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



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

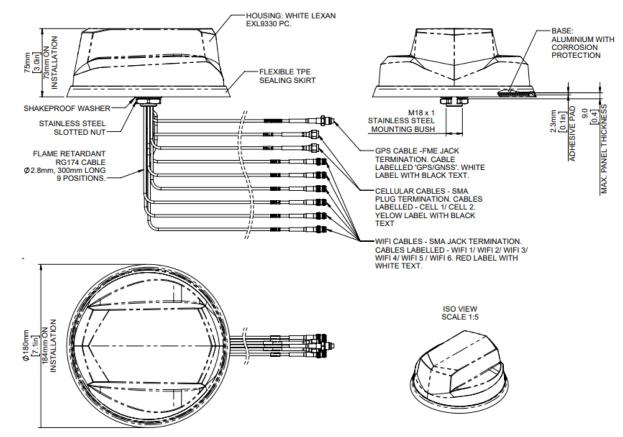
The L[G]M[X]M[X]-6-60[-24-58] range has been designed to provide 2x2 4G/5G MiMo performance from 617-960/1710-6000MHz in a robust low profile package. The flexible platform allows the main elements to be combined with a number of other functions including GPS/GNSS and up to 6x6 MiMo WiFi 2.4/5.0GHz.

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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 UNECE 118.01 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.



1_____

Technical Drawing

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LGMHM-6-60-24-58 Shown

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

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Product Data

			LGMHM-6-60-24-58	LGMHMB-6-60-24-58	LGMQM-6-60-24-58	LGMQMB-6-60-24-58			
Electrical Data									
Frequency Rar	nge 4G/5G Elements			2x 617-960	/ 1710-6000				
(MHz)	WiFi Elements		6x 2.4/4.9-6GHz 4x 2.4/4.9-6GHz						
		617-960MHz	5						
Peak Gain: Isotroj : All Elements Fed	4G/5G Elements	1710-3800MHz	9						
		4900-6000MHz	10						
	Fed	2.4GHz			3				
	WiFi Elements	7.2GHz							
	AG/5G Elements	4G/5G Elements		10					
Typical Efficiency			>70%						
			>80%						
solation	Wifi Elements	4G/5G Elements		>12dB >20dB					
Correlation	4G/5G Elements				0.1				
Correlation Co-efficient	WiFi Elements).1				
Nominal Imped			50Ω						
GPS/GNSS D									
- requency Rar				1562-7	1612				
/SWR	U (1)		<2.0:1 ± 4MHz -						
Gain: LNA		26dB							
Out of band rej	jection		>40dB (@ > +/- 100MHz f)						
۔ Fypical Noise F			-2.7dB						
	ection @787MHz		23dBm						
Operating Volta	age		3 - 5V DC						
Typcal Current	: (mA)		15						
Mechanical Da	ita								
Dimensions	Height			75 (3")					
mm)	Diameter			180	(7.1")				
Operating Tem	perating Temp		-40°/ +80°C (-40° / +176°F)						
Colour			White	Black	White	Black			
ngress Protect	tion			IPe	9K				
Mounting Data									
Mounting type			Panel mount						
Max panel thic	kness (mm)		7 (0.27")						
Mounting hole	(mm)		19 (3/4")						
Cable Data									
	Туре		RG174 -FR (UN ECE118.01 Compliant)						
All Cables	Diameter (mm)		2.8 (0.1")						
	Length (m)			0.3	(1')				
Terminations									
4G/5G		SMA (m)							
WiFi		SMA (f)							
GPS/GNSS				FM	E (f)				

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

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Product Data

Part No.									
Electrical Data				LGMTM-6-60-24-58	LGMTMB-6-60-24-58	LGMDM-6-60-24-58	LGMDMB-6-60-24-58		
		4G/5G Elements			2x 617-960 /	1710 6000			
Frequency Ran (MHz)	ige	WiFi Elements		2× 2 1/1	.9-6GHz		4.9-6GHz		
()			67-960MHz	58 2.4/4			4.9-00112		
		4G/5G		5					
Peak Gain: Isotr All Elements Feo		Elements	1710-3800MHz	9					
			4900-6000MHz		10)			
		WiFi Elements	2.4GHz		8	5			
			7.2GHz		10	0			
Typical Efficiend	cv	4G/5G Elements			>7()%			
	.,	WiFi Elements			>8()%			
Isolation		4G/5G Elements			>12	dB			
1001041011		Wifi Elements			>20	dB			
Correlation Co-	efficient	4G/5G Elements			< ().1			
Conciation Co-	emolerit	WiFi Elements			<0	.1			
Nominal Impeda	ance				50	Ω			
GPS/GNSS Da	ata								
Frequency Ran	ige (MHz)				1562-	1612			
VSWR			<2.0:1 ± 4MHz						
Gain: LNA			26dB						
Out of band reje	pand rejection		>40dB (@ > +/- 100MHz f)						
Typical Noise F			-2.7dB						
Notch Filter reje	Notch Filter rejection @787MHz		23dBm						
Operating Volta	ige			3 - 5V DC					
Typcal Current	(mA)			15					
Mechanical Dat	ta								
Dimensions	Height				75 ([3")			
	Diameter				180 (7.1")			
Operating Temp	C			-40°/ +80°C (-40° / +176°F)					
Colour				White	Black	White	Black		
Ingress Protecti	ion				IP6	9K			
Mounting Data									
Mounting type					Panel	mount			
Max panel thick	kness (mm	1)		7 (0.27")					
Mounting hole ((mm)				19 (3	3/4")			
Cable Data									
1	Туре			RG174 -FR (UN ECE118.01 Compliant)					
All Cables	Diameter (mm)			2.8 (0.1")					
L	Length (m	1)			0.3	(1')			
Terminations									
4G/5G					SMA	. (m)			
WiFi					SMA	A (f)			
GPS/GNSS					FME	E (f)			

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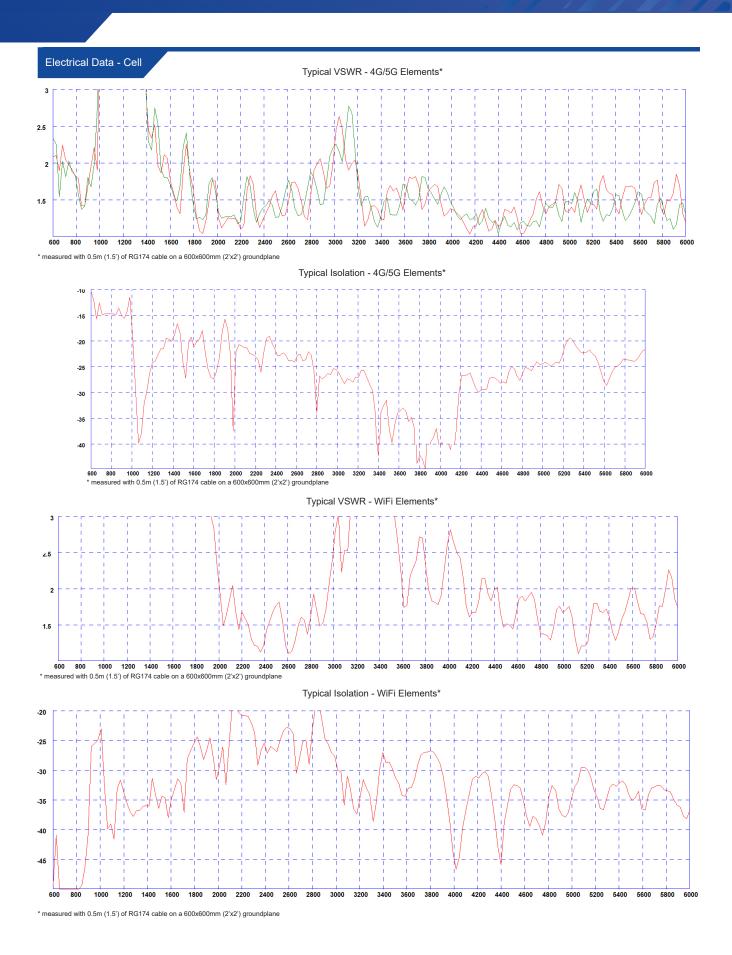
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Product Data

Part No.								
				LGMM-6-60	LGMMB-6-60	LPMM-6-60	LPMMB-6-60	
Electrical Data								
Frequency Range	(MHz)	z) 4G/5G Elements 2x 617-960 / 1710-6000						
Peak Gain: Isotrop Elements Fed			617-960MHz		Ę	5		
	pic : All	4G/5G Elements	1710-3800MHz		ç	Э		
			4900-6000MHz		1	0		
Typical Efficiency	iciency 4G/5G Elements			>70%				
Isolation		4G/5G Elements		>12dB				
Correlation Co-eff	icient	4G/5G Elements		< 0.1				
Nominal Impedan	се				50	Ω		
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 (m	A)			15			-	
Mechanical Data								
Dimensions	Height				75	(3")		
	Diameter			180 (7.1")				
Operating Temp	ating Temp				-40°/ +80°C (-	40° / +176°F)		
Colour				White	Black	White	Black	
Ingress Protectior	1				IP6	9K		
Mounting Data								
Mounting type				Panel mount				
Max panel thickne	ess (mm)			7 (0.27")				
Mounting hole (mi	m)				19 (3	3/4")		
Cable Data								
	Туре			RG174 -FR (UN ECE118.01 Compliant)				
All Cables	Diameter (mm)			2.8 (0.1")				
	Length (n	n)			0.3	(1')		
Terminations								
4G/5G					SMA	(m)		
GPS/GNSS			FMI	E (f)		-		

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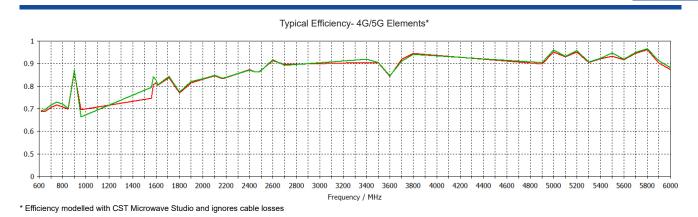


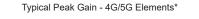
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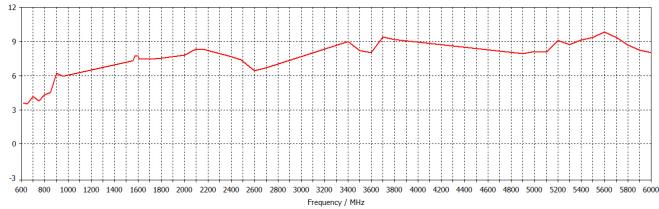
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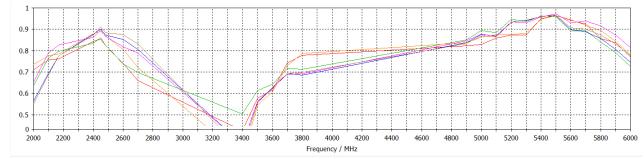




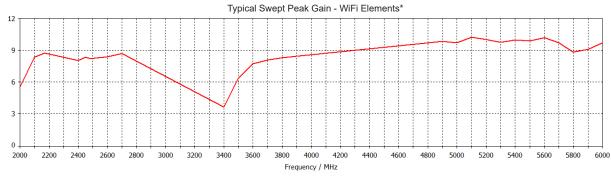


*Swept peak gain modelled with all elements fed in CST Microwave Studio on a 600x600mm (2'x2') ground plane excluding cable loss

Typical Efficiency - WiFi Elements*



* Efficiency modelled with CST Microwave Studio and ignores cable losses



*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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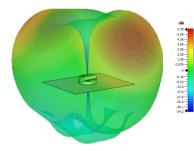
MiMo 4G/5G Dome Combination Antenna Range PANORAMA (C) ANTENNAS

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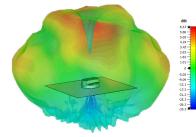
4G/5G Pattern Data

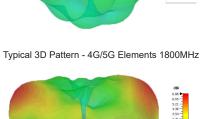
Typical 3D Pattern - 4G/5G Elements 617MHz

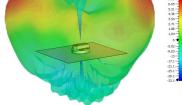
Typical 3D Pattern - 4G/5G Elements 900MHz



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



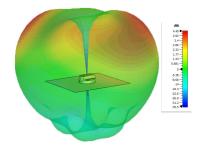




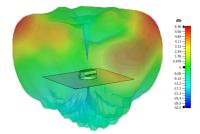
Typical 3D Pattern - 4G/5G Elements 3600MHz

7,15 6,29 5,42 4,55 3,68 2,82 1,95 1,05 -4,98 -4,98 -4,98 -12,9 -24,9 -24,9 -24,9 -3,9

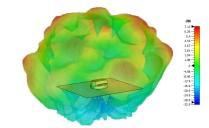




Typical 3D Pattern -4G/5G Elements 2000MHz

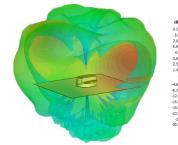


Typical 3D Pattern - 4G/5G Elements 5400MHz

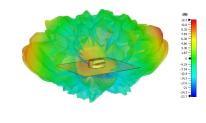


WiFi Pattern Data

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.

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