

ANTENNA INFORMATION

OEM	Lenovo		
ODM	Huaqin Technology Co.,Ltd.		
Platform model name	Yoga 7 2-in-1 16ILL10		
Intel platform (ex: Yes, No or NA)	YES		
Platform type (ex: regular NB, convertible PC, AIO...etc)	Convertible PC		
SAR minimum separation (mm)	FCC (1g)	2.96	
	ISED (1g)	2.96	
	ISED (10g)	N/A	

Antenna manufacturer	Company name	AWAN
	Address	No.925 Huayuan Road,Zhangpu Town,Kunshan City,Jiangsu Province
Test location	Company name	AWAN
	Address	No.925 Huayuan Road,Zhangpu Town,Kunshan City,Jiangsu Province
Test Personnel	Name(Full name)	Xing.pang
	E-mail	Xing.pang@awan-ant.com
	Tel/Mobile	18842985447
Testing date		2024/9/23

Antenna Part number	Main	AYL6Y-100054
	Aux	AYL6Y-100055
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	1.26	1.47	1.05	3.32	2.98	2.48	3.13	3.21	3.21	2.95
Aux	1.23	-0.32	0.73	3.10	3.16	3.14	3.37	3.01	3.35	2.79

Cable Assembly Part Number and Information					
	Cable PN	Cable length(mm)	Cable diameter(mm)	Impedance(ohm)	Connector type
Main	YCB00113-V000916	314	1.13	50	I-PEX NGFF:20565-001R-13
Aux	YCB00113-V020916	90	1.13	50	I-PEX NGFF:20565-001R-13

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

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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
Monopole	From WiFi 7	2.83	4.57	4.44	4.95	4.95	4.43	4.87	4.91	4.91	4.79

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

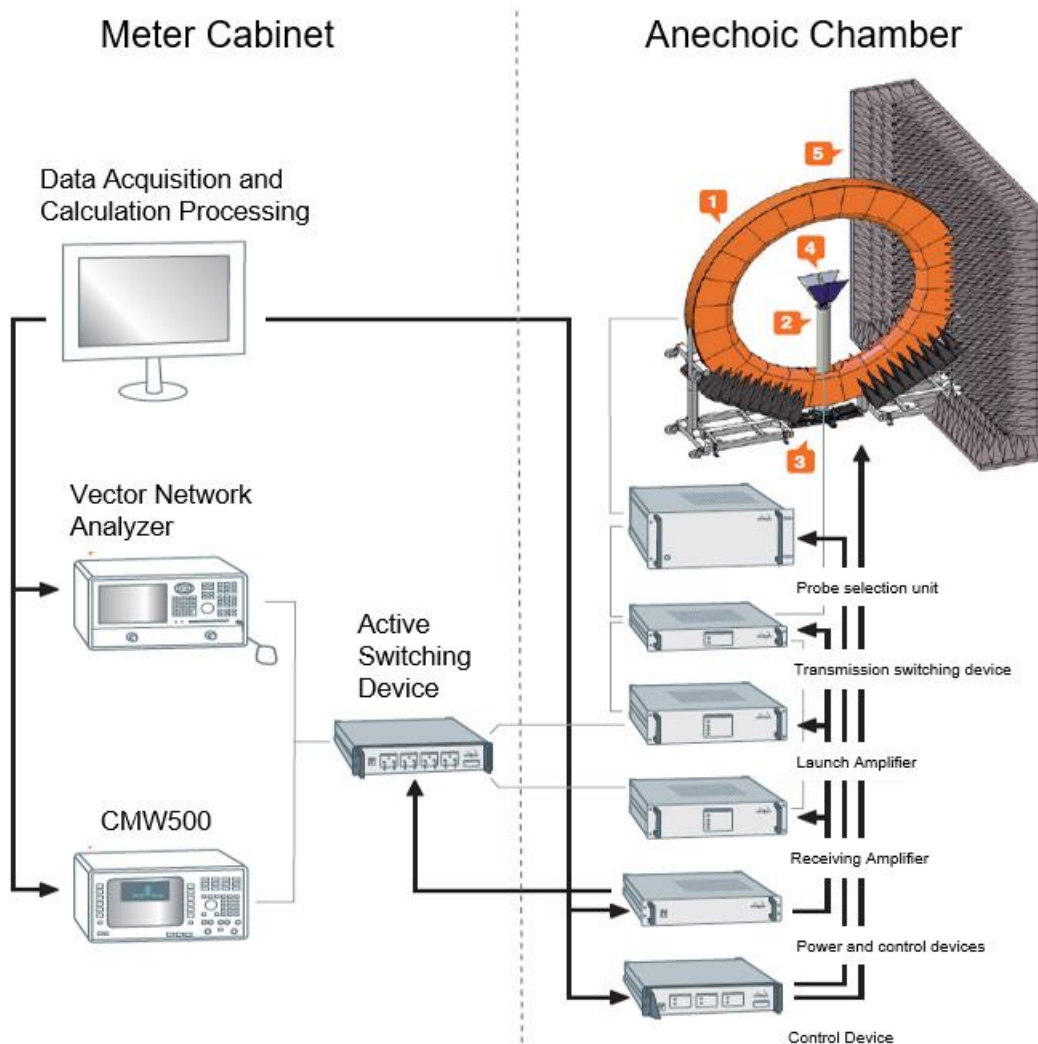
Revision #	Revision Details	Issued Date
Rev. 00	First Issue	2024.9.23

3. Test & System Description

3.1 Measurement Method and System

This test report is prepared for host antenna testing under a Full Anechoic Chamber.

3.2 Test setup



3.3 Equipment list

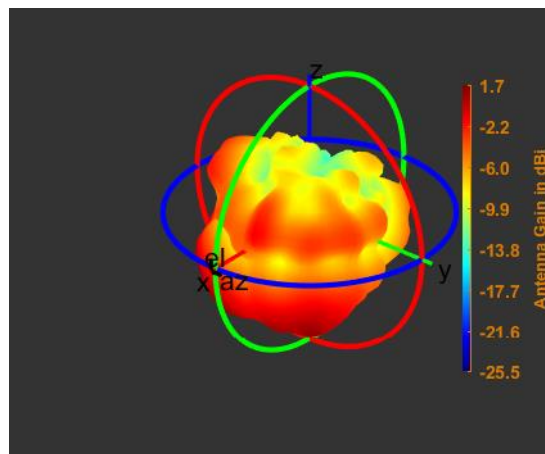
Number	Devic	Manufacturer	Cal.Date	Cal.Due.Date
1	Chamber	SATIMO	2023/10/28	2024/10/27
2	Hron Antenna	EM-Pro	2023/10/28	2024/10/27
3	Notwork Analyzer	Keysight	2024/3/12	2025/3/11
4	TX/RX Amplifier	EM-Pro	2023/10/28	2024/10/27
5	Probe Switcher	EM-Pro	2023/10/28	2024/10/27
6	Turntable Controller	EM-Pro	2023/10/28	2024/10/27
7	UPS	SANTAK	NA	NA
8	Test System Host	SATIMO	NA	NA

4. Radiation characteristics of antenna loaded in Host Platform

Main Antenna

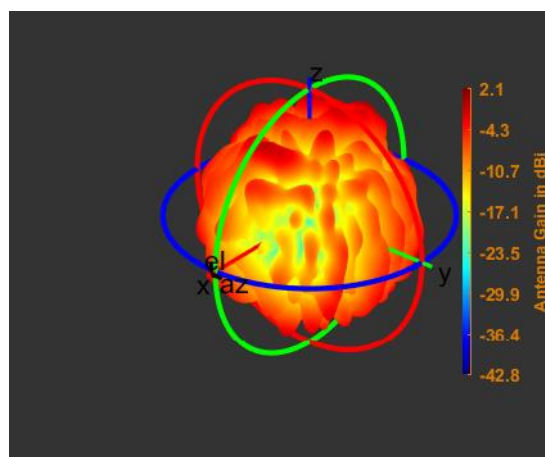
Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	1.26



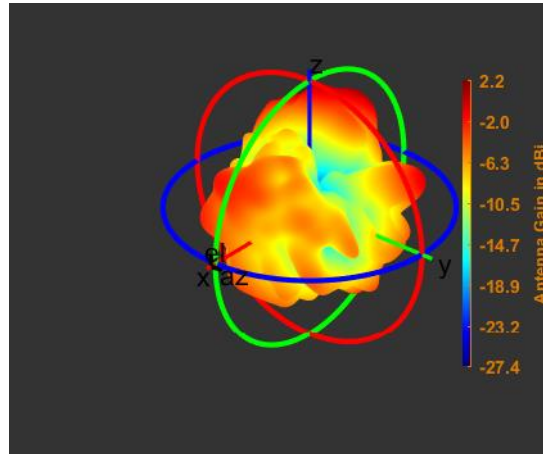
Max Antenna 3D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	1.47



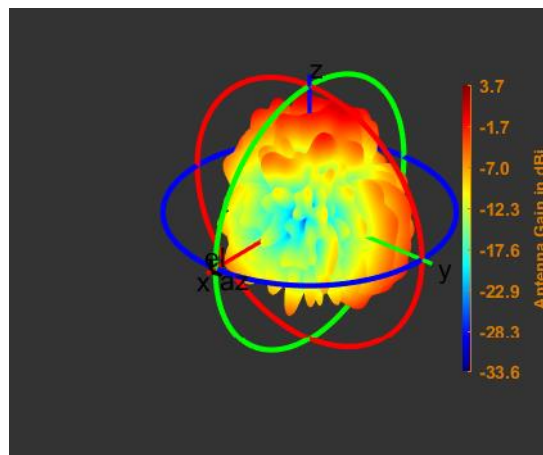
Max Antenna 3D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	1.05



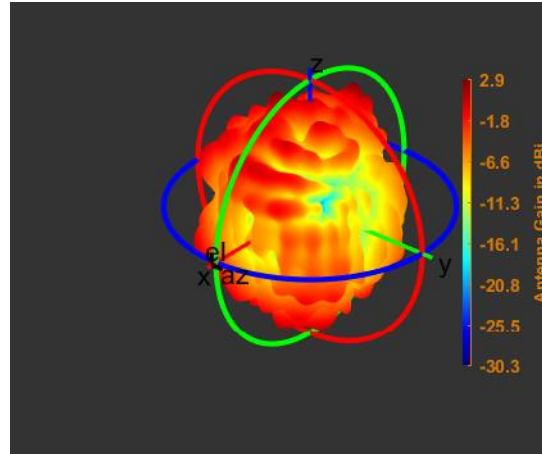
Max Antenna 3D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5470-5725	3.32



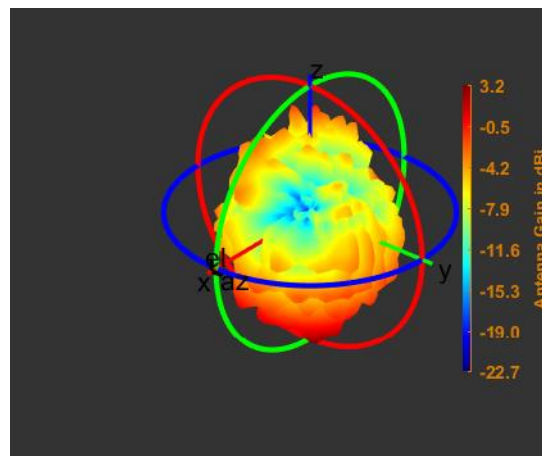
Max Antenna 3D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	2.98



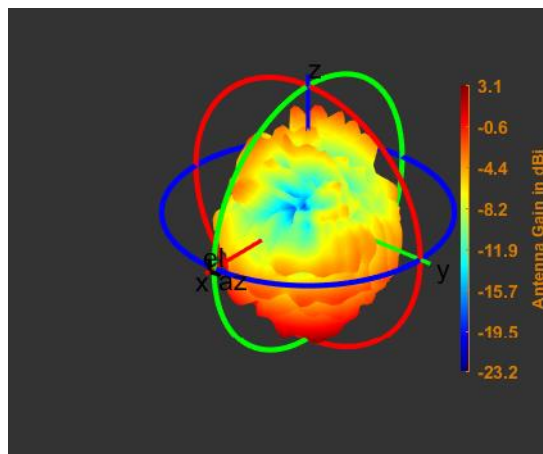
Max Antenna 3D Radiation Pattern 5850-5895 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5850-5895	2.48



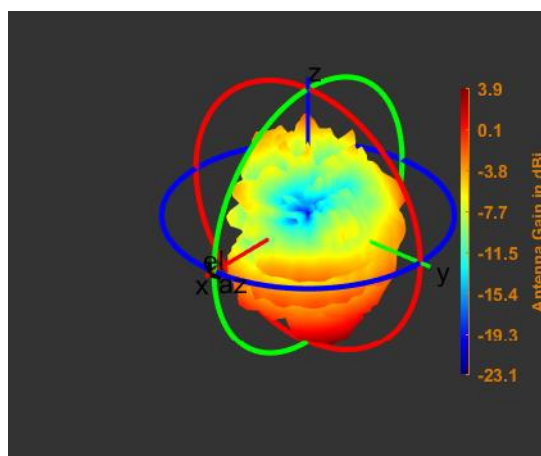
Max Antenna 3D Radiation Pattern 5925-6425 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5925-6425	3.13



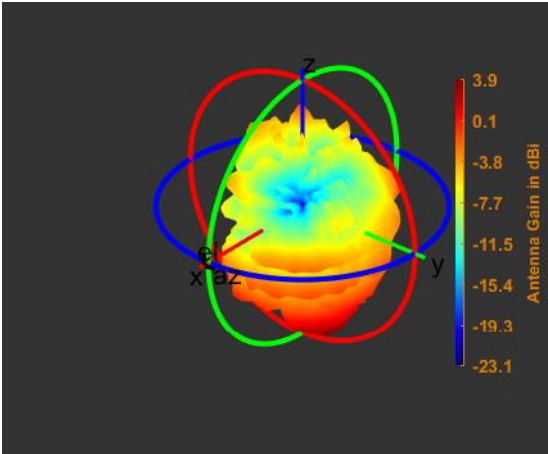
Max Antenna 3D Radiation Pattern 6425-6525 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6425-6525	3.21



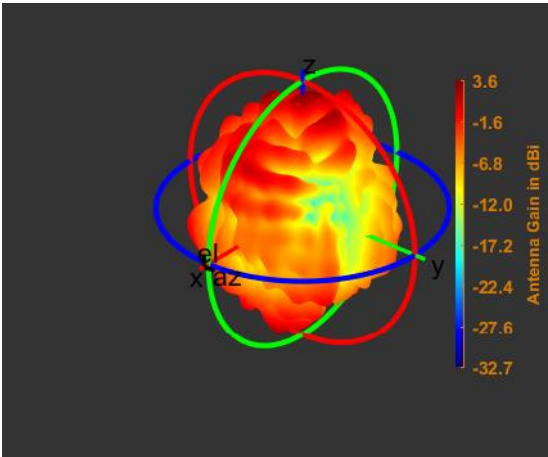
Max Antenna 3D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6525-6875	3.21



Max Antenna 3D Radiation Pattern 6875-7125 MHz

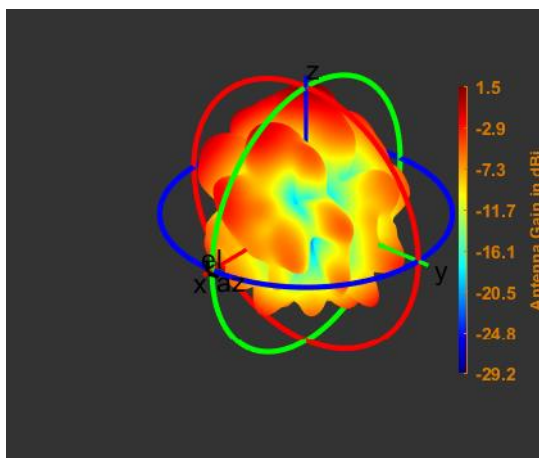
Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6875-7125	2.95



Auxiliary Antenna

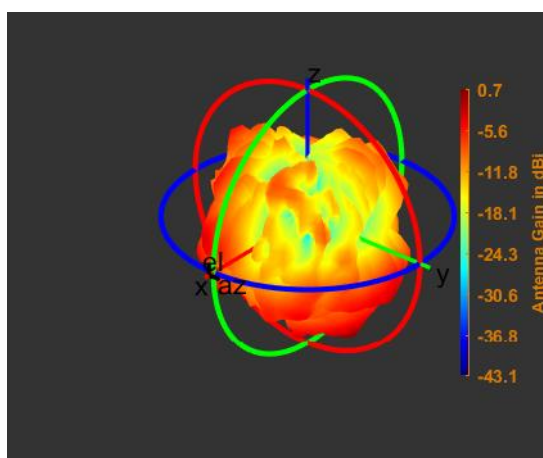
Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	1.23



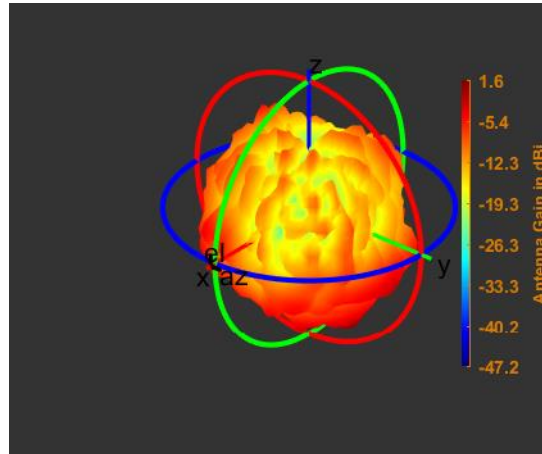
Max Antenna 3D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	-0.32



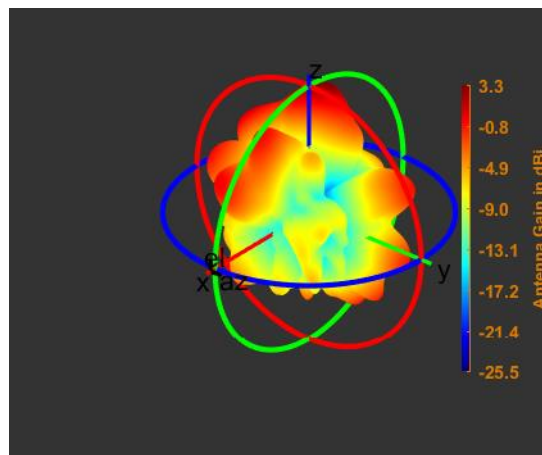
Max Antenna 3D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	0.73



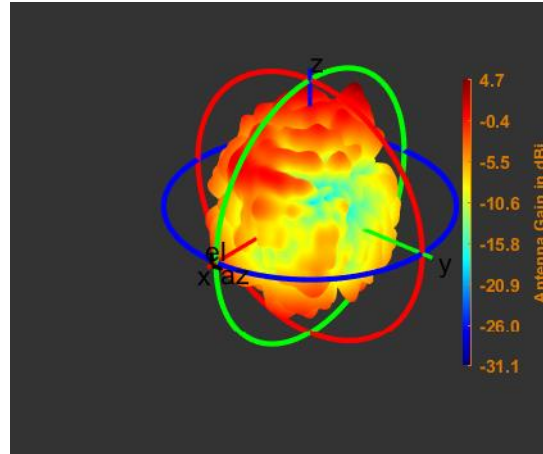
Max Antenna 3D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5470-5725	3.10



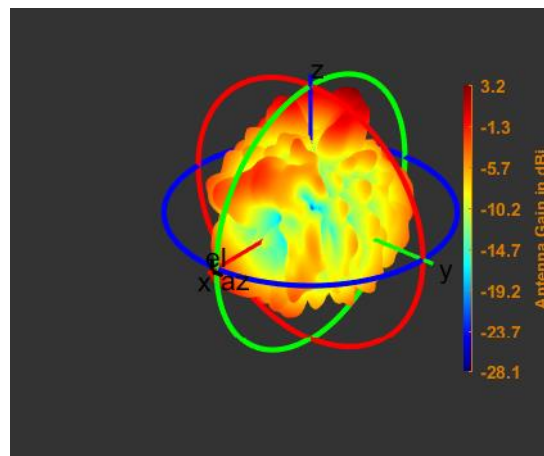
Max Antenna 3D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	3.16



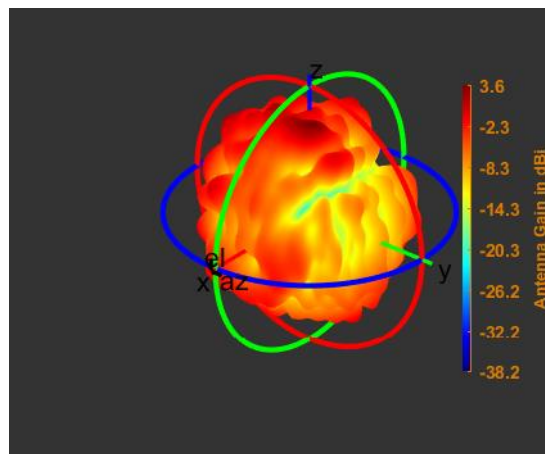
Max Antenna 3D Radiation Pattern 5850-5895 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5850-5895	3.14



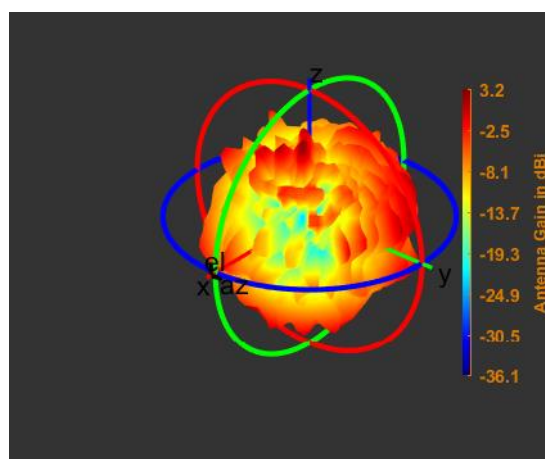
Max Antenna 3D Radiation Pattern 5925-6425 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5925-6425	3.37



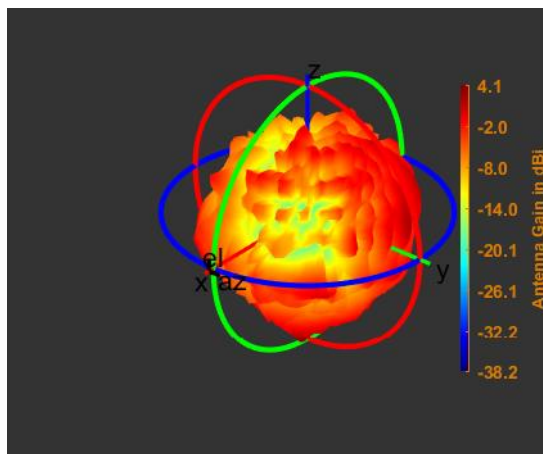
Max Antenna 3D Radiation Pattern 6425-6525 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6425-6525	3.01



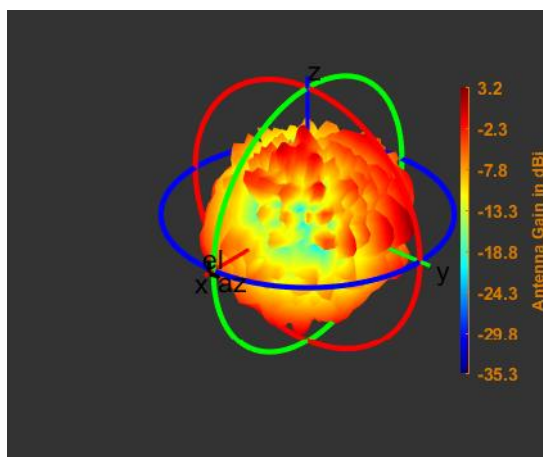
Max Antenna 3D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6525-6875	3.35



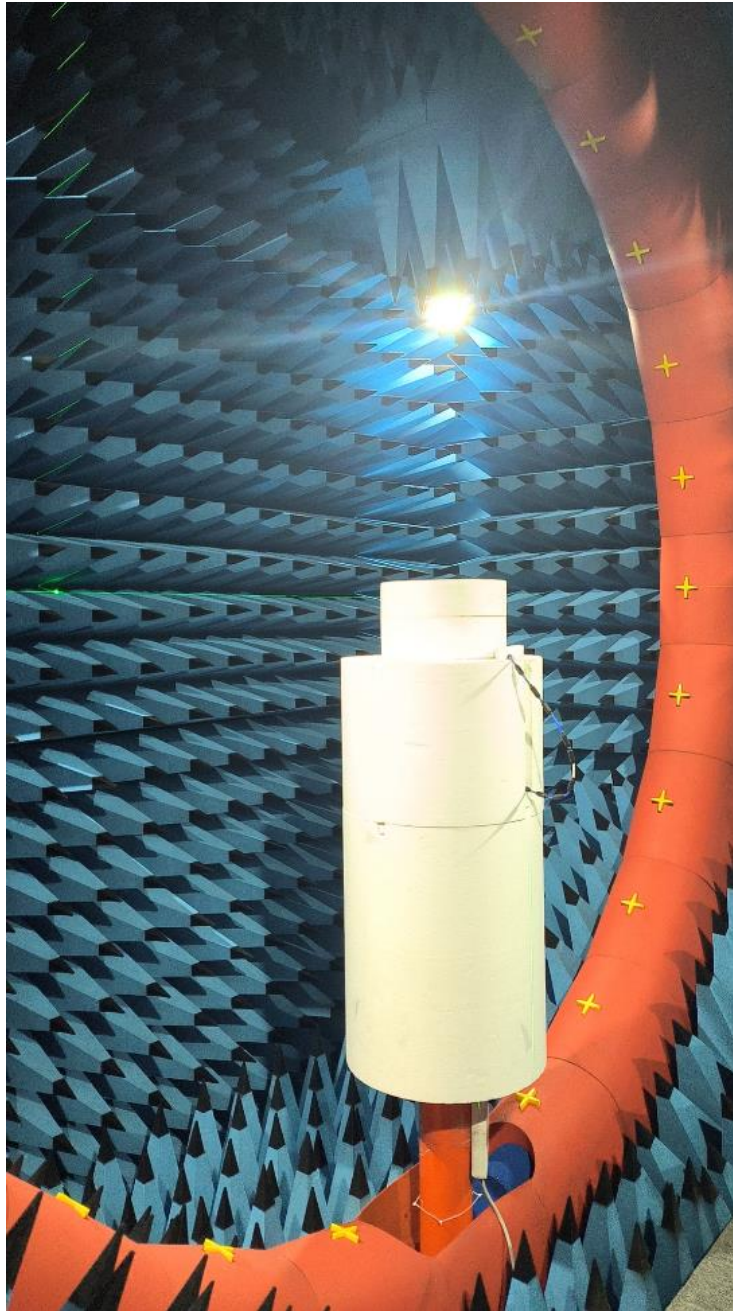
Max Antenna 3D Radiation Pattern 6875-7125 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6875-7125	2.79



Annex A. Photographs

A.1 Setup Photo



Antenna Drawing



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HSF相關物質拆分及測試點選擇參照
 <HSF均質物質拆分作業圖示表>

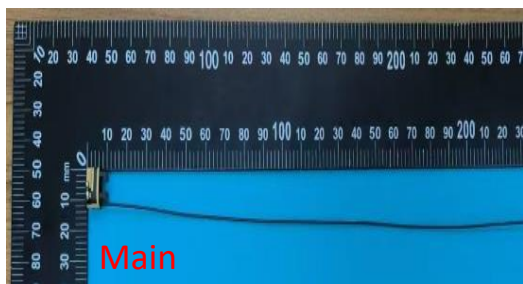
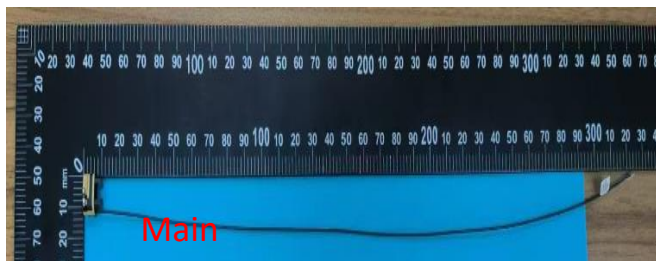
- 1.0 標示時應注意事項
- 1.1 未標示公害者以公差表之規範視之
- 1.2 * 為重要標性尺寸
- 2.0 其他應注意事項
- 2.1 外觀表面不可有刮痕、汙漬及膠漆
- 2.2 有害物質管控：嚴禁鉛鎘汞環保+ROHS2.0環保標準
- 2.3 華越產品小標和內外箱包裝標識日期一致

6								
5	0000			1	XXXX			Type
4	0000			1	1-10015-1800000			Type
3	CT10-100720B-15-0400-1000000							Material
2	4010 Buss 1/2" Copper - 1000' - 10000000-0000-10000000							Cable
1	CT10-100720B-15-0400-10000000			1	XXXX			LOS
Item				Qty		Part #		Material / Finish
Notes								
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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

[illegible]

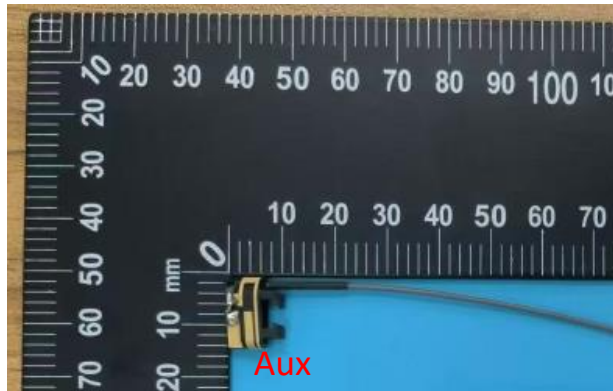
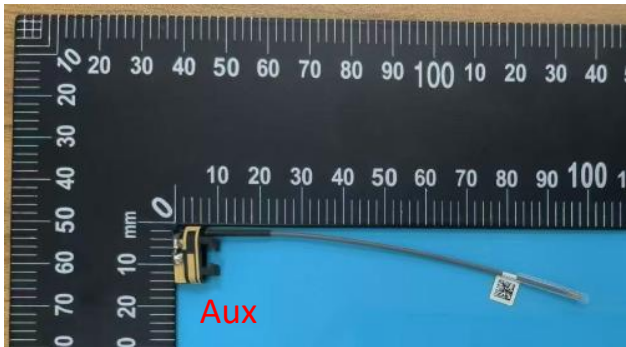
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HSF相關物質拆分及測試點選擇參照
〈HSF均質物質拆分作業圖表示〉

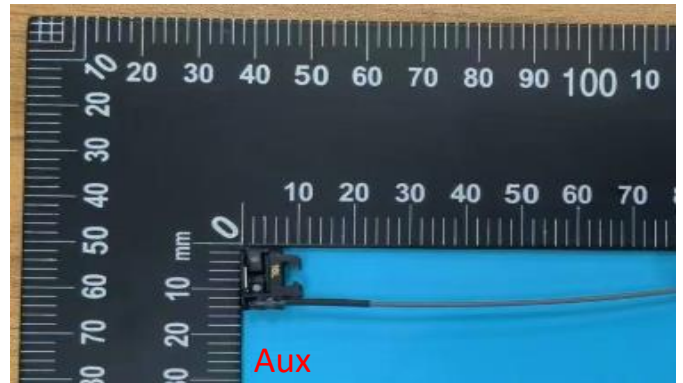
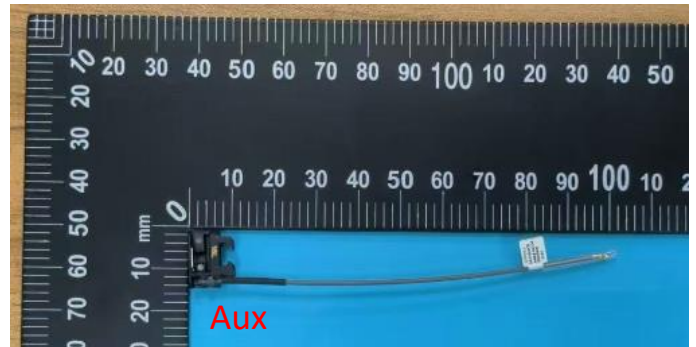
符合AWAN環境管理物質技術標準
All materials meet the AWAN's spec. Environment - related substances management technical standard.

Antenna Photo

Front



Back



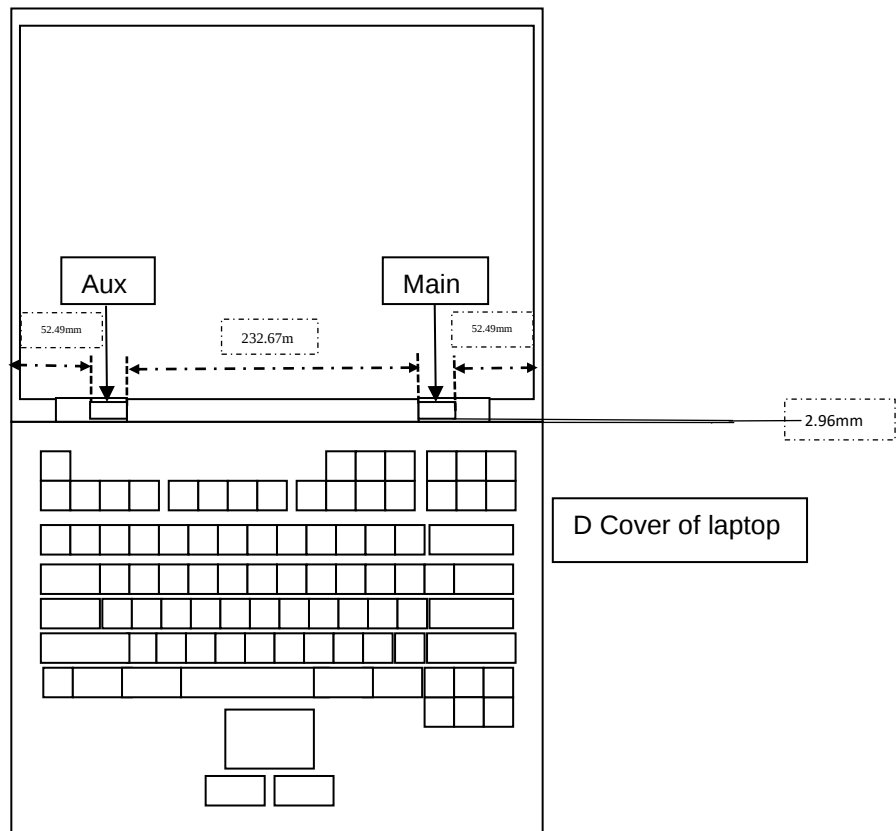
Note: antenna photo should include L type ruler

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).

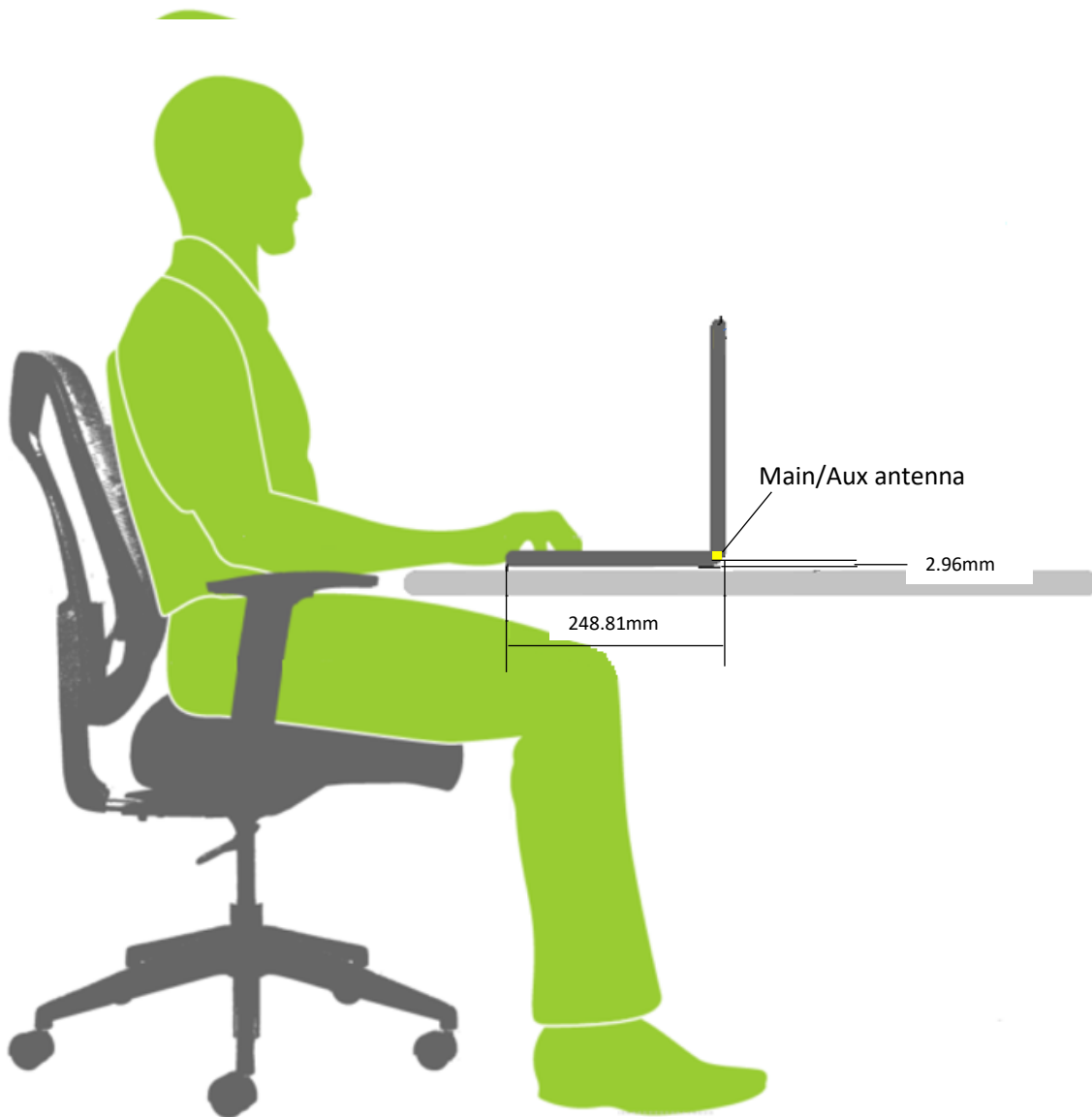
Any antenna that transmits must show dimensions to bottom of laptop. Provide a description of the materials that are used for supporting or surrounding transmit antennas; for example, non-conductive plastics vs. conductive coated plastic or metallic materials.



B.2 Antenna dimensional information for SAR evaluation

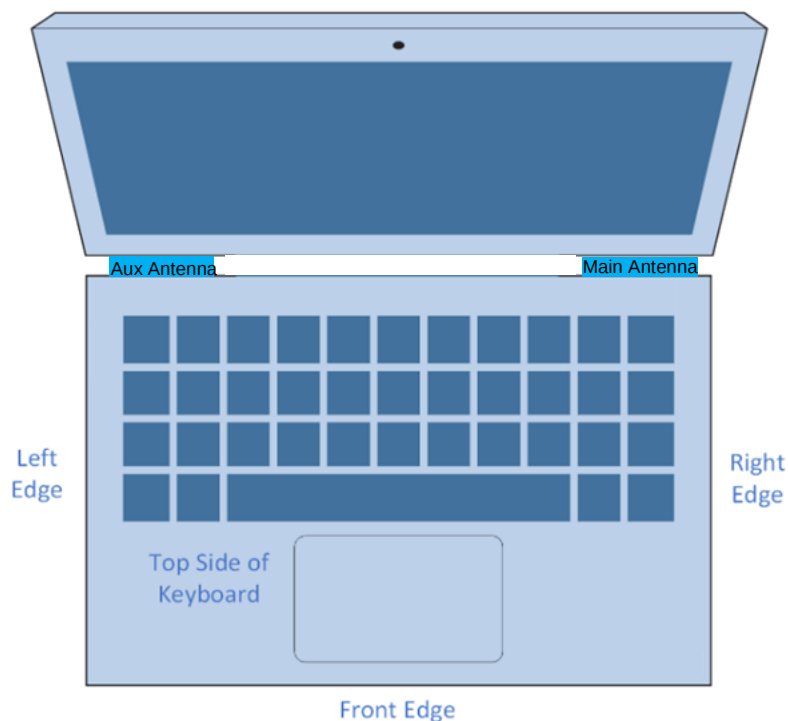
Include a dimensioned photo(s) or dimensioned drawing(s) showing the distance (mm) between the transmit antennas and the user. For notebook/laptop hosts show lapheld position (example below). For tablet hosts show all orientations including lapheld, primary & secondary portrait, primary & secondary landscape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

Antennas on the panel section



Measuring Surface	Antenna	Separation Distance(antenna-to- Surface)(mm)	1g SAR
Bottom Side	Main	2.96	FCC/ISED
	Aux	2.96	FCC/ISED

Antennas on the keyboard section



Measuring Surface	Antenna	Separation Distance(antenna-to-Surface)(mm)	1g or 10g SAR
Bottom Side	Main	2.96	1g (FCC/ISED)
	Aux	2.96	1g (FCC/ISED)
Front Edge	Main	N/A	1g (ISED)
	Aux	N/A	1g (ISED)
Left Edge	Main	N/A	10g (ISED)
	Aux	N/A	10g (ISED)
Right Edge	Main	N/A	10g (ISED)
	Aux	N/A	10g (ISED)
Top side of Keyboard	Main	N/A	10g (ISED)
	Aux	N/A	10g (ISED)