IPMX-W40F-IRW3
4MP Starlight Mini Wedge Network Camera

IC REALTIME

- 1/2.9" 4 Megapixel progressive scan CMOS
- H.265 & H.264 triple-stream encoding
- 30fps @4MP(2688 × 1520)
- Intelligent Motion Detect 2.0 and Perimeter Protection
- WDR(120dB), Day/Night(ICR), 3DNR,AWB
- 2.8mm fixed lens, Built-in Mic
- Starlight support, Max IR LED Length 98 feet
- 256GB Micro SD memory, IP67, IK10, PoE

System Overview

The IPMX-W40F-IRW3 is the newest wedge dome in the Max line of cameras updated with the newest AI features. This small form factor camera adopts a 4MP, 1/3" Megapixel progressive scan CMOS sensor enabling 4 Megapixel video at up to 30FPS. This sensor is paired with a 2.8mm fixed lens, and Starlight supported with IR LEDs capable of illumination up to 164'. The image sensor itself has a strong 120 dB dynamic range, making this dome camera a 'True WDR' camera. The camera also supports audio with a built-in mic.

The real magic of this camera lies in its new AI (Advanced Intelligence) suite of features, which includes: Intelligent Motion Detect 2.0 and Perimeter Protection. These features combined with our AI line of recorders provide extra reduction in false positives and efficiency using the 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 (0.005 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.

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.

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 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.

Protection (IP67, IK10, wide voltage)
The camera allows for ±25% input voltage tolerance, suitable for the most unstable conditions for outdoor applications. Its 2KV lightning rating provides effective protection for both the camera and its structure against lightning. Subjected and certified to rigorous dust and immersion tests (IP67) and impact tests (IK10), The camera complies with an IK10 impact rating making it capable of withstanding the equivalent of 5 kg (11.02 lbs) of force dropped from a height of 40 cm (15.75 in.)

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
Min. Illumination	0.005 lux@F1.4 (Color, 30 IRE) 0.0005 lux@F1.4 (B/W, 30 IRE) 0.01 lux@F2.0 (Color, 30 IRE) 0.001 lux@F2.0 (B/W, 30 IRE) 0 lux (Illuminator on)
S/N Ratio	> 56 dB
IR Distance	98.43 ft (30m)
IR On/Off Control	Auto / Manual
IR LEDs	2

Lens

Lens Type	Fixed
Mount Type	M12
Focal Length	2.8mm
Max. Aperture	F1.4
Angle of View	Horizontal:102°; vertical: 54°;
Optical Zoom	N/A
Focus Control	Fixed
Close Focus Distance	2.95ft (0.9m)

DORI Distance	Detect	Observe	Recognize	Identify
	208ft	83ft	41ft	21ft

Pan/Tilt/Rotation

Pan/Tilt/Rotation Range	Pan: 0°–355°; Tilt: -20°–70°; Rotation: 0°–355°

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); 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: 2688 × 1520@ (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
AI Scene Self-adaptation	Supported
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)
Electronic Image Stabilization (EIS)	N/A
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; 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
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

Interface

Video Interface	N/A
Audio Interface	Built-in Mic, 1/1 channel (RCA port)
RS485	N/A
Alarm	1 channel in: 5 mA 3–5 VDC
	1 channel out: 300 mA 12 VDC

Electrical

Power Supply	DC12V, PoE (802.3af)
Power Consumption	Basic: 3.8 W (12 VDC); 4.6 W (PoE) Max. (WDR + IR intensity + Intelligence): 5.9 W (12 VDC); 7.2 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
Vandal Resistance	IK10

Construction

Casing	Metal
Dimensions	2.55" × Φ4.37" (64.8 mm × Φ111.0 mm)
Net Weight	0.93lb (423g)
Gross Weight	1.17lb (530g)

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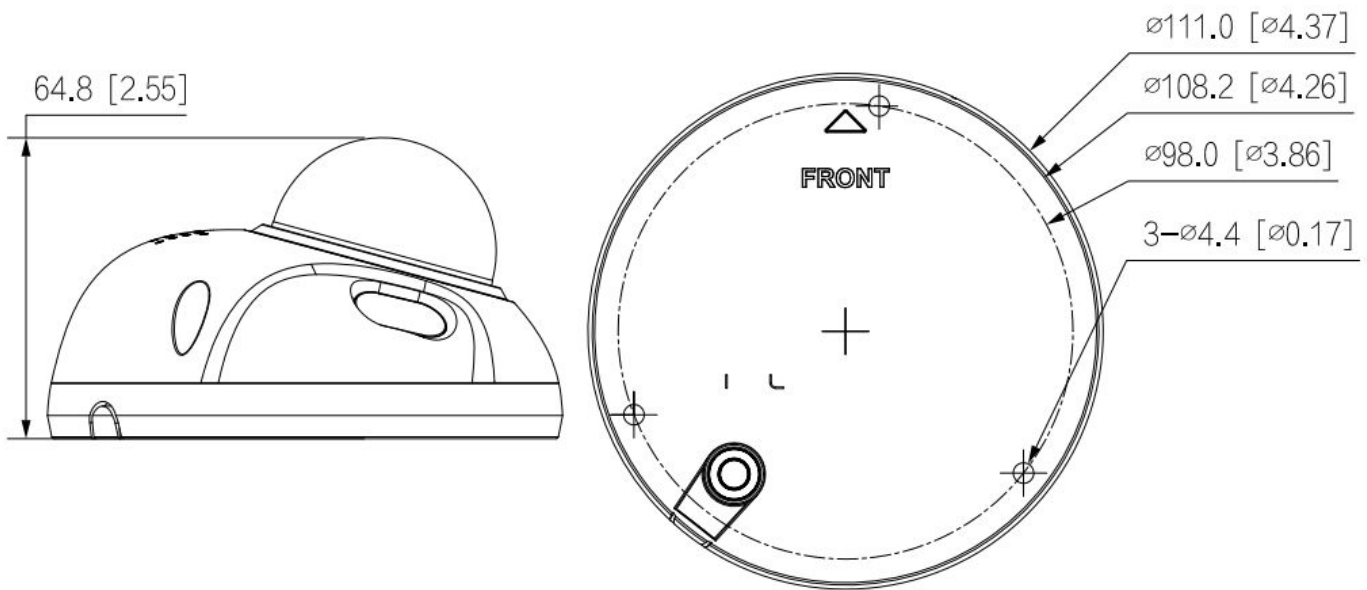
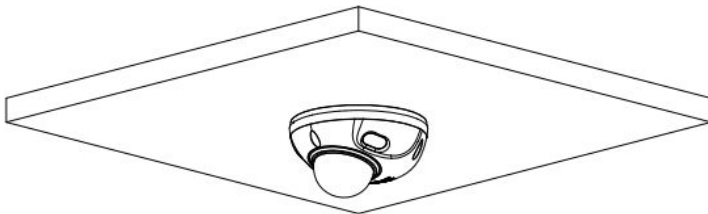|	
Capabilities	Advanced secondary filtering for human and motor vehicle , reducing false alarms caused by leaves, rain and lighting condition change. Supports **Object Search** with compatible NVRs.

AI Search

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

Dimensions (mm/in)

64.8 [2.55]

⌀111.0 [⌀4.37]
⌀108.2 [⌀4.26]
⌀98.0 [⌀3.86]
3−⌀4.4 [⌀0.17]

FRONT

Accessories

Included Mount

MNT-JUNCTIONBOX-6