

# TEST REPORT

**Product Name** : QHD 4.0MP Wi-Fi Camera  
**Model Number** : R4M, R4S, R4C, R4P  
**FCC ID** : ZDER4M

**Prepared for** : ShenZhen Foscam Intelligent Technology Co., Ltd  
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**Report Number** : EDG2406070166E00303R  
**Date(s) of Tests** : June 07, 2024 to August 30, 2024  
**Date of issue** : August 30, 2024

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## 1. TEST RESULT CERTIFICATION

Applicant : ShenZhen Foscam Intelligent Technology Co., Ltd  
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 Manufacturer : ShenZhen Foscam Intelligent Technology Co., Ltd  
 Address : Room 902,Building 1B, Shenzhen International innovationValley, Xingke 1st Street, Nanshan District, Shenzhen,Guangdong, China, 518055.  
 Factory : ShenZhen Foscam Intelligent Technology Co., Ltd  
 Address : 701, 7th Floor, Building D, Guangming Port Intelligent Manufacturing Innovation Park, No. 8 Jinjun Road, Huangjiang Town, Dongguan, Guangdong, China,  
 EUT : QHD 4.0MP Wi-Fi Camera  
 Model Name : R4M, R4S, R4C, R4P  
 Trademark : FOSCAM

Measurement Procedure Used:

APPLICABLE STANDARDS	
STANDARD	TEST RESULT
§ 15.247(i), § 2.1093	PASS

The above equipment was tested by EMTEK(DONGGUAN) CO., LTD. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 (2013) and the energy emitted by the sample EUT tested as described in this report is in compliance with the requirements of FCC Rules FCC § 15.247(i), § 2.1093.

The test results of this report relate only to the tested sample identified in this report

Date of Test : June 07, 2024 to August 30, 2024

Prepared by : Warren Deng

Warren Deng /Editor

Reviewer : Tim Dong

Tim Dong /Supervisor

Approve & Authorized Signer : 

Sam Lv / Manager



## Modified History

Version	Report No.	Revision Date	Summary
	EDG2406070166E00303R	/	Original Report



## 2. EUT Specification

Characteristics	Description
<b>Product:</b>	QHD 4.0MP Wi-Fi Camera
<b>Model Number:</b>	R4M, R4S, R4C, R4P
<b>Sample:</b>	1#
<b>Data Rate:</b>	DSSS with DBPSK/DQPSK/CCK for 802.11b; OFDM with BPSK/QPSK/16QAM/64QAM for 802.11g/n;
<b>Modulation:</b>	DSSS, OFDM
<b>Operating Frequency Range(s) :</b>	2412-2462MHz for 802.11b/g/n(HT20); 2422-2452MHz for 802.11n(HT40); 5745-5825MHz for 802.11a/n(HT20); 5755-5795MHz for 802.11n(HT40);
<b>Transmit Power Max:</b>	UNII-3 Band:12.78 dBm(0.018967 W) 2412-2462MHz 16.86 dBm(0.048529 W)
<b>Antenna Gain:</b>	2.36 dBi for 2412-2462MHz 2.07 dBi for UNII-3 Band
<b>Power supply:</b>	DC 5V 1.5A from Adapter
<b>Evaluation applied:</b>	<input checked="" type="checkbox"/> MPE Evaluation <input type="checkbox"/> SAR Evaluation

### 3. Test Requirement:

## RF EXPOSURE EVALUATION

According to §15.247(i) and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

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:

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f_{(\text{GHz})}}] \leq 3.0$  for 1-g SAR and  $\leq 7.5$  for 10-g extremity SAR,<sup>24</sup> where

- $f_{(\text{GHz})}$  is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation<sup>25</sup>
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

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 5) in section 4.1 is applied to determine SAR test exclusion.

Routine SAR evaluation refers to that specifically required by § 2.1093, using measurements or computer simulation. When routine SAR evaluation is not required, portable transmitters with output power greater than the applicable low threshold require SAR evaluation to qualify for TCB approval. One antenna is available for the EUT. The minimum separation distance is 5mm.

## 4. Measurement Result

gain:	2.36	WIFI 2.4G FCC EMF							
Mode	Frequency (MHz)	Output Power (dBm)	E.I.R.P(dBm)	Target Power W/tolerance (dBm)	Max tune up power(dBm) tolerance	Max tuneup power(mW) tolerance	Power Density at R=20cm (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	Verdict
802.11b	2412	16.86	19.22	8±1	20	100.00	0.034255	1	PASS
	2437	16.22	18.58	9±1	19	79.43	0.027210	1	PASS
	2462	15.46	17.82	6±1	18	63.10	0.021614	1	PASS
802.11g	2412	16.56	18.92	7±1	19	79.43	0.027210	1	PASS
	2437	15.51	17.87	5±1	18	63.10	0.021614	1	PASS
	2462	14.95	17.31	6±1	18	63.10	0.021614	1	PASS
802.11n(HT 20)	2412	15.2	17.56	-1±1	18	63.10	0.021614	1	PASS
	2437	14.33	16.69	-1±1	17	50.12	0.017168	1	PASS
	2462	13.85	16.21	-2±1	17	50.12	0.017168	1	PASS
802.11n(HT 40)	2422	15.75	18.11	2±1	19	79.43	0.027210	1	PASS
	2437	14.15	16.51	-4±1	17	50.12	0.017168	1	PASS
	2452	13.69	16.05	-3±1	17	50.12	0.017168	1	PASS

gain:	UNII-3 Band: 2.07 dBi								
Mode	Frequency (MHz)	Output Power (dBm)	E.I.R.P(dBm)	Target Power W/tolerance (dBm)	Max tune up power(dBm) tolerance	Max tuneup power(mW) tolerance	Power Density at R=20cm (mW/cm2)	Limit (mW/cm2)	Verdict
802.11a	5745	12.78	14.85	14±1	15	31.62	0.010133	1	Pass
	5785	10.5	12.57	12±1	13	19.95	0.006393	1	Pass
	5825	11.41	13.48	13±1	14	25.12	0.008049	1	Pass
802.11n(HT 20)	5745	12.66	14.73	14±1	15	31.62	0.010133	1	Pass
	5785	10.37	12.44	12±1	13	19.95	0.006393	1	Pass
	5825	11.15	13.22	13±1	14	25.12	0.008049	1	Pass
802.11n(HT 40)	5795	11.67	13.74	13±1	14	25.12	0.008049	1	Pass
	5775	9.82	11.89	11±1	12	15.85	0.005078	1	Pass

### Simultaneous launch MAX Power Density at R=20cm (mW/cm2)

Wireless specification	2.4G WIFI	5GWIFI	2.4G WIFI	5GWIFI
MAX Power Density at R=20cm (mW/cm2)	0.034255	0.010133		
business accounting	0.044388	Limit (mW/cm2)	1	
Verdict	Pass			

According to KDB 447498, no stand-alone required for WIFI antenna, and no simultaneous SAR measurement is required.



\*\*\* End of Report \*\*\*

