

RF Exposure Evaluation Report

Report No.:	2405Z107557EG					
Applicant:	Zhuhai Glory Technology Co., Ltd					
Address:	3F, Bldg 7, No. 178 Dingxing Road, Tangjiawan Town, Zhuha 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: Test Date:	47 CFR §1.1310 KDB 447498 D01 General RF Exposure Guidance v06 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	Module 1:				
Output Power	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

Tel: +86-755-29691511, Email: <u>qa@watc.com.cn</u>

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)	<u>≤</u> 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 Gener	al Population/Uncontrolled Ex	cposure					
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 π R² = 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	Power Density (mW/cm ²)	MPE Limit (mW/cm ²)	Verdict
		(dBm)	(mW)	(dBi)	(numeric)	(cm)			
2.4G WLAN	2/12-2/62	27 5	562.34	2 69	1 86	20	0 208	1.0	Pass
(module 1)	2412-2402	27.5	502.54	2.09	1.00	20	0.208	1.0	1 0 3 3
2.4G WLAN	2412-2462	24.0	251 10	2 01	1 59	20	0 079	1.0	Pass
(module 2)		24.0	231.13	2.01	1.55	20	0.075	1.0	1 835
	5180-5240	10.0	10.00	4.90	3.09	20	0.006	1.0	Pass
5G WLAN	5260-5320	11.5	14.13	4.90	3.09	20	0.009	1.0	Pass
(module 2)	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---