

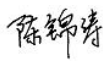




# TEST REPORT

Report Number: I22I30019-SAR01-V01

Applicant	Shanghai Sunmi Technology Co.,Ltd.
Product Name	POS System
Model Name	L3516
Brand Name	SUNMI
FCC ID	2AH25D22ND

Industrial Internet Innovation Center (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in FCC 47 CFR Part 2 2.1091.

Prepared by		Reviewed by	
Approved by		Issue Date	2022-03-18

**Industrial Internet Innovation Center (Shanghai) Co., Ltd.**



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11. After confirmation with the customer, the Max power and antenna gain information provided by the customer may affect the validity of the measurement results in this report, and the customer shall bear the impact and consequences.

### **Test Laboratory:**

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### Revision Version

Report Number	Revision	Date	Memo
I22I30019-SAR01-V00	00	2022-03-10	Initial creation of test report
I22I30019-SAR01-V01	01	2022-03-18	Update the FCC Number



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## 1. Test Laboratory

### 1.1. Testing Location

Primary Lab:

Company Name	Industrial Internet Innovation Center (Shanghai) Co., Ltd.
Address	Building 4, No. 766 Jingang Rd, Pudong, Shanghai, China
FCC Registration No.	958356
FCC Designation No.	CN1177

### 1.2. Testing Environment

Normal Temperature	18°C~25°C
Relative Humidity	25%RH~75%RH

### 1.3. Project Information

Project Leader	Wang Wenwen
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## 2. Client Information

### 2.1. Applicant Information

Company Name	Shanghai Sunmi Technology Co.,Ltd.
Address	Room 505, KIC Plaza, No.388 Song Hu Road, Yang Pu District, Shanghai, China
Telephone	+86 18501703215

### 2.2. Manufacturer Information

Company Name	Shanghai Sunmi Technology Co.,Ltd.
Address	Room 505, KIC Plaza, No.388 Song Hu Road, Yang Pu District, Shanghai, China
Telephone	+86 18501703215

### 3. Equipment under Test (EUT) and Ancillary Equipment (AE)

#### 3.1. About EUT

Product Name	POS System
Model name	L3516
Supported Radio Technology and Bands	BT4.2,BLE WLAN 802.11b,g,n
Hardware Version	Athens_MB_V1.1
Software Version	1.0.8 194
FCC ID	2AH25D22ND

Note: Photographs of EUT are shown in ANNEX A of this test report.

#### 3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version	Date of Receipt
N/A	N/A	N/A	N/A	N/A

\*EUT ID: is internally used to identify the test sample in the lab.

#### 3.3. Internal Identification of AE used during the test

AE ID*	Description	Model	SN/Remark
N/A	N/A	N/A	N/A

\*AE ID: is internally used to identify the test sample in the lab.

## 4. Reference Documents

### 4.1. Reference Documents for testing

The following documents listed in this section are referred for testing.

Reference	Title
FCC 47 CFR Part 2 2.1091	FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS. Section 2.1091 Radiofrequency radiation exposure evaluation: mobile devices

### 4.2. Criteria

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure. In accordance with the reference this device has been defined as a mobile device whereby a distance of 0.2m normally can be maintained between the user and the device.

Limits for Occupational / Controlled Exposure				
Frequency (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Times  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes)
0.3 – 3.0	614	1.63	(100)*	6
3.0 – 30	1824/f	4.89/f	(900/f)*	6
30 – 300	61.4	0.163	1	6
300 – 1500	--	--	F/300	6
1500 - 100000	--	--	5	6
Limits for General Population / Uncontrolled Exposure				
Frequency (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Times  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes)
0.3 – 1.34	614	1.63	(100)*	30
1.34 – 30	824/f	2.19/f	(180/f)*	30
30 – 300	27.5	0.073	0.2	30
300 – 1500	--	--	F/1500	30
1500 - 100000	--	--	1	30
Note: f = frequency in MHz; * Plane-wave equivalent power density. For the DUT, the limits for General Population / Uncontrolled Exposure are applicable.				





### 4.3. Reference Information from client

All technical documents are supplied by the client or manufacturer, which is the basis of testing. (such as antenna gain, etc.)

### 4.4. Calculation Method

For conservative evaluation consideration, only maximum power of each frequency band based on the tighter limits respectively are used to calculate the boundary power density.

Based on the FCC KDB 447498 D01 and 47 CFR §2.1091, the DUT is evaluated as a mobile device.

$$S = \frac{P \times G}{4\pi d^2}$$

Where

P = Power in Watts

G = Numeric antenna gain

d = Distance in meters

S = Power density in milliwatts / square centimeter

## 5. Test Summary

### 5.1. RF Power Output

Band	Max power(dBm)	Highest Output Power (dBm)	Antenna Gain(dBi)
WiFi 2.4G	16	16	1.78
BT	12.5	12.5	1.78
BLE	10	10	1.78

### 5.2. Duty Cycle

Mode	Duty Cycle
WiFi 2.4G	1:1
BT	1:1
BLE	1:1

### 5.3. Summary of Evaluation Results

Band	Frequency (MHz)	Highest Output Power (dBm)	Highest Output Power (mW)	Antenna Gain(dBi)	Numeric antenna gain	Power density at 20cm (mW/cm <sup>2</sup> )	Limit mW/cm <sup>2</sup>
WiFi 2.4G	2412	16	39.81	1.78	1.507	0.012	1.000
BT	2402	12.5	17.78	1.78	1.507	0.005	1.000
BLE	2402	10	10	1.78	1.507	0.003	1.000

The product is under the MPE limits.

### 5.4. Simultaneous Evaluation

Power density /Limit		$\Sigma$ (Power density /Limit) of
1	2	
WLAN	BT	1+2
0.012	0.005	0.017
Power density /Limit		$\Sigma$ (Power density /Limit) of
1	2	
WLAN	BLE	1+2
0.012	0.003	0.015
<p>Note:</p> <p>1. <math>\Sigma</math> (Power density /Limit) : This is a summation of [(Power density for each transmitter/antenna included in the simultaneous transmission)/ (corresponding MPE limit)], for Wi-Fi+BT.</p> <p>2. Considering the BT collocation with the Wi-Fi transmitter of the Highest output power performance listed in the table above, the aggregated (Power density /Limit) is smaller than1, and MPE collocated transmitters is compliant.</p>		



## 6. Statements

The L3516, manufactured by Shanghai Sunmi Technology Co.,Ltd. is a new product for testing.

Industrial Internet Innovation Center (Shanghai) Co., Ltd. has verified that the compliance of the tested device specified in section 3 of this test report is successfully evaluated according to the procedure and test methods as defined in type certification requirement listed in section 4 of this test report.

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