

Compliance Certification Services (Kunshan)

Report No.: KSCR220500085002

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1 Cover Page

RF Exposure Evaluation Report

 Application No.:
 KSCR2205000850AT

 FCC ID:
 2AVYF-IPC-CX2F-C

 IC:
 25954-IPCCX2FC

Applicant: Hangzhou Huacheng Network Technology Co.,Ltd.

Address of Applicant: No.2930, Nanhuan Road, Binjiang District, Hangzhou, China

Manufacturer: Hangzhou Huacheng Network Technology Co.,Ltd.

Address of Manufacturer: No.2930, Nanhuan Road, Binjiang District, Hangzhou, China

Factory: Hangzhou Huacheng Network Technology Co.,Ltd.

Address of Factory: No.2930, Nanhuan Road, Binjiang District, Hangzhou, China

Equipment Under Test (EUT):

EUT Name: CONSUMER CAMERA

Model No.: IPC-C22FP-C

Add Model No.: IPC-C22FP-C-imou, IPC-C22FN-C-imou, IPC-C22FN-C, LC-TC3F,

IPC-TC22F-C-LC

For IC Model No.: IPC-C22FP-C-imou;IPC-C22FP-C;IPC-C22FN-C-imou;IPC-C22FN-C

Standard(s): FCC Rules 47 CFR §2.1091

KDB447498 D01 General RF Exposure Guidance v06

Date of Receipt: 2022-06-16

Date of Test: 2022-06-17 to 2022-06-23

Date of Issue: 2022-06-26

Test Result: Pass*

Eric Lin
EMC Laboratory Manager



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



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Revision Record					
Version	Chapter	Date	Modifier	Remark	
01		2022-06-26		Original	

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



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3 General Information

3.1 General Description of E.U.T.

Power supply:	DC 5V by Adapter Adapter 1: Model: A8-501000 Input: 100-240V~50/60Hz Output: 5V 1A
	Adapter 2: Model: A187-050100U-US1 Input: 100-240V~50/60Hz 200mA Output: 5V === 1A
Cable:	DC Cable 2m
Serial Number:	8D0673CYAZ25FC5
Firmware Version:	V2.800.0000000

3.2 Technical Specifications

Operation Frequency:	802.11b/g/n(HT20): 2412MHz to 2462MHz;802.11n(HT40): 2422MHz to 2452MHz		
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		
Channel Spacing:	5MHz		
Antenna Type:	Integral Antenna		
Antenna Gain:	2.84dBi (Provided by manufacturer)		
Date Rate:	802.11b:1/2/5.5./11Mbps 802.11g:6/9/12/18/24/36/48/54Mbps 802.11n:MCS0-MCS7		



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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.

Note:

1.SGS is not responsible for wrong test results due to incorrect information (e.g. max. clock frequency, highest internal frequency, antenna gain, cable loss, etc.) is provided by the applicant. (if applicable).

2.SGS is not responsible for the authenticity, integrity and the validity of the conclusion based on results of the data provided by applicant. (if applicable).

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.

• A2LA (Certificate No. 6332.01)

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. is accredited by the American Association for Laboratory Accreditation(A2LA).

FCC (Designation Number: CN1301)

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 Company Number: 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.



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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/cm²)	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



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5 Measurement and Calculation

5.1 Maximum transmit power

The Power Data is based on the RF Test Report KSCR220500085001

Test Mode	Test Channel	Power [dBm]	Power [mW]	
11B 2412		11.32	13.55	
11B	11B 2437 11B 2462		14.96	
11B			14.76	
11G	2412	9.18	8.28	
11G	2437	9.61	9.14	
11G	2462	9.57	9.06	
11N20SISO	2412	9.15	8.22	
11N20SISO	2437	9.60	9.12	
11N20SISO	2462	9.56	9.04	
11N40SISO	2422	10.02	10.05	
11N40SISO	2437	10.19	10.45	
11N40SISO	2452	10.23	10.54	



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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

The max. antenna gain is

2.84 dBi

Max. conducted Power P(mW)	Gain in Linear Scale G	Operation Distance R(cm)	Power Density (mW/cm ²)	Limit (mW/cm²)	Result
14.96	1.923	20	0.00572	1	Pass

For IC:

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 $1.31 \times 10^{-2} f0.6834$ W (adjusted for tune-up tolerance), where f is in MHz

E.I.R.P.=P*G=14.96 x 1.92=28.72mW=0.029W<2.68W

So the device is exclusion from SAR test.

-- End of the Report--



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