



## RF Exposure Evaluation Declaration

**FCC ID:** SVNDH-SD12D

**APPLICANT:** ZHEJIANG DAHUA VISION TECHNOLOGY CO.,LTD.

**Application Type:** Certification

**Product:** network PTZ Camera

**Model No.:** DH-SD-12D200U-GN-W

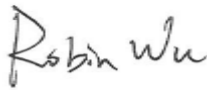
**Serial Model No.:** SD12xyzutv-Ga-W, DH-SD12xyzutv-Ga-W (“x” can be 1-9 or blank or missing; “y” can be 0-9 or blank or missing; “z” can be 0- 9 or blank or missing; “u” can be A-Z or blank or missing; “t” can be A-Z or blank or missing; “v” can be N or blank or missing; “a” can be C, N, S, NI or blank or missing)

**Brand Name:**  or 

**FCC Classification:** Digital Transmission System (DTS)

**Test Date:** May 10, 2018 ~ May 12, 2018

Reviewed By :   
( Sunny Sun )

Approved By :   
( Robin Wu )



The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standards through the calibration of the equipment and evaluated measurement uncertainty herein.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

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### Revision History

| Report No.    | Version | Description    | Issue Date | Note  |
|---------------|---------|----------------|------------|-------|
| 1712RSU036-U2 | Rev. 01 | Initial Report | 19-06-2018 | Valid |
|               |         |                |            |       |

## §2.1033 General Information

|                                |                                                                                                                                 |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| <b>Applicant:</b>              | ZHEJIANG DAHUA VISION TECHNOLOGY CO.,LTD.                                                                                       |
| <b>Applicant Address:</b>      | No.1199, Bin'an Road, Binjiang District, Hangzhou, P.R. China                                                                   |
| <b>Manufacturer:</b>           | ZHEJIANG DAHUA VISION TECHNOLOGY CO.,LTD.                                                                                       |
| <b>Manufacturer Address:</b>   | No.1199, Bin'an Road, Binjiang District, Hangzhou, P.R. China                                                                   |
| <b>Test Site:</b>              | MRT Technology (Suzhou) Co., Ltd                                                                                                |
| <b>Test Site Address:</b>      | D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China                                              |
| <b>FCC Registration No.:</b>   | 893164                                                                                                                          |
| <b>Test Device Serial No.:</b> | N/A <input type="checkbox"/> Production <input checked="" type="checkbox"/> Pre-Production <input type="checkbox"/> Engineering |

### Test Facility / Accreditations

Measurements were performed at MRT Laboratory located in Tian'edang Rd., Suzhou, China.

- MRT facility is a FCC registered (MRT Reg. No. 893164) test facility with the site description report on file and has met all the requirements specified in Section 2.948 of the FCC Rules.
- MRT facility is an IC registered (MRT Reg. No. 11384A-1) test laboratory with the site description on file at Industry Canada.
- MRT facility is a VCCI registered (R-20025, G-20034, C-20020, T-20020) test laboratory with the site description on file at VCCI Council.
- MRT Lab is accredited to ISO 17025 by the American Association for Laboratory Accreditation (A2LA) under the American Association for Laboratory Accreditation Program (A2LA Cert. No. 3628.01) in EMC, Telecommunications and Radio testing for FCC, Industry Canada, EU and TELEC Rules.



## 1. PRODUCT INFORMATION

### 1.1. Equipment Description

|                      |                                                                                                                                                                                                                                                                                                         |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Name:        | network PTZ Camera                                                                                                                                                                                                                                                                                      |
| Model No.:           | DH-SD-12D200U-GN-W                                                                                                                                                                                                                                                                                      |
| Serial Model No.:    | SD12xyzutv-Ga-W, DH-SD12xyzutv-Ga-W ("x" can be 1-9 or blank or missing; "y" can be 0-9 or blank or missing; "z" can be 0- 9 or blank or missing; "u" can be A-Z or blank or missing; "t" can be A-Z or blank or missing; "v" can be N or blank or missing; "a" can be C, N, S, NI or blank or missing) |
| Brand Name:          |  or                                                                                                                                  |
| Wi-Fi Specification: | 802.11b/g/n                                                                                                                                                                                                                                                                                             |
| Frequency Range:     | 802.11b/g/n-HT20: 2412 ~ 2462 MHz<br>802.11n-HT40: 2422 ~ 2452MHz                                                                                                                                                                                                                                       |
| Channel Number:      | 802.11b/g/n-HT20: 11; 802.11n-HT40: 7                                                                                                                                                                                                                                                                   |
| Type of Modulation:  | 802.11b: DSSS; 802.11g/n: OFDM                                                                                                                                                                                                                                                                          |
| Data Rate:           | 802.11b: 1/2/5.5/11Mbps<br>802.11g: 6/9/12/18/24/36/48/54Mbps<br>802.11n: up to 150Mbps                                                                                                                                                                                                                 |
| Antenna Gain:        | 2.56dBi                                                                                                                                                                                                                                                                                                 |

## 2. RF Exposure Evaluation

### 2.1. Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

#### LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

| Frequency Range (MHz)                                     | Electric Field Strength (V/m) | Magnetic Field Strength (A/m) | Power Density (mW/cm <sup>2</sup> ) | Average Time (Minutes) |
|-----------------------------------------------------------|-------------------------------|-------------------------------|-------------------------------------|------------------------|
| (A) Limits for Occupational/ Control Exposures            |                               |                               |                                     |                        |
| 300-1500                                                  | --                            | --                            | f/300                               | 6                      |
| 1500-100,000                                              | --                            | --                            | 5                                   | 6                      |
| (B) Limits for General Population/ Uncontrolled Exposures |                               |                               |                                     |                        |
| 300-1500                                                  | --                            | --                            | f/1500                              | 6                      |
| 1500-100,000                                              | --                            | --                            | 1                                   | 30                     |

f= Frequency in MHz

Calculation Formula:  $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$

Where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = output power to antenna in mW

$G$  = gain of antenna in linear scale

$\pi$  = 3.1416

$r$  = distance between observation point and center of the radiator in cm

$P_d$  is the limit of MPE, 1mW/cm<sup>2</sup>. If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance  $r$  where the MPE limit is reached.

## 2.2. Test Result of RF Exposure Evaluation

|           |                        |
|-----------|------------------------|
| Product   | network PTZ Camera     |
| Test Item | RF Exposure Evaluation |

| Test Mode   | Frequency Band<br>(MHz) | Maximum EIRP<br>(dBm) | Power Density at<br>R = 20 cm<br>(mW/cm <sup>2</sup> ) | Limit<br>(mW/cm <sup>2</sup> ) |
|-------------|-------------------------|-----------------------|--------------------------------------------------------|--------------------------------|
| 802.11b/g/n | 2412 ~ 2462             | 25.47                 | 0.0701                                                 | 1                              |

### CONCLUSION:

Therefore, the Min Safety Distance is 20cm.

\_\_\_\_\_ The End \_\_\_\_\_