

Report No.: SEWM2309000364RG05

Rev.: 01

Page: 1 of 10

# TEST REPORT

**Application No.:** SEWM2309000364RG  
**Applicant:** Fibocom Wireless Inc.  
**Address of Applicant:** 1101, Tower A, Building 6, Shenzhen International Innovation Valley, Dashi 1st Rd, Nanshan, Shenzhen, China  
**Manufacturer:** Fibocom Wireless Inc.  
**Address of Manufacturer:** 1101, Tower A, Building 6, Shenzhen International Innovation Valley, Dashi 1st Rd, Nanshan, Shenzhen, China  
**EUT Description:** 5G Module  
**Model No.:** FM160-NA  
**Trade Mark:** Fibocom  
**FCC ID:** ZMOFM160NA  
**Standards:** 47 CFR Part 96.47  
**Date of Receipt:** 2022/03/15 (for report KSCR220500074001)  
2022/07/08 (for report FG220711003)  
2023/09/12 (for report SEWM2309000364RG05)  
**Date of Test:** 2022/05/12 to 2022/05/13 (for report KSCR220500074001)  
2022/07/14 to 2022/07/18 (for report FG220711003)  
**Date of Issue:** 2023/10/08

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

\* In the configuration tested, the EUT detailed in this report complied with the standards specified above.

Authorized Signature:

Well Wei

Well Wei  
Wireless 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 <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. 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**

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000  
中国·苏州·中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南面 邮编: 215000

t (86-512) 62992980 www.sgsgroup.com.cn  
t (86-512) 62992980 sgs.china@sgs.com


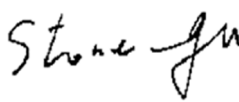
Report No.: SEWM2309000364RG05

Rev.: 01

Page: 2 of 10

## 1 Version

| Revision Record |         |            |          |          |
|-----------------|---------|------------|----------|----------|
| Version         | Chapter | Date       | Modifier | Remark   |
| 01              |         | 2023/10/08 |          | Original |

|             |  |
|-------------|--|
| Prepared By | <br>(Levi Li) / Test Engineer |
| Checked By  | <br>(Stone Gu) / 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 <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. 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)

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000  
中国·苏州·中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编: 215000

t (86-512) 62992980 www.sgsgroup.com.cn  
t (86-512) 62992980 sgs.china@sgs.com

Report No.: SEWM2309000364RG05

Rev.: 01

Page: 3 of 10

## Contents

|     |   |    |
|-----|---|----|
| 1   | Version .....                               | 2  |
| 2   | Test Summary .....                          | 4  |
| 3   | General Information .....                   | 5  |
| 3.1 | Details of Client .....                     | 5  |
| 3.2 | Test Location .....                         | 5  |
| 3.3 | Test Facility .....                         | 5  |
| 3.4 | General Description of EUT .....            | 6  |
| 3.5 | Test Environment .....                      | 7  |
| 3.6 | Description of Support Units .....          | 7  |
| 4   | Description of Tests .....                  | 8  |
| 4.1 | End User Device additional requiement ..... | 8  |
| 5   | Main Test Instruments .....                 | 10 |
| 6   | Measurement Uncertainty .....               | 10 |
| 7   | Appendixes .....                            | 10 |



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 <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. 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**

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000  
中国·苏州·中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编: 215000

t (86-512) 62992980 www.sgsgroup.com.cn  
t (86-512) 62992980 sgs.china@sgs.com

Report No.: SEWM2309000364RG05

Rev.: 01

Page: 4 of 10

## 2 Test Summary

| Test Item                                 | FCC Rule No. | Test Result | Verdict  |
|---|--------------|-------------|--|
| End User Device<br>additional requiemment | §96.47       | Clause 4.1  | Reference report<br>KSCR220500074001<br>&<br>FG220711003 |

### Remark:

This test report (Report No.: SEWM2309000364RG05 issue on 2023/10/08) is based on the original test report (Report No.: KSCR220500074001 issue by Compliance Certification Services (Kunshan) Inc. on 2022/05/13 and FG220711003 issue by Sporton International (USA) Inc. on 2022/07/20).

Review this report and original report, this report just changing the parts according to the declaration letter from client.

Therefore in this report all items do not need to retest and all test data please refer to the test report with report number KSCR220500074001 issue by Compliance Certification Services (Kunshan) Inc. on 2022/05/13 and FG220711003 issue by Sporton International (USA) Inc. on 2022/07/20.



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 <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. 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**

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000  
中国·苏州·中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编: 215000

t (86-512) 62992980 www.sgsgroup.com.cn  
t (86-512) 62992980 sgs.china@sgs.com

Report No.: SEWM2309000364RG05

Rev.: 01

Page: 5 of 10

### 3 General Information

#### 3.1 Details of Client

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

#### 3.2 Test Location

|            |  |
|------------|--|
| Company:   | SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.   |
| Address:   | South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone |
| Post code: | 215000   |

#### 3.3 Test Facility

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

• **A2LA (Certificate No. 6336.01)**

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 6336.01.

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

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0120.

IC#: 27594.

• **FCC –Designation Number: CN1312**

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. has been recognized as an accredited testing laboratory.

Designation Number: CN1312.

Test Firm Registration Number: 717327



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 <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. 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)

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000  
中国·苏州·中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南面 邮编: 215000

t (86-512) 62992980 [www.sgsgroup.com.cn](http://www.sgsgroup.com.cn)  
t (86-512) 62992980 [sgs.china@sgs.com](mailto:sgs.china@sgs.com)

Report No.: SEWM2309000364RG05

Rev.: 01

Page: 6 of 10

### 3.4 General Description of EUT

|   |  |
|---|--|
| EUT Description:  | 5G Module  |
| Model No.:  | FM160-NA   |
| Trade Mark:   | Fibocom  |
| Hardware Version:   | V1.1   |
| Software Version:   | 89610.1000.00.02.02.12   |
| Power Supply:   | DC 3.8V  |
| Antenna Type:   | Monopole   |
| Transmitter Frequency Band:   | LTE Band 48<br>NR Band n48   |
| Transmitter Frequency Range:  | 3550 to 3700 MHz<br>3570 to 3590 MHz   |
| Antenna Gain:   | LTE Band 48: -0.13dBi(Ant0)  |
|   | NR Band n48: -0.13dBi(Ant0); -0.13dBi(Ant3)  |
|   | Note:<br>The antenna gain are derived from the gain information report provided by the manufacturer. |
| <b>Remark:</b><br>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 <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. 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**

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000  
中国·苏州·中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南面 邮编: 215000

t (86-512) 62992980 www.sgsgroup.com.cn  
t (86-512) 62992980 sgs.china@sgs.com



Report No.: SEWM2309000364RG05

Rev.: 01

Page: 7 of 10

### 3.5 Test Environment

| Environment Parameter   | Selected Values During Tests |            |
|---|------------------------------|------------|
| Relative Humidity   | 48.8~65 % RH Ambient         |            |
| Value   | Temperature(°C)              | Voltage(V) |
| NTNV  | 21.9~25                      | 3.8        |
| Remark:<br>NV: Normal Voltage                      NT: Normal Temperature |                              |            |

### 3.6 Description of Support Units

| Description  | Manufacturer | Model No.         |
|--|--------------|-------------------|
| Mother board   | Fibocom      | EVb-M2V1.2        |
| Adapter  | JiYin        | TEKA018-1201500UK |
| Remark: all above the information of table are provided by client. |              |                   |



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 <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. 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.

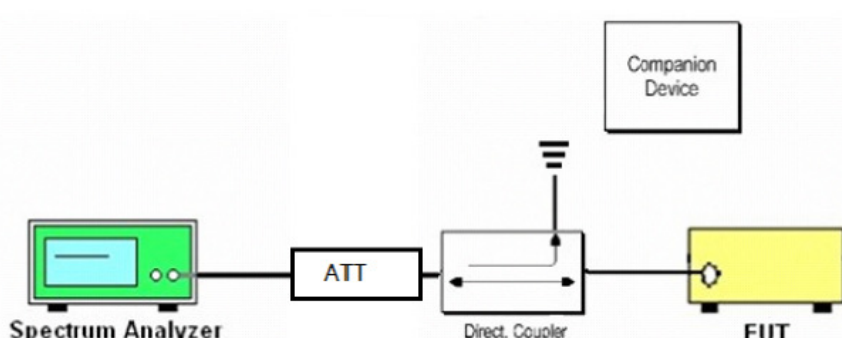
Attention: To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000 t (86-512) 62992980 www.sgsgroup.com.cn  
 中国·苏州·中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编: 215000 t (86-512) 62992980 sgs.china@sgs.com

Report No.: SEWM2309000364RG05  
Rev.: 01  
Page: 8 of 10

## 4 Description of Tests

### 4.1 End User Device additional requirement

|                   |   |
|-------------------|---|
| Test Requirement: | FCC Part 96.47  |
| Test Method:      | WINNF-18-IN-00178 CBRS End User Devices as UUT Test Guidelines  |
| Requirement:      | <p>(a)End User Devices may operate only if they can positively receive and decode anauthorization signal transmitted by a CBSD, including the frequencies and power limits fortheir operation.</p> <p>(1)An End User Device must discontinue operations, change frequencies, or changeits operational power level within 10 seconds of receiving instructions from its associated CBSD.</p> |
| Test setup:       |    |
| Test Result:      | Please reference report KSCR220500074001  |



Report No.: SEWM2309000364RG05

Rev.: 01

Page: 9 of 10

|                   |  |
|-------------------|--|
| Test Requirement: | FCC Part 96.47   |
| Test Method:      | WINNF-18-IN-00178 CBRS End User Devices as UUT Test Guidelines   |
| Requirement:      | <p>(a)End User Devices may operate only if they can positively receive and decode an authorization signal transmitted by a CBSD, including the frequencies and power limits for their operation.</p> <p>(1)An End User Device must discontinue operations, change frequencies, or change its operational power level within 10 seconds of receiving instructions from its associated CBSD.</p> |
| Test setup:       | <p>The diagram illustrates the test setup for FCC Part 96.47. It shows a Spectrum Analyzer connected to an ATT (Attenuator), which is connected to a Direct Coupler. The Direct Coupler is connected to a Companion Device and an EUT (End User Test).</p>   |
| Test Result:      | Please reference report FG220711003  |

Report No.: SEWM2309000364RG05

Rev.: 01

Page: 10 of 10

## 5 Main Test Instruments

Please reference report KSCR220500074001 and FG220711003.

## 6 Measurement Uncertainty

Please reference report KSCR220500074001 and FG220711003.

## 7 Appendixes

Setup Photos

Please reference report KSCR220500074001 and FG220711003.

---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 <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. 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)

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000  
中国·苏州·中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编: 215000

t (86-512) 62992980 www.sgsgroup.com.cn  
t (86-512) 62992980 sgs.china@sgs.com