

RF Exposure Evaluation Report

Report No.: 2405Z107557EG

Applicant: Zhuhai Glory Technology Co., Ltd

Address: 8F, Bldg 7, No. 178 Dingxing Road, Tangjiawan Town, Zhuhai, Guangdong, China

Product Name: 8 CH Wi-Fi Network Video Recorder

Product Model: N1

Multiple Models: N/A

Trade Mark: N/A

FCC ID: 2BMPT-N1

Standards: 47 CFR §1.1310
KDB 447498 D01 General RF Exposure Guidance v06

Test Date: 2025-02-19

Test Result: Complied

Report Date: 2025-02-24

Reviewed by:

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Revision History

Version No.	Issued Date	Description
00	2025-02-24	Original

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1 General Information

1.1 Client Information

Applicant:	Zhuhai Glory Technology Co., Ltd
Address:	8F, Bldg 7, No. 178 Dingxing Road, Tangjiawan Town, Zhuhai, Guangdong, China
Manufacturer:	Zhuhai Glory Technology Co., Ltd
Address:	8F, Bldg 7, No. 178 Dingxing Road, Tangjiawan Town, Zhuhai, Guangdong, China

1.2 Product Description of EUT

The EUT is 8 CH Wi-Fi Network Video Recorder that contains 2.4G and 5G WLAN radios.

Sample Serial Number	2V98-2 (assigned by WATC)
Sample Received Date	2024-12-02
Sample Status	Good Condition
Frequency Range	2.4G WLAN: 2412MHz - 2462MHz 5.2G RLAN: 5150 MHz - 5250MHz 5.4G RLAN: 5250 MHz - 5350MHz 5.6G RLAN: 5470 MHz - 5725MHz 5.8G RLAN: 5725 MHz - 5850MHz
Maximum Conducted Output Power	Module 1: 2.4G WLAN: 27.19dBm Module 2: 2.4G WLAN: 23.76dBm 5.2G WLAN: 9.51dBm 5.3G WLAN: 11.04dBm 5.6G WLAN: 12.60dBm 5.8G WLAN: 12.14dBm
Modulation Technology	DSSS, OFDM
Antenna Gain [#]	Module 1: ANT 1(chain 0): 2.69dBi, ANT 2(chain 1): 2.69dBi Module 2: 2.01dBi(2.4G Band), 4.90dBi(5G Band)
Spatial Streams	Module 1: MIMO (2TX, 2RX) Module 2: SISO(1TX, 1RX)
Power Supply	DC 12V from adapter
Adapter Information	N/A
Modification	Sample No Modification by the test lab
Note: the device installed two Wi-Fi modules, module 1 integrates RF chip MT7628 and with two antennas, module 2 integrates RF chip RTL8731BU and with one antenna, detail please refer the EUT photo, the module 2 support 2.4G and 5G WLAN, module 1 only support 2.4G WLAN.	

1.3 Laboratory Location

World Alliance Testing & 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

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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 (module 1)	2412-2462	27.5	562.34	2.69	1.86	20	0.208	1.0	Pass
2.4G WLAN (module 2)	2412-2462	24.0	251.19	2.01	1.59	20	0.079	1.0	Pass
5G WLAN (module 2)	5180-5240	10.0	10.00	4.90	3.09	20	0.006	1.0	Pass
	5260-5320	11.5	14.13	4.90	3.09	20	0.009	1.0	Pass
	5500-5720	13.0	19.95	4.90	3.09	20	0.012	1.0	Pass
	5745-5825	13.0	19.95	4.90	3.09	20	0.012	1.0	Pass

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

Simultaneously transmit Consideration:

The module 1 and module 2 can transmit at same time, the 2.4G/5G WLAN of module 2 cannot transmit at same time, so the worst case:

The ratio=0.208/1+0.079/1=0.287<1

Result: the device compliance MPE limit at 20cm distance.

---End of Report---