



FCC RADIO TEST REPORT

FCC ID : QYLAX211NG
Equipment : Wireless Module
Brand Name : Getac
Model Name : AX211NGW
Applicant : Getac Technology Corporation.
5F., Building A, No. 209, Sec.1, Nangang Rd., Nangang
Dist., Taipei City 115018, Taiwan, R.O.C.
Standard : FCC Part 15 Subpart E §15.407

The product was received on Feb. 11, 2025 and testing was performed from Feb. 17, 2025 to Mar. 04, 2025. We, Sporton International Inc. Wensan Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this partial report apply exclusively to the tested model / sample. Without written approval from Sporton International Inc. Wensan Laboratory, the test report shall not be reproduced except in full.

Approved by: Louis Wu

Sportun International Inc. Wensan Laboratory

No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)



Table of Contents

History of this test report	3
Summary of Test Result	4
1 General Description	5
1.1 Product Feature of Equipment Under Test.....	5
1.2 Modification of EUT	7
1.3 Testing Location	7
1.4 Applicable Standards.....	7
2 Test Configuration of Equipment Under Test	8
2.1 Carrier Frequency and Channel	8
2.2 Test Mode.....	8
2.3 EUT Operation Test Setup	8
3 Test Result	9
3.1 Maximum E.I.R.P Output Power Measurement	9
4 List of Measuring Equipment	10

Appendix A. Conducted Test Results



History of this test report



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
-	15.407(e)	6dB & 26dB Bandwidth	Pass	See Note
-	2.1049	99% Occupied Bandwidth	Pass	See Note
3.1	15.407(a)	Maximum E.I.R.P Output Power	Pass	-
-	15.407(a)	Power Spectral Density	Pass	See Note
-	15.407(b)	Unwanted Emissions	Pass	See Note
-	15.207	AC Conducted Emission	Pass	See Note
-	15.203	Antenna Requirement	Pass	See Note

Note: For host device, the Conducted Output Power is no difference after compared to module (Model: AX211NGW)

Conformity Assessment Condition:

The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.

Disclaimer:

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Yun Huang

Report Producer: Clio Lo



1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
General Specs	WCDMA/LTE, Bluetooth, Wi-Fi 2.4GHz 802.11b/g/n/ax, Wi-Fi 5GHz 802.11a/n/ac/ax, Wi-Fi 6GHz 802.11ax, and GNSS.
Antenna Type	WLAN: <Main>: PIFA Antenna <Aux.>: PIFA Antenna

The product was installed into Tablet PC (Brand Name: Getac, Model Name: A140, A140G2, A140Y (Y= 10 characters, Y can be 0-9, a-z, A-Z, "-", "_" or blank for marketing purpose and no impact safety related critical components and constructions.)) during test, and the host information was recorded in the following table.

Antenna Information for Host			
Antenna	Manufacturer	GTK	
	Antenna Type	PIFA Antenna	PIFA Antenna
	Part number	340140100002	340140100003
	Peak gain (dBi)	Main Antenna: WLAN (5G UNII-4): 2.97	Aux. Antenna: WLAN (5G UNII-4): 2.26

Sample Information for Host	
SKU	SKU 5
WWAN	Support (EM7511)
WLAN	Support (AX211NGW)
RFID	Not Support
GPS	Support (MC1010)
Finger printer	Support
Barcode	Support
AC Adapter 1 (65W)	Not Support
AC Adapter 2 (120W)	Not Support
AC Adapter 3 (65W)	Support
AC Adapter 3 (65W)	Support

Remark: The EUT's information above is declared by manufacturer. Please refer to Disclaimer in report summary.



1.1.1 Antenna Directional Gain

Follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01 F)2)f)ii)

Directional gain = G_{ANT} + Array Gain, where Array Gain is as follows:

For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$.

G_{ANT} is set equal to the gain of the antenna having the highest gain.

For PSD measurements, the directional gain calculation.

$$Directional\ Gain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$$

where

Each antenna is driven by no more than one spatial stream;

N_{SS} = the number of independent spatial streams of data;

N_{ANT} = the total number of antennas

$g_{j,k} = 10^{G_k / 20}$ if the k th antenna is being fed by spatial stream j , or zero if it is not;
 G_k is the gain in dBi of the k th antenna.

As minimum $N_{SS}=1$ is supported by EUT, the formula can be simplified as:

$$\text{Directional gain} = 10 \cdot \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] \text{ dBi}$$

Where $G1, G2, \dots, GN$ denote single antenna gain.

The directional gain "DG" is calculated as following table.

UNII-4			DG for Power (dBi)	DG for PSD (dBi)
	Chain A (dBi)	Chain B (dBi)		
	2.26	2.97	2.97	5.63

Calculation example:

If a device has two antenna, $G_{CHAIN\ A}=2.26\text{dBi}$; $G_{CHAIN\ B}=2.97\text{dBi}$

Directional gain of power measurement = $\max(2.26, 2.97) + 0 = 2.97 \text{ dBi}$

Directional gain of PSD derived from formula which is

$$10 \cdot \log \{ [10^{(2.26 \text{ dBi} / 20)} + 10^{(2.97 \text{ dBi} / 20)}]^2 / 2 \} / 2$$

$$= 5.63 \text{ dBi}$$



1.2 Modification of EUT

No modifications made to the EUT during the testing.

1.3 Testing Location

Test Site	Sporton International Inc. Wensan Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	Sporton Site No. TH05-HY

FCC designation No.: TW3786

1.4 Applicable Standards

According to the specifications declared by the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ FCC Part 15 Subpart E
- ♦ FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- ♦ FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ♦ FCC KDB 291074 D02 EMC Measurement v01
- ♦ ANSI C63.10-2013

Remark:

1. All the test items were validated and recorded in accordance with the standards without any modification during the testing.
2. The TAF code is not including all the FCC KDB listed without accreditation.



2 Test Configuration of Equipment Under Test

- a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

2.1 Carrier Frequency and Channel

Frequency Band	Bandwidth	Channel	Frequency (MHz)	Note
5850-5895 MHz (U-NII-4)	20 MHz	169	5845	Straddle
		173	5865	
		177	5885	
	40 MHz	167	5835	Straddle
		175	5875	
	80 MHz	171	5855	Straddle
	160 MHz	163	5815	Straddle

Note: The channel noted with "straddle" spans 5.725-5.850 GHz and 5.850-5.895 GHz.

2.2 Test Mode

The final test modes include the worst data rates for each modulation shown in the table below.

MIMO Mode

Modulation	Data Rate
802.11ax HE80	MCS0

2.3 EUT Operation Test Setup

The RF test items, utility "QCRT 0.7332.23.90.0" was installed in Notebook which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

3 Test Result

3.1 Maximum E.I.R.P Output Power Measurement

3.1.1 Limit of Maximum E.I.R.P Output Power

For client devices operating under the control of an indoor access point in the 5.850-5.895 GHz band, the maximum power spectral density must not exceed 14 dBm e.i.r.p. in any 1-megahertz band, and the maximum e.i.r.p. over the frequency band of operation must not exceed 30 dBm. Client devices operating on a channel that spans the 5.725-5.850 GHz and 5.850-5.895 GHz bands must not exceed an e.i.r.p. of 30 dBm.

3.1.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

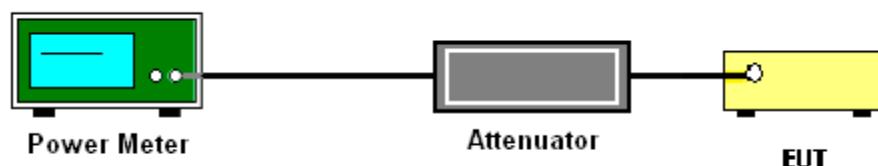
3.1.3 Test Procedures

The testing follows Method PM-G of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Method PM-G (Measurement using a gated RF average power meter):

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit at its maximum power control level.
3. Measure the average power of the transmitter.
4. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.
5. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

3.1.4 Test Setup



3.1.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.



4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Hygrometer	TECPEL	DTM-303A	TP201996	N/A	Nov. 01, 2024	Feb. 17, 2025~Mar. 04, 2025	Oct. 30, 2025	Conducted (TH05-HY)
USB Power Sensor	DARE	RPR3008W	RPR8W-2301 0013 (NO:100)	10MHz~8GHz	Jul. 26, 2024	Feb. 17, 2025~Mar. 04, 2025	Jul. 25, 2025	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV3044	101466	10HZ~44GHZ	Aug. 14, 2024	Feb. 17, 2025~Mar. 04, 2025	Aug. 13, 2025	Conducted (TH05-HY)
Switch Control Mainframe	Burgeon	ETF-058	EC1300484 (BOX3)	N/A	May 20, 2024	Feb. 17, 2025~Mar. 04, 2025	May 19, 2025	Conducted (TH05-HY)
Software	Sporton	BTWIFI_Final_version_250114	N/A	Conducted Other Test Item	N/A	Feb. 17, 2025~Mar. 04, 2025	N/A	Conducted (TH05-HY)

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Beck Chen	Temperature:	21~25	°C
Test Date:	2025/2/17-2025/3/4	Relative Humidity:	51~54	%

Remark: For Conducted Test Items, Ant. 1 means Chain A (Aux.) and Ant. 2 means Chain B (Main).

TEST RESULTS DATA
Average Power Table

UNII-4 MIMO														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config	Average Conducted Power (dBm)			DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)	
						Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2
HE80	MCS0	2	171	5855	Full	20.20	20.10	23.16	2.97		26.13		30	

—————THE END—————