

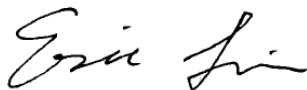
### 1 Cover Page

## RF Exposure Evaluation Report

**Application No.:** KSCR2208001345AT  
**FCC ID:** 2AXVM-HM-TS43  
**Applicant:** Hangzhou Microimage Software Co.,Ltd  
**Address of Applicant:** Room 313, Unit B, Building 2, 399 Danfeng Road, Xixing Subdistrict, Binjiang District, Hangzhou, Zhejiang  
**Manufacturer:** Hangzhou Microimage Software Co.,Ltd  
**Address of Manufacturer:** Room 313, Unit B, Building 2, 399 Danfeng Road, Xixing Subdistrict, Binjiang District, Hangzhou, Zhejiang  
**Factory:** Hangzhou Microimage Intelligent Technology Co., Ltd.  
**Address of Factory:** Floor 2, Building A1, 299 Qiushi Road, Tonglu Economic Development Zone, Tonglu County, Hangzhou City, Zhejiang Province  
**Equipment Under Test (EUT):**  
**EUT Name:** Thermal Monocular/Thermal Telescope  
**Model No.:** HM-TS43-25XG/W-FH25, HM-TS43-35XG/W-FH35, HM-TS46-35XG/W-FQ35, HM-TS46-50XG/W-FQ50, FH25, FH35, FQ35, FQ50  
**Trade Mark:** HIKMICRO  
**Standard(s) :** FCC Rules 47 CFR §2.1093  
KDB447498 D01 General RF Exposure Guidance v06  
**Date of Receipt:** 2022-08-02  
**Date of Test:** 2022-08-03 to 2022-08-11  
**Date of Issue:** 2022-08-12

<b>Test Result:</b>	<b>Pass*</b>
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\* In the configuration tested, the EUT complied with the standards specified above.



Eric Lin  
Laboratory Manager

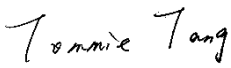
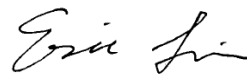


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Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2022-08-12		Original

<b>Authorized for issue by:</b>			
		 <hr/> <b>Tommie_Tang/Project Engineer</b>	
		 <hr/> <b>Eric Lin /Reviewer</b>	



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### 3 General Information

#### 3.1 General Description of E.U.T.

Power supply:	DC 5V by USB or DC 3.6V by rechargeable Li-ion battery Battery Model: HM-3632DC Voltage: 3.6V Capacity: 3200mAh Energy: 11.52Wh
Product Type:	<input checked="" type="checkbox"/> Portable device
	<input type="checkbox"/> Mobile device
	<input type="checkbox"/> Fixed device

#### 3.2 Details of E.U.T.

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:	FPC Antenna
Antenna Gain:	-1.3dBi (Provided by the manufacturer)



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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.

Note:

- 1.SGS is not responsible for wrong test results due to incorrect information (e.g., max. internal working 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 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 (Kunshan) 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 FCC Radio frequency radiation exposure limits

#### 4.1 FCC Radiofrequency radiation exposure limits:

a) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances  $\leq$  50 mm are determined by:

$[(\text{max power of channel})/(\text{min test separation distance})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$  for 1-g SAR and  $\leq 7.5$  for 10-g extremity SAR, where

- $f(\text{GHz})$  is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds

$$P_{\text{max}} \leq 3 \cdot D_{\text{min}} / \sqrt{f} = 3 \cdot 5 / \sqrt{2.462} = 9.56 \text{ mW}$$

The test exclusions are applicable only when the minimum test separation distance is  $\leq$  50 mm, and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is  $<$  5 mm, a distance of 5 mm according to 4.1 f) is applied to determine SAR test exclusion.

b) For 100 MHz to 6 GHz and test separation distances  $>$  50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following (also illustrated in Appendix B):<sup>32</sup>

1)  $\{[\text{Power allowed at numeric threshold for 50 mm in step a)}] + [(\text{test separation distance} - 50 \text{ mm}) \cdot (f(\text{MHz})/150)]\}$  mW, for 100 MHz to 1500 MHz

2)  $\{[\text{Power allowed at numeric threshold for 50 mm in step a)}] + [(\text{test separation distance} - 50 \text{ mm}) \cdot 10]\}$  mW, for  $>$  1500 MHz and  $\leq$  6 GHz

$$P_{\text{max}} \leq 3 / (\sqrt{f} / D_{\text{min}}) = 3 / (\sqrt{2.462} / 5) = 9.56 \text{ mW}$$



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## 5 Measurement and Calculation

### 5.1 Maximum transmit power

The Power Data is based on the RF Test Report KSCR220800134501.

Test Mode	Test Channel	Ant	Power [dBm]	Power [mW]
11B	2412	Ant1	7.04	5.06
11B	2437	Ant1	7.69	5.87
11B	2462	Ant1	7.87	<b>6.12</b>
11G	2412	Ant1	7.36	5.45
11G	2437	Ant1	7.78	6.00
11G	2462	Ant1	7.75	5.96
11N20SISO	2412	Ant1	7.29	5.36
11N20SISO	2437	Ant1	7.72	5.92
11N20SISO	2462	Ant1	7.70	5.89
11N40SISO	2422	Ant1	7.24	5.30
11N40SISO	2437	Ant1	7.43	5.53
11N40SISO	2452	Ant1	7.45	5.56

### 5.2 RF Exposure Calculation

The Max Conducted Output Power is 6.12 mW. The best case gain of the antenna is -1.3dBi.

-1.3dBi logarithmic terms convert to numeric result is nearly 0.74.

According to the formula. calculate the EIRP test result:

$$P = 6.12 \text{ mW} < 9.56\text{mW}$$

So, the device is to qualify for SAR test exemption, the exemption report is in lieu of the SAR report.

**--End of the Report--**



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