

1 Cover Page

RF MPE REPORT

Application No.: KSEM2109001552CR(SHEM2107007586CR)
FCC ID: SVN-MXVR4104
Applicant: ZHEJIANG DAHUA VISION TECHNOLOGY CO.,LTD.
Address of Applicant: No.1199, Bin'an Road, Binjiang District, Hangzhou, P.R. China
Manufacturer: ZHEJIANG DAHUA VISION TECHNOLOGY CO.,LTD.
Address of Manufacturer: No.1199, Bin'an Road, Binjiang District, Hangzhou, P.R. China
Equipment Under Test (EUT):
EUT Name: MOBILE VIDEO RECORDER
Model No.: DHI-MXVR4104-GCW
Add Model No: MxVRmnpq-abcd; DHI-MxVRmnpq-abcd;
DHI-DAE-MxVRmnpq-abcd (x=X or C or N or H;m=1,2,3,4,5,6,7,8,9;
n=0,1,2,3,4; pq=04,08,12,16,20; a=G, B or blank; b=C,F,A,E or blank;
c=W or blank; d= I or blank)
Standard(s) : FCC Rules 47 CFR §2.1091
KDB447498 D01 General RF Exposure Guidance v06
Date of Receipt: 2021-07-09
Date of Test: 2021-09-01 to 2021-09-02
Date of Issue: 2021-09-02

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

Eric Lin

Eric Lin

Eric Ehr

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	2021-09-02	/

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 6~36V by DC Battery
Serial Number:	7B06930PAJ6F215
Firmware version:	4.002.0000000.0
IMEI:	861075024229692

3.2 Technical Specifications

3G

Operation Frequency Band:	UMTS B2	
Operation Frequency	Band 2	TX: 1852.4~1907.6MHz; RX 1932.4~1987.6MHz
Modulation Type:	QPSK,BPSK	
Antenna Type:	Dipole Antenna	
Antenna Gain:	UMTS Band 2: 3.15dBi	

Note:

The antenna gain value is provided by the customer. The test lab will not be responsible for wrong test result due to incorrect information about antenna gain values.



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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 Canada (ISED) as an accredited testing laboratory.

Company Number: 2324E

- **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 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/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

Note: Limit for WCDMA B2 is 1mW/cm²

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5 Measurement and Calculation

5.1 Maximum transmit power

The Power Data is based on the RF Test Report KSEM210900155201.

WCDMA Band 2

ENV	Band: 2							Verdict	
	Network	Mode		Frequency (MHz)	Conducted Power (dBm)	Gain (dbi)	EIRP (dBm)		
		Subset					Result	Limit	
NTNV	RMC	12.2kbps RMC	1852.4	21.77	3.15	24.92	<=33.01	Pass	
			1880	21.66	3.15	24.81	<=33.01	Pass	
			1907.6	21.28	3.15	24.43	<=33.01	Pass	
	HSDPA	Subtest 1	1852.4	18.90	3.15	22.05	<=33.01	Pass	
		Subtest 2	1852.4	18.86	3.15	22.01	<=33.01	Pass	
		Subtest 3	1852.4	18.82	3.15	21.97	<=33.01	Pass	
		Subtest 4	1852.4	18.83	3.15	21.98	<=33.01	Pass	
		Subtest 1	1880	19.11	3.15	22.26	<=33.01	Pass	
		Subtest 2	1880	19.05	3.15	22.20	<=33.01	Pass	
		Subtest 3	1880	19.05	3.15	22.20	<=33.01	Pass	
		Subtest 4	1880	19.07	3.15	22.22	<=33.01	Pass	
		Subtest 1	1907.6	18.83	3.15	21.98	<=33.01	Pass	
		Subtest 2	1907.6	18.77	3.15	21.92	<=33.01	Pass	
		Subtest 3	1907.6	18.73	3.15	21.88	<=33.01	Pass	
		Subtest 4	1907.6	18.75	3.15	21.90	<=33.01	Pass	
	HSUPA	Subtest 1	1852.4	17.39	3.15	20.54	<=33.01	Pass	
		Subtest 2	1852.4	16.33	3.15	19.48	<=33.01	Pass	
		Subtest 3	1852.4	16.86	3.15	20.01	<=33.01	Pass	
		Subtest 4	1852.4	17.60	3.15	20.75	<=33.01	Pass	
		Subtest 5	1852.4	16.78	3.15	19.93	<=33.01	Pass	
		Subtest 1	1880	17.11	3.15	20.26	<=33.01	Pass	
		Subtest 2	1880	16.77	3.15	19.92	<=33.01	Pass	
		Subtest 3	1880	17.09	3.15	20.24	<=33.01	Pass	
		Subtest 4	1880	17.63	3.15	20.78	<=33.01	Pass	
		Subtest 5	1880	17.14	3.15	20.29	<=33.01	Pass	
		Subtest 1	1907.6	17.14	3.15	20.29	<=33.01	Pass	
		Subtest 2	1907.6	16.59	3.15	19.74	<=33.01	Pass	
		Subtest 3	1907.6	17.26	3.15	20.41	<=33.01	Pass	
		Subtest 4	1907.6	16.74	3.15	19.89	<=33.01	Pass	
		Subtest 5	1907.6	16.89	3.15	20.04	<=33.01	Pass	

Note1: EIRP=Conducted Power+Antenna Gain

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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

Band Information	Antenna Gain (dBi)	Gain in Linear Scale G	Operation Distance R(cm)	Max Tune-up power (dBm)	Max Tune-up power (mW)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Result
WCDMA Band 2	3.15	2.07	20	22	158.49	0.065	1	Pass

According to the KDB447498 section 7.2 determine the device is exclusion from SAR test.

--End of the Report--



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