RF Exposure Evaluation Report

Report No.:	2405U45453ED
Applicant:	M5Stack Technology Co., Ltd
Address:	5F, Tangwei Stock Commercial BuildingYouli Road, Bao'an District, Shenzhen,Guangdong,China
Product Name:	M5AtomS3R
Product Model:	AtomS3R
Multiple Models:	AtomS3R Lite, AtomS3R Cam, AtomS3R Ext
Trade Mark:	M5STACK
FCC ID:	2AN3WM5ATOMS3R
Standards:	47 CFR §1.1310 KDB 447498 D01 General RF Exposure Guidance v06
Test Date:	2024-07-11
Test Result:	Complied
Report Date:	2024-07-12

Reviewed by: Abel chen

Abel Chen
Project Engineer

Approved by: Jacob Kong

Jacob Kong
Manager

Prepared by:

World Alliance Testing & Certification (Shenzhen) Co., Ltd

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NVLAP TESTING NVLAP LAB CODE 600335-0

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Revision History

Version No.	Issued Date	Description
00	2024-07-12	*Original*

Contents

1 General Information

1.1 Client Information

Applicant:	M5Stack Technology Co., Ltd
Address:	5F, Tangwei Stock Commercial Building Youli Road, Bao'an District, Shenzhen, Guangdong, China
Manufacturer:	M5Stack Technology Co., Ltd
Address:	5F, Tangwei Stock Commercial Building Youli Road, Bao'an District, Shenzhen, Guangdong, China

1.2 Product Description of EUT

The EUT is Smart photo frame that contains 2.4G WLAN radios.

Sample Serial Number	2N9F-2 (assigned by WATC)
Sample Received Date	2024-06-20
Sample Status	Good Condition
Frequency Range	2.4G WLAN: 2412MHz - 2472MHz BLE1M/2M: 2402MHz - 2480MHz
Maximum Conducted Output Power	2.4G WLAN: 21.76dBm BLE1M/2M: 8.71dBm
Modulation Technology	2.4G WLAN: DSSS, OFDM BLE1M/2M: GFSK
Antenna Gain#	4.23dBi
Spatial Streams	SISO (1TX, 1RX)
Power Supply	DC 4.5~5.5V from type C port
Adapter Information	N/A
Modification	Sample No Modification by the test lab

1.3 Laboratory Location

World Alliance Testing & Certification (Shenzhen) Co., Ltd

No. 1002, East Block, Laobing Building, Xingye Road 3012, Xixiang street, Bao'an District, Shenzhen, Guangdong, People's Republic of China

Tel: +86-755-29691511, Email: qa@watc.com.cn

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 463912, the FCC Designation No. : CN5040.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0160.

2 RF Exposure Evaluation

2.1 Standard

According to §1.1310, radio frequency devices shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

According to KDB447498 D01 General RF Exposure Guidance v06:

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] • [√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm according to 5) in section 4.1 is applied to determine SAR test exclusion.

2.2 Result

Radio	Frequency (MHz)	Maximum Conducted Power including Tune-up Tolerance (dBm)	Min. test separation distance (mm)	Result (1-g SAR)	Exclusion Limit (1-g SAR)	Verdict
2.4G WLAN	2412-2472	15.0	5	9.8	3.0	Need SAR test
BLE	2402-2480	9.0	5	2.5	3.0	Pass

Note: The Maximum Conducted Power including Tune-up Tolerance was declared by manufacturer.

For BLE, no need standalone SAR test.

For 2.4G WLAN, need SAR test, please refer the SAR report: 2404U67808E-SA.

Result: Complied

---End of Report---