IPMX-B40F-IRW3
4MP Starlight Mini Bullet Network Camera

IC REALTIME

- 4MP, 1/2.9" CMOS image sensor, low illuminance, high image definition
- H.265 & H.264 triple-stream encoding
- 4MP (2688 × 1520)@30 fps
- Intelligent Motion Detect 2.0 and Perimeter Protection
- 2.8mm fixed lens, WDR(120dB), 3D DNR, HLC, BLC
- Starlight support, Max. IR LEDs Length 164ft
- 256GB Micro SD Support, IP67, PoE

System Overview

IC Realtime's IPMX-B40F-IRW3 is a mini bullet camera provideing 30FPS@ 4MP (2688 × 1520) with H.265 support and equipped with a 1/2.9" low illuminance, high image definition CMOS image sensor on top of 2.8mm lens. Combined with Starlight support, 164 feet of IR distance and 120dB WDR, the camera provides a crisp, vibrant image under the most demanding lighting conditions.

With Intelligent Motion Detect (iMD) 2.0 and Perimeter Protection technology, you can filter moving objects as vehicle or person on motion detect or when setting up virtual tripwire and intrusion zones. This helps reduce false alarms and streamline the playback search functionality.

Functions

Smart (H.265+ & H.264+)
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, wide voltage)
The camera allows for ±30% input voltage tolerance, 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. It also features ±30% input voltage tolerance, allowing it to operate under unstable power supply conditions. Its 4KV lightning rating provides protection from the effects of a lightning strike.

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.

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).

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	Distance up to 50 m (164.0 ft)
IR On/Off Control	Auto / Manual
IR LEDs	1

Lens

Lens Type	Fixed-focal
Mount Type	M12
Focal Length	2.8mm
Max. Aperture	F1.4
Angle of View	Horizontal:107°; vertical: 56°
Close Focus Distance	2.3ft (0.7m)

DORI Distance	Lens	Detect	Observe	Recognize	Identify
	2.8mm	208 ft	83 ft	41 ft	21 ft

Pan/Tilt/Rotation

Pan/Tilt/Rotation Range	Pan:0˚~360˚; Tilt:0˚~90˚; 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	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 1: 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; 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° (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 Users (Total bandwidth: 64 M)
Edge Storage	NAS, 256GB max SD Card, FTP, SFTP
Web Viewer	IE, Chrome, Firefox, Safari
Management Software	SmartICRSS, DSS
Smart Phone	IOS, Android

Certifications

Certifications	FCC Part 15, Subpart B

Interface

Audio Interface	Built-in Microphone; Audio In/ Out (RCA ports)
RS485	N/A
Alarm	1 channel in: 5mA 3V–5V DC 1 channel out: 300mA 12V DC

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

Construction

Casing	Metal
Dimensions	192.7 mm × 70.5 mm × 66.4 mm (7.5" × 2.77" × 2.6")
Net Weight	1.3lb (590 g)
Gross Weight	1.7lb (780 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
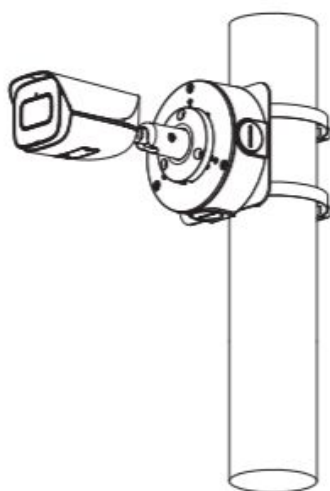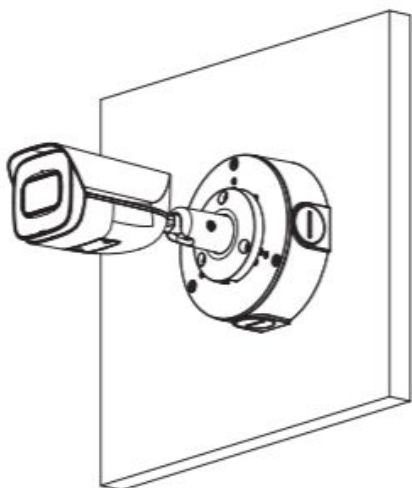
Capabilities	Advanced secondary filtering for human and motor vehicle , reducing false alarms caused by leaves, rain and lighting condition change. Supports **Object Search** with compatible NVRs.

AI Search

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

Accessories

Dimensions (mm/in)