



Compliance Certification Services (Kunshan) Inc.  
Shenzhen Branch

Report No.: FYCR220300002102

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# RF Exposure Evaluation Report

**Application No.:** FYCR2203000021AT  
**Applicant:** Sichuan AI-Link Technology Co.,Ltd.  
**Address of Applicant:** Anzhou Industrial Park, Mianyang, Sichuan, P.R.C  
**Manufacturer:** Sichuan AI-Link Technology Co.,Ltd.  
**Address of Manufacturer:** Anzhou Industrial Park, Mianyang, Sichuan, P.R.C  
**Factory:** Sichuan AI-Link Technology Co.,Ltd.  
**Address of Factory:** Anzhou Industrial Park, Mianyang, Sichuan, P.R.C

**Equipment Under Test (EUT):**

**Product Name:** WIFI Module  
**Model No.:** WF-M620-RSC1  
**Trade mark:** AI-Link  
**FCC ID:** 2AOKI-WFM620RSC1  
**Standards:** 47 CFR Part 2.1091  
 47 CFR Part 1.1307  
 47 CFR Part 1.1310

**Date of Receipt:** 2022-03-11  
**Date of Test:** 2022-03-15 to 2022-03-21  
**Date of Issue:** 2022-03-24

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

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

Kidd Yang  
EMC Laboratory Manager





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Compliance Certification Services (Kunshan) Inc.  
Shenzhen Branch

Fuyong lab, Xinlong TechnoPark, Fengtang Road, Fuyong Subdistrict, Bao'an, Shenzhen, China 518103 t (86-755) 88663988 f (86-755) 26710594 www.sgsgroup.com.cn  
 中国·深圳·宝安区福永街道凤塘大道鑫龙科技园福永实验室 邮编: 518103 t (86-755) 88663988 f (86-755) 26710594 sgs.china@sgs.com

## 2 Version

| <b>Revision Record</b> |                |             |                 |               |
|------------------------|----------------|-------------|-----------------|---------------|
| <b>Version</b>         | <b>Chapter</b> | <b>Date</b> | <b>Modifier</b> | <b>Remark</b> |
| 01                     |                | 2022-03-24  |                 | Original      |
|                        |                |             |                 |               |
|                        |                |             |                 |               |

|                                 |  |   |  |
|---------------------------------|--|---|--|
| <b>Authorized for issue by:</b> |  |   |  |
|                                 |  |    |  |
|                                 |  | _____   |  |
|                                 |  | <b>Tree Zhan/Project Engineer</b>   |  |
|                                 |  |  |  |
|                                 |  | _____   |  |
|                                 |  | <b>Winkey Wang/Reviewer</b>   |  |



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## 4 General Information

### 4.1 General Description of EUT

|                      |   |
|----------------------|---|
| Power supply:        | RF Chip: DC3.3V<br>Main Board: Powered by Micro USB port                        |
| Modulation Type:     | 802.11b: DSSS (CCK, DQPSK, DBPSK)<br>802.11g/n: OFDM (64QAM, 16QAM, QPSK, BPSK) |
| Number of Channels:  | 802.11b/g/n(HT20):13  |
| Operation Frequency: | 802.11b/g/n(HT20): 2412MHz to 2472MHz   |
| Channel Spacing:     | 5MHz  |
| Antenna Type:        | PCB Antenna   |
| Antenna Gain:        | 1.77dBi   |

#### Remark:

Model No.: WF-M620-RSC1

This test report (Ref. No.: FYCR220300002102) is only valid with the original test report (Ref. No.: SZEM190301214702).

Review this report and original report, this report just changed the EUT name and changed the antenna.

According to the declaration from the applicant, the models in this report and models in original report were identical, only difference with being changed the antenna.

Considering to the difference, pre-scan were performed on the sample in this report to find the items which can be influential to the result in the original test report for fully retest.

Therefore in this report the section 2 items were fully retested on model and shown the data in this report, other tests please refer to original report SZEM190301214702.



## 4.2 Test Location

All tests were performed at:

Compliance Certification Services (Kunshan) Inc. Shenzhen branch.

Fuyong lab. Xinlong TechnoPark, Fengtang Road, Fuyong Subdistrict, Bao'an, Shenzhen, China

Tel: +86 755 8866 3988 Fax: +86 755 2671 0594

No tests were sub-contracted.

## 4.3 Test Facility

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

- **A2LA (Certificate No. 6606.01)**

Compliance Certification Services (Kunshan) Inc. Shenzhen branch is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 6606.01.

- **FCC –Designation Number: CN1322**

Compliance Certification Services (Kunshan) Inc. Shenzhen branch has been recognized as an accredited testing laboratory.

Designation Number: CN1322. Test Firm Registration Number: 718073

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

Compliance Certification Services (Kunshan) Inc. Shenzhen branch has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0129.

IC#: 28189.



#### **4.4 Deviation from Standards**

None.

#### **4.5 Abnormalities from Standard Conditions**

None.

#### **4.6 Other Information Requested by the Customer**

None.



## 5 RF Exposure Evaluation

### 5.1 RF Exposure Compliance Requirement

#### 5.1.1 Limits

According to FCC Part1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in part1.1307(b)

**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 <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

Friis Formula

Friis transmission formula:  $Pd = (Pout \cdot G) / (4 \cdot \pi \cdot R^2)$

Where

Pd = power density in mW/cm<sup>2</sup>

Pout = 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

Pd id 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.

#### 5.1.2 Test Procedure

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



### 4.1.3 EUT RF Exposure Evaluation

Antenna Gain: 1.77dBi

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 1.5 in linear scale.

Output Power Into Antenna & RF Exposure Evaluation Distance:

| Channel | Frequency (MHz) | Max Conducted Peak Output Power (dBm) | Output Power to Antenna (mW) | Power Density at R = 20 cm (mW/cm <sup>2</sup> ) | Limit | Result |
|---------|-----------------|---------------------------------------|------------------------------|--|-------|--------|
| Highest | 2462            | 17.40                                 | 54.95                        | 0.0164   | 1.0   | PASS   |

Note: Refer to report No. FYCR220300002101 for EUT test Max Conducted Peak Output Power value. The distance r (4th column) calculated from the Friis transmission formula is far greater than 20 cm separation requirement.

- End of the Report -

