RF EXPOSURE EVALUATION REPORT

APPLICANT	:	Fibocom Wireless Inc.
PRODUCT NAME	:	SC126-NA1
MODEL NAME	:	SC126-NA1
BRAND NAME	:	Fibocom
FCC ID	:	ZMOSC126NA1
STANDARD(S)	:	FCC 47CFR Part 2(2.1091)
RECEIPT DATE	:	2025-07-24
TEST DATE	:	2025-08-28
ISSUE DATE	:	2025-09-15

Edited by: Pang Siyu (Rapporteur)

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DIRECTORY

Change History		
Version	**Date**	**Reason for Change**
1.0	2025-09-15	First edition

1. Technical Information

Note: Provide by applicant.

1.1 Applicant and Manufacturer Information

Applicant:	Fibocom Wireless Inc.
Applicant Address:	1101, Tower A, Building 6, Shenzhen International Innovation Valley, Dashi 1st Rd, Nanshan, Shenzhen, China
Manufacturer:	Fibocom Wireless Inc.
Manufacturer Address:	1101, Tower A, Building 6, Shenzhen International Innovation Valley, Dashi 1st Rd, Nanshan, Shenzhen, China

1.2 Equipment under Test (EUT) Description

Product Name:	SC126-NA1
Serial No:	(N/A, marked #1 by test site)
Hardware Version:	V1.2
Software Version:	SC126-T6.020.100
Frequency Bands:	LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 17: 704 MHz ~ 716 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 71: 663 MHz ~ 698 MHz WLAN 2.4GHz: 2412 MHz ~ 2472 MHz WLAN 5.2GHz: 5180 MHz ~ 5240 MHz WLAN 5.3GHz: 5260 MHz ~ 5320 MHz WLAN 5.5GHz: 5500 MHz ~ 5700 MHz WLAN 5.8GHz: 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz
Modulation Mode:	LTE: QPSK, 16QAM 802.11b: DSSS 802.11a/g: OFDM

	802.11n-HT20/40: OFDM 802.11ac-VHT20/40/80: OFDM Bluetooth: GFSK, π/4-DQPSK, 8-DPSK Bluetooth LE: GFSK	
Antenna Type:	external rubber sleeve antenna	
Antenna Gain:	Wireless Mode	Antenna Gain (dBi)
	LTE Band 2	2.63
	LTE Band 4	1.89
	LTE Band 5	1.66
	LTE Band 7	1.52
	LTE Band 12	0.53
	LTE Band 13	0.94
	LTE Band 17	0.53
	LTE Band 25	2.63
	LTE Band 26	1.66
	LTE Band 41	1.83
	LTE Band 66	1.94
	LTE Band 71	-0.06
	WLAN 2.4GHz	3.36
	WLAN 5.2GHz	4.29
	WLAN 5.3GHz	4.43
	WLAN 5.5GHz	3.68
	WLAN 5.8GHz	1.47
	Bluetooth	3.36

Note: The declarations of EUT presented in the report are provided by applicant and/or manufacturer, and the test laboratory is not responsible for the accuracy of the information.

1.3 Applied Reference Documents

Leading reference documents for testing:

Identity	Document Title	Remark
FCC 47CFR Part 2(2.1091)	Radio Frequency Radiation Exposure Assessment: mobile devices	/
KDB 447498 D01v06	General RF Exposure Guidance	/
Note: Any additions, deviation, or exclusions from the method shall be noted in the “Remark”.		

2. Device Category and RF Exposure Limit

Per user manual, Based on 47CFR 2.1091, this device belongs to mobile device category with General Population/Uncontrolled exposure.

Mobile Devices:

47CFR 2.1091(b)

For purposes of this section, a mobile device is defined as a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that a separation distance of at least 20 centimeters is normally maintained between the transmitter's radiating structure(s) and the body of the user or nearby persons. In this context, the term “fixed location” means that the device is physically secured at one location and is not able to be easily moved to another location. Transmitting devices designed to be used by consumers or workers that can be easily re-located, such as wireless devices associated with a personal computer, are considered to be mobile devices if they meet the 20 centimeter separation requirement.

General Population/Uncontrolled Exposure:

The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity. Warning labels placed on low-power consumer devices such as cellular telephones are not considered sufficient to allow the device to be considered under the occupational/controlled category, and the general population/uncontrolled exposure limits apply to these devices.

Table 1—Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*($180/f^2$)	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

3. Maximum Average Power Summary

➢ **Maximum Average Power**

Wireless Mode	Channel	Frequency (MHz)	Max. Average Power (dBm)	Tune-up Limit (dBm)
LTE Band 2	18900	1880	23.18	25.00
LTE Band 4	20175	1732.5	23.24	25.00
LTE Band 5	20525	836.5	23.52	25.00
LTE Band 7	21100	2535	23.2	25.00
LTE Band 12	23095	707.5	23.52	25.00
LTE Band 13	23230	782	23.53	25.00
LTE Band 17	23790	710	23.61	25.00
LTE Band 25	26365	1882.5	23.27	25.00
LTE Band 26	26865	831.5	23.58	25.00
LTE Band 41	40620	2593	23.26	25.00
LTE Band 66	132322	1745	23.18	25.00
LTE Band 71	133322	683	23.42	25.00
WLAN 2.4GHz	13	2472	16.59	17.50
WLAN 5.2GHz	48	5240	15.15	16.00
WLAN 5.3GHz	60	5300	15.54	16.50
WLAN 5.5GHz	100	5500	14.99	15.50
WLAN 5.8GHz	165	5825	14.43	15.00
Bluetooth	78	2480	10.96	12.00

Note：

1. The output power of WLAN and Bluetooth is derived from the report SZ25070305W01/02/03/04.
2. The output power of WWAN is derived from the annex B.

4. RF Exposure Assessment

➢ **Standalone Transmission Assessment:**

Bands	Frequency (MHz)	Tune-up Limit (dBm)	Antenna Gain (dBi)	EIRP (mW)	Power Density (mW/cm²)	Limit for MPE (mW/cm²)
LTE Band 2	1880	25.00	2.63	579.43	0.115	1.0
LTE Band 4	1732.5	25.00	1.89	488.65	0.097	1.0
LTE Band 5	836.5	25.00	1.66	463.45	0.092	0.558
LTE Band 7	2535	25.00	1.52	448.75	0.089	1.0
LTE Band 12	707.5	25.00	0.53	357.27	0.071	0.472
LTE Band 13	782	25.00	0.94	392.64	0.078	0.521
LTE Band 17	710	25.00	0.53	357.27	0.071	0.473
LTE Band 25	1882.5	25.00	2.63	579.43	0.115	1.0
LTE Band 26	831.5	25.00	1.66	463.45	0.092	0.554
LTE Band 41	2593	25.00	1.83	481.95	0.096	1.0
LTE Band 66	1745	25.00	1.94	494.31	0.098	1.0
LTE Band 71	683	25.00	-0.06	311.89	0.062	0.455
WLAN 2.4GHz	2472	17.50	3.36	121.90	0.024	1.0
WLAN 5.2GHz	5240	16.00	4.29	106.91	0.021	1.0
WLAN 5.3GHz	5300	16.50	4.43	123.88	0.025	1.0
WLAN 5.5GHz	5500	15.50	3.68	82.79	0.016	1.0
WLAN 5.8GHz	5825	15.00	1.47	44.36	0.009	1.0
Bluetooth	2480	12.00	3.36	34.36	0.007	1.0

Note:

1. According to KDB 447498, SAR test exclusion conditions are based on source-based time-averaged maximum conducted output power of the RF channel requiring assessment, adjusted for tune-up tolerance, and the minimum test separation distance required for the exposure conditions.
2. MPE calculate method

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

Where: EIRP = P+G (mW)

P = Output Power (dBm)

G = Antenna Gain (dBi)

R = Separation Distance (20cm)

➢ **Simultaneous Transmission Assessment:**

Multi-Band Simultaneous Transmission Consideration

Simultaneous Transmission Consideration	Applicable Combination
	WWAN + WLAN 2.4GHz + Bluetooth
	WWAN + WLAN 5GHz + Bluetooth

1. This device contains transmitters that may operate simultaneously, therefore simultaneous transmission analysis is required.
2. The worst condition for WWAN & WLAN & Bluetooth will be calculated for transmitting simultaneously.

   Formula: TER = Power density$_1$/ limit$_1$ + Power density$_2$/ limit$_2$ + Power density$_3$/ limit$_3$≤1.

Transmission Bands	Power Density (mW/cm²)	Limit	Total Exposure Ratio
WWAN	0.092	0.554	0.197
WLAN 2.4GHz	0.024	1.0	
Bluetooth	0.007	1.0	

Transmission Bands	Power Density (mW/cm²)	Limit	Total Exposure Ratio
WWAN	0.092	0.554	0.198
WLAN 5GHz	0.025	1.0	
Bluetooth	0.007	1.0	

➢ **Conclusion:**

According to 47 CFR §2.1091, this device complies with human exposure basic restrictions.

Annex A General Information

1. Identification of the Responsible Testing Laboratory

Laboratory Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Laboratory Address:	FL.1-3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China
Telephone:	+86 755 36698555
Facsimile:	+86 755 36698525

2. Identification of the Responsible Testing Location

Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Address:	FL.1-3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China

3. Facilities and Accreditations

The FCC designation number is CN1192, the test firm registration number is 226174.

END OF REPORT