Maximum Permissible Exposure Evaluation

FCC ID: 2A95N-BC01

1. Client Information

Applicant	:	Shenzhen Digital Stone Technology Co.,Ltd
Address	:	Shenzhen City, Nanshan District, China A14, 3rd Floor, Building 3, Enterprise Technology Park
Manufacturer	:	Shenzhen Digital Stone Technology Co.,Ltd
Address	:	Shenzhen City, Nanshan District, China A14, 3rd Floor, Building 3, Enterprise Technology Park

2. General Description of EUT

EUT Name	:	AI Bird Camera	
Models No.	:	BC01	
Model Different		----	
Product Description	:	Operation Frequency:	Bluetooth LE5.0: 2402MHz~2480MHz 802.11b/g/n(HT20): 2412MHz~2462MHz
		Antenna Gain:	0.5dBi PCB Antenna for Bluetooth LE -2.49 External Antenna for 2.4GWiFi
Power Rating	:	Input: DC 5V DC 3.6V by 5000mAh Rechargeable Li-ion battery	
Software Version	:	V0.6.1	
Hardware Version	:	CG621_C03_V2	
Connecting I/O Port(S)	:	Please refer to the User's Manual	
Remark	:	the evaluation report used the EUT(202212-0193-1-2#).	

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:

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	17.331	17±1	18	-2.49	20	0.00708	1
	14.774	14±1	15	-2.49	20	0.00355	1
	17.821	17±1	17	-2.49	20	0.00562	1
802.11G	16.845	16±1	17	-2.49	20	0.00562	1
	14.675	14±1	15	-2.49	20	0.00355	1
	15.078	15±1	16	-2.49	20	0.00446	1
802.11N(HT20)	16.476	16±1	17	-2.49	20	0.00562	1
	14.350	14±1	15	-2.49	20	0.00355	1
	14.817	14±1	15	-2.49	20	0.00355	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)**
BLE	-2.676	-2±1	-1	0.5	20	0.00018	1
	-3.470	-3±1	-2	0.5	20	0.00014	1
	-3.649	-3±1	-2	0.5	20	0.00014	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
0.00708	0.00018	0.00726	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&Bluetooth LE :2412~2462 MHz and 2402-2480MHz
MPE limit S: 1mW/ cm^2
The worst MPE is calculated as 0.00726***/ cm^2 < 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-----