Huizhou Speed communications electronic Limited by Share Ltd.（Huizhou Speed）

Customer：TCL Communication Ltd.

Project name：T807M

Product name：T807W - Cellular & WiFi antenna

Date：2025.11.19

1. Antenna specification and test location
Antenna 0/1/2/3/4/5/6/7/8/9/10/11/12
Material: MDA
Manufacturer: Huizhou Speed Wireless Technology Co.Limited
Kunshan Innowave Communication Technology Co., LTD
Antenna gain and radiation pattern measured in SATIMO anechoic chamber.
Project date: 2025.06.25 - 2025.11.19
Test engineer: kanning.zhang

2. NFC specification
Material: FPC+ Ferrite
Manufacturer: Huizhou Speed Wireless Technology Co.,Ltd
Modal :S3NRN4VX
Size :31mmm*29.6mm

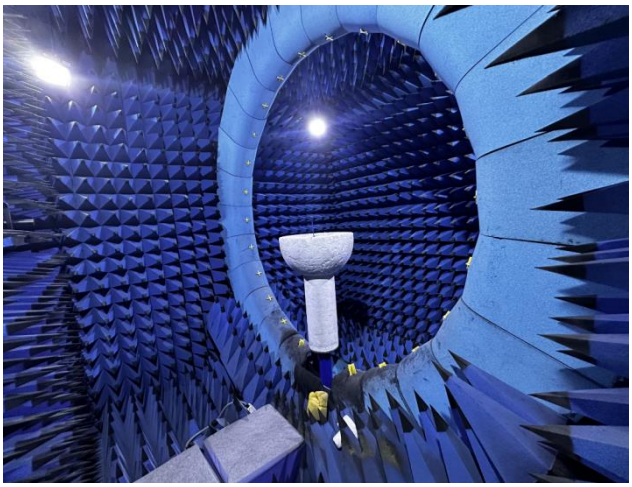
Test Equipment list

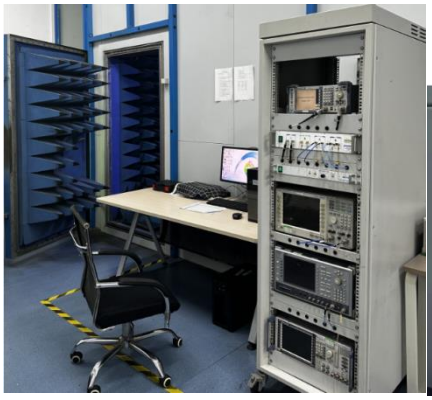
Description	Manufacturer	Model	Cal Date
Vector Network Analyzer	Agilent Technologies	E5071C	2025.01.07
Anechoic Chamber	SATIMO	SG24	2025.01.07

2. Test system introduction

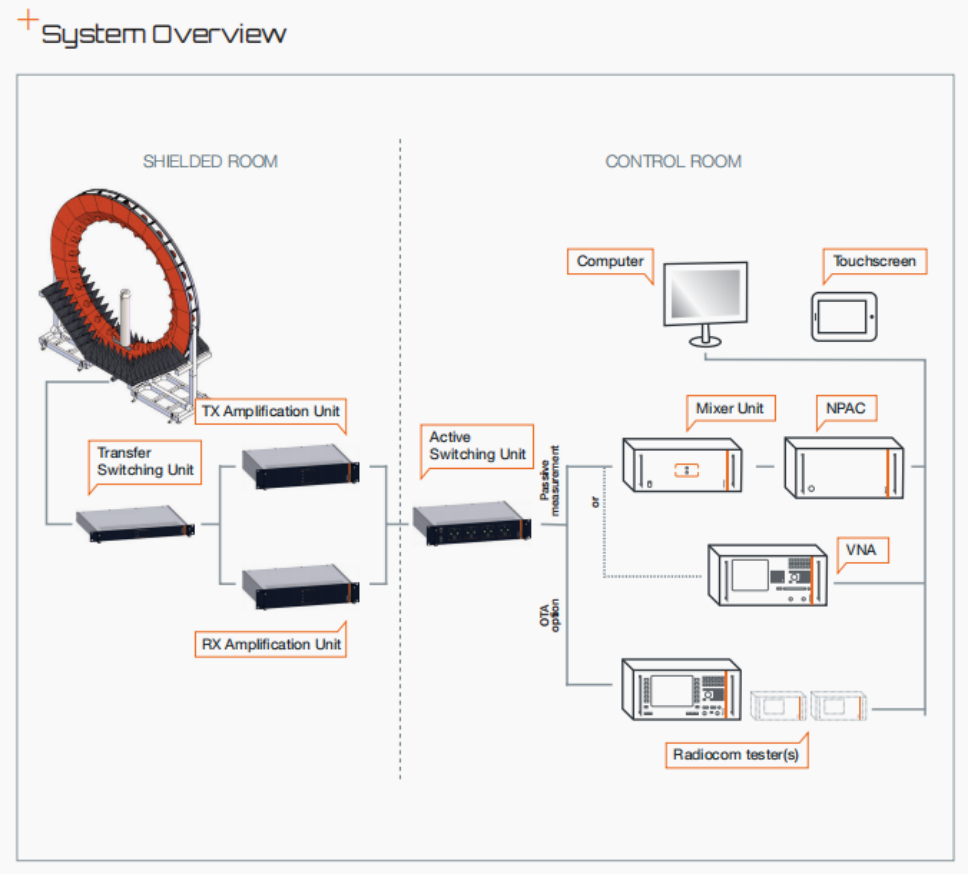
2.1 Anechoic chamber

Our company has a number of anechoic chamber for OTA test. It is ranging from 400 MHz to 8.5 GHz, which can provide passive test and active test, including OTA overall 2G, 3G, 4G, 5G FR test, WiFi multi-mode test, GPS active test, Bluetooth active test. The test system can provide antenna gain, efficiency, radiation pattern, upper and lower hemisphere efficiency values and mutual disturbance correlation coefficient analysis.





2.2 Test system architecture



The figure above shows the connection and control process between the anechoic chamber 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.

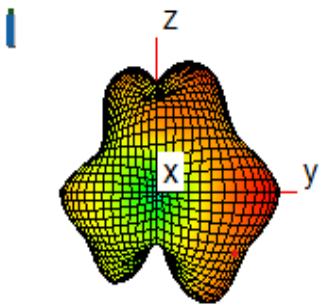
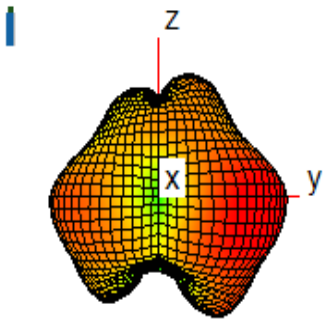
3. Test result

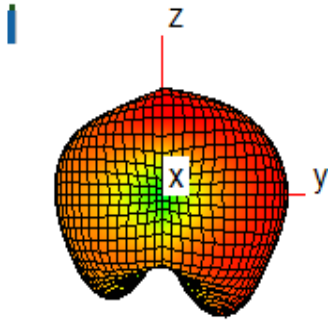
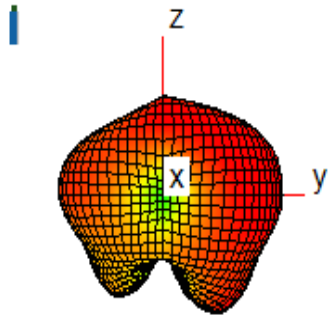
3.1 Antenna placement:

Antenna	Type	Description
0	MDA	MB TRX+HB MIMO PRX antenna
1	MDA	B40 TRX+UHB DRX antenna
2	MDA	LB TRX antenna
3	MDA	MHB TRX2+MHB DRX antenna
4	MDA	UHB TRX antenna
5	MDA	LB DRX antenna
6	MDA	GPS L5+UHB MIMO PRX antenna
7	MDA	HB TRX+MB MIMO PRX antenna
8	MDA	GPS L1+WIFI_2.4G_CH0 antenna
9	MDA	WIFI_2.4G_CH1 antenna
10	MDA	UHB MIMO DRX+ WIFI_5G _CH1 antenna
11	MDA	MHB MIMO DRX antenna
12	LDS	WIFI_5G _CH0 antenna

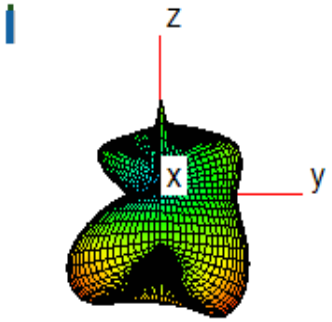
3.2 Radiation Pattern

Antenna 0

(Frequency Band)	LTE B1/WCDMA B1/NR n1	GSM1900/LTE B2/25/WCDMA B2/NR n2
3D Radiation Pattern		

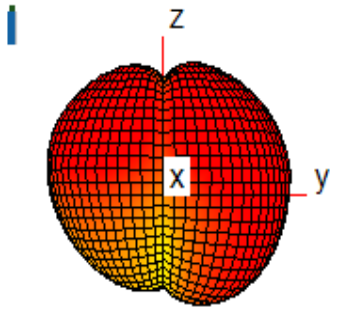
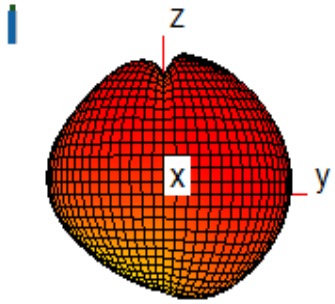
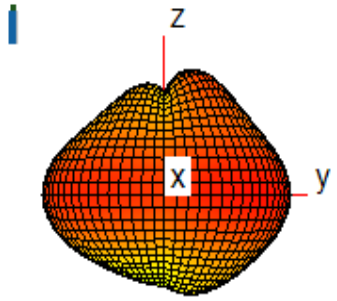
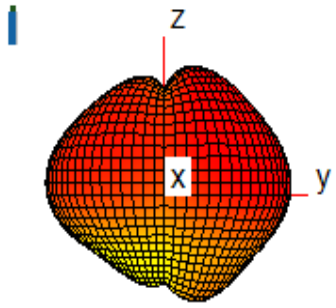
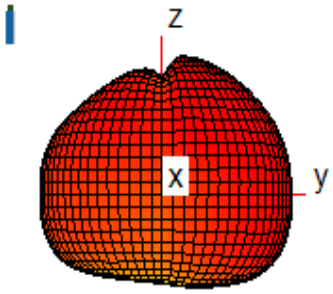
Avg Gain [dBi]	-3.71	-3.76
Peak Gain [dBi]	-1.21	-1.29
(Frequency Band)	GSM1800/LTE B3/NR n3	WCDMA B4/LTE B4/66/NR 66
3D Radiation Pattern		
Avg Gain [dBi]	-4.04	-3.97
Peak Gain [dBi]	-1.53	-1.53

Antenna 1

(Frequency Band)	LTE B40/NR n40
3D Radiation Pattern	
Avg Gain [dBi]	-8.58
Peak Gain [dBi]	-4.93

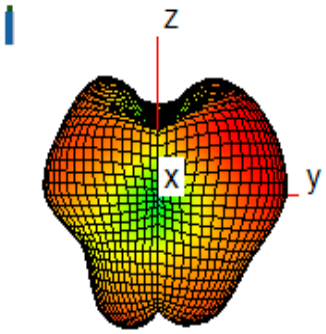
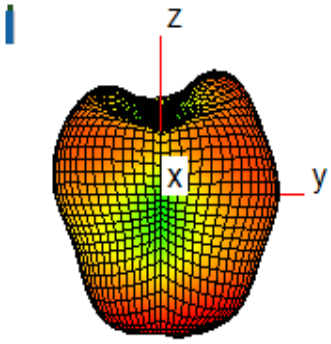
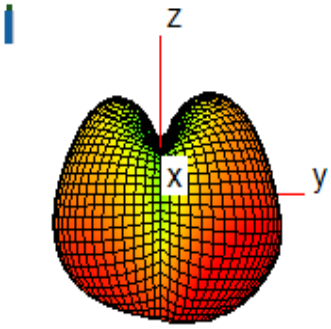
Antenna 2

(Frequency Band)	GSM900/WCDMA B8/LTE B8	GSM850/WCDMA B5/LTE B5/B20/B26

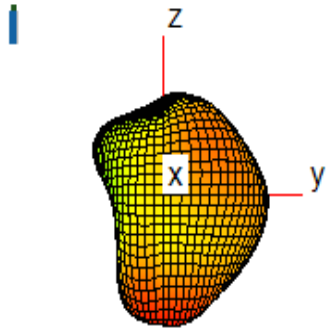
3D Radiation Pattern		
Avg Gain [dBi]	-8.45	-6.13
Peak Gain [dBi]	-5.12	-3.25
(Frequency Band)	LTE B12/B28/NR n12/n28	LTE B13/B14
3D Radiation Pattern		
Avg Gain [dBi]	-7.72	-7.63
Peak Gain [dBi]	-4.96	-4.85
(Frequency Band)	LTE B71/NR n71	
3D Radiation Pattern		

Avg Gain [dBi]	-8.24	
Peak Gain [dBi]	-5.07	

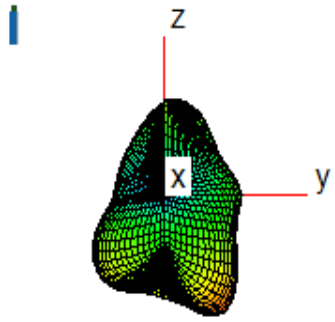
Antenna 3

(Frequency Band)	(ENDC)LTE B2/25	(ENDC)LTE B4/66
3D Radiation Pattern		
Avg Gain [dBi]	-4.58	-6.13
Peak Gain [dBi]	-2.05	-2.97
(Frequency Band)	(ENDC)LTE B7/38/41	
3D Radiation Pattern		
Avg Gain [dBi]	-5.55	
Peak Gain [dBi]	-2.41	

Antenna 4

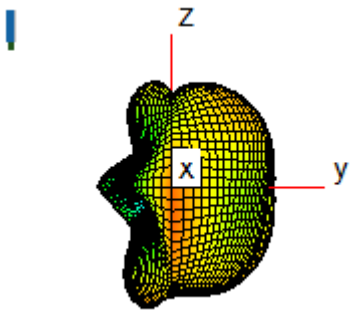
(Frequency Band)	N78	
3D Radiation Pattern		
Avg Gain [dBi]	-3.6	
Peak Gain [dBi]	-0.64	

Antenna 7

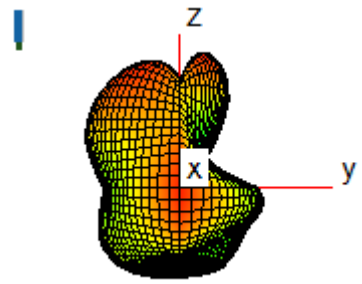
(Frequency Band)	LTE B7/38/41/NR n7/38/41
3D Radiation Pattern	
Avg Gain [dBi]	-4.41
Peak Gain [dBi]	-1.55

Antenna 8

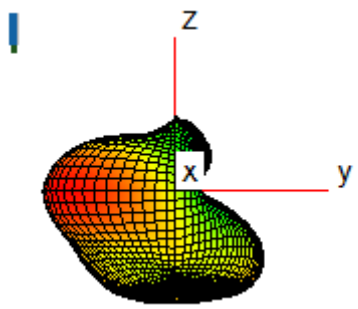
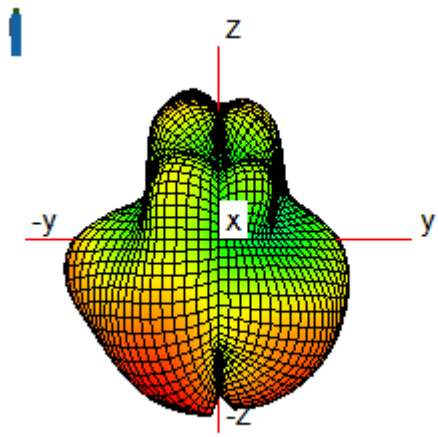
(Frequency Band)	WiFi 2.4G CH0/BT

3D Radiation Pattern	
Avg Gain [dBi]	-6.76
Peak Gain [dBi]	-3.8

Antenna 9

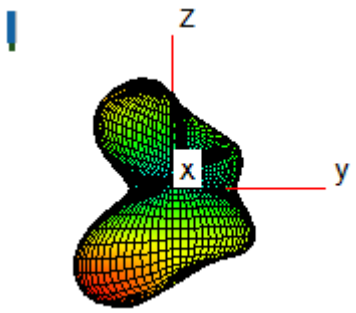
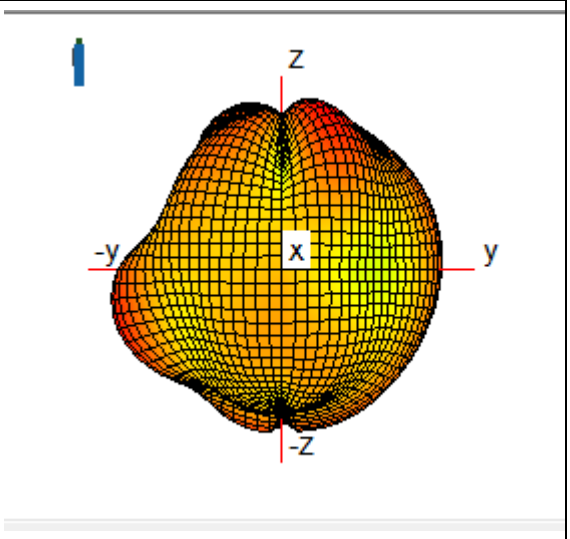
(Frequency Band)	WiFi 2.4G CH1
3D Radiation Pattern	
Avg Gain [dBi]	-4.7
Peak Gain [dBi]	-2.24

Antenna 10

(Frequency Band)	WiFi 5G CH1	WiFi 6G CH1
3D Radiation Pattern		
Avg Gain [dBi]	-7.66	-9.59
Peak	-5.12	-7.62

Gain [dBi]		

Antenna 12

(Frequency Band)	WiFi 5G CH1	WiFi 6G CH1
3D Radiation Pattern		
Avg Gain [dBi]	-8.15	-8.69
Peak Gain [dBi]	-5.79	-5.93