1 Cover Page

RF Exposure Evaluation Report

Application No.:	SHCR2110000481AT
FCC ID:	2APV2-CSC3X6E4
Applicant:	Hangzhou Ezviz Software Co., Ltd.
Address of Applicant:	Room 302, Unit B, Building 2,399 Danfeng Road, Binjiang District, Hangzhou, Zhejiang
Manufacturer:	Hangzhou Ezviz Software Co., Ltd.
Address of Manufacturer:	Room 302, Unit B, Building 2,399 Danfeng Road, Binjiang District, Hangzhou, Zhejiang
Equipment Under Test (EUT):	
EUT Name:	Smart Home Camera
Model No.:	CS-C3X
Add Model No:	CS-C3X (4MP,W1,2.8mm), CS-C3X (4MP,W1,4mm)
Trade mark:	EZVIZ
Standard(s) :	FCC Rules 47 CFR §2.1091 KDB447498 D01 General RF Exposure Guidance v06
Date of Receipt:	2021-10-18
Date of Test:	2021-11-06 to 2021-11-10
Date of Issue:	2021-11-10
Test Result:	**Pass***

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

Parlam Zhan

Parlam Zhan
E&E Section Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

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Revision Record			
Version	**Description**	**Date**	**Remark**
00	Original	2021-11-10	/

Authorized for issue by:				
		Micheal Niu		
		Micheal Niu / Project Engineer		
		Parlam Zhan		
		Parlam Zhan / Reviewer		

通标标准技术服务(上海)有限公司
检验检测专用章
Inspection & Testing Services
SGS-CSTC Standards Technical Services(Shanghai) Co., Ltd.
Testing Center EMC Laboratory

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3 General Information

3.1 General Description of E.U.T.

Power supply:	DC 12V by Adapter

3.2 Technical Specifications

2.4GHz

Antenna Gain:	Ant 1:3dBi (Provided by manufacturer) Ant 2:3dBi (Provided by manufacturer) Directional gain:6.01dBi
Antenna Type:	Antenna 1: Dipole Antenna Antenna 2: Dipole Antenna
Channel Spacing:	5MHz
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
Operation Frequency:	802.11b/g/n(HT20): 2412MHz to 2462MHz

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3.3 Test Location

All tests were performed at:

Compliance Certification Services (Kunshan) Inc.

No.10 Weiye Rd, Innovation park, Eco&Tec, Development Zone, Kunshan City, Jiangsu, China.

Tel: +86 512 5735 5888 Fax: +86 512 5737 0818

No tests were sub-contracted.

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.

• ISED (CAB identifier: CN0072)

Compliance Certification Services (Kunshan) Inc. has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory.

CAB Identifier: CN0072.

• 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-20134, R-11600,C-11707, T-11499, 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	Power density(mW/cm^2)	Averaging time(minutes)
300MHz~1.5GHz	f/1500	30
1.5GHz~100GHz	1.0	30

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5 Measurement and Calculation

5.1 Maximum transmit power

The Power Data is based on the RF Test Report SHCR211000048101

Test Mode	Channel	Antenna 1 Power[dBm]	Antenna 2 Power[dBm]	MIMO Power[dBm]	Antenna 1 Power[mW]	Antenna 2 Power[mW]	MIMO Power[mW]
11B	2412	15.53	15.35	NA	35.73	34.28	N/A
11B	2437	15.92	15.36	NA	39.08	34.36	N/A
11B	2462	15.46	15.00	NA	35.16	31.62	N/A
11G	2412	17.09	17.57	NA	51.17	57.15	N/A
11G	2437	17.29	17.76	NA	**53.58**	**59.70**	N/A
11G	2462	17.01	17.33	NA	50.23	54.08	N/A
11N20MIMO	2412	15.17	16.32	18.79	32.89	42.85	75.68
11N20MIMO	2437	15.29	16.47	18.93	33.81	44.36	**78.16**
11N20MIMO	2462	15.10	16.02	18.59	32.36	39.99	72.28

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5.2 MPE Calculation

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 2.4G WiFi –Antenna1:

The max. antenna gain is 3 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
53.58	1.995	20	0.02127	1	Pass

For 2.4G WiFi –Antenna2:

The max. antenna gain is 3 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
59.7	1.995	20	0.02370	1	Pass

In MIMO mode:

The max. antenna gain is 6.01 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
78.16	3.990	20	0.06205	1	Pass

According to the KDB447498 section 7.2 determine the device is exclusion from SAR test

--End of the Report--

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