ANTENNA INFORMATION

OEM	Lenovo
ODM	Huaqin
Platform model name	IdeaPad 5 2-in-1 14AHP9
Intel platform (ex: Yes, No or NA)	NO
Platform type (ex: regular NB, convertible PC, AIO…etc)	Convertible PC
SAR minimum separation (mm)	NB:6.45mm; PAD:5mm

Antenna manufacturer	AWAN
Address	No.925 Huayuan Road,Zhangpu Town,Kunshan City,Jiangsu Province
Antenna Part number	Main: AYP6Y-100467 Aux: AYP6Y-100468
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	1.69	3.15	2.42	2.38	3.04	2.11	2.76	3.88	3.16	3.27
Aux	2.22	2.68	2.16	3.21	3.66	3.02	3.95	3.46	3.25	3.45

Cable Assembly Part Number and Information					
	Cable PN	**Cable length**(cm)	**Cable diameter**(mm)	**Impedance**(ohm)	**Connector type**
Main	YCB00113-V000916	19.15	1.13	50	I-PEX NGFF:20565-001R-13/KangsuoNGFF :MHF-B13-N-01
Aux	YCB00113-V030916	32.35	1.13	50	I-PEX NGFF:20565-001R-13/KangsuoNGFF :MHF-B13-N-01

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

Table of Contents

1. Reference Gain and Type

NA

2. Document Revision History

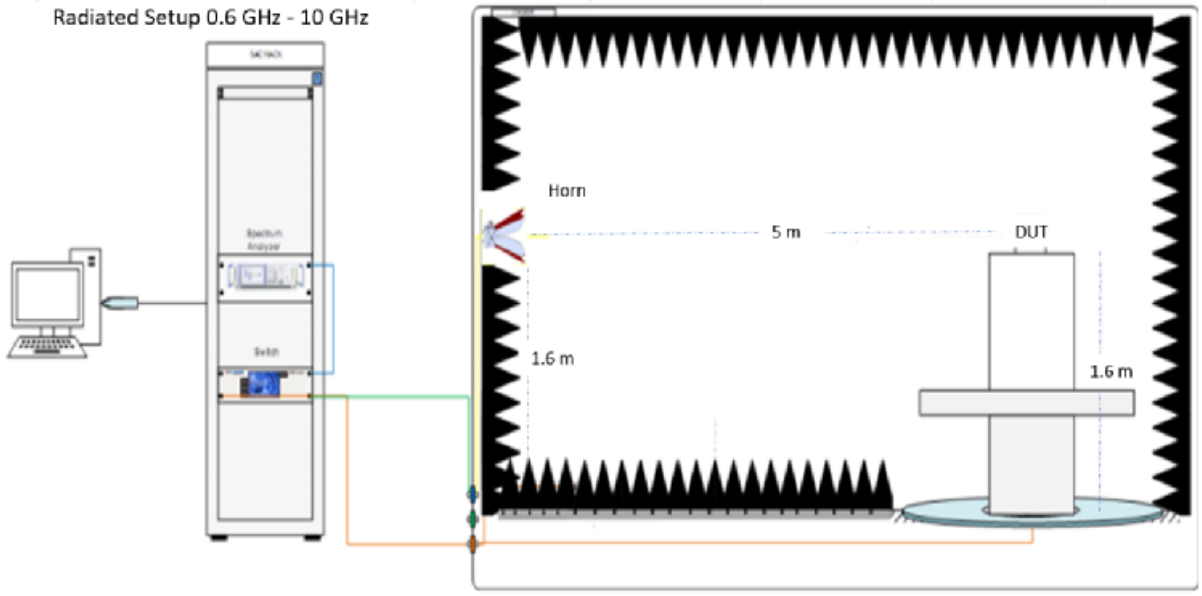
Revision #	Revision Details	Issued Date
Rev. 00	First Issue	2023.11.1

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

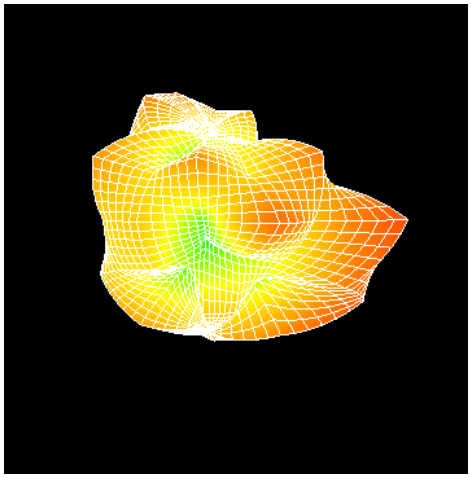
Number	Device	Manufacter	Cal.Date	Cal.Due.Date
1	Chamber	ETS-Lindgren	2023/1/14	2024/1/13
2	Hron Antanna	Bwant	2023/1/14	2024/1/13
3	Notwork Analyzer	Keysight	2023/3/13	2024/3/12
4	Turn table control box	ETS-Lindgren	N/A	N/A
5	Turn table control computer	ETS-Lindgren	N/A	N/A
6	Test system host	EMT	N/A	N/A
7	RF Line TX	Jmtt	2023/2/5	2024/2/4
8	RF Line RX	Jmtt	2023/2/5	2024/2/4
9	Cable 2m 1KHz-8.5GHz	Jmtt	2023/2/5	2024/2/4
10	optical fiber line	Jmtt	N/A	N/A

4. Radiation characteristics of antenna loaded in Host Platform

Main Antenna

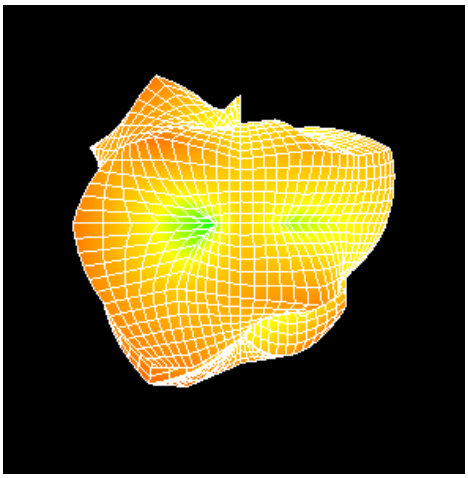
Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	1.69



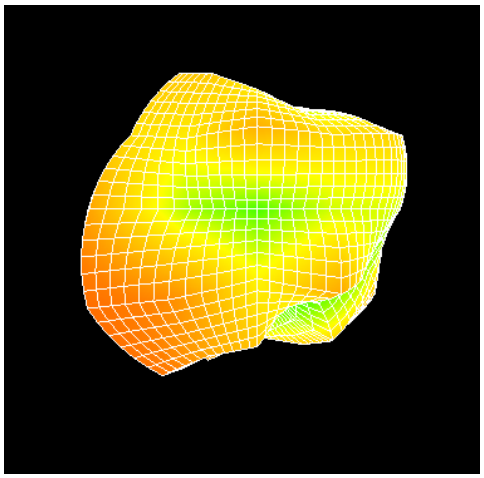
Max Antenna 3D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	3.15



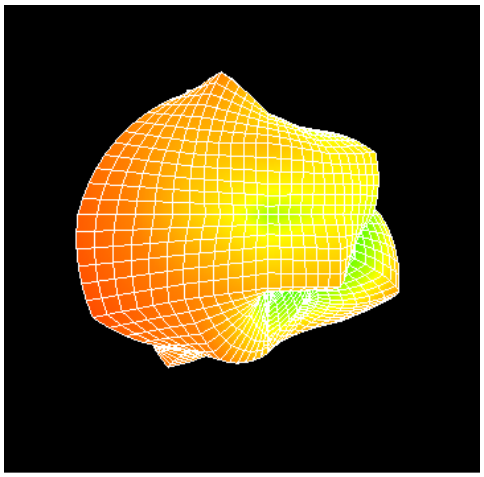
Max Antenna 3D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	2.42



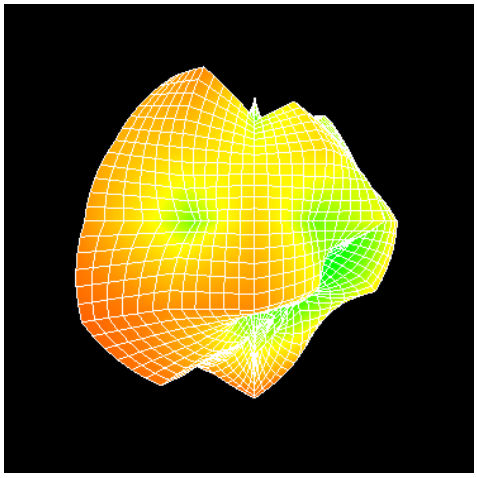
Max Antenna 3D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5470-5725	2.38



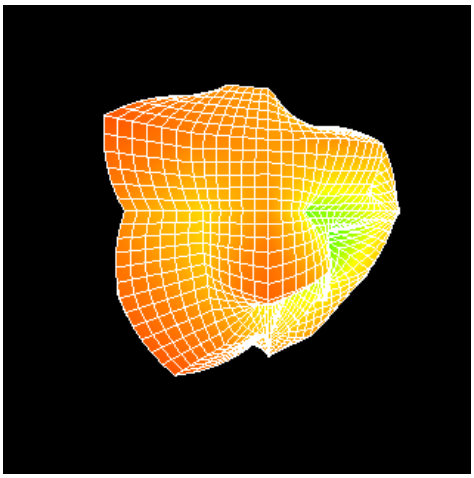
Max Antenna 3D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	3.04



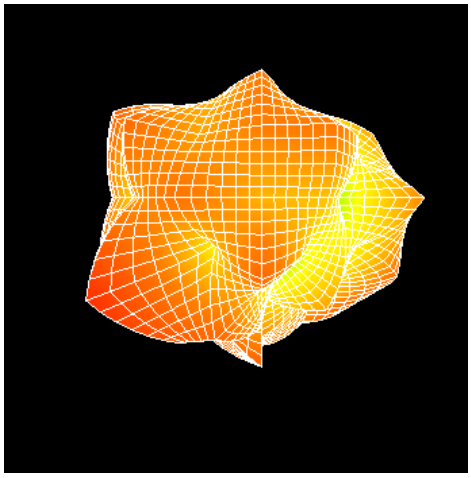
Max Antenna 3D Radiation Pattern 5850-5895 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5850-5895	2.11



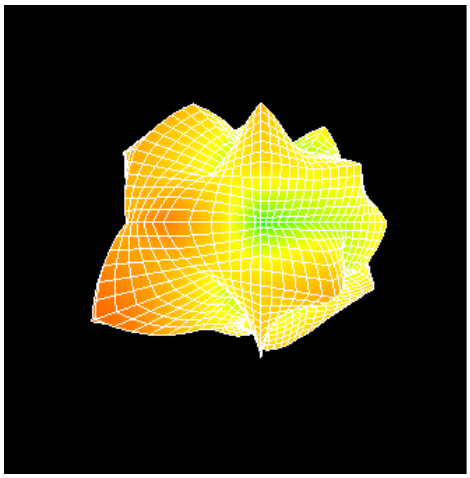
Max Antenna 3D Radiation Pattern 5925-6425 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5925-6425	2.76



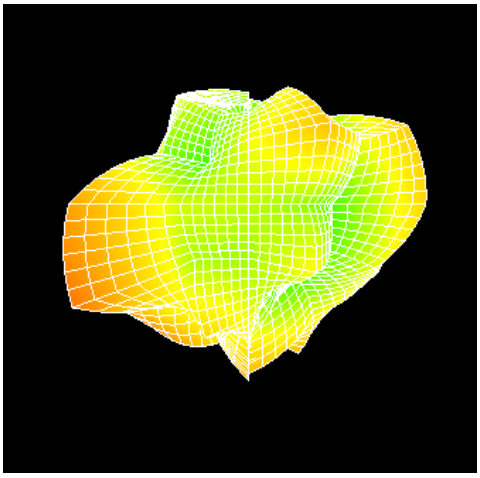
Max Antenna 3D Radiation Pattern 6425-6525 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6425-6525	3.88



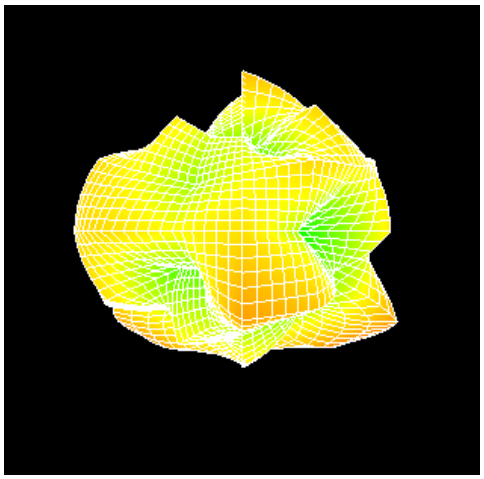
Max Antenna 3D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6525-6875	3.16



Max Antenna 3D Radiation Pattern 6875-7125 MHz

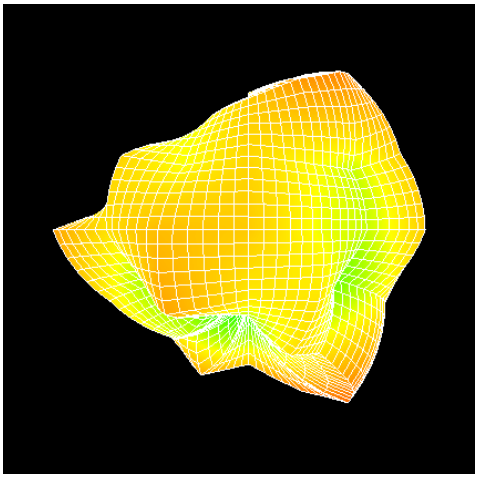
Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6875-7125	3.27



Auxiliary Antenna

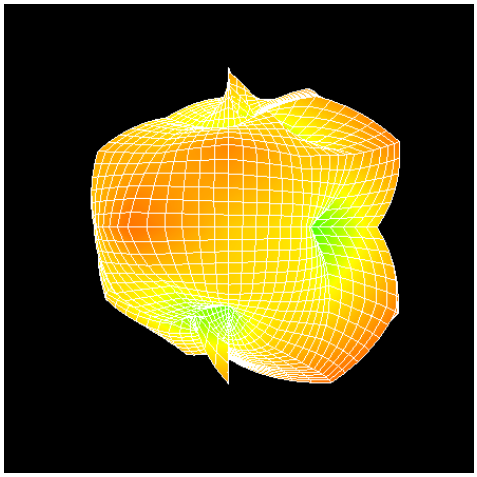
Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	2.22



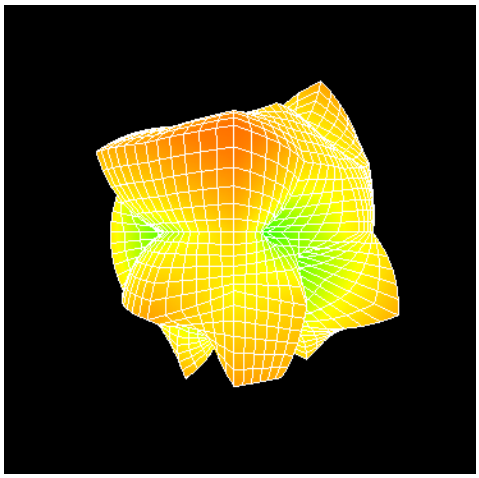
Max Antenna 3D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	2.68



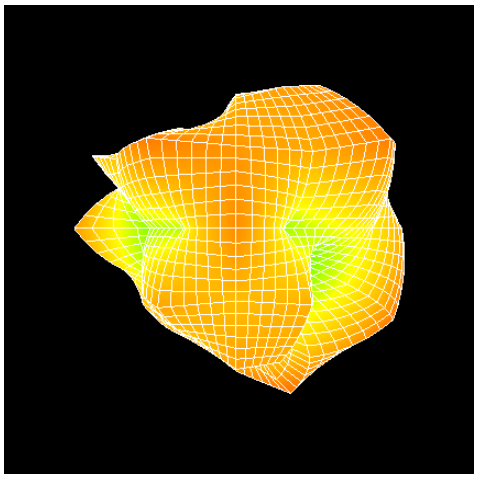
Max Antenna 3D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	2.16



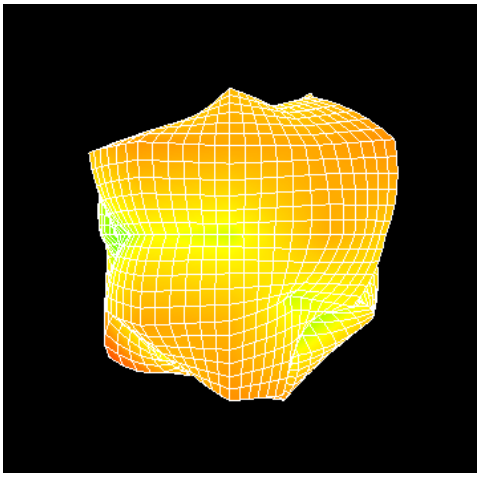
Max Antenna 3D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5470-5725	3.21



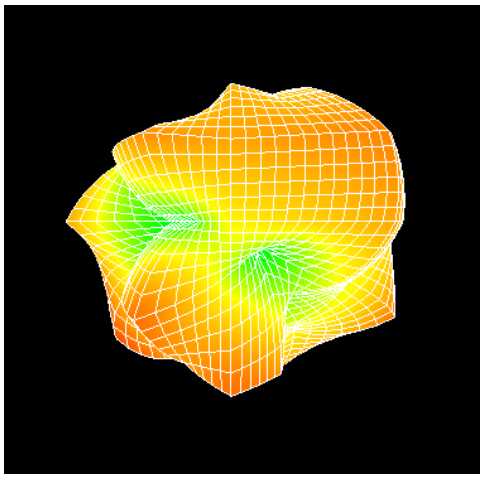
Max Antenna 3D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	3.66



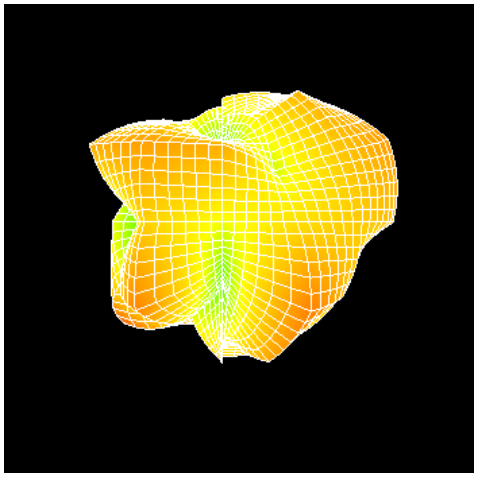
Max Antenna 3D Radiation Pattern 5850-5895 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5850-5895	3.02



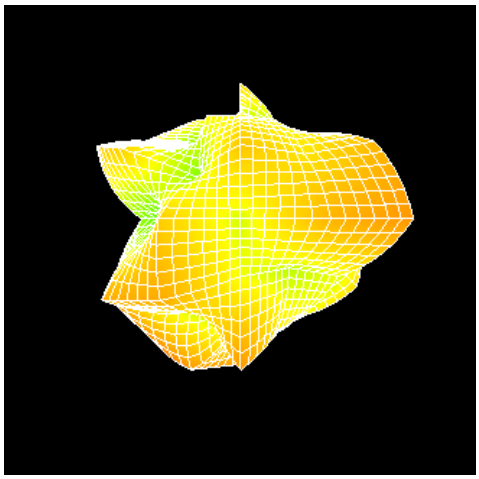
Max Antenna 3D Radiation Pattern 5925-6425 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5925-6425	3.95



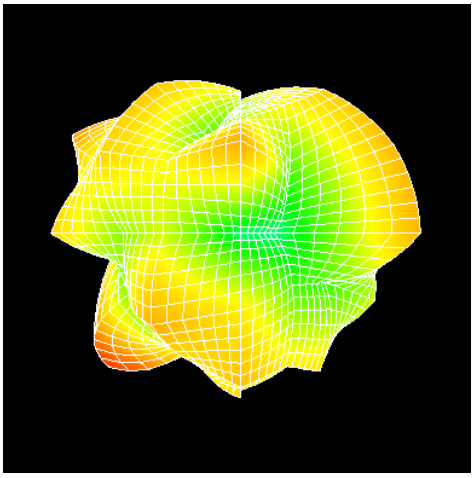
Max Antenna 3D Radiation Pattern 6425-6525 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6425-6525	3.46



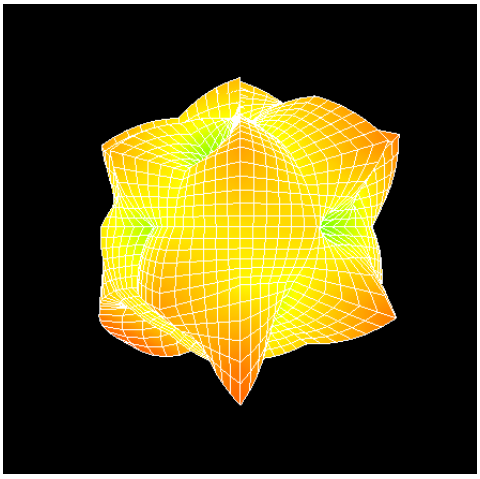
Max Antenna 3D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6525-6875	3.25



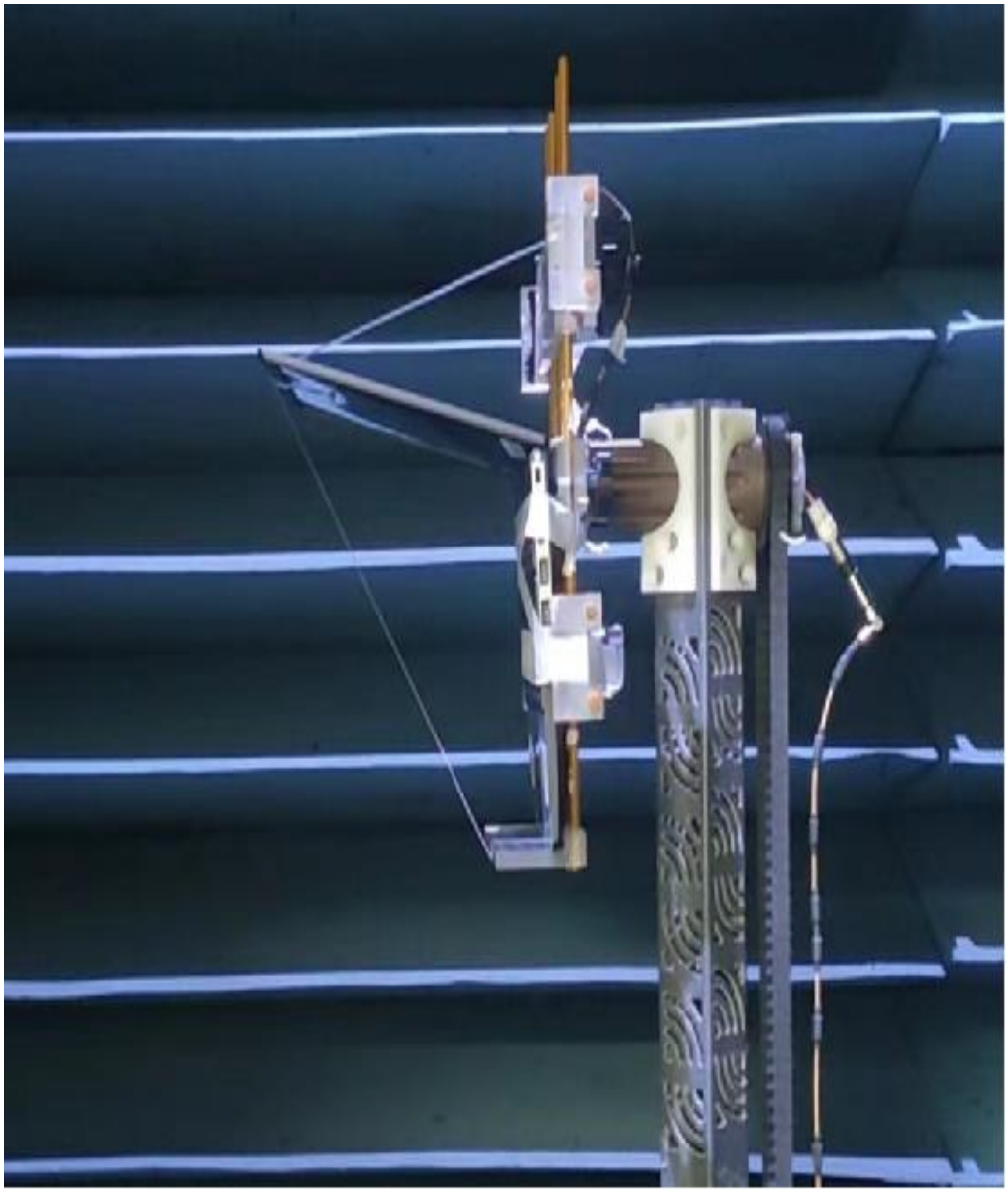
Max Antenna 3D Radiation Pattern 6875-7125 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6875-7125	3.45



Annex A. Photographs

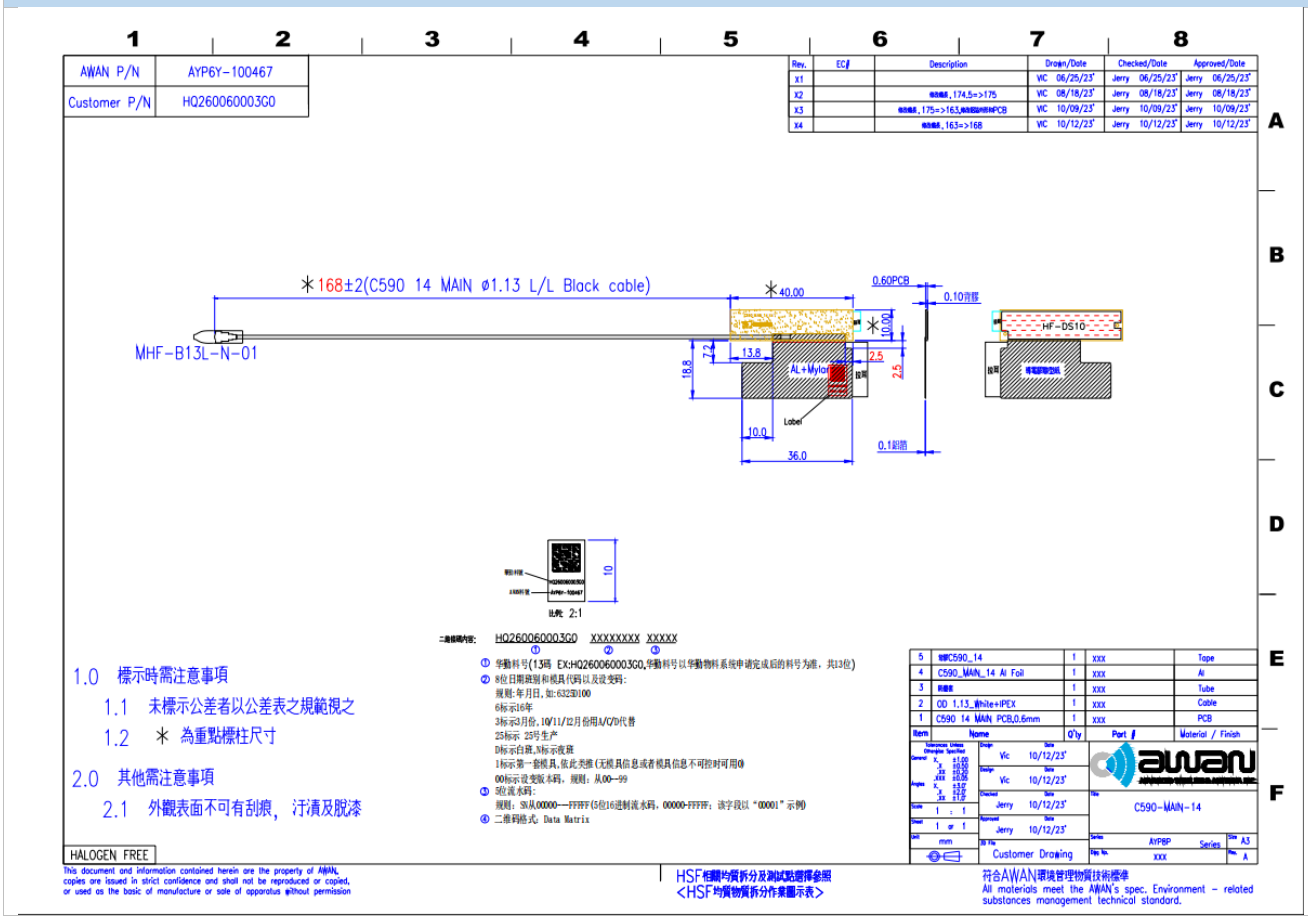
A.1 Setup Photo

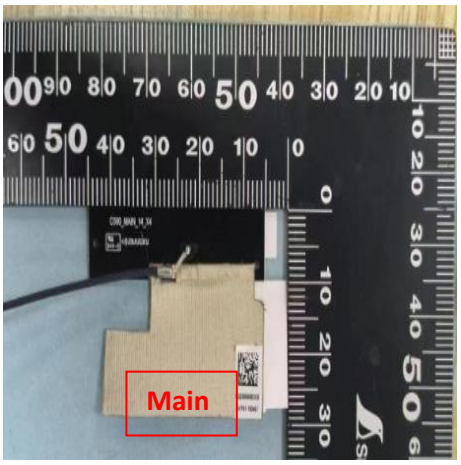
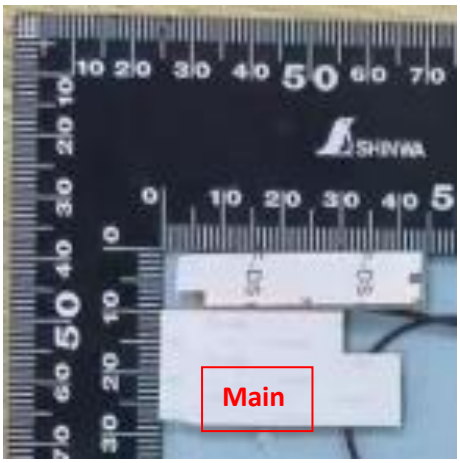
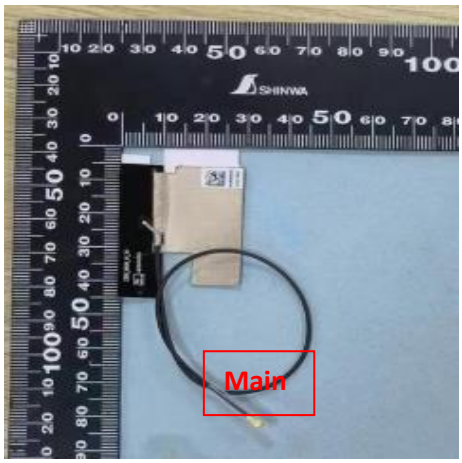
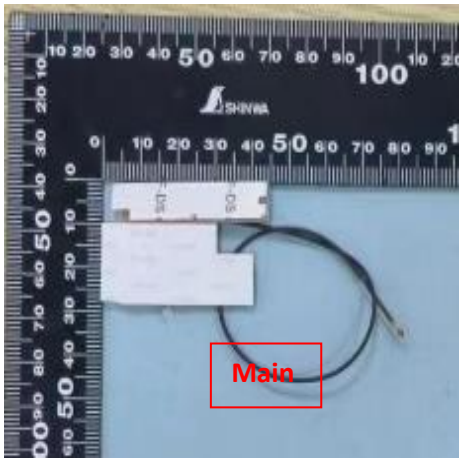


A.2 Test sample

Main Antenna

Antenna Drawing

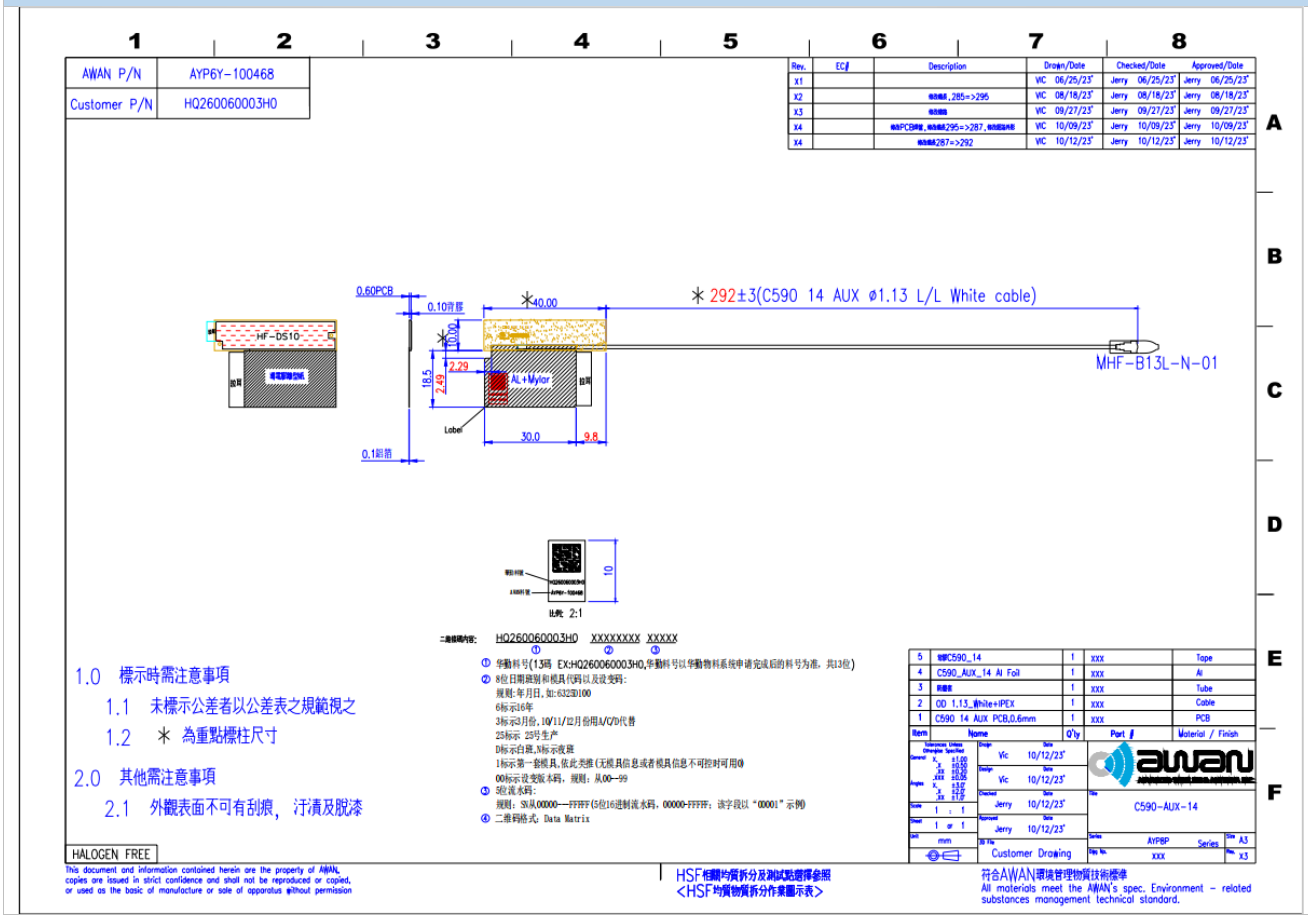


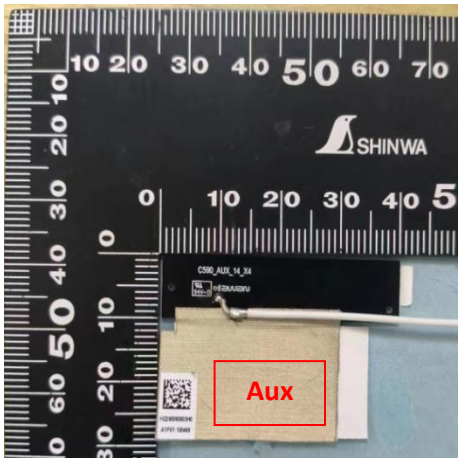
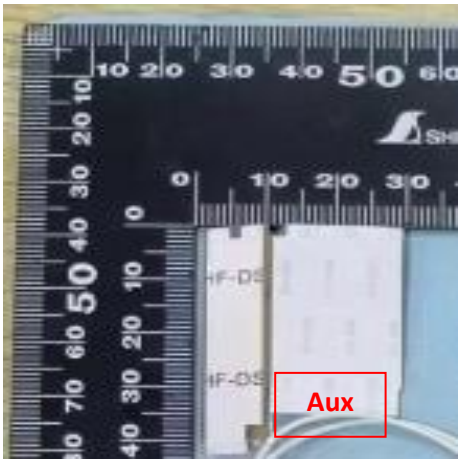
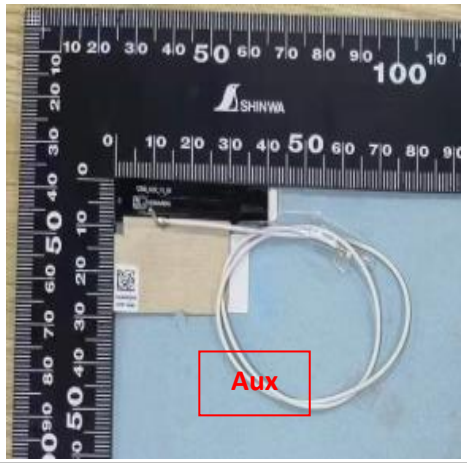
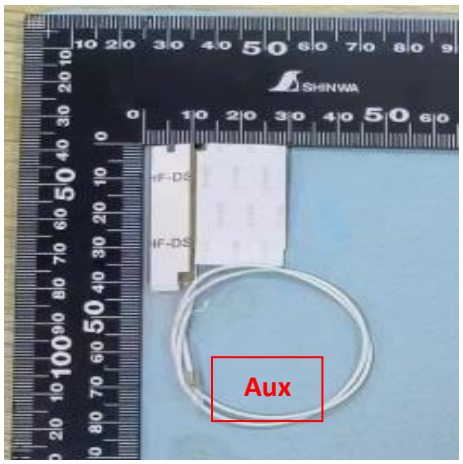
Antenna Photo	
Front	Back
	
	

Note: antenna photo should include L type ruler

Aux Antenna

Antenna Drawing



Antenna Photo	
Front	Back
	
	

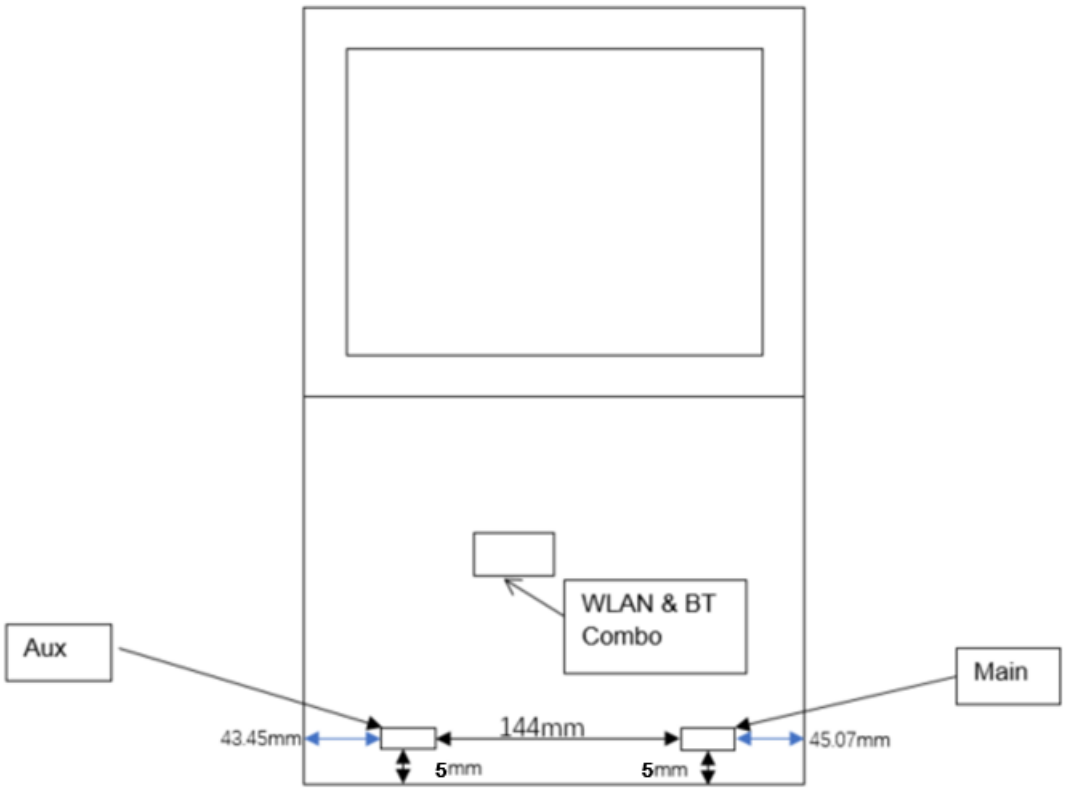
Note: antenna photo should include L type ruler

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).

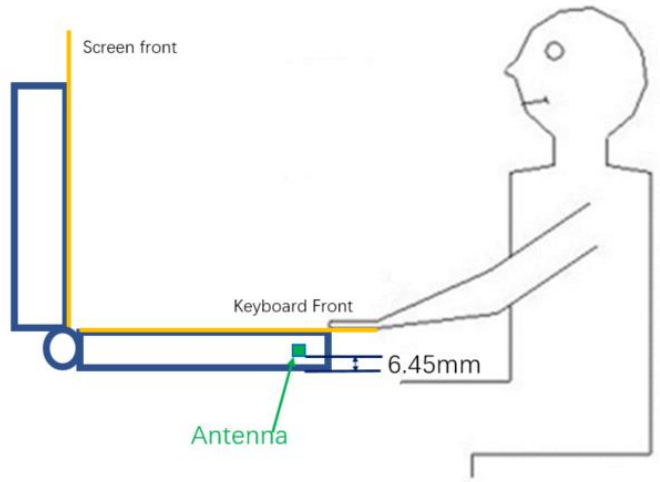
Any antenna that transmits must show dimensions to bottom of laptop. Provide a description of the materials that are used for supporting or surrounding transmit antennas; for example, non-conductive plastics vs. conductive coated plastic or metallic materials.



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.

NB Mode SAR dimensioned photo:



Tablet Mode SAR dimensioned photo: