

Low Profile IOT Antenna

4x4 MiMo 698-960/1427-4200MHz

Up to 4x4 MiMo WiFi 6e (Optional)

GPS/GNSS L1/L5 or L1 only 30dB / 26dB LNA (Optional)

Meets IK10 and IP69K

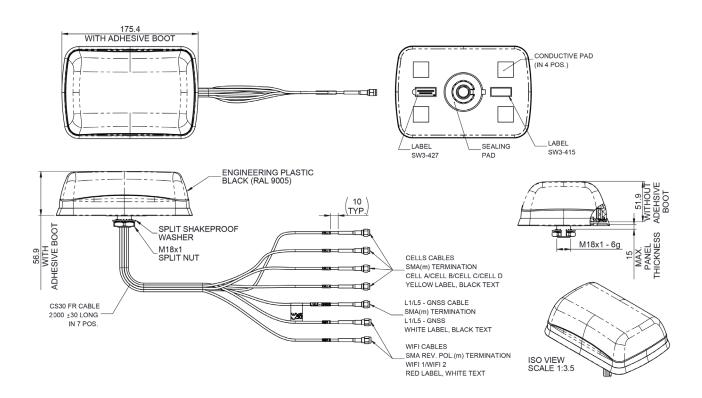
The L[X]A[X]M4-7-42[-X] MiMo antenna is designed to be a one size fits all solution for IOT applications. The robust low profile housing contains 4x 4G LTE / 5G NR elements covering 698-960/1427-4200MHz. Versions of the product also contain up to 4x optional WiFi elements supporting WiFi 6e 2.4/5.150-7.125GHz and optional L1 only or L1/L5 GPS/GNSS.

The housing is constructed from robust, flame retardant, impact resistant plastic. The subtle, curved design makes the product hardert to vandalise and the IK10 rating ensures that the product is suitable for use in tough environments and devices located in public areas. The housing is UV stable and approved to IP69K for ingress protection.

The product is supplied with integrated low loss flame retardant cables approved to UN ECE R118 and fitted connectors offer plug and play connectivity for a huge range of devices.

The L[X]A[X]M4-7-42[-X] can be installed on conductive or non-conductive panels without significant detriment to performance.

Technical Drawing LG5ADM4-7-42 Shown





				Product Data			
Part No.							
		LGAQM4-7-42	LGADM4-7-42	LGAM4-742			
Electrical Data							
	Cell /LTE		4x 698-960 / 1427-4200				
Frequency Range (MHz)	WiFi	4x 2396-7125	2x 2396-7125	-			
(1711 12)	GPS/GNSS		1x 1559-1612				
T	Cell Elements		<2.5:1				
Typical VSWR*	WiFi Elements	< 2	l:1	-			
Isolation**	Cell Elements	≥6dI	3 (698-960MHz) / ≥12dB (1427-4200MHz)				
isolation	Wifi Elements	>25dB (2.4-	7.125GHz)	-			
Pattern			Omni-directional				
Impedance			50Ω				
Max Input Power (V	N)		5				
GPS/GNSS Data							
Frequency Range ((MHz)		1559-1612				
Impedance			50Ω				
LNA Gain			26dB				
Voltage / Current			3-5v 17ma Typical				
Polarisation			Right Hand Circular				
Mechanical Data							
	Height (unmounted)		56.9 (2.2")				
Dimensions (mm)	Width	118 (4.64")					
	Length		175.4 (6.9")				
Environmental Spe	cification						
Operating Temp (°0	C)		-40° / +85°C (-40° / +185°F)				
Radome Material	·		Lexan EXL 9330				
Radome Approvals			V0 (UL 94) / UL 746C (F1)				
Ingress Protection			IP69K				
Vandal Resistance			IK10				
Mounting Data							
Fixing			M18 (3/4") Mounting Bush				
Termination Data							
Cable Type			CS30 (Compliant to UN ECE R118)				
Cable Diameter (m	m)		2.8 (0.1")				
Cable Length (m)	,		2m (6.6')				
	4G/5G		4x SMA Plug (m)				
Termination	WiFi	4x Reverse Polarity SMA Plug	2x Reverse Polarity SMA Plug	-			
	GPS/GNSS		1x SMA Plug (m)				

^{*}Across 90% of relevant bands when measured in free space with 0.5m (20") of CS30 cable **Worst case isolation measured for LGADM4-7-42 in free space with 0.5m (1.5') CS30 cable

4X4 MiMo 4G/5G IOT Antenna



Product Data

L[X]A[X]M4-7-42[-X]

		1.0546111 = 10	LOSADMITA	1.05444 = 11		
		LG5AQM4-7-42	LG5ADM4-7-42	LG5AM4-7-42		
Electrical Data						
Frequency Range	Cell /LTE		4x 698-960 / 1427-4200			
(MHz)	WiFi	4x 2396-7125	2x 2396-7125	-		
	GPS/GNSS		1x 1164-1189 / 1559-1612			
Typical VSWR*	Cell Elements		<2.5:1			
	WiFi Elements	< 2:		-		
Isolation**	Cell Elements		≥6dB (698-960MHz) / ≥12dB (1427-4200MHz)			
	Wifi Elements	>25dB (2.4-7	.125GHz)	-		
Pattern			Omni-directional			
Impedance			50Ω			
Max Input Power (\	W)		5			
GPS/GNSS Data						
Frequency Range ((MHz)		1164-1189 / 1559-1612			
Impedance			50Ω			
LNA Gain			30dB / 26dB			
Voltage / Current			3-5v 37ma Typical			
Polarisation			Right Hand Circular			
Mechanical Data						
	Height		56.9 (2.2")			
Dimensions (mm)	Width	118 (4.64")				
	Length		175.4 (6.9")			
Environmental Spe	cification					
Operating Temp (°0	C)		-40° / +85°C (-40° / +185°F)			
Radome Material			Lexan EXL 9330			
Radome Approvals	;		V0 (UL 94) / UL 746C (F1)			
Ingress Protection			IP69K			
Vandal Resistance			IK10			
Mounting Data						
Fixing			M18 (3/4") Mounting Bush			
Termination Data						
Cable Type		(CS30 (Compliant to UN ECE R118)			
Cable Diameter (m	ım)		2.8 (0.1")			
Cable Length (m)			2m (6.6')			
	4G/5G		4x SMA Plug (m)			
Termination	WiFi	4x Reverse Polarity SMA Plug	2x Reverse Polarity SMA Plug	-		
	GPS/GNSS		1x SMA Plug (m)			

^{*}Across 90% of relevant bands when measured in free space with 0.5m (20") of CS30 cable **Worst case isolation measured for LGADM4-7-42 in free space with 0.5m (1.5") CS30 cable



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Part No.							
		LPAQM4-7-42	LPADM4-7-42	LPAM4-7-42			
Electrical Data							
Frequency Range	Cell /LTE		4x 698-960 / 1427-4200				
(MHz)	WiFi	4x 2396-7125	2x 2396-7125	-			
Typical VSWR*	Cell Elements		<2.5:1				
Typical VOVIII	WiFi Elements	< 2:	1	-			
Isolation**	Cell Elements	≥6dB	(698-960MHz) / ≥12dB (1427-4200MHz)				
1001411011	Wifi Elements	>25dB (2.4-7	7.125GHz)	-			
Pattern			Omni-directional				
Impedance			50Ω				
Max Input Power (\	W)		5				
Mechanical Data							
	Height		56.9 (2.2")				
Dimensions (mm)	Width		118 (4.64")				
	Length		175.4 (6.9")				
Environmental Spe	ecification						
Operating Temp (°0	C)		-40° / +85°C (-40° / +185°F)				
Radome Material			Lexan EXL 9330				
Radome Approvals	3		V0 (UL 94) / UL 746C (F1)				
Ingress Protection			IP69K				
Vandal Resistance	1		IK10				
Mounting Data							
Fixing			M18 (3/4") Mounting Bush				
Termination Data							
Cable Type			CS30 (Compliant to UN ECE R118)				
Cable Diameter (m	nm)		2.8 (0.1")				
Cable Length (m)			2m (6.6')				
	4G/5G		4x SMA Plug (m)				
Termination —	WiFi	4x Reverse Polarity SMA Plug	2x Reverse Polarity SMA Plug	-			

^{*}Across 90% of relevant bands when measured in free space with 0.5m (20") of CS30 cable **Worst case isolation measured for LGADM4-7-42 in free space with 0.5m (1.5') CS30 cable

4X4 MiMo 4G/5G IOT AntennaL[X]A[X]M4-7-42[-X]



Electrical Data- Cell-Free space

Measurement Conditions AU/SG Antennas Peak Gain (albi) Efficiency (%)	Free space Measurement Conditions	AC/EC Aptop	200			
C330 Cable Milt2 Element				Antenna	Peak Gain (dBi)	Efficiency (%)
899-798 12.13, 14.17,28 Cell B -0.2 45 Cell C -0.2 45 Cell C -0.2 45 Cell C -0.1 46 Cell D -0.1 46 Cell B 0.5 50 Cell C 0.7 50 Cell C 0.7 50 Cell C 0.7 50 Cell C 0.6 52 Cell B 1.3 57 Cell C 1.6 53 Cell C 1.6 Cell B 1.3 40 Cell B 1.8 46 Cell C 1.0 35 Cell C 1.0 35 Cell C 1.0 35 Cell C 1.0 35 Cell C 1.0 Cell C Cell C 1.0 Cell C C			ETE Barras		r can Cam (abi)	Emoleticy (70)
Cell B	SKININA HAMANA KANDA	600 709	40.40.44.47.00	Cell A	0.8	45
1427-1518 11,21,74,75,76		099-790	12,13, 14 17,20	Cell B	-0.2	45
807-882 5,19,20,26,27 Cell B				Cell C	-0.2	45
807-862 807-862 807-862 5,19,20,26,27 Cell C 0.7 50 Cell C 0.7 50 Cell D 0.6 52 Cell B 1.9 53 Cell B 1.3 57 Cell C 1.6 53 Cell D 1.6 56 Cell D 1.6 56 Cell D 1.6 56 Cell D 1.5 45 Cell C 1.0 35 Cell D 1.5 45 Cell D 1.2 44 Cell D 1.2 44 Cell D 1.2 44 Cell C 2.2 48 Cell D 1.2 44 Cell C 3.9 55 Cell C 3.9 55 Cell D 1.2 44 Cell C 3.9 55 Cell C 3.9 55 Cell C 3.9 55 Cell C 3.9 55 Cell D 1.4 51 Cell C 4.5 60 Cell D 1.4 51 Cell C 4.5 60 Cell D 1.4 51 Cell C 4.5 60 Cell D 1.4 51 Cell C 5.2 61 Cell D 5.3 65 Cell D 5.				Cell D	-0.1	46
Cell B		807- 862	5,19,20,26,27	Cell A	1.8	50
Section Sect				Cell B	0.5	50
880-960 8	+			Cell C	0.7	50
880-960 8				Cell D	0.6	52
Cell B	<u> </u>			Cell A	1.9	53
1427-1518 11, 21, 74,75,76 11, 21, 74,75 11, 21, 74		880-960	8	Cell B	1.3	57
1427-1518 11, 21, 74, 75, 76 11, 21, 74, 75 11, 21, 74, 75, 76 11, 21, 74, 75 11, 21, 74, 75, 76 11, 21, 74, 75 11, 21, 74, 75, 76 11, 21, 74, 75 11, 21, 74,				Cell C	1.6	53
1427-1518 11, 21, 74,75,76 Cell B 1.8 46 Cell C 1.0 35 Cell D 1.5 45 Cell B 2.0 47 Cell C 2.2 48 Cell D 1.2 44 Cell A 3.7 56 Cell B 2.5 48 Cell C 3.9 55 Cell D 2.2 47 Cell B 3.3 53 Cell C 4.5 60 Cell B 1.3 53 Cell C 4.5 60 Cell D 1.4 51 Cell B 3.3 53 Cell C 5.2 61 Cell B 3.3 53 Cell C 5.2 61 Cell D 2.6 54 Cell D 3.9 65 Cell D 3.9 66 Cell D 3.9 65 Cell D 3.9 66 Cell D				Cell D	1.6	56
Cell B 1.8 46 Cell C 1.0 35 Cell D 1.5 45 Cell D 1.5 45 Cell B 2.0 47 Cell C 2.2 48 Cell D 1.2 44 Cell A 3.7 56 Cell B 2.5 48 Cell C 3.9 55 Cell D 2.2 47 Cell C 3.9 55 Cell D 2.2 47 Cell C 3.9 55 Cell D 2.2 47 Cell B 1.3 53 Cell C 4.5 60 Cell D 1.4 51 Cell C 4.5 60 Cell D 1.4 51 Cell C 4.5 60 Cell D 1.4 51 Cell C 5.2 61 Cell D 2.6 54 Cell C 5.2 61 Cell D 2.6 54				Cell A	1.3	40
1710-1920 2.3,4,9,25,35, Cell A 2.2 5.2 5.2 5.2 5.2 5.3 Cell B 2.0 4.7 Cell C 2.2 4.8 Cell D 1.2 4.4 Cell A 3.7 5.6 Cell B 2.5 4.8 Cell D 2.5 4.8 Cell D 2.2 4.7 Cell D 2.2 4.7 Cell A 4.4 6.3 Cell B 1.3 5.3 Cell C 4.5 6.0 Cell D 1.4 5.1 Cell D 1.4 5.1 Cell D 1.4 5.1 Cell D 2.2 6.1 Cell D 2.2 6.1 Cell D 2.2 6.1 Cell D 2.2 6.1 Cell D 2.6 5.4 Cell D 2.6 Ce		1427-1518	11, 21, 74,75,76	Cell B	1.8	46
23,4,9,25,35,				Cell C	1.0	35
1710-1920 39,66 Cell B 2.0 47 Cell C 2.2 48 Cell D 1.2 44 Cell A 3.7 56 Cell B 2.5 48 Cell C 3.9 55 Cell D 2.2 47 Cell A 4.4 63 Cell B 1.3 53 Cell C 4.5 60 Cell D 1.4 51 Cell A 5.4 64 Cell A 5.4 64 Cell C 5.2 61 Cell C 5.2 61 Cell C 5.2 61 Cell D 2.6 54 Cell D 330 65 Cell D 2.6 54 Cell D 3.6 65 Cell D 3.7 66 Cell D 3.7 67 Cell D 3.7 66 Cell D 3.7 66 Cell D 3.7 67 Cell D 3.7 67 Cell D 3.7 67 Cell D 3.7 67 Cell D 3.7 Cell D 3.7 66 Cell D 3.7 Cell D				Cell D	1.5	45
Cell B 2.0 47 Cell C 2.2 48 Cell D 1.2 44 Cell A 3.7 56 Cell B 2.5 48 Cell C 3.9 55 Cell C 3.9 55 Cell D 2.2 47 Cell A 4.4 63 Cell B 1.3 53 Cell C 4.5 60 Cell D 1.4 51 Cell D 2.2 61 Cell C 5.2 61 Cell C 5.2 61 Cell C 5.2 61 Cell D 2.6 54 Cell D 3.0 65				Cell A	2.2	52
1920-2170 1,23		1710-1920		Cell B	2.0	47
1920-2170				Cell C	2.2	48
1920-2170 1,23 Cell B 2.5 48 Cell C 3.9 55 Cell D 2.2 47 Cell A 4.4 63 Cell B 1.3 53 Cell C 4.5 60 Cell D 1.4 51 Cell B 3.3 53 Cell C 4.5 60 Cell D 5.2 61 Cell C 5.2 61 Cell D 2.6 54 Cell D 5.2 61 Cell D 5.2 61 Cell D 63 Cell D 64 Cell D 65 Cell D 65 Cell D 65 Cell D 7,38,41				Cell D	1.2	44
2300-2400 2300-2400 30,40 Cell D 2.2 47 Cell A 4.4 63 Cell B 1.3 53 Cell C 4.5 60 Cell D 1.4 51 Cell B 3.3 53 Cell C 5.2 61 Cell D 5.2 61 Cell D 5.4 Cell C 5.2 61 Cell D 5.4 Cell C 5.2 61 Cell D 2.6 54 Cell D 2.6 65			1,23	Cell A	3.7	56
2300-2400 30,40 Cell D 2.2 47 Cell A 4.4 63 Cell B 1.3 53 Cell C 4.5 60 Cell D 1.4 51 Cell B 3.3 53 Cell C 5.2 61 Cell C 5.2 61 Cell D 2.6 54		1920-2170		Cell B	2.5	48
2300-2400 2300-2400 2496-2690 2496-2690 2496-2690 7,38,41 2496-2690 7,38,41 22,42,43,48,77, 78,79 22,42,43,48,77, 78,79 Cell A 4.4 63 Cell B 1.3 53 Cell C 4.5 60 Cell B 3.3 53 Cell C 5.2 61 Cell D 2.6 54 Cell B 4.5 47 Cell B 4.5 47 Cell C 4.9 62				Cell C	3.9	55
2300-2400				Cell D	2.2	47
Cell B 1.3 53 Cell C 4.5 60 Cell D 1.4 51 Cell A 5.4 64 Cell B 3.3 53 Cell C 5.2 61 Cell D 2.6 54 Cell D 2.6 54 Cell B 3.3 65 Cell D 2.6 54 Cell B 4.5 47 Cell B 4.5 47 Cell C 4.9 62			30,40	Cell A	4.4	63
2496-2690 7,38,41 Cell D 1.4 51 Cell A 5.4 64 Cell B 3.3 53 Cell C 5.2 61 Cell D 2.6 54 Cell D 2.6 54 Cell A 6.3 65 Cell B 4.5 47 Cell C 4.9 62		2300-2400		Cell B	1.3	53
2496-2690 7,38,41 Cell A 5.4 64 Cell B 3.3 53 Cell C 5.2 61 Cell D 2.6 54 Cell B 4.5 47 Cell B 4.5 47 Cell C 4.9 62				Cell C	4.5	60
2496-2690 7,38,41 Cell B 3.3 53 Cell C 5.2 61 Cell D 2.6 54 Cell A 6.3 65 Cell B 4.5 47 Cell C 4.9 62				Cell D	1.4	51
Cell B 3.3 53 Cell C 5.2 61 Cell D 2.6 54 Cell A 6.3 65 Cell B 4.5 47 Cell C 4.9 62				Cell A	5.4	64
Cell D 2.6 54 22,42,43,48,77, 78,79 Cell B 4.5 47 Cell C 4.9 62		2496-2690	7,38,41	Cell B	3.3	53
3300-4200				Cell C	5.2	61
3300-4200 22,42,43,48,77, 78,79 Cell B 4.5 47 Cell C 4.9 62				Cell D	2.6	54
78,79 Cell B 4.5 47 Cell C 4.9 62				Cell A	6.3	65
				Cell B	4.5	47
Cell D 4.4 47				Cell C	4.9	62
				Cell D	4.4	47

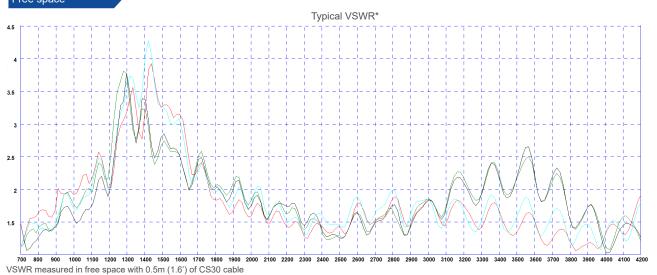
					Electrical Data - WiFi-Free Space
Measurement Conditions	WiFi Antenna	ıs			
LGADM4-7-42 measured in free space with 0.5m (1.6') CS30 Cable	Frequency Range (MHz)	WiFi Bands	Antenna Element	Peak Gain (dBi)	Efficiency (%)
			WiFi 1	3.6	60
	2396-2485	2.5GHz	WiFi 2	3.4	57
	5450 5050		WiFi 1	6.6	64
	5150-5250	UNII-1	WiFi 2	6.2	61
* * * * * * * * * * * * * * * * * * *	2		WiFi 1	6.3	63
	5250-5350	UNII-2A	WiFi 2	6.6	61
		UNII-2B	WiFi 1	6.1	61
4	5470-5725		WiFi 2	6.5	55
		UNII-3	WiFi 1	6.0	65
	5725-5900		WiFi 2	6.2	56
			WiFi 1	5.3	64
	5845-5885 UN	UNII-4	WiFi 2	5.5	55
		UNII-5	WiFi 1	5.3	63
	5935-6415		WiFi 2	5.3	57
			WiFi 1	5.4	61
	6435-6515	UNII-6	WiFi 2	5.5	60
			WiFi 1	5.2	57
	6535-6875	UNII-7	WiFi 2	6.2	58
			WiFi 1	4.8	51
	6875-7125	UNII-8	WiFi 2	5.6	58

WiFi 2

5.6

Electrical Data- Cell-Free space

L[X]A[X]M4-7-42[-X]



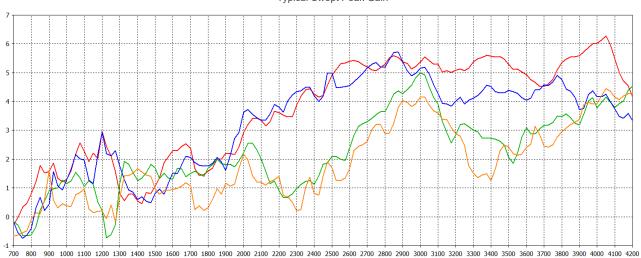
Typical Efficiency*

Typical Efficiency*

Typical Efficiency*

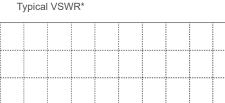
700 800 900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 2500 2600 2700 2800 2900 3000 3100 3200 3300 3400 3500 3600 3700 3800 3900 4000 4100 4200 *Efficiency measured in free space with 0.5m (1.6°) of CS30 cable

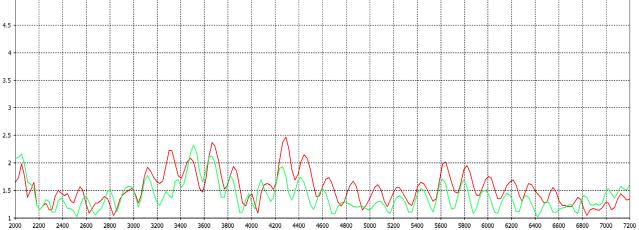
Typical Swept Peak Gain*



* Swept peak gain measured in free space with 0.5m (1.6') of CS30 cable

Electrical Data -WiFi-Free Space





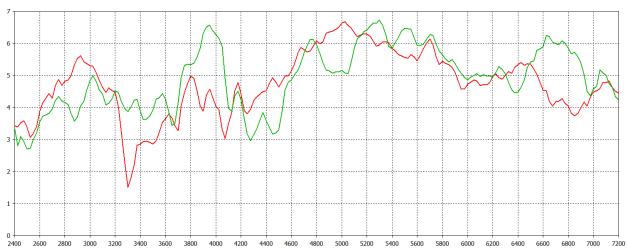
*VSWR measured in free space with 0.5m (1.6') of CS30 cable





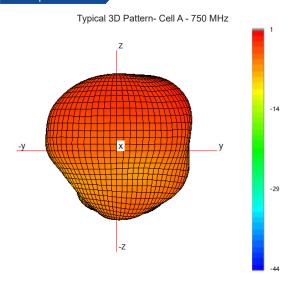
*Efficiency measured in free space with 0.5m (1.6') of CS30 cable

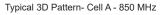
Typical Swept Peak Gain*

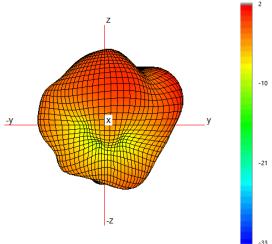


* Swept peak gain measured in free space with 0.5m (1.6') of CS30 cable

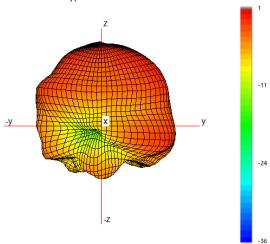
3D Pattern Data in Free Space Cell A



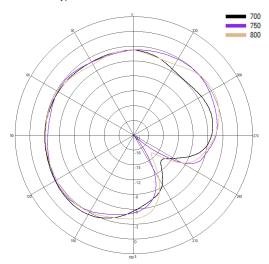




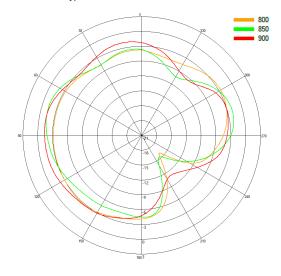
Typical 3D Pattern- Cell A - 1475 MHz



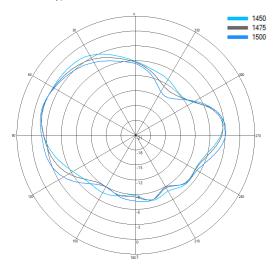
Typical H Plane- Cell A - Patterns- 700-800MHz



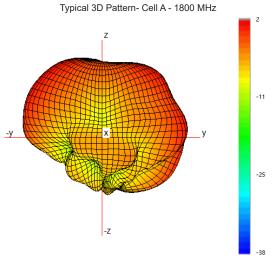
Typical H Plane- Cell A - Patterns- 800-900MHz

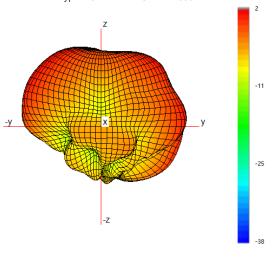


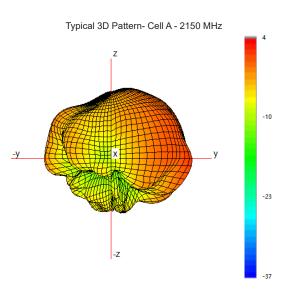
Typical H Plane- Cell A- Patterns- 1450-1500 MHz

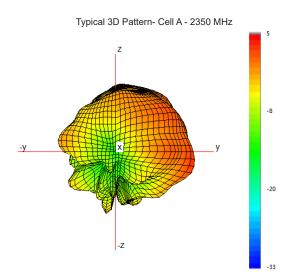


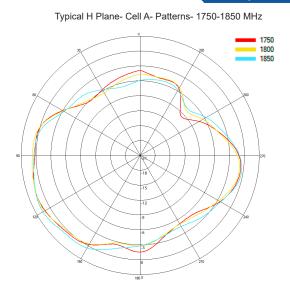
3D Pattern Data in Free Space Cell A

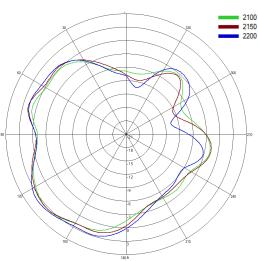




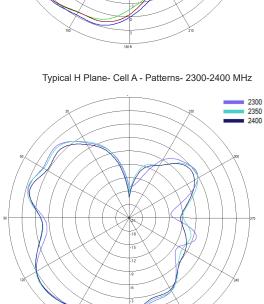




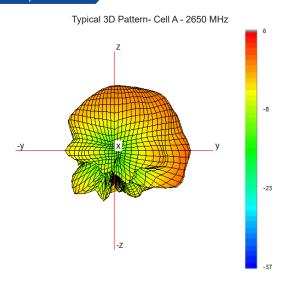


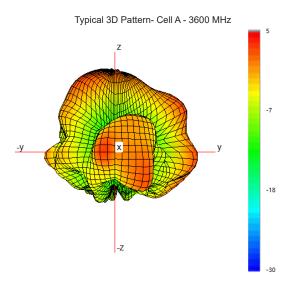


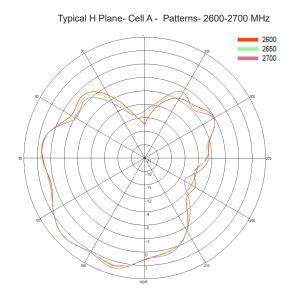
Typical H Plane- Cell A- Patterns- 2100-2200 MHz

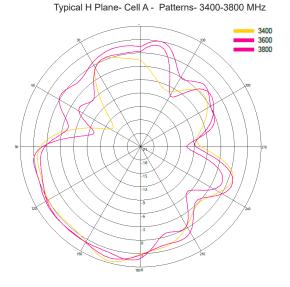


3D Pattern Data in Free Space Cell A

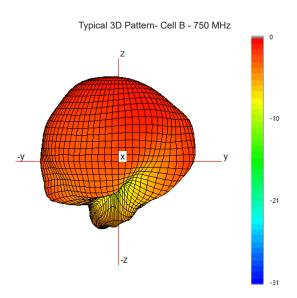


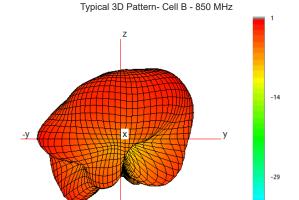


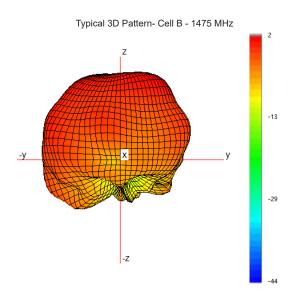


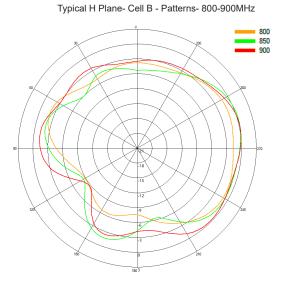


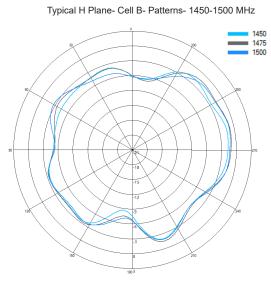
3D Pattern Data in Free Space Cell B



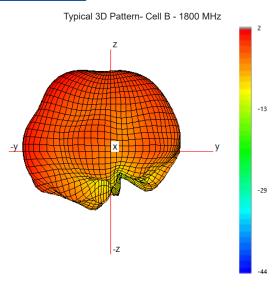


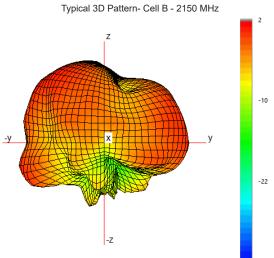


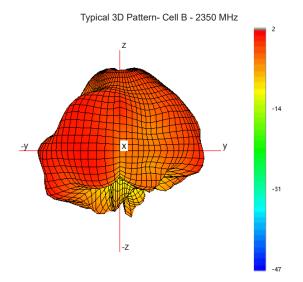


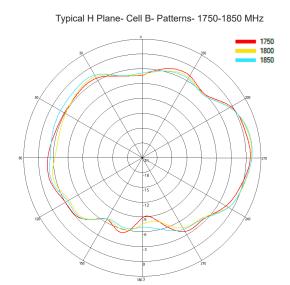


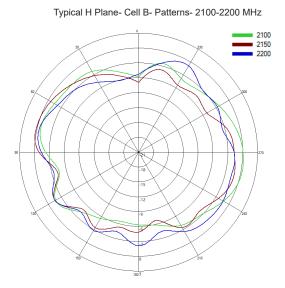
3D Pattern Data in Free Space Cell B

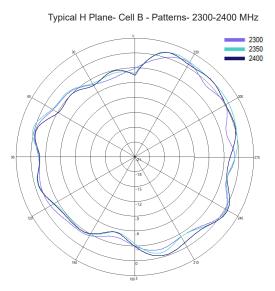




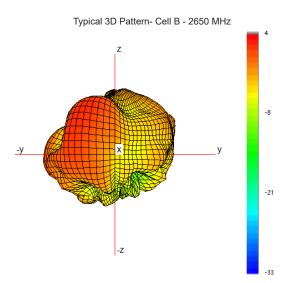


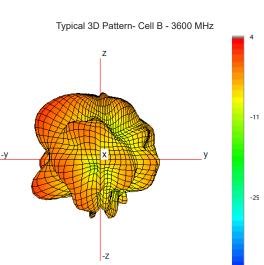


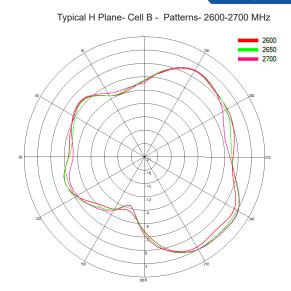


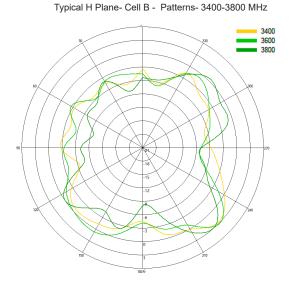


3D Pattern Data in Free Space Cell B

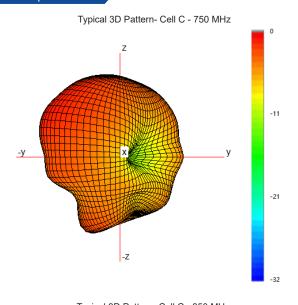


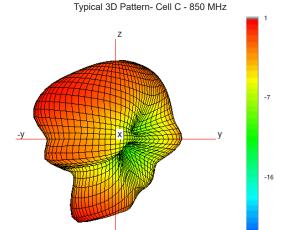


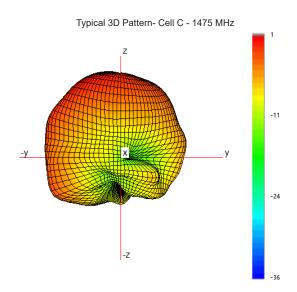




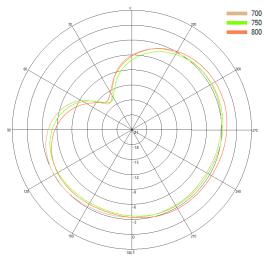
3D Pattern Data in Free Space Cell C



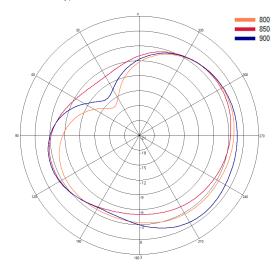




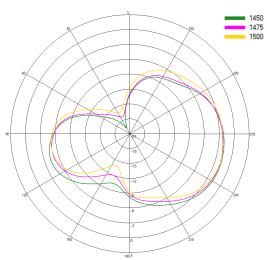
Typical H Plane- Cell C - Patterns- 700-800MHz



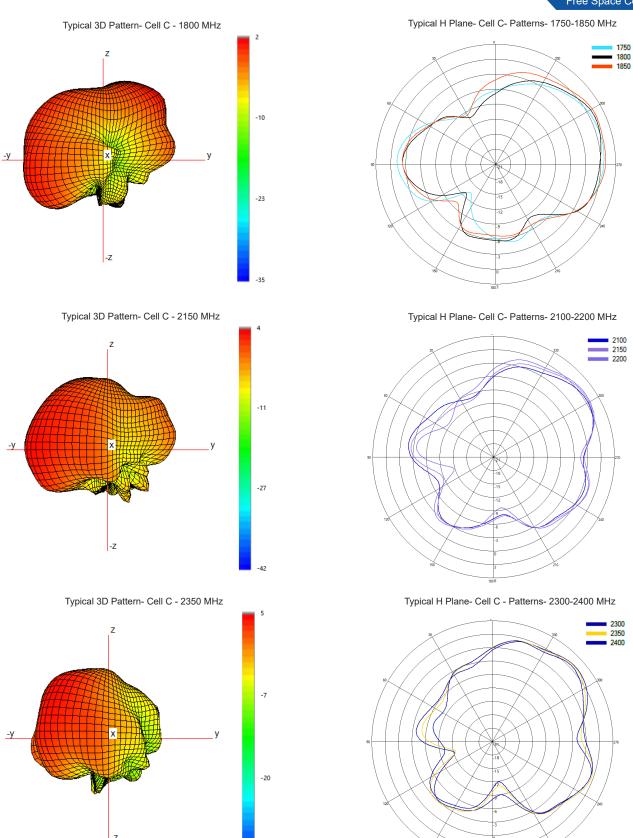
Typical H Plane- Cell C - Patterns- 800-900MHz



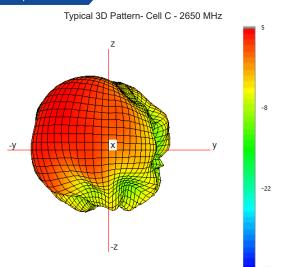
Typical H Plane- Cell C- Patterns- 1450-1500 MHz

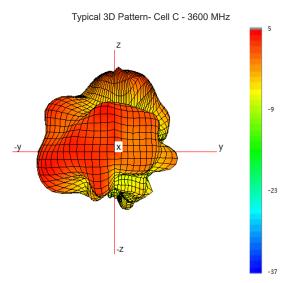


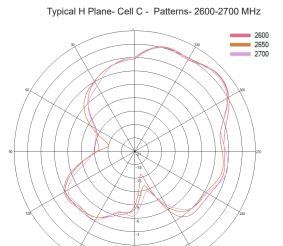
3D Pattern Data in Free Space Cell C

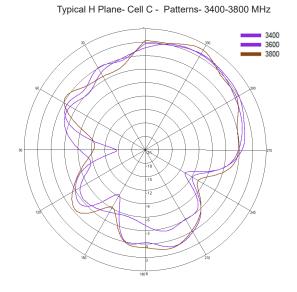


3D Pattern Data in Free Space Cell C

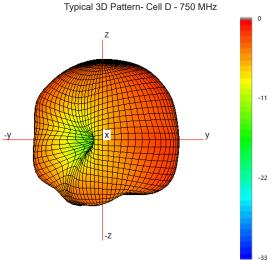


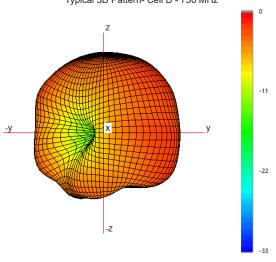


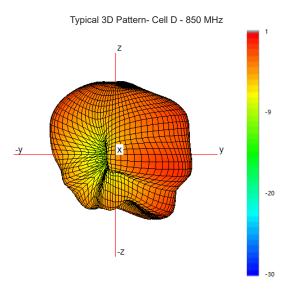


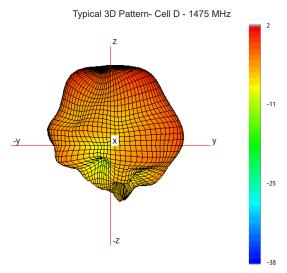


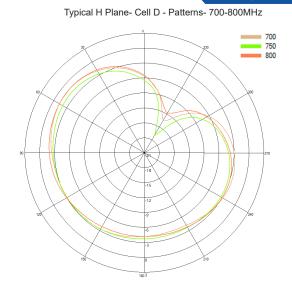
3D Pattern Data in Free Space Cell D

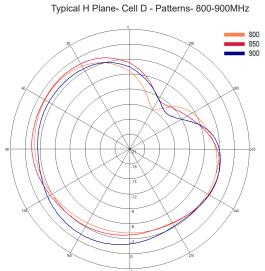


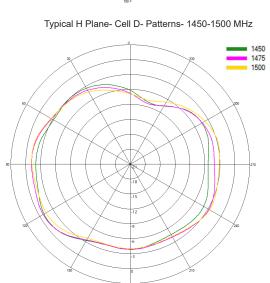




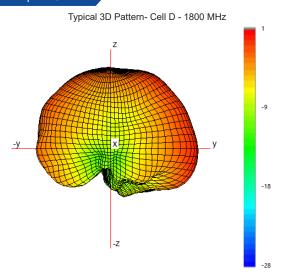


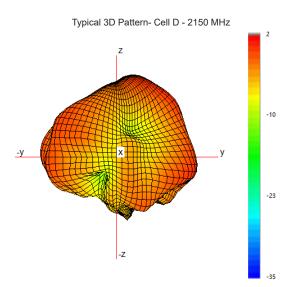


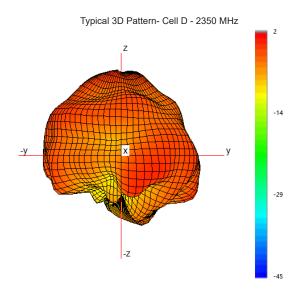




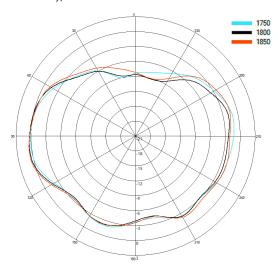
3D Pattern Data in Free Space Cell D



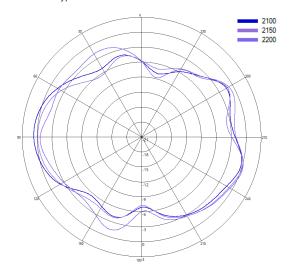




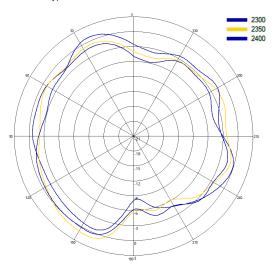
Typical H Plane- Cell D- Patterns- 1750-1850 MHz



Typical H Plane- Cell D- Patterns- 2100-2200 MHz

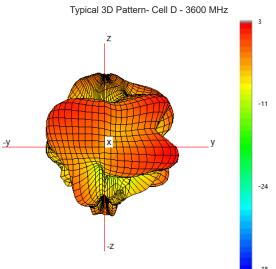


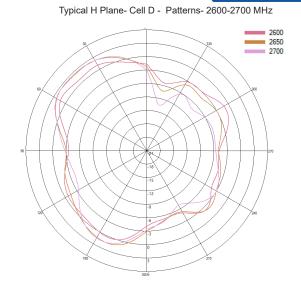
Typical H Plane- Cell D - Patterns- 2300-2400 MHz

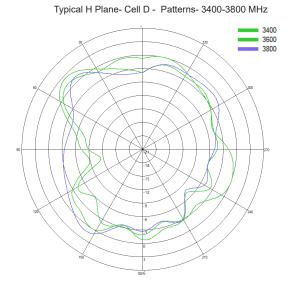


3D Pattern Data in Free Space Cell D

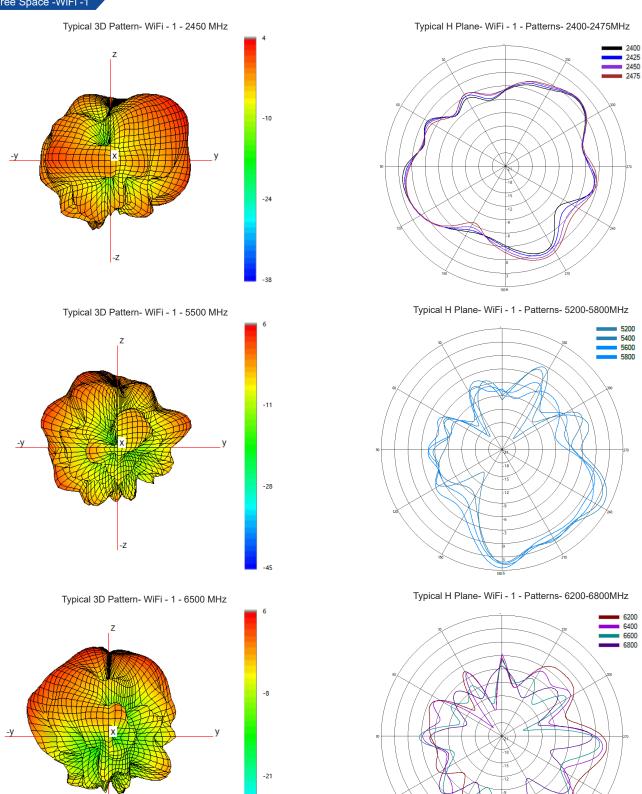
Typical 3D Pattern- Cell D - 2650 MHz -10 -23 -Z





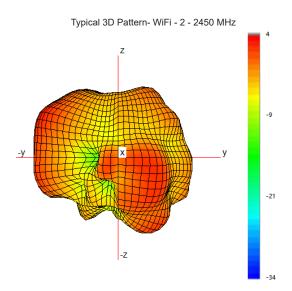


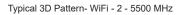
WiFi Pattern-Data in Free Space -WiFi -1

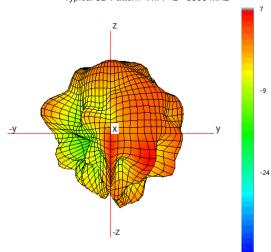


-Z

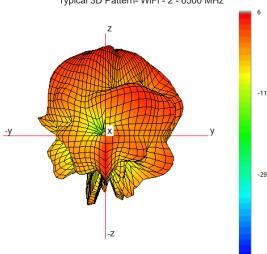
WiFi Pattern-Data in Free Space -WiFi -2





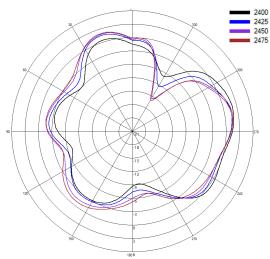


Typical 3D Pattern- WiFi - 2 - 6500 MHz

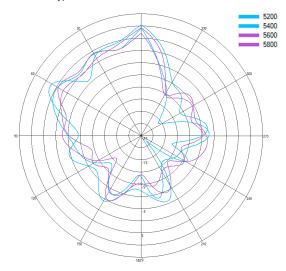


Panorama Antennas Ltd Frogmore, London, SW18 1HF, United Kingdom T: +44 (0)20 8877 4444 |F: +44 (0)20 8877 4477 E: sales@panorama-antennas.com W: www.panorama-antennas.com

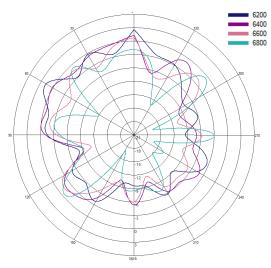
Typical H Plane- WiFi - 2 - Patterns- 2400-2475MHz



Typical H Plane- WiFi - 2 - Patterns- 5200-5800MHz



Typical H Plane- WiFi - 2 - Patterns- 6200-6800MHz



4X4 MiMo 4G/5G IOT AntennaL[X]A[X]M4-7-42[-X]



Electrical Data Cell on Ground Plane

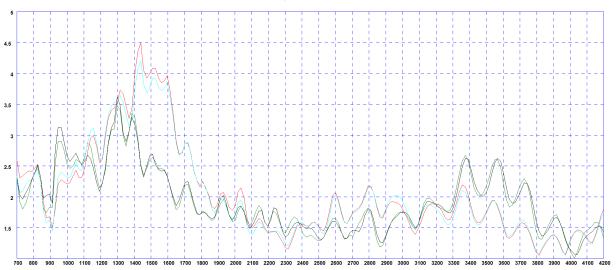
Measurement Conditions	4G/5G Antenr	nas			
LGADM4-7-42 measured on 400x400mm (1.3'x1.3')	Frequency Range		Antenna	Peak Gain (dBi)	Efficiency (%)
ground plane with 0.5m (1.6') CS30 Cable	(MHz)		Element Cell A	3.5	44
MARIN WALLER	699-798	12,13, 14 17,28	Cell B	3.0	46
			Cell C	3.7	40
			Cell D	2.4	46
			Cell A	3.8	46
	807- 862	5,19,20,26,27	Cell B	4.0	49
The state of the s			Cell C	3.5	43
			Cell D	3.9	50
			Cell A	4.2	64
	880-960	8	Cell B	4.2	55
			Cell C	4.5	59
			Cell D	3.9	56
			Cell A	3.3	31
	1427-1518	11, 21, 74,75,76	Cell B	4.4	47
			Cell C	3.3	35
	1		Cell D	4.1	46
		2,3,4,9,25,35, 39,66	Cell A	5.6	54
	1710-1920		Cell B	4.8	47
			Cell C	5.0	49
			Cell D	4.4	47
	1920-2170	1,23	Cell A	7.6	61
			Cell B	5.9	49
			Cell C	7.1	58
			Cell D	5.2	49
		30,40	Cell A	8.6	64
	2300-2400		Cell B	6.1	49
			Cell C	7.8	61
			Cell D	5.5	51
	0.400,0000	7.00.44	Cell A	7.8	57
	2496-2690	7,38,41	Cell B	7.2	56
			Cell C	7.5	59
			Cell D	6.5	54
	2200 4200	22,42,43,48,77,	Cell A	6.9	61
	3300-4200	78,79	Cell B	6.8	49
			Cell C	7.1	61
			Cell D	6.6	49

Electrical Data WiFi on Ground Plane

Measurement Conditions	WiFi Antenna	S			
LGADM4-7-42 measured on 400x400mm (1.3'x1.3') ground plane with 0.5m (1.6') CS30 Cable	Frequency Range (MHz)	WiFi Bands	Antenna Element	Peak Gain (dBi)	Efficiency (%)
SERVINA MATARIE	2396-2485	2.5GHz	WiFi 1	5.7	55
			WiFi 2	5.6	47
			WiFi 1	7.8	57
	5150-5250	UNII-1	WiFi 2	8.1	59
	5050 5050	UNII-2A	WiFi 1	8.0	57
	5250-5350	UNII-2A	WiFi 2	8.6	60
*	5470 5705	LINIU OD	WiFi 1	6.7	55
	5470-5725	UNII-2B	WiFi 2	7.0	52
	5725-5900	UNII-3	WiFi 1	5.9	60
			WiFi 2	6.6	55
	5845-5885	UNII-4	WiFi 1	5.8	58
			WiFi 2	6.0	53
	5935-6415	UNII-5	WiFi 1	7.8	60
			WiFi 2	6.8	57
			WiFi 1	7.3	60
	6435-6515	UNII-6	WiFi 2	6.4	58
	0505 0075	118111.7	WiFi 1	5.9	62
	6535-6875	UNII-7	WiFi 2	5.8	58
			WiFi 1	5.7	59
	6875-7125	UNII-8	WiFi 2	5.5	56

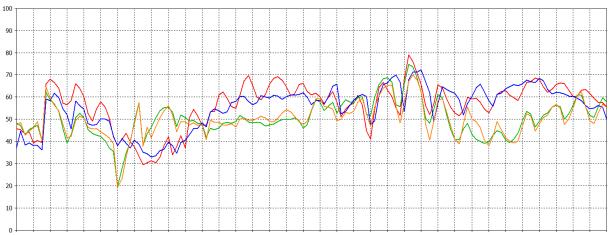
Electrical Data Cell on Ground Plane

Typical VSWR*

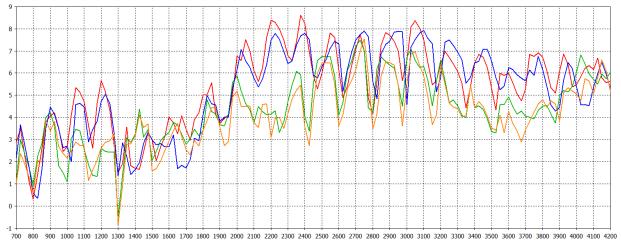


*VSWR measured on a 400x400mm (1.3'x1.3') ground plane with 0.5m (1.6') of CS30 cable

Typical Efficiency*



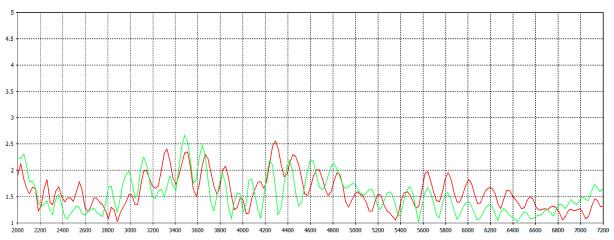
Typical Swept Peak Gain*



^{*} Swept peak gain measured on a 400x400mm (1.3'x1.3') ground plane with 0.5m (1.6') of CS30 cable

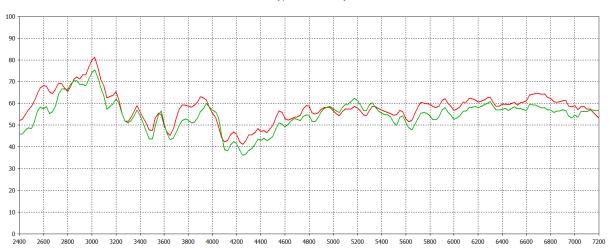
Electrical Data WiFi on Ground Plane

Typical VSWR*



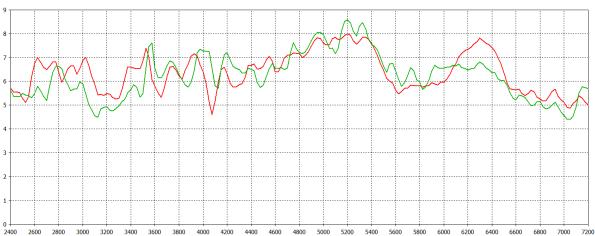
*VSWR measured on a 400x400mm (1.3'x1.3') ground plane with 0.5m (1.6') of CS30 cable

Typical Efficiency*



*Efficiency measured on a 400x400mm (1.3'x1.3') ground plane with 0.5m (1.6') of CS30 cable

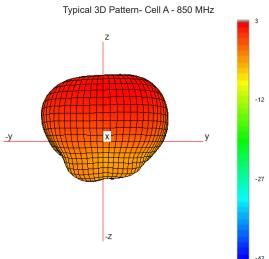
Typical Swept Peak Gain*

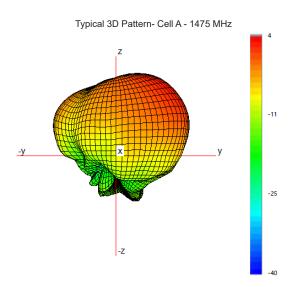


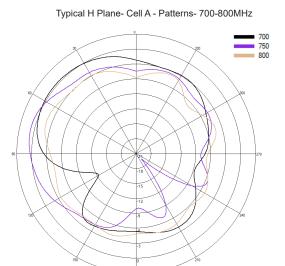
* Swept peak gain measured on a 400x400mm (1.3'x1.3') ground plane with 0.5m (1.6') of CS30 cable

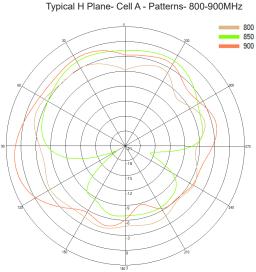
3D Pattern Data on Ground Plane Cell A

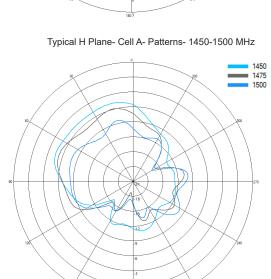
Typical 3D Pattern- Cell A - 750 MHz -13 Х -30





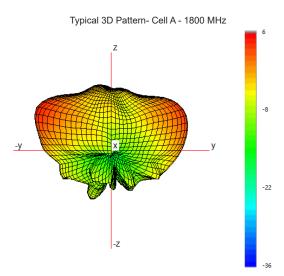


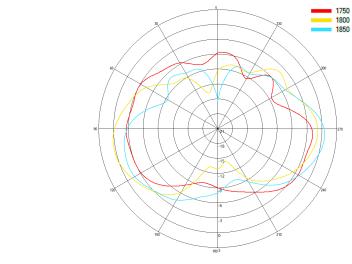


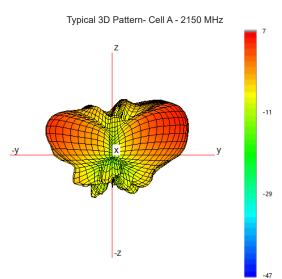


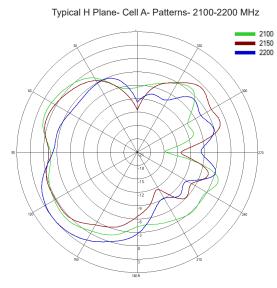
Typical H Plane- Cell A- Patterns- 1750-1850 MHz

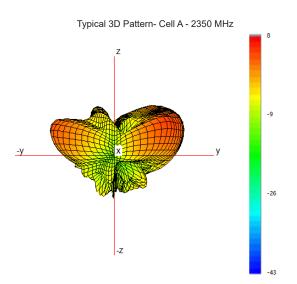
3D Pattern Data on Ground Plane Cell A

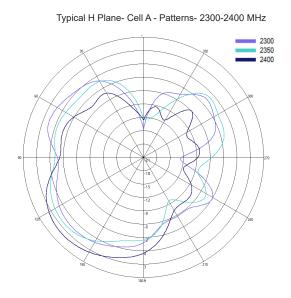








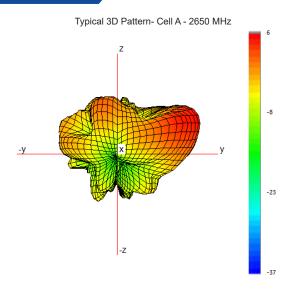


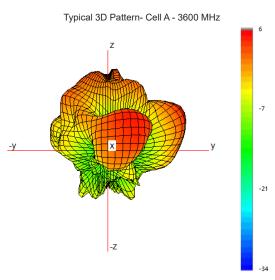


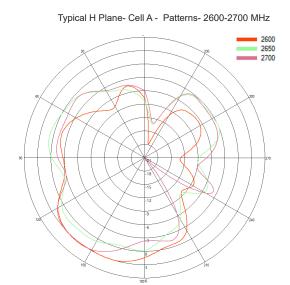
Panorama Antennas Ltd Frogmore, London, SW18 1HF, United Kingdom T: 44 (0)20 8877 4444 | F: 444 (0)20 8877 4477 E: sales@panorama-antennas.com W: www.panorama-antennas.com

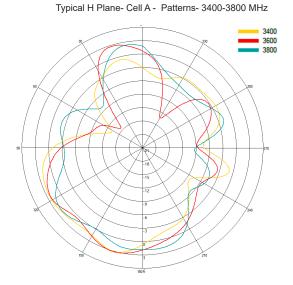
 $L[X]A[X]M4-7-42[-X] -29/09/2023 \quad \ \ V2 \qquad \qquad \begin{array}{c} \text{conditions and do spin} \\ \text{spin} \end{array}$

3D Pattern Data on Ground Plane Cell A

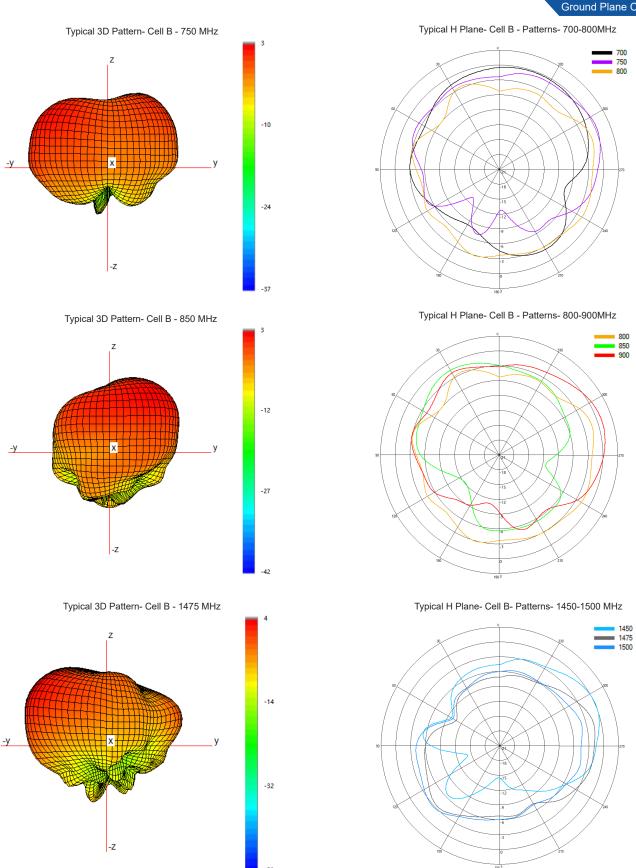




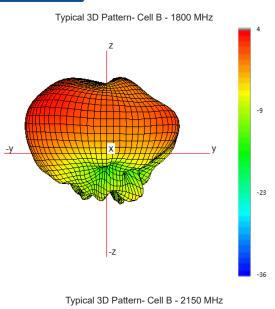


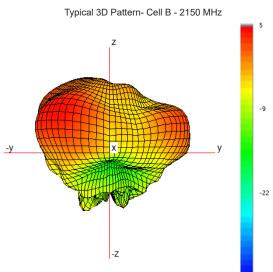


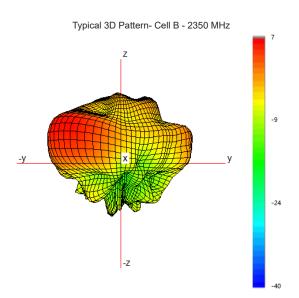
3D Pattern Data on Ground Plane Cell B

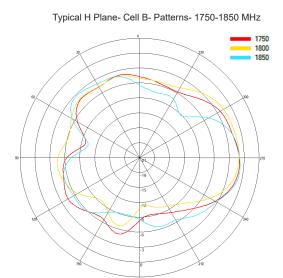


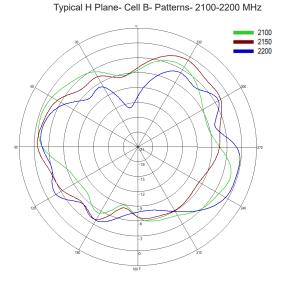
3D Pattern Data on Ground Plane Cell B

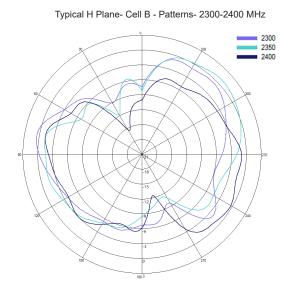




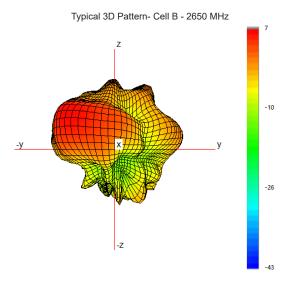


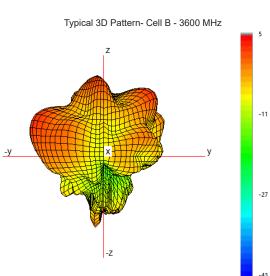


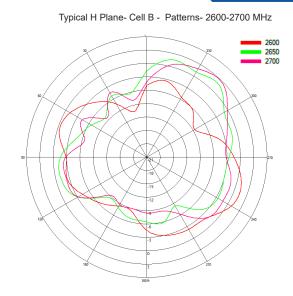


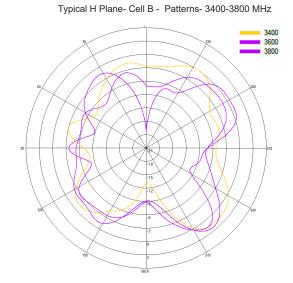


3D Pattern Data on Ground Plane Cell B

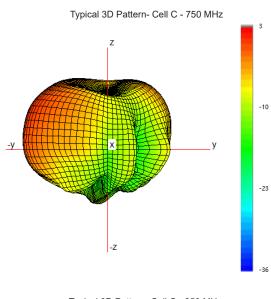


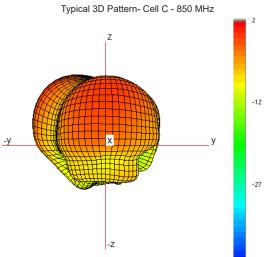


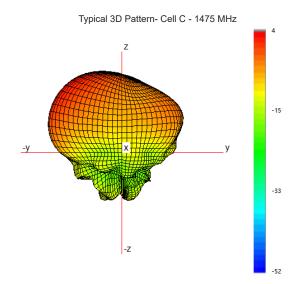


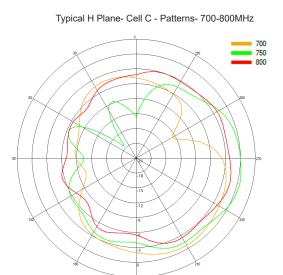


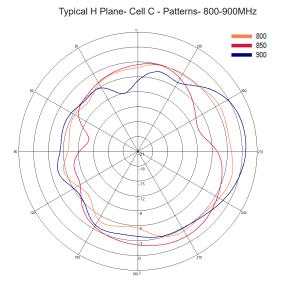
3D Pattern Data on Ground Plane Cell C

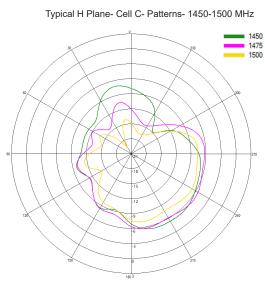




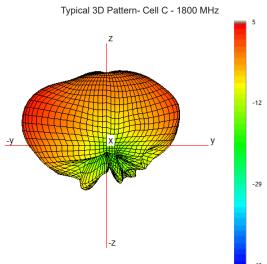


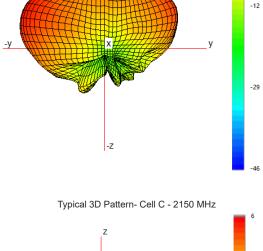


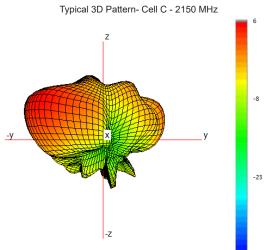


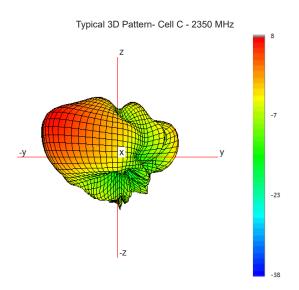


3D Pattern Data on Ground Plane Cell C

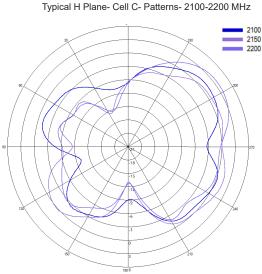


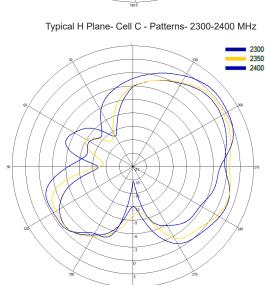




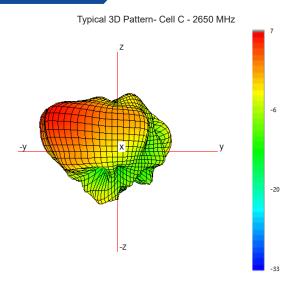


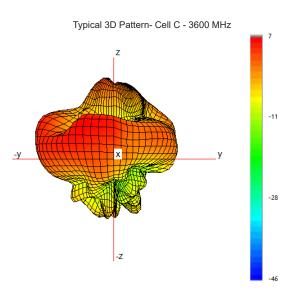
Typical H Plane- Cell C- Patterns- 1750-1850 MHz 1750 1800 1850

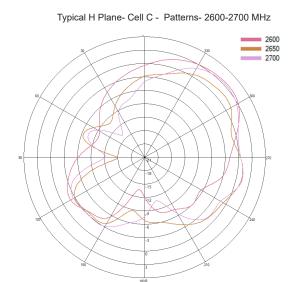


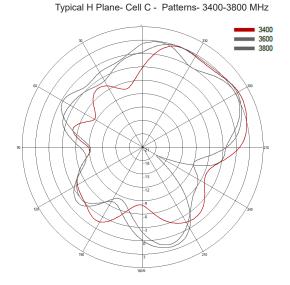


3D Pattern Data on Ground Plane Cell C

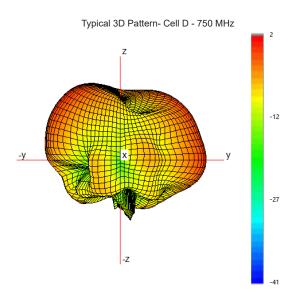


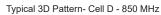


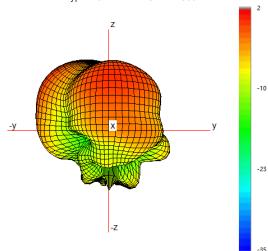




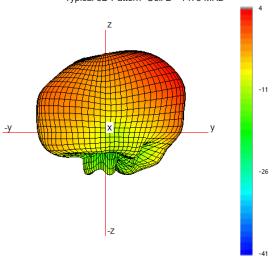
3D Pattern Data on Ground Plane Cell D



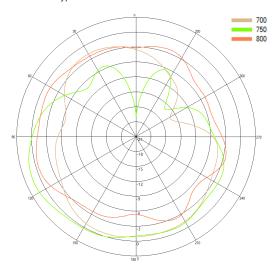




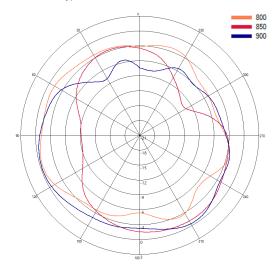
Typical 3D Pattern- Cell D - 1475 MHz



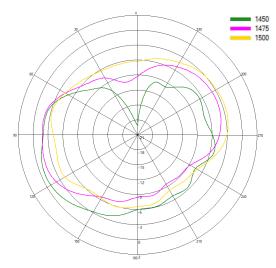
Typical H Plane- Cell D - Patterns- 700-800MHz



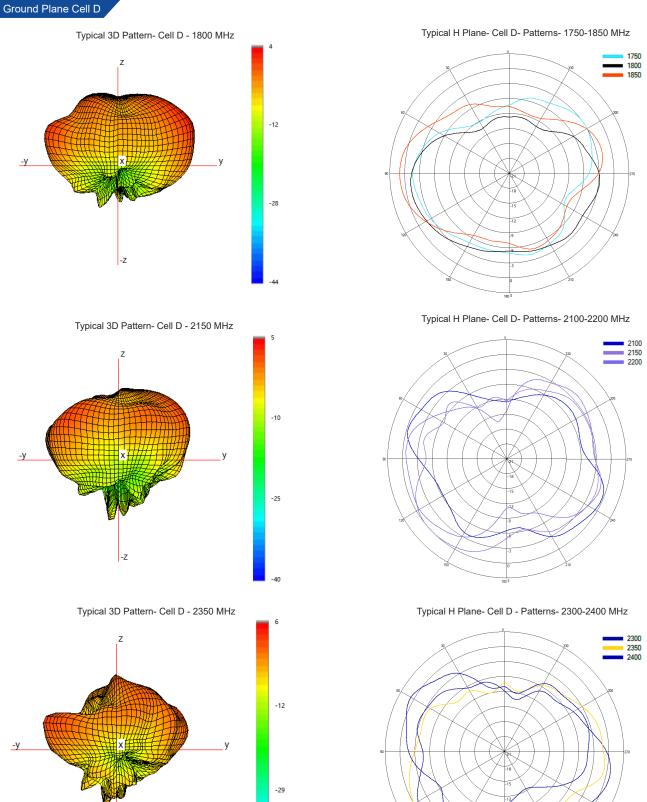
Typical H Plane- Cell D - Patterns- 800-900MHz



Typical H Plane- Cell D- Patterns- 1450-1500 MHz



3D Pattern Data on



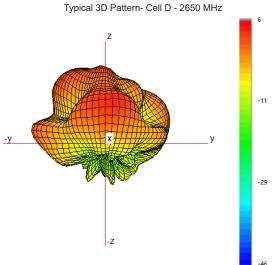
Panorama Antennas Ltd Frogmore, London, SW18 1HF, United Kingdom T: +44 (0)20 8877 4444 | F: +44 (0)20 8877 4477 E: sales@panorama-antennas.com W: www.panorama-antennas.com

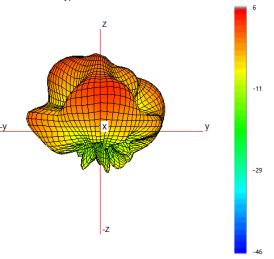
L[X]A[X]M4-7-42[-X] -29/09/2023 V2

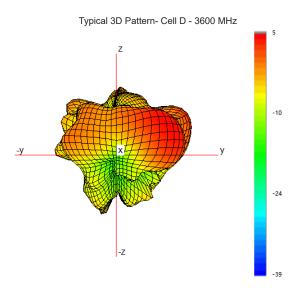
Waiver: The data given above is indicative of the performance of the product/s under particular conditions and does not imply a guarantee of performance. These specifications are subject to change without notice.

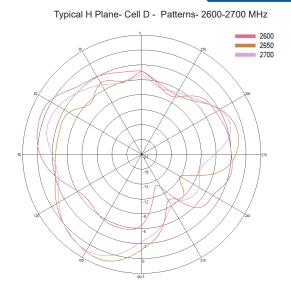
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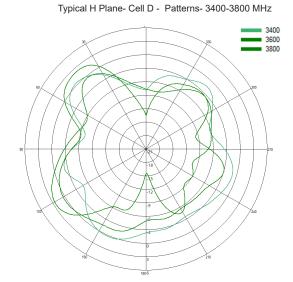
3D Pattern Data on Ground Plane Cell D



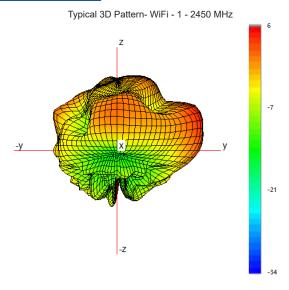


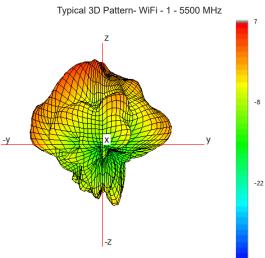


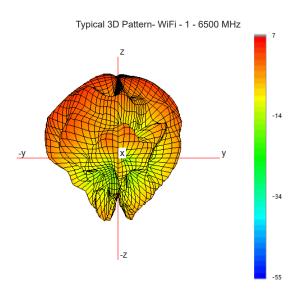


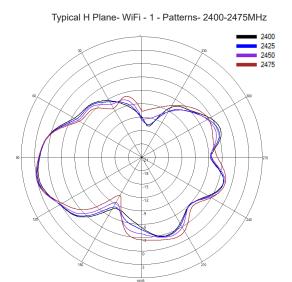


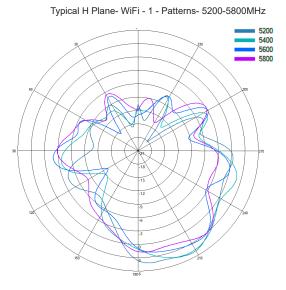
WiFi Pattern-Data on Ground Plane -WiFi -1

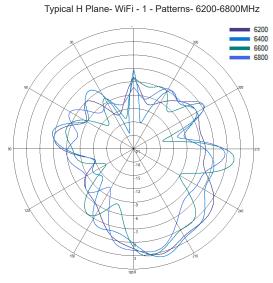




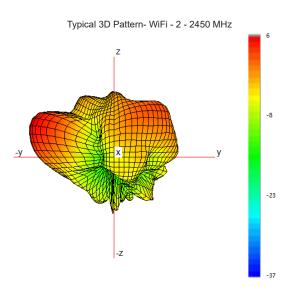


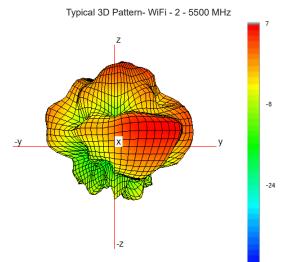


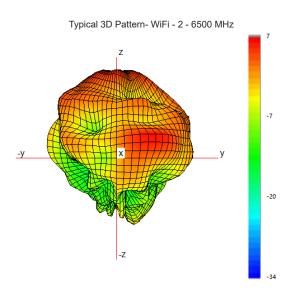


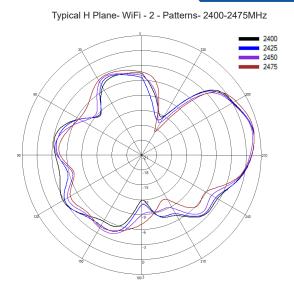


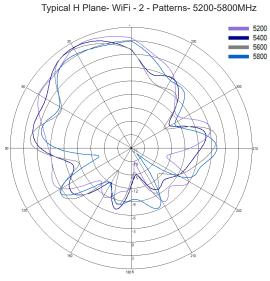
WiFi Pattern-Data on Ground Plane -WiFi -2

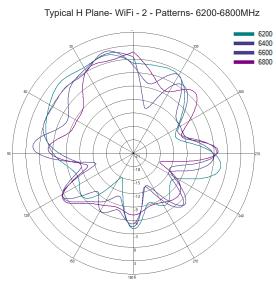






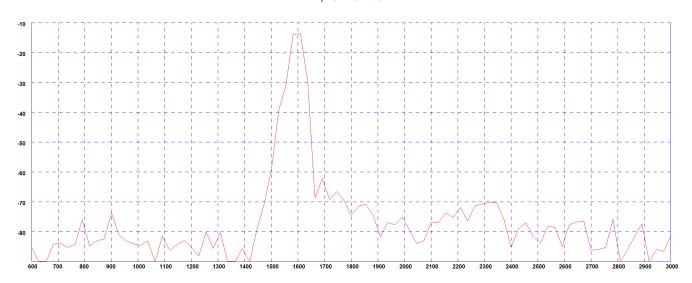






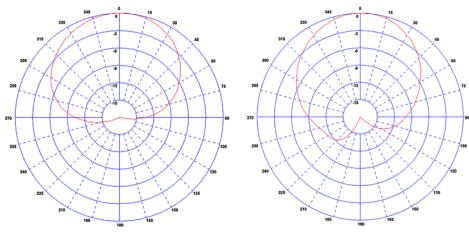
Electrical Data- L1 GPS/GNSS

Swept Gain GPS/GNSS



Typical E Plane Pattern - GPS/GNSS 1575 MHz

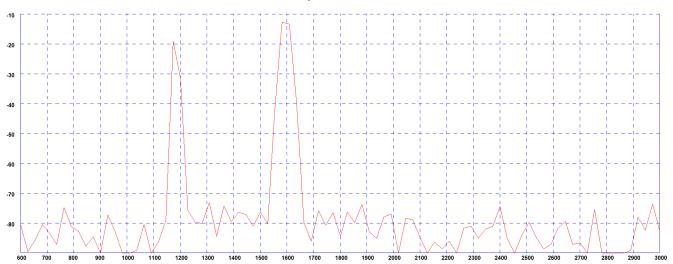
Typical E Plane Pattern - GPS/GNSS 1602 MHz



GPS/GNSS Measurements taken on 190x190mm (7.4" x 7.4") ground plane excluding cable loss

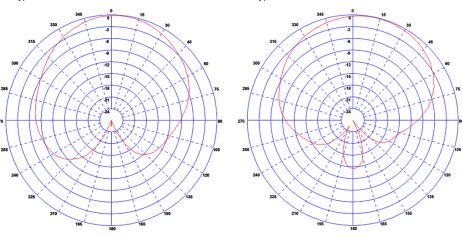
Electrical Data- L1/L5 GPS/GNSS

Swept Gain GPS/GNSS

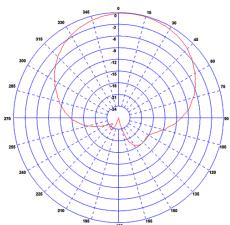


Typical E Plane Pattern - GPS/GNSS 1575 MHz

Typical E Plane Pattern - GPS/GNSS 1602 MHz



Typical E Plane Pattern - GPS/GNSS 1176 MHz



GPS/GNSS Measurements taken on 190x190mm (7.4" x 7.4") ground plane excluding cable loss