

FCC TEST REPORT

Report No.....: AB25080021FW05

FCC ID.....: **2AXHE-A68800A-UUBA**

Applicant.....: Shenzhen MiaoMing Intelligent Technology Co.,Ltd

Address.....: 3rd Floor, Building 2, No. 1310, Kukeng Sightseeing Road, Kukeng Community, Guanlan Street, Longhua District, Shenzhen, Guangdong

Manufacturer.....: Shenzhen MiaoMing Intelligent Technology Co.,Ltd

Address.....: 3rd Floor, Building 2, No. 1310, Kukeng Sightseeing Road, Kukeng Community, Guanlan Street, Longhua District, Shenzhen, Guangdong

Product Name.....: Wireless Module

Trade Mark.....: /

Test Model.....: A68800A-UUBA

Additional Model(s).....: /

Standard.....: FCC 47 CFR §2.1091
KDB 447498 D01
IEEE C95.1

Date of Receipt.....: 2025.08.08

Date of Test Date.....: 2025.08.12-2025.09.26

Date of Issue.....: 2025.09.26

Test Result.....: Pass

Compiled by:
(Printed Name + Signature)

Huaijie Li

Huaijie Li

Supervised by:
(Printed Name + Signature)

David Huang

David Huang

Approved by:
(Printed Name + Signature)

Jay Liu

Jay Liu

Testing Laboratory Name.....: Aibo Standard Technology (Shenzhen) Co., Ltd.

Address.....: 101, Building B, Tuori New Energy Industrial Park, High-tech Park, Tianliao Community, Yutang Street, Guangming District, Shenzhen City, Guangdong Province, China

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FCC TEST REPORT

Test Report No.: AB25080021FW05	<u>2025.09.26</u> Date of issue
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EUT.....	: Wireless Module
Test Model.....	: A68800A-UUBA
Applicant.....	: Shenzhen MiaoMing Intelligent Technology Co.,Ltd
Address.....	: 3rd Floor, Building 2, No. 1310, Kukeng Sightseeing Road, Kukeng Community, Guanlan Street, Longhua District, Shenzhen, Guangdong
Manufacturer.....	: Shenzhen MiaoMing Intelligent Technology Co.,Ltd
Address.....	: 3rd Floor, Building 2, No. 1310, Kukeng Sightseeing Road, Kukeng Community, Guanlan Street, Longhua District, Shenzhen, Guangdong

Test Result	Positive
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The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

REPORT VERSION

Version No.	Issue Date	Description
01	2025.09.26	Initial Issue

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1. GENERAL INFORMATION

1.1. GENERAL DESCRIPTION OF EUT

Product Name:	Wireless Module
Trade Mark:	/
Test Model:	A68800A-UUBA
Additional Model(s):	/
Hardware Version:	A68800A-UUBA
Software Version:	/
Power Supply:	DC 3.3V
EUT Supports Function: (Provided by the customer)	2.4GHz ISM Bands,5GHz U-NII-1/3
Test Sample(s) Number:	AB25080021-01 (Engineer Sample)
Radio Specification Subject to this Report	
Frequency Range:	2402MHz~2480MHz
Modulation Type:	GFSK for Bluetooth (BT LE) GFSK, $\pi/4$ -DQPSK, 8-DPSK for Bluetooth (BDR/EDR)
Channel Spacing:	2MHz for Bluetooth (BT LE) 1MHz for Bluetooth(BDR/EDR)
Channel Number(s):	40 channels for Bluetooth (BT LE) 79 channels for Bluetooth (BDR/EDR)
Antenna Type:	Integral Antenna
Antenna Gain:	3.02dBi(Max.)
2.4G Wifi	
Radio Specification:	IEEE 802.11b/g/n/ax
Frequency Range:	2412MHz~2462MHz for IEEE 802.11b/g/n(HT20)/ax(HE20) 2422MHz~2452MHz for IEEE 802.11n(HT40)/ax(HE40)
Modulation Type:	IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g: OFDM (64-QAM, 16-QAM, QPSK, BPSK) IEEE 802.11n-HT20: OFDM (64-QAM, 16-QAM, QPSK, BPSK) IEEE 802.11n-HT40: OFDM (64-QAM, 16-QAM, QPSK, BPSK) IEEE 802.11ax-HE20: OFDM (1024-QAM,256-QAM,64-QAM, 16-QAM, QPSK, BPSK) IEEE 802.11ax-HE40: OFDM (1024-QAM,256-QAM,64-QAM, 16-QAM, QPSK, BPSK)
Channel Spacing:	5MHz
Channel Number(s):	11 Channels for IEEE 802.11b/g/n(HT20)/ax(HE20) 7 Channels for IEEE 802.11n(HT40)/ax(HE40)
Antenna Type:	Integral Antenna
Antenna Gain:	3.02dBi(Max.)
5.1G WIFI	
Frequency Range	5180MHz ~ 5250MHz

Channel Number	4 channels for 20MHz bandwidth(5180-5240MHz) 2 channels for 40MHz bandwidth(5190~5230MHz)
Modulation Type	802.11a/n/ac/ax: OFDM
Antenna gain	1.57dBi(Max)
5.8G WIFI	
Frequency Range	5745MHz ~ 5825MHz
Channel Number	5 channels for 20MHz bandwidth(5745-5825MHz) 2 channels for 40MHz bandwidth(5755~5795MHz)
Modulation Type	802.11a/n/ac/ax: OFDM
Antenna Description	Integral Antenna; 3.03dBi (Max)

1.2. DESCRIPTION OF SUPPORT EQUIPMENT

Description	Manufacturer	Model	Serial Number	Supplied by
Lenovo	Notebook	B470	WB05067151	Applicant
CH340T serial to TTL module	DOFLY	CH340T	/	Applicant

1.3. DESCRIPTION OF EXTERNAL I/O

I/O Port Description	Quantity	Cable
USB Port/USB Port	1	0.8m, unshielded

1.4. DESCRIPTION OF TEST FACILITY

Test Lab: Aibo Standard Technology (Shenzhen) Co., Ltd.

Address: 101, Building B, Tuori New Energy Industrial Park, High-tech Park, Tianliao Community, Yutang Street, Guangming District, Shenzhen City, Guangdong Province, China

Tel.: +(86) 0755 85250797

E-mail: Aibonorm@aibonorm.com

Website: www.Aibonorm.com

The test facility is recognized, certified, or accredited by the following organizations:

A2LA-Lab Certificate No.: 7514.01

Aibo Standard Technology (Shenzhen) Co., Ltd. has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

FCC Accredited Lab.

Designation Number: CN1411

Test Firm Registration Number: 567066

ISED Wireless Device Testing Laboratories

CAB identifier: CN0185

2. RF EXPOSURE EVALUATION

2.1 Limit

The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f ²)	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

f = frequency in MHz

Friis transmission formula: $P_d = (P_{out} * G) / (4 * \pi * r^2)$

Where

P_d = power density in mW/cm², P_{out} = output power to antenna in mW;

G = gain of antenna in linear scale, π = 3.1416;

R = distance between observation point and center of the radiator in cm

P_d is the limit of MPE, 1 mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

2.2 Evaluation Result

BR/EDR

Mode	Output power (EIRP) (dBm)	Output power (EIRP) (mW)	Power Density at R=20cm (mW/cm ²)	Limit (mW/cm ²)	Result
8DPSK	7.11	5.140	0.001023	1.0	PASS

BLE

Mode	Output power (EIRP) (dBm)	Output power (EIRP) (mW)	Power Density at R=20cm (mW/cm ²)	Limit (mW/cm ²)	Result
GFSK	6.89	4.887	0.000972	1.0	PASS

2.4G Wi-Fi

Mode	Output power (EIRP) (dBm)	Output power (EIRP) (mW)	Power Density at R=20cm (mW/cm ²)	Limit (mW/cm ²)	Result
802.11n20	8.72	7.447	0.001482	1.0	PASS

5.1G Wi-Fi

Mode	Output power (EIRP) (dBm)	Output power (EIRP) (mW)	Power Density at R=20cm (mW/cm ²)	Limit (mW/cm ²)	Result
802.11ac40	11.28	13.428	0.002671	1.0	PASS

5.8G Wi-Fi

Mode	Output power (EIRP) (dBm)	Output power (EIRP) (mW)	Power Density at R=20cm (mW/cm ²)	Limit (mW/cm ²)	Result
802.11ax40	13.76	23.768	0.004729	1.0	PASS

Results for transmit simultaneously

No.	Configurations	Maximum MPE Value mW/cm ²		Transmit simultaneously	Limits
1	BT+2.4GWi-Fi	0.001023	0.001482	0.002505	1
2	BT+5.8GWi-Fi	0.001023	0.004729	0.005752	1
3	2.4GWi-Fi+5.1GWi-Fi	0.001482	0.002671	0.004153	1
4	2.4GWi-Fi+5.8GWi-Fi	0.001482	0.004729	0.006211	1

At the transmit simultaneously calculation method is as follows:

$$\text{Transmit simultaneously MPE} = \sum \text{of MPE ratios}^2$$

$$\text{MPE ratios} = \text{Field strengths or power density} / \text{MPE limit at the test frequency}$$

So a SAR test is not required

*****THE END*****