

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

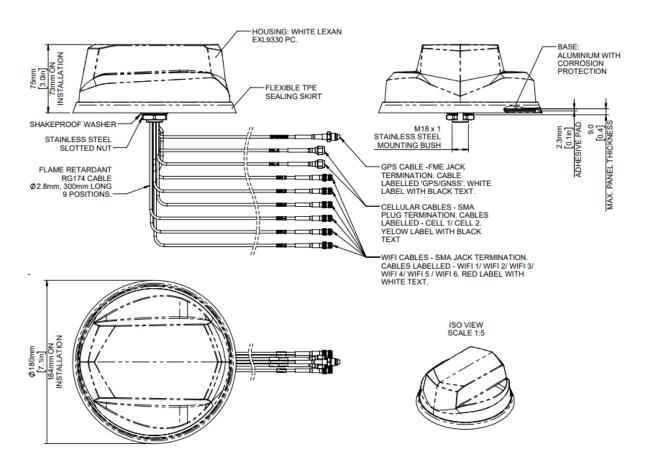
The L[G]M[X]M[X]-6-60[-24-58] range has been designed to provide 2x2 4G/5G MiMo performance from 617-960/1710-6000MHz in a robust low profile package. The flexible platform allows the main elements to be combined with a number of other functions including GPS/GNSS and up to 6x6 MiMo WiFi 2.4/4.9-7.2GHz.

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]



**Product Data** 

Mile	Part No.								
Mile				LGMHM-6-60-24-58	LGMHMB-6-60-24-58	LGMQM-6-60-24-58	LGMQMB-6-60-24-58		
Mile	Electrical Data	1							
Part	Frequency Ra	ange 4G/5G Elements	4G/5G Elements		2x 617-960 / 1710-6000				
### AGI/S Elements	(MHz)	WiFi Elements		6x 2.4/4	6x 2.4/4.9-7.2GHz 4x 2.4/4.9-7.2GHz				
Ag   Ag   Ag   Ag   Ag   Ag   Ag   Ag			617-960MHz	5					
All Elements Fed		4G/5G Elements	1710-3800MHz	9					
No   No   No   No   No   No   No   No			4900-6000MHz		1	0			
A9-7 2GHz	. All Liements	reu	2.4GHz						
Spricial Efficiency   Wife Elements   \$12dB   \$12d		WiFi Elements							
Wiff Elements		4G/5G Elements							
Solition   Wifi Elements   Solition   Sol	Typical Efficier	ncy WiFi Elements							
Wifi Elements   \$200B    \$		4G/5G Elements			>12	2dB			
Wifi Elements	Isolation	Wifi Elements			>20	OdB			
SPECIAL NOTE   SPE	Correlation	4G/5G Elements			< (	0.1			
### Pack	Co-efficient	WiFi Elements			<(	).1			
Frequency Rame (MHz) 1562-1612  /SWR	Nominal Impe	dance			50	Ω			
SWR	GPS/GNSS E	Data							
### Panel mount  #### Panel mount  ###################################	Frequency Ra	inge (MHz)		1562-1612					
Dut 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")           Dimensions (mm)         Diameter         180 (7.1")           Diperating Temp         -40°/ +80°C (-40° / +176°F)           Colour         White         Black         White         Black           Ingress Protection         IP69K         IP69K         IP69K           Mounting type         Panel mount         Max	VSWR			<2.0:1 ± 4MHz -					
Popicial Noise Figure   -2.7dB	Gain: LNA			26dB					
Notch Filter rejection @787MHz   23dBm	Out of band re	ejection		>40dB (@ > +/- 100MHz f)					
Second	Typical Noise	Figure		-2.7dB					
Typeal Current (mA)   15	Notch Filter re	jection @787MHz							
Mechanical Data           Dimensions mm)         Height planeter         75 (3")           mm)         Diameter         180 (7.1")           Operating Temp         -40°/ +80°C (-40° / +176°F )           Colour         White         Black         White         Black           In peace of the properties of the p									
Height	* *				15	5			
Manual	Mechanical Da								
Colour	Dimensions								
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')           Ferminations           4G/5G         SMA (m)			eter						
### Mounting Data  ### Mounting type	, ,	np		140.00			D		
Mounting Data           Mounting type         Panel mount           Max panel thickness (mm)         7 (0.27")           Mounting hole (mm)         19 (3/4")           Cable Data           All Cables         Diameter (mm)         RG174 -FR (UN ECE R118 Compliant)           Length (m)         0.3 (1")           Terminations           4G/5G         SMA (m)				vvnite			Black		
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)					IPC	99K			
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)					Danol	mount			
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)									
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)	•								
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)		(111111)			19 (	5/4 )			
Diameter (mm)   2.8 (0.1")				RG174 -FR (UN ECE R118 Compliant)					
Length (m) 0.3 (1')  Ferminations  4G/5G SMA (m)	All Cables			· · · ·					
Terminations SMA (m)	7 til Gabics								
4G/5G SMA (m)	Terminations	3 ()			0.0	(·/			
, ,	4G/5G				SMA	A (m)			
- 17	WiFi								
GPS/GNSS FME (f)	GPS/GNSS								

### MiMo 4G/5G Dome Combination Antenna Range L[G]M[X]M[X]-6-60[-24-58]



#### **Product Data**

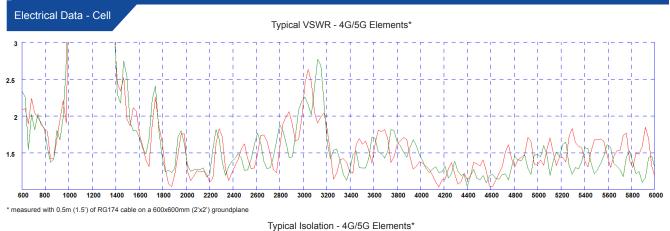
Part No.								
				LGMTM-6-60-24-58	LGMTMB-6-60-24-58	LGMDM-6-60-24-58	LGMDMB-6-60-24-58	
Electrical Data								
Frequency Rang	ige	4G/5G Elements			2x 617-960	1710-6000		
(MHz)		WiFi Elements		3x 2.4/4.	9-7.2GHz	2x 2.4/4	.9-7.2GHz	
			67-960MHz	5				
		4G/5G Elements	1710-3800MHz	9				
Peak Gain: Isoto All Elements Fe			4900-6000MHz		10	)		
All Elements Fe			2.4GHz		3			
		WiFi Elements	4.9-7.2GHz		1			
		4G/5G Elements	1.0 7.2012		>7(			
Typical Efficience	су	WiFi Elements			>8(			
		4G/5G Elements			>12			
Isolation		Wifi Elements			>20			
		4G/5G Elements			< (			
Correlation Co-	efficient	WiFi Elements			<0	.1		
Nominal Impeda	ance				50			
GPS/GNSS Da								
Frequency Rang					1562-	1612		
VSWR				<2.0:1 ± 4MHz				
Gain: LNA				26dB				
Out of band reje	ection			>40dB (@ > +/- 100MHz f)				
Typical Noise Fi				-2.7dB				
Notch Filter reje	ection @78	B7MHz		23dBm				
Operating Volta	ige			3 - 5V DC				
Typcal Current (	(mA)			15				
Mechanical Dat	ta							
Dimensions	Height				75 (	(3")		
Dimensions [	Diameter				180 (	7.1")		
Operating Temp	0				-40°/ +80°C (-4	40° / +176°F )		
Colour				White	Black	White	Black	
Ingress Protecti	ion				IP6	9K		
Mounting Data								
Mounting type				Panel mount				
Max panel thickness (mm)		7 (0.27")						
Mounting hole (	(mm)				19 (3	3/4")		
Cable Data								
1	Туре	/pe		RG174 -FR (UN ECE R118 Compliant)				
All Cables [	Diameter (	mm)			2.8 (	0.1")		
L	Length (m	)			0.3	(1')		
Terminations								
4G/5G					SMA	. (m)		
WiFi					SMA	\ (f)		
GPS/GNSS					FME	E (f)		

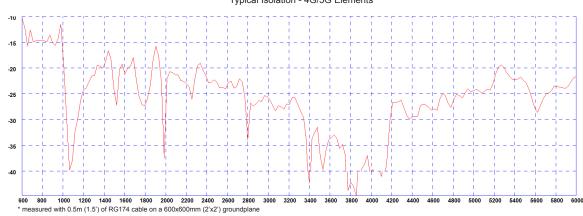
## MiMo 4G/5G Dome Combination Antenna Range L[G]M[X]M[X]-6-60[-24-58]

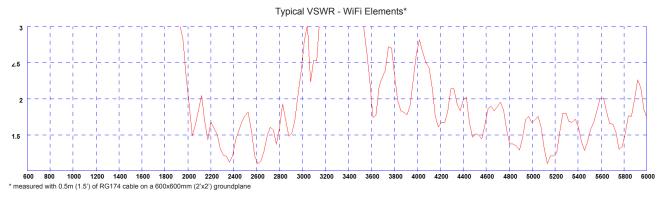


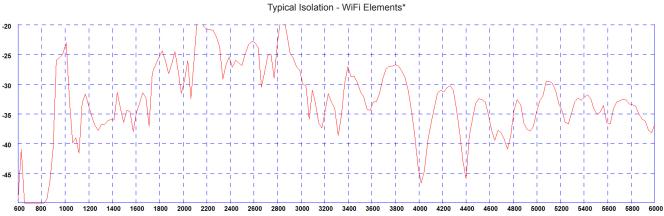
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Part No.							
			LGMM-6-60	LGMMB-6-60	LPMM-6-60	LPMMB-6-60	
Electrical Data							
Frequency Range	e (MHz) 4G/5G Elemen	is .		2x 617-960 /	1710-6000		
		617-960MHz		5			
Peak Gain: Isotr Elements Fed	opic : All 4G/5G Elemen	1710-3800MHz	9				
Liomonto i ca		4900-6000MHz		10			
Typical Efficiency	4G/5G Elemen	s		>70	)%		
Isolation	4G/5G Elemen	S		>12	dB		
Correlation Co-et	fficient 4G/5G Elemen	S		< 0	).1		
Nominal Impeda	nce			50	Ω		
GPS/GNSS Data							
Frequency Rang	e (MHz)		1562	-1612		-	
VSWR			<2.0:1 ± 4MHz -			-	
Gain: LNA			26dB -				
Out of band rejec	etion		>40dB (@ > +/- 100MHz f)				
Typical Noise Fig	jure		-2.7dB -			-	
Notch Filter rejec	tion @787MHz		23dBm -				
Operating Voltag	е		3 - 5V DC -				
Typcal Current (r	nA)		,	15		-	
Mechanical Data							
Dimensions	Height			75 (	(3")		
	Diameter		180 (7.1")				
Operating Temp				-40°/ +80°C (-4	40° / +176°F )		
Colour			White	Black	White	Black	
Ingress Protectio	n			IP6	9K		
Mounting Data							
Mounting type			Panel mount				
Max panel thickness (mm)			7 (0.27")				
Mounting hole (m	nm)			19 (3	3/4")		
Cable Data							
	Туре		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)				

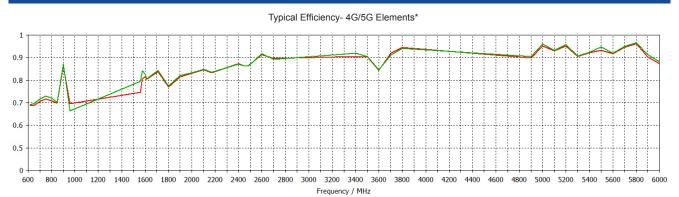






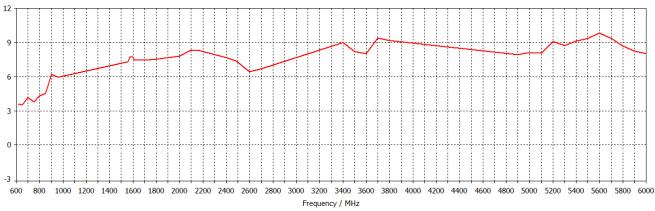


<sup>\*</sup> measured with 0.5m (1.5') of RG174 cable on a 600x600mm (2'x2') groundplane

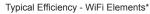


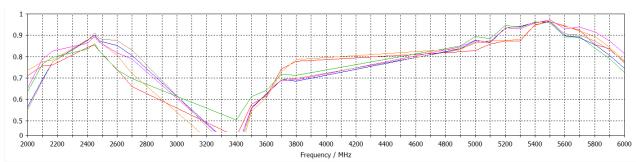
<sup>\*</sup> Efficiency modelled with CST Microwave Studio and ignores cable losses

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

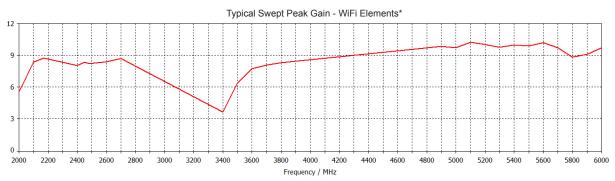


\*Swept peak gain modelled with all elements fed in CST Microwave Studio on a 600x600mm (2'x2') ground plane excluding cable loss





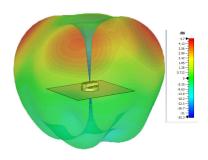
<sup>\*</sup> Efficiency modelled with CST Microwave Studio and ignores cable losses



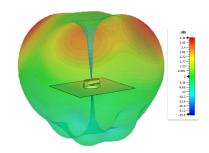
<sup>\*</sup>Swept peak gain modelled with all elements fed in CST Microwave Studio on a 600x600mm (2'x2') ground plane excluding cable loss

#### 4G/5G Pattern Data

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

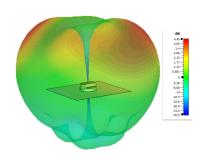


Typical 3D Pattern - 4G/5G Elements 900MHz



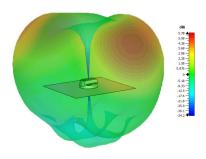
TTypical 3D Pattern - 4G/5G Elements 700MHz

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

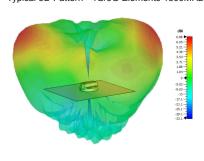


Typical 3D Pattern - 4G/5G Elements 800MHz

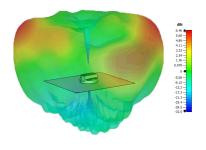
Typical 3D Pattern -4G/5G Elements 2000MHz



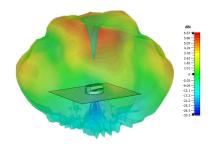
Typical 3D Pattern - 4G/5G Elements 2600MHz

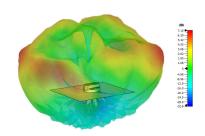


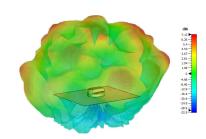
Typical 3D Pattern - 4G/5G Elements 3600MHz



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

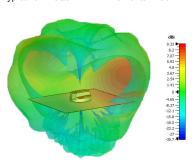




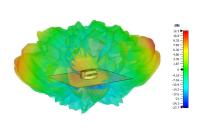


### WiFi Pattern Data

Typical 3D Pattern - WiFi Elements 2400MHz



Typical 3D Pattern - WiFi Elements 5400MHz



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