



1 Cover Page

RF Exposure Evaluation Report

Application No.: SHEM1902011106CR
FCC ID: SVNDH-SD22
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: 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

| | |
|---------------------|--------------|
| 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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Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com



| Revision Record | | | |
|-----------------|-------------|------------|--------|
| Version | Description | Date | Remark |
| 00 | Original | 2019-03-11 | / |
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| Authorized for issue by: | | | |
| | | <i>Vincent zhu</i> | |
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| | | Vincent Zhu /Project Engineer | |
| | | <i>Parlam zhan</i> | |
| | | <hr/> | |
| | | Parlam Zhan /Reviewer | |



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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--