Regulatory WLAN Antenna Information (Template)

English Language Required for Intel Regulatory Review / Approval

(OEM/ODM or antenna vendor is required to complete this document with platform antenna information.

Remove Intel references and make this your own document)

Platform information					
Brand	**ODM**	****End product model name**	**Intel platform** (ex: Yes, No or NA)	**Platform type** (ex: regular NB, convertible PC, AIO…etc)	***SAR minimum separation (mm)**
ASUS	Quanta	GA403U	No	NB	5.02

*****Please fill in exact product model name and make sure the model name is visible on product cover or any parts for end users recognize for authority inspection.**

Antenna information			
Vendor	**Type**	**Antenna Part number** (Main)	**Antenna Part number** (Aux)
LUXSHAREICT	**PIFA**	LA9RF524-CS-H	LA9RF525-CS-H

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	2.97	3.14	3.45	3.57	3.57	2.71	2.76	2.00	2.00	1.66
Aux	3.16	3.15	3.15	3.40	3.06	3.06	4.71	4.13	4.58	4.06

Table of contents

1. **Applicable test methods**

<insert test description here for test method>

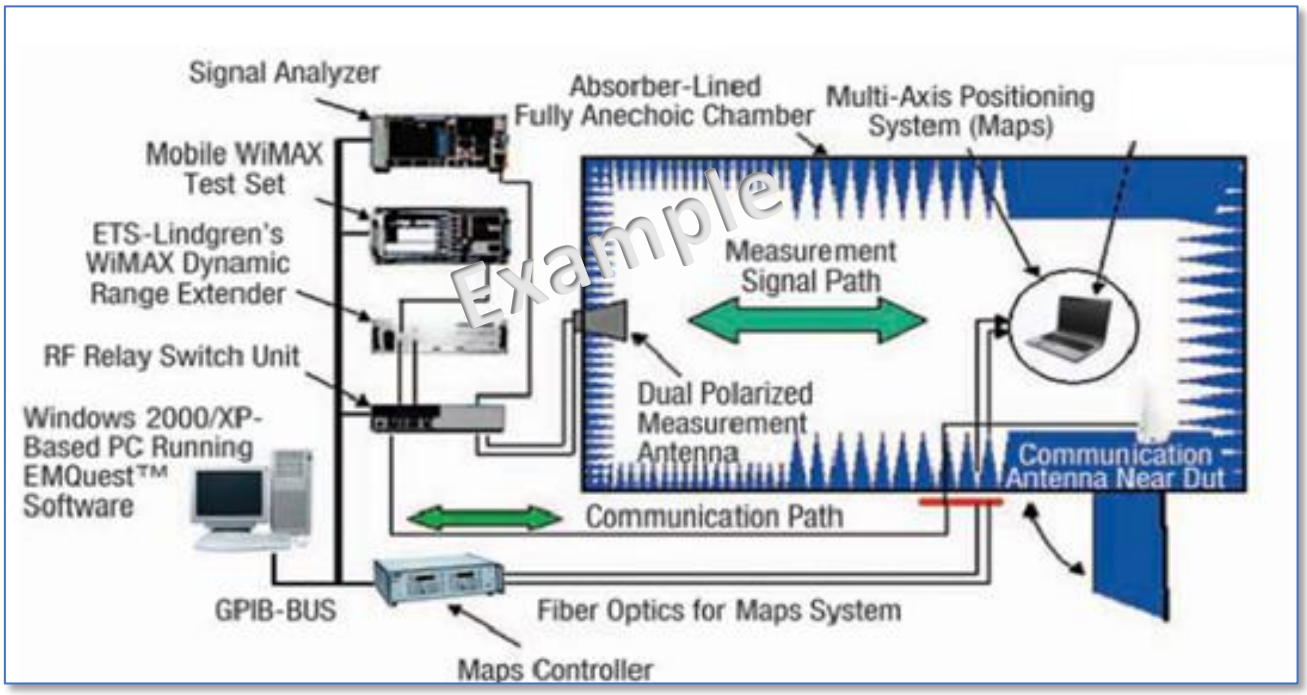
This test report is prepared for host antenna testing under a Full Anechoic Chamber.

This test with host with fixed position and allow to UUT turn different angels.

2. Test & System Description

a. Test setup

<insert test diagram here for test site utilized>



b. Equipment list

<insert test diagram here for test site utilized>

Device	Type/Model	Serial#	Manufacturer	Cal. Date	Cal. Due Date
Anechoic Chamber	AMS-8500	1191	ETS-Lindgren	2022/3/9	2024/3/9
Turn Table	2090	-	ETS-Lindgren	N/A	N/A
Switch & Positioning systems	7001-002	116599	ETS-Lindgren	N/A	N/A
Measurement SW	EMQuest v1.0.8	1352	ETS-Lindgren	N/A	N/A
Boresight antenna mast	2090	-	ETS-Lindgren	N/A	N/A
Spectrum Analyzer	N9010A	X16-96096	Agilent Technologies	2022/7/25	2024/7/25
Horn antenna	3164-08	00143257	ETS-Lindgren	2022/4/3	2024/4/3
Horn antenna + Amplifier + HPF6.4	115195	00117614	ETS-Lindgren	2022/8/18	2024/8/18
Cable 2.5m - 30MHz to 18GHz	0500990992500KE	19.23.395	Radial	2022/1/10	2024/1/10
Cable 1.2m - 18 to 40GHz	UFA147A-0-0480-200200	MFR 64639223720-003	Micro-caox	2022/1/10	2024/1/10
Cable 1m - 1GHz to 18GHz	UFA147A	-	Utillflex	2022/1/10	2024/1/10
Cable 2m - 26.5MHz to 40GHz	794-9191-200A	E00327	Atem	2022/1/10	2024/1/10
Cable 1m - 30MHz to 18GHz	UFB311A-0-0590-50U50U	MFR 64639223230-001	Micro-caox	2022/1/10	2024/1/10
Cable 7m - DC-18GHz	0501051057000GX	19.35.850	Radial	2022/1/10	2024/1/10
Cable 7m - 18GHz to 40GHz	R286304009	-	Radial	2022/1/10	2024/1/10
Cable 1.5m - DC-18GHz	CBL-1.5M-SMSM+	202879	Mini-Circuits	2022/1/10	2024/1/10
Temp & Humidity Logger	GM-108A	-		2022/5/2	2024/5/2

Antenna Information

Section 1. Antenna Assembly Specifications

1A Antenna Part Number	1B Manufacturer	1C Antenna Type	1D Cable Assembly Part Number and Information	Freq Range MHz	1E * Peak Gain W/ Cable loss (dBi)	1F Peak Gain w/o Cable Loss (dBi)	1G Max VSWR	1H Cable Loss (dB)
(P/N: DQ69RF52400) Main Antenna	LUXSHAREICT	PIFA	(P/N: SHEN-YU-SY113/50-055) 50 ohm Coaxial length: 294mm diameter: 1.13mm Connector type : I-PEX	2400-2483.5	2.97	3.82	3	0.85
				5150-5250	3.14	4.47	3	1.33
				5250-5350	3.45	4.79	3	1.34
				5470-5725	3.57	4.95	3	1.38
				5725-5850	3.57	4.95	3	1.38
				5850-5895	2.71	4.11	3	1.40
				5925-6425	2.76	4.17	3	1.41
				6425-6525	2.00	3.46	3	1.46
				6525-6875	2.00	3.46	3	1.46
				6875-7125	1.66	3.16	3	1.50
(P/N: DQ69RF52500) Aux Antenna	LUXSHAREICT	PIFA	(P/N: SHEN-YU-SY113/50-055) 50 ohm Coaxial length: 335mm diameter: 1.13mm Connector type : I-PEX	2400-2483.5	3.16	4.14	3	0.98
				5150-5250	3.15	4.67	3	1.52
				5250-5350	3.15	4.67	3	1.52
				5470-5725	3.4	4.96	3	1.56
				5725-5850	3.06	4.65	3	1.59
				5850-5895	3.06	4.65	3	1.59
				5925-6425	4.71	6.33	3	1.62
				6425-6525	4.13	5.79	3	1.66
				6525-6875	4.58	6.85	3	1.67
				6875-7125	4.06	5.99	3	1.71

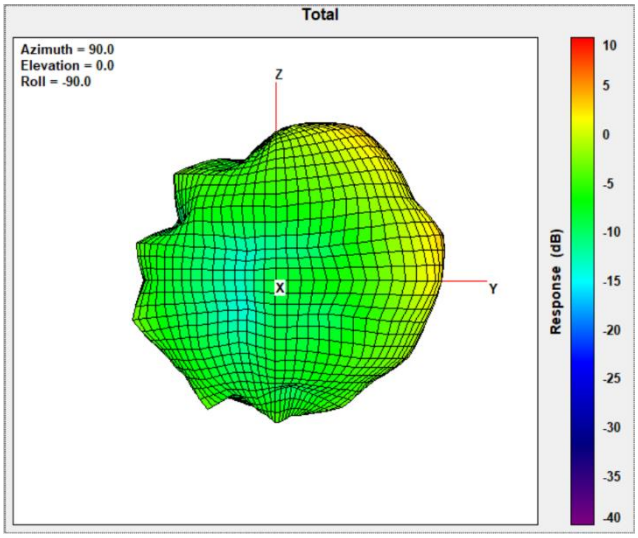
- **3D Antenna Peak Gain required being test in system basis.**

Section 3. Radiation characteristics of antenna loaded in Host Platform

Main Antenna

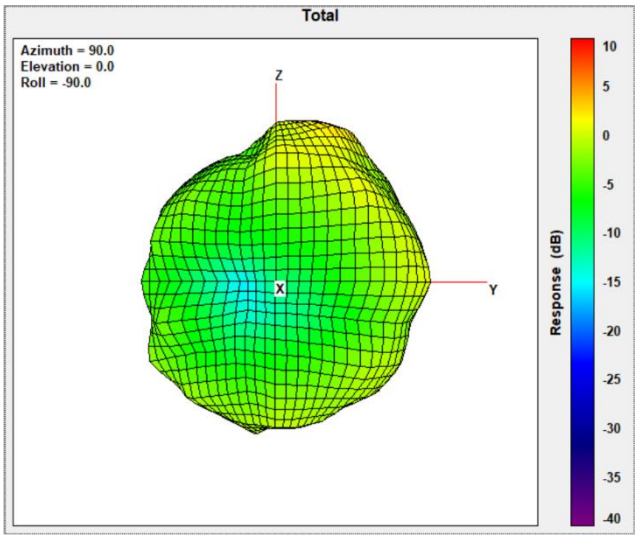
Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	2.97



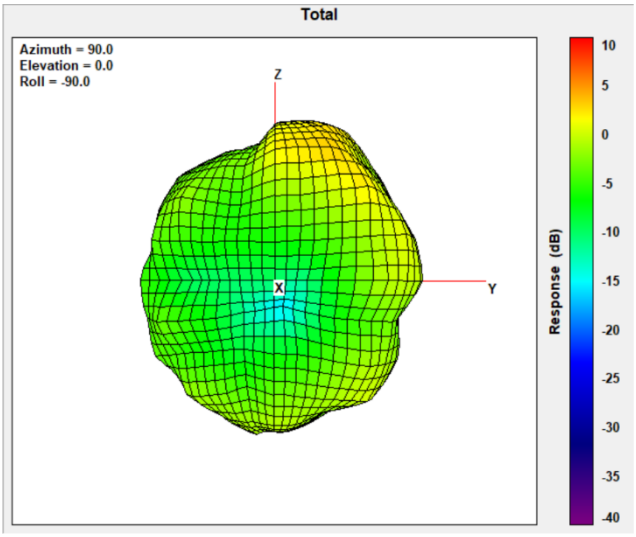
Max Antenna 3D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	3.14



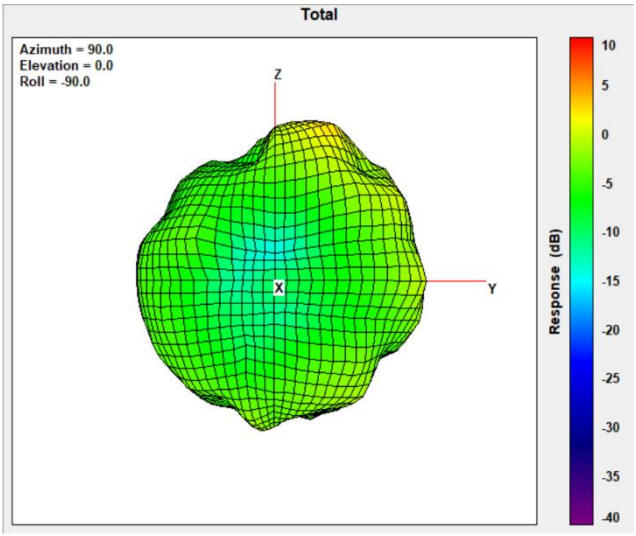
Max Antenna 3D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	3.45



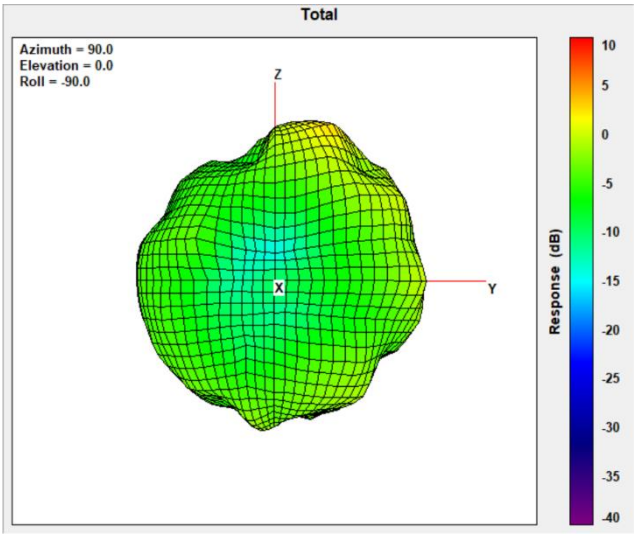
Max Antenna 3D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5470-5725	3.57



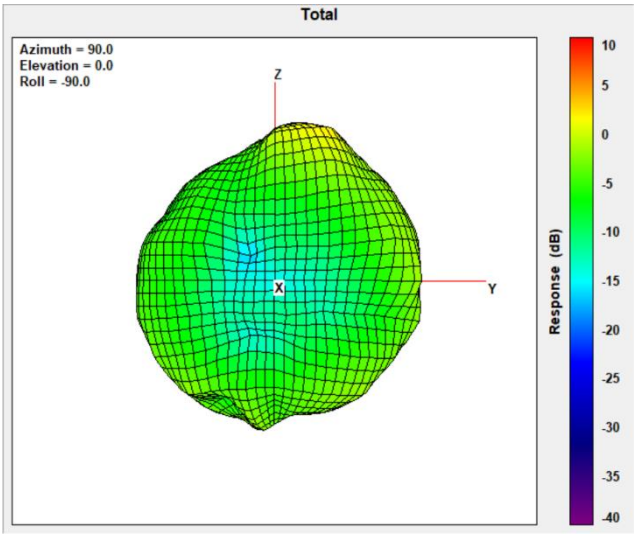
Max Antenna 3D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	3.57



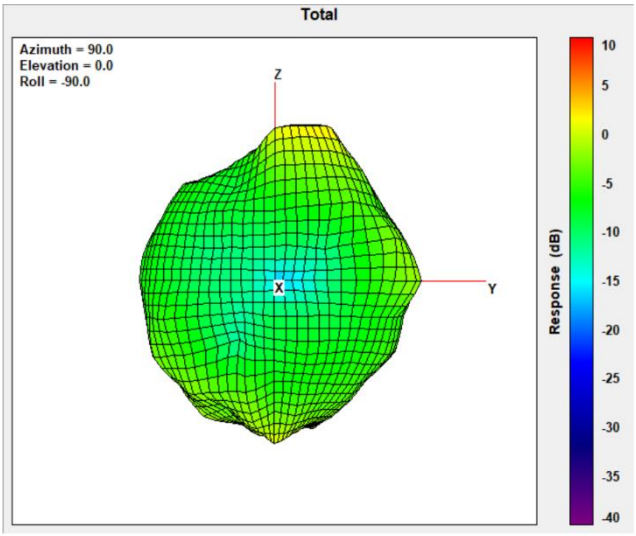
Max Antenna 3D Radiation Pattern 5850-5895 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5850-5895	2.71



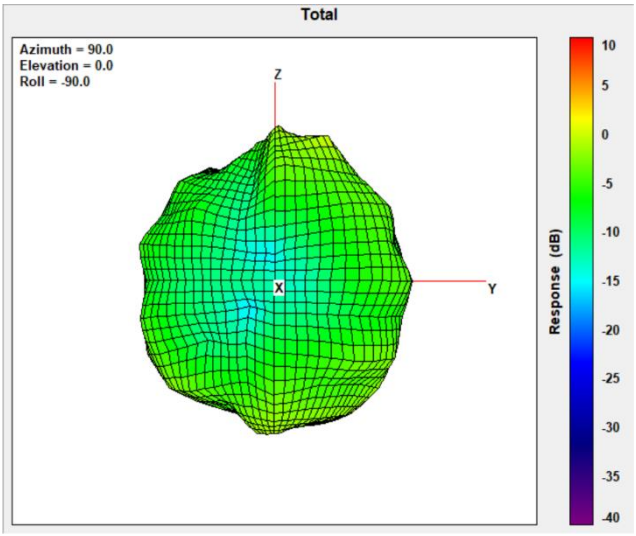
Max Antenna 3D Radiation Pattern 5925-6425 MHz

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



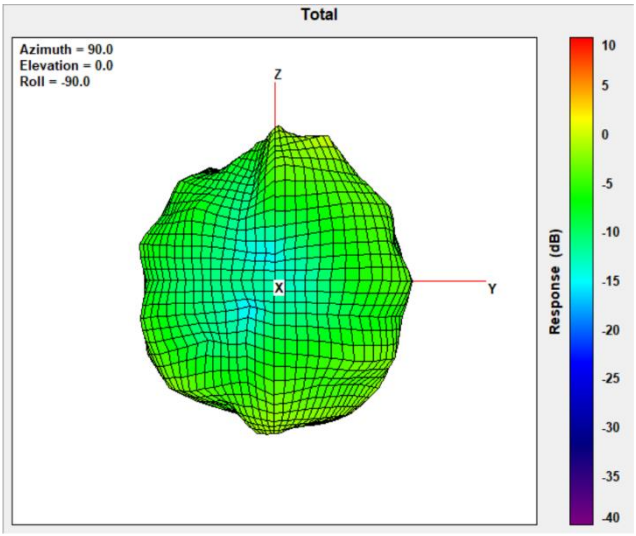
Max Antenna 3D Radiation Pattern 6425-6525 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6425-6525	2.00



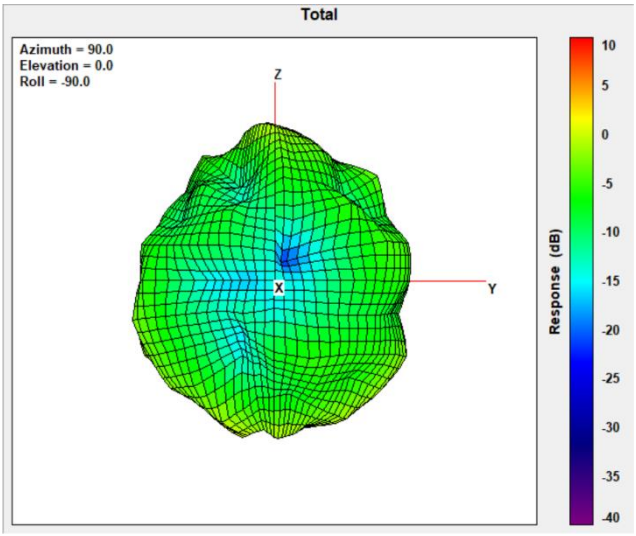
Max Antenna 3D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6525-6875	2.00



Max Antenna 3D Radiation Pattern 6875-7125 MHz

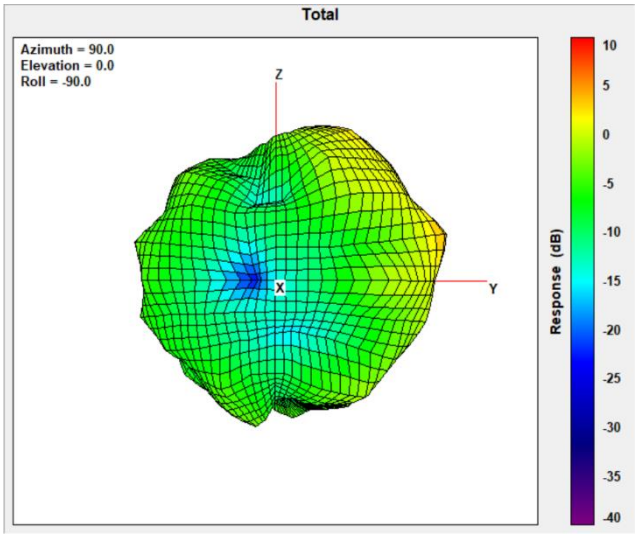
Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6875-7125	1.66



Auxiliary Antenna

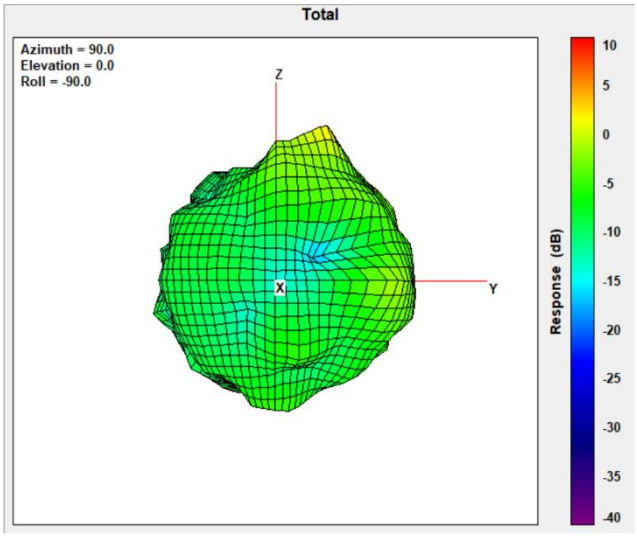
Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	3.16



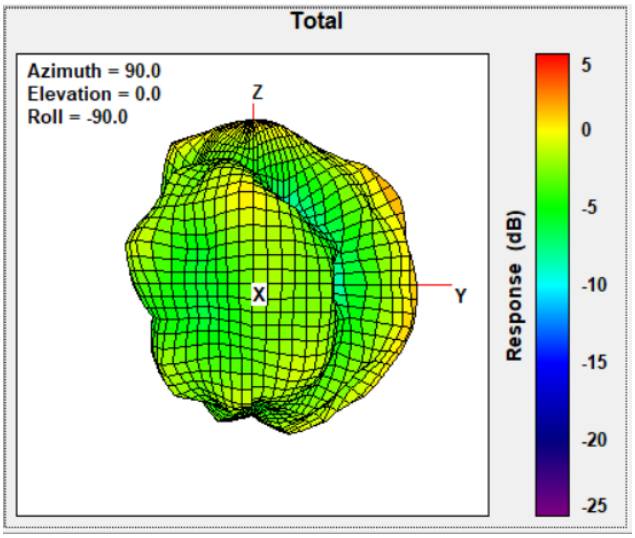
Max Antenna 3D Radiation Pattern 5150-5250 MHz

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



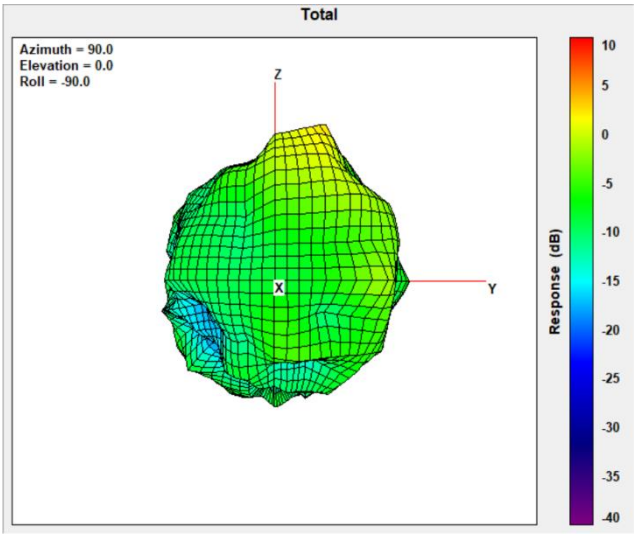
Max Antenna 3D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	3.15



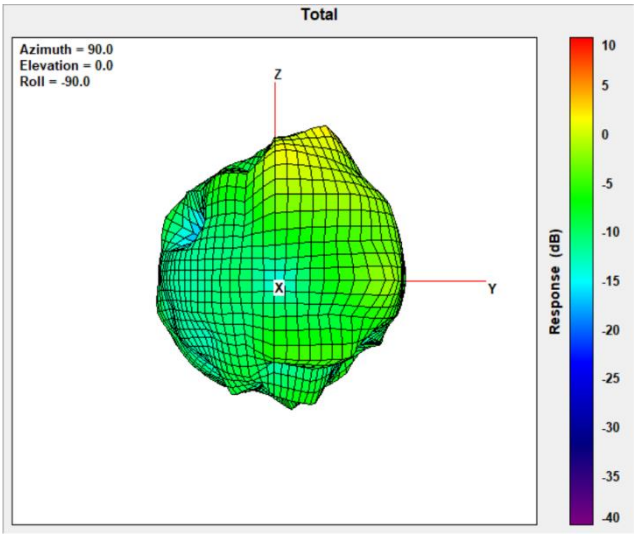
Max Antenna 3D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5470-5725	3.40



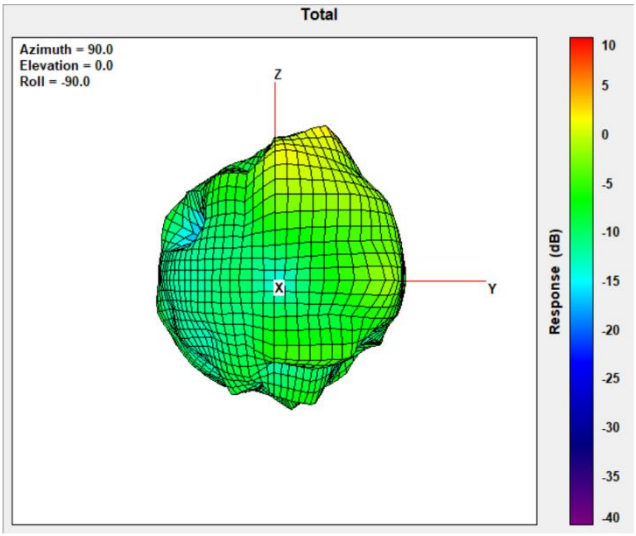
Max Antenna 3D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	3.06



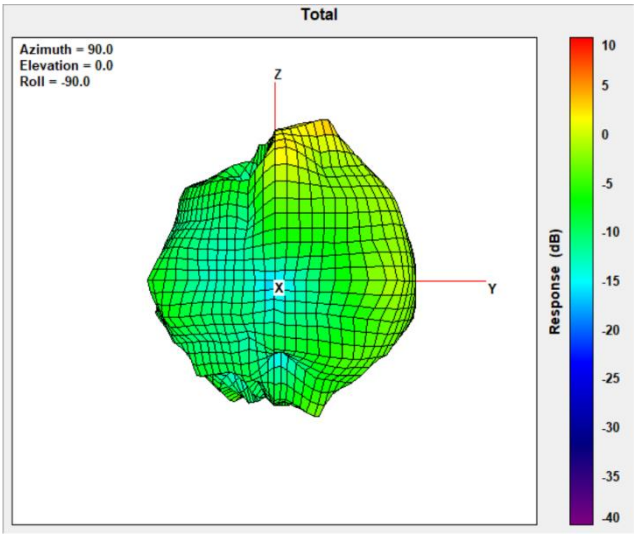
Max Antenna 3D Radiation Pattern 5850-5895 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5850-5895	3.06



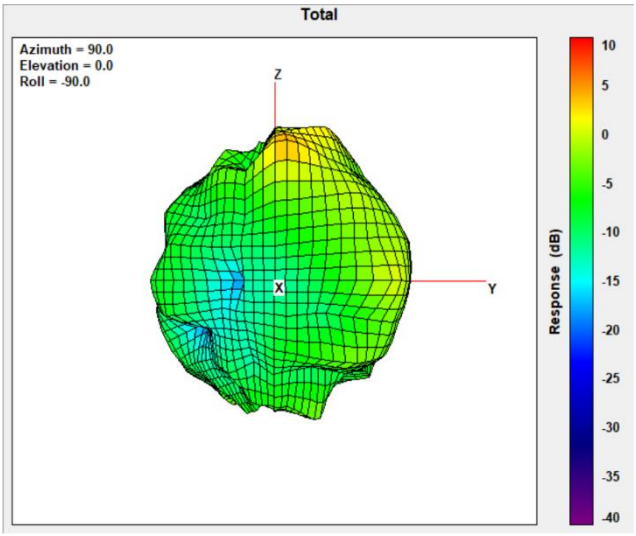
Max Antenna 3D Radiation Pattern 5925-6425 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5925-6425	4.71



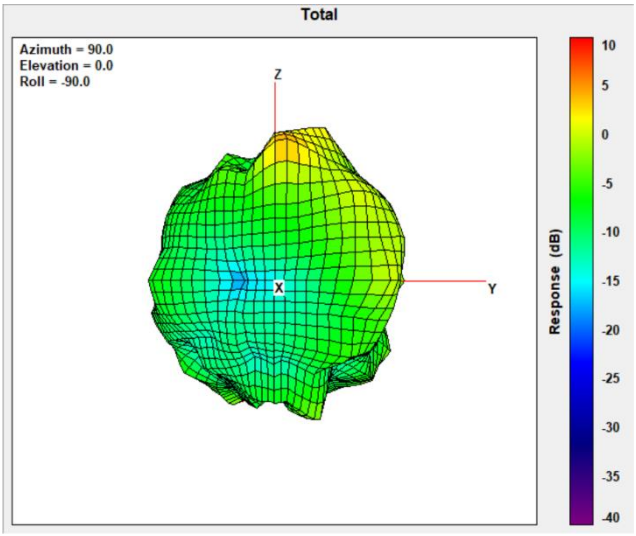
Max Antenna 3D Radiation Pattern 6425-6525 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6425-6525	4.13



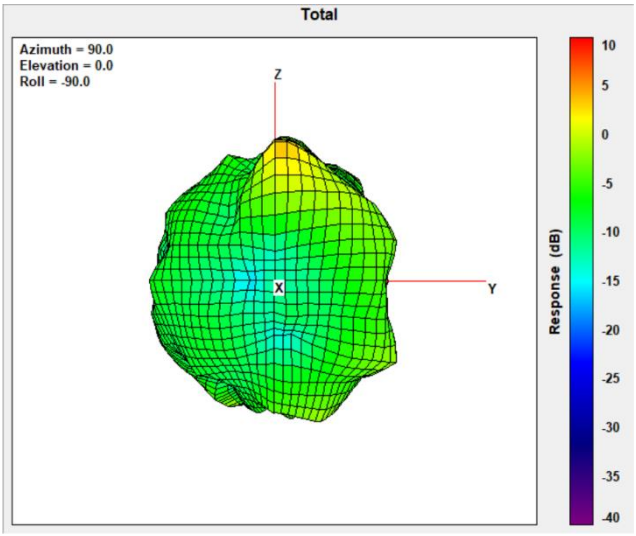
Max Antenna 3D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6525-6875	4.58



Max Antenna 3D Radiation Pattern 6875-7125 MHz

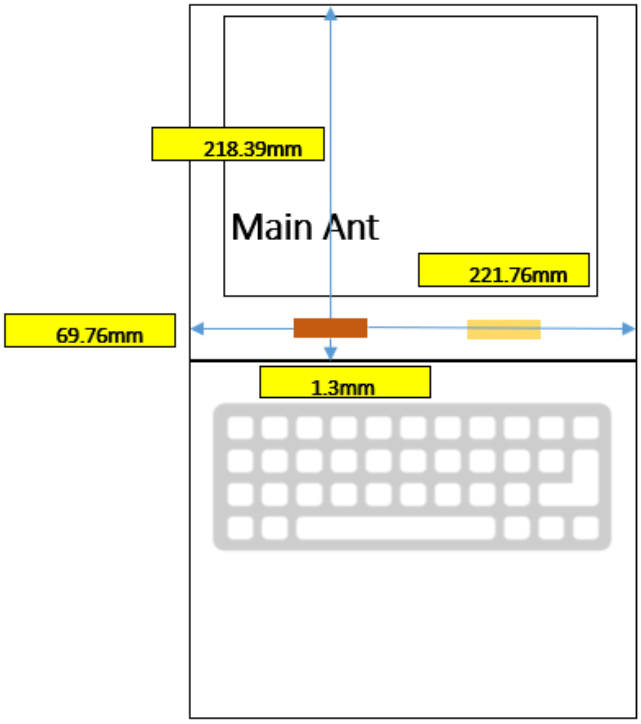
Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6875-7125	4.06

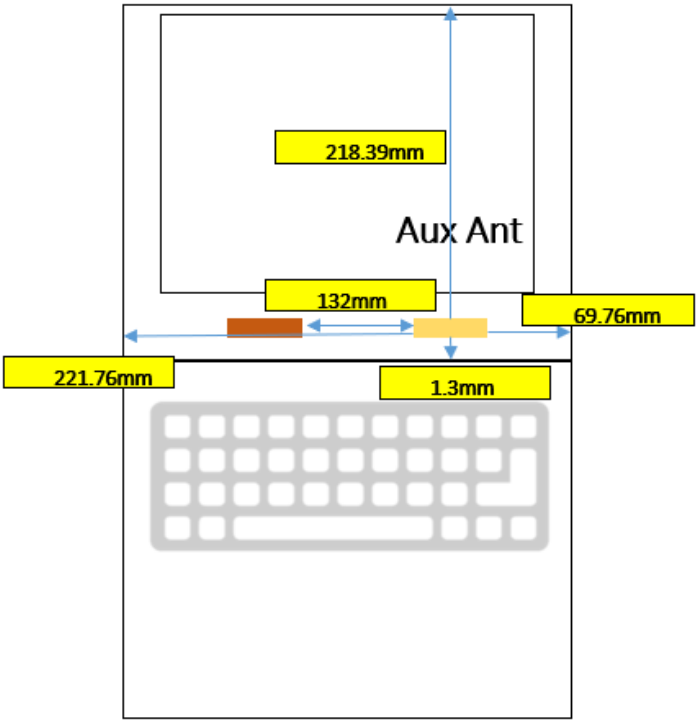


Section 4. Antenna Host Platform Location Information

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.

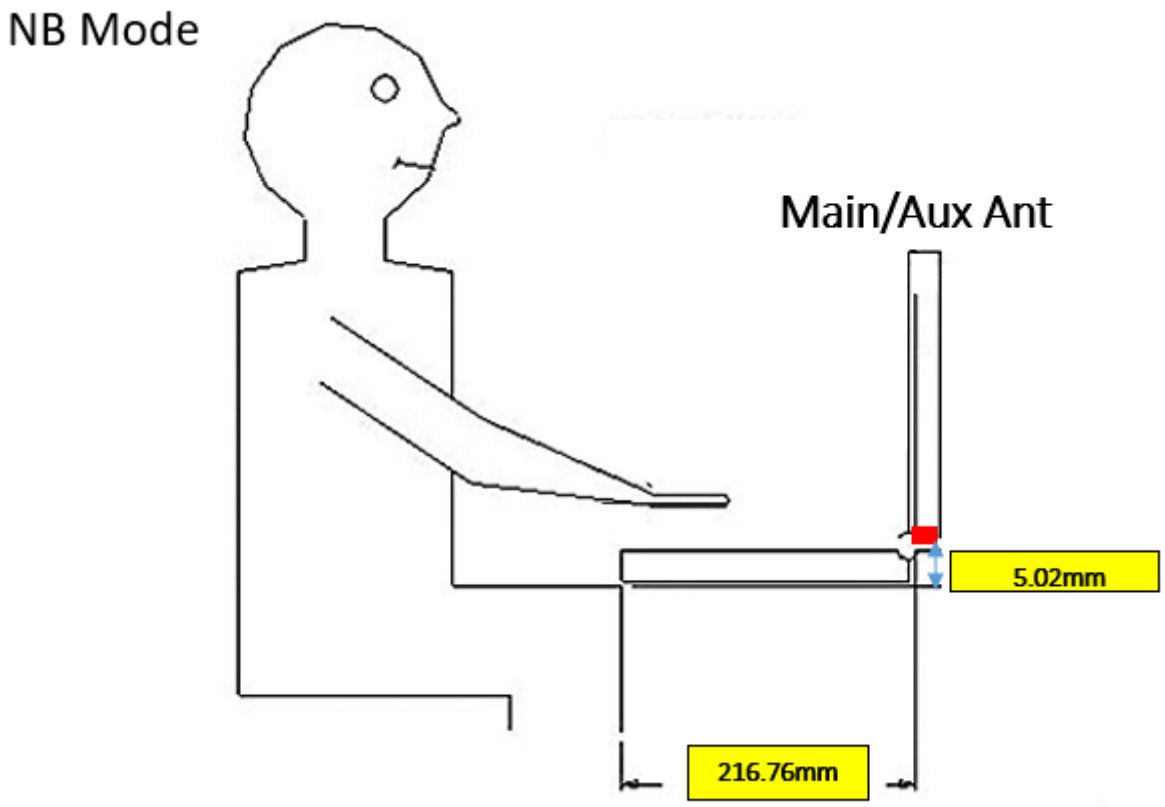




Section 5. Antenna dimensional information for SAR evaluation

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

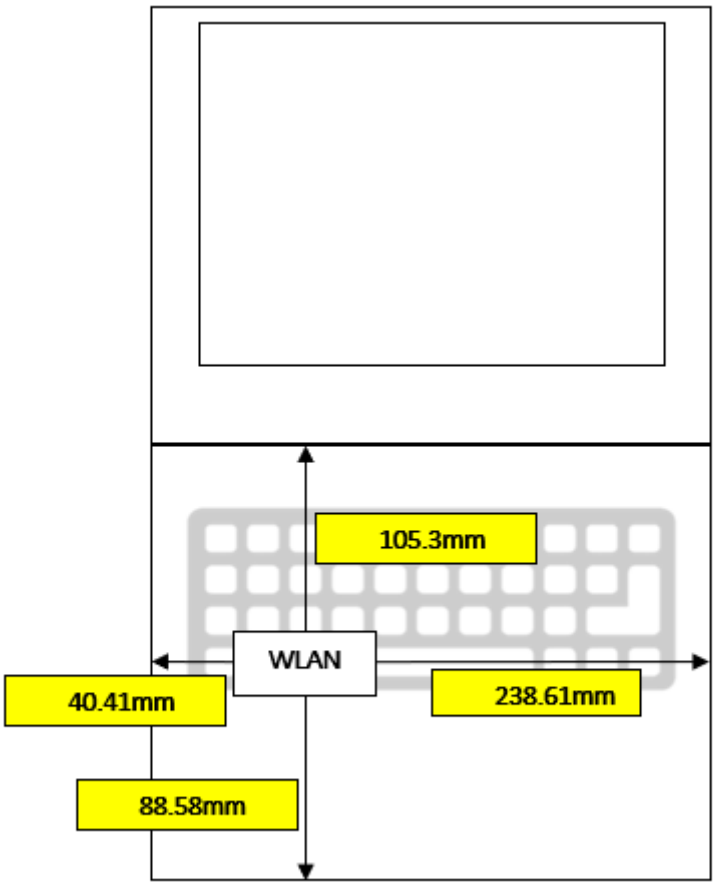
landscape positions. Include a description of any proximity sensors or power throttling implementations that limit or exclude use of any host orientation.



Section 6. Diagram Example of Co-Location Antenna Separation

Include a **dimensioned photo or dimensioned drawing** showing the distance (mm) between **all WLAN transmit antennas** and other co-located radiator transmit antenna such as Bluetooth, WWAN,..

(Note: Due to the evolving rules regarding co-location, each platform will need to be reviewed on a case by case basis)



Revision History

Revision	Description	Date
10.3	Page2-5 Add Applicable test method, Test & System Description and Setup photo	July 24, 2022
10.4	Cover page Add Intel 5.9GHz reference antenna gain Cover page/Section1/Section3 Add 5.9GHz antenna gain information	September 15, 2022