

RF Exposure Evaluation

FCC ID: 2ABQJ-SP360

1. Client Information

Applicant : Shenzhen Sinopine Technology Co., Ltd
Address : D Building, Huafeng Industrial Zone, Hangcheng Boulevard, Gushu Village, Xixiang Town, Bao'an District, Shenzhen City, China
Manufacturer : Shenzhen Sinopine Technology Co., Ltd
Address : D Building, Huafeng Industrial Zone, Hangcheng Boulevard, Gushu Village, Xixiang Town, Bao'an District, Shenzhen City, China

2. General Description of EUT

EUT Name	:	Network Camera
Models No.	:	SP360, SP360PIR, SP370, SP380, SP390
Model Difference	:	The different models are identical in schematic, structure and critical component, the only different is the appearance.
Product Description	:	Operation Frequency: 802.11b/g/n(HT20): 2412MHz~2462MHz 802.11n(HT40):2422MHz~2452MHz
		Number of Channel: 802.11b/g/n(HT20):11 channels
		RF Output Power: 802.11b: 17.12 dBm 802.11g: 15.23 dBm 802.11n (HT20): 14.47 dBm
		Antenna Gain: 2 dBi Integral Antenna
		Modulation Type: 802.11b: CCK, QPSK, BPSK 802.11g: OFDM 802.11n (20M): OFDM
		Bit Rate of Transmitter: 802.11b:11/5.5/2/1 Mbps 802.11g:54/48/36/24/18/12/9/6 Mbps 802.11n:up to 150Mbps
Power Supply	:	DC Voltage supplied from AC/DC adapter
Power Rating	:	AC/DC adapter : Input: 100~240V 50/60Hz 0.4A Output: 12V 1A
Connecting I/O Port(S)	:	Please refer to the User's Manual

Note:

- (1) More detail information about Equipment, please refer to User's manual, more information about the test data, please refer to test report.
- (2) Antenna information provided by the applicant.

MPE Calculations for WIFI

1. Antenna Gain:

Integral Antenna: 2 dBi.

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:

Band	Channel	Frequency (MHz)	Power (dBm) [P]	ANT Gain (dBi) [G]	Distance (cm) [R]	Power Density (mW/ cm ²) [S]
802.11b	CH1	2412	17.12	2	20	0.0162
	CH6	2437	16.92	2	20	0.0155
	CH11	2462	16.73	2	20	0.0149
802.11g	CH1	2412	15.20	2	20	0.0104
	CH6	2437	14.97	2	20	0.0099
	CH11	2462	15.23	2	20	0.0105
802.11n (HT20)	CH1	2412	13.91	2	20	0.0076
	CH6	2437	14.07	2	20	0.0080
	CH11	2462	14.47	2	20	0.0088

5. Conclusion:

FCC: 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 (2412~2462 MHz)

MPE limit S: 1 mW/ cm²

The MPE is calculated as 0.0162mW / cm² < limit 1 mW / cm². 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 47CFR2.1091 (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.