

Zhejiang Haitong communications electronic Limited by Share Ltd. (Shenzhen Haitong)

Customer: TCL Communication Ltd.

Project name: T807E

Product name: T807E - Cellular & wifi antenna

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

Date: 2025.08.08

1. Antenna specification and test location

Antenna 0/1/2/3/4/5/6/7/8/9/10/11/12

Material: metal

Manufacturer: Shenzhen Haitong

Manufacturer Address: Southern District, Phoenix Tower, 15 Nanshan District science and Technology North Road, Shenzhen, Guangdong.

Antenna gain and radiation pattern measured in SATIMO anechoic chamber.

Project date: 2025.04.11 - 2025.08.08

Test engineer: youqiang zheng

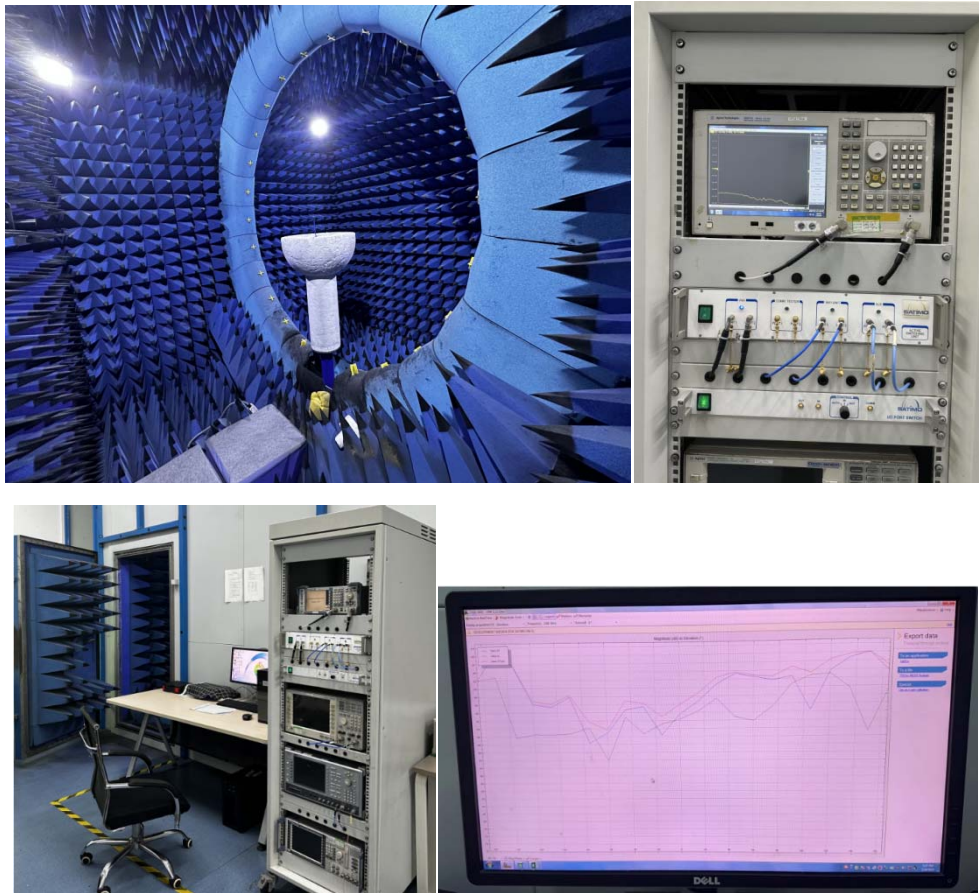
郑由强

Test Equipment list

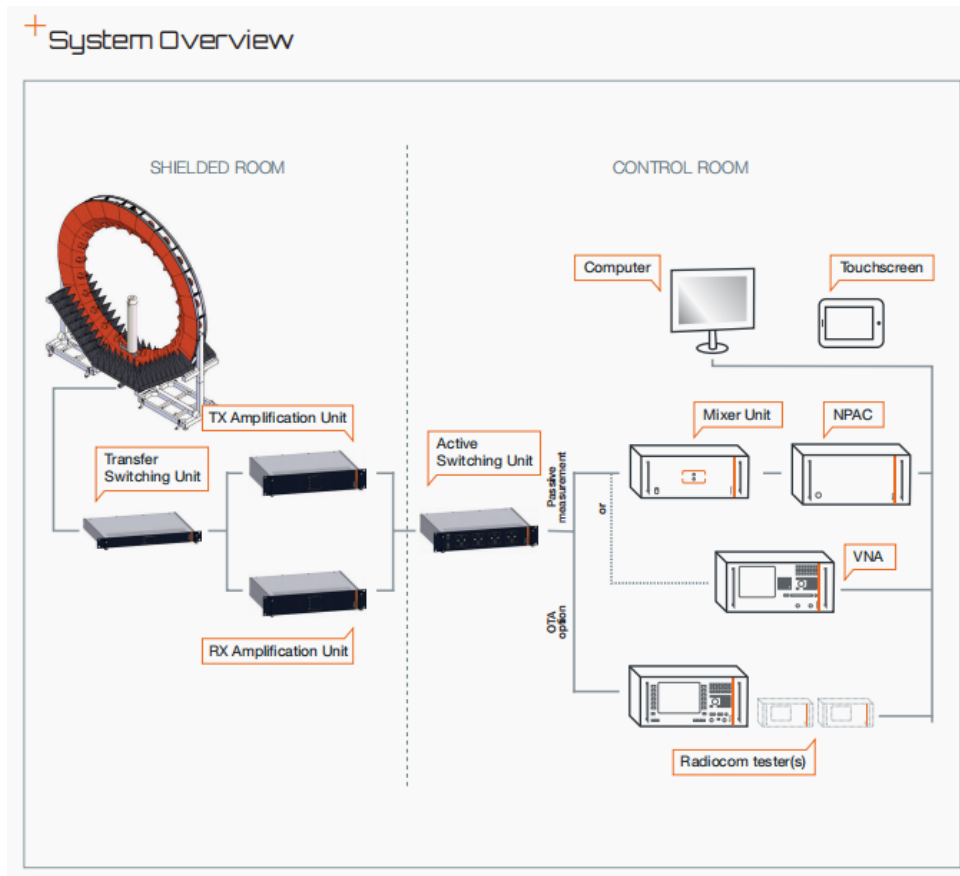
2. Test system introduction

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.

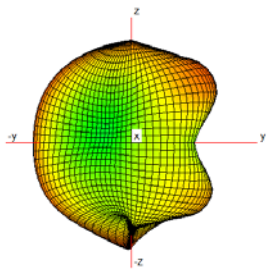
3. Test result

3.1 Antenna placement:

Antenna	Type	Description
0	MDA	MB TX+HB PRX MIMO antenna
1	MDA	HB TRX2+UHB DRX antenna
2	MDA	LB TRX 2 antenna
3	MDA	MHB DRX(EN-DC)+B32 DRX antenna
4	MDA	UHB TRX antenna
5	MDA	LB DRX (TRX 2) antenna
6	MDA	LB(3)+UHB PRX MIMO antenna
7	MDA	HB TX+MB PRX MIMO antenna
8	MDA	L1+2.4G_CH0+B32+N75 antenna
9	MDA	GPS L5+2.4G_CH1 antenna
10	MDA	UHB DRX MIMO+ WIFI 5G _CH1 antenna
11	MDA	MHB DRX MIMO antenna
12	LDS	WIFI 5G _CH0 antenna

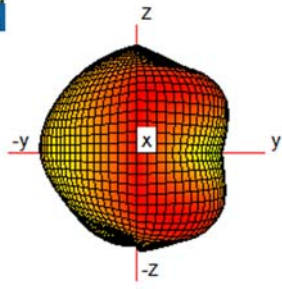
3.2 Radiation Pattern

Antenna 8

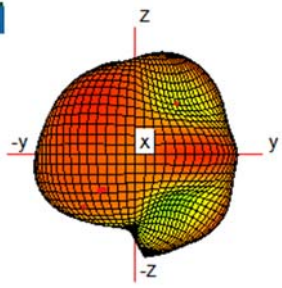
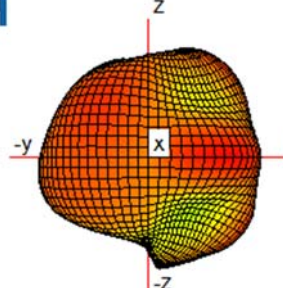
(Frequency Band)	WiFi 2.4G CH0/BT
3D Radiation Pattern	 A 3D surface plot showing the radiation pattern of Antenna 8. The plot is centered at the origin of a 3D coordinate system with x, y, and z axes. The surface is colored with a gradient from green (lower gain) to yellow and orange (higher gain). The pattern is roughly spherical but has some irregularities, with a slight protrusion along the positive x-axis and a slight indentation along the negative x-axis. The gain values range from -4.15 dB to -1.65 dB.
Avg Gain [dBi]	-4.15
Peak Gain [dBi]	-1.65

Antenna 9

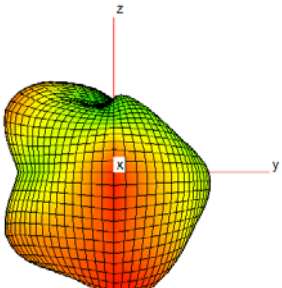
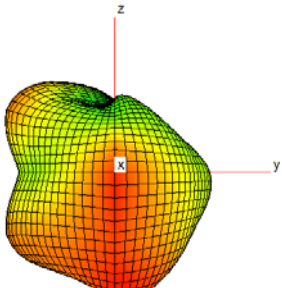
(Frequency Band)	WiFi 2.4G CH1
------------------	---------------

3D Radiation Pattern	
Avg Gain [dBi]	-7.51
Peak Gain [dBi]	-2.42

Antenna 10

(Frequency Band)	WiFi 5G CH1	WiFi 6G CH1
3D Radiation Pattern		
Avg Gain [dBi]	-9.97	-9.53
Peak Gain [dBi]	-8.42	-8.26

Antenna 12

(Frequency Band)	WiFi 5G CH1	WiFi 6G CH1
3D Radiation Pattern		
Avg Gain [dBi]	-9.74	-9.26
Peak Gain [dBi]	-8.17	-7.75

NFC antenna type: Coil antenna, 3.1cm*3.0cm, 4turns.