



FCC RF EXPOSURE REPORT

CERTIFICATION TEST REPORT

For

M2M Gateway

MODEL NUMBER: FPC-N64

FCC ID: 2AIVJ-FPCN64

REPORT NUMBER: 4789677522-5

ISSUE DATE: October 20, 2020

Prepared for

**SIERRA MONITOR CORP
1991 TAROB CT MILPITAS, CA 95035-6825 USA**

Prepared by

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Revision History

Rev.	Issue Date	Revisions	Revised By
V0	10/20/2020	Initial Issue	



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1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name: SIERRA MONITOR CORP
Address: 1991 TAROB CT MILPITAS, CA 95035-6825 USA

Manufacturer Information

Company Name: SIERRA MONITOR CORP
Address: 1991 TAROB CT MILPITAS, CA 95035-6825 USA

EUT Information

EUT Name: M2M Gateway
Model: FPC-N64
Brand: SMC
Sample Received Date: September 21, 2020
Sample Status: Normal
Sample ID: 3402283
Date of Tested: September 22, 2020~ September 25, 2020

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC 47CFR§2.1091	PASS

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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091.

3. FACILITIES AND ACCREDITATION

Accreditation Certificate	A2LA (Certificate No.: 4102.01) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with A2LA. FCC (FCC Designation No.: CN1187) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. Has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules ISED (Company No.: 21320) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been registered and fully described in a report filed with Industry Canada. The Company Number is 21320. VCCI (Registration No.: G-20019, R-20004, C-20012 and T-20011) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with VCCI, the Membership No. is 3793. Facility Name: Chamber D, the VCCI registration No. is G-20019 and R-20004 Shielding Room B, the VCCI registration No. is C-20012 and T-20011
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Note: All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China.



4. DESCRIPTION OF EUT

EUT Name	M2M Gateway	
Model	FPC-N64	
Product Description (Bluetooth – Low Energy)	Operation Frequency	2402 MHz ~ 2480 MHz
	Modulation Type	Data Rate
	GFSK	1 Mbps
Product Description (Bluetooth – BR & EDR)	Operation Frequency	2402 MHz ~ 2480 MHz
	Modulation Type	Data Rate
	GFSK	1 Mbps
	$\pi/4$ -DQPSK	2 Mbps
	8DPSK	3 Mbps

5. REQUIREMENT

LIMIT AND CALCULATION METHOD

Systems operating under the provisions of FCC 47 CFR section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as mobile device whereby a distance of 0.2m normally can be maintained between the user and the device, and below RF Permissible Exposure limit shall comply with.

Limits for General Population/Uncontrolled Exposure

RF EXPOSURE LIMIT

Frequency Range (MHz)	E-field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (Minutes)
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

CALCULATION METHOD

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

Where:

S=power density

P=power input to antenna

G=power gain of the antenna in the direction of interest relative to an isotropic radiator

R=distance to the center of radiation of the antenna



CALCULATED RESULTS

BLE Mode (Worst case)					
Frequency	Output Power	Output Power	Power Density	Power Density Limit	Test Result
MHz	dBm	mW	mW/cm ²	mW/cm ²	--
2480	6	3.98	0.00141	1.0	Complies

Note: 1. Antenna Gain=2.5dBi (Numeric 1.78), $\pi=3.141$.
2. The minimum separation distance of the device is greater than 20 cm.
3. Calculate by WORST-CASE mode.
4. Owing to the maximum Calculated Result is below the limit, so it deemed to comply with the basic restrictions without testing which means that no SAR is required.

END OF REPORT