

# IPEG-E20F-IRW4

## 2MP Eyeball Network Camera



- 2MP, 1/2.7" CMOS image sensor
- H.265 & H.264 dual-stream encoding
- Outputs 2MP (1920 × 1080)@25/30 fps
- DWDR, 3D DNR, HLC, BLC
- 2.8 mm fixed lens, Max. IR LEDs Length 98ft
- IP67, PoE, TAA Compliant, Made in Korea

## System Overview

The IPEG-E20F-IRW4 is a Eyeball Turret style camera in IC Realtime's cost-effective Edge lineup. The camera comes equipped with high end features including H.265 encoding and Starlight support with DWDR for a more colorful image in daylight as well as low illumination environments and Smart IR support with up to 98ft of illumination.

The H.265 encoding technology provides a more efficient video encoding capacity, and saves bandwidth and storage space compared to H.264. In addition, the camera includes a built-in microphone for audio, and is waterproof and dust-proof by complying to IP67 standards.

## Functions

### Protection

The camera's outstanding reliability is unsurpassed due to its rugged design. The camera is protected against water and dust with IP67 rating, making it suitable for indoor or outdoor environments.

### Environmental

With a temperature range of -40°F to +140°F (-40°C to +60°C), the camera is designed for extreme temperature environments. Subjected and certified to rigorous dust and water immersion tests, the IP67 rating makes it suitable for demanding outdoor applications.

### Interoperability

The camera conforms to the ONVIF (Open Network Video Interface Forum) specifications, ensuring interoperability between network video products regardless of manufacturer.

### Smart H.265+

Deliver high quality video without straining the network, Smart H.265+ is the optimized implementation of H.265. The Smart H.265+ encoding technology includes a scene adaptive encoding strategy, dynamic GOP, dynamic ROI, flexible multi-frame reference structure and intelligent noise reduction, providing saving of up to 70% of bandwidth and storage when compared with standard H.265.

### Smart IR Technology

With IR illumination, detailed images can be captured in low light or total darkness. The camera's Smart IR technology adjusts the intensity of camera's infrared LEDs to compensate the distance of an object. Smart IR technology prevents IR LEDs from whitening out images as they come closer to the camera. The camera's integrated infrared illumination provides high performance in extreme low-light environments up to 98ft (30m).

## Technical Specification

### Camera

|                          |   |
|--------------------------|---|
| Image Sensor             | 1/2.7"2 Megapixel progressive CMOS  |
| Effective Pixels         | 1920 (H) × 1080 (V)   |
| RAM/ROM                  | 64MB /16 MB   |
| Scanning System          | Progressive   |
| Electronic Shutter Speed | Auto/Manual 1/3 s–1/100000 s  |
| Minimum Illumination     | 0.01 lux@F2.0 (Color,30 IRE)<br>0.001 lux@F2.0 (B/W,30 IRE)<br>0 lux (Illuminator on) |
| S/N Ratio                | >56 dB  |
| IR Distance              | 98.43 ft (30 m)   |
| IR On/Off Control        | Auto / Manual   |
| IR LEDs                  | 1   |

### Lens

|                      |        |                                 |         |           |          |
|----------------------|--------|---------------------------------|---------|-----------|----------|
| Lens Type            |        | Fixed                           |         |           |          |
| Mount Type           |        | M12                             |         |           |          |
| Focal Length         |        | 2.8mm                           |         |           |          |
| Max. Aperture        |        | F2.0                            |         |           |          |
| Angle of View        |        | Horizontal: 102°, Vertical: 54° |         |           |          |
| Optical Zoom         |        | N/A                             |         |           |          |
| Focus Control        |        | Fixed                           |         |           |          |
| Close Focus Distance |        | 1.6 ft (0.5 m)                  |         |           |          |
| DORI Distance        | Lens   | Detect                          | Observe | Recognize | Identify |
|                      | 2.8 mm | 126ft                           | 50ft    | 25ft      | 12ft     |

### Pan/Tilt/Rotation

|                         |   |
|-------------------------|---|
| Pan/Tilt/Rotation Range | Pan: 0°–355°, Tilt: 0°–78°, Rotation: 0°–360° |
|-------------------------|---|

### Video

|                      |  |
|----------------------|--|
| Compression          | H.265; H.264; H.264B; MJPEG (Sub Stream Only)  |
| Streaming Capability | 2 Streams  |
| Resolution           | 1080P(1920×1080)/1.3M(1280×960)/<br>720P(1280×720)/D1(704×576/704×480)/<br>VGA(640×480)/CIF(352×288/352×240) |
| Frame Rate           | Main Stream: 1920 × 1080 (1 fps-25/30 fps)<br>Sub Stream: 704 × 576 (1 fps-25fps)<br>704 × 480 (1 fps-30fps) |
| Bit Rate Control     | CBR/VBR  |
| Bit Rate             | H.264: 32 kbps–6144 kbps<br>H.265: 12 kbps–6144 kbps   |
| Day/Night            | Auto(ICR) / Color / B/W  |
| BLC Mode             | BLC / HLC / DWDR   |
| White Balance        | Auto/natural/street lamp/outdoor/manual/regional<br>custom   |
| Gain Control         | Auto / Manual  |
| Noise Reduction      | 3D DNR   |
| Motion Detection     | Off / On (4 Zone, Rectangle)   |
| Region of Interest   | Off / On (4 Zone)  |

|                 |   |
|-----------------|---|
| Smart IR        | Support   |
| Starlight       | Support   |
| Digital Zoom    | 16x   |
| Flip            | 0°/90°/180°/270° (Supports 90°/270° with 1080p resolution or lower) |
| Mirror          | Off / On  |
| Privacy Masking | Off / On (4 Area, Rectangle)  |

### Network

|                     |  |
|---------------------|--|
| Ethernet            | RJ-45 (10/100Base-T)   |
| Protocol            | IPv4; IPv6; HTTP; TCP; UDP; ARP; RTP; RTSP; RTCP; SMTP; FTP; DHCP; DNS; DDNS; NTP; Multicast   |
| Interoperability    | ONVIF(Profile S); CGI; P2P   |
| Cyber Security      | Video encryption; Configuration encryption; Digest; WSSE; Account lockout; Security logs; Generation and importing of X.509 certification; Trusted boot; Trusted upgrade |
| Streaming Method    | Unicast / Multicast  |
| Max. User Access    | 6 (Total bandwidth: 36 M)  |
| Edge Storage        | FTP  |
| Web Viewer          | IE, Chrome, Firefox, Safari  |
| Management Software | SmartICRSS, DSS  |
| Smart Phone         | IOS, Android   |

### Certifications

|                |                        |
|----------------|------------------------|
| Certifications | FCC Part 15, Subpart B |
|----------------|------------------------|

### Interface

|                 |     |
|-----------------|-----|
| Video Interface | N/A |
| Audio Interface | N/A |
| RS485           | N/A |
| Alarm           | N/A |

### Electrical

|                   |  |
|-------------------|--|
| Power Supply      | DC12V, PoE   |
| Power Consumption | Basic: 1.4W (12 VDC); 2.2 W (PoE)<br>Max. (ICR + H.265+IR intensity): 3.5 W (12 VDC);<br>4.6W(PoE) |

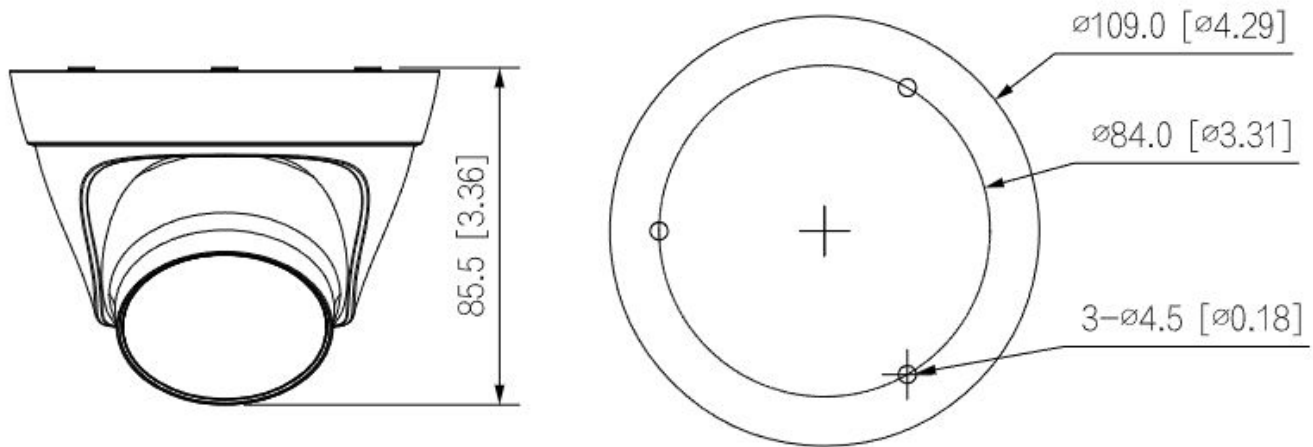
### Environmental

|                      |   |
|----------------------|---|
| Operating Conditions | -40°F to +140°F (-40°C to +60°C)/less than ≤ 95% RH |
| Storage Conditions   | -40°F to +140°F (-40°C to +60°C)                    |
| Ingress Protection   | IP67  |

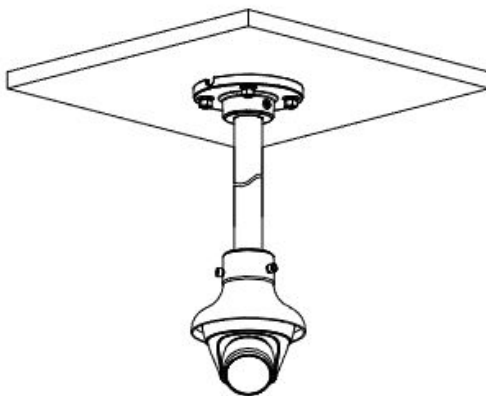
### Construction

|              |  |
|--------------|--|
| Casing       | Inner core: Metal + Plastic<br>Cover: Plastic<br>Decoration ring: Plastic<br>Base: Plastic |
| Dimensions   | 3.4" × 4.3" (85.5 mm × 109 mm)   |
| Net Weight   | 0.5 lb (0.24 kg)   |
| Gross Weight | 0.8 lb (0.37 kg)   |

## Dimensions (mm/in)



## Accessories

**MNT-ADAPT-SM +  
MNT-CEILING-30****MNT-IPMINIDOME-WALL**