ANTENNA INFORMATION

OEM	Lenovo
ODM	HuaQin
Platform model name	Legion Go S
Intel platform (ex: Yes, No or NA)	No
Platform type (ex: regular NB, convertible PC, AIO…etc)	Gaming
SAR minimum separation (mm)	3.95mm

Antenna manufacturer	INPAQ
Address	Room 802, Unit A2, Kexing Science Park, Nanshan District, Shenzhen City, Guangdong Province
Antenna Part number	Main: WA-F-LE-02-060 Aux: WA-F-LE-03-005
Antenna type (ex: PIFA, Dipole…etc)	PIFA

Antenna Peak gain w/ cable loss (dBi)*

	2.4GHz 2400-2483.5 MHz	**5.2GHz** 5150-5250MHz	**5.3GHz** 5250-5350MHz	**5.6GHz** 5470-5725MHz	**5.8GHz** 5725-5850MHz	**5.9GHz** 5850-5895MHz	**6.2GHz** 5925-6425MHz	**6.5GHz** 6425-6525MHz	**6.7GHz** 6525-6875MHz	**7.0 GHz** 6875-7125MHz
Main	-0.22	1.4	1.58	2.64	1.63	0.67	1.67	1.95	0.24	1.00
Aux	-0.34	0.52	1.81	2.49	1.83	1.73	2.08	2.13	1.19	-0.61

Cable Assembly Part Number and Information

	Cable PN	**Cable length**(mm)	**Cable diameter**(mm)	**Impedance**(ohm)	**Connector type**
Main	SY113/50-055	104.8	1.13	50	I-PEX MHF4L (20565-001R-13)
Aux	SY113/50-064	306.5	1.13	50	I-PEX MHF4L (20565-001R-13)

* 3D Antenna Peak Gain required being test in system basis.

Table of Contents

1. Intel Reference Gain and Type

Antenna Peak gain w/ cable loss (dBi)											
Band/Frequency		**2.4GHz** 2400-2483.5 MHz	**5.2GHz** 5150-5250MHz	**5.3GHz** 5250-5350MHz	**5.6GHz** 5470-5725MHz	**5.8GHz** 5725-5850MHz	**5.9GHz** 5850-5895MHz	**6.2GHz** 5925-6425MHz	**6.5GHz** 6425-6525MHz	**6.7GHz** 6525-6875MHz	**7.0 GHz** 6875-7125MHz
Design	EU/UK	3.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
PIFA	For WiFi 6E and earlier	3.24	3.64	3.73	4.77	4.97	4.72	4.83	4.30	5.37	5.59
	From WiFi 7	2.95	5.11	4.55	5.15	5.13	4.45	5.02	5.02	4.96	4.96
Dipole	For WiFi 6E and earlier	2.89	2.92	3.19	4.41	4.22	4.22	4.83	4.30	4.49	5.34
	From WiFi 7	2.95	4.03	4.11	5.15	5.13	4.45	5.02	4.71	4.49	4.96

3D Peak Antenna gain should be equal or greater than -2 dBi

If a host integrator plans to use a lower gain antenna of the same type, additional CBP(FCC)/EDT(EU) testing need to be performed while the module is installed in the host.

2. Document Revision History

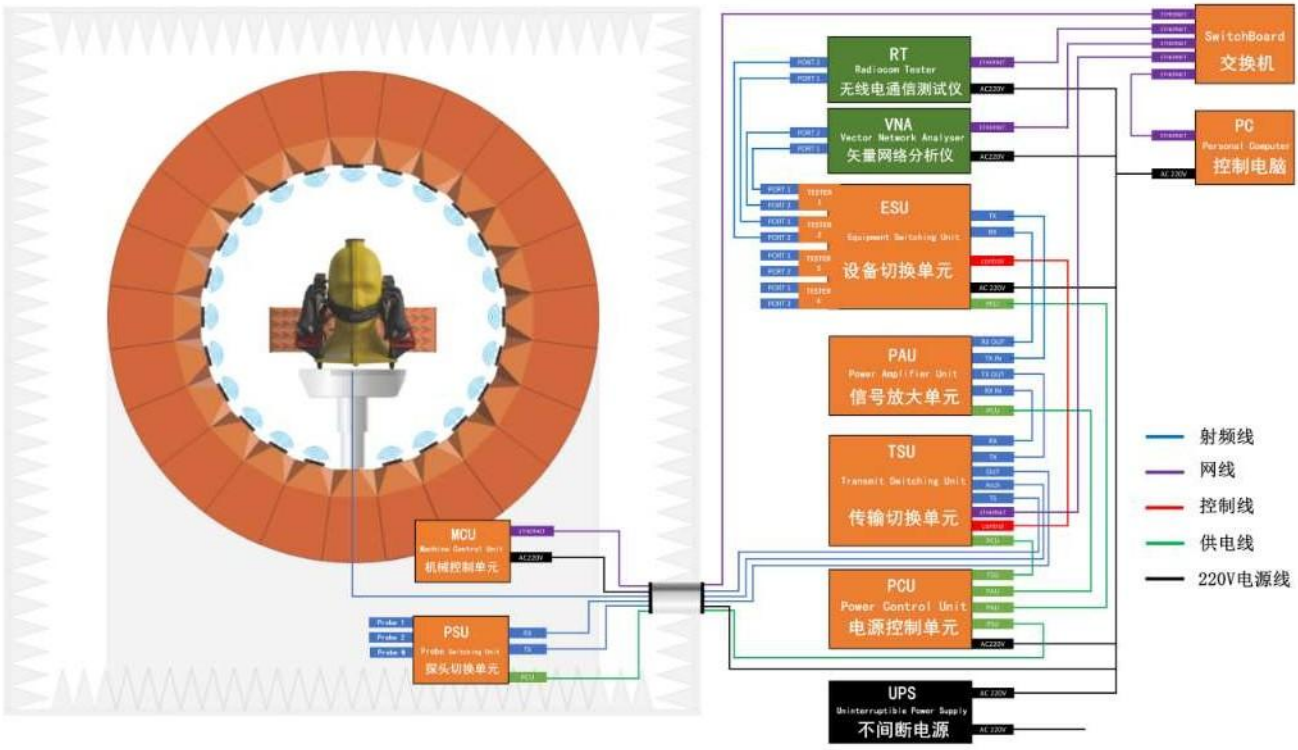
Revision #	Revision Details	Issued Date
Rev. 00	First Issue	2024.08.05

3. Test & System Description

3.1 Measurement Method and System

1. Use a low-loss coaxial cable to connect the notebook fixture
2. Fix the notebook fixture on the turntable
3. Connect the jig to the network analyzer port, and use the antenna of the test probe to collect data.

3.2 Test setup



3.3 Equipment list

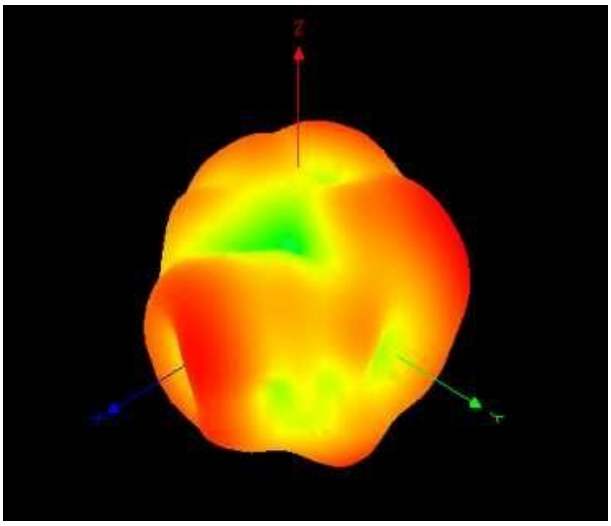
item	Device	Manufacter	Cal.Date	Cal.Due.Date
1	Chamber isolation	TEM24	2024/2/5	2025/2/4
2	Turntable accuracy	TEM24	2023/10/28	2024/10/27
3	WPA Box(Tx route) Gain	TEM24	2023/10/28	2024/10/27
4	LNA Box(Rx route) Gain	TEM24	2023/10/28	2024/10/27
5	Probe Switch Box Loss	TEM24	2023/10/28	2024/10/27
6	Tester Switch Box Loss	TEM24	2023/10/28	2024/10/27
7	Signal Switch Box Loss	TEM24	2023/10/28	2024/10/27
8	Radio Communication Tester	Rohde&Schwarz	2024/7/25	2025/7/24
9	Network Analyzer	Keysight	2024/7/25	2025/7/24
10	Chamber Calb SMAJ-SMAJ-1.5m 0.1G-18G Loss	TEM24	2023/10/28	2024/10/27
11	Chamber Calb SMAJ-SMAJ-0.5m 0.1G-18G Loss	TEM24	2023/10/28	2024/10/27

4. Radiation characteristics of antenna loaded in Host Platform

Main Antenna

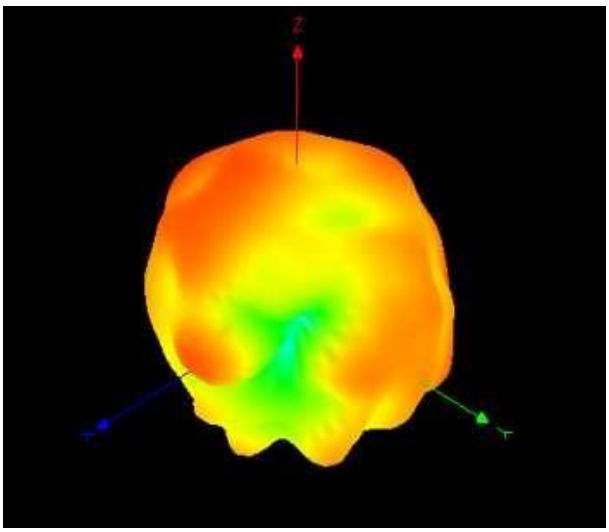
Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	-0.22



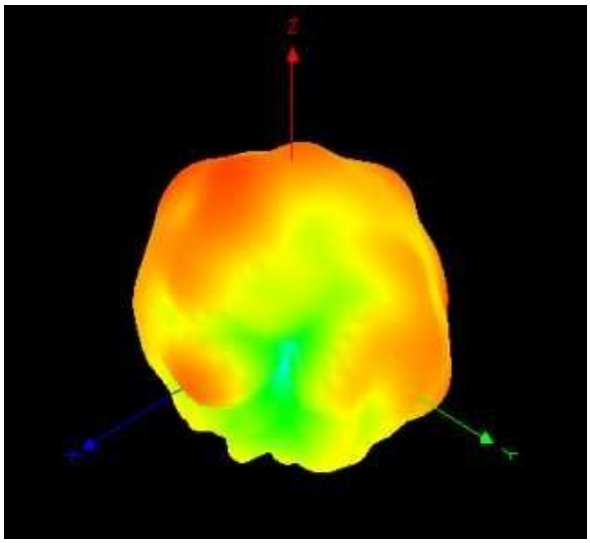
Max Antenna 3D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	1.4



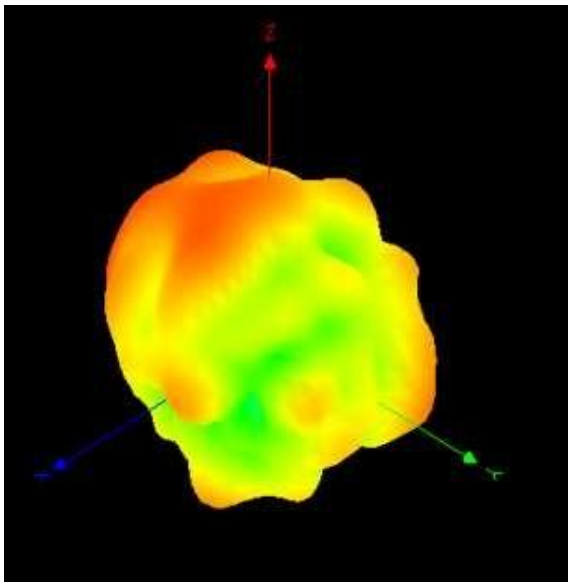
Max Antenna 3D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	1.58



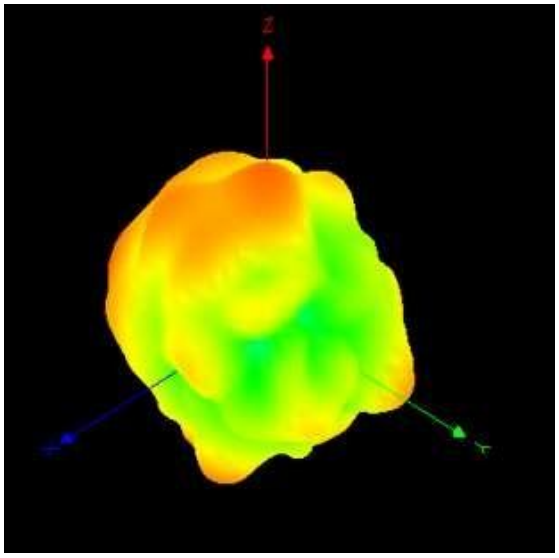
Max Antenna 3D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5470-5725	2.64



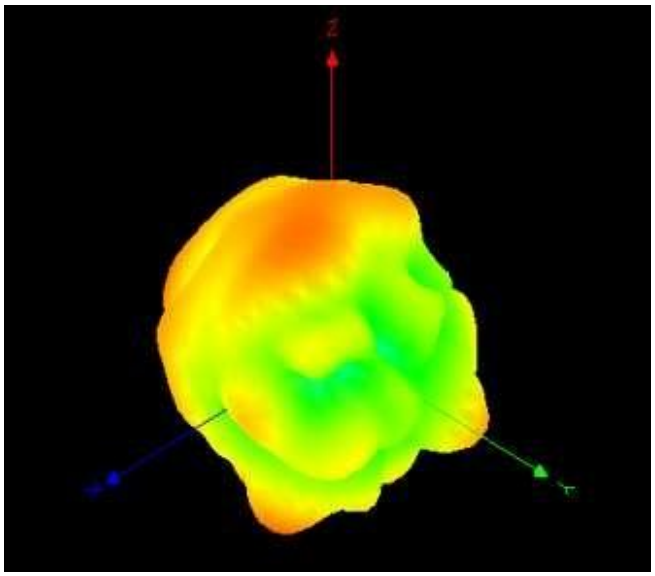
Max Antenna 3D Radiation Pattern 5727-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	1.63



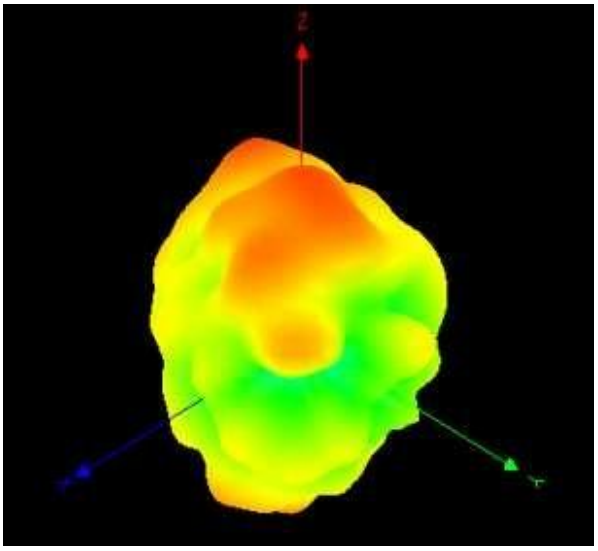
Max Antenna 3D Radiation Pattern 5850-5950 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5850-5950	0.67



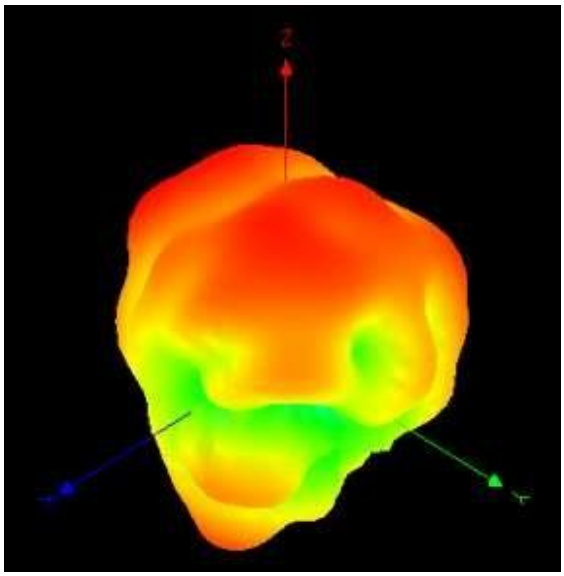
Max Antenna 3D Radiation Pattern 6150-6250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6150-6250	1.67



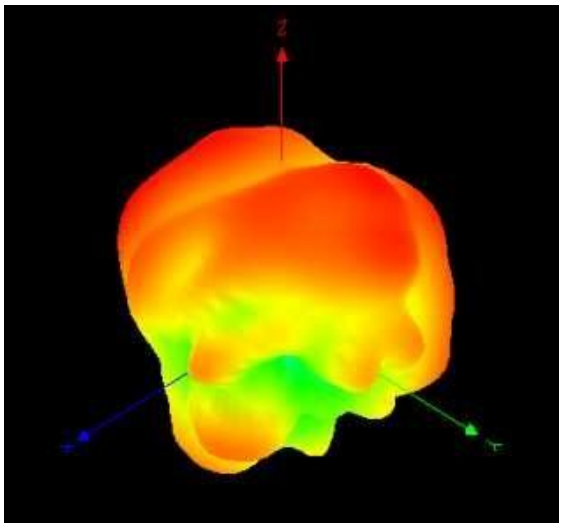
Max Antenna 3D Radiation Pattern 6450-6550 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6450-6550	1.95



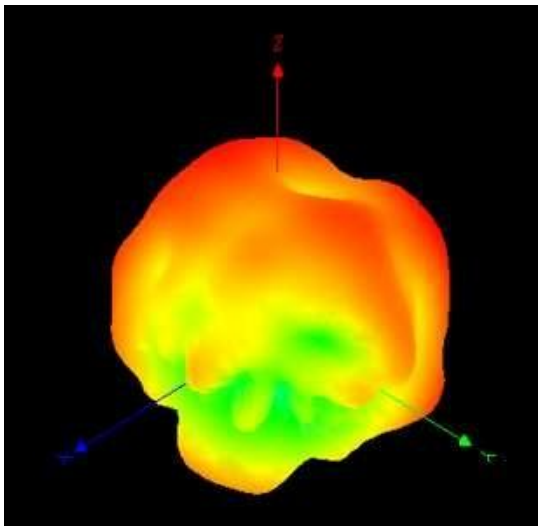
Max Antenna 3D Radiation Pattern 6650-6750 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6650-6750	0.24



Max Antenna 3D Radiation Pattern 6950-7050 MHz

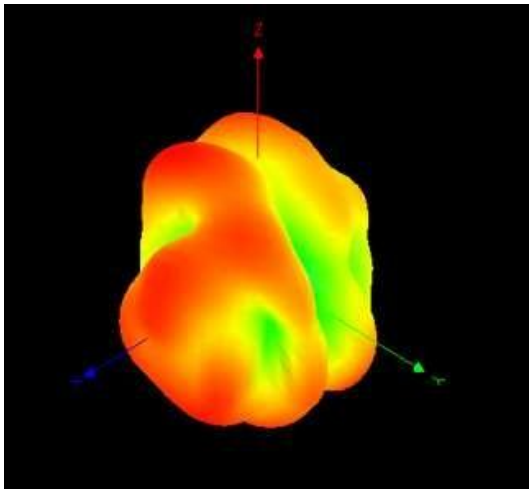
Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6950-7050	1.00



Auxiliary Antenna

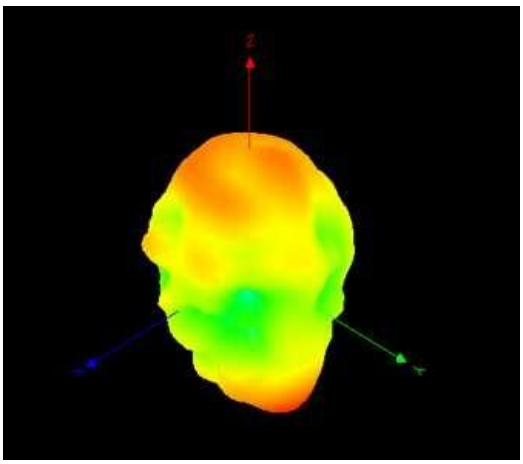
Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	-0.34



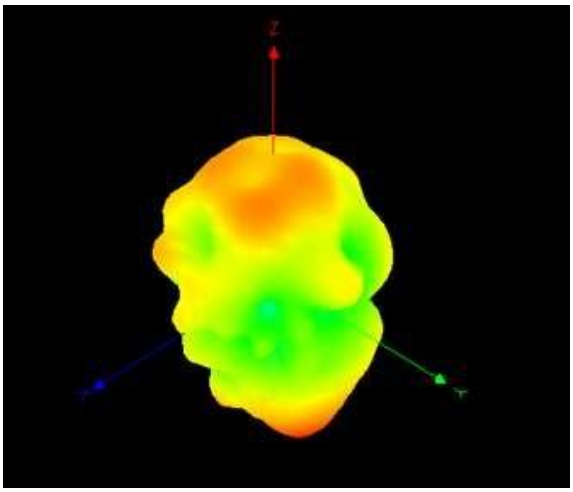
Max Antenna 3D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	0.52



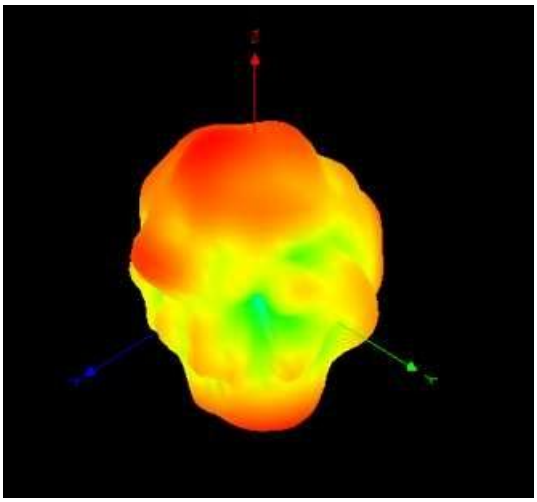
Max Antenna 3D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	1.81



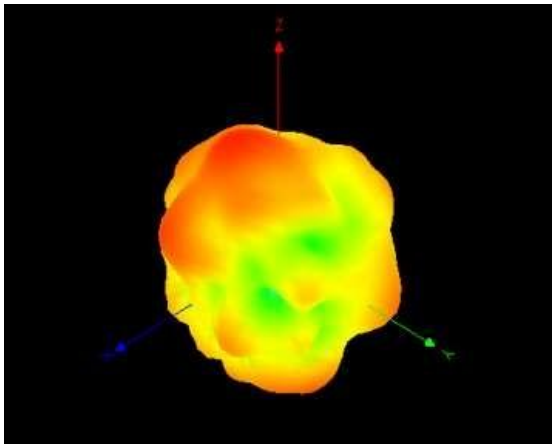
Max Antenna 3D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5470-5725	2.49



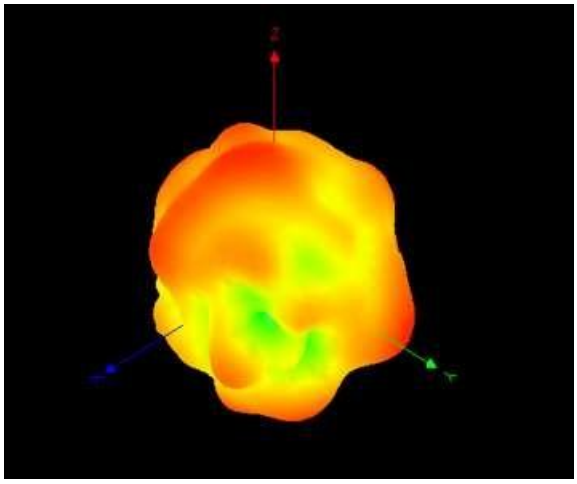
Max Antenna 3D Radiation Pattern 5722-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	1.83



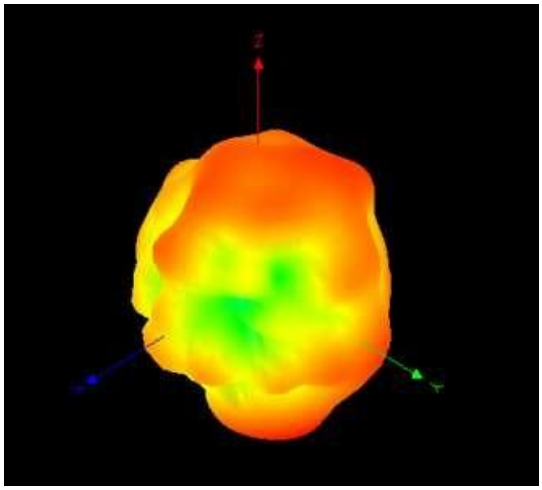
Max Antenna 3D Radiation Pattern 5850-5950 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5850-5950	1.73



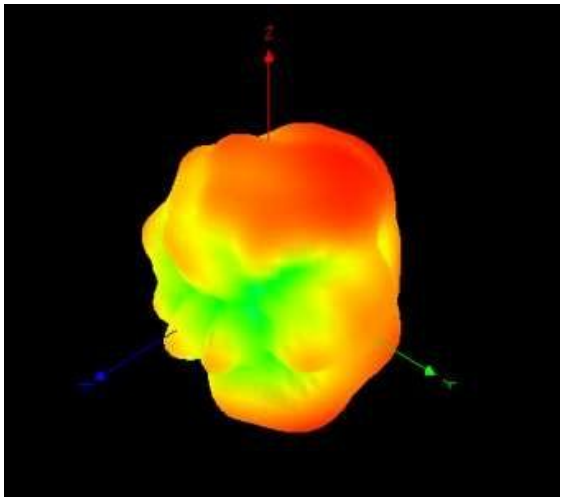
Max Antenna 3D Radiation Pattern 6150-6250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6150-6250	2.08



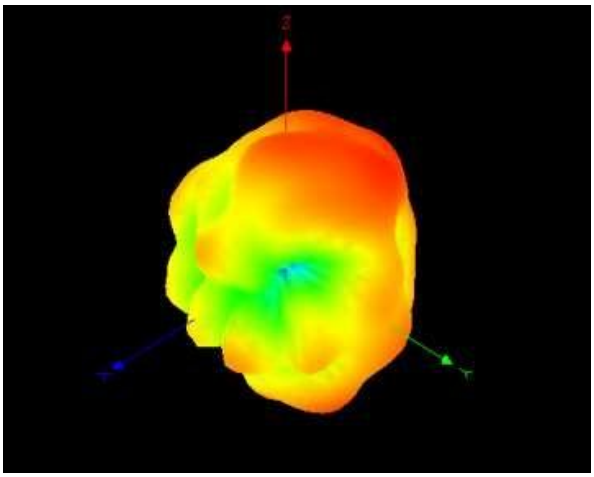
Max Antenna 3D Radiation Pattern 6450-6550 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6450-6550	2.13



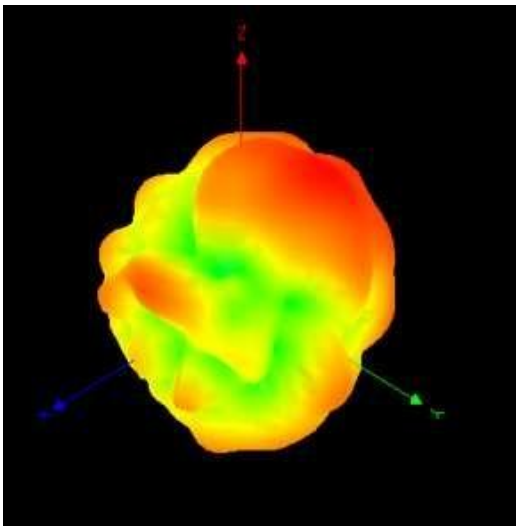
Max Antenna 3D Radiation Pattern 6650-6750 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6650-6750	1.19



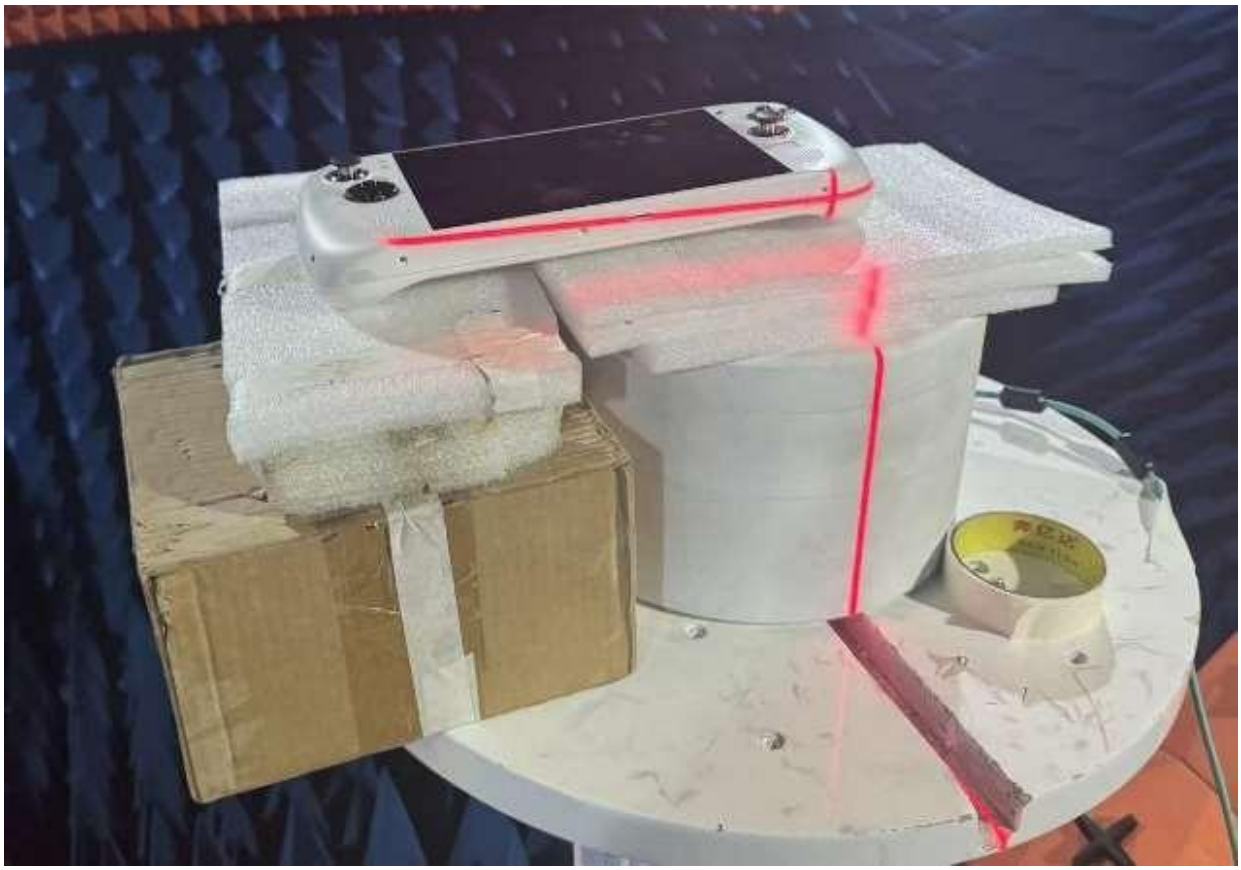
Max Antenna 3D Radiation Pattern 6950-7050 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6950-7050	-0.61



Annex A. Photographs

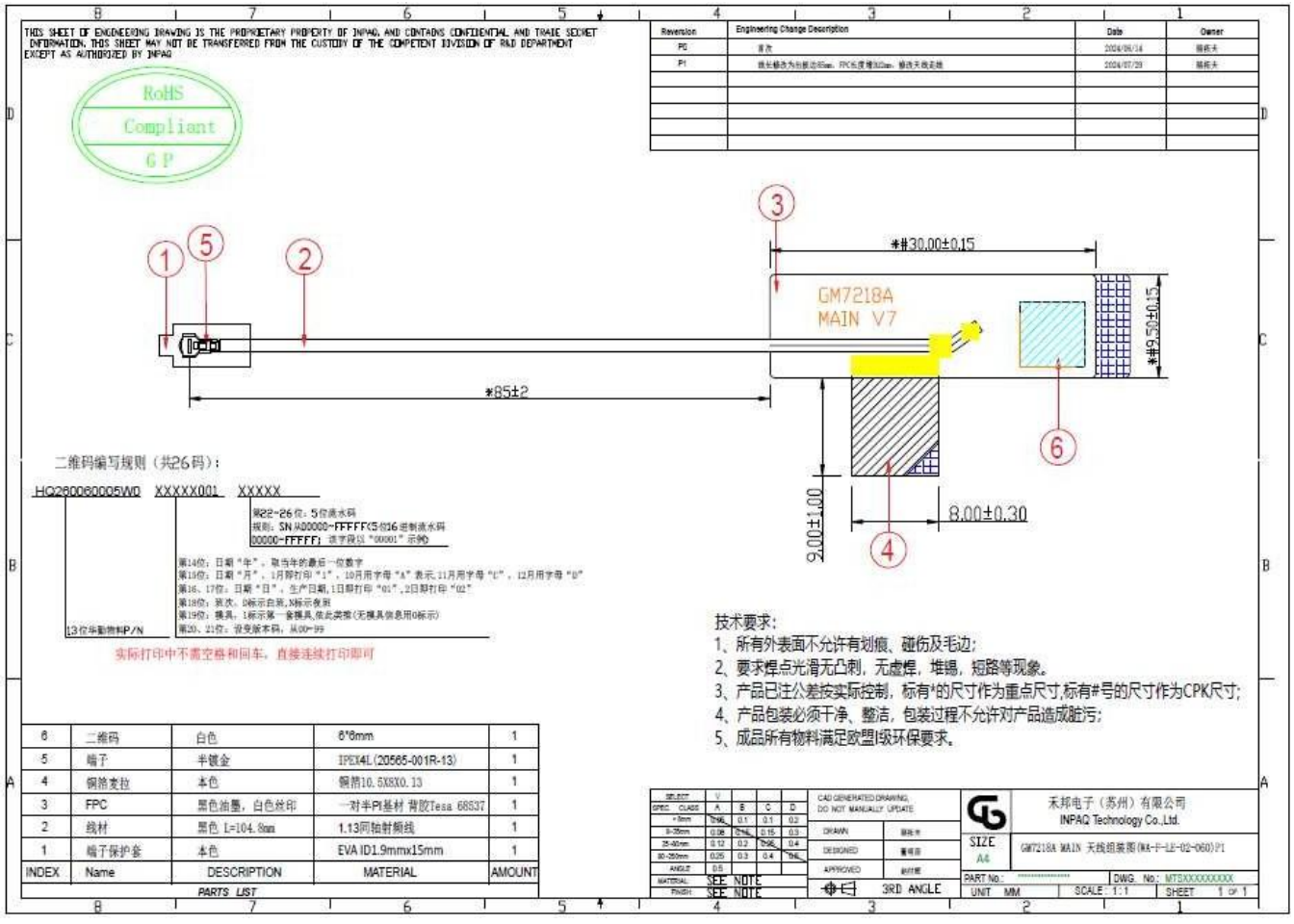
A.1 Setup Photo

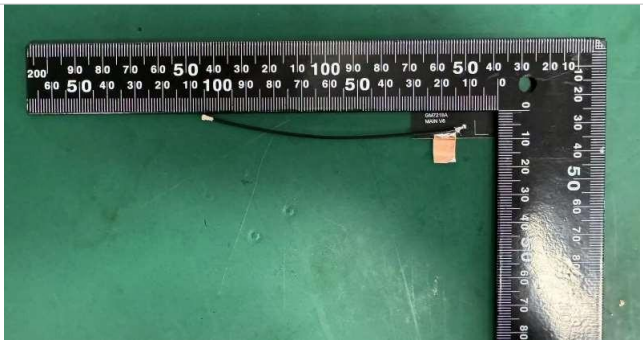
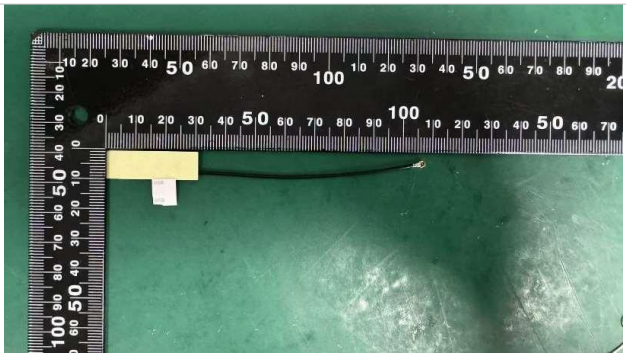


A.2 Test sample

Main Antenna

Antenna Drawing

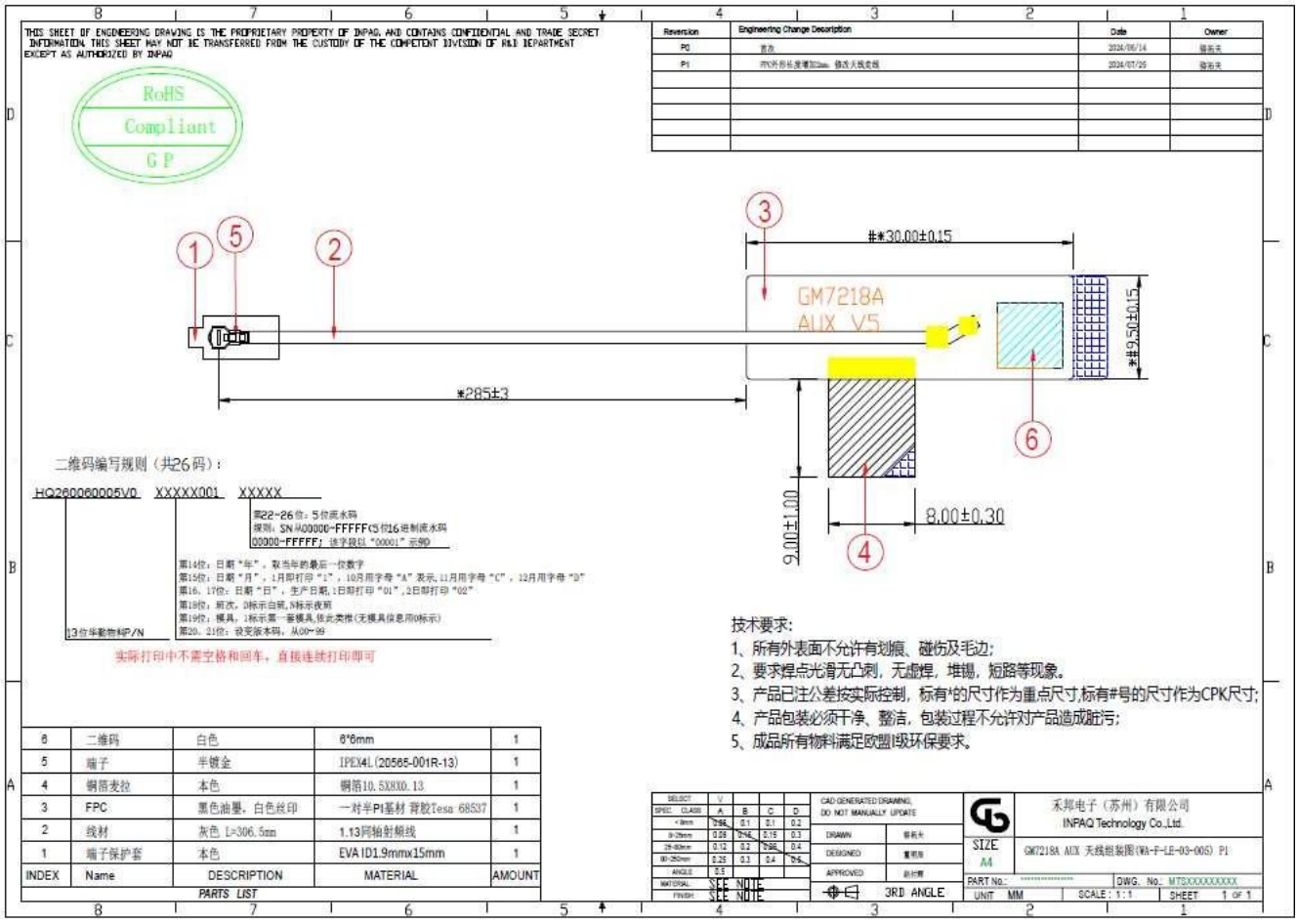


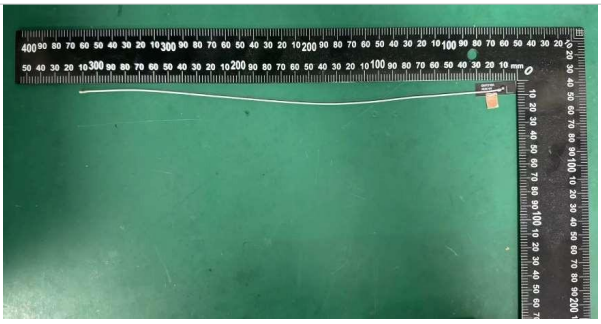
Antenna Photo	
Front	Back
	

Note: antenna photo should include L type ruler

Aux Antenna

Antenna Drawing



Antenna Photo	
Front	Back
	

Note: antenna photo should include L type ruler

Annex B. Antenna Location

B.1 Antenna Host Platform Location Information

Include a dimensioned photo(s) or dimensioned drawing(s) of Main and Aux antenna placements (measurements are not required for receive-only antenna).

Any antenna that transmits must show dimensions to bottom of laptop. Provide a description of the materials that are used for supporting or surrounding transmit antennas; for example, non-conductive plastics vs. conductive coated plastic or metallic materials.

B.2 Antenna dimensional information for SAR evaluation

Include a dimensioned photo(s) or dimensioned drawing(s) showing the distance (mm) between the transmit antennas and the user. For notebook/laptop hosts show lapheld position (example below). For tablet hosts show all orientations including lapheld, primary & secondary portrait, primary & secondary landscape positions. Include a description of any proximity sensors or power throttling implementations that limit or exclude use of any host orientation.