

# ANTENNA INFORMATION

OEM	Lenovo
ODM	Huaqin
Platform model name	IdeaPad 5 2-in-1 16AHP9
Intel platform (ex: Yes, No or NA)	NO
Platform type (ex: regular NB, convertible PC, AIO...etc)	Convertible PC
SAR minimum separation (mm)	NB:6.37mm ; PAD:4.9mm

Antenna manufacturer	AWAN	
Address	No.925 Huayuan Road,Zhangpu Town,Kunshan City,Jiangsu Province	
Antenna Part number	Main: AYP6Y-100469	Aux: AYP6Y-100470
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	2.26	3.16	3.08	2.43	3.22	2.31	2.85	3.88	3.14	2.25
Aux	2.16	3.41	3.33	2.89	3.82	2.24	3.38	3.40	3.40	3.53

Cable Assembly Part Number and Information					
	Cable PN	Cable length(cm)	Cable diameter(mm)	Impedance(ohm)	Connector type
Main	YCB00113-V000916	22.4	1.13	50	I-PEX NGFF:20565-001R-13/KangsuoNGFF :MHF-B13-N-01
Aux	YCB00113-V030916	32.65	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

<b>Cover page</b> .....	<b>1</b>
<b>1. Intel Reference Gain and Type</b> .....	<b>3</b>
<b>2. Document Revision History</b> .....	<b>3</b>
<b>3. Test &amp; System Description</b>	
3.1 Measurement Method and System.....	4
3.2 Test setup.....	4
3.3 Equipment list.....	5
<b>4. Radiation characteristics of antenna loaded in Host Platform</b> .....	<b>6</b>
<b>Annex A. Photographs</b>	
A.1 Setup Photo.....	16
A.2 Test sample.....	17
<b>Annex B. Antenna Location</b>	
B.1 Antenna Host Platform Location Information.....	19
B.2 Antenna dimensional information for SAR evaluation.....	20

**1. Reference Gain and Type**

NA

**2. Document Revision History**

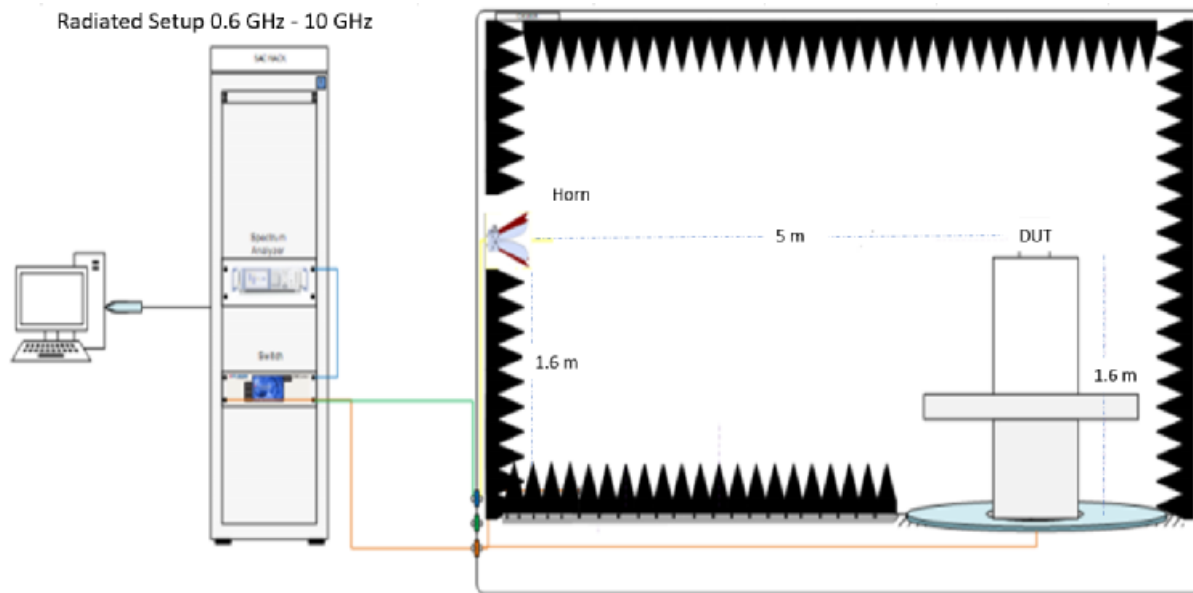
<b>Revision #</b>	<b>Revision Details</b>	<b>Issued Date</b>
Rev. 00	First Issue	2023.11.1

### 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

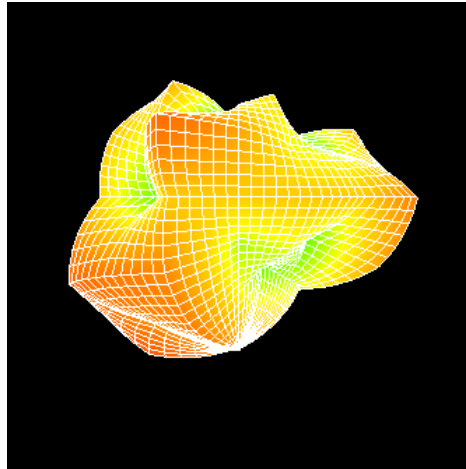
Number	Device	Manufacturer	Cal. Date	Cal. Due. Date
1	Chamber	ETS-Lindgren	2023/1/14	2024/1/13
2	Hron Antanna	Bwant	2023/1/14	2024/1/13
3	Notwork Analyzer	Keysight	2023/3/13	2024/3/12
4	Turn table control box	ETS-Lindgren	N/A	N/A
5	Turn table control computer	ETS-Lindgren	N/A	N/A
6	Test system host	EMT	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

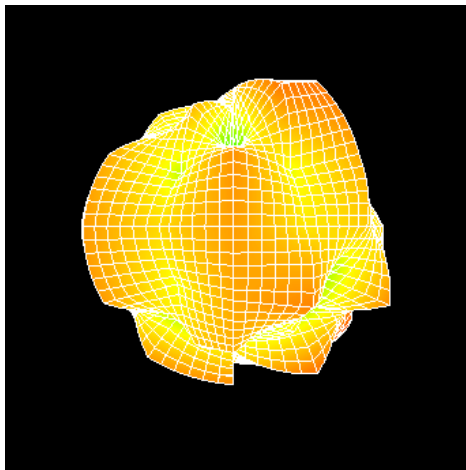
Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	2.26



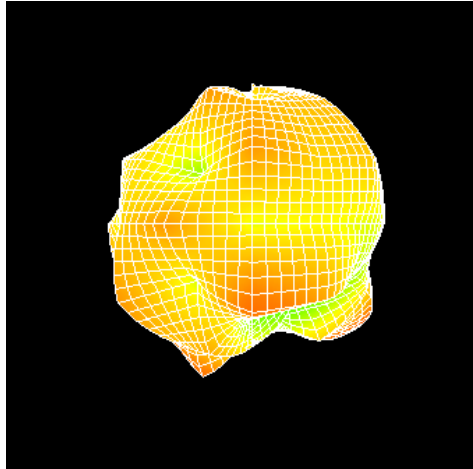
Max Antenna 3D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	3.16



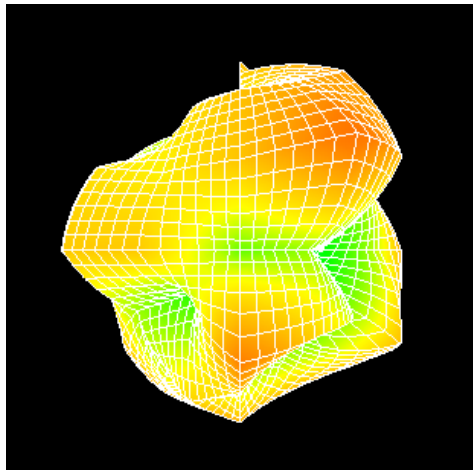
## Max Antenna 3D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	3.08



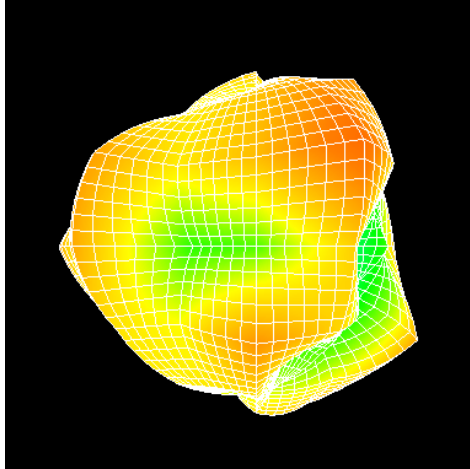
## Max Antenna 3D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5470-5725	2.43



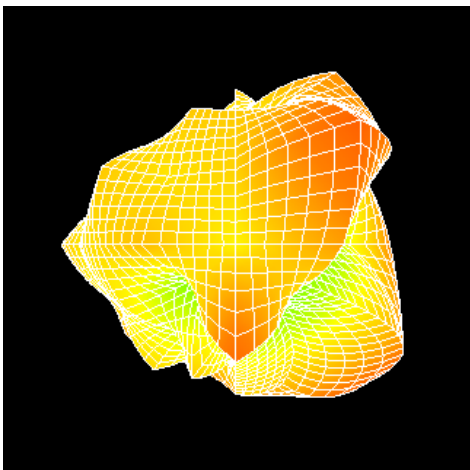
## Max Antenna 3D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	3.22



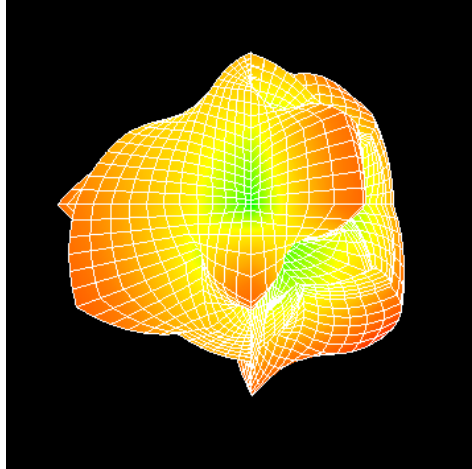
## Max Antenna 3D Radiation Pattern 5850-5895 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5850-5895	2.31



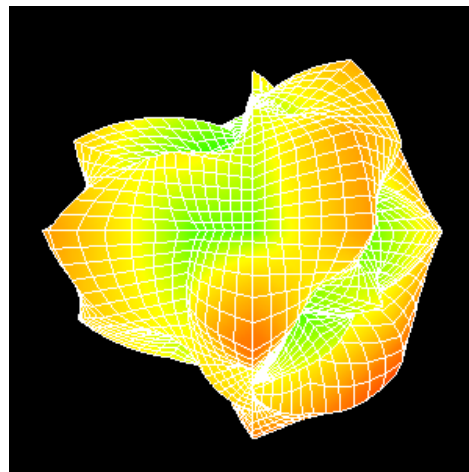
## Max Antenna 3D Radiation Pattern 5925-6425 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5925-6425	2.85



## Max Antenna 3D Radiation Pattern 6425-6525 MHz

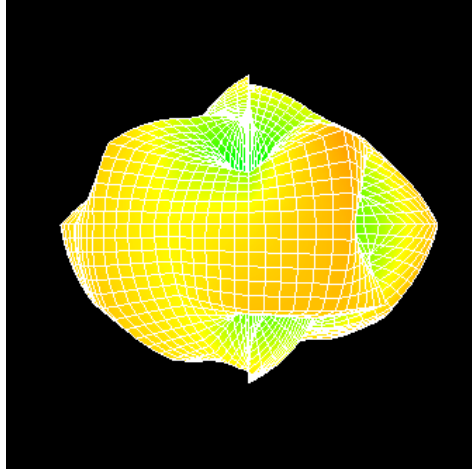
Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6425-6525	3.88





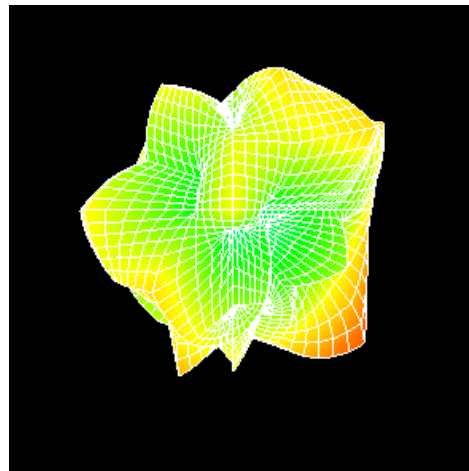
## Max Antenna 3D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6525-6875	3.14



## Max Antenna 3D Radiation Pattern 6875-7125 MHz

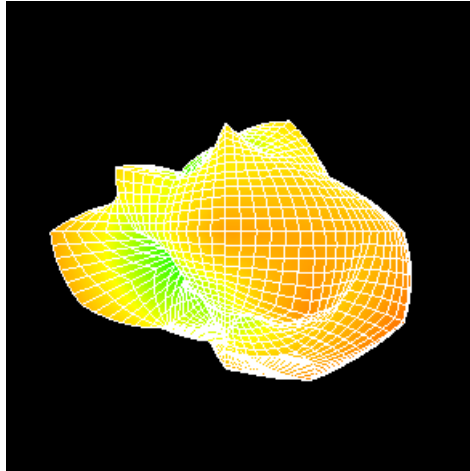
Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6875-7125	2.25



## Auxiliary Antenna

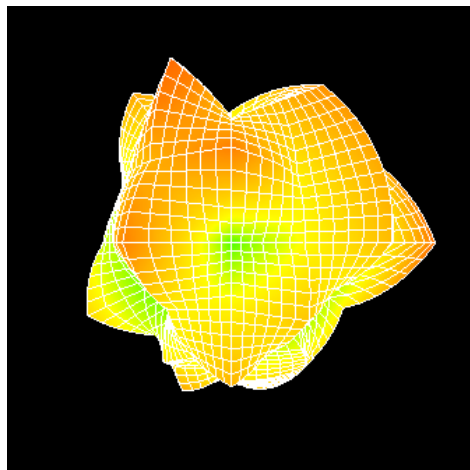
### Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	2.16



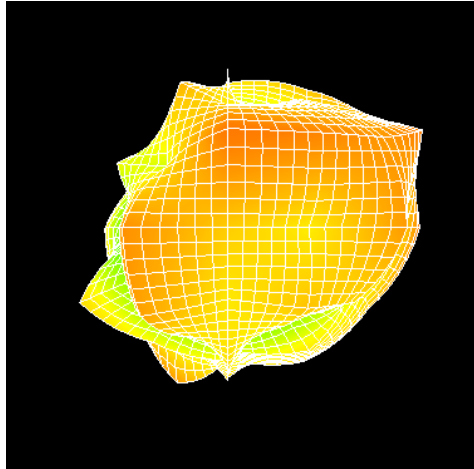
### Max Antenna 3D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	3.41



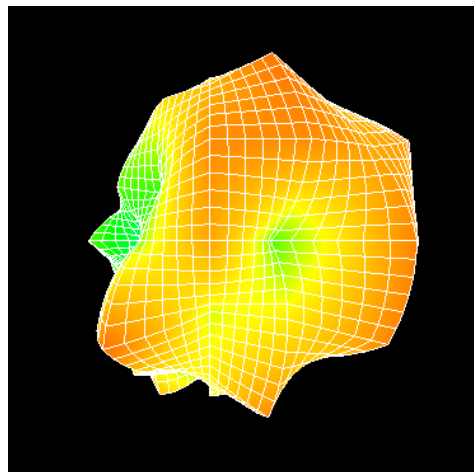
## Max Antenna 3D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	3.33



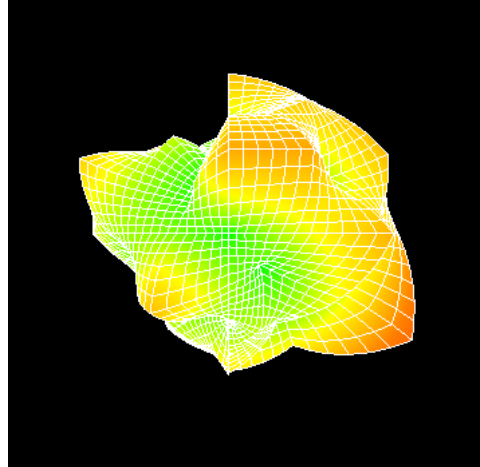
## Max Antenna 3D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5470-5725	2.89



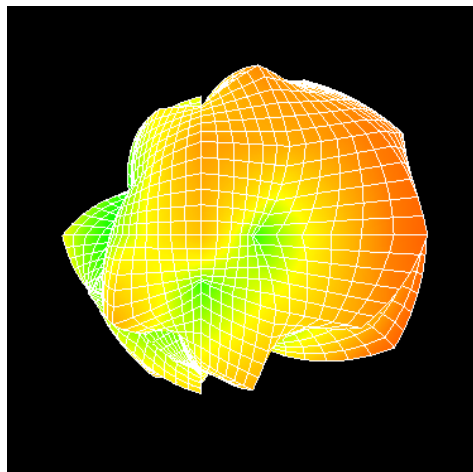
## Max Antenna 3D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	3.82



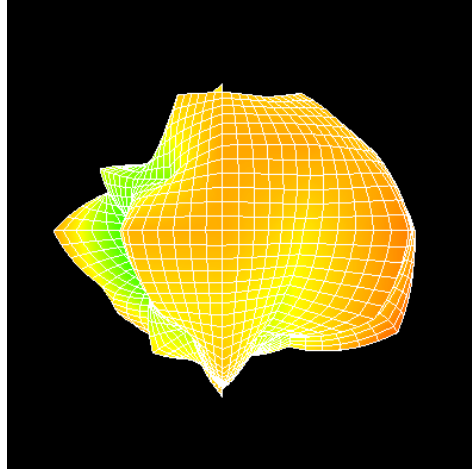
## Max Antenna 3D Radiation Pattern 5850-5895 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5850-5895	2.24



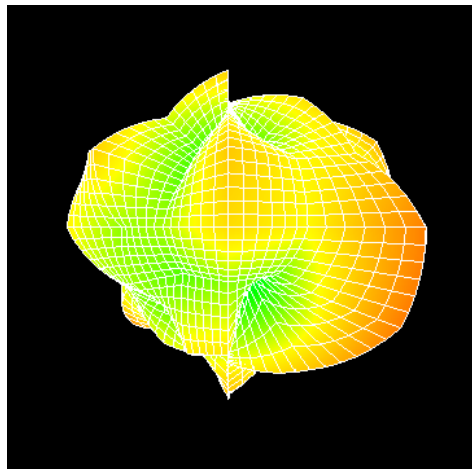
## Max Antenna 3D Radiation Pattern 5925-6425 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5925-6425	3.38



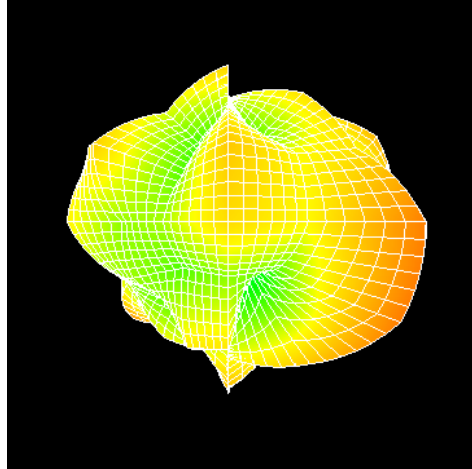
## Max Antenna 3D Radiation Pattern 6425-6525 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6425-6525	3.40



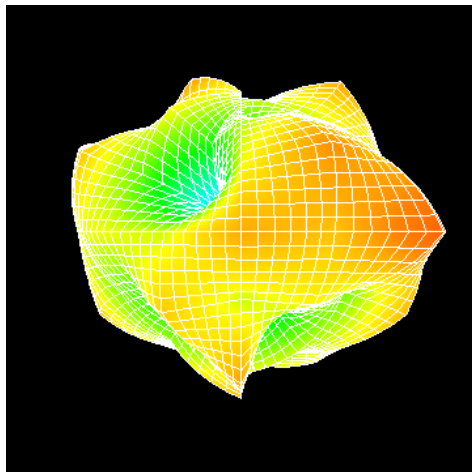
## Max Antenna 3D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6525-6875	3.40



## Max Antenna 3D Radiation Pattern 6875-7125 MHz

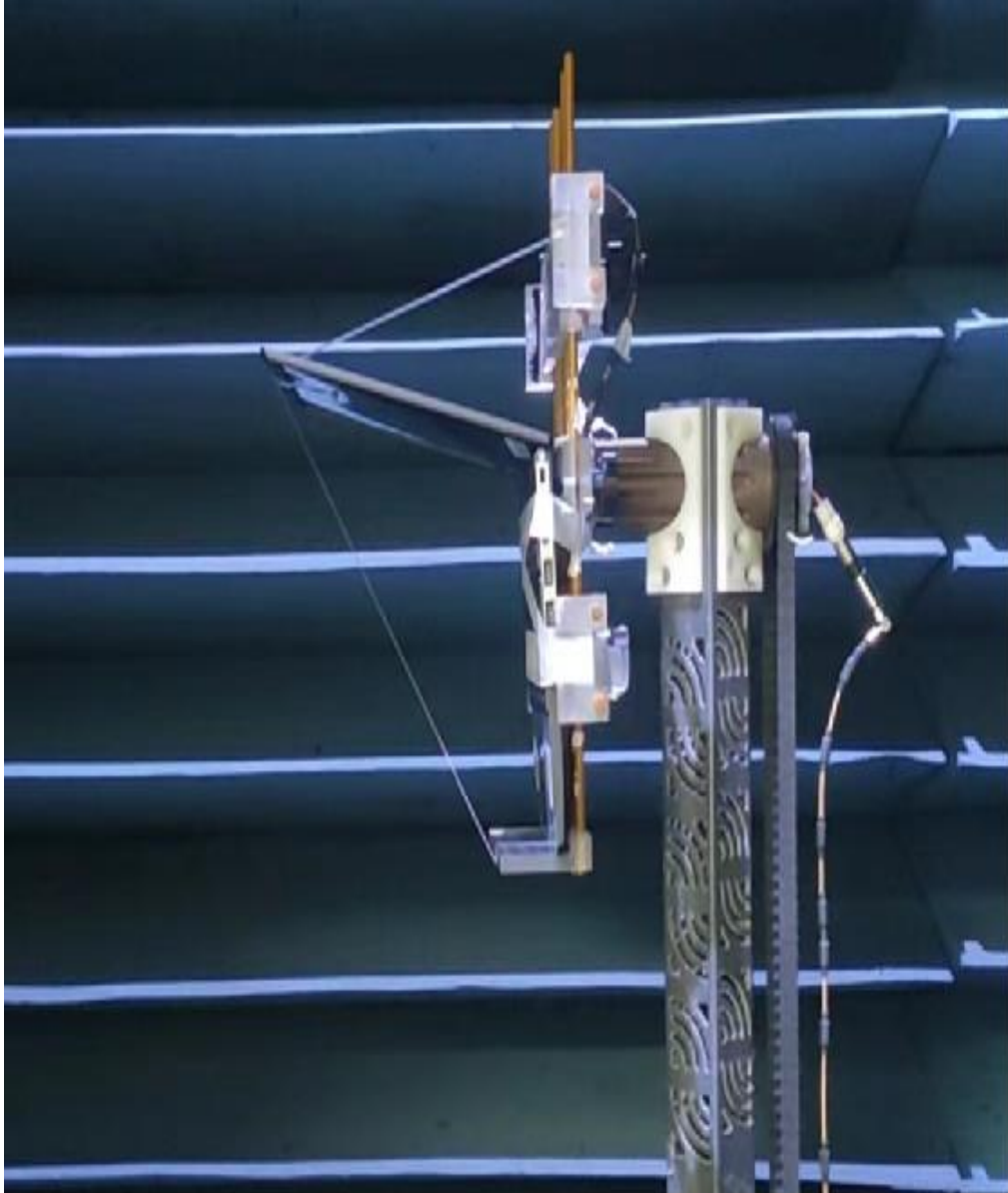
Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6875-7125	3.53



# Annex A. Photographs

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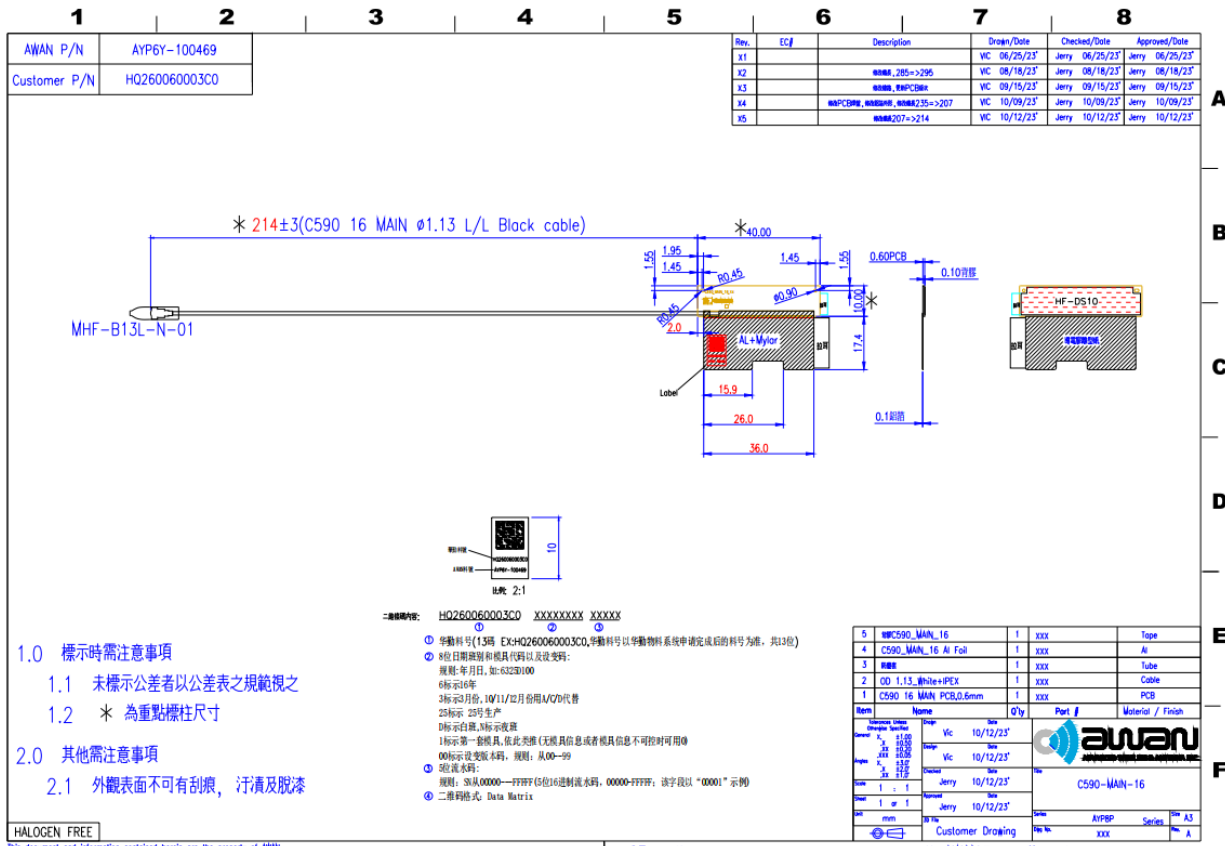
## A.1 Setup Photo



## A.2 Test sample

### Main Antenna

#### Antenna Drawing



- 1.0 標示時需注意事項
- 1.1 未標示公差者以公差表之規範視之
  - 1.2 \* 為重點標柱尺寸
- 2.0 其他需注意事項
- 2.1 外觀表面不可有刮痕, 汙漬及脫漆

二維碼規格: HQ260060003C0 XXXXXXXX XXXXX

- ① 華勤料号(13碼) EX:HQ260060003C0, 華勤料号以華勤物料系統申請完成后的料号為準, 共13位
- ② 8位日期跟蹤和器具代碼以及校對碼:  
 規則:年日月, 如:63230100  
 6標示6年  
 3標示3月份, 10/11/12月份用A/G/D代替  
 25標示 25号生产
- ③ 標示日期, 3標示改裝
- ④ 標示第一套器具, 套此套類(无器具信息或者器具信息不可控时可用00)
- ⑤ 00標示受控版本碼, 規則: 从00-99
- ⑥ 0位版本碼:  
 規則: S从00000---FFFFF(位16进制流水碼, 00000-FFFFF; 該字段以"00000"示例)
- ⑦ 二維碼格式: Data Matrix

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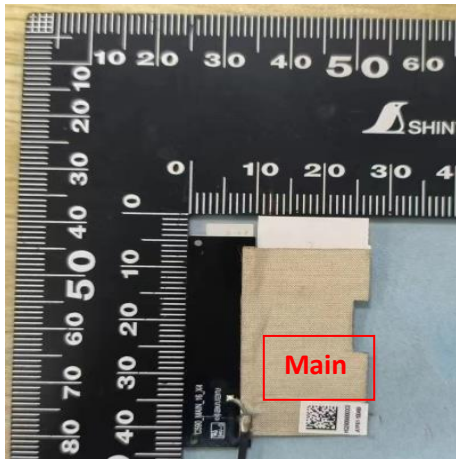
HSF相關物質分析及測試數據保留  
 <HSF與物質分析作業圖示表>

符合AWAN環境管理物資技術標準  
 All materials meet the AWAN's spec. Environment - related substances management technical standard.

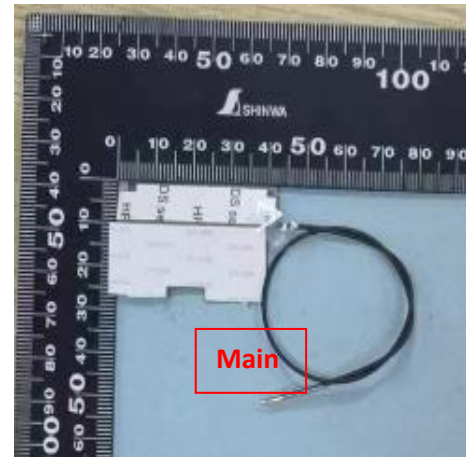
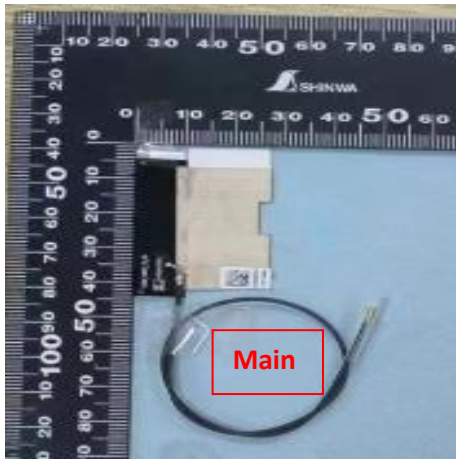
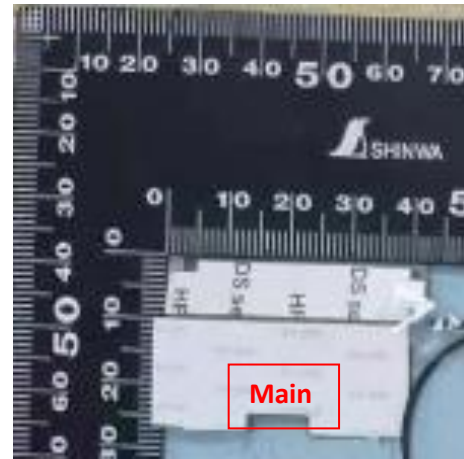


Antenna Photo

Front



Back



Note: antenna photo should include L type ruler

# Aux Antenna

## Antenna Drawing

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
AWAN P/N AYP6Y-100470				Rev. ECJ Description Drawn/Date Checked/Date Approved/Date			
Customer P/N HQ260060003D0				X1 VC 06/25/23 Jerry 06/25/23 Jerry 06/25/23			
				X2 物料, 物料PCBA VC 09/15/23 Jerry 09/15/23 Jerry 09/15/23			
				X3 物料物料, 物料325->295 VC 10/09/23 Jerry 10/09/23 Jerry 10/09/23			

Item	Name	Q'ty	Part #	Material / Finish
5	物料C590_AUX_16	1	xxx	Tube
4	C590_AUX_16 Al Foil	1	xxx	Al
3	物料	1	xxx	Tube
2	OD 1.13 物料+PEX	1	xxx	Cable
1	C590 16 AUX PCB,0.6mm	1	xxx	PCB

- 1.0 標示時需注意事項
- 1.1 未標示公差者以公差表之規範視之
  - 1.2 \* 為重點標柱尺寸
- 2.0 其他需注意事項
- 2.1 外觀表面不可有刮痕, 汗漬及脫漆

- 二維碼規格: HQ260060003D0 XXXXXXXX XXXXX
- ① 物料料号(15碼) Ex:HQ260060003D0,物料料号以物料系统申请完成后的料号为准,共13位
  - ② 8位日期编码和模具代码以及改号:
  - 格式:年月日,如:6323100
  - 6标示6年
  - 3标示3月份,10/11/12月份用M/O/D代替
  - 25标示25号生产
  - D标示白班,M标示夜班
  - 1标示第一套模具,依此类推(无模具信息或者模具信息不可控时可用000标示套取本码,规则:从00-99)
  - ③ 改号规则:
  - 规则: S从00000-FFFFF(5位16进制流水码,00000-FFFFF;该字段以"00001"示例)
  - ④ 二維碼格式: Data Matrix

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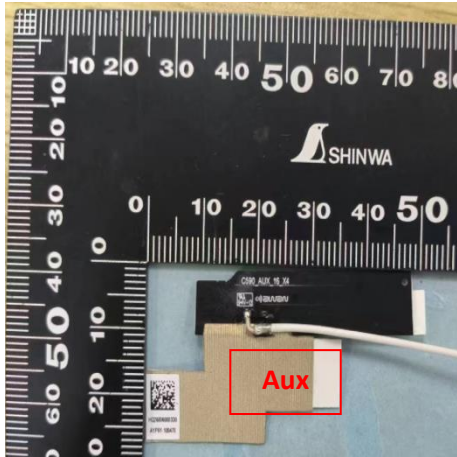
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HSF相關均質分析及測試點標得參照  
<HSF均質分析作業顯示表>

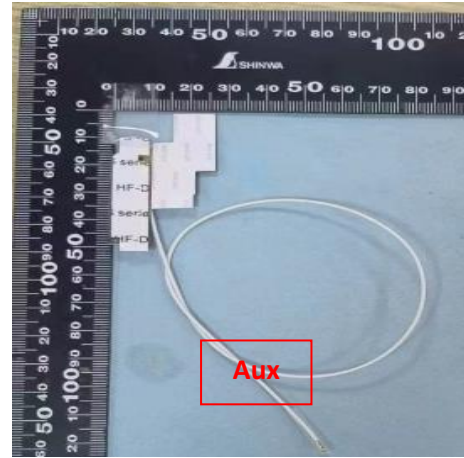
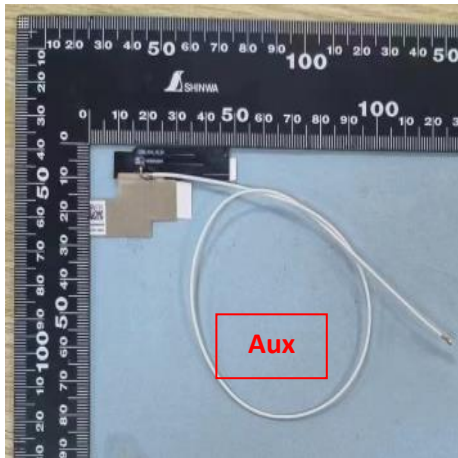
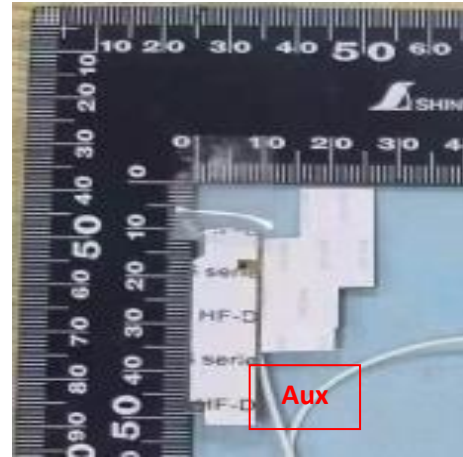
符合AWAN環境管理物質技術標準  
All materials meet the AWAN's spec. Environment - related substances management technical standard.

Antenna Photo

Front



Back



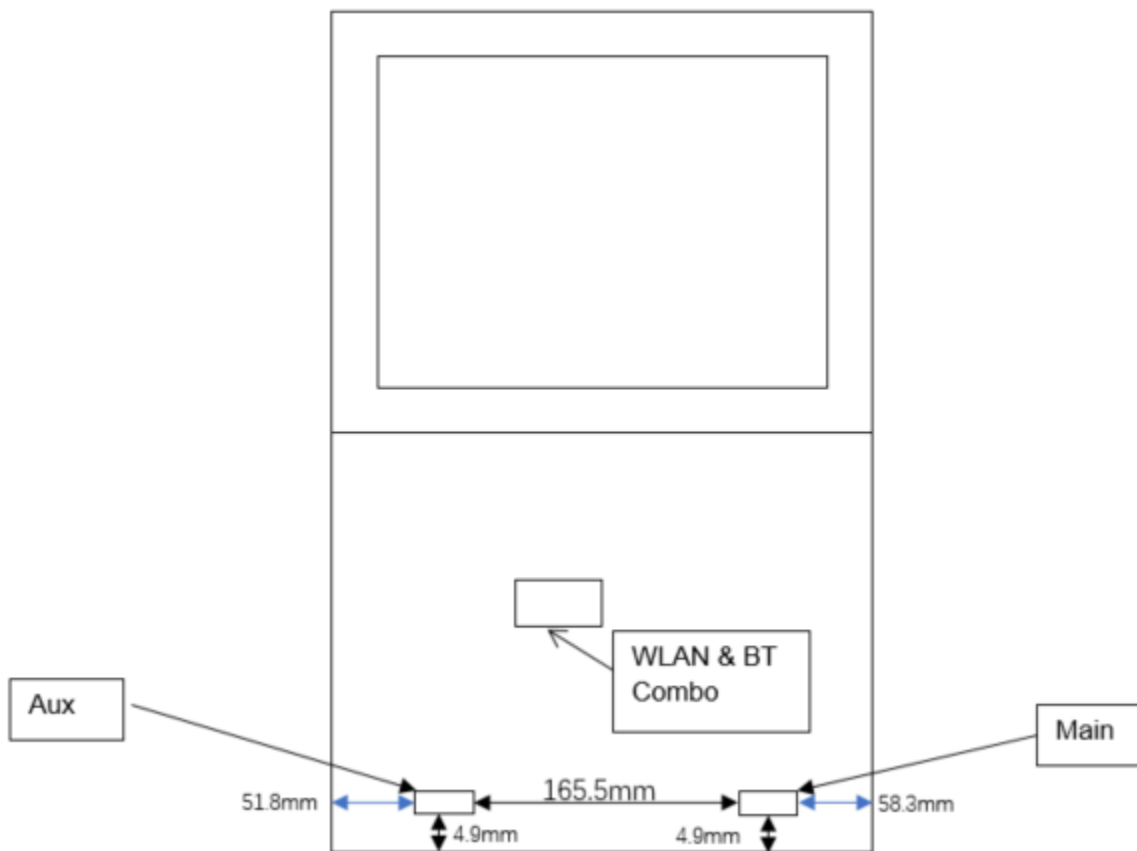
Note: antenna photo should include L type ruler

# 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).

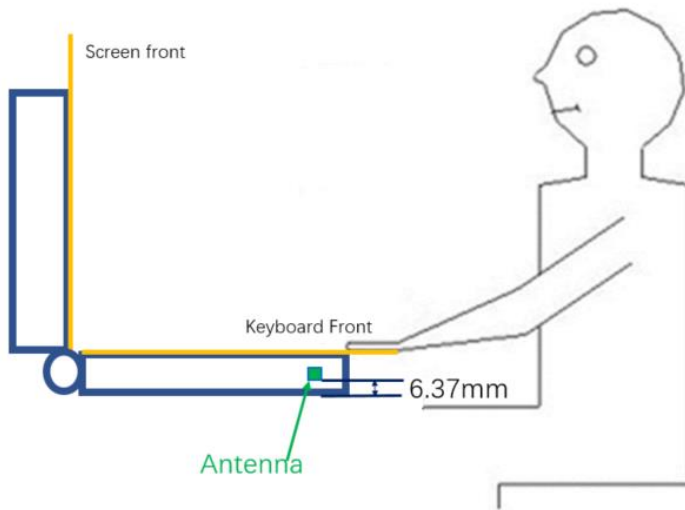
Any antenna that transmits must show dimensions to bottom of laptop. Provide a description of the materials that are used for supporting or surrounding transmit antennas; for example, non-conductive plastics vs. conductive coated plastic or metallic materials.



## 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:

