

# IPEL-B12V-IRW3

## 12MP IR AI Bullet Network Camera



- 12MP 1/1.7" CMOS image sensor, high image definition
- H.265 & H.264, five-stream encoding support
- Outputs 12MP (4000 × 3000) @25/30 fps
- IVS, People Counting, Face Recognition and Perimeter Protection
- DWDR, Day/Night(ICR), 3DNR,AWB,AGC,BLC,
- 2.7-12mm Motorized varifocal lens
- Max. IR LEDs Length 196 ft
- 512GB Micro SD memory, IP67, IK10, PoE, ePOE

## System Overview

The IPEL-B12V-IRW2 is a 12MP Ultra HD bullet camera featuring a 1/1.7" CMOS high image definition image sensor with a 2.7-12mm motorized varifocal lens. It outputs 12MP (4000 × 3000) @25/30 fps with H.265 support for optimized storage. In addition, the camera features an IR distance up to 196 feet and weatherproofed thanks to IP67 and protected with an IK10 rated housing. protection. The camera also comes equipped with a 512GB Micro SD card support for onboard storage.

This Elite series camera also sports an impressive AI suite with not only IVS and People Counting, but also Perimeter Protection, which features human/ vehicle recognition. This helps to drastically reduce false positive triggers. Working with other AI enabled recorders, the camera also supports Face Detection and Recognition technology with a built-in Face database.

## Functions

### Starlight Technology

Featuring Starlight Technology, this camera is ideal for applications with challenging lighting conditions. Its low-light performance delivers usable video with minimal ambient light. Even in extreme low-light conditions, Starlight Technology is capable of delivering color images in near complete darkness (0.0009 lux).

### Perimeter Protection

IC Realtime's Perimeter Protection features significantly improve detection accuracy. The benefits of Perimeter Protection include up to a 90% reduction in false alarms. Other advantages include a decrease in pixel count requirement for object detection, which translates into more efficiency with less strain on the system. Perimeter Protection options let you customize tripwires based on the object type and allow intelligent automation within a limited area of access such as pedestrian or vehicle-only zones. The combination of advanced AI analytics and real-time alerts maximizes efficiency & balance of the total systems capacity and resources resulting in greater surveillance system efficiency.

### 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 196ft (60m).

### Protection (IP67, IK10)

Subjected and certified to rigorous dust and immersion tests (IP67) and impact tests (IK10), the camera is the choice for installation in even the most unforgiving environments.

### 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.

### Face Recognition

IC Realtime's Face Recognition technology extracts the features of captured faces and compares them with that in user-created face database to recognize the person's identity.

## Technical Specification

### Camera

|                          |                                      |
|--------------------------|--------------------------------------|
| Image Sensor             | 1/1.7" 12 Megapixel progressive CMOS |
| Effective Pixels         | 4000 (H) × 3000 (V)                  |
| RAM/ROM                  | 8GB/4GB                              |
| Scanning System          | Progressive                          |
| Electronic Shutter Speed | Auto/Manual, 1/3 s–1/100000 s        |

|                      |  |
|----------------------|--|
| Minimum Illumination | 0.0009 lux@F1.6 (Color, 30 IRE)<br>0.0005 lux@F1.6 (B/W, 30 IRE)<br>0 lux (Illuminator on) |
|----------------------|--|

|           |        |
|-----------|--------|
| S/N Ratio | >56 dB |
|-----------|--------|

|             |                |
|-------------|----------------|
| IR Distance | 196.9 ft (60m) |
|-------------|----------------|

|                   |               |
|-------------------|---------------|
| IR On/Off Control | Auto / Manual |
|-------------------|---------------|

|         |   |
|---------|---|
| IR LEDs | 4 |
|---------|---|

### Lens

|           |                      |
|-----------|----------------------|
| Lens Type | Motorized vari-focal |
|-----------|----------------------|

|            |     |
|------------|-----|
| Mount Type | φ14 |
|------------|-----|

|              |              |
|--------------|--------------|
| Focal Length | 2.7 mm-12 mm |
|--------------|--------------|

|               |      |
|---------------|------|
| Max. Aperture | F1.6 |
|---------------|------|

|               |                          |
|---------------|--------------------------|
| Angle of View | H: 106°–45°; V: 77°–34°; |
|---------------|--------------------------|

|                      |                 |
|----------------------|-----------------|
| Close Focus Distance | 5.91 ft (1.8 m) |
|----------------------|-----------------|

| DORI Distance | Lens | Detect | Observe | Recognize | Identify |
|---------------|------|--------|---------|-----------|----------|
|               | W    | 287 ft | 114 ft  | 57 ft     | 28 ft    |
|               | T    | 612 ft | 244 ft  | 122 ft    | 61 ft    |

### Pan/Tilt/Rotation

|                         |   |
|-------------------------|---|
| Pan/Tilt/Rotation Range | Pan: 0-355,°Tilt: 0-90°, Rotation: 0-360° |
|-------------------------|---|

### Video

|             |  |
|-------------|--|
| Compression | H.265; H.264; H.264H; H.264B; MJPEG (only supported by the sub stream) |
|-------------|--|

|             |                          |
|-------------|--------------------------|
| Smart Codec | Smart H.264+Smart H.265+ |
|-------------|--------------------------|

|                      |           |
|----------------------|-----------|
| Streaming Capability | 3 Streams |
|----------------------|-----------|

|            |   |
|------------|---|
| Resolution | 12M (4000 × 3000); 8M (3840 × 2160); 6M (3072 × 2048); 5M (3072 × 1728); 5M (2592 × 1944); 4M (2688 × 1520); 3M (2048 × 1536); 3M (2304 × 1296); 2M (1920 × 1080); 1.3M (1280 × 960); 720P (1280 × 720); D1 (704 × 576/704 × 480); CIF (352 × 288/352 × 240); VGA (640 × 480) |
|------------|---|

|            |                                       |
|------------|---------------------------------------|
| Frame Rate | Main stream: 4000 × 3000 @1-25/30 fps |
|------------|---------------------------------------|

|                                       |
|---------------------------------------|
| Sub stream: 1920 × 1080@(1-25/30 fps) |
|---------------------------------------|

|  |
|--|
| Third stream: 1920 × 1080 @1-25/30 fps |
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|   |
|---|
| Fourth stream: 1920 × 1080 @1-25/30 fps |
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|   |
|---|
| Fifth stream: 704 × 576@(1-25 fps)/<br>704 × 480@(1-30 fps) |
|---|

|                  |         |
|------------------|---------|
| Bit Rate Control | CBR/VBR |
|------------------|---------|

|          |  |
|----------|--|
| Bit Rate | H.264: 32 kbps–16384 kbps<br>H.265: 32 kbps–12288 kbps |
|----------|--|

|           |                         |
|-----------|-------------------------|
| Day/Night | Auto(ICR) / Color / B/W |
|-----------|-------------------------|

|          |                  |
|----------|------------------|
| BLC Mode | BLC / HLC / DWDR |
|----------|------------------|

|               |   |
|---------------|---|
| White Balance | Auto/natural/street lamp/outdoor/manual/regional 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 |
|----------|---------|

|      |   |
|------|---|
| Flip | 0°/90°/180°/270° (Support 90°/270° with 2688 × 1520 resolution and lower) |
|------|---|

|        |          |
|--------|----------|
| Mirror | Off / On |
|--------|----------|

|                 |                              |
|-----------------|------------------------------|
| Privacy Masking | Off / On (4 Area, Rectangle) |
|-----------------|------------------------------|

### Audio

|             |                                    |
|-------------|------------------------------------|
| Compression | G.711a, G.711Mu, G.726, AAC, G.723 |
|-------------|------------------------------------|

### Network

|          |                      |
|----------|----------------------|
| Ethernet | RJ-45 (10/100Base-T) |
|----------|----------------------|

|          |  |
|----------|--|
| Protocol | IPv4; IPv6; HTTP; TCP; UDP; ARP; RTP ; RTSP; RTCP; RTMP; SMTP; FTP; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP; Multicast; ICMP; IGMP; NFS; SAMBA; PPPoE; SNMP; P2P |
|----------|--|

|                |   |
|----------------|---|
| Cyber Security | Video encryption; firmware encryption; configuration encryption; Digest; WSSE; account lockout; security logs; IP/MAC filtering; generation and importing of X.509 certification; syslog; HTTPS; 802.1x; trusted boot; trusted execution; trusted upgrade |
|----------------|---|

|                  |  |
|------------------|--|
| Interoperability | ONVIF (Profile S/Profile G/Profile T); CGI |
|------------------|--|

|                  |                     |
|------------------|---------------------|
| Streaming Method | Unicast / Multicast |
|------------------|---------------------|

|                  |                             |
|------------------|-----------------------------|
| Max. User Access | 20 (Total bandwidth: 340 M) |
|------------------|-----------------------------|

|              |   |
|--------------|---|
| Edge Storage | FTP; SFTP; Micro SD card (support max. 512 GB); NAS |
|--------------|---|

|            |                             |
|------------|-----------------------------|
| 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 | 1 channel input/ output (RCA port) |
|-----------------|------------------------------------|

|       |  |
|-------|--|
| RS485 | 1 (baud rate range: 1200 bps–115200 bps) |
|-------|--|

|       |                                    |
|-------|------------------------------------|
| Alarm | Input: 3 channels in: 5mA 3V–5V DC |
|-------|------------------------------------|

|   |
|---|
| Output: 2 channels out: 1,000mA 30V DC/500mA 50V DC |
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### Electrical

|              |                                   |
|--------------|-----------------------------------|
| Power Supply | 12 VDC/24 VAC/PoE+ (802.3at)/ePoE |
|--------------|-----------------------------------|

|                   |   |
|-------------------|---|
| Power Consumption | Basic: 7.3 W (12 VDC); 10.2 W (24 VAC); 10.6 W (PoE) Max. (ICR switch + IR intensity): 18.2 W (12 VDC); 24.2 W (24 VAC); 24.3 W (PoE) Heating: 3 W (12 VDC); 4.6 W (24 VAC); 5.47 W (PoE) |
|-------------------|---|

### Environmental

|                      |  |
|----------------------|--|
| Operating Conditions | –40°F to +149°F (–40°C to +65°C) /Less than 95% RH |
|----------------------|--|

|                    |                                  |
|--------------------|----------------------------------|
| Storage Conditions | –40°F to +149°F (–40°C to +65°C) |
|--------------------|----------------------------------|

|                    |      |
|--------------------|------|
| Ingress Protection | IP67 |
|--------------------|------|

|                   |      |
|-------------------|------|
| Vandal Resistance | IK10 |
|-------------------|------|

### Construction

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|--------|-----------------|
| Casing | Metal + plastic |
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| Dimensions | 13.61" × 5.28" × 5.32"<br>(345.6 mm × 134.2 mm × 135.1 mm) (L × W × H) |
|------------|--|

|            |                   |
|------------|-------------------|
| Net Weight | 3.64 lb (1.65 kg) |
|------------|-------------------|

|              |                   |
|--------------|-------------------|
| Gross Weight | 6.02 lb (2.73 kg) |
|--------------|-------------------|

## AI Functions

### IVS

|              |   |
|--------------|---|
| Basic IVS    | Tripwire; Intrusion; Abandoned object; missing object, loitering detection; people gathering; parking detection |
| Advanced IVS | People Counting, Face Detection   |

### Perimeter Protection

|              |  |
|--------------|--|
| Capabilities | Tripwire; Intrusion; Fast moving (These functions support the classification and detection of vehicle and human objects) |
|--------------|--|

### Video Metadata

|                          |   |
|--------------------------|---|
| Capabilities             | Generates flow statistics for people, motor vehicles and non-motor vehicles based on the direction, and exports Reports. Motor vehicle, non-motor vehicle, face, and human body detection; snapshot; snapshot optimization; optimal face snapshot upload. |
| Human attributes         | Top and bottom type and color, bag, hat, gender and umbrella  |
| Motor Vehicle attributes | License plate, vehicle type, vehicle color, vehicle logo, seatbelt, smoking, and calling.   |
| Non-Motor attributes:    | Type, vehicle color, number of people, top type and color, and hat  |

### Parking Space Management

|              |  |
|--------------|--|
| Capabilities | Parking Space Management: Manage outdoor and planned parking lots; manage parking spaces in multiple areas; display the total number of parking spaces and parking spaces that are available; trigger alarms based on a predefined number of vehicles. |
|--------------|--|

### People Counting

|              |   |
|--------------|---|
| Capabilities | Tripwire: people counting and people counting in area, generating and exporting report (day/month/year); queue management, generating and exporting report (day/month); 4 rules can be set for tripwire, people counting in area and queue management |
|--------------|---|

### ANPR

|              |   |
|--------------|---|
| Performance  | The camera can recognize plate numbers of vehicles moving at speeds of up to 37 MPH (60km/h). Captures 1 direction-either incoming or departing traffic. Supports up to 10,000 blacklist and allowlist records. |
| Capabilities | <b>Vehicle attributes:</b> License plate, vehicle type, vehicle color.<br><b>Other attributes:</b> Seat belt, smoking, calling.   |

### AI Search

|              |   |
|--------------|---|
| Capabilities | Works together with AI enabled NVRs to perform refined intelligent search, event extraction and merging to event videos |
|--------------|---|

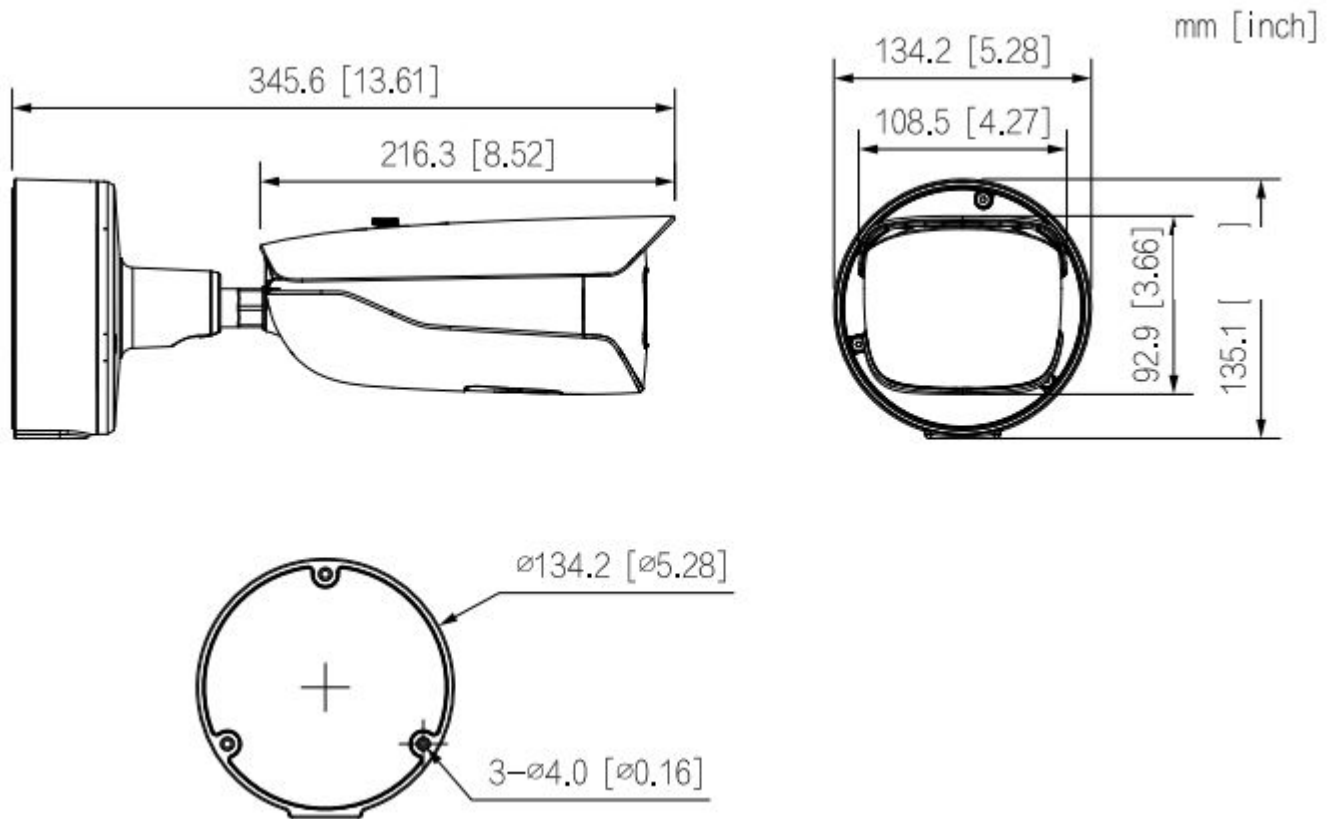
### Face Detection

|              |   |
|--------------|---|
| Capabilities | Face detection; track; snapshot; snapshot optimization; optimal face snapshot upload; face enhancement; face exposure; face attributes extraction including 6 attributes and 8 expressions; face snapshot set as face or one-inch photo; snapshot strategies (real-time snapshot, quality priority and optimization snapshot); face angle filter; optimization time setting |
|--------------|---|

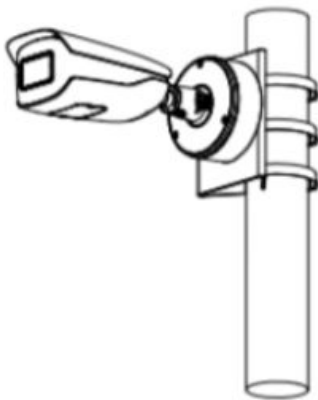
### Face Recognition

|               |   |
|---------------|---|
| General Mode  | Face detection; snapshot; snapshot optimization; optimal face snapshot upload; face enhancement; face exposure; face attributes extraction including 6 attributes and 8 expressions                       |
| Counting Mode | Offers advanced customer counter, filters out specified faces from the face database, and exports reports both before and after removing duplicate faces.   |
| Stranger Mode | Detect strangers' faces (not in device's face database). Similarity threshold can be set manually.  |
| AI Search     | Supports face image search, similarity threshold can be set for each target face image.   |
| Database      | Supports adding 5 group face databases; registering person one by one or in batches; setting face similarity; and supports face comparison with the face database containing up to 200,000 face pictures. |

## Dimensions (mm/in)



## Accessories

**Included Mount  
+MNT-POLIP****Included Mount**