Regulatory WLAN Antenna Information

English Language Required for Intel Regulatory Review / Approval

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)
Lenovo	LCFC	IP Flex 3 Chrome 12IAN8	Yes	convertible PC	3.6mm

*****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)
ZTX	PIFA	DC33001ZZ00	DC33001ZZ10

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	-0.45	2.23	1.64	0.86	0.22	0.03	1.43	2.79	2.68	2.82
Aux	1.32	2.37	1.89	3.0	2.73	2.88	2.83	2.61	2.58	1.44

Intel Reference Gain/Type/ Separation distance

Antenna Type	Antenna Peak gain (In dBi)*										Distance to the end user (mm)
	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	7.0GHz 6875-7125MHz	
Design	**3.00**	**5.00**	**5.00**	**5.00**	**5.00**	**5.00**	**5.00**	**5.00**	**5.00**	**5.00**	Generic: refer to modular FCC SAR report
PIFA	**3.24**	**3.64**	**3.73**	**4.77**	**4.97**	**4.72**	**4.83**	**4.30**	**5.37**	**5.59**	Mid-power: ≥ 8 mm
Dipole	**2.89**	**2.92**	**3.19**	**4.41**	**4.22**	**4.22**	**4.83**	**4.30**	**4.49**	**5.34**	Low power: ≥ 5 mm

Notes (marked with *)

*** SAR minimum separation (mm)**

- Regular NB: Minimum antenna-to-body (from antenna bottom to the bottom of the device)

- Tablet / Convertible PC: Minimum antenna-to-edge (5 sides of the device)

- Mini-tablet: Minimum antenna-to-edge (6 sides of the device)

*** 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.

Table of contents

1. **Applicable test methods**

<insert test description here for test method>

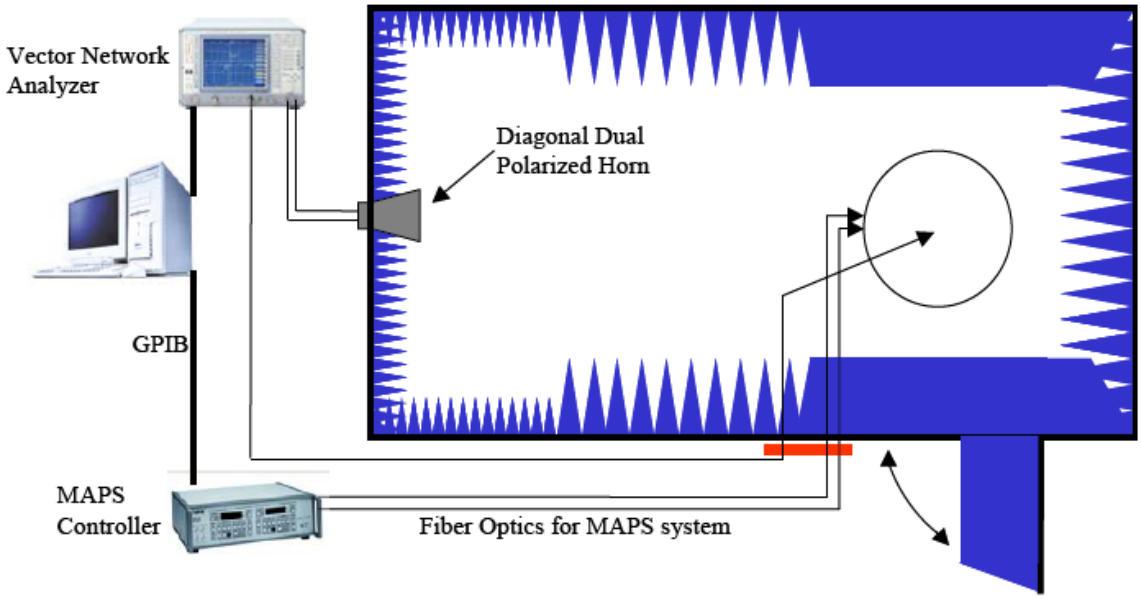
This test report is prepared for host antenna testing under a Full Anechoic Chamber.

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

2. Test & System Description

a. Test setup

ETS-8500

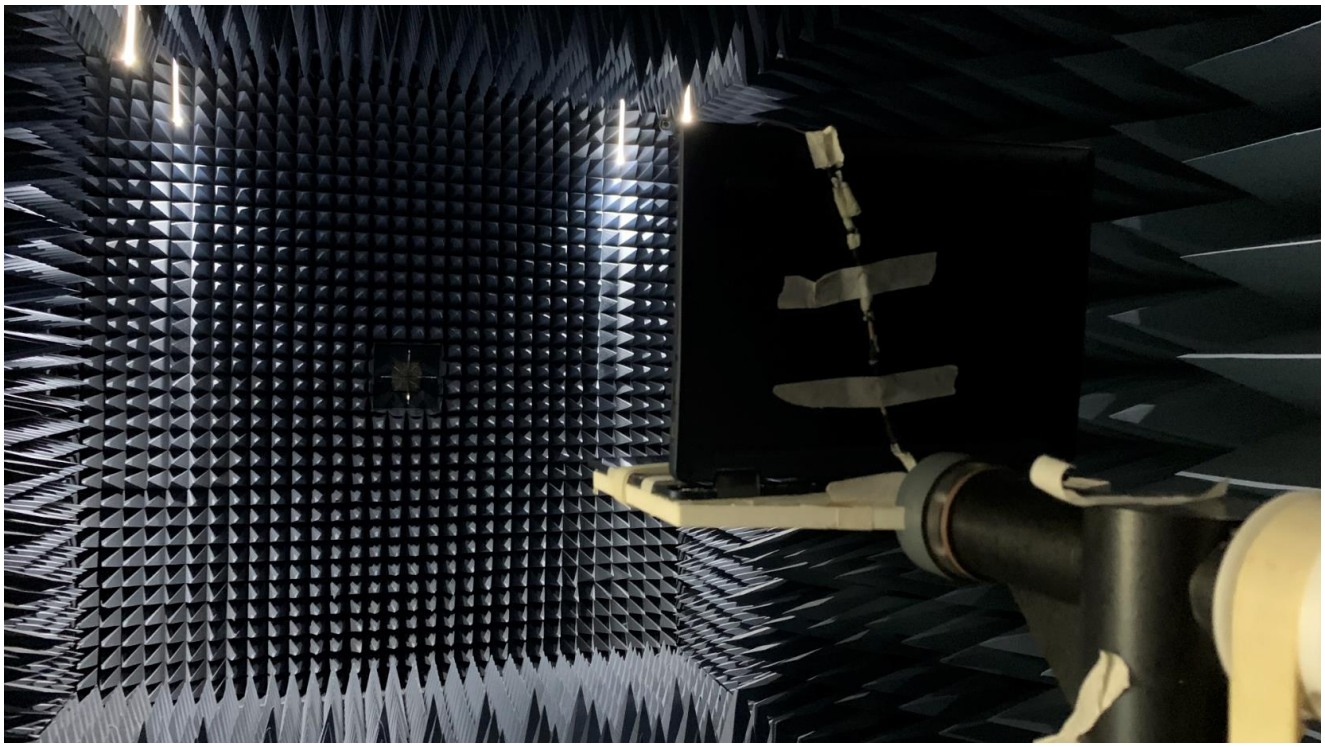


b. Equipment list

<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	2021/7/25	2023/7/25
Horn antenna	3164-08	00143257	ETS-Lindgren	2022/4/3	2024/4/3
Horn antenna + Amplifier + HPF6.4	115195	00117614	ETS-Lindgren	2021/8/18	2023/8/18
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	-		2021/5/2	2023/5/2

3. Setup photo



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: DC33001ZZ00) Main Antenna	ZTX	PIFA	(P/N: 20565-001R-13) 50 ohm Coaxial length: 51.7cm diameter: 1.1mm Connector Type: i-pex(MHF)	2400-2483.5	-0.45	0.98	3.0 max	1.43
				5150-5250	2.23	4.47	3.0 max	2.24
				5250-5350	1.64	3.88	3.0 max	2.24
				5470-5725	0.86	3.16	3.0 max	2.30
				5725-5850	0.22	2.56	3.0 max	2.34
				5850-5895	0.03	2.37	3.0 max	2.34
				5925-6425	1.43	3.85	3.0 max	2.42
				6425-6525	2.79	5.29	3.0 max	2.50
				6525-6875	2.68	5.24	3.0 max	2.56
				6875-7125	2.82	5.46	3.0 max	2.64
(P/N: DC33001ZZ10) Aux Antenna	ZTX	PIFA	(P/N: 20565-001R-13) 50 ohm Coaxial length:7.95cm diameter: 1.1mm Connector Type: i-pex(MHF)	2400-2483.5	1.32	1.57	3.0 max	0.25
				5150-5250	2.37	2.76	3.0 max	0.39
				5250-5350	1.89	2.28	3.0 max	0.39
				5470-5725	3.0	3.40	3.0 max	0.40
				5725-5850	2.73	3.14	3.0 max	0.41
				5850-5895	2.88	3.29	3.0 max	0.41
				5925-6425	2.83	3.25	3.0 max	0.42
				6425-6525	2.61	3.05	3.0 max	0.44
				6525-6875	2.58	3.03	3.0 max	0.45
				6875-7125	1.44	1.90	3.0 max	0.46

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