

Shenzhen Etheta Communication
Technology Co., Ltd.
(Shenzhen R&D)

Customer: TCL Communication Ltd.

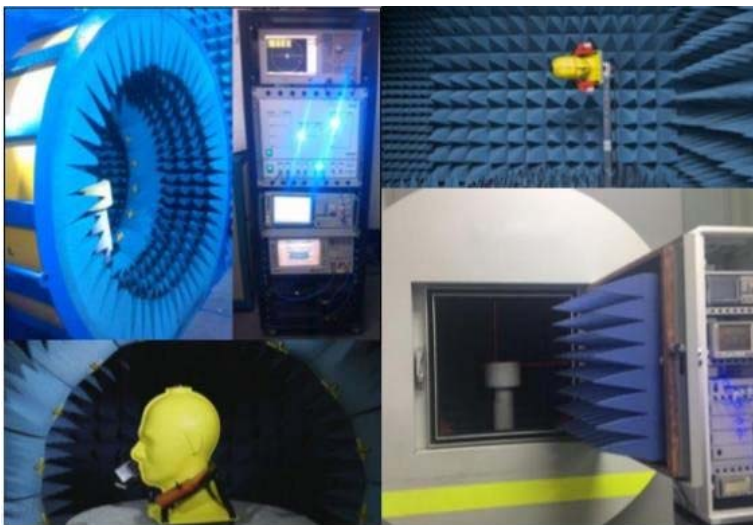
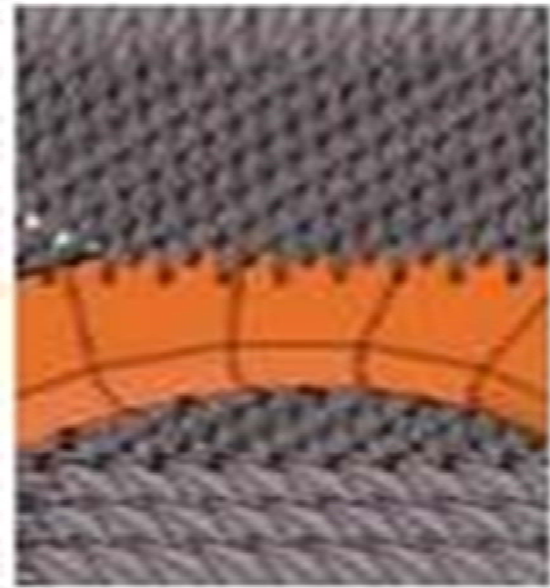
Project name: T430W

Product name: T430W- cellular &wifi antenna

Material: FPC

Date: 2022.10.17

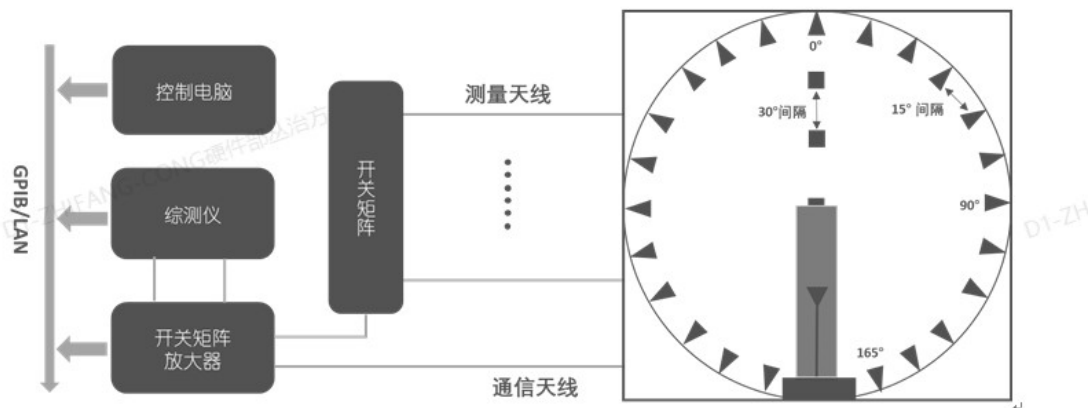
1: chamber room introduction and testing scope



Our company has a number of OTA test darkrooms, ranging from 400MHz to 8.5ghz, which can provide passive test and active test (including OTA overall 2G,3G,4G,5GFR test, WiFi multi-mode test, GPS active test, Bluetooth active test, which can provide antenna gain and efficiency. 2D orientation and apple chart analysis and upper and lower hemisphere efficiency values, mutual disturbance correlation coefficient test items

WIFI a/b/g/n/ac/a

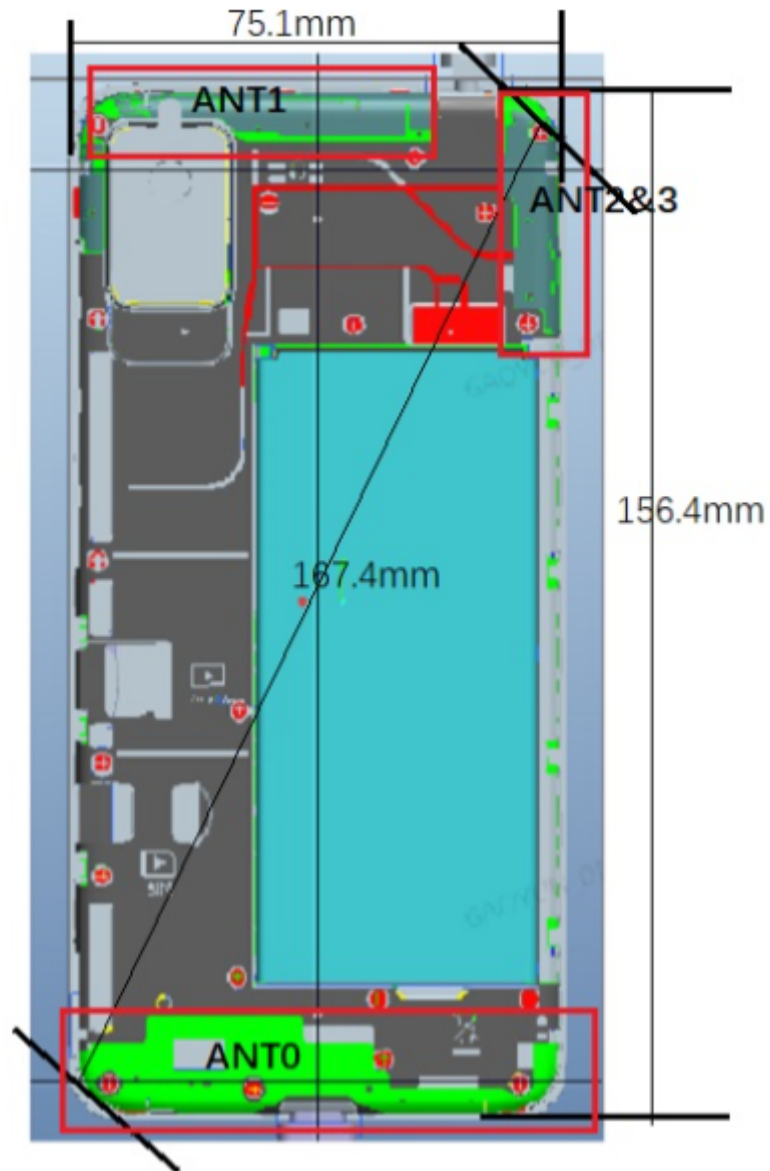
2: test system introduction:



The figure above shows the connection and control process between the darkroom of our company and the testing system and computer. The testing system has the characteristics of accurate, fast and simple testing
The operation interface is simple and humanized

3: Test result

Antenna placement:



ANT1_800M			
Frequency (MHz)	AVG Gain	efficiency (%)	Peak Gain
800	-3.66	40%	-3.49
810	-3.72	40%	-3.56
820	-3.88	38%	-3.69
830	-3.97	38%	-3.67
840	-4.16	36%	-3.74

850	-4.49	34%	-3.98
860	-5.12	30%	-4.32
870	-5.79	25%	-4.93
880	-6.56	21%	-5.56
890	-7.23	18%	-6.18
900	-8.14	15%	-7.27
910	-9.41	11%	-8
AVG	-5.51	29%	-3.49

ANT1_700M			
Frequency (MHz)	AVG Gain	efficiency (%)	Peak Gain
700	-4.45	35%	-2.4
710	-4.97	32%	-2.73
720	-6.22	24%	-3.52
730	-6.23	24%	-3.83
740	-5.79	26%	-3.51
750	-8.45	14%	-5.43
760	-7.10	19%	-4.86
770	-6.78	21%	-4.47
780	-6.96	19%	-4.78
790	-7.46	17%	-5.07
800	-7.85	16%	-5.33
AVG	-6.57	23%	-4.17

ANT1_650M			
Frequency (MHz)	AVG Gain	efficiency (%)	Peak Gain
600	-4.25	35%	-4.44
610	-3.86	38%	-4.43
620	-3.94	38%	-4.57
630	-4.04	37%	-4.58
640	-4.03	37%	-4.64
650	-4.23	35%	-4.59
660	-4.24	36%	-4.4
670	-4.25	36%	-4.39
680	-4.67	33%	-4.58
690	-5.14	30%	-4.83
700	-5.52	28%	-5.09
AVG	-4.38	35%	-4.6

ANT2_1575M			
Frequency (MHz)	AVG Gain	efficiency (%)	Peak Gain
1550	-3.09	53%	-5
1560	-2.86	56%	-4.69
1570	-2.69	58%	-4.5
1580	-2.57	59%	-4.34
1590	-2.56	59%	-4.33
1600	-2.46	60%	-4.19
1610	-2.39	61%	-4.09
1620	-2.39	61%	-4.08
1630	-2.42	60%	-4.16
1640	-2.44	59%	-4.29
1650	-2.52	57%	-4.43
1660	-2.64	55%	-4.58
AVG	-3.06	50%	-4.92

ANT2_2500M			
Frequency (MHz)	AVG Gain	efficiency (%)	Peak Gain
2400	-7.01	28%	-3.48
2410	-6.96	28%	-3.47
2420	-7.00	28%	-3.58
2430	-6.77	29%	-3.46
2440	-6.61	29%	-3.34
2450	-6.42	30%	-3.35
2460	-6.18	31%	-3.15
2470	-6.05	32%	-3.13
2480	-5.98	32%	-3.1
2490	-5.98	32%	-3.15
2500	-6.01	32%	-3.23
AVG	-6.45	30%	-3.31

ANT2_5000M			
Frequency (MHz)	AVG Gain	efficiency (%)	Peak Gain
5150	-5.59	33%	-4.42
5200	-5.40	35%	-4.11
5250	-5.34	36%	-4.06

5300	-5.27	37%	-3.74
5350	-5.11	39%	-3.34
5400	-4.99	40%	-2.98
5450	-4.84	42%	-2.46
5500	-4.85	42%	-2.21
5550	-4.56	44%	-2.2
5600	-4.55	44%	-2.55
5650	-4.60	44%	-2.7
5700	-4.80	42%	-2.99
5750	-4.86	42%	-3.07
5800	-4.99	41%	-3.33
5850	-5.39	37%	-4.27
AVG	-5.01	40%	-3.23

ANTO_1700M			
Frequency (MHz)	AVG Gain	efficiency (%)	Peak Gain
1700	-5.39	31%	-5.3
1720	-5.02	33%	-5.09
1740	-4.70	36%	-4.56
1760	-4.38	38%	-4.04
1770	-4.24	40%	-3.64
1780	-4.10	41%	-3.23
1800	-4.03	42%	-2.95
1820	-4.04	42%	-2.84
1840	-4.06	41%	-2.71
1860	-4.11	40%	-2.61
1880	-4.04	41%	-2.26
AVG	-4.37	-39%	-3.56

ANTO_1900M			
Frequency (MHz)	AVG Gain	efficiency (%)	Peak Gain
1880	-3.4	45.71	-1.6
1890	-3.53	44.37	-1.64
1900	-3.48	44.86	-1.54
1910	-3.56	44.03	-1.65
1920	-3.55	44.16	-1.63
1930	-3.6	43.61	-1.67
1940	-3.73	42.33	-1.78
1950	-3.75	42.17	-1.84

1960	-3.78	41.83	-2
1970	-3.86	41.08	-2.07
1980	-3.93	40.46	-2.31
1990	-4.02	39.63	-2.47
AVG	-3.68	42.85	-1.85

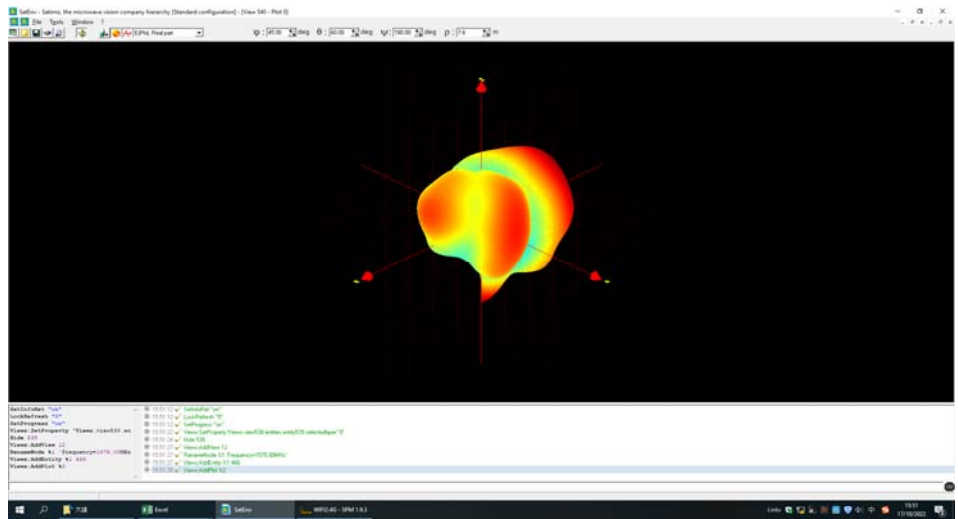
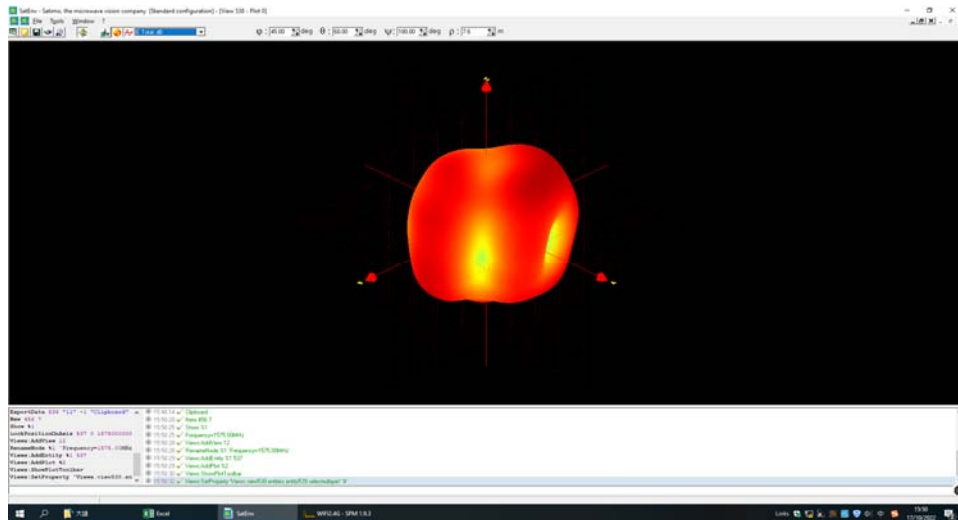
ANTO_2500M			
2500	-3.51	49%	-1.36
2520	-3.74	47%	-1.62
2540	-3.94	45%	-1.86
2560	-4.13	43%	-1.92
2580	-5.23	35%	-1.77
2600	-5.39	31%	-3.27
2620	-5.02	33%	-3.06
2640	-4.70	36%	-2.53
2660	-4.38	38%	-2.01
2680	-4.24	40%	-1.61
2700	-4.10	41%	-1.2
AVG	-4.39	40%	-2.02

ANTO_800M			
Frequency (MHz)	AVG Gain	efficiency (%)	Peak Gain
800	-5.80	24%	-4.41
810	-5.85	24%	-4.4
820	-5.82	24%	-4.21
830	-6.22	22%	-4.13
840	-5.92	24%	-4
850	-5.81	25%	-3.79
860	-5.92	24%	-3.57
870	-5.99	24%	-3.49
880	-6.25	23%	-3.6
890	-6.35	22%	-3.55
900	-6.58	21%	-3.72
910	-6.89	20%	-3.88
AVG	-6.12	23%	-3.9

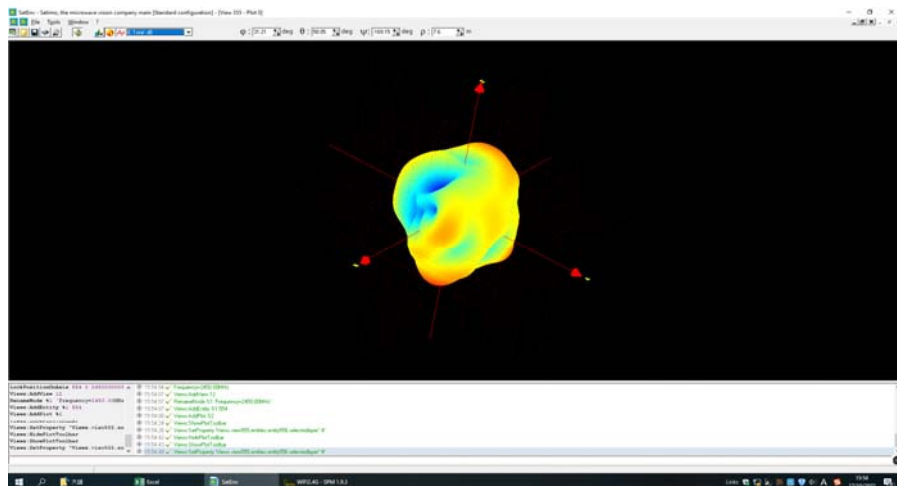
3D Pattern

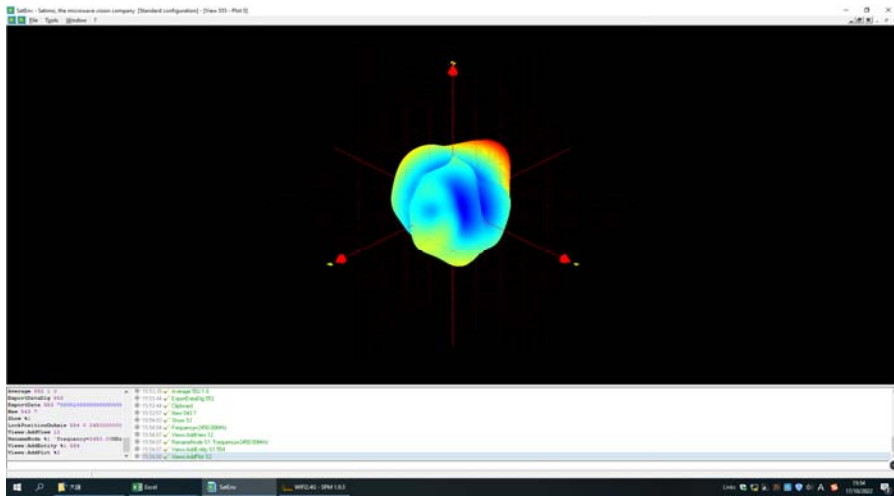
ANT 1_800M (Frequency=840MHz)

ANT 2_ 1500M (Frequency=1575MHz)

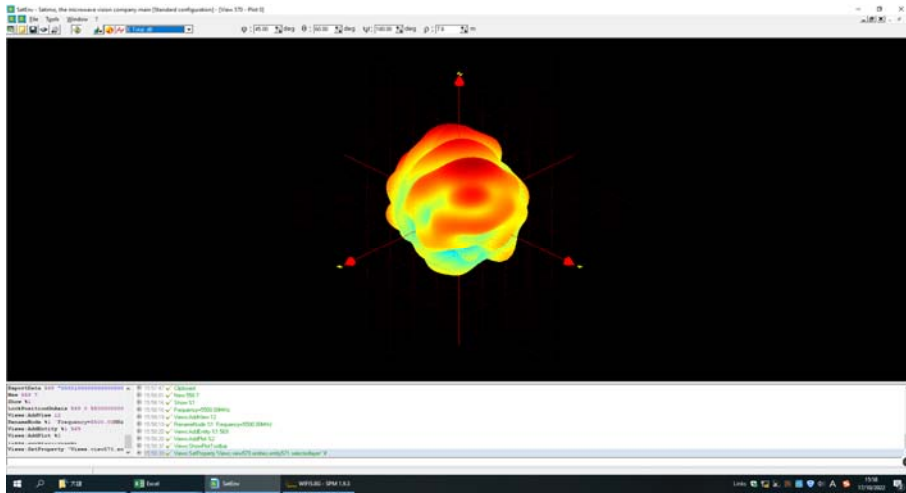


ANT 2_ 2500M (Frequency=2450MHz)

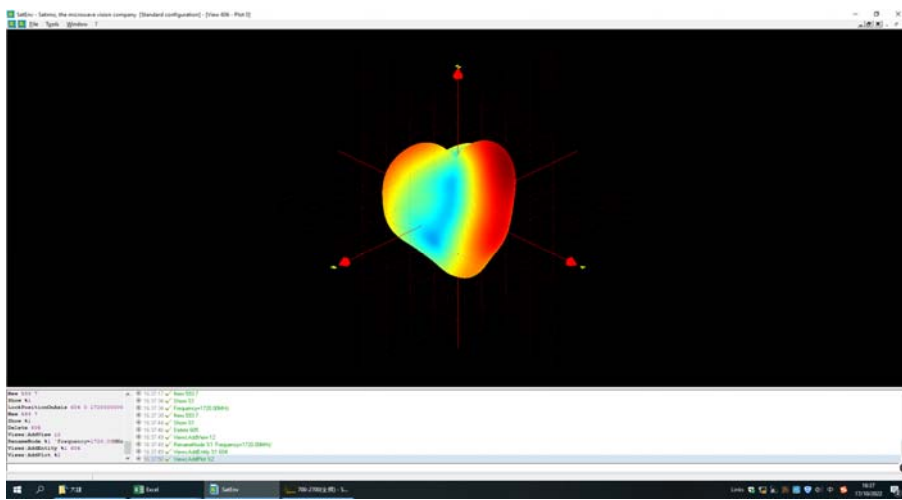
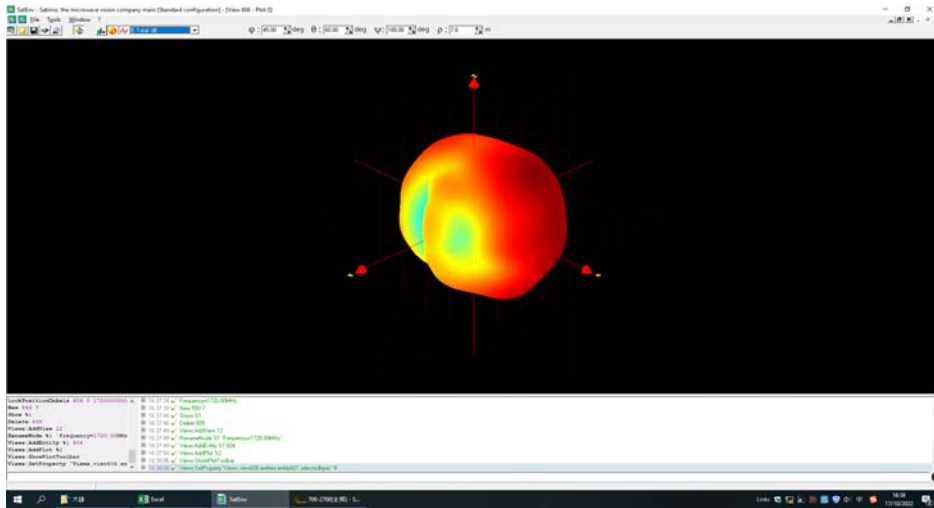




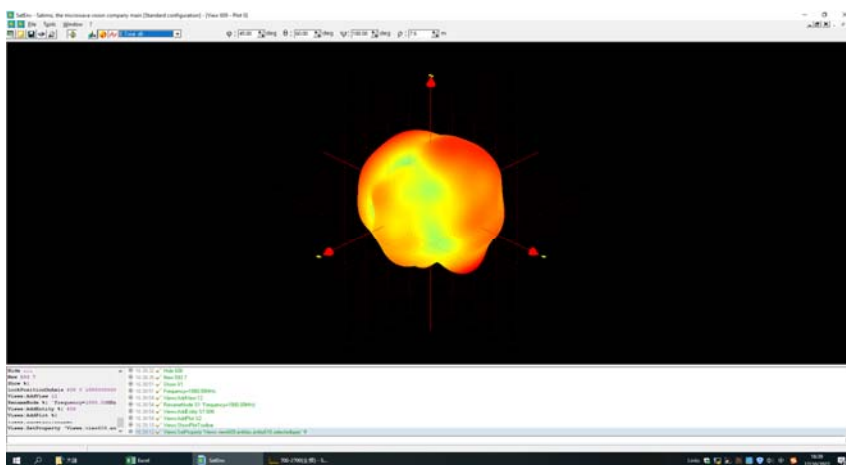
ANT 2_5000M (Frequency=5500MHz)

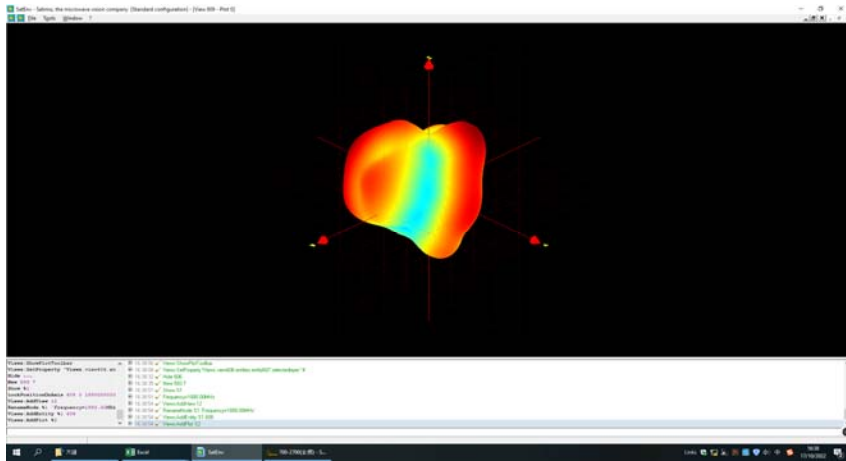


ANT 0_1700M (Frequency=1720MHz)

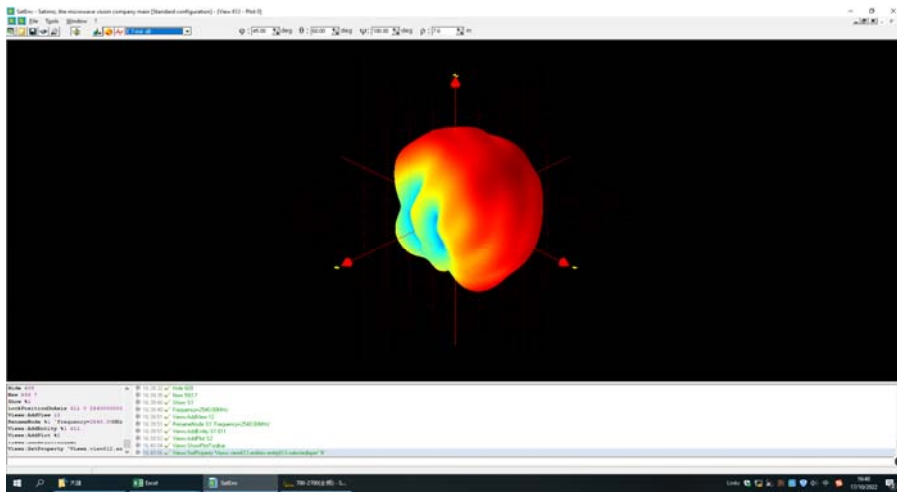


ANT 0_1900M (Frequency=1880MHz)





ANT 0_2500M (Frequency=2540MHz)



ANT 0_800M (Frequency=840MHz)

