Maximum Permissible Exposure Evaluation

FCC ID: 2APRB-PJ2421

1. Client Information

Applicant	:	Guangzhou Juan Intelligent Tech Joint Stock Co.,Ltd
Address	:	No.2 Plant, West of Shanxi country, Dashi street, Panyu District, Guangzhou City, China
Manufacturer	:	Guangzhou Juan Intelligent Tech Joint Stock Co.,Ltd
Address	:	No.2 Plant, West of Shanxi country, Dashi street, Panyu District, Guangzhou City, China

2. General Description of EUT

EUT Name	:	IP Camera	
Models No.	:	JA-PJ2421-DL-W (Please see the Annex)	
Model Different	:	All these models are in the same PCB, layout and electrical circuit, the only difference is model.	
Product Description	:	Operation Frequency:	802.11b/g/n(HT20): 2412MHz~2462MHz 802.11n(HT40): 2422MHz~2452MHz
		Max Output Power:	802.11b: 17.09dBm
		Antenna Gain:	3dBi Reverse SMA Antenna
		Modulation Type:	802.11b: DSSS(CCK, DQPSK, DBPSK) 802.11g/n: OFDM(BPSK,QPSK,16QAM, 64QAM)
Power Supply	:	DC 12 Voltage by AC/DC Adapter supplied	
Software Version	:	V2.2.40	
Hardware Version	:	V103	

1A/F., Bldg.6, Yusheng Industrial Zone, The National Road No.107 Xixiang Section 467, Xixiang, Bao'an, Shenzhen, China
Tel: +86 75526509301 Fax: +86 75526509195

MPE Calculations for WIFI

1. Antenna Gain:

Reverse SMA Antenna: 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:

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]
802.11b	17.09	17±1	18	3	20	0.025046
802.11g	15.94	15±1	16	3	20	0.015803
802.11n (HT20)	15.96	15±1	16	3	20	0.015803
802.11n (HT40)	13.56	13±1	14	3	20	0.009971

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 802.11b/g/n(HT20):2412~2462 MHz
802.11n(HT40): 2422MHz~2452MHz
MPE limit S: $1mW/cm^2$
The MPE is calculated as ***$0.025046mW/cm^2$ < 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.

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