Antenna Report

Radiation Characteristics of antenna located into a Host Platform

Unique ID Generator: 202504-093739

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Antenna Peak Gain and VSWR w/ cable loss (dBi)[1]

													2400 – 2483.5 MH	5150-5250 MHz	5250-5350 MHz	5470-5725 MHz	5725-5850 MHz	5850-5895 MHz	5925-6425 MHz	6425-6525 MHz	6525-6875 MHz	6875-7125 MHz			
Antenna Cycle	OEM	ODM	Host Platform Name	Host Platform Type	Intel-Platform	Antenna-Manufacturer	Antenna-Type	Antenna-PN	Antenna Main/Aux	SAR min separation (mm)	WiFi-Module	Applicable Certification	SAR FCC-ISED CIPC Apply	Antenna Metrics[2]	2.4 GHz	5.2 GHz	5.3 GHz	5.6 GHz	5.8 GHz	5.9 GHz	6.2 GHz	6.5 GHz	6.7 GHz	7.0 GHz	Applicant e-mail	Application Date	UniqueID
202504	DELL	Compal	T19G	Tablet	Yes	Auden	Monopole	A33460-30	Main/Ant.2	2.15			YES	Gain	1.09	2.21	2.21	2.84	2.98	2.98	3.38	2.86	2.98	3.19	Penny_Chang@compal.com	2025-04-10	202504-093739
202504	DELL	Compal	T19G	Tablet	Yes	Auden	Monopole	A33456-30	Aux/Ant.1	2	0	0	YES	Gain	0.68	2.90	2.90	2.72	2.92	2.77	3.83	3.87	3.86	3.82	Penny_Chang@compal.com	2025-04-10	202504-093739
202504	DELL	Compal	T19G	Tablet	Yes	Auden	Monopole	A33460-30	Main/Ant.2	2	0	0	YES	VSWR	1.29	1.12	1.27	1.62	1.62	1.71	1.98	1.51	1.36	1.68	Penny_Chang@compal.com	2025-04-10	202504-093739
202504	DELL	Compal	T19G	Tablet	Yes	Auden	Monopole	A33456-30	Aux/Ant.1	2	0	0	YES	VSWR	1.98	1.37	1.88	1.68	1.68	1.22	1.97	1.26	1.98	2.28	Penny_Chang@compal.com	2025-04-10	202504-093739

1: 3D Antenna Peak Gain required being test in system basis

2: Maximum VSWR level required by the Wi-Fi module vendor to ensure proper antenna matching is 2 (S11 < -10 dB) for dual band LB/HB modules and 2.32 (S11 < -8 dB) for triple band LB/HB/UHB modules

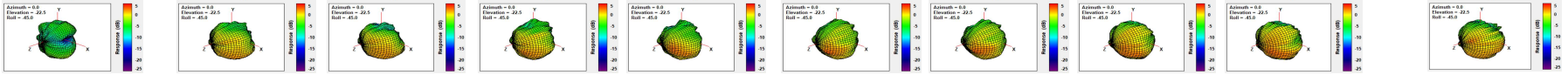
Intel Reference Antenna Gain and Type

Antenna Type	Application	2.4 GHz	5.2 GHz	5.3 GHz	5.6 GHz	5.8 GHz	5.9 GHz	6.2 GHz	6.5GHz	6.7 GHz	7.0 GHz
PIFA5	Design Reference	3.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
PIFA6	For WiFi 6E and ear	3.24	3.64	3.73	4.77	4.97	4.72	4.83	4.30	5.37	5.59
PIFA7	From WiFi 7 module	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 ear	2.89	2.92	3.19	4.41	4.22	4.22	4.83	4.30	4.49	5.34
Dipole7	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.

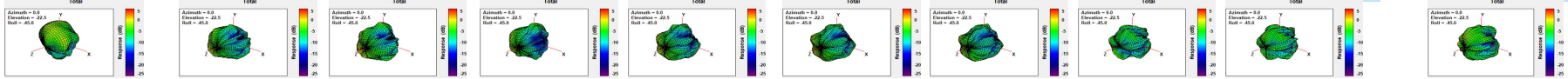
Max Antenna 3D Radiation Pattern - Main Antenna / Ant.2

Frequency (MHz) - Gain (dBi)	2400 – 2483.5	5150-5250	5250-5350	5470-5725	5725-5850	5850-5895	5925-6425	6425-6525	6525-6875	6875-7125
Total	1.09	2.21	2.21	2.84	2.98	2.98	3.38	2.86	2.98	3.19



Max Antenna 3D Radiation Pattern - Aux Antenna / Ant.1

Frequency (MHz) - Gain (dBi)	2400 – 2483.5	5150-5250	5250-5350	5470-5725	5725-5850	5850-5895	5925-6425	6425-6525	6525-6875	6875-7125
Total	0.68	2.90	2.90	2.72	2.92	2.77	3.83	3.87	3.86	3.82



Antenna VSWR data plot inside and outside a host Platform (standalone)

Main/Ant.2 Standalone	Aux/Ant.1 Standalone	Main/Ant.2 inside host platform	Aux/Ant.1 inside host platform
1	2	1	2

Maximum VSWR level required by the Wi-Fi module vendor to ensure proper antenna matching is 2 (S11 < -10dB)

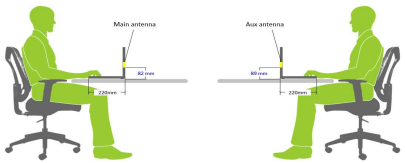
Antenna Report

Mechanical Information

Antenna Location 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.

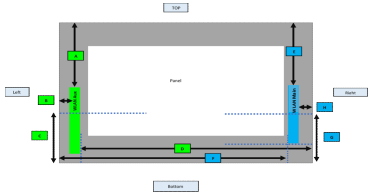
Notebook- Antenna on the panel section



Notebook- Antenna on the keyboard section

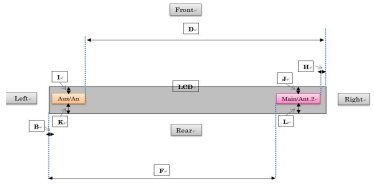
#VALUE!

Tablet mode



Cable Assembly

PN	Length	Dimensions	Impedance	Connector Type
Main	99 mm	1.13 mm SLL	50-ohm	IPEX-4
Aux	286 mm	1.13 mm SLL	50-ohm	IPEX-4



SAR Separation Distance - Notebook

Measuring Surface	Antenna	Distance (mm)
Top Side	Main/Ant.2	95.65
	Aux/Ant.1	105.68
Right Edge	Main/Ant.2	245.24
	Aux/Ant.1	7.25
Left Edge	Main/Ant.2	7.26
	Aux/Ant.1	245.28
Bottom Side	Main/Ant.2	82.00
	Aux/Ant.1	89.00

SAR Separation Distance

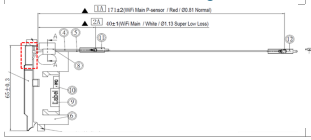
Measuring Surface	Antenna	Distance (mm)
Top Side of KB	Main/Ant.2	
	Aux/Ant.1	
Right Edge	Main/Ant.2	
	Aux/Ant.1	
Left Edge	Main/Ant.2	
	Aux/Ant.1	
Bottom Side	Main/Ant.2	
	Aux/Ant.1	
Front Edge	Main/Ant.2	
	Aux/Ant.1	

SAR Separation Distance

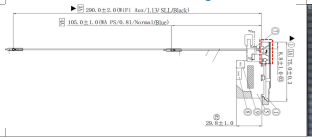
Measuring Surface	Item	Antenna	Distance (mm)
Top Side of Edg	A	Aux/Ant.1	95.65
	E	Main/Ant.2	105.68
Right Edge	D	Aux/Ant.1	245.24
	H	Main/Ant.2	7.25
Left Edge	B	Aux/Ant.1	7.26
	F	Main/Ant.2	245.28
Bottom Side	C	Aux/Ant.1	72
	G	Main/Ant.2	56
Front Side	I	Aux/Ant.1	2.15
	J	Main/Ant.2	2.15
Rear Side	K	Aux/Ant.1	7.2
	L	Main/Ant.2	7.3

Antenna Drawing and Photo

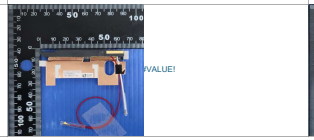
Main/Ant.2 Drawing



Aux/Ant.1 Drawing



Main/Ant.2 Front



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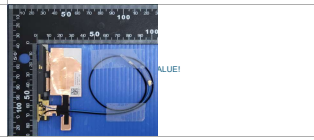
Main/Ant.2 Back



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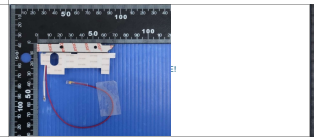
Aux/Ant.1 Front



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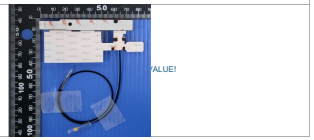
Aux/Ant.1 Back



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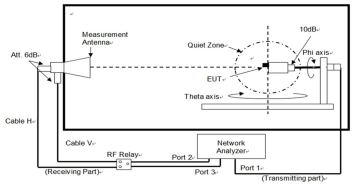
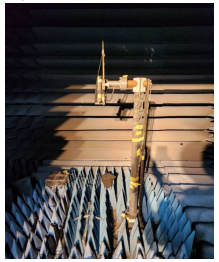
Measurement Method and Test System Description

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.



Photographs



Test Equipment List

ID	Model Name	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
	ENA Series Network Analyzer	Keysight	MY46100746	2024.11.12	2025.11.11
	RF Switch	Keysight	MY42000955	NCR	NCR
	Multi-Axis Positioner Controller	ETS-Lindgren	N/A	NCR	NCR
	Medium-Duty Positioner	ETS-Lindgren	N/A	NCR	NCR
	Measurement Horn Antenna	EMCO	00086722	NCR	NCR
	Anechoic Chamber	ETS-Lindgren	N/A	2024.12.06	2025.12.05
	MA(M)+20core for 60cm RG316DS	Woken Technology Inc.	N/A	N/A	N/A
	MA(M)+30core for 300cm RG316D	Woken Technology Inc.	N/A	N/A	N/A

Test location

Company name	SPORTON INTERNATIONAL INC
Addreaa	NO. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)

Test Personnel

Name(Full nam	Jason Chang
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Testing date	2025.04.08