

# Maximum Permissible Exposure Evaluation

## FCC ID: 2ANNWAN-H308F

### 1. Client Information

**Applicant** : Shenzhen Annidigital Technology Co., Ltd  
**Address** : 3rd Floor, Hasee Bldg, NO.1, Banlan Road, Bantian, Buji Town, Longgang, Shenzhen, China  
**Manufacturer** : Shenzhen Annidigital Technology Co., Ltd  
**Address** : 3rd Floor, Hasee Bldg, NO.1, Banlan Road, Bantian, Buji Town, Longgang, Shenzhen, China

### 2. General Description of EUT

|                            |   |                                                                                                                                                           |
|----------------------------|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>EUT Name</b>            | : | IP Camera                                                                                                                                                 |
| <b>Models No.</b>          | : | AN-H308F, AN-H308D, AN-HXXXXF, AN-HXXXXX, AN-HXXXXXX, AN-HXXXXX-X, AN-HXXXXX-XX, ANXXXXXX-XX ("X" dedicated to A to Z and / or 0 to 999 up to 10 digits.) |
| <b>Model Difference</b>    | : | All models are identical in the same PCB layout interior structure and electrical circuits, The only difference is pixel.                                 |
| <b>Product Description</b> | : | Operation Frequency: 802.11b/g/n(HT20): 2412MHz~2462MHz<br>802.11n(HT40): 2422MHz~2452MHz                                                                 |
|                            | : | Number of Channel: 802.11b/g/n(HT20):11 channels <b>see note(3)</b><br>802.11n(HT40): 7 channels <b>see note(3)</b>                                       |
|                            | : | RF Output Power: 802.11b: 17.40dBm<br>802.11g: 17.97dBm<br>802.11n (HT20): 16.84dBm<br>802.11n (HT40): 15.83dBm                                           |
|                            | : | Antenna Gain: 2.53dBi PFC Antenna                                                                                                                         |
|                            | : | Modulation Type: 802.11b: DSSS(CCK, QPSK, BPSK)<br>802.11g: OFDM<br>802.11n: OFDM                                                                         |
|                            | : | Bit Rate of Transmitter: 802.11b: 11/5.5/2/1 Mbps<br>802.11g: 54/48/36/24/18/12/9/6 Mbps<br>802.11n: up to 150Mbps                                        |

*TB-RF-075-1.0*



|                                                                                 |   |                                                                                            |
|---------------------------------------------------------------------------------|---|--------------------------------------------------------------------------------------------|
| <b>Power Supply</b>                                                             | : | DC Voltage supplied by AC/DC Adapter.                                                      |
| <b>Power Rating</b>                                                             | : | AC/DC Adapter (MXM6-0502000U):<br>Input: AC 100~240V, 50/60Hz, 0.3A.<br>Output: DC 5V, 2A. |
| <b>Connecting I/O Port(S)</b>                                                   | : | Please refer to the User's Manual                                                          |
| Note: More information about the RF function, please refer the RF test reports. |   |                                                                                            |

## MPE Calculations for WIFI

### 1. Antenna Gain:

PFC Antenna: 2.53dBi.

### 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 <sub>TX</sub> | Freq.<br>(MHz) | Conducted<br>Power(max)<br>(dBm) | Turn-up<br>Power<br>(dB) | Max tune up<br>power<br>(dBm)<br>[P] | ANT Gain<br>(dBi)<br>[G] | Distance<br>(cm)<br>[R] | Power<br>Density<br>(mW/ cm <sup>2</sup> )<br>[S] |
| 802.11b                                                                                                                               | 1               | 2412           | 16.24                            | 17±1                     | 18                                   | 2.53                     | 20                      | 0.0225                                            |
|                                                                                                                                       |                 | 2437           | 16.96                            | 17±1                     | 18                                   | 2.53                     | 20                      | 0.0225                                            |
|                                                                                                                                       |                 | 2462           | 17.40                            | 17±1                     | 18                                   | 2.53                     | 20                      | 0.0225                                            |
| 802.11g                                                                                                                               | 1               | 2412           | 16.73                            | 17±1                     | 18                                   | 2.53                     | 20                      | 0.0225                                            |
|                                                                                                                                       |                 | 2437           | 17.49                            | 17±1                     | 18                                   | 2.53                     | 20                      | 0.0225                                            |
|                                                                                                                                       |                 | 2462           | 17.97                            | 17±1                     | 18                                   | 2.53                     | 20                      | 0.0225                                            |
| 802.11n<br>(HT20)                                                                                                                     | 1               | 2412           | 15.94                            | 16±1                     | 17                                   | 2.53                     | 20                      | 0.0179                                            |
|                                                                                                                                       |                 | 2437           | 16.12                            | 16±1                     | 17                                   | 2.53                     | 20                      | 0.0179                                            |
|                                                                                                                                       |                 | 2462           | 16.84                            | 16±1                     | 17                                   | 2.53                     | 20                      | 0.0179                                            |
| 802.11n<br>(HT40)                                                                                                                     | 1               | 2422           | 15.05                            | 15±1                     | 16                                   | 2.53                     | 20                      | 0.0142                                            |
|                                                                                                                                       |                 | 2437           | 15.63                            | 15±1                     | 16                                   | 2.53                     | 20                      | 0.0142                                            |
|                                                                                                                                       |                 | 2452           | 15.83                            | 15±1                     | 16                                   | 2.53                     | 20                      | 0.0142                                            |
| Note:<br>(1) N <sub>TX</sub> = Number of Transmit Antennas<br>(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<br>(MHz) | Power density<br>(mW/ cm <sup>2</sup> ) |
|--------------------------|-----------------------------------------|
| 300-1,500                | F/1500                                  |
| 1,500-100,000            | 1.0                                     |

For 802.11b/g/n (2412~2462 MHz)

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

The MPE is calculated as  $0.0225 \text{ mW} / \text{cm}^2 < \text{limit } 1 \text{mW} / \text{cm}^2$ . 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.

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