1 Cover Page

RF Exposure Evaluation Report

Application No.:	SHEM2004003051CR
FCC ID:	2ADTD-KH9510-WTE1
IC:	20199-KH9510WTE1
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., Ltd.
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. 3. Chongqing Hikvision technology Co., Ltd. 4.Hangzhou Hikvision Digital Technology Co., Ltd
Address of Factory:	1. No. 700, Dongliu Road, Binjiang District, Hangzhou City, 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 4. No. 555, Qianmo Road, Binjiang District, Hangzhou City, Zhejiang Province,China
Equipment Under Test (EUT):	
EUT Name:	IP Video Intercom Indoor Station
Model No.:	DS-KH9310-WTE1, DS-KH9310-WTE1UHK, DS-KH9310-WTE1CKV, DS-KH9310-WTE1UVS, DS-KH9310-WTE1KVO, DS-KH9310-WTE1HUN, DS-KH9510-WTE1, DS- KH9510-WTE1UHK, DS-KH9510-WTE1CKV, DS-KH9510-WTE1UVS, DS-KH9510-WTE1KVO, DS-KH9510-WTE1HUN
Trade mark:	HIKVISION
Standard(s) :	FCC Rules 47 CFR §2.1091 KDB447498 D01 General RF Exposure Guidance v06 RSS-102 Issue 5 (March 2015)
Date of Receipt:	2020-04-22
Date of Test:	2020-04-30 to 2020-05-13
Date of Issue:	2020-05-15
Test Result:	**Pass***

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

Parlam Zhan
E&E Section Manager

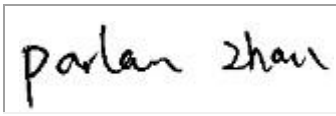
The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant 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.

Note:

For FCC Mode No: DS-KH9310-WTE1, DS-KH9510-WTE1, DS-KH9310-WTE1UHK, DS-KH9310-WTE1CKV, DS-KH9310-WTE1UVS, DS-KH9310-WTE1KVO, DS-KH9310-WTE1HUN, DS- KH9510-WTE1UHK, DS-KH9510-WTE1CKV, DS-KH9510-WTE1UVS, DS-KH9510-WTE1KVO, DS-KH9510-WTE1HUN

For IC Mode No: DS-KH9510-WTE1UHK, DS-KH9510-WTE1CKV, DS-KH9510-WTE1, DS-KH9310-WTE1UHK, DS-KH9310-WTE1

Revision Record			
Version	**Description**	**Date**	**Remark**
00	Original	2020-05-15	/

Authorized for issue by:				
				
		Micheal Niu / Project Engineer		
				
		Parlam Zhan / Reviewer		

2 Contents

Page

3 General Information

3.1 General Description of E.U.T.

Power supply:	12V⎓1A PoE(38-57V)⎓0.35A

3.2 Technical Specifications

Antenna Gain:	DS-KH9510-WTE1: 4.61dBi; DS-KH9310-WTE1: 5.01dBi
Antenna Type:	FPC Antenna
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

3.3 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

3.4 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 17025:2017 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.

• NVLAP (LAB CODE: 201034-0)

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP).

• FCC (Designation Number: CN5033)

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

• ISED (CAB Identifier: CN0020)

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. EMC Laboratory has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory.

• 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

4.2 IC Radiofrequency radiation exposure limits:

According to RSS-102 section 2.5.2, RF exposure evaluation is required if the separation distance between the user and/or bystander and the device's radiating element is greater than 20 cm, except when the device operates as follows:

below 20 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 1 W (adjusted for tune-up tolerance);

• at or above 20 MHz and below 48 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than $4.49/f^{0.5}$ W (adjusted for tune-up tolerance), where f is in MHz;

• at or above 48 MHz and below 300 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 0.6 W (adjusted for tune-up tolerance);

• at or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than $1.31 \times 10^{-2}\ f^{0.6834}$ W (adjusted for tune-up tolerance), where f is in MHz;

• at or above 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 5 W (adjusted for tune-up tolerance).

For 2.4G device, the limit of worse case is 2.68 W

5 Measurement and Calculation

5.1 Maximum transmit power

The Power Data is based on the RF Test Report SHEM200400305101

Test Mode	Test Channel	Ant	Power [dBm]	Power [mW]
11B	2412	Ant1	13.54	22.59
11B	2437	Ant1	13.86	**24.32**
11B	2462	Ant1	13.66	23.23
11G	2412	Ant1	12.25	16.79
11G	2437	Ant1	12.84	19.23
11G	2462	Ant1	12.89	19.45
11N20SISO	2412	Ant1	12.22	16.67
11N20SISO	2437	Ant1	12.77	18.92
11N20SISO	2462	Ant1	12.79	19.01
11N40SISO	2422	Ant1	11.15	13.03
11N40SISO	2437	Ant1	11.40	13.80
11N40SISO	2452	Ant1	11.51	14.16

5.2 MPE Calculation

For FCC:

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/cm²

For Model No.: DS-KH9510-WTE1

The max. antenna gain is 4.61 dBi

Max. Conducted Power P(mW)	Gain in Linear Scale G	Operation Distance R(cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)	Result
24.32	2.891	20	0.01399	1	Pass

For Model No.: DS-KH9310-WTE1

The max. antenna gain is 5.01 dBi

Max. Conducted Power P(mW)	Gain in Linear Scale G	Operation Distance R(cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)	Result
24.32	3.170	20	0.01534	1	Pass

For IC:

Model No: DS-KH9510-WTE1

E.I.R.P.= P*G= 0.02432×2.891=0.07W＜2.68W

Model No: DS-KH9310-WTE1

E.I.R.P.= P*G= 0.02432×3.17=0.08W＜2.68W

So the device is exclusion from SAR test.

--End of the Report--