IPEL-E80F-IRW3
8MP Starlight Eyeball Network Camera

IC REALTIME

- 8MP, 1/2.8" CMOS image sensor, low illuminance, high image definition
- H.265 & H.264 triple-steam encoding
- Outputs max. 8MP (3840 × 2160) @25/30 fps
- Intelligent Motion Detect 2.0 and Perimeter Protection
- WDR(120dB), Day/Night(ICR), 3DNR,AWB,AGC,BLC,
- Starlight support, Max. IR LEDs Length 98 ft
- 256GB Micro SD memory, Built-in Mic, IP67, PoE

System Overview

New in IC Realtime's Elite lineup, the IPEL-E80F-IRW3 boasts an impressive 8MP, 1/2.8" low illuminance, high image definition CMOS image sensor supporting up to 4K (3840 × 2160) @30 fps. The camera excels in low light environments with Starlight support and a max IR distance of 98 feet. It is also features a built-in microphone and is IP67 rated for outdoor use as well as 256GB Micro SD storage support.

This camera is also equipped with a suite of AI features including Intelligent Motion Detect (iMD) 2.0 and Perimeter Protection. This technology utilizes a deep learning algorithm that recognizes people and vehicles, which drastically reduces false positives, enabling a more optimized search function.

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 (0.007 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.

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.

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 ±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	1/2.8" 8 Megapixel progressive CMOS
Effective Pixels	3840 (H) × 2160 (V)
RAM/ROM	1GB/ 128MB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100000 s
Minimum Illumination	0.007 lux@F1.4 (Color, 30 IRE) 0.0007 lux@F1.4 (B/W, 30 IRE) 0 lux (Illuminator on)
S/N Ratio	> 56 dB
IR Distance	98.4 ft (30 m)
IR On/Off Control	Auto / Manual
IR LEDs	1

Lens

Lens Type	Fixed-focal
Mount Type	M12
Focal Length	2.8 mm
Max. Aperture	F1.4
Angle of View	Horizontal:107°; vertical: 56°
Iris Type	Fixed aperture
Close Focus Distance	4.9 ft (1.5 m)

DORI Distance	Lens	Detect	Observe	Recognize	Identify
	2.8mm	287 ft	115 ft	57 ft	28 ft

Pan/Tilt/Rotation

Pan/Tilt/Rotation Range	Pan: 0°–360°; Tilt: 0°–78°; Rotation: 0°–360°

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	8M (3840 × 2160); 6M (3072 × 2048); 5M (3072 × 1728/2592 × 1944); 4M (2688 × 1520); 3.6M (2560 × 1440); 3M (2048×1536); 3M (2304×1296); 1080p (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: 3840 × 2160 @ (1–25/30) fps
	Sub stream: 704 × 576 @ (1–25 fps)/ 704 × 480 @ (1–30 fps)
	Third Stream: 1920 × 1080 @(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° (supports 90°/270° with 2688×1520 resolution and lower)
Mirror	Off / On
Privacy Masking	Off / On (4 Area, Rectangle)

Audio

Compression	G.711a; G.711Mu; PCM; G.726; 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
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; P2P
Streaming Method	Unicast / Multicast
Max. User Access	20 (Total bandwidth: 64 M)
Edge Storage	NAS, FTP, SFTP, Micro SD Card (256 GB) Local PC for instant recording
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	Built-in Mic, 1 channel input/ output (RCA port)
Alarm	N/A

Electrical

Power Supply	DC12V, PoE (802.3af)
Power Consumption	Basic: 4.3 W (12 VDC); 4.9 W (PoE) Max. (WDR + IR intensity + Intelligence): 7.6 W (12 VDC); 8.9 W (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	Metal
Dimensions	3.69" × Φ4.17" (93.6 mm × Φ106.0 mm)
Net Weight	1.10 lb (500 g)
Gross Weight	1.7 lb (770 g)

AI Functions

IVS

Basic IVS	Tripwire; Intrusion

Perimeter Protection

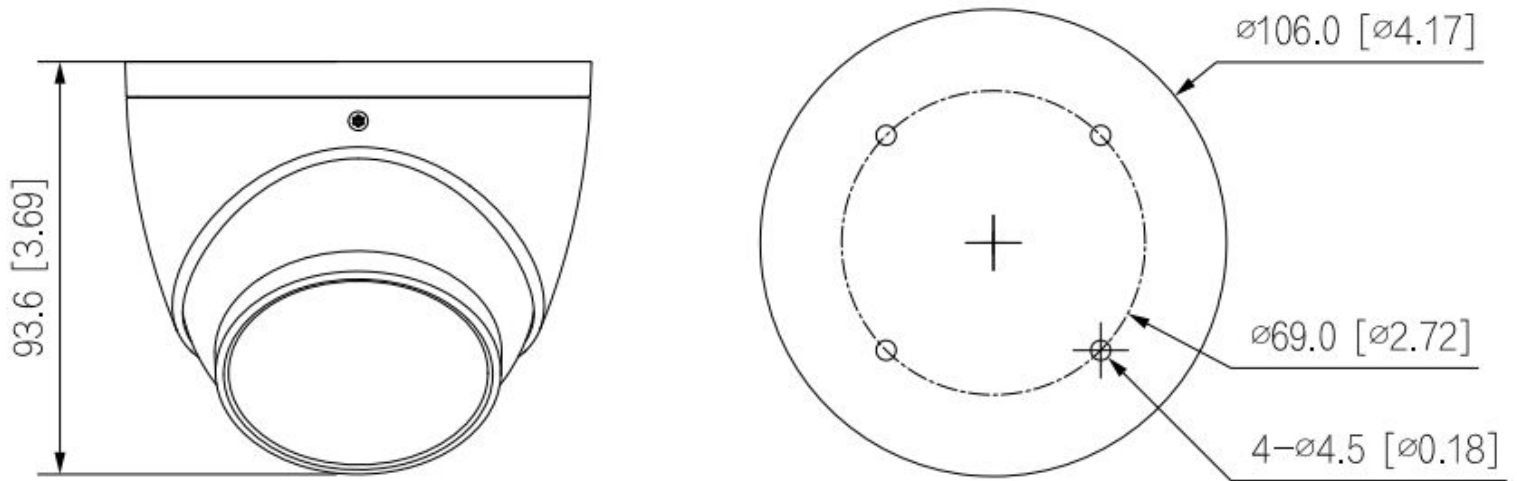| Capabilities	Tripwire; Intrusion (These functions support the classification and detection of vehicle and human objects)

Intelligent Motion Detect 2.0

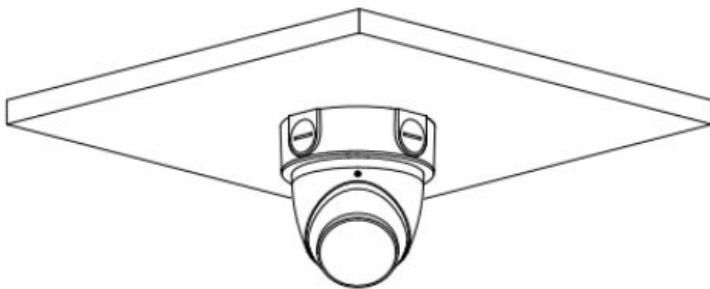| Capabilities	Advanced secondary filtering for human and motor vehicle , reducing false alarms caused by leaves, rain and lighting condition change. Supports **Object Search** with compatible NVRs.

AI Search

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

Dimensions (mm/in)

93.6 [3.69]

∅106.0 [∅4.17]

∅69.0 [∅2.72]

4−∅4.5 [∅0.18]

Accessories

MNT-JUNCTIONBOX-1

MNT-IPMINIDOME-WALL