1 Cover Page

RF MPE REPORT

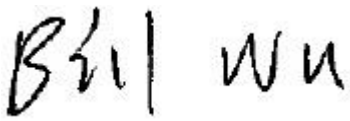
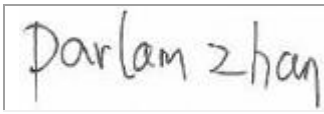
Application No.:	SHEM1811001281CR
FCC ID:	2ADTD-DS10001
Applicant:	Hangzhou Hikvision Digital Technology Co., Ltd.
Address of Applicant:	No.555 Qianmo Road, Binjiang District, Hangzhou 310052, China
Manufacturer:	Hangzhou Hikvision Digital Technology Co., Ltd.
Address of Manufacturer:	No.555 Qianmo Road, Binjiang District, Hangzhou 310052, China
Factory:	1.Hangzhou Hikvision Technology Co., Ltd. 2.Hangzhou Hikvision Electronics Co., Ltd.
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
Equipment Under Test (EUT):	
EUT Name:	Digital Signage
Model No.:	DS-D6055FL-B/S,
Add Model No.:	DS-D6055TL-B/S, DS-D6055FL-B/SF, DS-D6055FL-B/SC
Standard(s) :	FCC Rules 47 CFR §2.1091 KDB447498 D01 General RF Exposure Guidance v06
Date of Receipt:	2018-11-28
Date of Test:	2018-11-29 to 2018-12-03
Date of Issue:	2018-12-05
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	2018-12-06	/

Authorized for issue by:				
				
		Bill Wu / Project Engineer		
				
		Parlam Zhan /Reviewer		

2 Contents

3 General Information

3.1 General Description of E.U.T.

Power supply:	100-240V AC, 50/60Hz, 2.0A
Test voltage:	AC 120V 60Hz
Cable:	AC Cable 1.5m

3.2 Technical Specifications

BT

Antenna Gain	1.13dBi
Antenna Type	PCB Antenna
Channel Spacing	1MHz
Modulation Type	GFSK, π/4DQPSK, 8DPSK
Number of Channels	79
Operation Frequency	2402MHz to 2480MHz
Spectrum Spread Technology	Frequency Hopping Spread Spectrum(FHSS)

BLE

Antenna Gain	1.13dBi
Antenna Type	PCB Antenna
Channel Spacing	2MHz
Modulation Type	GFSK
Number of Channels	40
Operation Frequency	2402MHz to 2480MHz

2.4G WiFi

Antenna Gain	1.13dBi
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

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

No tests were sub-contracted.

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 17025:2005 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.

• 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-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

5 Measurement and Calculation

5.1 Maximum transmit power

The Power Data is based on the RF Test Report SHEM181100128101 & SHEM181100128102 & SHEM181100128103.

BT

Test Mode	Test Frequency (MHz)	Output Power (dBm)	Reading Power (mW)
DH5	2402	0.77	1.19
DH5	2441	3.44	**2.21**
DH5	2480	3.16	2.07
2DH5	2402	-1.79	0.66
2DH5	2441	1.53	1.42
2DH5	2480	1.47	1.40
3DH5	2402	-1.58	0.70
3DH5	2441	1.91	1.55
3DH5	2480	1.85	1.53

BLE

Test Mode	Test Frequency (MHz)	Output Power (dBm)	Reading Power (mW)
BLE	2402	0.62	1.15
	2442	2.17	**1.65**
	2480	2.03	1.60

2.4G WiFi

Test Mode	Test Channel	Power [dBm]	Power [mW]
11B	2412	13.56	22.70
11B	2437	15.04	31.92
11B	2462	15.73	**37.41**
11G	2412	11.97	15.74
11G	2437	13.71	23.50
11G	2462	14.64	29.11
11N20SISO	2412	11.04	12.71
11N20SISO	2437	12.83	19.19
11N20SISO	2462	13.80	23.99
11N40SISO	2422	10.23	10.54
11N40SISO	2437	11.19	13.15
11N40SISO	2452	11.84	15.28

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) =Power Input to antenna $=10^{\frac{dBm}{10}}$ / 1000
2) G (Antenna gain in numeric) = 10^ (Antenna gain in dBi /10)
3) R = distance to the center of radiation of antenna (in meter) = 20cm
4) MPE limit = 1mW/cm²

For BT
The Max Conducted Peak Output Power is 2.21mW
The best case gain of the antenna is 1.31dBi. 1.31dB logarithmic terms convert to numeric result is nearly 1.35.

$$S=\frac{PG}{4R^2\pi}=\frac{2.21x1.35}{4\times400\times3.14}=0.0006\ mW/cm^2$$

For 2.4G WiFi
The Max Conducted Peak Output Power is 37.41mW
The best case gain of the antenna is 1.31dBi. 1.31dB logarithmic terms convert to numeric result is nearly 1.35.

$$S=\frac{PG}{4R^2\pi}=\frac{37.41x1.35}{4\times400\times3.14}=0.01\ mW/cm^2$$

The BT and the DTS modules can simultaneous transmitting at frequency 2.4GHz band.But the maximum rate of MPE is $\frac{0.0006}{1.0}+\frac{0.01}{1.0}$ =0.01<=1.0. according to the KDB447498 section 7.2 determine the device is exclusion from SAR test.

--End of the Report--