

RF Test Report

Applicant : jjPlus Corporation

Product Name : 11ac 2T2R WIFI & BT Module

Trade Name : jjPlus

Model Number : WMU6204, WMU6205, WMU6206, WMU6207, WMU6202, WMU6203, WMU6208, WMU6209, WMU6210, WMU6211, WMI6201

Applicable Standard : MIC notification. No.88 of 2004, Annex 43
2.4 GHz band wide-band low-power data communication system
(Item 19 of Article 2 Paragraph 1)

Received Date : Nov. 29, 2022

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Issued by

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Note:

- 1.The test results are valid only for samples provided by customers and under the test conditions described in this report.
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- 3.The relevant information is provided by customers in this test report. According to the correctness, appropriateness or completeness of the information provided by the customer, if there is any doubt or error in the information which affects the validity of the test results, the laboratory does not take the responsibility.

Revision History

Version	Issued Date	Revisions	Revised By
00	Dec. 12, 2022	Initial Issue	Emma Chao

Verification of Compliance

Applicant : jjPlus Corporation

Product Name : 11ac 2T2R WIFI & BT Module

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Applicable Standard : MIC notification. No.88 of 2004, Annex 43
2.4 GHz band wide-band low-power data communication system (Item 19 of Article 2 Paragraph 1)

Test Result : Complied

Performing Lab. : Eurofins E&E Wireless Taiwan Co., Ltd.
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The above equipment has been tested by Eurofins E&E Wireless Taiwan Co., Ltd., and found compliance with the requirements set forth in the 2.4 GHz band wide-band low-power data communication system (Item 19 of Article 2 Paragraph 1) and technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Approved By : Kai Yu Yang

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1 General Information

1.1. EUT Description

Applicant	jjPlus Corporation 15F.-7, No. 2, Jianba Rd.,Zhonghe Dist.,New Taipei City 235603,Taiwan (R.O.C.)
Product Type	11ac 2T2R WIFI & BT Module
Trade Name	jjPlus
Model Number	WMU6204, WMU6205, WMU6206, WMU6207, WMU6202, WMU6203, WMU6208, WMU6209, WMU6210, WMU6211, WMI6201
Models different description	All of models RF chip and PCB design are the same. The model detail difference listed as following table.
Hardware Version	X4 : WMU6204, WMU6205, WMU6206, WMU6207, WMU6208 , WMU6209, WMU6210, WMU6211, WMI6201 X2 : WMU6202 X3 : WMU6203
Software Version	1030.30.1201.2017
Antenna Information	ANT-0/ANT-1 Trade Name: LYNwave Model Number: WMU6204_7 Antenna Type: PCB antenna Max. Gain: 3.2 dBi ANT-0/ANT-1 Trade Name: LYNwave Model Number: AOA160-221050-000000 Antenna Type: External dipole antenna Max. Gain: 5 dBi ANT-0/ANT-1 Trade Name: LYNwave Model Number: AOA160-221020-000000 Antenna Type: External dipole antenna Max. Gain: 3 dBi ANT-0/ANT-1 Trade Name: LYNwave Model Number: AOA160-221034-000000 Antenna Type: External dipole antenna Max. Gain: 3 dBi ANT-0/ANT-1 Trade Name: SINBON Model Number: A9706632 Antenna Type: PIFA Antenna Max. Gain: 4.1 dBi ANT-0/ANT-1 Trade Name: SINBON Model Number: A9706633 Antenna Type: PIFA Antenna Max. Gain: 4.8 dBi

Antenna Information	ANT-0/ANT-1 (The added antenna) Trade Name: ARISTOTLE Model Number: RFA-25-AP152R-70-180 Antenna Type: Dipole Antenna Max. Gain: 3.42 dBi			
	ANT-0/ANT-1 (The added antenna) Trade Name: ARISTOTLE Model Number: RFA-25-AP152R-70B360 Antenna Type: Dipole Antenna Max. Gain: 2.55 dBi			
Radio Equipment	2.4 GHz Band Wide-Band Low-Power Data Communication System			
Classification of Specified Radio Equipment	Article 2 Clause 1 Item 19			
Modulation Type	IEEE 802.11b: DSSS			
	IEEE 802.11g: OFDM			
	IEEE 802.11n 20 MHz : OFDM			
	IEEE 802.11n 40 MHz : OFDM			
Type of Emissions	IEEE 802.11b: G1D 2412 MHz-2472 MHz (Interval of 5 MHz 13ch)			
	IEEE 802.11g: D1D, G1D 2412 MHz-2472 MHz (Interval of 5 MHz 13ch)			
	IEEE 802.11n 20 MHz : D1D, G1D 2412 MHz-2472 MHz			
	IEEE 802.11n 40 MHz : D1D, G1D 2422 MHz-2462 MHz			
Declared Rated Power	IEEE 802.11b	4.82	mW/MHz	6.83 dBm/MHz
	IEEE 802.11g	2.55	mW/ MHz	4.07 dBm/MHz
	IEEE 802.11n 20 MHz	4.71	mW/MHz	6.73 dBm/MHz
	IEEE 802.11n 40 MHz	2.30	mW/MHz	3.62 dBm/MHz
E.I.R.P	IEEE 802.11b	11.83 dBm/MHz		
	IEEE 802.11g	9.07 dBm/MHz		
	IEEE 802.11n 20 MHz	11.73 dBm/MHz		
	IEEE 802.11n 40 MHz	8.62 dBm/MHz		
Tested Circuit Insertion Loss	11 dB			
Frequency equal to the transmission rate of the modulation signal	IEEE 802.11b: 1.375 MHz			
Operate Temp. Range	-20 ~ +70 °C			
EUT Power Rating	DC 5 V			

Model difference description table :

Model	Interface	Antenna Type	Remark
WMU6204	USB Type-A	Dipole Antenna	---
WMU6205	4 Pin USB Wafer	Dipole Antenna	---
WMU6206	USB Type-A	PCB Antenna	---
WMU6207	4 Pin USB Wafer	PCB Antenna	---
WMU6202	Mini PCIe	Dipole Antenna	---
WMU6203	M.2 Key A+E	Dipole Antenna	---
WMU6208	Pin Wafer	Dipole Antenna	---
WMU6209	Pin Wafer	Dipole Antenna	---
WMU6210	Pin Wafer	PCB Antenna	---
WMU6211	Pin Wafer	PCB Antenna	---
WMI6201	USB Type-A	PCB Antenna	has outer casing

EUT Modify Description :

Modify Description: - Add a new antenna: (1) Trade Name: ARISTOTLE, Model Number: RFA-25-AP152R-70-180 (2) Trade Name: ARISTOTLE, Model Number: RFA-25-AP152R-70B360 - Change the applicant address. As the antenna gains of the new antennas are lower than the original ones. After the evaluation, retest of all test items is not required. The test data refer to the original report. Original Report : 2104JR18
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1.2. Summary of Test Result

Item	Result	Remark
Frequency Error	N/A	Note
Occupied Bandwidth	N/A	Note
Spread Bandwidth	N/A	Note
Spread factor	N/A	Note
Antenna Power Error	N/A	Note
Unwanted Emission Strength	N/A	Note
Secondarily Emitted Radio Wave Strength	N/A	Note
Carrier Sense	N/A	Note
Radio Interference Prevention Capability Measurement	N/A	Note

Note: The test data refer to the original report : 2104JR18.

Decision Rule

- ☒ Uncertainty is not included.
- ☐ Uncertainty is included.

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