Maximum Permissible Exposure Evaluation
FCC ID: 2AUDF-CG12Y

1. Client Information

Applicant	:	Shenzhen ADDX Innovation Technology co., LTD.
Address	:	NO.2902, Building 9A-1.Shenzhen Bay Technology and Ecological Park, Nanshan District, Shenzhen, China
Manufacturer	:	Shenzhen ADDX Innovation Technology co., LTD.
Address	:	NO.2902, Building 9A-1.Shenzhen Bay Technology and Ecological Park, Nanshan District, Shenzhen, China

2. General Description of EUT

EUT Name	:	Wireless Smart Battery Camera	
Models No.	:	CG1, CG1NF, CG1NS, CG1NA	
Model Different		All these models are identical in the same PCB, layout and electrical circuit, the only difference is appearance and model name.	
Product Description	:	Operation Frequency:	802.11b/g/n(HT20): 2412MHz~2462MHz Bluetooth LE 5.0: 2402-2480MHz
		Number of Channel:	802.11b/g/n(HT20):11 channels 40 channels for Buletooth LE
		Antenna Gain:	0.5dBi PCB Antenna for Bluetooth LE 2.62 dBi Dipole Antenna for WiFi
Power Rating	:	Input: DC 3.7V DC 3.7V by 2600mAh Rechargeable Li-ion battery*2	
Software Version	:	V0.6.1	
Hardware Version	:	CQ121C_C01_V1	
Connecting I/O Port(S)	:	Please refer to the User's Manual	
Remark	:	the evaluation report used the EUT(202204-0397-6-2#).	

MPE Calculations for WIFI

1. EUT Operation Condition:

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

2. Exposure Evaluation:

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S=(PG)/4\pi R^2$$

Where

S: power density

P: power input to the antenna

G: power gain of the antenna in the direction of interest relative to an isotropic radiator.

R: distance to the center of radiation of the antenna

3. Simultaneous transmission MPE Considerations

According to KDB447498: All transmitters and antennas in the host must be either evaluated for MPE compliance, by measurement or computational modeling, or qualify for the standalone MPE test exclusion in section 7.1. Simultaneous transmission MPE test exclusion applies when the sum of the MPE ratios for all simultaneous transmitting antennas incorporated in a host device, based on the calculated/estimated, numerically modeled or measured field strengths or power density, is ≤ 1.0.

This means that:

∑ of MPE ratios ≤ 1.0

4. Test Result:

2.4G WiFi & Bluetooth LE worst reported.

Mode	Conducted Power(max) (dBm)	Turn-up Power (dB)	Max tune up power (dBm) [P]	ANT Gain (dBi) [G]	Distance (cm) [R]	Power Density (mW/ cm^2) [S]	Limit of Power Density (mW/ cm^2) (S)
802.11b	18.421	18±1	19	2.62	20	0.02889	1
Mode	**Conducted Power(max) (dBm)**	**Turn-up Power (dB)**	**Max tune up power (dBm) [P]**	**ANT Gain (dBi) [G]**	**Distance (cm) [R]**	**Power Density (mW/ cm^2) [S]**	**Limit of Power Density (mW/ cm^2) (S)**
Bluetooth LE	-2.321	-2±1	-1	0.5	20	0.00018	1

Maximum Simultaneous transmission MPE Ratios for 2.4GHz WiFi and Bluetooth LE.

Maximum MPE ratio 2.4GWiFi	Maximum MPE ratio Bluetooth LE	∑MPE	Limit	Results
0.02889	0.00018	0.02907	1.0	PASS

5. Conclusion:

As specified in Table 1B of 47 CFR 1.1310- Limits for Maximum Permissible Exposure (MPE),

Limits for General Population/ Uncontrolled Exposure

Frequency Range (MHz)	Power density (mW/ cm^2)
300-1,500	F/1500
1,500-100,000	1.0

For 2.4WIFI:2412~2462 MHz and Bluetooth LE
  MPE limit S: 1mW/ cm^2
The MPE is calculated as **0.02907** *limit 1mW / cm^2*. So, RF exposure limit warning or SAR test are not required.

The EUT will only be used with a separation of 20cm or greater between the antenna and nearby persons and can therefore be considered a mobile transmitter per 47 CFR2.1091 (b).

The RF Exposure Information page from the manual is included here for reference.

Note

For a more detailed features description, please refer to the RF Test Report.

6. Conclusion:

The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure of mobile device.

-----END OF REPORT-----