

RF Exposure Evaluation Report

Report No.: 2605P42911ED

Applicant: Chengdu Yunjiu Intelligent Control Technology Co., Ltd

Address: Room 605, Building 1, No.777, Chengdu High-Tech Zone, Pilot
Free Trade Zone Chengdu China

Product Name: Receiver

Product Model: M-CTR101

Multiple Models: N/A

Trade Mark: N/A

FCC ID: 2BTOQ-M-CTR101

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

Test Result: Complied

Report Date: 2026-02-05

Reviewed by:

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Revision History

Version No.	Issued Date	Description
00	2026-02-05	Original

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1 General Information

1.1 Client Information

Applicant:	Chengdu Yunjiu Intelligent Control Technology Co., Ltd
Address:	Room 605, Building 1, No.777,Chengdu High-Tech Zone, Pilot Free Trade Zone Chengdu China
Manufacturer:	Chengdu Yunjiu Intelligent Control Technology Co., Ltd
Address:	Room 605, Building 1, No.777,Chengdu High-Tech Zone, Pilot Free Trade Zone Chengdu China

1.2 Product Description of EUT

The EUT is Receiver that contains BLE and UBW radios

Sample Serial Number	3GGF-2, 3GGF-3 (assigned by WATC)
Sample Received Date	2026-01-22
Sample Status	Good Condition
Frequency Range	BLE: 2402MHz - 2480MHz UBW: 7987.2MHz
Maximum Conducted Output Power	BLE: -5.75dBm UBW: -6.45dBm/50MHz
Modulation Technology	BLE: GFSK UBW: BPSK
Antenna Gain [#]	BLE: 0.74dBi UBW: 3.46dBi
Spatial Streams	BLE: SISO (1TX, 1RX) UWB: SIMO (1TX, 2RX)
Power Supply	DC 3.7V from battery or DC 5V from USB port
Adapter Information	N/A
Modification	Sample No Modification by the test lab

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: 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-MPE

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

For BLE:

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)				
BLE	2402-2480	-5.0	0.32	0.74	1.2	20	0.00008	1.0	Pass

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

For UWB:

According to FCC part 1.1310(d)(3), At operating frequencies above 6 GHz, the MPE limits listed in Table 1 in paragraph (e)(1) of this section shall be used in all cases to evaluate the environmental impact of human exposure to RF radiation as specified in § 1.1307(b) of this part.

Radio	Frequency (MHz)	Maximum Tune-up EIRP		Min. test separation distance (cm)	Power Density (mW/cm ²)	MPE Limit (mW/cm ²)	Verdict
		(dBm)	(mW)				
UWB	7987.2	-6.0	0.251	20	0.00005	1.0	Pass

Note: The Maximum Tune-up EIRP was declared by manufacturer.

Simultaneously transmit Consideration:

BLE and UWB transmit at same time:

The ratio= $MPE_{BLE}/MPE_{BLE}+MPE_{UWB}/Limit_{UWB}=0.00008/1.0+0.00005/1.0=0.00013<1$

Result: the device comply with the RF exposure limit at 20cm distance.

---End of Report---