

1 Cover Page

RF Exposure Evaluation Report

Application No.: SHEM1902011106CR
FCC ID: SVNDH-SD22
Applicant: ZHEJIANG DAHUA VISION TECHNOLOGY CO., LTD.
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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: NETWORK PTZ CAMERA
Model No.: DH-SD22204UE-GN-W
Add Model No.: DH-SD22204UEN-GN-W, SD22204UE-GN-W, SD22204UEN-GN-W
Standard(s) : FCC Rules 47 CFR §2.1091
KDB447498 D01 General RF Exposure Guidance v06
Date of Receipt: 2019-02-25
Date of Test: 2019-02-28 to 2019-03-01
Date of Issue: 2019-03-11

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

parlan zhan

Parlam Zhan
E&E Section Manager

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Attention: To check the authenticity of testing /Inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN_Dncccheck@sina.com

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Version	Description	Date	Remark
00	Original	2019-03-11	/

Authorized for issue by:			
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3 General Information

3.1 General Description of E.U.T.

Power supply:	DC 12V by adapter
Test voltage:	AC 120V 60Hz
Antenna Gain	4 dBi
Antenna Type	Monopole
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):11 802.11n(HT40):7
Operation Frequency	802.11b/g/n(HT20): 2412MHz to 2462MHz 802.11n(HT40): 2422MHz to 2452MHz

3.2 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch

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

Tel: +86 21 6191 5666

Fax: +86 21 6191 5678

3.3 Test Facility

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

- CNAS (No. CNAS L0599)**

CNAS has accredited SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. to ISO/IEC 17025:2005 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.

- NVLAP (Certificate No. 201034-0)**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. is accredited by the National Voluntary Laboratory Accreditation Program(NVLAP). Certificate No. 201034-0.

- FCC –Designation Number: CN5033**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been recognized as an accredited testing laboratory.

Designation Number: CN5033. Test Firm Registration Number: 479755.

- Industry Canada (IC) – IC Assigned Code: 8617A**

The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 8617A-1.

- VCCI (Member No.: 3061)**

The 3m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-13868, C-14336, T-12221, G-10830 respectively.

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

5 Measurement and Calculation

5.1 Maximum transmit power

The Power Data is based on the RF Test Report SHEM190201110601

Test Mode	Test Channel	Ant	Power [dBm]	Power [mW]
11B	2412	Ant1	13.01	20.00
11B	2442	Ant1	13.79	23.93
11B	2472	Ant1	14.29	26.85
11G	2412	Ant1	11.85	15.31
11G	2442	Ant1	12.80	19.05
11G	2472	Ant1	13.32	21.48
11N20SISO	2412	Ant1	11.70	14.79
11N20SISO	2442	Ant1	12.66	18.45
11N20SISO	2472	Ant1	13.17	20.75
11N40SISO	2422	Ant1	11.15	13.03
11N40SISO	2437	Ant1	11.65	14.62
11N40SISO	2452	Ant1	12.04	16.00

5.2 MPE Calculation

The Max Conducted Peak Output Power is 26.85mW;

The best case gain of the antenna is 4dBi. 4dB logarithmic terms convert to numeric result is nearly 2.51

For FCC:

According to the formula $S = \frac{PG}{4R^2\pi}$, we can calculate S which is MPE.

Note:

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

$$S = \frac{PG}{4R^2\pi} = 26.85 * 2.51 / (4 * 20 * 20 * 3.14) = 0.013 \text{ mW/cm}^2 < 1 \text{ mW/cm}^2$$

So the device is exclusion from SAR test.

--End of the Report--