



# **TEST REPORT**

Applicant Name: M5Stack Technology Co., Ltd

Address: Block A10, Expo Bay South Coast, Fuhai Street, Bao'an District,

Shenzhen, China

Report Number: 2504T19882E-RF

FCC ID: 2AN3WM5STAMPLC

Test Standard (s)

47 CFR §1.1307& §2.1091

**Sample Description** 

Product Type: M5Stam PLC

Model No.: Stam PLC

Trade Mark:

MSSTACK

Date Received: 2025-05-08

Report Date: 2025-08-08

Test Result: The EUT complied with the standards above.

Prepared and Checked By:

Matt Liang

EMC Engineer

Approved By:

**Bob Liao** 

**EMC** Engineer

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Shenzhen Accurate Technology Co., Ltd.

Floor 1, KuMaKe Building, Dongzhou Community, Guangming Street, Guangming District, Shenzhen, Guangdong, China.

Tel: +86 755-26503290

Web: www.atc-lab.com

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## **DOCUMENT REVISION HISTORY**

Revision Number	Report Number	Description of Revision	Date of Revision	
Rev.00	2504T19882E-RF	Original Report	2025-08-08	

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#### **GENERAL INFORMATION**

### **Product Description for Equipment under Test (EUT)**

Product	M5Stam PLC
Tested Model	Stam PLC
Voltage Range <sup>#</sup>	DC 6-36V

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Frequency Range	BLE 1M/2M: 2402-2480MHz 2.4G Wi-Fi: 2412-2462MHz
Antenna Specification#	BLE 1M/2M & 2.4G Wi-Fi: 3.98dBi (It is provided by the applicant.)
Sample Serial Number	32J4-1 (Assigned by ATC, Shenzhen)
Sample/EUT Status	Good condition

### **Objective**

This test report is in accordance with Part 2-Subpart J, Part 15-Subparts C and Part 2-Subpart J, Radiofrequency Radiation Exposure of the Federal Communication Commission rules.

The tests were performed in order to determine compliance with FCC §2.1091 rules.

### **Test Facility**

The test site used by Shenzhen Accurate Technology Co., Ltd. to collect test data is located on the Floor 1, KuMaKe Building, Dongzhou Community, Guangming Street, Guangming District, Shenzhen, Guangdong, China.

Accredited by American Association for Laboratory Accreditation (A2LA). The Certificate Number is 4297.01.

#### RF EXPOSURE

#### **Applicable Standard**

According to subpart 2.1091 systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to RF energy level in excess of the communication guidelines.

Limits for General Population/Uncontrolled Exposure

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Limits for General Population/Uncontrolled Exposure					
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Averaging Time (Minutes)	
0.3-1.34	614	1.63	*(100)	30	
1.34-30	824/f	2.19/f	*(180/f <sup>2</sup> )	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

#### Result

#### **Calculated Formulary:**

Predication of MPE limit at a given distance

$$S = \frac{PG}{4\pi R^2}$$

S = power density (in appropriate units, e.g. mW/cm2)

P = power input to the antenna (in appropriate units, e.g., mW).

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain.

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

Mode	Frequency	Antenna Gain <sup>#</sup>		Tune up conducted power#		Evaluation Distance	Power Density	MPE Limit
	(MHz)	(dBi)	(numeric)	(dBm)	(mW)	(cm)	(mW/cm <sup>2</sup> )	(mW/cm²)
BLE	2402	3.98	2.50	8.50	7.079	20	0.0035	1.0
2.4G Wi-Fi	2412	3.98	2.50	24.50	281.838	20	0.140	1.0

Note 1: The tune-up power and antenna gain are declared by the applicant.

Note 2: The BLE and WIFI can't transmission simultaneously.

To maintain compliance with the FCC's RF exposure guidelines, place the equipment at least 20cm from nearby persons.

**Result: Compliance** 

<sup>\* =</sup> Plane-wave equivalent power density

\*\*\*\*\* END OF REPORT \*\*\*\*\*