

## 1 Cover Page

# **FCC MPE REPORT**

<b>Application No.:</b>	SHEM1609006144CR
<b>Applicant:</b>	Hangzhou Hikvision Digital Technology Co., Ltd
<b>FCC ID:</b>	2ADTD-I002Q00
<b>IC:</b>	20199-I002Q00
<b>Equipment Under Test (EUT):</b>	
<b>NOTE:</b> The following sample(s) was/were submitted and identified by the client as	
<b>Product Name:</b>	Network Camera
<b>Model No.(EUT):</b>	DS-2CV2Q01FD-IW
<b>Add Model No.:</b>	DS-2CV2Q21FD-IW; DS-2CV2Q21FD-IW/32G-T; DS-2CV2Q21FD-IW/64G-T; DS-2CV2Q01FD-IW/16G-T; DS-2CV2Q01FD-IW/32G-T; DS-2CV2Q01FD-IW/64G-T; DS-2CV2Q21FD-IW/16G-T
<b>Standards:</b>	FCC Rules 47 CFR §2.1091 KDB447498 D01 General RF Exposure Guidance v06 RSS-102 Issue 5 (March 2015)
<b>Date of Receipt:</b>	2016-09-14
<b>Date of Test:</b>	2017-06-06 to 2017-06-20
<b>Date of Issue:</b>	2017-06-29
<b>Test Result:</b>	<b>Pass*</b>

\* In the configuration tested, the EUT detailed in this report complied with the standards specified above.



**Parlam Zhan**  
**E&E Section Manager**  
**SGS-CSTC (Shanghai) Co., Ltd.**

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.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

## 2 Version

Revision Record				
Version	Chapter	Date	Modifier	Remark
00	/	2017-06-29	/	Original

Authorized for issue by:				
Engineer		Vincent Zhu		Vincent Zhu
Reviewer		Eddy Zong		Eddy Zong

### **3 Contents**

	Page
<b>1 COVER PAGE</b>	<b>1</b>
<b>2 VERSION</b>	<b>2</b>
<b>3 CONTENTS</b>	<b>3</b>
<b>4 GENERAL INFORMATION</b>	<b>4</b>
4.1 CLIENT INFORMATION	4
4.1 GENERAL DESCRIPTION OF E.U.T	4
4.2 TECHNICAL SPECIFICATIONS	4
4.3 TEST LOCATION	5
4.4 TEST FACILITY	5
<b>5 TEST STANDARDS AND LIMITS</b>	<b>6</b>
5.1 FCC RADIOFREQUENCY RADIATION EXPOSURE LIMITS:	6
<b>6 MEASUREMENT AND CALCULATION</b>	<b>7</b>
6.1 MAXIMUM TRANSMIT POWER	7
6.2 MPE CALCULATION	8
<b>7 EUT CONSTRUCTIONAL DETAILS</b>	<b>8</b>

## 4 General Information

### 4.1 Client Information

Applicant:	Hangzhou Hikvision Digital Technology Co., Ltd.
Address of Applicant:	No. 555 Qianmo Road, Binjiang District, Hangzhou 310052, China
Manufacturer:	Hangzhou Hikvision Digital Technology Co.
Address of Manufacturer:	No. 555 Qianmo Road, Binjiang District, Hangzhou 310052, China
Factory:	1. Hangzhou Hikvision Technology Co., Ltd. 2. Hangzhou Hikvision Electronics Co., Ltd.
Address of Factory:	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.

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

Product Description:	Fixed product with Enternet port and WiFi monitor function
Rated Input:	DC 5V 1A
Test Voltage:	AC 120V 60Hz for Adapter
Rated Input:	AC 100~240V, 50/60Hz 0.3A
Rated Output:	DC 5V 1.0A
Cable length:	AC port: 2 wires DC port: 100 cm

### 4.2 Technical Specifications

Operation Frequency:	802.11 b/g/n(HT20): 2412MHz-2462MHz 802.11 n(HT40): 2422MHz-2452MHz
Modulation Technique:	02.11 b DSSS(CCK, DQPSK, DBPSK) 802.11 g/n(HT20)/n(HT40) OFDM(64QAM, 16QAM, QPSK, BPSK)
Data Rate:	802.11 b/g/n(HT20): 11 802.11 n(HT40) 7
Number of Channel:	802.11b: 1/2/5.5/11Mbps, 802.11g: 6/9/12/18/24/36/48/54Mbps 802.11n: MCS0-7
Antenna Type:	Integral Antenna
Antenna Gain:	2.4 dBi

#### **4.3 Test Location**

All tests were performed at:

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.  
588 West Jindu Road, Xinqiao, Songjiang, 201612 Shanghai, China  
Tel: +86 21 6191 5666  
Fax: +86 21 6191 5678

#### **4.4 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.

- FCC – Registration No.: 402683**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered and fully described in a report filed with the Federal Communications Commission (FCC). The acceptance letter from the FCC is maintained in our files. Registration No.: 402683.

- 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-3868, C-4336, T-2221, G-830 respectively.

## 5 Test Standards and Limits

### 5.1 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

## 6 Measurement and Calculation

### 6.1 Maximum transmit power

The Power Data is based on the RF Test Report SHEM160900614403.

Test Mode	Test Channel	Power[dBm]	Power[mW]	Limit[dBm]	Verdict
11B	2412	Ant1	38.64	30	PASS
11B	2437	Ant1	52.24	30	PASS
11B	2462	Ant1	49.43	30	PASS
11G	2412	Ant1	149.28	30	PASS
11G	2437	Ant1	<b>197.24</b>	30	PASS
11G	2462	Ant1	186.21	30	PASS
11N20SISO	2412	Ant1	117.49	30	PASS
11N20SISO	2437	Ant1	150.31	30	PASS
11N20SISO	2462	Ant1	146.89	30	PASS
11N40SISO	2422	Ant1	88.72	30	PASS
11N40SISO	2437	Ant1	96.16	30	PASS
11N40SISO	2452	Ant1	96.83	30	PASS

## 6.2 MPE Calculation

The Max Conducted Peak Output Power is 22.95dBm (197.24 mW);

The best case gain of the antenna is 2.4dBi. 2.4dB logarithmic terms convert to numeric result is nearly 1.74.

For FCC:

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

Note:

- 1) P (Watts) = Power Input to antenna =  $10^{\frac{dBm}{10}} / 1000$
- 2) G (Antenna gain in numeric) =  $10^{\frac{dBi}{10}}$  (Antenna gain in dBi /10)
- 3) R = distance to the center of radiation of antenna (in meter) = 20cm
- 4) MPE limit = 1mW/cm<sup>2</sup>

$$S = \frac{PG}{4R^2\pi} = \frac{197.24 \times 1.74}{4 \times 400 \times 3.14} = 0.068 \text{ mW/cm}^2$$

So the device is exclusion from SAR test.

## 7 EUT Constructional Details

Refer to the < External Photos > & < Internal Photos >.

**--End of the Report--**