

Sichuan AI-Link Technology Co., Ltd.

MPE ASSESSMENT REPORT

Report Type:

FCC Part §2.1091, §2.1093 and §1.1307(b) assessment report

Model:
WF-R710-RTG1

REPORT NUMBER:
190702122SHA-002

ISSUE DATE:
August 19, 2019

DOCUMENT CONTROL NUMBER:
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TEST REPORT

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Report no.: 190702122SHA-002

Applicant: Sichuan AI-Link Technology Co., Ltd.
Anzhou, Industrial park, Mianyang, Sichuan, China

Manufacturer: Sichuan AI-Link Technology Co., Ltd.
Anzhou, Industrial park, Mianyang, Sichuan, China

Product Name: WIFI Module

Type/Model: WF-R710-RTG1

FCC ID: 2AOKI-WFR710RTG1

SUMMARY:

The equipment complies with the requirements according to the following standard(s) or Specification:

KDB447498 D01 General RF Exposure Guidance v06
FCC Part2.1091, FCC Part2.1093, FCC Part1.1307(b)

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TEST REPORT**Revision History**

| Report No. | Version | Description | Issued Date |
|-------------------|----------------|-------------------------|--------------------|
| 190702122SHA-002 | Rev. 01 | Initial issue of report | August 19, 2019 |
| | | | |
| | | | |

TEST REPORT**1 GENERAL INFORMATION****1.1 Description of Equipment Under Test (EUT)**

| | |
|-----------------------|--|
| Product name: | WIFI Module |
| Type/Model: | WF-R710-RTG1 |
| Description of EUT: | The EUT is a WIFI module which supports 802.11b/g/n mode, it has only one model. |
| Rating: | DC 3.3V |
| Software Version: | / |
| Hardware Version: | / |
| Sample received date: | July 15, 2019 |
| Date of test: | July 15, 2019 ~ August 2, 2019 |

1.2 Technical Specification

| | |
|---------------------|---|
| Frequency Range: | 2412MHz ~ 2462MHz |
| Support Standards: | IEEE 802.11b, IEEE 802.11g, IEEE 802.11n-HT20, IEEE 802.11n-HT40 |
| Type of Modulation: | IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g: OFDM (64-QAM, 16-QAM, QPSK, BPSK) IEEE 802.11n-HT20: OFDM (64-QAM, 16-QAM, QPSK, BPSK) IEEE 802.11n-HT40: OFDM (64-QAM, 16-QAM, QPSK, BPSK) |
| Channel Number: | 11 Channels for 802.11b, 802.11g and 802.11n(HT20) 7 Channels for 802.11n(HT40) |
| Data Rate: | IEEE 802.11b: Up to 11 Mbps IEEE 802.11g: Up to 54 Mbps IEEE 802.11n-HT20: Up to MCS7 IEEE 802.11n-HT40: Up to MCS7 |
| Channel Separation: | 5 MHz |
| Antenna: | Internal antenna, 1.0dBi Peak gain |

TEST REPORT**1.3 Description of Test Facility**

| | |
|------------|--|
| Name: | Intertek Testing Services Shanghai |
| Address: | Building 86, No. 1198 Qinzhou Road(North), Shanghai 200233, P.R. China |
| Telephone: | 86 21 61278200 |
| Telefax: | 86 21 54262353 |

| | |
|---|---|
| The test facility is recognized, certified, or accredited by these organizations: | CNAS Accreditation Lab Registration No. CNAS L0139 |
| | FCC Accredited Lab Designation Number: CN1175 |
| | IC Registration Lab CAB identifier.: CN0051 |
| | VCCI Registration Lab Registration No.: R-14243, G-10845, C-14723, T-12252 |
| | A2LA Accreditation Lab Certificate Number: 3309.02 |

TEST REPORT**2 MPE Assessment****Test result:** Pass**2.1 MPE Assessment Limit**

Mobile device exposure for standalone operations:

| Frequency range | E-field strength (V/m) | H-field strength (A/m) | B-field (uT) | Equivalent plane wave power density S_{eq} (W/m ²) |
|-----------------|---------------------------|---------------------------|---------------------|--|
| 0-1 Hz | - | $3,2 \times 10^4$ | 4×10^4 | - |
| 1-8 Hz | 10 000 | $3,2 \times 10^4/f^2$ | $4 \times 10^4/f^2$ | - |
| 8-25 Hz | 10 000 | $4 000/f$ | $5 000/f$ | - |
| 0,025-0,8 kHz | $250/f$ | $4/f$ | $5/f$ | - |
| 0,8-3 kHz | $250/f$ | 5 | 6,25 | - |
| 3-150 kHz | 87 | 5 | 6,25 | - |
| 0,15-1 MHz | 87 | $0,73/f$ | $0,92/f$ | - |
| 1-10 MHz | $87/f^{1/2}$ | $0,73/f$ | $0,92/f$ | - |
| 10-400 MHz | 28 | 0,073 | 0,092 | 2 |
| 400-2 000 MHz | $1,375 f^{1/2}$ | $0,0037 f^{1/2}$ | $0,0046 f^{1/2}$ | $f/200$ |
| 2-300 GHz | 61 | 0,16 | 0,20 | 10 |

Mobile device exposure for simultaneous transmission operations: **the sum of the MPE ratios for all simultaneously transmitting antennas incorporated in a host device is ≤ 1.0**

TEST REPORT**2.2 Assessment Results**

Power density (S) is calculated according to the formula:

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

Where S = power density in mW/cm²

P = Radiated transmit power in mW

G = numeric gain of transmit antenna

R = distance (cm)

As we can see from the test report 190702122SHA-001:

The calculations in the table below use the highest gain of antenna for client EUT. These calculations represent worst case in terms of the exposure levels.

| Frequency band (MHz) | Power | | Antenna Gain (Numeric) | | R (cm) | S (mW/cm ²) | Limits (mW/cm ²) |
|-------------------------|-------|-------|---------------------------|-----------|-----------|----------------------------|---------------------------------|
| 2412 - 2462 | dBm | mW | dBi | (Numeric) | (cm) | (mW/cm ²) | (mW/cm ²) |
| 2412 - 2462 | 18.28 | 67.30 | 1 | 1.26 | 20 | 0.017 | 1 |

Note: 1 mW/cm² from 1.310 Table 1

TEST REPORT**Appendix I**

Definition below must be outlined in the User Manual:

To satisfy FCC RF exposure requirements, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during device operation. To ensure compliance, operations at closer than this distance is not recommended.

***** END *****