

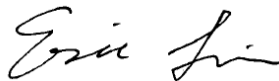
1 Cover Page

# RF MPE REPORT

**Application No.:** KSCR2203000408AT  
**FCC ID:** 2ADTD-I0T2101  
**Applicant:** Hangzhou Hikvision Digital Technology Co., Ltd  
**Address of Applicant:** 555 Qianmo Road, Binjiang District, Hangzhou, Hangzhou, Zhejiang, China  
**Manufacturer:** Hangzhou Hikvision Digital Technology Co., Ltd  
**Address of Manufacturer:** 555 Qianmo Road, Binjiang District, Hangzhou, Hangzhou, Zhejiang, China  
**Factory:** 1.Hangzhou Hikvision Technology Co., Ltd.  
 2.Hangzhou Hikvision Electronics Co., Ltd.  
 3.Chongqing Hikvision technology Co., Ltd.  
 1.No.700,Dongliu Road, Binjiang District, Hangzhou Ctiy,Zhejiang, 310052, China.  
 2.No.299,Qiushi Road,Tonglu Economic Development Zone,Tonglu County, Hangzhou,Zhejiang,310052,China.  
 3.No. 118, Haikang Road, Area C, Jianqiao Industrial Park, Dadukou District, Chongqing, 401325, China.  
**Address of Factory:**  
**Equipment Under Test (EUT):**  
**EUT Name:** NETWORK CAMERA  
**Model No.:** DS-2CV2141G2-IDW  
**Add Model No.:** DS-2CV2141G2-IDWUHK  
**Standard(s) :** FCC Rules 47 CFR §2.1091  
 KDB447498 D01 General RF Exposure Guidance v06  
**Date of Receipt:** 2022-03-30  
**Date of Test:** 2022-04-22 to 2022-04-22  
**Date of Issue:** 2022-05-06

<b>Test Result:</b>	<b>Pass*</b>
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\* In the configuration tested, the UT complied with the standards specified above.



Eric Lin  
 Laboratory Manager



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Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2022-05-06		Original

<b>Authorized for issue by:</b>				
		<i>Pawn. Liu</i>		
		<b>Pawn.Liu/Project Engineer</b>		
		<i>Eric Lin</i>		
		<b>Eric Lin/Reviewer</b>		



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### 3 General Information

#### 3.1 General Description of E.U.T.

Power supply:	DC 12V by Adapter ,0.5A,6W
---------------	----------------------------

#### 3.2 Technical Specifications

2.4GHz

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:	Dipole Antenna
Antenna Gain:	Antenna 1:1.85dBi (Provided by the manufacturer) Antenna 2: 1.85dBi (Provided by the manufacturer) Directional Gain: 4.83dBi



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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.

Company Number: 2324E

• **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 <sup>2</sup> )	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 KSCR220300040801

2.4GHz

Test Mode	Frequency (MHz)	Antenna 1 Power[dBm]	Antenna 2 Power[dBm]	MIMO Power[dBm]	Antenna 1 Power[mW]	Antenna 2 Power[mW]	MIMO Power[mW]
11B	2412	14.36	12.98	NA	27.29	19.86	N/A
11B	2437	14.79	14.84	NA	<b>30.13</b>	<b>30.48</b>	N/A
11B	2462	14.41	14.64	NA	27.61	29.11	N/A
11G	2412	14.00	13.85	NA	25.12	24.27	N/A
11G	2437	13.68	14.06	NA	23.33	25.47	N/A
11G	2462	13.12	13.74	NA	20.51	23.66	N/A
11N20MIMO	2412	13.94	13.85	16.91	24.77	24.27	49.09
11N20MIMO	2437	13.50	13.86	16.69	22.39	24.32	46.67
11N20MIMO	2462	12.98	13.55	16.28	19.86	22.65	42.46
11N40MIMO	2422	14.19	14.33	17.27	26.24	27.10	<b>53.33</b>
11N40MIMO	2437	13.87	14.18	17.04	24.38	26.18	50.58
11N40MIMO	2452	13.59	14.16	16.89	22.86	26.06	48.87



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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/cm<sup>2</sup>

For 2.4G WiFi –Antenna1:

The max. antenna gain is		1.85	dBi		
Max. Conducted Power P(mW)	Gain in Linear Scale G	Operation Distance R(cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	Result
30.13	1.531	20	0.00918	1	Pass

For 2.4G WiFi –Antenna2:

The max. antenna gain is		1.85	dBi		
Max. Conducted Power P(mW)	Gain in Linear Scale G	Operation Distance R(cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	Result
30.48	1.531	20	0.00928	1	Pass

In MIMO mode:

Two antennas can transmit simultaneously and they are correlated.

The max. antenna gain is		4.83	dBi		
Max. Conducted Power P(mW)	Gain in Linear Scale G	Operation Distance R(cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	Result
53.33	3.041	20	0.03226	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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