

IPMX-P40F-W1-LED

4MP Full-Color LED AI PTZ Network Camera



- 1/1.8" 4 Megapixel STARVIST™ CMOS
- Pan, Tilt & Digital Zoom, Built-in mic and speaker for 2-way talk
- Max. 25/30fps@4MP, H.265 Encoding
- Perimeter Protection, iMD (Human Auto-tracking)
- i-Sniper+ Pro, 24/7 full color image
- Warm LED Illumination distance up to 98 feet
- IP66, 256GB mSD support, DC 12V or PoE

System Overview

IC Realtime's IPMX-P40F-W1-LED combines a compact Pan, Tilt and a digital zoom camera with the new night color generation chipset, resulting in unparalleled scholar images at night. This 4 Megapixel Starlight camera is equipped Warm light capable of 98 feet of Illumination in the event of an environment with zero ambient light. The camera supports improved AI Human/ Vehicle recognition Auto Tracking working with Intelligent Motion Detect. Furthermore, the camera supports Perimeter Protection (Tripwire, Intrusion).

The PTZ also supports 12V DC or PoE and is IP66 rated, making suitable for rugged outdoor environments. It is also equipped with a built-in Microphone and Speaker for 2-way talk capability.

Functions

iMD (Intelligent Motion Detect)

This is an upgraded version of motion detection currently known as Intelligent Motion Detection (iMD). The upgraded Plus version greatly improves alarm accuracy by pre-loading a deep learning algorithm that recognizes people and vehicles. Motion detection alerts containing a human and/or vehicle intrusion event are now possible with up to 95% accuracy. Eliminate false alarms, save time and keep stress levels low knowing you're protected.

Intelligent Video System (IVS)

With built-in intelligent video analytics, the camera has the ability to detect and analyze moving objects for improved video surveillance. The camera provides optional standard intelligence at the edge allowing detection of multiple object behaviors such as abandoned or missing objects. IVS also supports Tripwire analytics, allowing the camera to detect when a predetermined line has been crossed, ideal for business intelligence, and Facial Detection, for searching or identification of individuals.

Auto-tracking 2.0

Based on the improved AI skill set of iMD 2.0. Autotrack 2.0 includes an interference filtering algorithm to achieve military-grade target centered, autofocused telescopic auto tracking. Autotrack 2.0 extends PT camera tracking to a new level with much faster camera pan & tilt tracking speeds, predictive object centering and framing with improved false alert rejection.

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.

AI-ISP

AI-ISP (AI Image Signal Processing) combines advanced AI algorithms with traditional ISP techniques to deliver unparalleled image and video quality. By enhancing key visual elements like noise reduction, dynamic range (HDR), sharpening, and color optimization, AI-ISP transforms raw camera data into stunning visuals. With AI integrated into essential ISP modules such as 3DNR, tone mapping, and demosaic, every frame is optimized for exceptional clarity, accuracy, and vibrancy.

Protection (IP66)

Subjected and certified to rigorous dust and water jet tests (IP66), the camera is the choice for installation in even the most unforgiving environments.

Technical Specification

Camera

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|--------------------------|--|
| Image Sensor | 1/1.8" CMOS |
| Effective Pixels | 2560 (H) × 1440 (V), 4 Megapixels |
| RAM/ROM | 256 MB/ 256 MB |
| Scanning System | Progressive |
| Electronic Shutter Speed | 1/1 s–1/30,000 s |
| Minimum Illumination | 0.0005 lux@F1.0 (Color, 30 IRE); 0 lux (illuminator on) |
| Illumination Distance | 98 ft (30 m) |
| Illumination Control | Auto / Manual/ Off |
| Visible Warm Light LEDs | 4 |

Lens

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|----------------------|------------------------|---------|-----------|----------|
| Focal Length | 4 mm | | | |
| Max. Aperture | F1.0 | | | |
| Angle of View | H: 97°; V: 52°; D:114° | | | |
| Close Focus Distance | 8.53 ft (2.6 m) | | | |
| DORI Distance | Detect | Observe | Recognize | Identify |
| | 230 ft | 92 ft | 46 ft | 23 ft |

PTZ

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|----------------------|---------------------------------------|
| Pan/Tilt Range | Pan: 0° to 345°; Tilt: 0° to +90° |
| Manual Control Speed | Pan: 0.1°–34.5°/s; Tilt: 0.1°–36.4°/s |
| Preset Speed | Pan: 0.1°–33.8°/s; Tilt: 0.1°–36.3°/s |
| Presets | 300 |
| Tour | 8 Tour (up to 32 presets) |
| Power-off Memory | Yes |
| Idle Motion | Preset/Tour |

Intelligence

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|---------------------------|---|
| Perimeter Protection | Tripwire; Intrusion (Supports vehicle and human detection and Lite Auto Tracking) |
| Intelligent Motion Detect | Advanced motion detection alarm for human and vehicle. |
| IVS | Tripwire; intrusion |
| Auto-Tracking | Human Auto-Tracking (supported with iMD) |

Active Deterrence

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| Visual | Flashing Warm LED lights |
| Audible | Sound Prompt using the built-in speakers. Has optional pre-programmed prompts and additional prompts can be uploaded |
| Disarming | One-click disarm via web, app or via supported NVR |

Video

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| Compression | Smart H.265+; H.265; Smart H.264+; H.264B; H.264M; H.264H; MJPEG (Sub Stream) |
| Streaming Capability | 2 Streams |
| Resolution | 4M (2560 × 1440); 1080p (1920 × 1080); 720p (1280 × 720); D1 (704 × 480); VGA (640 × 480); CIF (352 × 288/352 × 240) |
| Frame Rate | Main stream: 4M/1080p/720p@(1–25/30 fps) Sub stream1: D1/VGA/CIF@(1–25/30 fps) |
| Bit Rate Control | CBR/VBR |

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|------------------------|--|
| Bit Rate | H264: 3,072 kbps–15,104 kbps H265: 1,280 kbps–9,216 kbps |
| Day/Night | Color/B/W |
| Backlight Compensation | BLC / HLC / DWDR |
| White Balance | Auto; indoor; outdoor; tracking; manual; sodium lamp; natural light; street lamp |
| Gain Control | Auto / Manual |
| Noise Reduction | 2DNR/3DNR |
| Region of Interest | Support |
| Defog | Electronic |
| Flip | 180° |

Audio

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|-------------|----------------------|
| Compression | PCM, G.711A, G.711Mu |
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Network

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| Ethernet | RJ-45 (10/100Base-T) |
| Protocol | HTTP; HTTPS; TCP/IP; IPv4; RTSP; UDP; SMTP; NTP; DHCP; DNS; DDNS; IPv6; 802.1x; SSL; QoS; FTP; UPnP; ICMP; SNMP; IGMP; ARP; RTCP; RTP; PPPoE; RTMP; Bonjour; NFS |
| Interoperability | ONVIF (Profile S & Profile G & Profile T); CGI; SDK |
| Streaming Method | Unicast / Multicast |
| Max. User Access | 20 (total bandwidth 64M) |
| Edge Storage | Micro SD card (Up to 256 GB); FTP |
| Web Viewer | IE, Chrome, Firefox, Safari |
| Management Software | IC Now, IC Now Pro |
| Smart Phone | IOS, Android |

Certifications

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|----------------|------------------------|
| Certifications | FCC: Part 15 subpart B |
|----------------|------------------------|

Interface

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|-----------------|-------------------|
| Video Interface | N/A |
| Audio Input | Built-in Mic |
| Audio Output | Built-in Speakers |
| Alarm I/O | N/A |

Electrical

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|-------------------|---|
| Power Supply | 12 VDC, 1A ± 10% PoE (802.3af); PSU Not included. |
| Power Consumption | PoE: Basic: 3.6 W Max: 9.5 W (LEDs on + PTZ moving) |

Environmental

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|----------------------|--|
| Operating Conditions | –22 °F to +131 °F (–30 °C to +55 °C) / Less than 95% RH |
| Ingress Protection | IP66 |
| Lightning Protection | TVS 2000 V lightning proof; surge protection; voltage transient protection; Waterproof and Dustproof |

Construction

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|--------------|--|
| Casing | Plastic |
| Mount | Included |
| Dimensions | 6.04" × Ø5.09" (153.5 mm × Ø129.3 mm) |
| Net Weight | 1.46 lb (0.66 kg) |
| Gross Weight | 2.20 lb (1 kg) |

Dimensions (mm/in)

