

# IPMX-E40F-IRW3

4MP Starlight Eyeball Network Camera



- 4MP, 1/2.9" CMOS image sensor, low illuminance, high image definition
- H.265 & H.264 triple-stream encoding
- Outputs 4MP (2688 × 1520) @25/30 fps
- Intelligent Motion Detect 2.0 and Perimeter Protection
- WDR(120dB), Day/Night(ICR), 3DNR,AWB,AGC,BLC,
- 2.8 mm fixed lens, Built-in Microphone
- Starlight support, Max. IR LEDs Length 164 ft
- Micro SD memory, IP67, PoE

## System Overview

IC Realtime's IPMX-E40F-IRW3 is an Eyeball dome camera featuring our latest generation of 1/2.9" CMOS sensors capable of 4MP @30 fps with H.265 encoding. The upgraded hardware now supports Intelligent Motion Detect 2.0 with Object Search support and a Starlight supported IR illumination up to 164'. Beyond this, the camera has Perimeter Protection with Tripwire and Intrusion, a built-in microphone, and IP67 weather protection.

Due to the larger image sensor, this camera supports a large dynamic range (120 dB), and is considered a 'True' WDR camera. On top of the image sensor sits a fixed, 2.8mm lens which offers up a 102 degree horizontal field of view. This makes the camera well suited for interior and exterior applications on commercial as well as residential installations.

Made in South Korea and conforms to the Trade Agreements Act (TAA).

## 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 (0.005 lux).

### iMD 2.0 (Intelligent Motion Detect)

The AI Machine Learning algorithms in our Intelligent Motion Detection (iMD) recorders & cameras means detection gets more accurate over time. Now, iMD 2.0 provides even better recognition, even fewer false alerts, and it encodes detection metadata in every video frame right from installation. This enables our new Object Search system to quickly locate recorded clips matching your search parameters.

### 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.

### Protection (IP67, wide voltage)

Subjected and certified to rigorous dust and water immersion tests, the IP67 rating makes it suitable for demanding outdoor applications. For environments with rain, sleet, snow and fog, an integrated wiper provides users with clear visibility at all times. Wide voltage: The camera allows  $\pm 30\%$  input voltage tolerance (wide voltage range), and it is widely applied to outdoor environment with unstable voltage.

### 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.

### Wide Dynamic Range (WDR)

The camera achieves vivid images, even in the most intense contrast lighting conditions, using industry-leading wide dynamic range (WDR) technology. For applications with both bright and low lighting conditions that change quickly, True WDR (120 dB) optimizes both the bright and dark areas of a scene at the same time to provide usable video.

Technical Specification

Camera

Image Sensor	1/2.9" 4 Megapixel progressive CMOS
Effective Pixels	2688 (H) ×1520 (V)
RAM/ROM	512MB/128MB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100000 s
Minimum Illumination	0.005 lux@F1.4 (Color, 30 IRE) 0.0005 lux@F1.4 (B/W, 30 IRE) 0 lux (Illuminator on)
S/N Ratio	> 56 dB
IR Distance	164.0 ft (50 m)
IR On/Off Control	Auto / Manual
IR LEDs	2

Lens

Lens Type		Fixed focal			
Mount Type		M12			
Focal Length		2.8 mm			
Max. Aperture		F1.4			
Angle of View		Horizontal:102°; Vertical: 54°			
Iris Type		Fixed aperture			
Focus Control		Fixed			
Close Focus Distance		2.3ft (0.7m)			
DORI Distance	Lens	Detect	Observe	Recognize	Identify
	2.8 mm	208 ft	83 ft	41 ft	21 ft

Pan/Tilt/Rotation

Pan/Tilt/Rotation Range	Horizontal: 0°–360°; vertical: 0°–78°; rotation: 0°–360°
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Video

Compression	H.265; H.264; H.264H; H.264B; MJPEG (sub stream only)
Smart Codec	Smart H.265+; Smart H.264+
AI Coding	AI H.265; AI H.264
Streaming Capability	3 Streams
Resolution	4M (2688 × 1520); 3M (2304 × 1296); 1080p (1920 × 1080); 1.3M (1280 × 960); 720p (1280 × 720); D1 (704 × 576/704 × 480); VGA (640 × 480); CIF (352 × 288/352 × 240)
Frame Rate	Main Stream: (2688 × 1520) @1–25/30 fps
	Sub Stream: (704 × 576) @1–25 fps/ (704 × 480) @1–30 fps
	Third Stream: (1280 × 720) @1–25/30 fps
Bit Rate Control	CBR/VBR
Bit Rate	H.264: 3 Kbps–8192 Kbps H.265: 3 Kbps–8192 Kbps
Day/Night	Auto(ICR) / Color / B/W
BLC Mode	BLC / HLC / WDR(120dB)
White Balance	Auto/Natural/Street Lamp/Outdoor/Manual
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° (Support 90°/270° with 1920 × 1080 resolution.)
Mirror	Off / On
Privacy Masking	Off / On (4 Area, Rectangle)

Audio

Compression	G.711a; G.711Mu; PCM; G.726; G.723
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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
Interoperability	ONVIF (Profile S/Profile G/Profile T); CGI; P2P
Streaming Method	Unicast / Multicast
Max. User Access	20 (Total bandwidth: 64 M)
Edge Storage	FTP; SFTP; Micro SD card (support max. 256 G); NAS
Web Viewer	IE, Chrome, Firefox, Safari
Management Software	SmartICRSS, DSS
Smart Phone	IOS, Android

Certifications

Certifications	FCC Part 15, Subpart B
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Interface

Video Interface	N/A
Audio Interface	Built-in MIC
RS485	N/A
Alarm	N/A

Electrical

Power Supply	DC12V, PoE (802.3af)
Power Consumption	Basic: 3.3 W (12 VDC); 4.2 W (PoE) Max. (WDR + IR intensity + Intelligence): 7.1 W (12 VDC); 7.9 W (PoE)

Environmental

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

Construction

Casing	Metal/ Plastic
Dimensions	3.69" × Φ4.17" (93.6 mm × Φ106.0 mm)
Net Weight	1.1 lb (500g)
Gross Weight	1.7 lb (770g)

AI Functions

IVS

Basic IVS	Tripwire; Intrusion
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Perimeter Protection

Capabilities	Tripwire; Intrusion (These functions support the classification and detection of vehicle and human objects)
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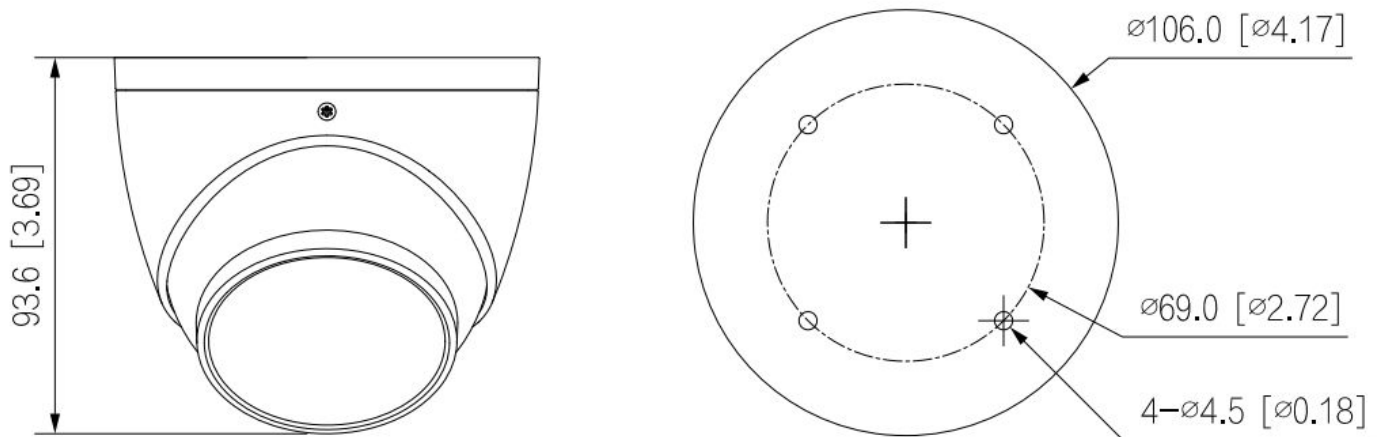
Intelligent Motion Detect 2.0

Capabilities	Advanced secondary filtering for human and motor vehicle , reducing false alarms caused by leaves, rain and lighting condition change. Supports Object Search with compatible NVRs.
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AI Search

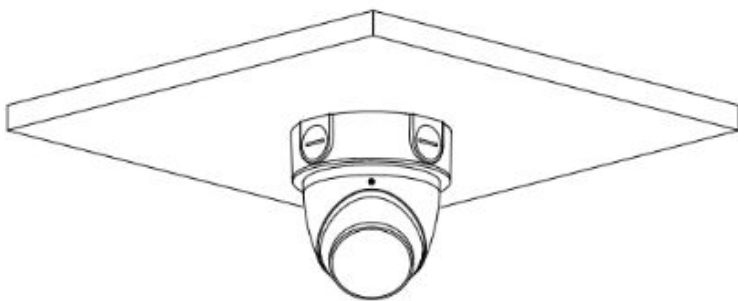
Capabilities	Works together with AI enabled NVRs to perform refined intelligent search, event extraction and merging to event videos
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## Dimensions (mm/in)



## Accessories

## MNT-JUNCTIONBOX-1



## MNT-CEILING-30

