

1 Cover Page

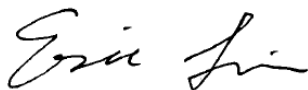
RF Exposure Evaluation Report

Application No.: KSCR2206000935AT
FCC ID: SVN-ASI3213A-W
Applicant: ZHEJIANG DAHUA VISION TECHNOLOGY CO.,LTD.
Address of Applicant: No.1199, Bin'an Road, Binjiang District, Hangzhou, P.R. China
Manufacturer: ZHEJIANG DAHUA VISION TECHNOLOGY CO.,LTD.
Address of Manufacturer: No.1199, Bin'an Road, Binjiang District, Hangzhou, P.R. China
Factory: 1, ZHEJIANG DAHUA VISION TECHNOLOGY CO.,LTD.
 2, ZHEJIANG DAHUA ZHILIAN CO.,LTD.
Address of Factory: 1, No.1199, Bin'an Road, Binjiang District, Hangzhou, P.R. China
 2, No.28, Dongqiao Road, Dongzhou Street, Fuyang District, Hangzhou, P.R.China.

Equipment Under Test (EUT):
EUT Name: Face Recognition Access Controller
Model No.: DHI-ASI3213A-W
Add Model No.: ASI3213A-W, DH-ASI3213A-W
Standard(s) : FCC Rules 47 CFR §2.1091
 KDB447498 D01 General RF Exposure Guidance v06
Date of Receipt: 2022-06-16
Date of Test: 2022-06-19 to 2022-06-28
Date of Issue: 2022-07-02

Test Result:	Pass*
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* In the configuration tested, the EUT complied with the standards specified above.



Eric Lin
EMC Laboratory Manager



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Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2022-07-02		Original

Authorized for issue by:			
		Damon Zhou	
		Damon Zhou/Project Engineer	
		Eric Lin	
		Eric Lin/Reviewer	



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Compliance Certification Services (Kunshan) Inc.
EMC Laboratory

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3 General Information

3.1 General Description of E.U.T.

Power supply:	DC 12V,1.5A by adapter Adapter Model: ADS-26FSG-12 12018EPG INPUT: 100-240V,50/60Hz, Max. 0.7A OUTPUT: 12.0V,1.5A,18.0W
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3.2 Technical Specifications

2.4G WiFi

Operation Frequency:	802.11b/g/n(HT20): 2412MHz to 2462MHz;802.11n(HT40): 2422MHz to 2452MHz
Modulation Type:	802.11b: DSSS (CCK, DQPSK, DBPSK);802.11g/n: OFDM (64QAM, 16QAM, QPSK, BPSK)
Number of Channels:	802.11b/g/n(HT20):11;802.11n(HT40):7
Channel Spacing:	5MHz
Antenna Type:	FPC Antenna
Antenna Gain:	2.88dBi (Provided by manufacturer)
Date Rate:	802.11b:1/2/5.5./11Mbps 802.11g:6/9/12/18/24/36/48/54Mbps 802.11n:MCS0-MCS7

13.56MHz

Antenna Type	Loop Antenna
Modulation Type	ASK
Operation Frequency	13.56MHz
Number of Channels:	1



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3.3 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. E&E Lab

588 West Jindu Road, Xinqiao, Songjiang, 201612 Shanghai, China

Tel: +86 21 6191 5666

Fax: +86 21 6191 5678

No tests were sub-contracted.

Note:

- 1.SGS is not responsible for wrong test results due to incorrect information (e.g. max. clock frequency, highest internal frequency, antenna gain, cable loss, etc) is provided by the applicant. (if applicable).
- 2.SGS is not responsible for the authenticity, integrity and the validity of the conclusion based on results of the data provided by applicant. (if applicable).

3.4 Test Facility

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

• **CNAS (No. CNAS L4354)**

CNAS has accredited Compliance Certification Services (Kunshan) Inc. to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

• **A2LA (Certificate No. 2541.01)**

Compliance Certification Services (Kunshan) Inc. is accredited by the American Association for Laboratory Accreditation (A2LA). Certificate No. 2541.01.

• **FCC –Designation Number: CN1172**

Compliance Certification Services Inc. has been recognized as an accredited testing laboratory. Designation Number: CN1172. Test Firm Registration Number: 995260.

• **Industry Canada (IC) – IC Assigned Code: 2324E**

The 10m and 3m Semi-anechoic chamber of Compliance Certification Services (Kunshan) Inc. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 2324E-1 for 10m chamber, 2324E-2 for 3m chamber.

• **VCCI (Member No.: 1938)**

The 3m and 10m Semi-anechoic chamber and Shielded Room of Compliance Certification Services (Kunshan) Inc. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-1600, C-1707, T-1499, G-10216 respectively.



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4 Test Standards and Limits

4.1 FCC Radiofrequency radiation exposure limits:

According to §1.1310, the limit for general population/uncontrolled exposures

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

Note: Limit for 2.4GHz is 1.0 mW/cm²
Limit for 13.56MHz is 60.77 V/m



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5 Measurement and Calculation

5.1 Maximum transmit power

The Power Data is based on the RF Test Report KSCR220600093501, KSCR220600093502,

2.4G WIFI

Test Mode	Test Channel	Ant	Power [dBm]	Power [mW]
11B	2412	Ant1	11.83	15.24
11B	2437	Ant1	8.75	7.50
11B	2462	Ant1	9.10	8.13
11G	2412	Ant1	10.29	10.69
11G	2437	Ant1	11.39	13.77
11G	2462	Ant1	10.86	12.19
11N20SISO	2412	Ant1	10.20	10.47
11N20SISO	2437	Ant1	11.51	14.16
11N20SISO	2462	Ant1	10.82	12.08
11N40SISO	2422	Ant1	8.07	6.41
11N40SISO	2437	Ant1	8.30	6.76
11N40SISO	2452	Ant1	8.48	7.05

13.56MHz: 21.93 dBuV/m@3m, @20cm=@3m+40log(3/0.2)=68.97dBuV/m



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5.2 MPE Calculation

For WiFi:

According to the formula $S=P/4\pi R^2$, we can calculate S which is MPE.

Note:

- 1) P (mW)
- 2) R = distance to the center of radiation of antenna (in meter) = 20cm
- 3) MPE limit = 1mW/cm²

For WIFI

The max. antenna gain is 2.88 dBi

Max. Conducted Power P(mW)	Gain in Linear Scale G	Operation Distance R(cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Result
15.24	1.941	20	0.00588	1	Pass

For 13.56MHz: 68.97dBuV/m=0.003V/m< 60.77 V/m.

The 2.4G band and 13.56MHz function can simultaneous transmitting. But the maximum rate of MPE is $0.006/1.0+0.003/60.77=0.006\leq 1.0$. according to the KDB447498 section 7.2 determine the device is exclusion from SAR test.

--End of the Report--



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