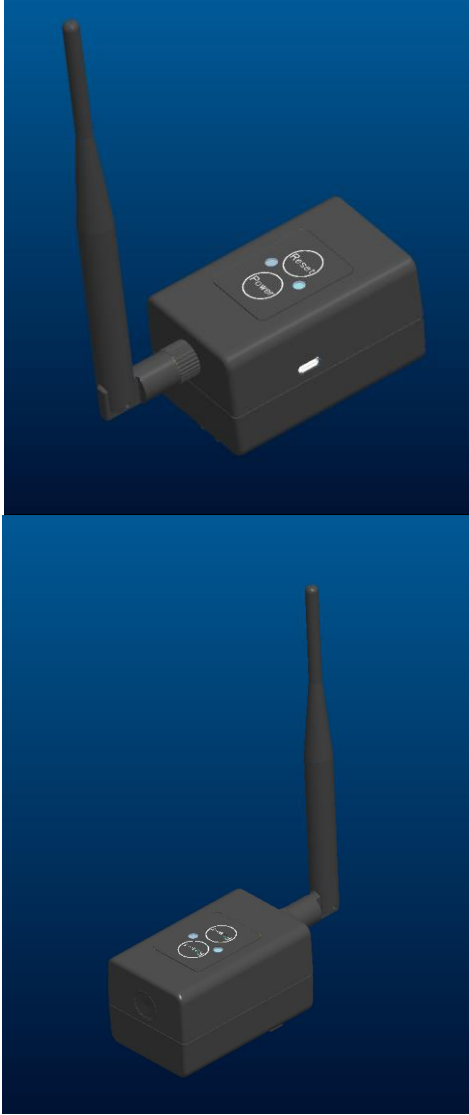


|                                                 |                                |                                     |              |
|-------------------------------------------------|--------------------------------|-------------------------------------|--------------|
| <b>Ebulent Optronics</b>                        |                                | Blaster Camera Module Specification |              |
|                                                 |                                | Model No.: EBPE0208                 |              |
| File No.<br>Spec211215152959                    | Issued Date: 11/11/2024        | Total Page: 10                      | Version: 1.8 |
| Presented By:<br>Hui Zhou                       | Customer's Approval<br>By Date |                                     |              |
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[illegible]

## 1. General Specification

| Drawing                                                                             |             |           |                  |             |           |
|-------------------------------------------------------------------------------------|-------------|-----------|------------------|-------------|-----------|
|  |             |           |                  |             |           |
| Item                                                                                | Description | Dimension | Item             | Description | Dimension |
| T                                                                                   | Thickness   | 45 mm ± 1 | Antenna          | Length(Max) | 194mm ± 2 |
| W                                                                                   | Width       | 50 mm ± 1 | Weight           |             | **        |
| L                                                                                   | Length      | 80 mm ± 1 |                  |             |           |
| Rmark: Contains antenna                                                             |             |           |                  |             |           |
| Parameter                                                                           |             |           | Specification    |             |           |
| Product Type                                                                        |             |           | IP Camera        |             |           |
| Spec                                                                                |             |           | 2 Million pixels |             |           |

## 2. Main Specification

### 2.1. Hardware specifications

| Item                        | Description                                                                                                                                            |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Video Processor             | T31,Ultra-high frequency, up to 1.5GHz.<br>Vector Deep Learning accelerator base on SIMD128<br>64KB + 128KB L1/L2 Cache<br>RiscV independent lite core |
| Camera Resolution           | 1080p, 2M resolution.                                                                                                                                  |
| Camera module               | Optical Angle: Horizontal 80 °, Vertical 50 °                                                                                                          |
| WIFI                        | 2.4G,802.11 b/g/n<br>5-50yard, line of sight,<br>Date rate better than 5Mbps                                                                           |
| Lens Focus                  | Fixed                                                                                                                                                  |
| Object distance             | 1.5-2ft                                                                                                                                                |
| Memory                      | DDR2 64MB                                                                                                                                              |
| FLASH                       | 16MB                                                                                                                                                   |
| WIFI distance               | 50meter<br>(The network environment without interference can be achieved)                                                                              |
| Antenna Port                | RF SMA                                                                                                                                                 |
| Power Port                  | Type-C                                                                                                                                                 |
| Power Input                 | DC 5V/1000mA                                                                                                                                           |
| Battery                     | Lithium ion, 3.7V/2000 mAh                                                                                                                             |
| Charging time               | 3 Hours                                                                                                                                                |
| Full Charged Operation Time | 3-4 Hours                                                                                                                                              |
| LED Indicators              | Power and WIFI status indicator, Green*2pcs                                                                                                            |
| Touch Key                   | Power and Reset Key*2pcs                                                                                                                               |
|                             |                                                                                                                                                        |
|                             |                                                                                                                                                        |

## 2.2. Function Parameters

| Item                          | Description                                                                                                |
|-------------------------------|------------------------------------------------------------------------------------------------------------|
| Resolution ratio              | 1920*1080(1080P)<br>1440*1080 (1080P)<br>1280*720(720P,Factory default)<br>960*720(720P)<br>960*540 (540P) |
| Brightness                    | Brightness gain value (0 to 255, default 128)                                                              |
| Auto balance/manual balance   | Support automatic, manual white balance gain (0~512)                                                       |
| Auto exposure/manual exposure | Support automatic, Manual exposure time (0~5000 milliseconds)                                              |
| Bitrate                       | Video bit rate:512K/1M/2M/3M/4M (default: 2M)                                                              |
| FPS                           | Frame rate (5-25, default 10)                                                                              |
| Antiflicker                   | Anti-flicker function (default 50hz), disable /50hz/60hz                                                   |
| Compression Standard          | H264 / H265, (Factory default H264),                                                                       |
| Screen shots                  | Support                                                                                                    |
| Station mode                  | External network connection mode                                                                           |
| AP mode                       | Default AP network configuration mode (Factory default, Default password: 6666)                            |
| WIFI hotspot                  | Account: 360WiFishao hao , Password: 123456789                                                             |
| Signal strength               | Support                                                                                                    |
| Reset                         | Support, Reset key                                                                                         |
| ONVIF Protocol                | Support (Test reference tool: ONVIF Device Test Tool 19.06)                                                |
| RSTP Protocol                 | Supports P2P remote RSTP (Test reference tool: VLC media player)                                           |
| APP Compliance                | Android and iOS(Customer development)                                                                      |

### 2.3. Working current

For Working voltage 5V

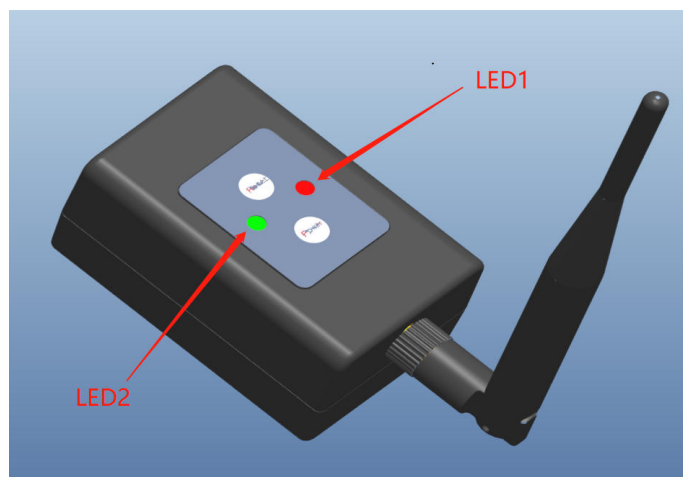
| Item                            | Description(Current: mA) |
|---------------------------------|--------------------------|
| Power ON Standby current        | Max: 250 mA              |
| Power ON current                | Max: 800 mA              |
| Power ON mode charging current  | Max: 1000 mA             |
| Power OFF mode charging current | Max: 800 mA              |
| Shutdown current                | 10-20uA                  |

### 3. Other specifications and certification

| Item                  | Test/Standard                                                   |
|-----------------------|-----------------------------------------------------------------|
| FCC-ID                | Part15C (TBC.)                                                  |
| CE                    | EN301893,EN301489-1,EN301489-17,EN300328,EN62311, N62368 (TBC.) |
| IC                    | RSS130+RSS247 (TBC.)                                            |
| NOM                   | NOM-019-SCFI, NOM-208-SCFI (TBC.)                               |
| Battery               | CB62133, UN38.3 (TBC.)                                          |
| RoHS Compliance       | Yes                                                             |
| Case Material         | ABS                                                             |
| Operation Temperature | 0°C to +40°C                                                    |
| Storage Temperature   | -20°C to +50°C                                                  |

\*Certification can be supported based on end market need.

#### 4. LED function description



LED instruction

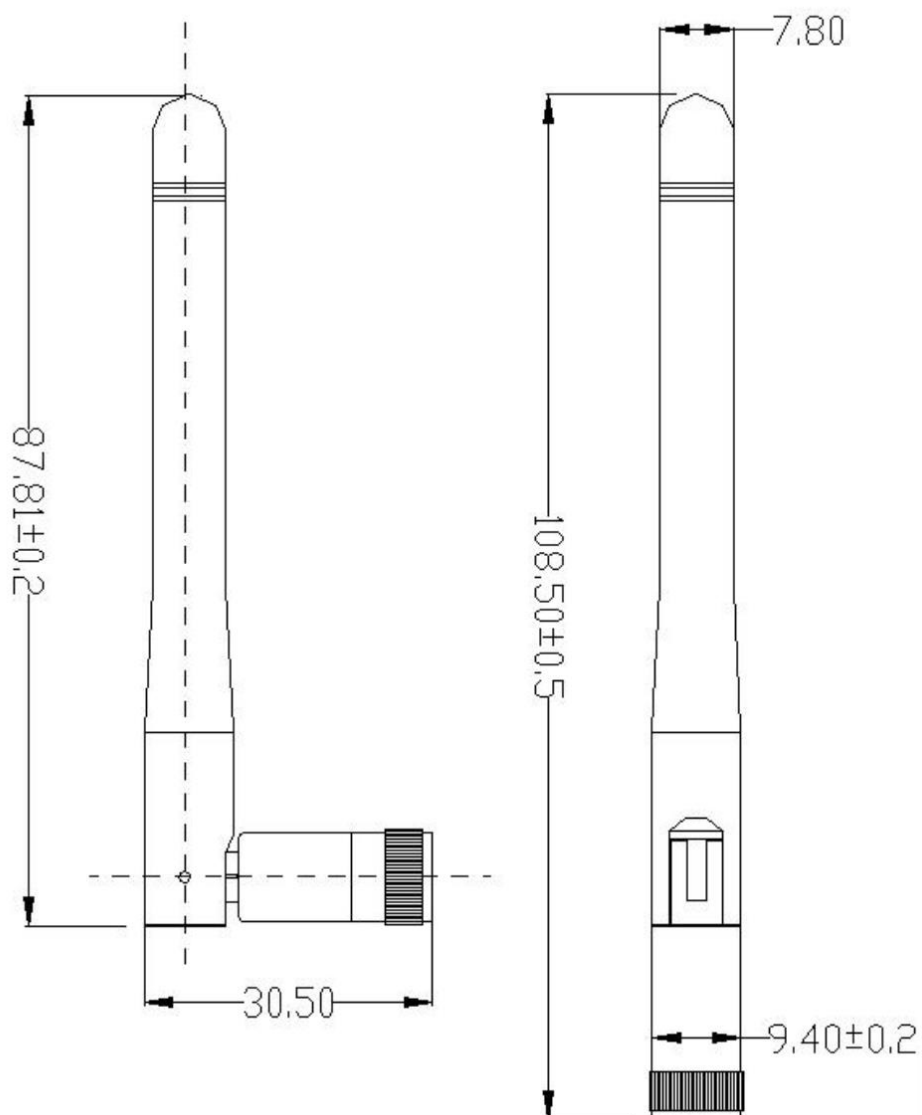
| Item                               | Function Description | LED1       | LED2       | Remarks                                                                     |
|------------------------------------|----------------------|------------|------------|-----------------------------------------------------------------------------|
| Power ON<br>Mode (Battery)<br>LED1 | Low voltage          | Fast flash |            |                                                                             |
|                                    | Charging             | Slow flash |            |                                                                             |
|                                    | Fully charged        | Long light |            |                                                                             |
|                                    | Run mode             | Long light |            |                                                                             |
|                                    | No power             | No light   |            |                                                                             |
| Power OFF<br>charging Mode         | Charging             | Long light |            |                                                                             |
|                                    | Fully charged        | No light   |            |                                                                             |
| AP Mode                            |                      |            | Slow flash |                                                                             |
| Wi-Fi signal<br>indicator<br>LED2  | Wi-Fi signal normal  |            | Long light |                                                                             |
|                                    | No Wi-Fi signal      |            | No light   |                                                                             |
|                                    | Weak Wi-Fi signal    |            | Slow flash |                                                                             |
| Power ON                           | Power ON             | Long light | Long light | Indicate battery and WIFI status within 10 seconds after startup            |
| Update                             | Firmware update      |            | Slow flash | Green light flashes while updating firmware, no light after update is done. |

## 5. Press button function description

| Item         | Function Description | LED1       | LED2       | Remarks                                                                                     |
|--------------|----------------------|------------|------------|---------------------------------------------------------------------------------------------|
| Power button | Power ON             | Long light | Long light | Hold the button to 2S and then power ON                                                     |
|              | Power OFF            |            |            | Hold the button to 2S and then power OFF                                                    |
| Reset button | Reset                |            | Fast flash | Hold the button for 3-4s before resuming factory Settings the LED2 indicator blinks for 1s. |

## 6. WIFI antenna description

| WIFI antenna description |                                        |
|--------------------------|----------------------------------------|
| Frequency Range (MHz)    | 2400-2500                              |
| Gain (dBi)               | $\geq 2$ (Typ. 3)                      |
| Antenna material         | ABS+ copper tube +SMA                  |
| Antenna size             | 108.5x9.4 tolerance $\pm 0.2\text{mm}$ |
| Color                    | Black                                  |
| Connection type          | RF+SMA (internal needle)               |



## 7. Reliability Specification

| NO | Test                                         | Condition                                                                                                           | Remarks |
|----|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------|---------|
| 1  | High Temperature Operation                   | T=+50°C 30%RH for 96Hr                                                                                              |         |
| 2  | Low Temperature Operation                    | T = -10°C for 96 Hr                                                                                                 |         |
| 3  | High Temperature Storage                     | T=+50°C 40%RH for 240Hr                                                                                             |         |
| 4  | Low-Temperature Storage                      | T = -20°C for 240Hr                                                                                                 |         |
| 5  | High Temperature,<br>High Humidity Operation | T=+40°C 90%RH for 96Hr                                                                                              |         |
| 6  | High Temperature,<br>High Humidity Storage   | T=+50°C 80%RH for 96Hr                                                                                              |         |
| 7  | Temperature Cycle                            | -25°C(30min)~ +60°C(30min)<br>10 Cycles                                                                             |         |
| 8  | Package Vibration                            | Frequency : 10~50Hz Sweep<br>Direction : X,Y,Z<br>Duration:1 hours in each direction                                |         |
| 9  | Package Drop Impact                          | Drop from height of 100 cm<br>on concrete surface<br>Drop sequence:1 corner,<br>3 edges,6 faces, one drop for each. |         |
| 10 | UV Exposure Resistance                       | 765 W/m <sup>2</sup> for 48hrs,                                                                                     |         |
| 11 | Electrostatic Discharge                      | 330Ω±8KV 200pF Air ,10 cycles                                                                                       |         |

## 8. Communication protocol

Please refer to the document for communication protocol: "Device Communication Control Protocol"

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**Note:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.
- This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.