

Test Report No.:
FCC2022-0068-HA1

Test Report

EUT : **WIFI Module**
MODEL : **WF-U21DS-SSC1**
BRAND NAME : **N/A**
CLIENT : **Sichuan AI-Link Technology Co.,Ltd.**
Classification Of Test : **N/A**

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Client	Name : Sichuan AI-Link Technology Co.,Ltd. Address : Anzhou Industrial Park, Mianyang, Sichuan, P.R.C		
Manufacturer	Name : Sichuan AI-Link Technology Co.,Ltd. Address : Anzhou Industrial Park, Mianyang, Sichuan, P.R.C		
Equipment Under Test	Name : WIFI Module Model/Type: WF-U21DS-SSC1 Trade mark : N/A Serial NO.:N/A Sample NO.:1-1		
Date of Receipt.	2021.11.10	Date of Testing	2021.11.10~2023.01.04
Test Specification		Test Result	
FCC Part 2.1091 & KDB 447498 D04 Interim General RF Exposure Guidance v01		PASS	
Evaluation of Test Result	The equipment under test was found to comply with the requirements of the standards applied. Issue Date: 2023.06.19		
Tested by:  Xu ZhenFei Name Signature	Reviewed by:  Liu YongHai Name Signature	Approved by:  Chen HuaWen Name Signature	
Other Aspects: NONE.			
Abbreviations:OK, Pass= passed Fail = failed N/A= not applicable EUT= equipment, sample(s) under tested			

This test report relates only to the EUT, and shall not be reproduced except in full, without written approval of CVC.



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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FCC2022-0068-H	Original release	2023.01.05
FCC2022-0068-HA1	Update Testing Date	2023.06.19

Note: After the release of a new report, it will replace the original report.



1. GERTIFICATION

FCC ID	2AOKI-AL5621D1
PRODUCT	WIFI Module
BRAND	N/A
MODEL	WF-U21DS-SSC1
ADDITIONAL MODEL	/
STANDARDS	FCC Part 2.1091
	KDB 447498 D04 Interim General RF Exposure Guidance v01
NOTE: 1. The Test Model is the same with the the original model WF-U21DS-SSA1 in Test Report No.FCC2022-0012 except that the model under test this time is added the shield.Therefore,we only test the radiated emission and as for the ohter test items ,we refer to the data in Test Report No.FCC2022-0012-H.	

2. RF EXPOSURE LIMIT GENERAL INFORMATION

2.1 Classification

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

2.2 LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

(Option B) According to Part 1.1307b, or the available maximum time-averaged power or effective radiated power (ERP), whichever is greater, is less than or equal to the threshold P_{th} (mW) described in the following formula. This method shall only be used at separation distances (cm) from 0.5 centimeters to 40 centimeters and at frequencies from 0.3 GHz to 6 GHz (inclusive). P is given by:

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

Where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right)$$

and f is in GHz;

and

$$P_{th} \text{ (mW)} = ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases}$$



(Option C) Or using Table 1 and the minimum separation distance (R in meters) from the body of a nearby person for the frequency (f in MHz) at which the source operates, the ERP (watts) is no more than the calculated value prescribed for that frequency. For the exemption in Table 1 to apply, R must be at least $\lambda / 2 \pi$, where λ is the free-space operating wavelength in meters. If the ERP of a single RF source is not easily obtained, then the available maximum time-averaged power may be used in lieu of ERP if the physical dimensions of the radiating structure(s) do not exceed the electrical length of $\lambda / 4$ or if the antenna gain is less than that of a half-wave dipole (1.64 linear value).

RF SOURCE FREQUENCY (MHZ)	THRESHOLD ERP(W)
0.3 -1.34	$1,920 R^2$
1.34 - 30	$3,450 R^2 F^2$
30 -300	$3.83 R^2$
300-1500	$0.0128 R^2 F$
1500-100,000	$19.2 R^2$

3. ANTENNA GAIN

The antennas provided to the EUT, please refer to the following table:

Frequency (MHz)	Chain 0 Peak Gain (dBi)	Chain 1 Peak Gain (dBi)	Antenna Type
2412-2462	3.46	3.46	External Antenna
5180-5240	3.37	3.37	External Antenna
5260-5320	3.37	3.37	External Antenna
5500-5700	3.37	3.37	External Antenna
5745-5825	3.37	3.37	External Antenna

Frequency (MHz)	Chain 2 Peak Gain (dBi)	Antenna Type
2402-2480	3.46	External Antenna

NOTE: Since the above data and/or information is provided by the client relevant results or conclusions of this report are only made for these data and/or information, CVC is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.



4. CALCULATION RESULT OF MAXIMUM CONDUCTED PEAK POWER

The measured conducted peak Power

Mode	Peak Power (dBm)
BT	13.40
2.4G WIFI	20.22
U-NII-1	20.29
U-NII-2A	19.72
U-NII-2C	20.71
U-NII-3	20.19

FREQUENCY BAND	Maximum conducted power (dBm)	Maximum Antenna gain (dBi)	Max EIRP (dBm)	Max ERP (dBm)	Max ERP (mW)	Pth (mW)	Maximum ERP/EIRP Limit (mW)	Part1.1307b Threshold (mW)
BT	13.40	3.46	16.86	14.71	29.58	29.58	60.95	3060.00
2.4G WIFI	20.22	3.46	23.68	21.53	142.23	142.23	609.54	3060.00
U-NII-1	20.29	3.37	23.66	21.51	141.58	141.58	609.54	3060.00
U-NII-2A	19.72	3.37	23.09	20.94	124.17	124.17	153.11	3060.00
U-NII-2C	20.71	3.37	24.08	21.93	155.96	155.96	153.11	3060.00
U-NII-3	20.19	3.37	23.56	21.41	138.36	138.36	609.54	3060.00

NOTE:

1. The Max EIRP (dBm) = Max Conducted Power (dBm) + Antenna Gain (dBi)
2. The Max ERP (dBm) = Max Conducted Power (dBm) + Antenna Gain (dBi) - 2.15
3. Therefore, the device qualifies for RF exposure test exemption



Important

- (1) The test report is valid with the official seal of the laboratory and the signatures of Test engineer, Author and Reviewer simultaneously.
- (2) The test report is invalid if altered.
- (3) Any photocopies or part photocopies in the test report are forbidden without the written permission from the laboratory.
- (4) Objections to the test report must be submitted to the laboratory within 15 days.
- (5) Generally, commission test is responsible for the tested samples only.

Address of the laboratory:

CVC Testing Technology Co., Ltd.

Address: No.3, Tiantaiyi Road, Kaitai Avenue, Science City, Guangzhou, China

Post Code: 510663

Tel: 020-32293888

FAX: 020-32293889

E-mail: office@cvc.org.cn