

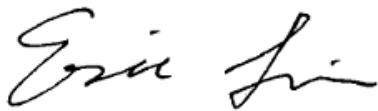
1 Cover Page

RF Exposure Evaluation Report

Application No.: KSCR2110000161AT
FCC ID: 2ADTD-AEC8PRO
Applicant: Hangzhou Hikvision Digital Technology Co.,Ltd.
Address of Applicant: No. 555, Qianmo Road, Binjiang District, Hangzhou
Manufacturer: Hangzhou Hikvision Digital Technology Co.,Ltd.
Address of Manufacturer: No. 555, Qianmo Road, Binjiang District, Hangzhou
Factory: Hangzhou Ymir Enterprise.,Ltd.
Address of Factory: No.356, Hongda Rd, Xiaoshan District, Hangzhou City
Equipment Under Test (EUT):
EUT Name: DashCam
Model No.: AE-DC8012-C8,AE-DC8012-C8+,AE-DC8012-C8P,AE-DC8212-C8PRO,AE-DC8212-C8PRO+,AE-DC8222-C8PRO,AE-DC8222-C8PRO+,AE-DC8232-C8S,AE-DCXXX2-CXX ("X" =0-9, A-Z, a-z, -, + or space)^a
Trade mark: HIKVISION
Standard(s) : FCC Rules 47 CFR §2.1091
KDB447498 D01 General RF Exposure Guidance v06
Date of Receipt: 2021-10-14
Date of Test: 2021-10-19 to 2021-11-08
Date of Issue: 2021-11-08

Test Result:	Pass*
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* In the configuration tested, the EUT complied with the standards specified above.



Eric Lin
Laboratory 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.



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Revision Record			
Version	Description	Date	Remark
00	Original	2021-11-08	/

Authorized for issue by:			
		Damon Zhou	
		Damon Zhou / Project Engineer	
		Eric Lin	
		Eric Lin / Reviewer	



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3 General Information

3.1 General Description of E.U.T.

Power supply:	DC 5V by Car cigarette lighter transverter Car cigarette lighter transverter 1# information: Model: PYS-CAC20002-01 Input: DC 12V-24V 2.5A USB1 Output: 5V,2.1A USB2 Output: 5V,1.0A Car cigarette lighter transverter 2# information: Model: TC16A-0503100D Input: DC 12V-24V Output: 5V,3.1A
Cable:	DC/DC charger cable (Unshielded, 392cm)

3.2 Technical Specifications

2.4G

Antenna Gain:	1.5dBi (Provided by the manufacturer)
Antenna Type:	Chip 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



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5G

Operation Frequency:	Band	Mode	Frequency Range(MHz)	Number of channels
	UNII Band I	802.11a/n(HT20)	5180-5240	4
		802.11n(HT40)	5190-5230	2
	UNII Band III	802.11a/n(HT20)	5745-5825	5
		802.11n(HT40)	5755-5795	2
Modulation Type:	802.11a: OFDM (64QAM, 16QAM, QPSK, BPSK) 802.11n: OFDM (BPSK, QPSK, 16QAM, 64QAM)			
Date Rate:	802.11a:6/9/12/18/24/36/48/54Mbps 802.11n: MCS0-MCS7			
Channel Spacing:	802.11a/n(HT20): 20MHz 802.11n(HT40): 40MHz			
Antenna Gain:	2.50dBi (Provided by manufacturer)			
Antenna Type:	Chip Antenna			



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3.3 Test Location

All tests were performed at:

Compliance Certification Services (Kunshan) Inc.

No.10 Weiye Rd, Innovation park, Eco&Tec, Development Zone, Kunshan City, Jiangsu, China.

Tel: +86 512 5735 5888 Fax: +86 512 5737 0818

No tests were sub-contracted.

3.4 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

• **CNAS (No. CNAS L4354)**

CNAS has accredited Compliance Certification Services (Kunshan) Inc. 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.

• **A2LA (Certificate No. 2541.01)**

Compliance Certification Services (Kunshan) Inc. is accredited by the American Association for Laboratory Accreditation (A2LA). Certificate No. 2541.01.

• **FCC (Designation Number: CN1172)**

Compliance Certification Services Inc. has been recognized as an accredited testing laboratory.

Designation Number: CN1172.

• **ISED (CAB Identifier: CN0072)**

Compliance Certification Services (Kunshan) Inc. has been recognized by Innovation, Science and Economic Development (ISED) Canada as an accredited testing laboratory.

CAB Identifier: CN0072.

• **VCCI (Member No.: 1938)**

The 3m and 10m Semi-anechoic chamber and Shielded Room of Compliance Certification Services (Kunshan) Inc. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-20134, R-11600, C-11707, T-11499, G-10216 respectively.



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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 KSCR211000016101, KSCR211000016102

2.4GHz

Test Mode	Test Frequency (MHz)	Output Power (dBm)	Reading Power (mW)
11B	2412	18.72	74.47
11B	2437	18.56	71.78
11B	2462	18.25	66.83
11G	2412	22.55	179.89
11G	2437	22.36	172.19
11G	2462	22.13	163.31
11N20SISO	2412	22.42	174.58
11N20SISO	2437	22.29	169.43
11N20SISO	2462	22.06	160.69
11N40SISO	2422	23.03	200.91
11N40SISO	2437	22.90	194.98
11N40SISO	2452	22.74	187.93



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5GHz

Test Mode	Test Frequency (MHz)	Output Power (dBm)	Reading Power (mW)
11A	5180	15.61	36.39
11A	5200	15.60	36.31
11A	5240	15.82	38.19
11A	5745	13.73	23.60
11A	5785	13.40	21.88
11A	5825	13.64	23.12
11N20SISO	5180	13.61	22.96
11N20SISO	5220	13.62	23.01
11N20SISO	5240	13.79	23.93
11N20SISO	5745	12.48	17.70
11N20SISO	5785	12.20	16.60
11N20SISO	5825	12.51	17.82
11N40SISO	5190	10.88	12.25
11N40SISO	5230	13.63	23.07
11N40SISO	5755	12.84	19.23
11N40SISO	5795	12.83	19.19

5.2 MPE Calculation

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



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For 2.4G WiFi:

The max. antenna gain is		1.5	dB		
Max. Conducted Power P(mW)	Gain in Linear Scale G	Operation Distance R(cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Result
200.91	1.413	20	0.05646	1	Pass

For 5G WiFi:

The max. antenna gain is		2.5	dB		
Max. Conducted Power P(mW)	Gain in Linear Scale G	Operation Distance R(cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Result
38.19	1.778	20	0.01351	1	Pass

The 2.4GHz WiFi and 5GHz WiFi can't transmit simultaneously, according to the KDB447498 section 7.2 determine the device is exclusion from SAR test.

5.3 Conclusion

EUT complies with FCC Rules 47 CFR §2.1091 requirement.

--End of the Report--



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