RF Exposure Evaluation

FCC ID: 2AEP6-EQ-2B

1. Client Information

Applicant	:	HangZhou XiongMai Technology CO., LTD
Address	:	9th Floor, Building 9, Yinhu Innovation Center, No.9 FuXian Road, YinHu Street, Hangzhou, China
Manufacturer	:	HangZhou XiongMai Technology CO., LTD
Address	:	9th Floor, Building 9, Yinhu Innovation Center, No.9 FuXian Road, YinHu Street, Hangzhou, China

2. General Description of EUT

EUT Name	:	PORTABLE BATTERY CAMERA	
Models No.	:	EQ-2B,XM-JPE13-2R,XM-JPED-2P,XM-JPEB2-F2,XM-JPEC2-R, XM-JPE2-2R,XM-JPEG-2D,XM-JPEG2-R,XM-JPEH-2R,ES-2R, XM-JPEG-2D,XM-JPEL-2D,XM-JPEG-3D,XM-JPEB4-F2,XM-JPEG-2D4G,XM-JPEG-3D4G,XM-JPEL-2D4G,EL-2D4G	
Model Difference	:	All these models are in the same PCB, layout and electrical circuit, the only difference is the model name	
Product Description	:	Operation Frequency:	**2.4G:** 802.11b/g/n(HT20): 2412MHz~2462MHz 802.11n(HT40): 2422MHz~2452MHz
		Modulation Type:	802.11b: DSSS(CCK, DQPSK, DBPSK) 802.11g/n: OFDM(BPSK,QPSK,16QAM, 64QAM)
Power Rating	:	Input: DC 5V	
Software Version	:	V1.0	
Hardware Version	:	XMJP-BIRD-SD-IO V1.03	
Connecting I/O Port(S)	:	Please refer to the User's Manual	
Remark	:	The antenna gain provided by the applicant, the verified for the RF conduction test provided by TOBY test lab.	

Note: More test information about the EUT please refer the RF Test Report.

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MPE Calculations for WIFI

1. Antenna Gain:

	Model	Frequency Range
PIFA Ant:	N/A	2400~2483.5MHz
		3dBi

2. EUT Operation Condition:

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

3. 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

4. Test Result:

2.4G WIFI&BLE

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	17.21	17±1	18	3.0	20	0.0250	1
802.11G	16.12	16±1	17	3.0	20	0.0199	1
802.11N(HT20)	15.96	16±1	17	3.0	20	0.0199	1
802.11N(HT40)	14.31	14±1	15	30	20	0.0126	1

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 BT&BLE:2402~2480 MHz
For WIFI: 802.11b/g/n(HT20): 2412MHz~2462MHz
802.11n(HT40): 2422MHz~2452MHz

MPE limit S: 1mW/ cm^2
The MPE is calculated as ***0.0250mW / cm2 < 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.

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