

# Sichuan Al-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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Intertek Testing Services Shanghai Building No.86, 1198 Qinzhou Road (North) Caohejing Development Zone Shanghai 200233, China

Telephone: 86 21 6127 8200

www.intertek.com

Report no.: 190702122SHA-002

**Applicant:** Sichuan Al-Link Technology Co., Ltd.

Anzhou, Industrial park, Mianyang, Sichuan, China

Manufacturer: Sichuan Al-Link Technology Co., Ltd.

Anzhou, Industrial park, Mianyang, Sichuan, China

**Product Name:** WIFI Module

Type/Model: WF-R710-RTG1

FCC ID: 2AOKI-WFR710RTG1

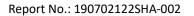
#### **SUMMARY:**

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)

PREPARED BY:	REVIEWED BY:	
Wade zhang	Donnel	
Project Engineer	Reviewer	
Wade Zhang	Daniel Zhao	

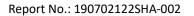
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# **Revision History**

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





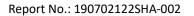
### **1 GENERAL INFORMATION**

# 1.1 Description of Equipment Under Test (EUT)

Product name:	WIFI Module
Type/Model:	WF-R710-RTG1
	The EUT is a WIFI module which supports 802.11b/g/n mode, it has only
Description of EUT:	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				
	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)				
Type of Modulation:	IEEE 802.11n-HT40: OFDM (64-QAM, 16-QAM, QPSK, BPSK)				
	11 Channels for 802.11b, 802.11g and 802.11n(HT20)				
Channel Number:	7 Channels for 802.11n(HT40)				
	IEEE 802.11b: Up to 11 Mbps				
	IEEE 802.11g: Up to 54 Mbps				
	IEEE 802.11n-HT20: Up to MCS7				
Data Rate:	IEEE 802.11n-HT40: Up to MCS7				
Channel Separation:	5 MHz				
Antenna:	Internal antenna, 1.0dBi Peak gain				



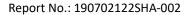


#### **TEST REPORT**

# 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,	CNAS Accreditation Lab Registration No. CNAS L0139
certified, or accredited by these	FCC Accredited Lab Designation Number: CN1175
organizations:	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





#### 2 MPE Assessment

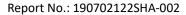
Test result: Pass

#### 2.1 MPE Assessment Limit

Mobile device exposure for standalone operations:

Frequency range	E-field strength	H-field strength	B-field	Equivalent plane wave
	(V/m)	(A/m)	(uT)	power density
				$S_{eq}$ (W/m <sup>2</sup> )
0-1 Hz	-	3,2 × 10 <sup>4</sup>	4 × 10 <sup>4</sup>	-
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 <sup>1/2</sup>	0,73/f	0,92/f	-
10-400 MHz	28	0,073	0,092	2
400-2 000 MHz	1,375 f <sup>1/2</sup>	0,0037 f <sup>1/2</sup>	0,0046 f <sup>1/2</sup>	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  $\leq$  1.0





#### 2.2 Assessment Results

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

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

Where  $S = power density in mW/cm^2$ 

P = Radiated transmit power in mW

G = numeric gain of transmit antenna

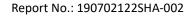
R = distance (cm)

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	Ро	wer	Ante	nna Gain	R	S	Limits
(MHz)	dBm	mW	dBi	(Numeric)	(cm)	(mW/cm <sup>2</sup> )	(mW/cm <sup>2</sup> )
2412 - 2462	18.28	67.30	1	1.26	20	0.017	1

Note: 1 mW/cm2 from 1.310 Table 1





# **Appendix I**

To satisfy FCC RF	F exposure requirements	, a separation distan	ce of 20 cm	or more should be

Definition below must be outlined in the User Manual:

maintained between the antenna of this device and persons during device operation.

To ensure compliance, operations at closer than this distance is not recommended.