

RF Exposure Evaluation Report

Report No.: RWAX202300107G

Applicant: FocusAI Inc

Address: 530 Lakeside Dr, Ste 180, Sunnyvale, CA 94085, United States.

Product Name: FocusAI Dome Camera FD10

Product Model: FD10

Multiple Models: N/A

Trade Mark: N/A

FCC ID: 2BDXBF10

Standards: 47 CFR §1.1310

KDB 447498 D01 General RF Exposure Guidance v06

Test Date: 2023/11/10~2024/02/24

Test Result: Complied

Report Date: 2024/02/27

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Revision History

Version No.	Issued Date	Description
00	2024/02/27	Original

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1 General Information

1.1 Client Information

Applicant:	FocusAI Inc
Address:	530 Lakeside Dr, Ste 180, Sunnyvale, CA 94085, United States.
Manufacturer:	FocusAI Inc
Address:	530 Lakeside Dr, Ste 180, Sunnyvale, CA 94085, United States.

1.2 Product Description of EUT

The EUT is FocusAI Dome Camera FD10 that contains 2.4G and 5G WLAN radios.

Sample Serial Number	4A-1 (assigned by WATC)
Sample Received Date	2023/11/10
Sample Status	Good Condition
Frequency Range	2.4G WLAN: 2412MHz - 2462MHz 5G WLAN: Band 1: 5180-5240 MHz (802.11a/ n ht20/ac vht20/ax hew20) 5190-5230 MHz (802.11 n ht40/ac vht40/ax hew40) 5210 MHz (802.11ac vht80/ax hew80) Band 2: 5260-5320 MHz (802.11a/ n ht20/ac vht20/ax hew20) 5270-5310 MHz (802.11 n ht40/ac vht40/ax hew40) 5290 MHz (802.11ac vht80/ax hew80) Band 3: 5500-5720 MHz (802.11a/ n ht20/ac vht20/ax hew20) 5510-5710 MHz (802.11 n ht40/ac vht40/ax hew40) 5530-5690 MHz (802.11ac vht80/ax hew80) Band 4: 5745-5825 MHz (802.11a/ n ht20/ac vht20/ax hew20) 5755-5795 MHz (802.11 n ht40/ac vht40/ax hew40) 5775 MHz (802.11ac vht80/ax hew80)
Maximum Conducted Output Power	2412MHz - 2462MHz: 28.56dBm 5150 MHz - 5250MHz: 17.80dBm 5250 MHz - 5350MHz: 17.72dBm 5470 MHz - 5725MHz: 19.48dBm 5725 MHz - 5850MHz: 21.76dBm
Modulation Technology	DSSS, OFDM, OFDMA
Antenna Gain [#]	2.4G WLAN: Ant0: 0.90dBi; Ant1: 2.50dBi 5G WLAN: Band1: Ant0: 2.80dBi; Ant1: 1.80dBi; Band2: Ant0: 2.90dBi; Ant1: 2.40dBi; Band3: Ant0: 3.0dBi; Ant1: 2.90dBi; Band4: Ant0: 1.70dBi; Ant1: 1.60dBi
Spatial Streams	MIMO (2TX, 2RX)
Power Supply	DC 48V from POE
Operating temperature [#]	-20 deg.C to +50 deg.C
Adapter Information	N/A
Modification	Sample No Modification by the test lab

1.3 Laboratory Location

World Alliance Testing and Certification (Shenzhen) Co., Ltd

No. 1002, East Block, Laobing Building, Xingye Road 3012, Xixiang street, Bao'an District, Shenzhen, Guangdong, People's Republic of China

Tel: +86-755-29691511, Email: qa@watc.com.cn

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 463912, the FCC Designation No. : CN5040.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0160.

2 RF Exposure Evaluation

2.1 Standard

According to §1.1310, radio frequency devices shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

Table 1 to § 1.1310(e)(1)—Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(i) Limits for Occupational/Controlled Exposure				
0.3–3.0	614	1.63	*(100)	≤6
3.0–30	1842/f	4.89/f	*(900/f ²)	<6
30–300	61.4	0.163	1.0	<6
300–1,500			f/300	<6
1,500–100,000			5	<6
(ii) 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
300–1,500			f/1500	<30
1,500–100,000			1.0	<30

f = frequency in MHz. * = Plane-wave equivalent power density.

Calculation formula:

Prediction of power density at the distance of the applicable MPE limit

$S = PG/4\pi R^2$ = power density (in appropriate units, e.g. mW/cm²);

P = power input to the antenna (in appropriate units, e.g., mW);

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain;

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm);

For simultaneously transmit system, the calculated power density should comply with:

$$\sum_i \frac{S_i}{S_{Limit,i}} \leq 1$$

2.2 Result

Radio	Frequency (MHz)	Maximum Conducted Power including Tune-up Tolerance		Antenna Gain		Min. test separation distance (cm)	Power Density (mW/cm ²)	MPE Limit (mW/cm ²)	Verdict
		(dBm)	(mW)	(dBi)	(numeric)				
2.4G WLAN	2412-2462	29.0	794.33	2.5	1.78	20	0.281	1	Pass
5.2G WLAN	5180-5240	18.0	63.10	2.8	1.91	20	0.024	1	Pass
5.3G WLAN	5260-5320	18.0	63.10	2.9	1.95	20	0.024	1	Pass
5.6G WLAN	5500-5720	20.0	100.00	3.0	2.00	20	0.040	1	Pass
5.8G WLAN	5745-5825	22.0	158.49	1.7	1.48	20	0.047	1	Pass

Note: The Maximum Conducted Power including Tune-up Tolerance was declared by manufacturer.

Simultaneously transmit Consideration:

The 2.4G WLAN and 5G WLAN can transmit simultaneously:

$$\sum_i \frac{S_i}{S_{Limit,i}}$$

$$= S_{2.4G}/S_{limit-WWAN} + S_{5.8G}/S_{limit-WiFi} = 0.281/1 + 0.047/1 = 0.328 < 1.0$$

Result: Complied.

---End of Report---