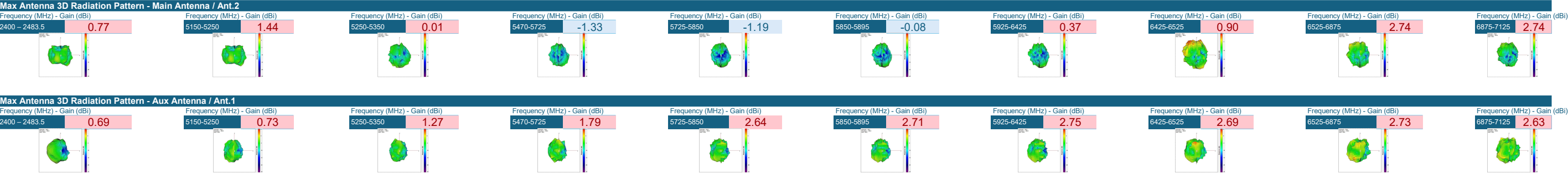


Radiation Characteristics of antenna located into a Host Platform

Antenna Peak Gain and VSWR w/ cable loss (dBi) ¹												2400 – 2483.5 MHz 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										Applicant e-mail	Application Date
Antenna Cycle	OEM	ODM	Host Platform Compliance ID	Host Platform product name	Host Platform Type	Antenna-Manufacturer	Antenna-Type	Antenna-PN	Antenna Main/Aux	SAR min separation (mm)	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		
202503	Lenovo Japan	Wistron	TP00168B;	ThinkPad L13 Gen 6 AMD;	Convertible PC	Speed	PIFA	025.902JB.0001	Main/Ant.2	2.00	Gain	0.77	1.44	0.01	-1.33	-1.19	-0.08	0.37	0.90	2.74	2.74	benson_ye_chang@wistron.com	2025-03-17
202503	Lenovo Japan	Wistron	TP00168B;	ThinkPad L13 2-in-1 Gen 6 AMD;	Convertible PC	Speed	PIFA	025.902JC.0011	Aux/Ant.1	2.00	Gain	0.69	0.73	1.27	1.79	2.64	2.71	2.75	2.69	2.73	2.63	benson_ye_chang@wistron.com	2025-03-17
202503	Lenovo Japan	Wistron	TP00168B;	ThinkPad L13 Gen 6 AMD;	Convertible PC	Speed	PIFA	025.902JB.0001	Main/Ant.2	2.00	VSWR	1.97	1.28	1.12	1.26	1.80	1.80	1.65	1.71	1.81	1.13	benson_ye_chang@wistron.com	2025-03-17
202503	Lenovo Japan	Wistron	TP00168B;	ThinkPad L13 2-in-1 Gen 6 AMD;	Convertible PC	Speed	PIFA	025.902JC.0011	Aux/Ant.1	2.00	VSWR	1.88	1.30	1.42	1.24	1.80	1.89	1.43	1.24	1.33	1.45	benson_ye_chang@wistron.com	2025-03-17

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

MTK Reference Antenna Gain and Type																							
Antenna Type	Application Module	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	Main/Ant. 2	PIFA	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
PIFA	MT7925B14L	3.18	4.92	4.92	4.92	4.92	4.92	4.76	4.29	4.61	4.09			3.18	4.92	4.92	4.92	4.92	4.92	4.76	4.29	4.61	4.09
Dipole	MT7925B14L	2.42	3.87	3.87	3.87	3.87	3.87	3.93	3.61	3.61	3.14			3.18	4.92	4.92	4.92	4.92	4.92	4.76	4.29	4.61	4.09



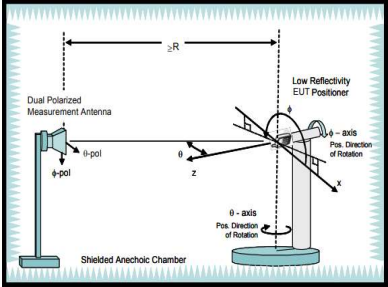
Maximum VSWR level required by the Wi-Fi module vendor to ensure proper antenna matching is 2 (S11 < -10dB)

Main/Aux	Model	Peak gain with cable loss	Cable Loss (dB)
Main	025.903JB.0001	0.77 dBi @ 2.4GHz	0.13dB @2.4GHz
		1.44 dBi @ 5GHz	0.13dB @5GHz
		0.37 dBi @ 5.925~6.425GHz	0.22 dB @ 5.925~6.425GHz
		0.90 dBi @6.425~6.525GHz	0.23dB @6.425~6.525GHz
		2.74 dBi @6.525~6.875GHz	0.36dB @6.525~6.875GHz
Aux	025.903JC.0011	0.69 dBi @ 2.4GHz	0.13dB @2.4GHz
		2.73 dBi @ 5GHz	0.13dB @5GHz
		2.75 dBi @ 5.925~6.425GHz	0.19dB @ 5.925~6.425GHz
		2.69 dBi @6.425~6.525GHz	0.18dB @6.425~6.525GHz
		2.73 dBi @6.525~6.875GHz	1.03 dB @6.525~6.875GHz

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.

The testing of antenna gain should be made at a CTIA qualified lab with an RF anechoic chamber with at least 3-meter separation from the receive antenna to the antenna under test. The antenna gain report from unqualified lab can't be referenced a passing. Besides, all test equipment including horn antennas, adapters, cables, network analyzers, and receivers shall be calibrated per manufacturer's minimum calibration requirements.



Photographs



Test Equipment List

ID	Model Name	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Anechoic Cham	AMS8500	ETS-Lindgren		20-Nov-24	19-Nov-26
Turn Table	2117-7200	ETS-Lindgren	SN00231447	20-Nov-24	19-Nov-26
Switch & Positic	EMCenter	ETS-Lindgren	SN00242606	20-Nov-24	19-Nov-26
Measurement S	EMQuest V1.15 build 27347	ETS-Lindgren	SN1802	20-Nov-24	19-Nov-26
Horn antenna	3164-10	ETS-Lindgren	SN00246202	20-Nov-24	19-Nov-26
Vector Network	E5071C	Keysight	PN5188-4462	20-Nov-24	19-Nov-26
Cable 7.5m 400	SS402	WOKEN	0100A1F5A1XX	20-Nov-24	19-Nov-26
Cable 7.5m 400	SS402	WOKEN	0100A1F5A1XX	20-Nov-24	19-Nov-26
Cable 14m 400	SS402	WOKEN	0100A1F5A1XX	20-Nov-24	19-Nov-26
Temp & Humidit	830	PROVA	SN84972	20-Nov-24	19-Nov-26

Test location

Company name SPEEDWIRE

Address No. 138, Hi-tech District East-river, Huizhou, Guangdong, ChinaSPEEDWIRE

Test Personnel

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Testing date 2025/2/7