MPE TEST REPORT

Applicant	Shanghai Sunmi Technology Co.,Ltd.
FCC ID	2AH25T1710
Product	POS system
Brand	SUNMI
Model	T1710
Report No.	R1911A0659-M1V1
Issue Date	January 3, 2020

TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC 47 CFR Part 1 1.1310**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Yu Wang

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1 Test Laboratory

1.1 Notes of the Test Report

This report shall not be reproduced in full or partial, without the written approval of **TA technology (shanghai) co., Ltd.**The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein .Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

1.2 Testing Location

Company:	TA Technology (Shanghai) Co., Ltd.
Address:	No.145, Jintang Rd, Tangzhen Industry Park, Pudong Shanghai, China
City:	Shanghai
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1.3 Laboratory Environment

Temperature	Min. = 18℃, Max. = 25 ℃
Relative humidity	Min. = 30%, Max. = 70%
Ground system resistance	< 0.5 Ω
Ambient noise is checked and found very low and in compliance with requirement of standards. Reflection of surrounding objects is minimized and in compliance with requirement of standards.	

2 Description of Equipment under Test

Client Information

Applicant	Shanghai Sunmi Technology Co.,Ltd.
Applicant address	Room 605, Block 7, KIC Plaza, No.388 Song Hu Road Yang Pu District, Shanghai, China
Manufacturer	Shanghai Sunmi Technology Co.,Ltd.
Manufacturer address	Room 605, Block 7, KIC Plaza, No.388 Song Hu Road Yang Pu District, Shanghai, China

General Technologies

Model	T1710
SN	DM02D99840035
Hardware Version	D2MMB60C
Software Version	V1.0.10
Date of Testing:	November 13, 2019~ November 29, 2019

Difference Configuration Statement		
Item	**Configure 1**	**Configure 2**
Adapter	CYZS36-240150	CYSE65-240250
HARDWARE	Sub pcb for scan cam	Sub pcb for printer
Other	The same	The same
Note: Customer declaration, two configures is the same, except for adapter. The detailed product change description please refers to the document which named *Product Change Description*. There are more than one Configure, each one should be applied throughout the compliance test respectively, however, only the worst case (Configure 2) will be recorded in this report.		

Note: This revised report (Report No.:R1911A0659-M1V1) supersedes and replaces the previously issued report (Report No.:R1911A0659-M1). Please discard or destroy the previously issued report and dispose of it accordingly.

3 Maximum conducted output power (measured) and antenna Gain

The numeric gain (G) of the antenna with a gain specified in dB is determined by
Numeric gain (G)=10^(antenna gain/10)

Band	Maximum Conducted Output Power		Antenna Gain (dBi)	Numeric gain
	(dBm)	(mW)		
2.4G	18.50	70.795	1.91	1.552
Bluetooth (Low Energy)	9.00	7.943	1.91	1.552
Bluetooth	9.00	7.943	1.91	1.552

4 Test Result

According to section 1.1310 of FCC 47 CFR Part 1, limits for maximum permissible exposure (MPE) are as following

TABLE 1 – LIMITS FOR MAXIMUN PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm2)	Averaging Time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3-30	1842/f	4.89/f	*(900/f2)	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/f2)	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
* = Plane-wave equivalent power density

Note1. Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational / controlled limits apply provided he or she is made aware of the potential for exposure.

Note2: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

The maximum permissible exposure for 1500~100,000MHz is 1.0.So

Band	The maximum permissible exposure
Wi-Fi 2.4G	1.0mW/cm^2
Bluetooth (Low Energy)	1.0mW/cm^2
Bluetooth	1.0mW/cm^2

RF Exposure Calculations:

The following information provides the minimum separation distance for the highest gain antenna provided. This calculation is based on the conducted power, considering maximum power and antenna gain. The formula shown in KDB 447498 D01 is used in the calculation.

Equation from KDB 447498 D01 General RF Exposure Guidance v06 (10/23/2015) is:

$$S = PG / 4\prod R^2$$

Where: S = power density (in appropriate units, e.g. mW/cm^2)

P = Time-average maximum tune up procedure (in appropriate units, e.g., mW)

G = the numeric gain of the antenna

R = distance to the center of radiation of the antenna (20 cm = limit for MPE)

Band	PG (mW)	Test Result (mW/cm^2)	Limit Value (mW/cm^2)	Conclusion
Wi-Fi 2.4G	109.901	0.022	1.000	Pass
Bluetooth (Low Energy)	12.331	0.002	1.000	Pass
Bluetooth	12.331	0.002	1.000	Pass
Note: **R** = 20cm ∏= 3.1416				

BT antenna and Wi-Fi 2.4G antenna can't transmit simultaneously.

Note: For transmitters, minimum separation distance is 20cm, even if calculations indicate MPE distance is less.