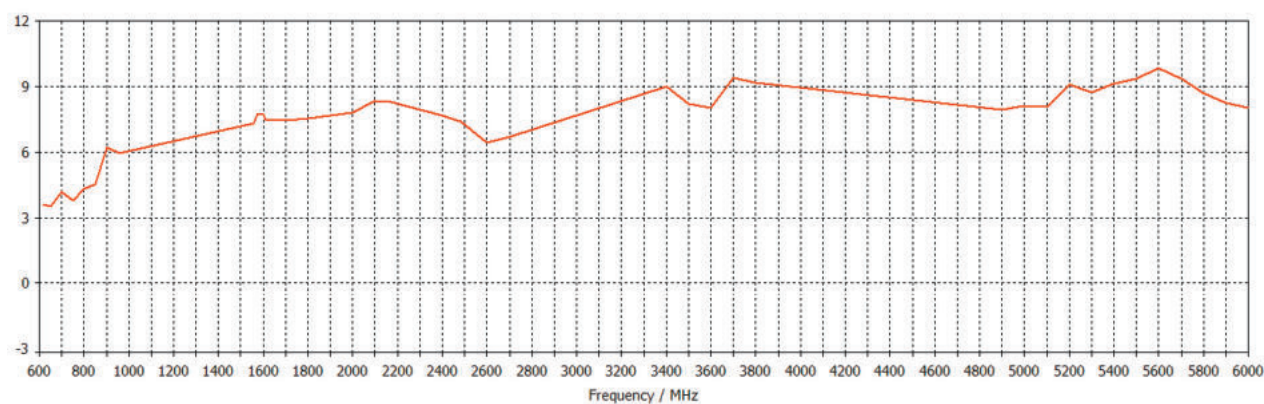
* measured with 0.5m (1.5') of RG174 cable on a 600x600mm (2'x2') groundplane

Typical Efficiency- 4G/5G Elements*



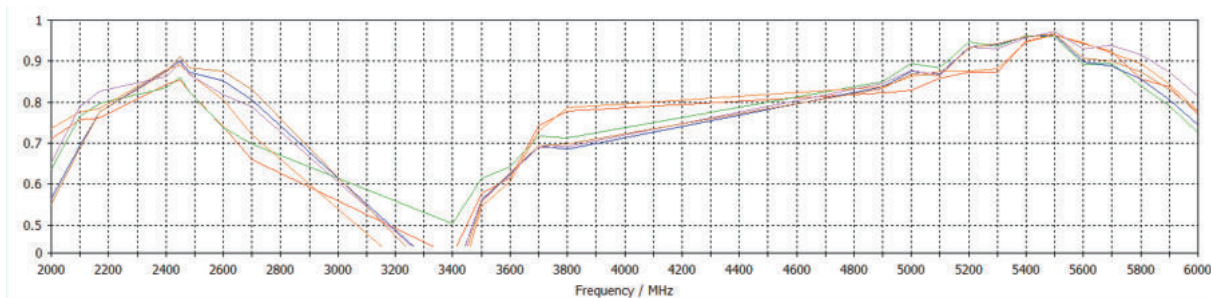
* Efficiency modelled with CST Microwave Studio and ignores cable losses

Typical Peak Gain - 4G/5G Elements*



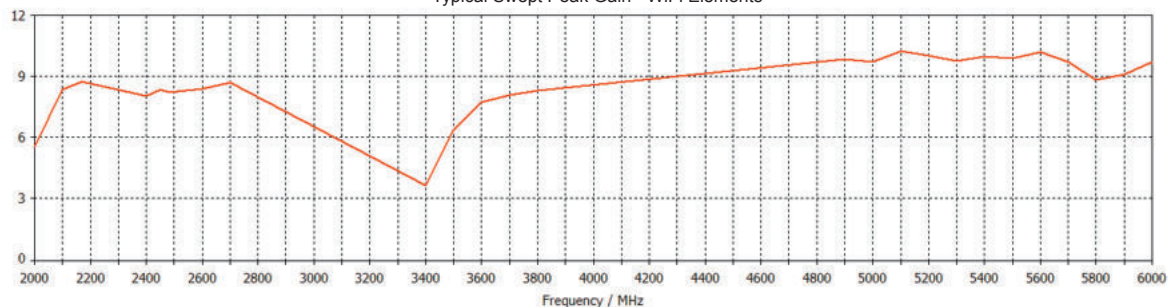
*Swept peak gain modelled with all elements fed in CST Microwave Studio on a 600x600mm (2'x2') ground plane excluding cable loss

Typical Efficiency - WiFi Elements*



* Efficiency modelled with CST Microwave Studio and ignores cable losses

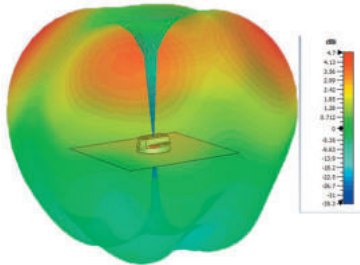
Typical Swept Peak Gain - WiFi Elements*



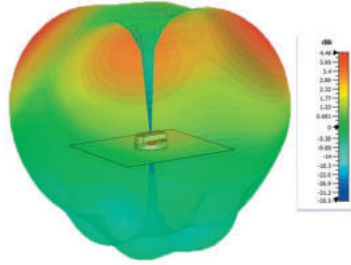
*Swept peak gain modelled with all elements fed in CST Microwave Studio on a 600x600mm (2'x2') ground plane excluding cable loss

4G/5G Pattern Data

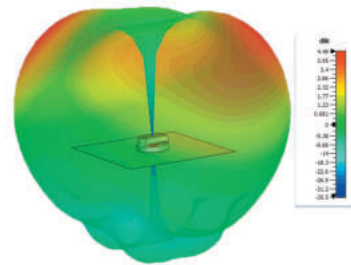
Typical 3D Pattern - 4G/5G Elements 617MHz



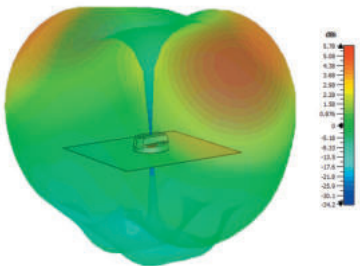
Typical 3D Pattern - 4G/5G Elements 700MHz



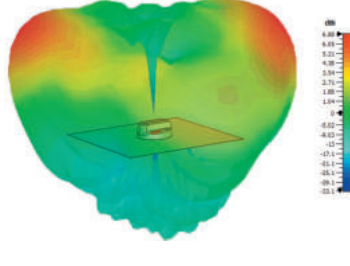
Typical 3D Pattern - 4G/5G Elements 800MHz



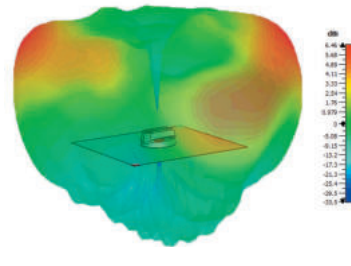
Typical 3D Pattern - 4G/5G Elements 900MHz



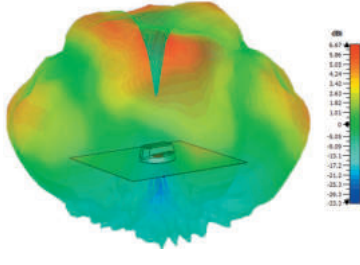
Typical 3D Pattern - 4G/5G Elements 1800MHz



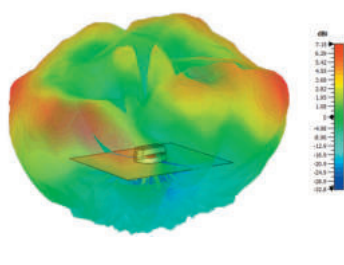
Typical 3D Pattern - 4G/5G Elements 2000MHz



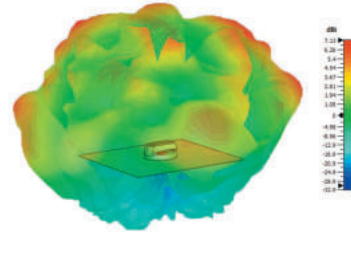
Typical 3D Pattern - 4G/5G Elements 2600MHz



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

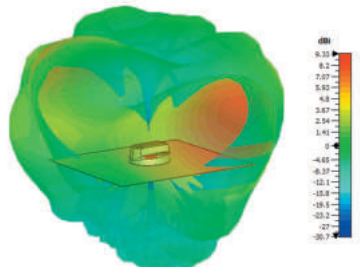


Typical 3D Pattern - 4G/5G Elements 5400MHz

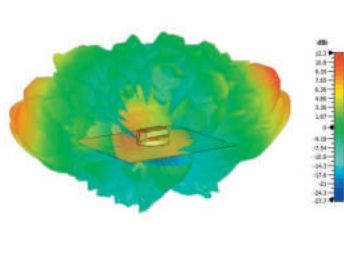


WiFi Pattern Data

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.