

Maximum Permissible Exposure Evaluation

FCC ID: 2AKUR-JF-IPC

1. Client Information

Applicant	:	Hangzhou Jufeng Technology Co., Ltd.
Address	:	Building 9, Yinhu Innovation Center, No.9 FuXian Road, YinHu Street, Hangzhou China
Manufacturer	:	Hangzhou Jufeng Technology Co., Ltd.
Address	:	Building 9, Yinhu Innovation Center, No.9 FuXian Road, YinHu Street, Hangzhou China

2. General Description of EUT

EUT Name	:	camera
Models No.	:	IPC-ENK8330PX-IR2R-WS, IPC-ENK8330PX-IR2R-WS-V2, JF-IPC-ENK8330PX-IR2R-WS, JF-IPC-ENK8330PX-IR2R-WS-V2, IPC-END8330PX-IR2R-WS, IPC-END8330PX-IR2R-WS-V2, IPC-ED8330PX-IR2R-WS, IPC-ED8330PX-IR2R-WS-V2, JF-IPC-ED8330PX-IR2R-WS, JF-IPC-ED8330PX-IR2R-WS, JF-IPC-END8330PX-IR2R-WS, JF-IPC-END8330PX-IR2R-WS-V2, JF-IPC-END8320PX-IR2R-WS, IPC-END8320PX-IR2R-WS
Model Different:	:	All PCB boards and circuit diagrams are the same, the only difference is pixels are different.
Brand Name	:	----
Product Description	Operation Frequency:	802.11b/g/n(HT20): 2412MHz~2462MHz 802.11n(HT40): 2422MHz~2452MHz
	Number of Channel:	11 channels
	RF Output Power:	802.11b: 17.575dBm 802.11g: 17.975dBm 802.11n (HT20): 17.843dBm 802.11n (HT40): 16.654dBm
	Antenna Gain:	5dBi dipole Antenna
Power Rating	:	Input: AC 100-240V 50/60Hz 1.5A Max
Software Version	:	PC_XM530_50X30-WNG_WIFINVRXM713G_TB. 713g.Nat
Hardware Version	:	BLK530AI-0M25-38X38-WIFI V1.02
Connecting I/O Port(S)	:	Please refer to the User's Manual
Remark	:	the MPE report used the EUT(20210518-14_01-1#).

MPE Calculations for WIFI

1. Antenna Gain:

Dipole Antenna:5dBi.

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:

Worst Maximum MPE Result								
Mode	N _{TX}	Freq. (MHz)	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]
802.11b	1	2412	16.871	17±1	18	5	20	0.0397
		2437	16.863	17±1	18	5	20	0.0397
		2462	17.575	18±1	19	5	20	0.0500
802.11g	1	2412	16.787	17±1	18	5	20	0.0397
		2437	17.975	18±1	19	5	20	0.0500
		2462	17.432	17±1	18	5	20	0.0397
802.11n(HT20)	1	2412	16.908	17±1	18	5	20	0.0397
		2437	17.843	18±1	19	5	20	0.0500
		2462	17.29	17±1	18	5	20	0.0397
802.11n(HT40)	1	2422	16.313	16±1	17	5	20	0.0315
		2437	16.654	17±1	18	5	20	0.0397
		2452	16.635	17±1	18	5	20	0.0397

Note:
 (1) N_{TX}= Number of Transmit Antennas
 (2) RF Output power specifies that Maximum Conducted Peak Output Power.

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

MPE limit S: 1mW/ cm²

The MPE is calculated as $0.0500 \text{ mW} / \text{cm}^2 < \text{limit } 1 \text{mW} / \text{cm}^2$. 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.

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