

ANTENNA INFORMATION

OEM	Lenovo
ODM	LCFC
Platform model name	Yoga 9 2-in-1 16N1X11
Intel platform (ex: Yes, No or NA)	No
Platform type (ex: regular NB, convertible PC, AIO...etc)	convertible PC
SAR minimum separation (mm)	FCC (1g) NB Mode : 4.5mm ;Pad Mode : 0.9mm ISED (1g) NB Mode : 4.5mm ;Pad Mode : 0.9mm ISED (10g) 0.9mm

Antenna manufacturer	Company name	Speed Wireless Technical Co., LTD
	Address	No.138 Huize Road, Hi-Tech Industrial Park of East River, Zhongkai Hi-tech District, Huizhou City, Guangdong Province
Test location	Company name	Speed Wireless Technical Co., LTD.
	Address	Lenovo Science and Technology Port, 5899 Xi You Road, Jingkai District, Hefei, Anhui province
Test Personnel	Name(Full name)	Zhenping Wu
	E-mail	Zhenping_wu@speed-hz.com
	Tel/Mobile	18718059121
Testing date		20260225

Antenna Part number	Main	DC33002A000
	Aux	DC33002A000
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	2.27	3.22	3.22	4.08	4.37	4.33	4.16	3.54	3.79	3.71
Aux	1.84	1.12	1.14	3.43	3.55	3.88	3.88	3.72	3.47	3.63

Cable Assembly Part Number and Information					
	Cable PN	Cable length(mm)	Cable diameter(mm)	Impedance(ohm)	Connector type
Main	M-Z4-SD-0081-501-K0	59.5	0.81	50	IPEX
Aux	M-Z4-SD-0081-501-G0	134.5	0.81	50	IPEX

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

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: DC33002A000) Main Antenna	Speed Wireless Technical Co., LTD.	PIFA	Connector type: IPEX Connector: (P/N: 20565-001R-13) 50 ohm Coaxial length:59.5mm diameter:0.81mm	2400-2483.5	2.27	2.43	1.81	0.16
				5150-5250	3.22	3.49	1.87	0.27
				5250-5350	3.22	3.50	1.46	0.28
				5470-5725	4.08	4.37	1.67	0.29
				5725-5850	4.37	4.67	1.73	0.30
				5850-5895	4.33	4.63	1.54	0.30
				5925-6425	4.16	4.47	1.57	0.31
				6425-6525	3.54	3.85	1.48	0.31
				6525-6875	3.79	4.11	1.46	0.32
				6875-7125	3.71	4.03	1.82	0.32
(P/N: DC33002A000) Aux Antenna	Speed Wireless Technical Co., LTD.	PIFA	Connector type: IPEX Connector: (P/N: 20565-001R-13) 50 ohm Coaxial length:134.5mm diameter:0.81mm	2400-2483.5	1.84	2.24	1.93	0.40
				5150-5250	1.12	1.77	1.55	0.65
				5250-5350	1.14	1.80	1.56	0.66
				5470-5725	3.43	4.10	1.38	0.67
				5725-5850	3.55	4.23	1.65	0.68
				5850-5895	3.88	4.57	1.56	0.69
				5925-6425	3.88	4.58	1.53	0.70
				6425-6525	3.72	4.44	1.52	0.72
				6525-6875	3.47	4.20	1.78	0.73
				6875-7125	3.63	4.37	1.39	0.74

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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

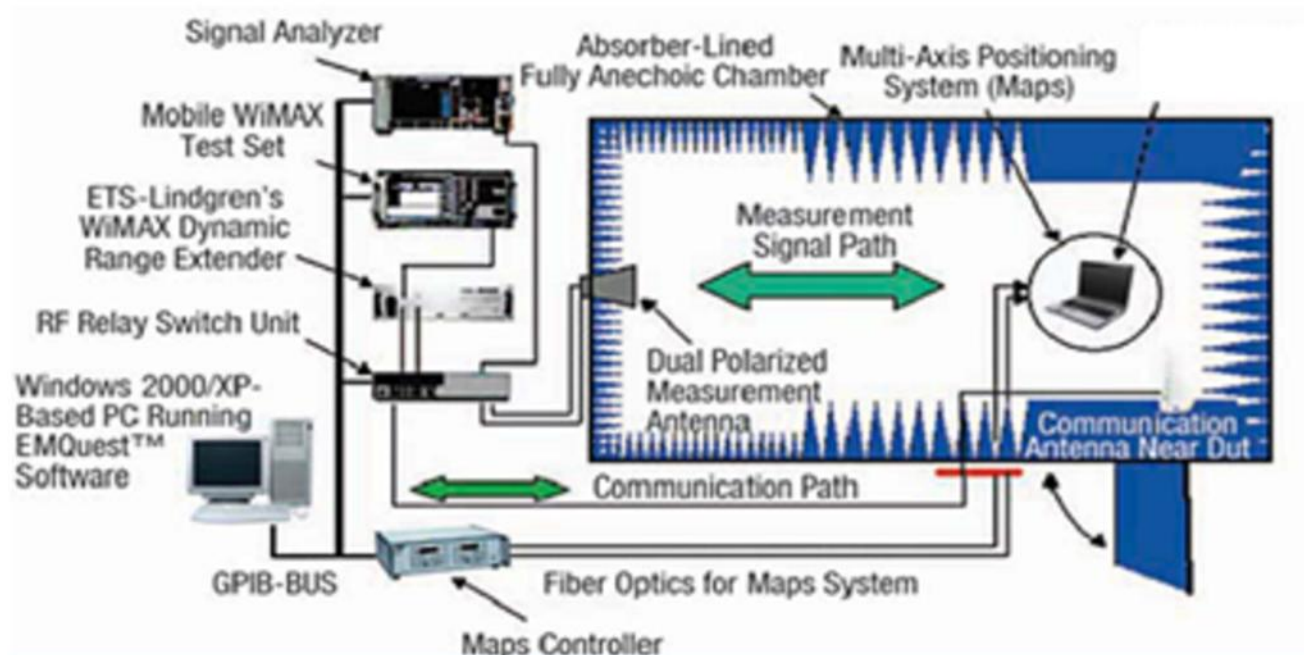
Revision #	Revision Details	Issued Date
Rev. 00	First Issue	

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

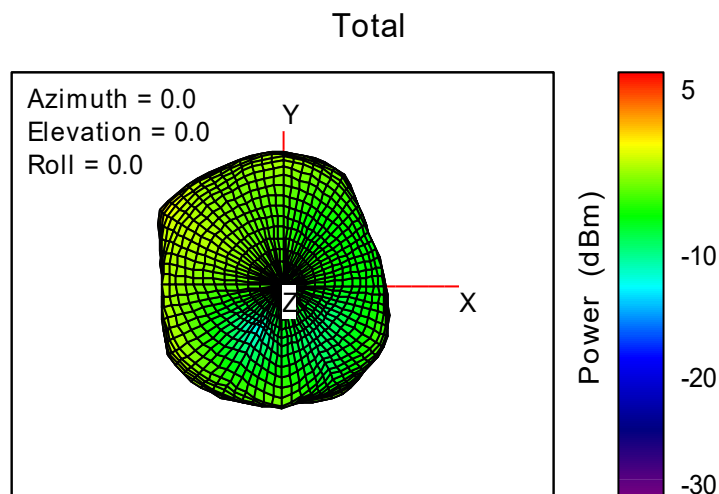
Number	Device	Manufacturer	Cal. Date	Cal. Due. Date
1	Turn table control box	EMT	2025/11/15	2026/11/15
2	Turn table control computer	EMT	2025/11/15	2026/11/15
3	TX/RX RF power and its control unit	EMT	N/A	N/A
4	Probe switch array	EMT	N/A	N/A
5	Test system host	EMT	N/A	N/A
6	Network analyzer	EMT	2025/5/19	2026/5/19
7	RF line TX	EMT	N/A	N/A
8	RF line RX	EMT	N/A	N/A
9	UPS uninterruptible power supply	EMT	N/A	N/A
10	Cable 2m 1GHz 8.5GHz	Atem	2025/11/15	2026/11/15
11	Chamber	EMT	2025/11/15	2026/11/15
12	Horn antenna	EMT	N/A	N/A

4. Radiation characteristics of antenna loaded in Host Platform

Main Antenna

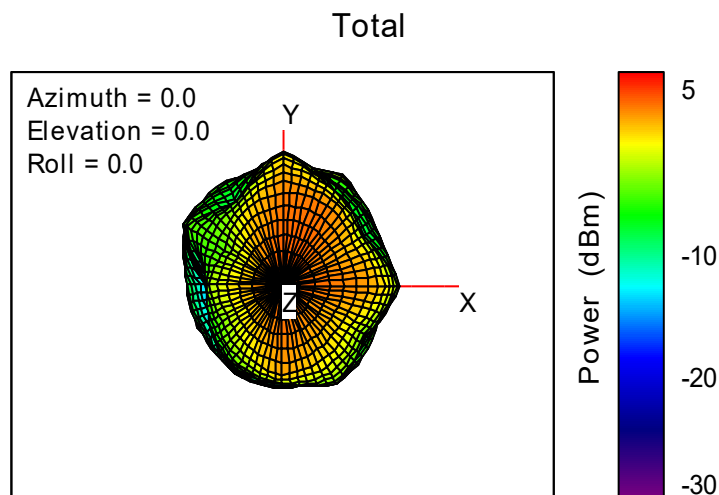
Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	2.27



Max Antenna 3D Radiation Pattern 5150-5250 MHz

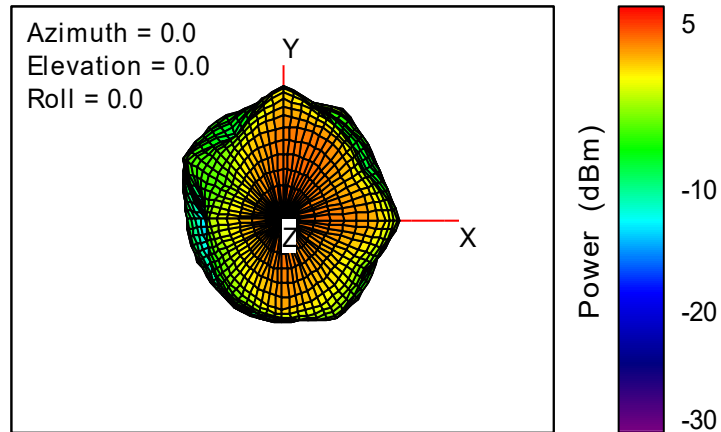
Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	3.22



Max Antenna 3D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	3.22

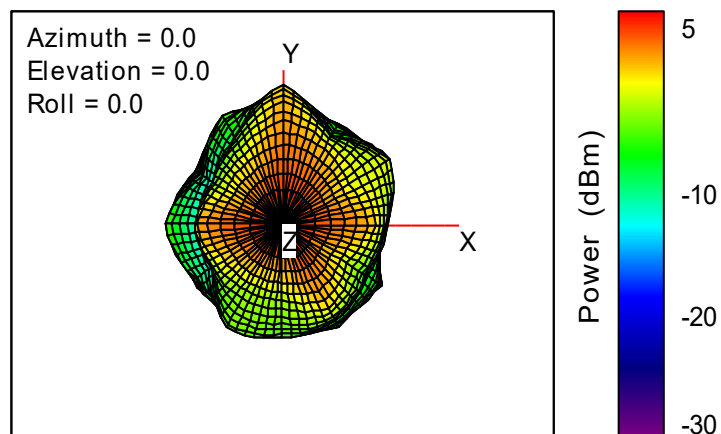
Total



Max Antenna 3D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5470-5725	4.08

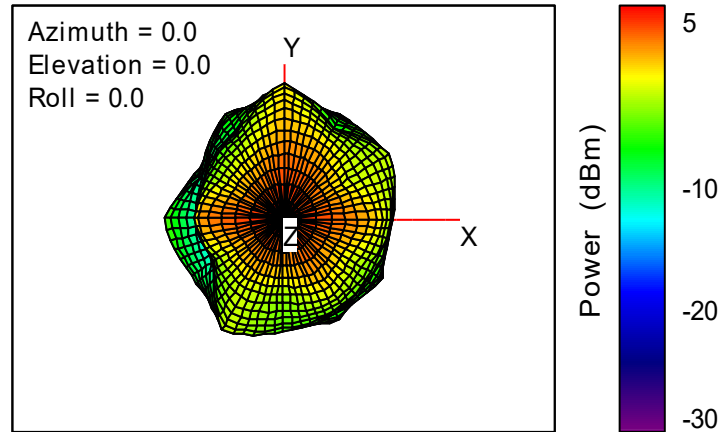
Total



Max Antenna 3D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	4.37

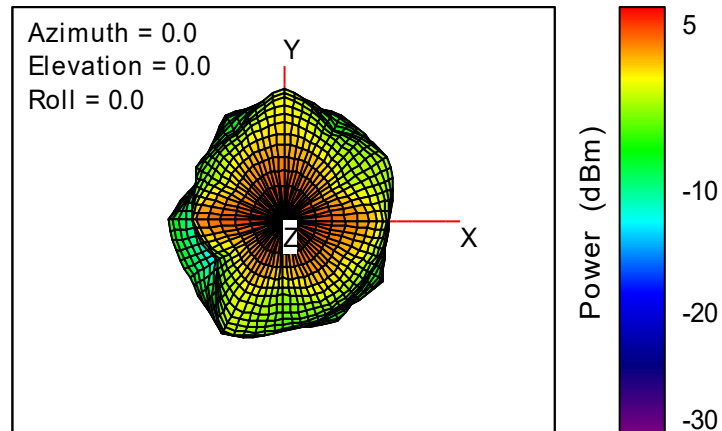
Total



Max Antenna 3D Radiation Pattern 5850-5895 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5850-5895	4.33

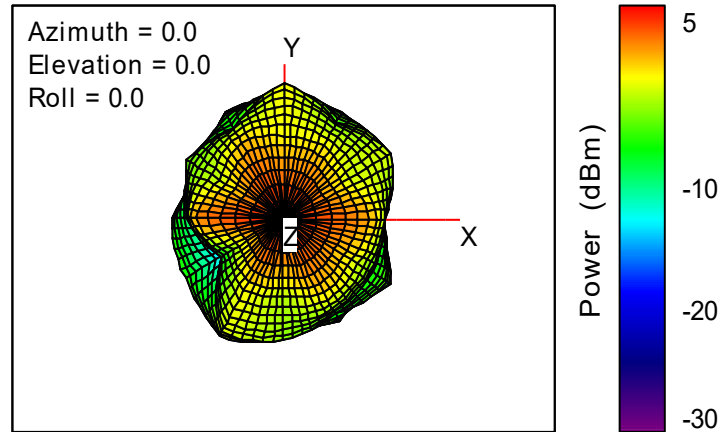
Total



Max Antenna 3D Radiation Pattern 5925-6425 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5925-6425	4.16

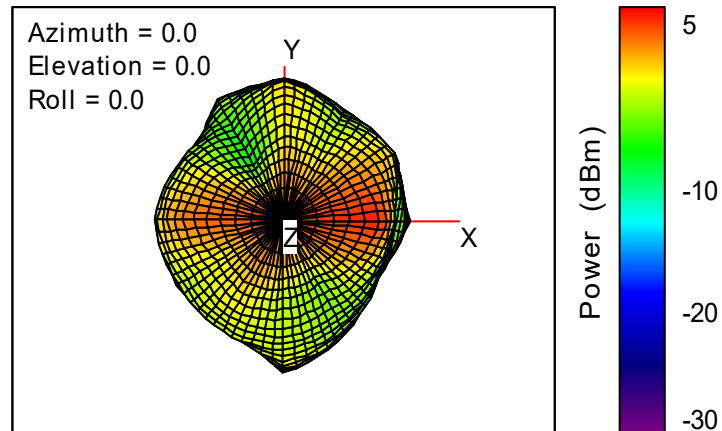
Total



Max Antenna 3D Radiation Pattern 6425-6525 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6425-6525	3.54

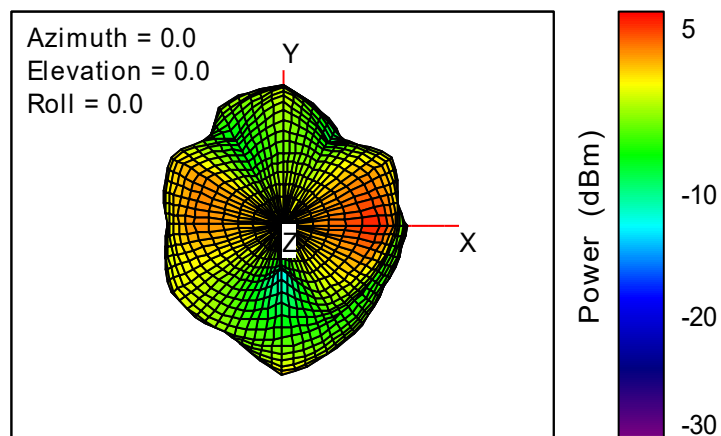
Total



Max Antenna 3D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6525-6875	3.79

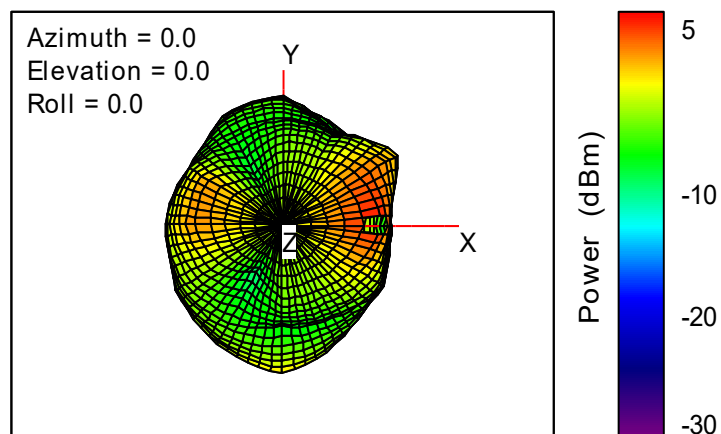
Total



Max Antenna 3D Radiation Pattern 6875-7125 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6875-7125	3.71

Total

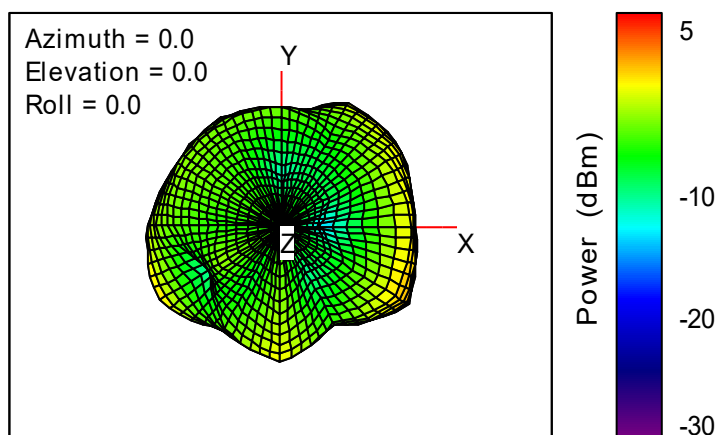


Auxiliary Antenna

Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	1.84

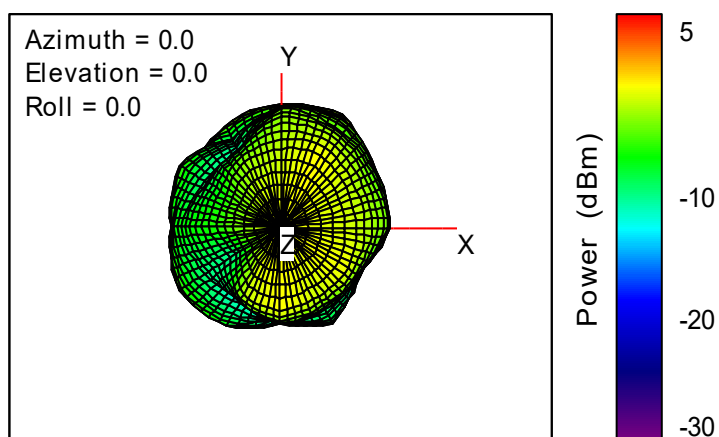
Total



Max Antenna 3D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	1.12

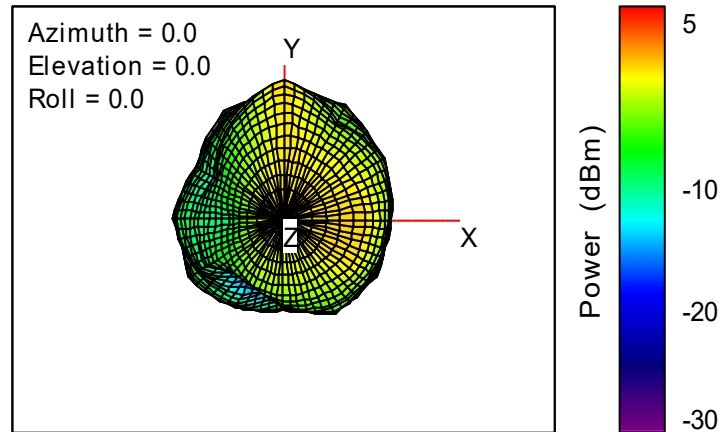
Total



Max Antenna 3D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	1.14

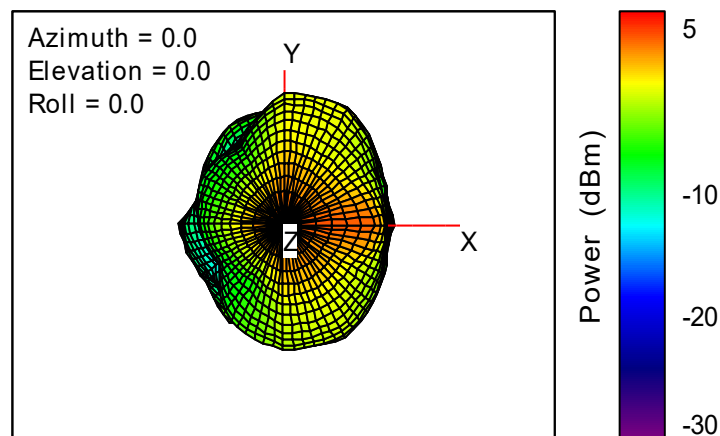
Total



Max Antenna 3D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5470-5725	3.43

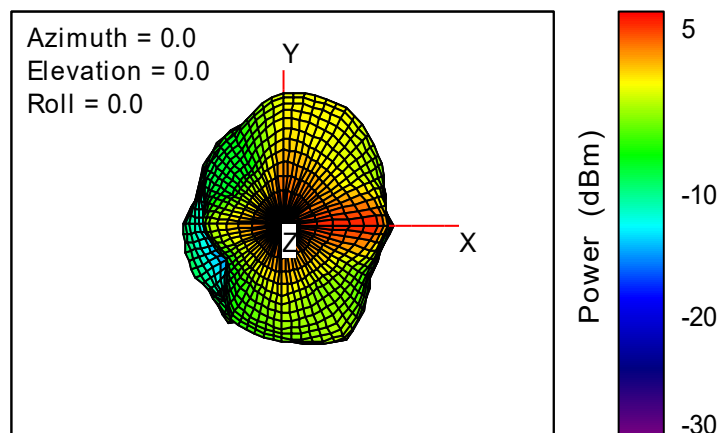
Total



Max Antenna 3D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	3.55

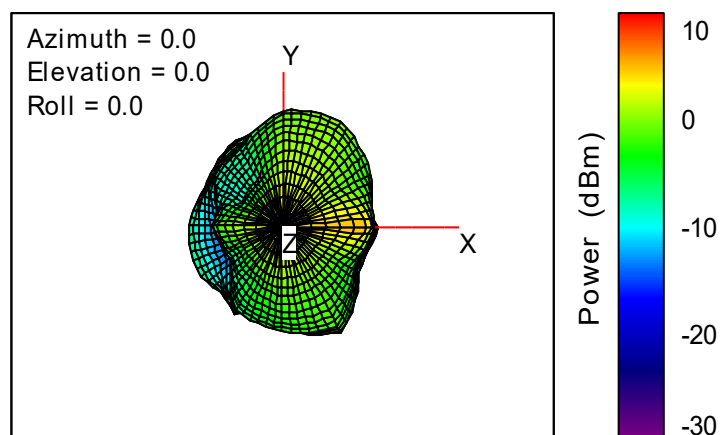
Total



Max Antenna 3D Radiation Pattern 5850-5895 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5850-5895	3.88

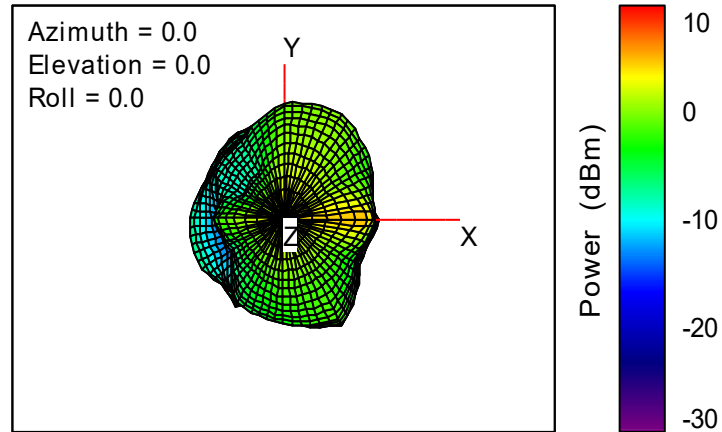
Total



Max Antenna 3D Radiation Pattern 5925-6425 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5925-6425	3.88

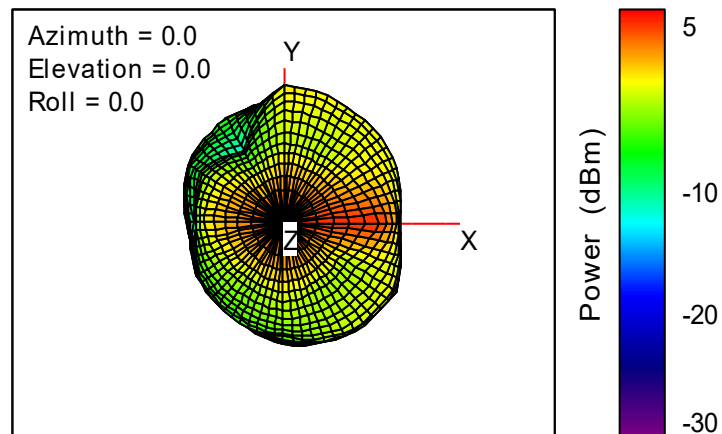
Total



Max Antenna 3D Radiation Pattern 6425-6525 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6425-6525	3.72

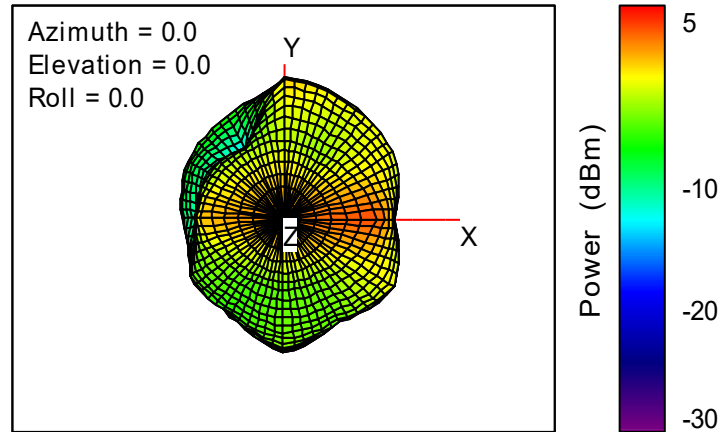
Total



Max Antenna 3D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6525-6875	3.47

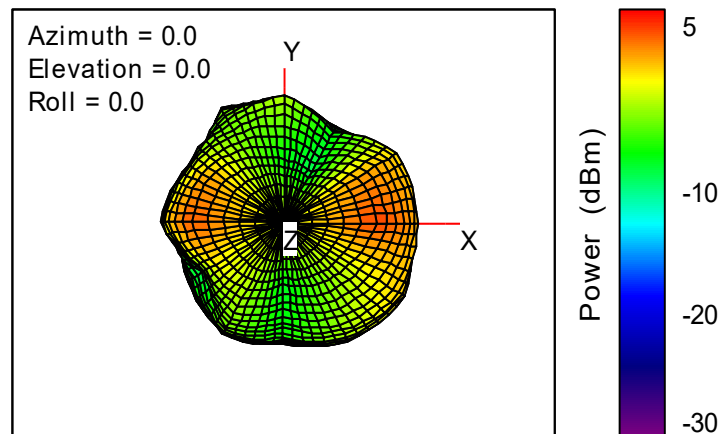
Total



Max Antenna 3D Radiation Pattern 6875-7125 MHz

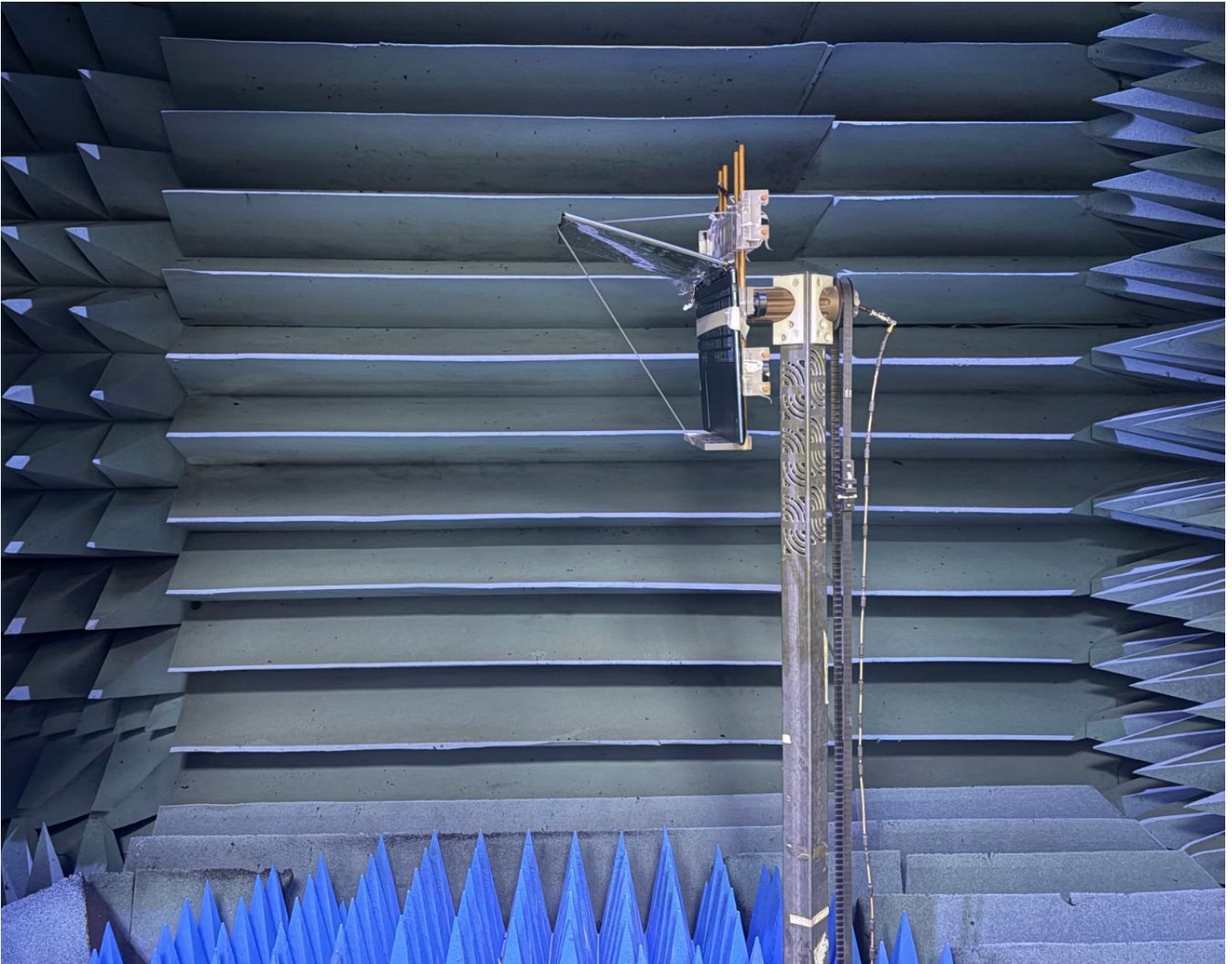
Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6875-7125	3.63

Total



Annex A. Photographs

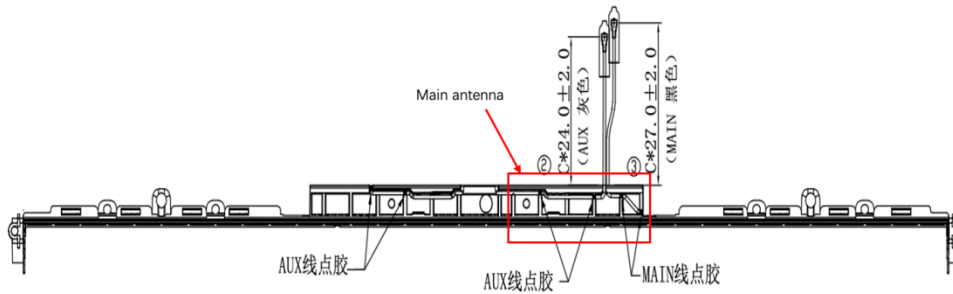
A.1 Setup Photo



A.2 Test sample

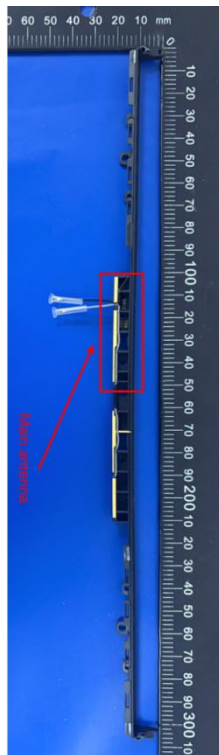
Main Antenna

Antenna Drawing

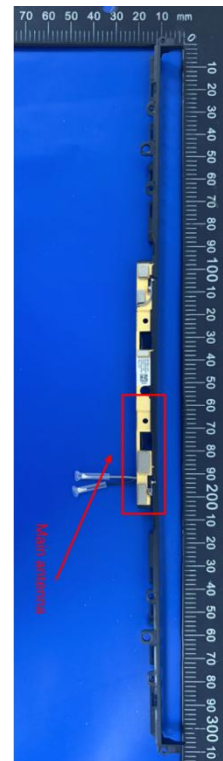


Antenna Photo

Front



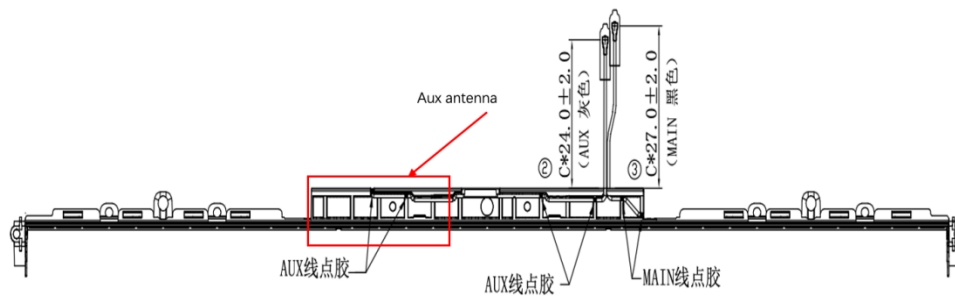
Back



Note: antenna photo should include L type ruler

Aux Antenna

Antenna Drawing

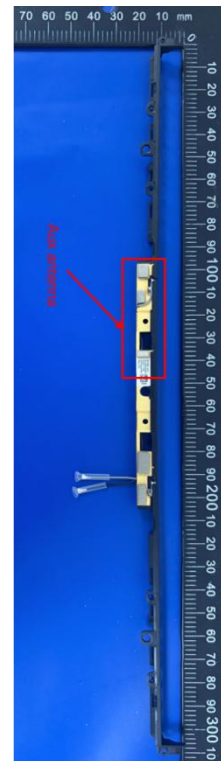


Antenna Photo

Front



Back



Note: antenna photo should include L type ruler

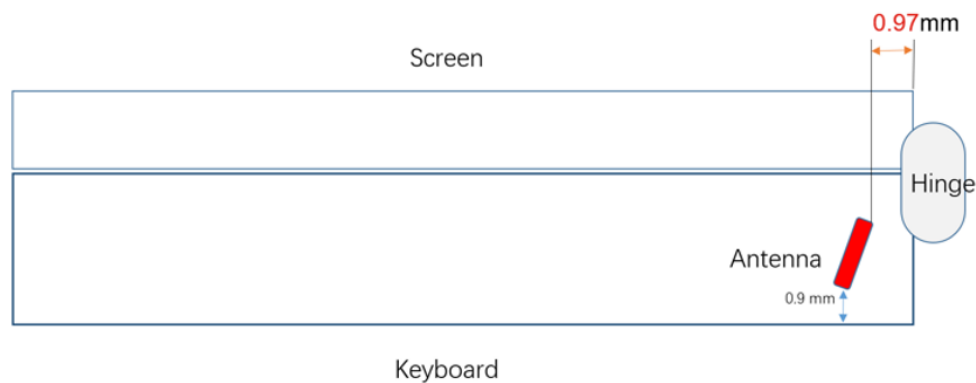
Annex B. Antenna Location

B.1 Antenna Host Platform Location Information

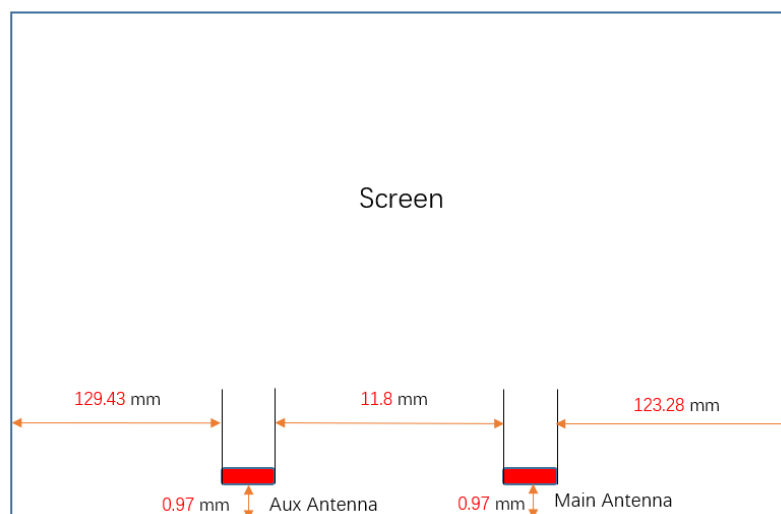
Include a dimensioned photo(s) or dimensioned drawing(s) of Main and Aux antenna placements (measurements are not required for receive-only antenna).

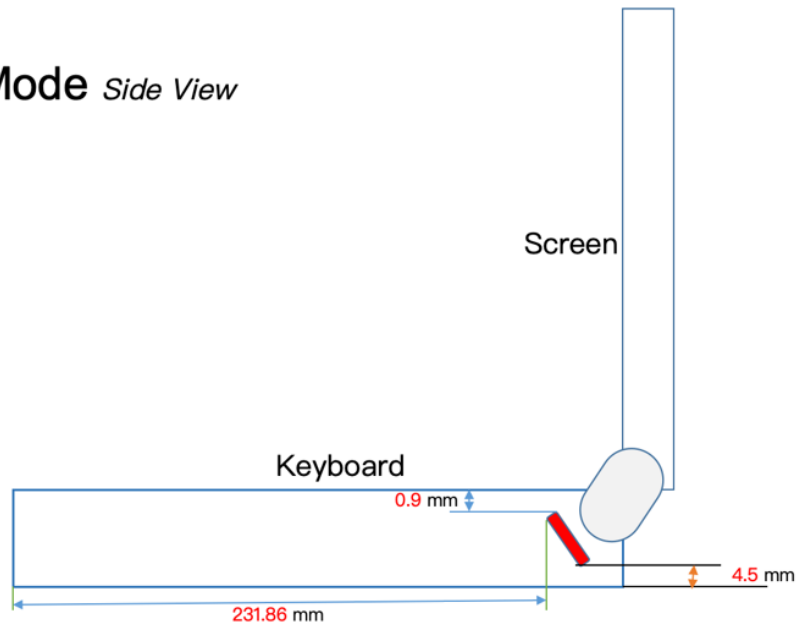
Any antenna that transmits must show dimensions to bottom of laptop. Provide a description of the materials that are used for supporting or surrounding transmit antennas; for example, non-conductive plastics vs. conductive coated plastic or metallic materials.

Tablet Mode *Side View*



Tablet Mode *Front View*

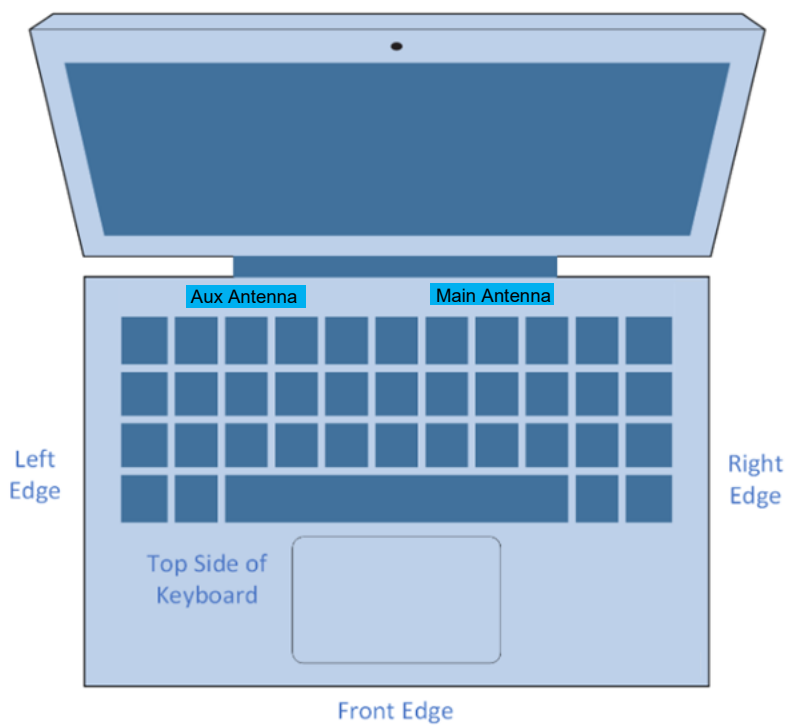


NB Mode *Side View*

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 keyboard section



Measuring Surface	Antenna	Separation Distance(antenna-to-Surface)(mm)	1g or 10g SAR
Bottom Side	Main	4.5	1g (FCC/ISED)
	Aux	4.5	1g (FCC/ISED)
Front Edge	Main	231.86	1g (ISED)
	Aux	231.86	1g (ISED)
Left Edge	Main	141.23	10g (ISED)
	Aux	129.43	10g (ISED)
Right Edge	Main	135.08	10g (ISED)
	Aux	161.23	10g (ISED)
Top side of Keyboard	Main	0.9	10g (ISED)
	Aux	0.9	10g (ISED)