

# Maximum Permissible Exposure Evaluation

## FCC ID: 2AV29-83610

### 1. Client Information

|                     |   |   |
|---------------------|---|---|
| <b>Applicant</b>    | : | Zhongshan Jesmay Electronics Co.,Ltd                                    |
| <b>Address</b>      | : | No.1 Industry District, Tan Zhou Town, Zhongshan City, Guangdong, China |
| <b>Manufacturer</b> | : | Zhongshan Jesmay Electronics Co.,Ltd                                    |
| <b>Address</b>      | : | No.1 Industry District, Tan Zhou Town, Zhongshan City, Guangdong, China |

### 2. General Description of EUT

|                               |                      |   |
|-------------------------------|----------------------|---|
| <b>EUT Name</b>               | :                    | IP CAMERA   |
| <b>Models No.</b>             | :                    | 83610, C029, C039, MZ-CW20A, MZ-CW20, 83612, 83616  |
| <b>Model Different</b>        | :                    | All these models are identical in the same PCB, layout and electrical circuit, the only difference is model name. |
| <b>Brand Name</b>             | :                    | Joustory, JSLBTECH, JouSecu, JouJou, TMEZON, JouLINK, Maysly  |
| <b>Product Description</b>    | Operation Frequency: | 802.11b/g/n(HT20): 2412MHz~2462MHz  |
|                               | Number of Channel:   | 802.11b/g/n(HT20):11 channels   |
|                               | RF Output Power:     | 802.11b:16.25dBm<br>802.11g: 16.28dBm<br>802.11n (HT20): 16.47dBm   |
|                               | Antenna Gain:        | 5 dBi External Antenna  |
| <b>Power Rating</b>           | :                    | Adapter:(R122-1201000UD)<br>Input: AC100-240V 50/60HZ 0.4A<br>Output:DC12V1A                                      |
| <b>Software Version</b>       | :                    | WNIP-2L-BU_20200331   |
| <b>Hardware Version</b>       | :                    | FH8852-F37-M-V2   |
| <b>Connecting I/O Port(S)</b> | :                    | Please refer to the User's Manual   |
| <b>Remark</b>                 | :                    | the MPE report used the EUT(20200525-17-01).  |

## 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 <sub>TX</sub> | 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 <sup>2</sup> ) [S] |
| 802.11b                  | 1               | 2412        | 16.25                      | 16±1               | 17                          | 5                  | 20                | 0.0315                                   |
|                          |                 | 2437        | 15.99                      | 16±1               | 17                          | 5                  | 20                | 0.0315                                   |
|                          |                 | 2462        | 15.47                      | 15±1               | 16                          | 5                  | 20                | 0.0250                                   |
| 802.11g                  | 1               | 2412        | 16.17                      | 16±1               | 17                          | 5                  | 20                | 0.0315                                   |
|                          |                 | 2437        | 15.93                      | 16±1               | 17                          | 5                  | 20                | 0.0315                                   |
|                          |                 | 2462        | 16.28                      | 16±1               | 17                          | 5                  | 20                | 0.0315                                   |
| 802.11n(HT20)            | 1               | 2412        | 16.47                      | 16±1               | 17                          | 5                  | 20                | 0.0315                                   |
|                          |                 | 2437        | 16.42                      | 16±1               | 17                          | 5                  | 20                | 0.0315                                   |
|                          |                 | 2462        | 16.10                      | 16±1               | 17                          | 5                  | 20                | 0.0315                                   |

Note:

(1) N<sub>TX</sub>= 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 <sup>2</sup> ) |
|-----------------------|--------------------------------------|
| 300-1,500             | F/1500                               |
| 1,500-100,000         | 1.0                                  |

For Bluetooth:2412~2462 MHz

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

The MPE is calculated as  $0.0315mW / cm^2 < limit 1mW / cm^2$ . 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.

**6. Conclusion:**

The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure of mobile device.

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