

TEST REPORT

Product Name : QHD Wireless PTZ IP camera
Model Number : SD4, SZ4, SDZ
FCC ID : ZDESD4

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1. TEST RESULT CERTIFICATION

Applicant : ShenZhen Foscam Intelligent Technology Co., Ltd.

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EUT : QHD Wireless PTZ IP camera

Model Name : SD4, SZ4, SDZ

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 22, 2024

Prepared by : 

Warren Deng /Editor

Reviewer : 

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
Product:	QHD Wireless PTZ IP camera
Model Number:	SD4, SZ4, SDZ
Sample:	1#
Data Rate:	DSSS with DBPSK/DQPSK/CCK for 802.11b; OFDM with BPSK/QPSK/16QAM/64QAM for 802.11g/n;
Modulation:	DSSS, OFDM
Operating Frequency Range(s) :	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);
Transmit Power Max:	UNII-3 Band: 12.68 dBm(0.018535 mW) 2.4G: 16.54 dBm(0.045082 W)
Antenna Gain:	1.85 dBi for 2.4G 3.88 dBi for UNII-3 Band
Power supply:	DC 12V 2A from Adapter
Evaluation applied:	☒ MPE Evaluation ☐ 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* ≤ 50 mm are determined by:

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

- $f_{(\text{GHz})}$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation²⁵
- 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 ≤ 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 dBi	WIFI 2.4G FCC EMF							
Mode	Frequen cy (MHz)	Outp ut Pow er (dBm)	E.I.R.P(dB m)	Target Power W/toleran ce (dBm)	Max tune up power(dB m) tolerance	Max tuneup power(m W) tolerance	Power Density at R=20cm (mW/cm 2)	Limit (mW/cm 2)	Verdi ct
802.11b	2412	16.5 4	18.39	18±1	19	79.43	0.02419 5	1	PAS S
	2437	15.6 1	17.46	17±1	18	63.10	0.01921 9	1	PAS S
	2462	14.9 5	16.8	16±1	17	50.12	0.01526 6	1	PAS S
802.11g	2412	15.8 4	17.69	17±1	18	63.10	0.01921 9	1	PAS S
	2437	14.9 1	16.76	16±1	17	50.12	0.01526 6	1	PAS S
	2462	14.4	16.25	16±1	17	50.12	0.01526 6	1	PAS S
802.11n(HT 20)	2412	15.6 6	17.51	17±1	18	63.10	0.01921 9	1	PAS S
	2437	14.7 1	16.56	16±1	17	50.12	0.01526 6	1	PAS S
	2462	14.2 5	16.1	16±1	17	50.12	0.01526 6	1	PAS S
802.11n(HT 40)	2422	15.4 4	17.29	17±1	18	63.10	0.01921 9	1	PAS S
	2437	14.4 8	16.33	16±1	17	50.12	0.01526 6	1	PAS S
	2452	14.3 2	16.17	1±1	17	50.12	0.01526 6	1	PAS S

gain:	UNII-3 Band: 2 dBi								
Mode	Frequency (MHz)	Output Power (dBm)	E.I.R.P (dBm)	Target Power W/tolerance (dBm)	Max tune up power(d Bm) tolerance	Max tuneup power(mW) tolerance	Power Density at R=20cm (mW/cm ²)	Limit (mW/cm ²)	Verdict
802.11a	5745	12.68	16.56	16±1	17	50.12	0.024363	1	Pass
	5785	11.28	15.16	15±1	16	39.81	0.019352	1	Pass
	5825	12.39	16.27	16±1	17	50.12	0.024363	1	Pass
802.11n(HT 20)	5745	12.43	16.31	16±1	17	50.12	0.024363	1	Pass
	5785	11.12	15	15±1	16	39.81	0.019352	1	Pass
	5825	12.16	16.04	16±1	17	50.12	0.024363	1	Pass
802.11n(HT 40)	5795	11.45	15.33	15±1	16	39.81	0.019352	1	Pass
	5775	10.6	14.48	14±1	15	31.62	0.015372	1	Pass

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

Wireless specification	2.4G WIFI	5GWIFI		
MAX Power Density at R=20cm (mW/cm ²)	0.024195	0.024363		
business accounting	0.048558	Limit (mW/cm ²)	1	
Verdict	Pass			

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

*** End of Report ***