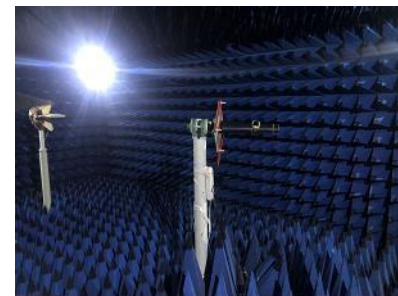
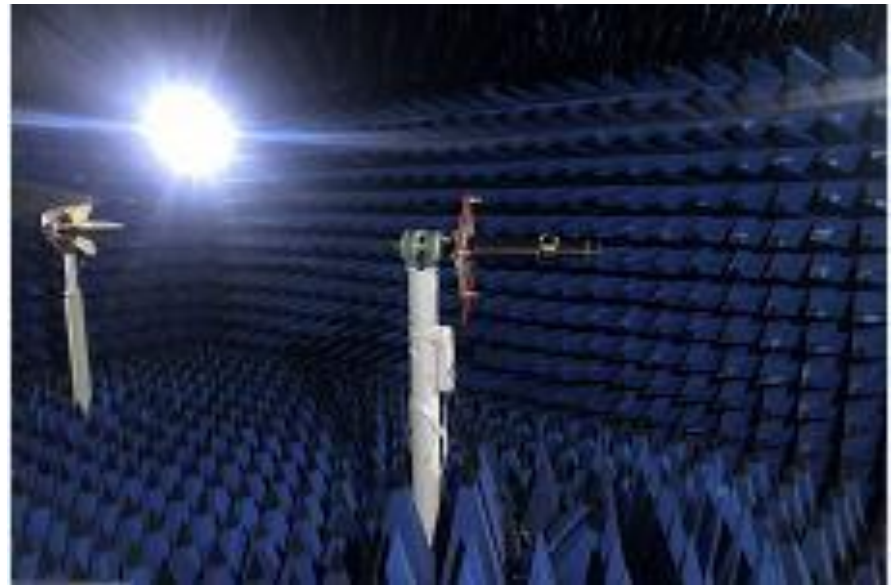


Tongli-M6G-US Version-Test Report



Project Development Environment

we are moving from the Internet era to the intelligent era, and the country is building a digital society and a smart city. In the next 5-10 years, both the consumer electronics market and the Internet of Things market have huge development potential. The field of wireless communication is very diversified. In the future, Yusheng will rely on the customer platform advantages of the main antenna business and its own comprehensive strength, and strive to provide customers with professional-level product solutions with market competitiveness.



Yusheng Communication's products cover almost all antenna applications for wireless terminal equipment, including automotive antennas, high-precision measurement and mapping antennas, UAV ground and satellite data navigation, high-precision positioning antennas, medical equipment wireless transmission, PAD, consumer antennas, (cell phone antenna, PAD, laptop antenna), base Station indoor distributed antennas, smart wearable antennas (smart watches, TWS headphones), security home antenna and a variety of wireless data transmission and wireless control of smart device antenna.



项目调试简介
Project Commissioning Introduction 1



报告版本大纲
Report Version Outline 2



天线有源参数
Antenna active parameters 3



天线无源参数
Antenna passive parameters 4

Introduction to Project Commissioning

Model				
Plate type	Motherboard			
Frequency band and antenna material	Main antenna	frequency band		Material
		2G	GSM850/1800/1900	FP C
		3G	WCDMA1/2/4/5	
		4G	LTE B2/4/5/7/12/13/17/28AB 38/40/66	
	Other antennas	G WB	1575 MHZ-2400-2500 MHZ	FP C
		DR X	700MHZ-2700MHZ	FP C
Performance requirements	According to customer			

Report Version Outline

Report Version	Reporting Time	The antenna research and development to solve the problem
V0.1	2024-10-24	Test Report
V0.2	2024-11.25	M6 US Version/No Environmental Treatment Test Report
v0.3	2024-12-16	Add 5G WIFI and direction map

GPS search star



Main Antenna Antenna

Main Antenna Efficiency	Effi (%)	Gain (dBi)
700	35.2%	0.73
720	31.5%	0.73
740	29.5%	0.78
760	36.1%	1.73
780	38.5%	2.01
800	35.2%	2.00
820	31.9%	1.81
840	32.3%	1.98
860	32.2%	1.85
880	32.7%	2.30
900	32.3%	1.60
920	32.4%	0.91
940	31.6%	0.50
960	27.9%	0.14

Main Antenna Efficiency	Effi (%)	Gain (dBi)
1700	38.7%	2.46
1720	40.8%	3.05
1740	41.2%	3.16
1760	36.2%	2.40
1780	34.3%	2.21
1800	37.6%	1.83
1820	32.8%	1.77
1840	36.5%	2.48
1860	37.1%	2.02
1880	38.6%	1.77
1900	40.2%	1.58
1920	45.9%	1.97
1940	53.7%	3.01
1960	52.5%	3.80
1980	42.7%	2.52
2000	37.2%	1.46

Main Antenna Efficiency	Effi (%)	Gain (dBi)
2020	37.2%	1.95
2040	40.1%	2.08
2060	35.0%	2.41
2080	45.3%	2.92
2100	53.0%	2.05
2120	50.8%	1.13
2140	54.7%	1.24
2160	57.3%	1.21
2180	55.2%	0.74
2240.0	52.5%	0.07
2260.0	42.7%	-0.45
2280.0	37.2%	-1.03
2300.0	34.8%	-1.19
2320.0	31.1%	-1.08
2340.0	25.7%	-1.14

Main Antenna Efficiency	Effi (%)	Gain (dBi)
2400.0	46.5%	0.72
2420.0	50.9%	1.56
2440.0	48.2%	2.51
2460.0	44.3%	2.94
2480.0	46.1%	2.70
2500.0	44.9%	1.83
2520.0	44.7%	1.73
2540.0	41.5%	1.79
2560.0	44.0%	1.98
2580.0	49.6%	2.15
2600.0	50.7%	1.97
2620.0	53.4%	2.10
2640.0	59.0%	2.79
2660.0	56.6%	3.00
2680.0	53.1%	2.64
2700.0	55.5%	2.30

Antenna passive parameters 2.4/5.8

Passive Test					
Freq	Effi	Gain	Freq	Effi	Gain
(MHz)	(%%)	(dbm0)	(MHz)	(%%)	(dbm0)
2400.0	45.5%	0.35	5100.0	31.5%	-0.26
2420.0	43.5%	0.63	5150.0	31.4%	-0.12
2440.0	39.4%	0.58	5200.0	33.1%	0.02
2460.0	42.9%	0.93	5250.0	28.9%	-0.79
2480.0	44.2%	1.05	5300.0	31.7%	1.56
2500.0	39.1%	0.52	5350.0	32.4%	2.67
			5400.0	34.5%	0.22
			5450.0	33.5%	1.60
			5500.0	33.7%	1.88
			5550.0	32.5%	2.39
			5600.0	32.0%	1.20
			5650.0	31.3%	2.72
			5700.0	30.8%	2.50
			5750.0	34.5%	0.15
			5800.0	33.8%	0.37

active antenna pa

Test	GSM 850			PCS 1900		
Channel	128	190	251	512	661	810
TRP(dBm)	24.2	24.6	24.9	24.5	24.4	24.6
TIS(dBm)			-97.9			-101.7

Test				DCS 1800		
Channel				512	698	885
TRP(dBm)				24.3	24.5	24.8
TIS(dBm)						-100.5



Test	WCDMA_I			WCDMA_II		
Result	10562	10700	10838	9662	9800	9938
TRP(dBm)	15.2	15.7	15.5	15.0	14.8	14.4
TIS(dBm)			-101.8			-101.7

Test	WCDMA_IV			WCDMA_V		
Result	1537	1638	1738	4357	4408	4458
TRP(dBm)	14.8	15.0	15.2	14.8	14.9	15.3
TIS(dBm)			-98.7			-99.2



Test	FDD B2			FDD B4		
Channel	18650	18900	19150	20000	20175	20350
TRP(dBm)	16.2	16.0	15.9	16.8	16.9	16.5
TIS(dBm)			-91.2			-92.0

Test	FDD B5			FDD B7		
Channel	20450	20525	20600	20800	21100	21400
TRP(dBm)	15.8	15.5	15.3	16.5	16.4	16.7
TIS(dBm)			-90.1			-90.1

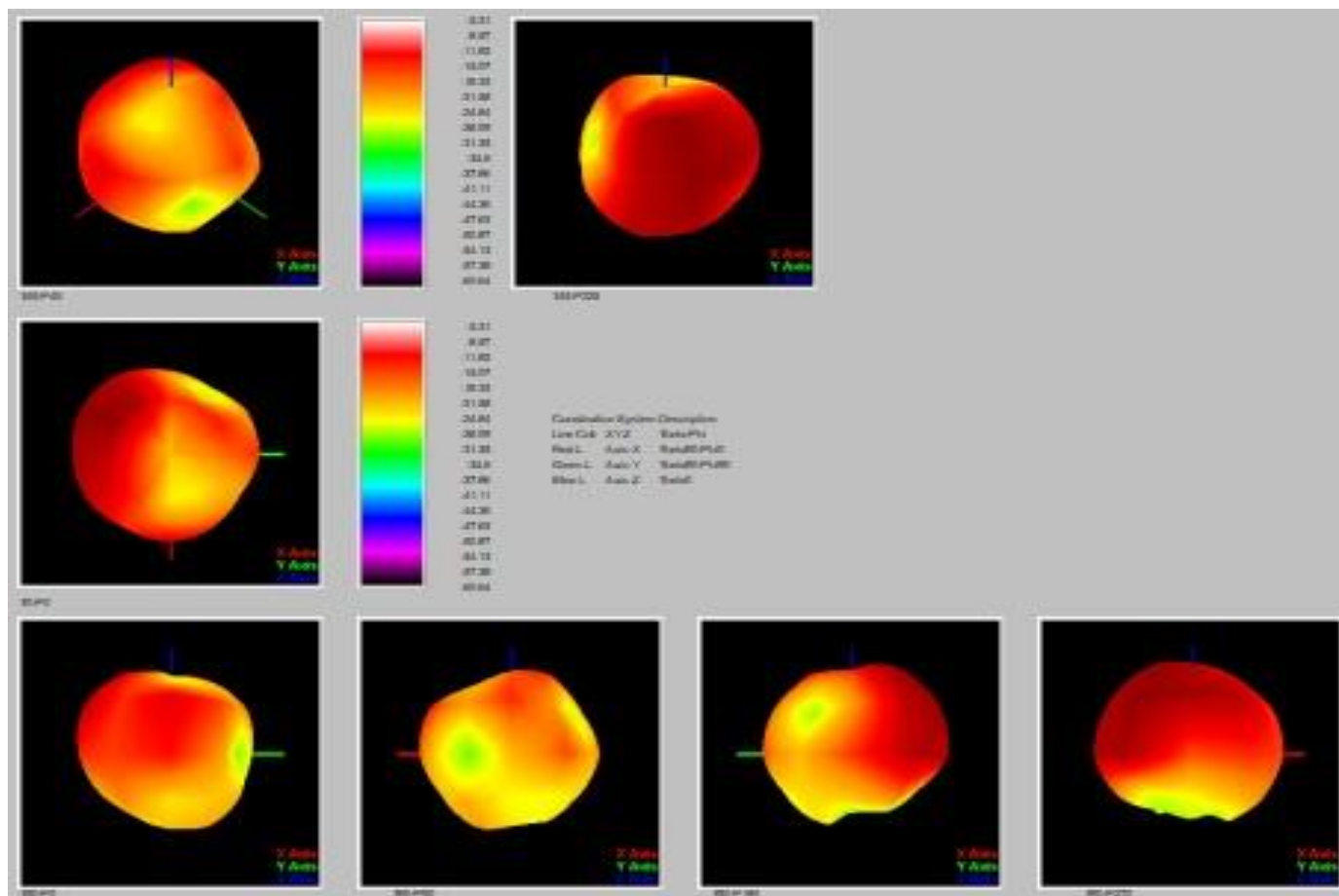
Test	FDD B12			FDD B13		
Channel	23050	23090	23130		23230	
TRP(dBm)	15.1	15.4	15.0		15.9	
TIS(dBm)			-89.5		-89.2	



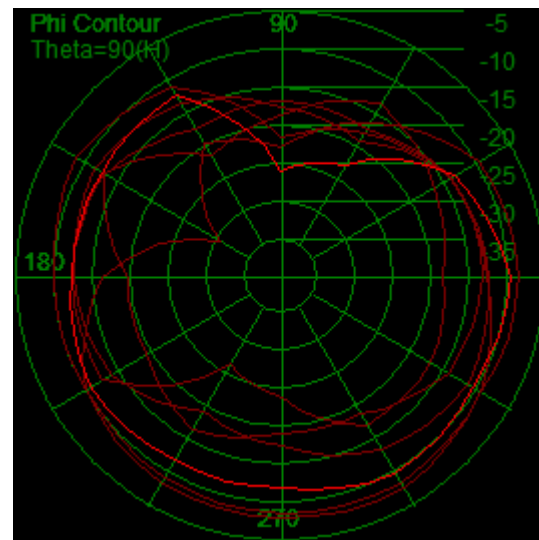
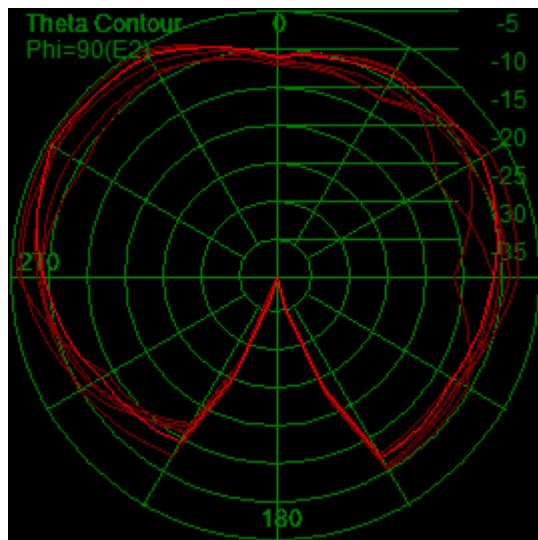
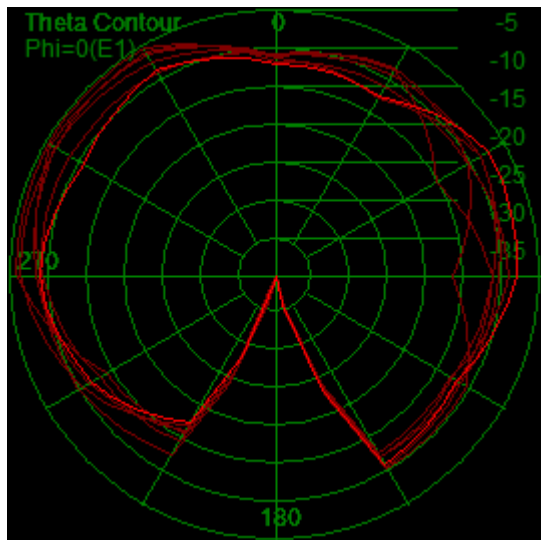
Test	FDD B17			FDD B28A		
Channel	23780	23790	23800	27260	27360	27460
TRP(dBm)	15.1	14.8	14.6	15.2	15.1	15.5
TIS(dBm)			-89.8			-89.5

Test	FDD B28B			FDD B66		
Channel	27410	27510	27610	132022	132322	132622
TRP(dBm)	14.7	15.6	15.4	16.5	16.3	16.8
TIS(dBm)			-88.8			-91.0

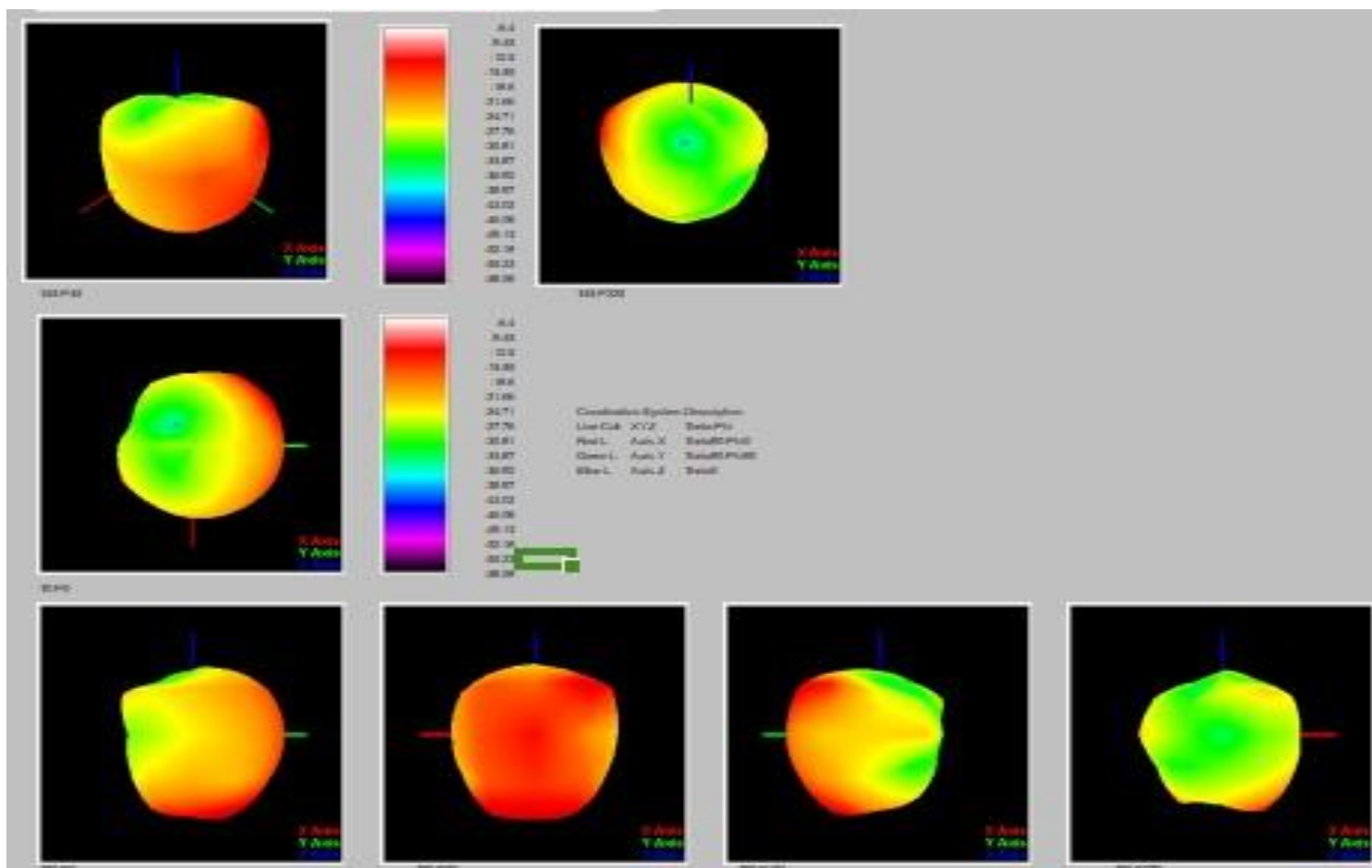
Test	TDD B38			TDD B40		
Channel	37850	38000	38150	38750	39150	39550
TRP(dBm)	16.1	16.3	16.7	16.2	16.0	15.8
TIS(dBm)			-90.2			-90.4



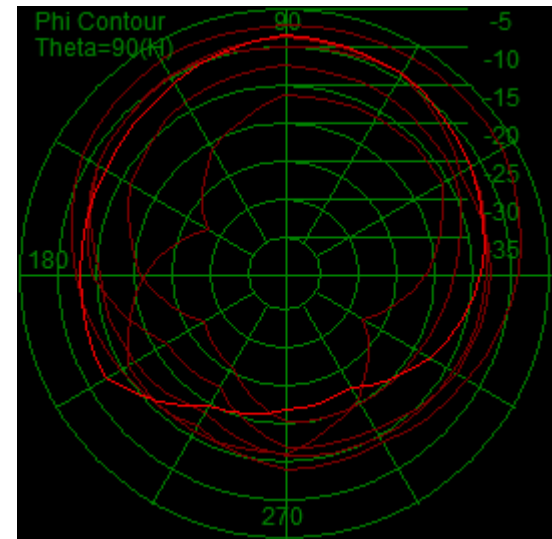
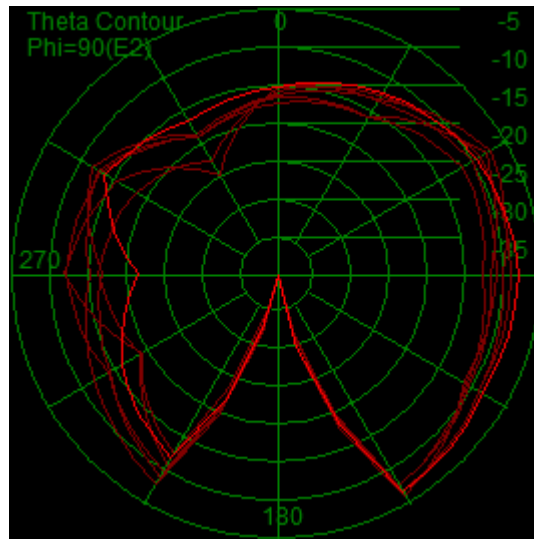
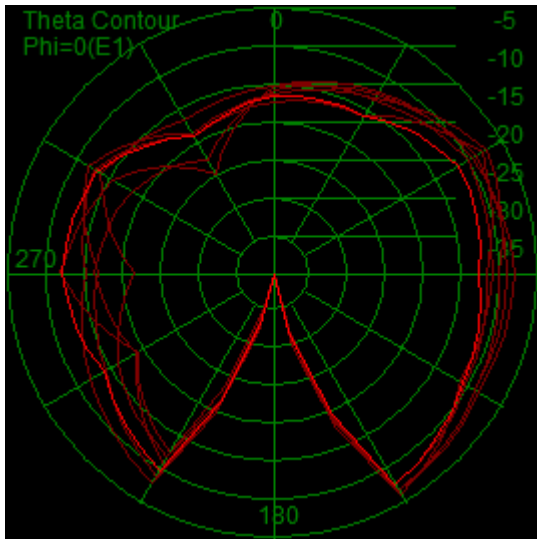
WiFi direction



GPS Apple chart



GPS direction



Thank you!



Shenzhen Address: **4** /F, Building **2**, Taiyun Chuanggu,
South Guangming Avenue, Guangming New District,
Shenzhen

Tel: **0755-23984257**

Fax: **0755-86090455**