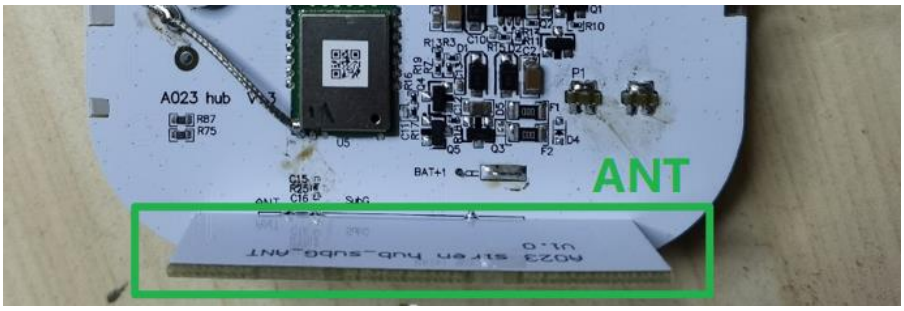
Antenna Specification

Antenna picture	
Antenna Type	Internal inverted F PCB antenna
Antenna Peak Gain	1.55 dBi
Operating Band	Sub-G: 902-928MHz, 915MHz
Test laboratory name and Address	IoT Antenna Test Laboratory, 3 / A,LEEDARSON LIGHTING CO., LTD. Xingtai Industrial Park, Changtai Economic Development Zone, Zhangzhou, 363900, China
Antenna Manufacturer	LEEDARSON LIGHTING CO., LTD.
Model name	Siren Hub
DUT photo	
Test System	SY-16 OTA System
Test Engineer	O.Young
Test Date	2023-10-18

Test Standard

Antenna Performance	Radiation Efficiency	IEEE Standard Test Procedures for Antennas	ANSI/IEEE Std 149-2021

Equipment List:

Equipment	Manufacturer	Model No.	Last Cal.	Due Date
Network Analyzer	Agilent	E5071C	2023.10.8	2024.10.7

Test Software: EMQuest

Test System

The SY-16 OTA system is an anechoic chamber, which can measures antenna passive data such as antenna efficiency, antenna gain, and 2D&3D pattern. The coordinates and topology are shown as follow:

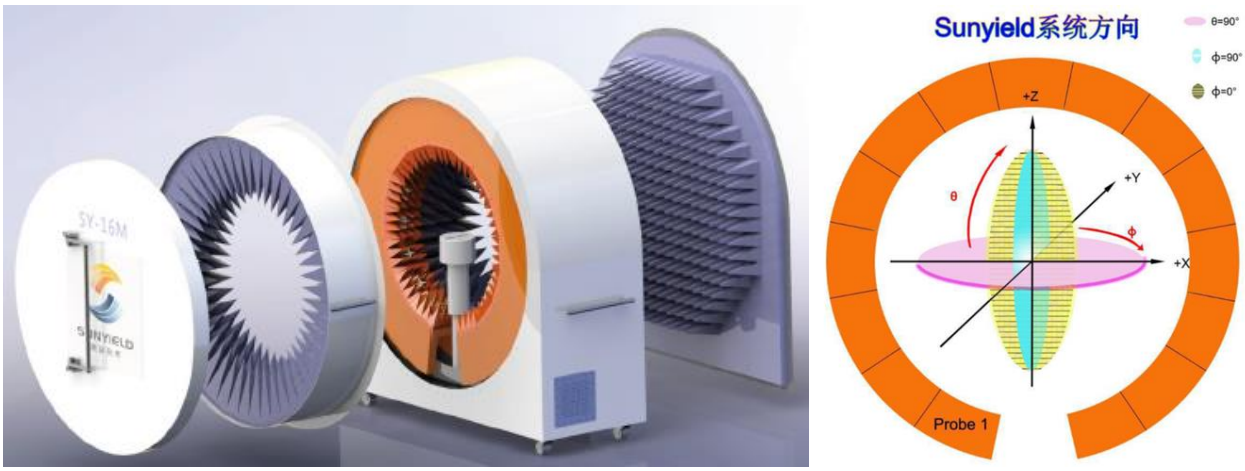


Figure 1 SY-16 OTA system

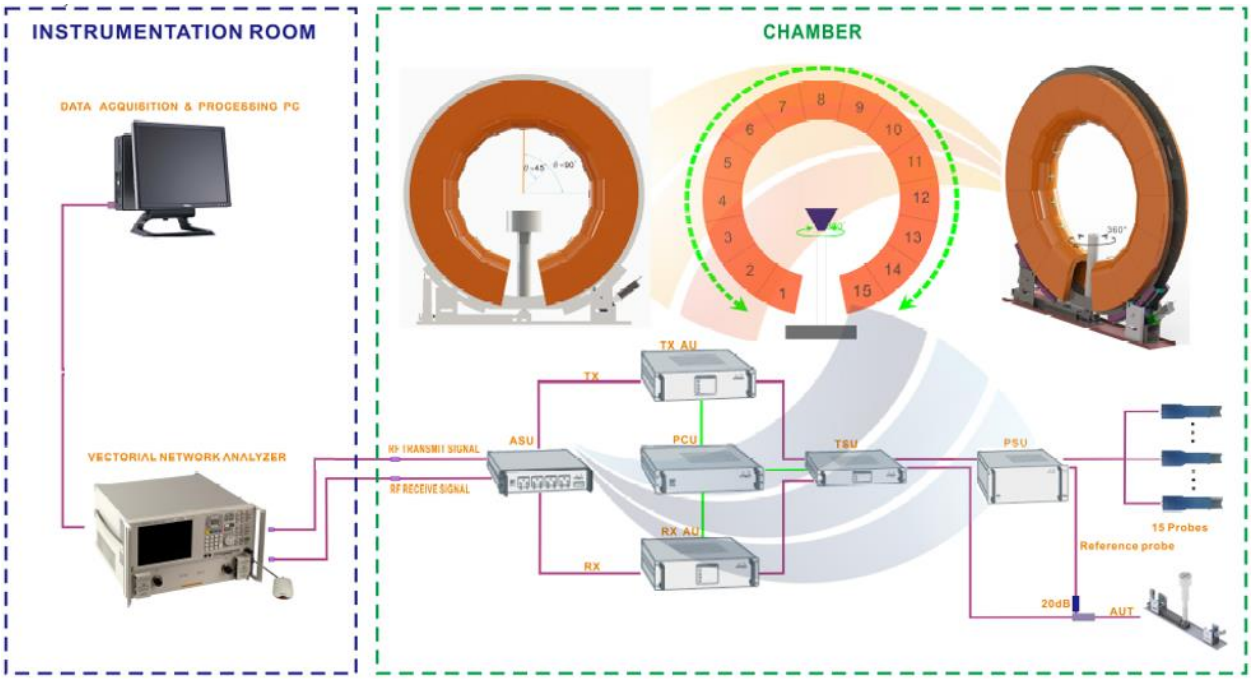


Figure 2 OTA measurement topology

Test Result

Efficiency and Gain

Table 1 Antenna Efficiency and Gain

Frequency (MHz)	Gain (dBi)	Efficiency (dB)	Efficiency (%)
900	1.02	-1.98	63.39
905	1.48	-1.44	71.72
910	1.55	-1.22	75.55
915	1.48	-1.15	76.78
920	1.44	-1.47	71.28
925	1.34	-1.26	74.81
930	1.37	-1.60	69.18

Radiation Pattern

Table 2 Product coordinates

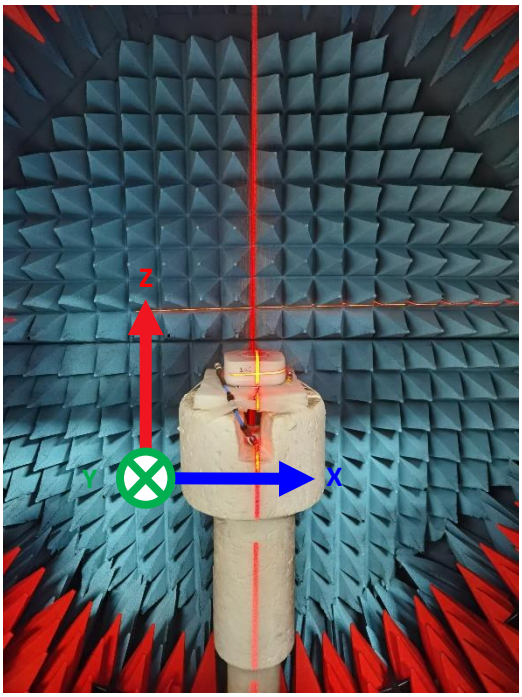
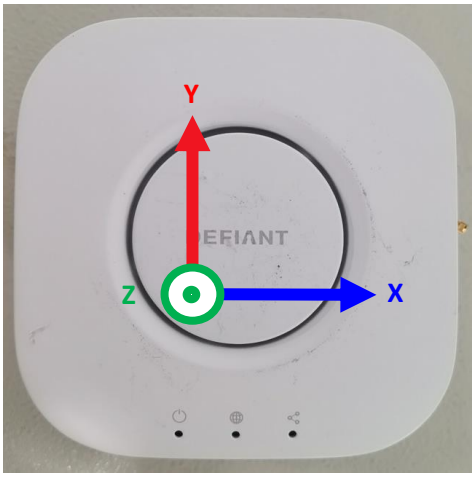
Product Coordinates	
	

Table 3 3D radiation pattern

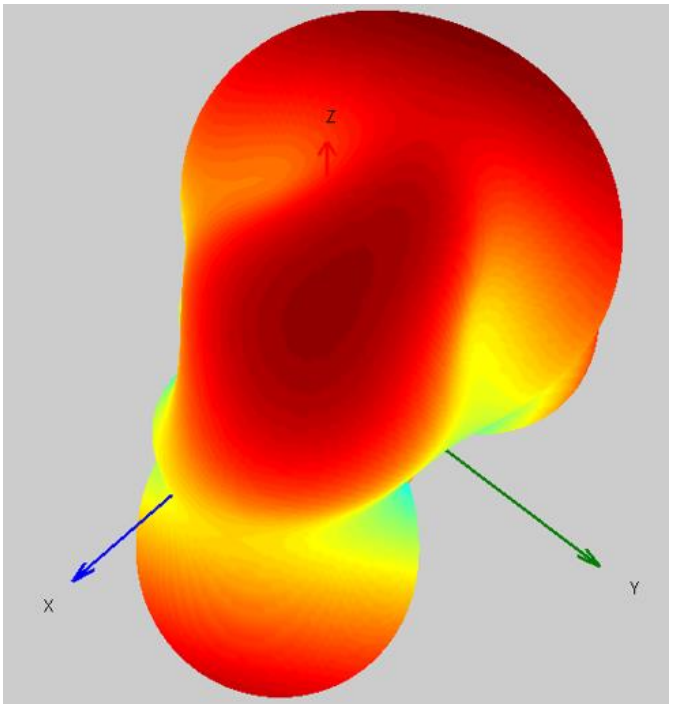
3D Radiation Pattern at 2450MHz


Table 4 Radiation pattern in XY Plane

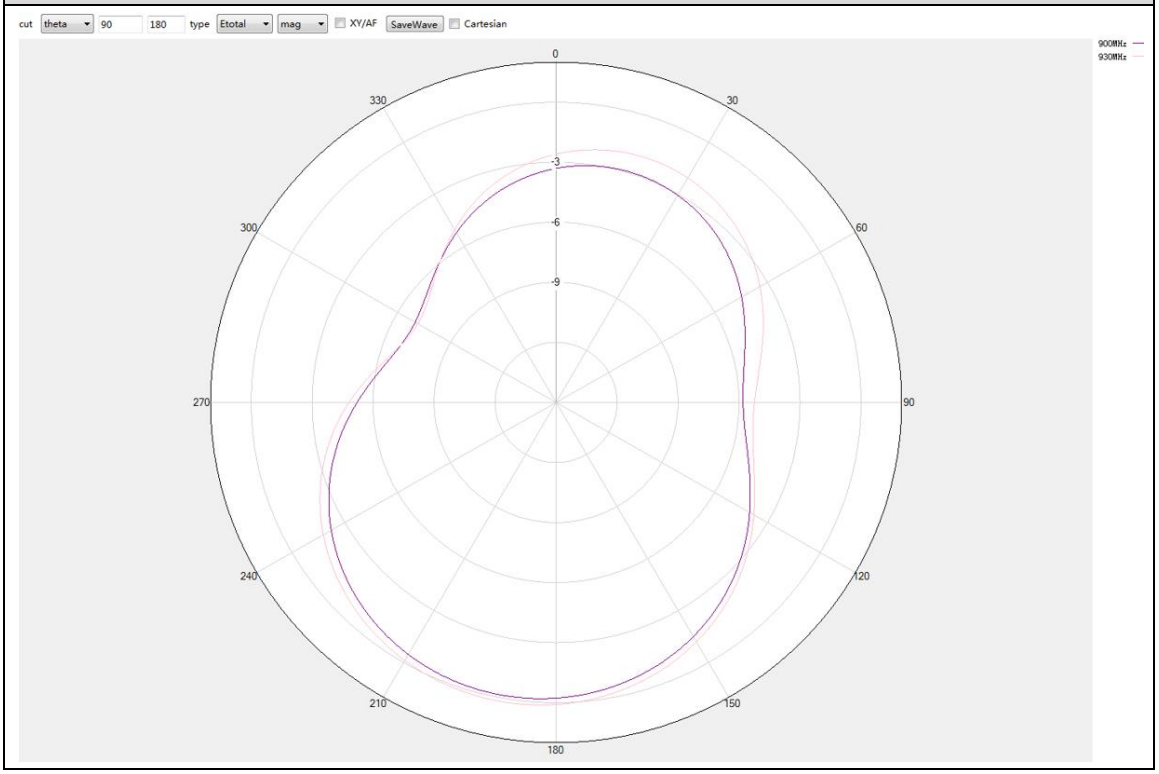
2D Radiation Pattern (θ = 90°, XY Plane)


Table 5 Radiation pattern in XZ Plane

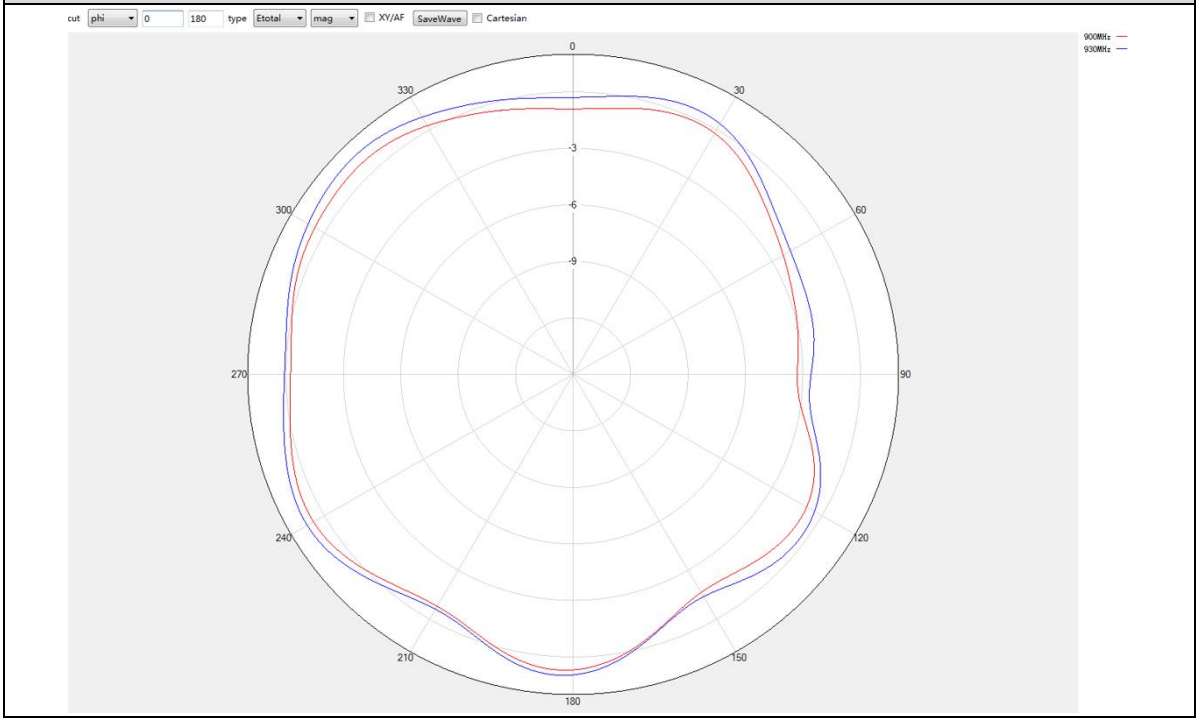
2D Radiation Pattern (ϕ = 0°, XZ Plane)


Table 6 Radiation pattern in YZ Plane

2D Radiation Pattern (ϕ = 90°, YZ Plane)