

# Maximum Permissible Exposure Evaluation

## ***FCC ID: 2ARER-IPC007HD***

### 1. Client Information

<b>Applicant</b>	:	Shenzhen Apeman Innovations Technology Co.,Ltd
<b>Address</b>	:	Building P11, Huanancheng, Longgang District, Shenzhen, China
<b>Manufacturer</b>	:	Shenzhen Apeman Innovations Technology Co.,Ltd
<b>Address</b>	:	Building P11, Huanancheng, Longgang District, Shenzhen, China

## 2. General Description of EUT

<b>EUT Name</b>	:	Nooie Cam Indoor	
<b>Models No.</b>	:	IPC007-720P	
<b>Model Difference</b>	:	All these models are identical in the same PCB layout and electrical circuit, the only difference is model name and color for commercial.	
<b>Product Description</b>	:	Operation Frequency:	802.11b/g/n(HT20): 2412MHz~2462MHz 802.11n(HT40): 2422MHz~2452MHz
	:	Max Output Power:	WIFI: 15.73 dBm
	:	Antenna Gain:	2.28dBi PIFA Antenna
<b>Power Supply</b>	:	DC Voltage supplied by AC/DC Adapter	
<b>Power Rating</b>	:	AC/DC Adapter (HA-19050100UU): Input: AC 100~240V, 50/60Hz, 0.25A. Output: DC 5V, 1A.	
<b>Connecting I/O Port(S)</b>	:	Please refer to the User's Manual	

## MPE Calculations for WIFI

### 1. Antenna Gain:

PIFA Antenna: 2.28dBi.

### 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 <sup>2</sup> ) [S]
802.11b	15.73	16±1	17	2.28	20	0.016864
802.11g	14.74	15±1	16	2.28	20	0.013395
802.11n (HT20)	13.80	14±1	15	2.28	20	0.010640
802.11n (HT40)	12.21	13±1	14	2.28	20	0.008452

**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 <sup>2</sup> )
300-1,500	F/1500
1,500-100,000	1.0

For 802.11b/g/n:2412~2462 MHz

For Bluetooth/BLE: 2402MHz~2480MHz

MPE limit S: 1mW/ cm<sup>2</sup>

The MPE is calculated as  $0.016864\text{mW} / \text{cm}^2 < \text{limit } 1\text{mW} / \text{cm}^2$ . 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.

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