1 Cover Page

RF Exposure Evaluation Report

Application No.:	SHEM1912019946CR
FCC ID:	2ADTD-K1T672MW
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.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. 555, Qianmo Road, Binjiang District, Hangzhou City, Zhejiang Province,China
Equipment Under Test (EUT):	
EUT Name:	Face Recognition Terminal
Model No.:	DS-K1T672MW
Add Model No.:	DS-K1T672M, DS-K1T672DW, DS-K1T672D, DS-K5672MW-Z, DS-K5672M-Z, DS-K1T672MWUHK, DS-K1T672MWCKV, DS-K1T672MWUVS, DS-K1T672MWKVO, DS-K1T672MWHUN, DS-K1T672MUHK, DS-K1T672MCKV, DS-K1T672MUVS, DS-K1T672MKVO, DS-K1T672MHUN, DS-K5672M-ZUHK, DS-K5672M-ZCKV, DS-K5672M-ZUVS, DS-K5672M-ZKVO, DS-K5672M-ZHUN
Standard(s) :	FCC Rules 47 CFR §2.1091 KDB447498 D01 General RF Exposure Guidance v06
Date of Receipt:	2019-12-20
Date of Test:	2019-12-26 to 2020-01-13
Date of Issue:	2020-01-21

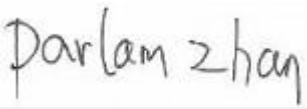
Test Result:	**Pass***

* 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.

Revision Record			
Version	**Description**	**Date**	**Remark**
00	Original	2020-01-21	/

Authorized for issue by:				
				
		Vincent Zhu /Project Engineer		
				
		Parlam Zhan /Reviewer		

2 Contents

3 General Information

3.1 General Description of E.U.T.

Power supply:	DC 12V 2A
Test voltage:	AC 120V 60Hz

3.2 Technical Specifications

2.4G WiFi

Antenna Gain	2.8dBi
Antenna Type	Integral 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

13.56MHz:

Antenna Type	Loop antenna
Modulation Type	ASK
Number of Channels	1
Operation Frequency	13.56MHz

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. Test Firm Registration Number: 479755.

• 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. ISED#: 8617A.

• 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 range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f2)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

Note:Limit for 13.56MHz is 60.77 V/m
Limit for 2.4GHz is 1.0 mW/cm^2

5 Measurement and Calculation

5.1 Maximum transmit power

The Power Data is based on the RF Test Report SHEM191201994602 & SHEM191201994603

Test Mode	Test Channel	Ant	Power [dBm]	Power [mW]
11B	2412	Ant1	13.57	22.75
11B	2437	Ant1	14.45	27.86
11B	2462	Ant1	15.23	**33.34**
11G	2412	Ant1	10.44	11.07
11G	2437	Ant1	11.03	12.68
11G	2462	Ant1	11.71	14.83
11N20SISO	2412	Ant1	9.39	8.69
11N20SISO	2437	Ant1	10.43	11.04
11N20SISO	2462	Ant1	11.29	13.46
11N40SISO	2422	Ant1	9.34	8.59
11N40SISO	2437	Ant1	9.95	9.89
11N40SISO	2452	Ant1	10.48	11.17

13.56MHz: 57.31dBuV/m@ 3m

@20cm=@3m+40*log(3/0.02)=144.35dBuV/m

5.2 MPE Calculation

For WiFi:

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

The max. antenna gain is 2.8 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
33.34	1.905	20	0.01264	1	Pass

For 13.56MHz: 144.35dBuV/m@20cm=16.5V/m< 60.77 V/m.

13.56MHz and WiFi modules can simultaneous transmitting, so the maximum rate of MPE is 16.5/60.77+0.01264/1.0 =0.284<=1.0. according to the KDB447498 section 7.2 determine the device is exclusion from SAR test.

--End of the Report--