1 Cover Page

RF Exposure Evaluation Report

Application No.:	SHEM1903011461CR
FCC ID:	2ADTD-K1T607TMFW
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 310052, China
Equipment Under Test (EUT):	
EUT Name:	Face Recognition Terminal
Model No.:	DS-K1T607TMFW, DS-K1T607MFW
Add Model No.:	Refer to Page 2
Standard(s) :	FCC Rules 47 CFR §2.1091 KDB447498 D01 General RF Exposure Guidance v06
Date of Receipt:	2019-03-12
Date of Test:	2019-03-15 to 2019-03-18
Date of Issue:	2019-04-18
Test Result:	**Pass***

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

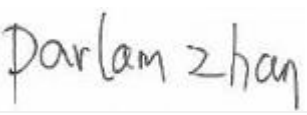
Parlam Zhan
E&E Section Manager

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 writing.

Add Model No.:

DS-K1T607TMW,DS-K1T607TMF,DS-K1T607TM,DS-K1T607PMFW,DS-K1T607PMW,DS-K1T607ATMFW,DS-K1T607ATMW,DS-K1T607ATMF,DS-K1T607ATM,DS-K1T607APMFW,DS-K1T607APMW,DS-K1T607TMUHK,DS-K1T607TMCKV,DS-K1T607TMUVS,DS-K1T607TMKVO,DS-K1T607TMHUN,DS-K1T607TMFUHK,DS-K1T607TMFCKV,DS-K1T607TMFUVS,DS-K1T607TMFKVO,DS-K1T607TMFHUN,DS-K1T607MW,DS-K1T607MF,DS-K1T607M,DS-K1T607AMFW,DS-K1T607AMW,DS-K1T607AMF,DS-K1T607AM,DS-K1T607MUHK,DS-K1T607MCKV,DS-K1T607MUVS,DS-K1T607MKVO,DS-K1T607MHUN,DS-K1T607MFUHK,DS-K1T607MFCKV,DS-K1T607MFUVS,DS-K1T607MFKVO,DS-K1T607MFHUN

Revision Record			
Version	**Description**	**Date**	**Remark**
00	Original	2019-04-18	/

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 by AC Adapter
Test voltage:	AC 120V 60Hz

2.4GWiFi:

Antenna Gain	3.05 dBi
Antenna Type	PCB 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

3.2 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

3.3 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.

• NVLAP (Certificate No. 201034-0)

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. is accredited by the National Voluntary Laboratory Accreditation Program(NVLAP). Certificate No. 201034-0.

• FCC –Designation Number: CN5033

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

Designation Number: CN5033. Test Firm Registration Number: 479755.

• Innovation, Science and Economic Development Canada

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

IC Registration No.: 8617A-1. CAB identifier: CN0020.

• 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)
1.34 MHz -30 MHz	*180/f^2	30
30 MHz -300 MHz	0.2	30
300MHz~1.5GHz	f/1500	30
1.5GHz~100GHz	1.0	30

Note: f = frequency in MHz * = Plane-wave equivalent power density

For 13.56MHz band, the limit of worse case is 0.98mW/cm^2

For 2.4GHz band, the limit 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 SHEM190301146101& SHEM190301146102

2.4GWiFi:

2Test Mode	Test Channel	Ant	Level [dBm]	Power [dBm]	Power [mW]
11B	2412	Ant1	16.13	16.13	41.02
11B	2437	Ant1	16.72	16.72	46.99
11B	2462	Ant1	16.92	16.92	**49.20**
11G	2412	Ant1	14.87	14.87	30.69
11G	2437	Ant1	15.54	15.54	35.81
11G	2462	Ant1	15.72	15.72	37.33
11N20SISO	2412	Ant1	14.33	14.33	27.10
11N20SISO	2437	Ant1	14.98	14.98	31.48
11N20SISO	2462	Ant1	15.18	15.18	32.96
11N40SISO	2422	Ant1	12.95	12.95	19.72
11N40SISO	2437	Ant1	13.34	13.34	21.58
11N40SISO	2452	Ant1	13.51	13.51	22.44

13.56MHz:

Frequency (MHz)	Model	Level (dBuV/m)	Output Power (dBm)	Output Power (mW)
13.56	DS-K1T607TMFW	57.98	-37.32	0.00019
	DS-K1T607MFW	61.25	-34.05	0.00039

5.2 MPE Calculation

For FCC:

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

Note:

1) P (Watts)
2) G (Antenna gain in numeric)
3) R = distance to the center of radiation of antenna (in meter) = 20cm
4) MPE limit = 1mW/cm²

The max conducted output power is 49.2 mW .
The best case gain of the antenna 3.05 dBi. 3.05dB logarithmic terms convert to numeri result is nearly 2.02 .

So, $S=\frac{PG}{4R^2\pi}$ = 0.02 mW/cm^2 ＜1mW/cm²

For 13.56MHz: The Max E.I.R.P is 0.00039 mW.

$S=\frac{PG}{4R^2\pi}$ =0.00039/(4*400*3.14)=$7.76*10^{-8}$$mW/cm^2$

13.56MHz and WiFi modules can simultaneous transmitting, so the maximum rate of MPE is (0.02/1)+($7.76*10^{-8}$/0.98)=0.02<=1.0. according to the KDB447498 section 7.2 determine the device is exclusion from SAR test.

--End of the Report--