

**SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch**

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR250500193302

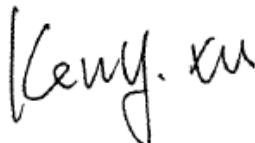
Page: 1 of 8

**TEST REPORT**

<b>Application No.:</b>	SZCR2505001933MO
<b>Applicant:</b>	Fibocom Wireless Inc.
<b>Address of Applicant:</b>	1101, Tower A, Building 6, Shenzhen International Innovation Valley, Dashi 1st Rd, Nanshan, Shenzhen, China.
<b>Manufacturer:</b>	Fibocom Wireless Inc.
<b>Address of Manufacturer:</b>	1101, Tower A, Building 6, Shenzhen International Innovation Valley, Dashi 1st Rd, Nanshan, Shenzhen, China.
<b>EUT Description:</b>	LTE CatM1&NB-IoT&EGPRS Module
<b>Model No.:</b>	MA510-GL
<b>Trade Mark:</b>	Fibocom
<b>FCC ID:</b>	ZMOMA510GL
<b>Standards:</b>	FCC 47 CFR Part 2.1091 FCC KDB 447498 D01 v06
<b>Date of Receipt:</b>	2025/05/18
<b>Date of Issue:</b>	2025/06/16

<b>Test Result:</b>	<b>PASS*</b>
---------------------	--------------

\* In the configuration tested, the EUT complied with the standards specified above.



Keny Xu

EMC Laboratory Manager



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /Inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN\\_Doccheck@sgs.com](mailto:CN_Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch Testing Center, L2C Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 [www.sgsgroup.com.cn](http://www.sgsgroup.com.cn)  
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编:518057 t (86-755) 26012053 f (86-755) 26710594 [sgs.china@sgs.com](mailto:sgs.china@sgs.com)

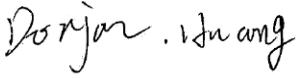
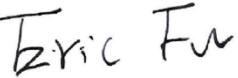
## SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR250500193302

Page: 2 of 8

Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2025/06/16		Original

Authorized for issue by:			
			
		Donjon Huang/Project Engineer	
			
		Eric Fu/Reviewer	



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch is a member of SGS Laboratory.

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 [www.sgsgroup.com.cn](http://www.sgsgroup.com.cn)  
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编:518057 t (86-755) 26012053 f (86-755) 26710594 [sgs.china@sgs.com](mailto:sgs.china@sgs.com)

## 2 Contents

1	Cover Page .....	1
2	Contents .....	3
3	General Information.....	4
3.1	General Description of EUT .....	4
3.2	Test Location .....	6
3.3	Test Facility .....	6
4	RF Exposure Evaluation .....	7
4.1	RF Exposure Compliance Requirement.....	7
4.1.1	Limits.....	7
4.1.2	Test Procedure .....	8
4.1.3	EUT RF Exposure Evaluation.....	8



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch is an ISO/IEC 17025 Laboratory.

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 [www.sgsgroup.com.cn](http://www.sgsgroup.com.cn)  
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编:518057 t (86-755) 26012053 f (86-755) 26710594 [sgs.china@sgs.com](mailto:sgs.china@sgs.com)

### 3 General Information

#### 3.1 General Description of EUT

EUT Description:	LTE CatM1&NB-IoT&EGPRS Module
Model No.:	MA510-GL
Trade Mark:	Fibocom
Hardware Version:	V1.0.3
Software Version:	69400.1000.00.00.00.32
Antenna Type:	<input checked="" type="checkbox"/> External, <input type="checkbox"/> Integrated
Antenna Gain:	GSM 850: -1.0dBi; GSM1900: 0.9dBi; LTE NB1 Band 2: 0.9dBi; LTE NB1 Band 4: 1.6dBi; LTE NB1 Band 5: -1.0dBi; LTE NB1 Band 12: -1.4dBi; LTE NB1 Band 13: -0.7dBi; LTE NB1 Band 25: 0.9dBi; LTE NB1 Band 26 ( 814-824 ) : -1.0dBi; LTE NB1 Band 26 ( 824-849 ) : -1.0dBi; LTE NB1 Band 66: 1.6dBi; LTE NB1 Band 71: -1.5dBi; LTE NB1 Band 85: -0.7dBi; LTE CatM1 Band 2: 0.9dBi; LTE CatM1 Band 4: 1.6dBi; LTE CatM1 Band 5: -1.0dBi; LTE CatM1 Band 12: -1.4dBi; LTE CatM1 Band 13: -0.7dBi; LTE CatM1 Band 14: -0.7dBi; LTE CatM1 Band 25: 0.9dBi; LTE CatM1 Band 26 ( 814-824 ) : -1.0dBi; LTE CatM1 Band 26 ( 824-849 ) : -1.0dBi; LTE CatM1 Band 66: 1.6dBi; LTE CatM1 Band 85: -0.7dBi;
Note:	The antenna gain are derived from the gain information report provided by the manufacturer.
Remark:	



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 [www.sgsgroup.com.cn](http://www.sgsgroup.com.cn)

中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编:518057 t (86-755) 26012053 f (86-755) 26710594 [sgs.china@sgs.com](mailto:sgs.china@sgs.com)



## SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR250500193302

Page: 5 of 8

As above information is provided and confirmed by the applicant. SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)  
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 [www.sgsgroup.com.cn](http://www.sgsgroup.com.cn)  
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编:518057 t (86-755) 26012053 f (86-755) 26710594 [sgs.china@sgs.com](mailto:sgs.china@sgs.com)

### 3.2 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China. 518057.

Tel: +86 755 2601 2053      Fax: +86 755 2671 0594

No tests were sub-contracted.

### 3.3 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **A2LA (Certificate No. 3816.01)**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

- **VCCI (Member No. 1937)**

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd.

Shenzhen EMC laboratory have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

- **FCC –Designation Number: CN1336**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1336. Test Firm Registration Number: 787754.

- **Innovation, Science and Economic Development Canada**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /Inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)



No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057      t (86-755) 26012053      f (86-755) 26710594      [www.sgsgroup.com.cn](http://www.sgsgroup.com.cn)  
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编:518057      t (86-755) 26012053      f (86-755) 26710594      [sgs.china@sgs.com](mailto:sgs.china@sgs.com)

## 4 RF Exposure Evaluation

### 4.1 RF Exposure Compliance Requirement

#### 4.1.1 Limits

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
<b>(A) Limits for Occupational/Controlled Exposures</b>				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f <sup>2</sup> )	6
30-300	61.4	0.163	1.0	6
300-1500	/	/	f/300	6
1500-100,000	/	/	5	6
<b>(B) Limits for General Population/Uncontrolled Exposure</b>				
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

\*=Plane-wave equivalent power density

RF exposure compliance will need to be determined with respect to 1.1307(c) and (d) of the FCC rules. The emissions should be within the limits at 300kHz in Table 1 of 1.1310(use the 300kHz limits for 150kHz:614V/m,1.63A/m).

Friis Formula

Friis transmission formula:  $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2)$

Where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = output power to antenna in mW

$G$  = gain of antenna in linear scale

$\pi$  = 3.1416

$R$  = distance between observation point and center of the radiator in cm

$P_d$  is the limit of MPE, 1 mW/cm<sup>2</sup>. If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance  $r$  where the MPE limit is reached.



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)  
 No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 [www.sgsgroup.com.cn](http://www.sgsgroup.com.cn)  
 中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编:518057 t (86-755) 26012053 f (86-755) 26710594 [sgs.china@sgs.com](mailto:sgs.china@sgs.com)

**4.1.2 Test Procedure**

Software provided by client enabled the EUT to transmit data at lowest, middle and highest channel individually

**4.1.3 EUT RF Exposure Evaluation**

Output Power Into Antenna & RF Exposure Evaluation Distance:

This confirmed that the device comply with MPE limit.

Operating Band	Frequency (MHz)	Antenna Gain (dBi)	Max Conducted Power (dBm)	EIRP(ERP) (dBm)	EIRP(ERP) Limit (dBm)	Power Density at R = 20 cm (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	Gain according to EIRP(ERP) (dBi)	Gain according to Pd (dBi)	Max Gain Allowed (dBi)	Conclusion
GSM850	824.20	-1.00	23.31	20.16	38.45	0.0041	0.5495	17.29	20.29	17.29	Pass
GSM1900	1850.20	0.90	20.81	21.71	33.00	0.0036	1.0000	12.19	25.39	12.19	Pass
LTE NB1 Band 2	1850.10	0.90	22.00	22.90	33.00	0.0388	1.0000	11.00	15.01	11.00	Pass
LTE NB1 Band 4	1710.10	1.60	22.00	23.60	30.00	0.0456	1.0000	8.00	15.01	8.00	Pass
LTE NB1 Band 5	824.10	-1.00	22.00	18.85	38.45	0.0250	0.5494	18.60	12.41	12.41	Pass
LTE NB1 Band 12	699.10	-1.40	22.00	18.45	34.77	0.0228	0.4661	14.92	11.69	11.69	Pass
LTE NB1 Band 13	777.10	-0.70	22.00	19.15	34.77	0.0268	0.5181	14.92	12.15	12.15	Pass
LTE NB1 Band 25	1850.10	1.60	22.00	23.60	33.00	0.0456	1.0000	11.00	15.01	11.00	Pass
LTE NB1 Band 26 (814-823.9)	814.20	-1.00	22.00	18.85	NA	0.0250	0.5428	NA	12.35	12.35	Pass
LTE NB1 Band 26 (824-849)	824.10	-1.00	22.00	18.85	38.45	0.0250	0.5494	18.60	12.41	12.41	Pass
LTE NB1 Band 66	1710.10	1.60	22.00	23.60	30.00	0.0456	1.0000	8.00	15.01	8.00	Pass
LTE NB1 Band 71	663.10	-1.50	22.00	18.35	34.77	0.0223	0.4421	14.92	11.46	11.46	Pass
LTE NB1 Band 85	698.10	-0.70	22.00	19.15	34.77	0.0268	0.4654	14.92	11.69	11.69	Pass
LTE CatM1 Band 2	1850.70	0.90	22.00	22.90	33.00	0.0388	1.0000	11.00	15.01	11.00	Pass
LTE CatM1 Band 4	1710.70	1.60	22.00	23.60	30.00	0.0456	1.0000	8.00	15.01	8.00	Pass
LTE CatM1 Band 5	824.70	-1.00	22.00	18.85	38.45	0.0250	0.5498	18.60	12.41	12.41	Pass
LTE CatM1 Band 12	699.70	-1.40	22.00	18.45	34.77	0.0228	0.4665	14.92	11.70	11.70	Pass
LTE CatM1 Band 13	779.50	-0.70	22.00	19.15	34.77	0.0268	0.5197	14.92	12.16	12.16	Pass
LTE CatM1 Band 14	790.50	-0.70	22.00	19.15	34.77	0.0268	0.5270	14.92	12.23	12.23	Pass
LTE CatM1 Band 25	1850.70	0.90	22.00	22.90	33.00	0.0388	1.0000	11.00	15.01	11.00	Pass
LTE CatM1 Band 26 (814-824)	814.70	-1.00	22.00	18.85	50.00	0.0250	0.5431	30.15	12.36	12.36	Pass
LTE CatM1 Band 26 (824-849)	824.70	-1.00	22.00	18.85	38.45	0.0250	0.5498	18.60	12.41	12.41	Pass
LTE CatM1 Band 66	1710.70	1.60	22.00	23.60	30.00	0.0456	1.0000	8.00	15.01	8.00	Pass
LTE CatM1 Band 85	700.50	-0.70	22.00	19.15	34.77	0.0268	0.4670	14.92	11.70	11.70	Pass

Remark: Frame-average power=Burst power+ Division Factors(-9.19)

---End of Report---

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)



No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 [www.sgsgroup.com.cn](http://www.sgsgroup.com.cn)

中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编:518057 t (86-755) 26012053 f (86-755) 26710594 [sgs.china@sgs.com](mailto:sgs.china@sgs.com)