

IPFX-P2025X-IRW1

2MP 25x Starlight IR PTZ Network Camera



- 1/2.8" 2 Megapixel STARVIST™ CMOS
- Powerful 25x optical zoom
- Max. 25/30fps@1080P
- H.265 & H.264 triple-stream encoding
- Auto tracking and IVS Support
- Intelligent Motion Detect 2.0, Perimeter Protection
- IR distance up to 492ft
- 512GB mSD Support, IP67, IK10, PoE+

System Overview

IC Realtime's IPFX-P2025X-IRW1 provides an all-in-one solution for capturing long distance video surveillance for outdoor applications. Together with infrared illumination up to 492ft with Starlight Technology, the camera is the perfect solution for dark, low light applications. The series combines a day/night mechanical IR cut filter for the highest image quality in variable lighting conditions during the day, and True WDR for applications with direct sunlight or glare.

This PTZ also supports Intelligent Motion Detect 2.0 and Auto Tracking with IVS (Tripwire, Intrusion) It also includes other AI such as Abandoned/Missing support, Parking Detection as well as Face Detection. Other features include IP67 and IK10 protection and flexible AC 24V/ PoE+ power options.

Functions

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.

Protection (IP67, IK10, wide voltage)

Supporting $\pm 25\%$ input voltage tolerance, this camera suits even the most unstable conditions for outdoor applications. Its 6KV lightning rating provides effective protection for both the camera and its structure against lightning. IP67 is supported by the camera, which makes it suitable for both indoor and outdoor environments. IK10 compliance enables the camera to sustain the equivalent of 5kg (11.02lbs) force.

Auto-tracking

This feature controls the pan/tilt/zoom actions of the camera to automatically track an object in motion and to keep it in the scene. The tracking action can be triggered manually or automatically by defined rules. Once a rule is triggered, the camera can zoom in and track the defined target automatically

Smart H.265+

Smart H.265+ is the optimized implementation of the H.265 codec that uses a scene-adaptive encoding strategy, dynamic GOP, dynamic ROI, flexible multi-frame reference structure and intelligent noise reduction to deliver high-quality video without straining the network. Smart H.265+ technology reduces bit rate and storage requirements by up to 70% when compared to standard H.265 video compression

Intelligent Video Analysis (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 Tripwire analytics, allowing the camera to detect when a predetermined line has been crossed, ideal for business intelligence, workforce optimization, and actionable intelligence.

Starlight

For challenging low-light applications, Starlight Ultra-low Light Technology offers best-in-class light sensitivity, capturing color details in low light. The camera uses a set of optical features to balance light throughout the scene, resulting in clear images in dark environments.

Interoperability

The camera conforms to the ONVIF (Open Network Video Interface Forum) specifications, ensuring interoperability between network video products regardless of manufacturer.

Technical Specification

Camera

Image Sensor	1/2.8" STARVIS™ CMOS
Effective Pixels	1920(H) x 1080(V), 2 Megapixels
RAM/ROM	1GB/4GB
Scanning System	Progressive
Electronic Shutter Speed	1/1s~1/30,000s
Minimum Illumination	Color: 0.005 lux@F1.6 B/W: 0.0005 lux@F1.6 0 lux (IR light on)
S/N Ratio	More than 55dB
IR Distance	Distance up to 492ft (150m)
IR On/Off Control	Auto / Manual
IR LEDs	4

Lens

Lens Type	4.8mm~120mm			
Max. Aperture	F1.6~F3.5			
Angle of View	H: 58.5°~2.8°; V: 33.2°~1.5°			
Optical Zoom	25x			
Focus Control	Auto/Manual			
Close Focus Distance	0.33 ft~4.92 ft (0.1 m~1.5 m)			
DORI Distance	Detect	Observe	Recognize	Identify
	5,292 ft	2,119 ft	1,060 ft	528 ft

PTZ

Pan/Tilt Range	Pan: 0° to 360° endless Tilt: -15° to +90°, auto flip 180°
Manual Control Speed	Pan: 0.1°/s~300°/s; Tilt: 0.1°/s~200°/s
Preset Speed	Pan: 240° /s; Tilt: 200° /s
Presets	300
PTZ Mode	5 Pattern, 8 Tour, Auto Pan ,5 Scan
Speed Setup	Human-oriented focal Length/ speed adaptation
Power up Action	Auto restore to previous PTZ and lens status after power failure
Idle Motion	Preset; Pattern; Tour; Scan
Protocol	ICR-SD, Pelco-P/D (Auto recognition)

Video

Compression	Smart H.265+; H.265; Smart H.264+; H.264; H.264B; H.264H; MJPEG (Sub Stream 1)
Streaming Capability	3 Streams
Resolution	1080P(1920×1080)/720P(1280×720)/D1(704×576/704×480)/CIF(352×288/352×240)
Frame Rate	Main stream: 1080p/1.3M/720p (1~25/30 fps) Sub stream1: D1/CIF (1~25/30 fps) Sub stream2: 1080p/1.3M/720p (1~25/30 fps)
Bit Rate Control	CBR/VBR
Bit Rate	H.265/H.264: 448K ~ 8192Kbps
Day/Night	Auto(ICR) / Color / B/W
Backlight Compensation	BLC / HLC / WDR(120dB)
White Balance	Auto, ATW, Indoor, Outdoor, Manual
Gain Control	Auto / Manual

Noise Reduction	2D NR; 3D NR
Motion Detection	Supported
Region of Interest	Supported
Electronic Image Stabilization (EIS)	Supported
Defog	Electronic; Supported
Digital Zoom	16x
Flip	180°
Privacy Masking	Up to 24 areas

Audio

Compression	PCM; G.711a; G.711Mu; G.726; MPEG2-Layer2; G722.1; G729; G723
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Network

Ethernet	RJ-45 (10Base-T/100Base-TX)
Protocol	HTTP; HTTPS; IPv4; RTSP; UDP; SMTP; NTP; DHCP; DNS; DDNS; IPv6; 802.1x; QoS; FTP; UPnP; ICMP; SNMP; SNMP v1/v2c/v3 (MIB-2); IGMP; ARP; RTCP; RTP; PPPoE; RTMP; TCP
Interoperability	ONVIF (Profile S,G&T); CGI
Streaming Method	Unicast / Multicast
Max. User Access	20 (total bandwidth: 64 M)
Edge Storage	FTP; Micro SD card (512 GB); 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	1 port(BNC, 1.0V[p-p], 75Ω)
Audio Interface	1/1 channel In/Out
RS485	1
Alarm I/O	2/1
Alarm Linkage	Capture; preset; tour; pattern; recording; triggering on-off value output; audio; sending email
Alarm Event	Motion/tampering detection; audio detection; network disconnection detection; IP conflict detection; memory card state detection; memory space detection; power exception detection

Electrical

Power Supply	24 VDC, 2.5 A (± 25%); PoE +(802.3at)
Power Consumption	Basic: 13 W Max.: 22 W (illuminator + PTZ working)

Environmental

Operating Conditions	-40° C ~ +60° C (-40° F ~ +140° F) / Less than 95% RH
Ingress Protection	IP67
Vandal Resistance	IK10
Lightning Protection	TVS 6000 V lightning proof; surge protection; voltage transient protection

Construction

Casing	Metal
Dimensions	13.07" × Φ7.48" (332 mm × Φ190 mm)
Net Weight	10.36 lb(4.7 kg)
Gross Weight	17.64 lb(8 kg)

AI Functions

IVS

Basic IVS	Tripwire; intrusion; fence climbing; loitering detection; abandoned/missing object; fast moving
Advanced IVS	People Counting; Parking detection; People gathering
Auto Tracking	Supported (Tripwire & Intrusion)

Perimeter Protection

Capabilities	Tripwire; Intrusion (Supports target filtering 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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Face Detection

Capabilities	Face detection; track; snapshot; snapshot optimization; optimal face snapshot upload; face enhancement; face exposure; face attributes extraction including 6 attributes and 8 expressions; face snapshot set as face or one-inch photo; snapshot strategies (real-time snapshot, quality priority and optimization snapshot); face angle filter; optimization time setting
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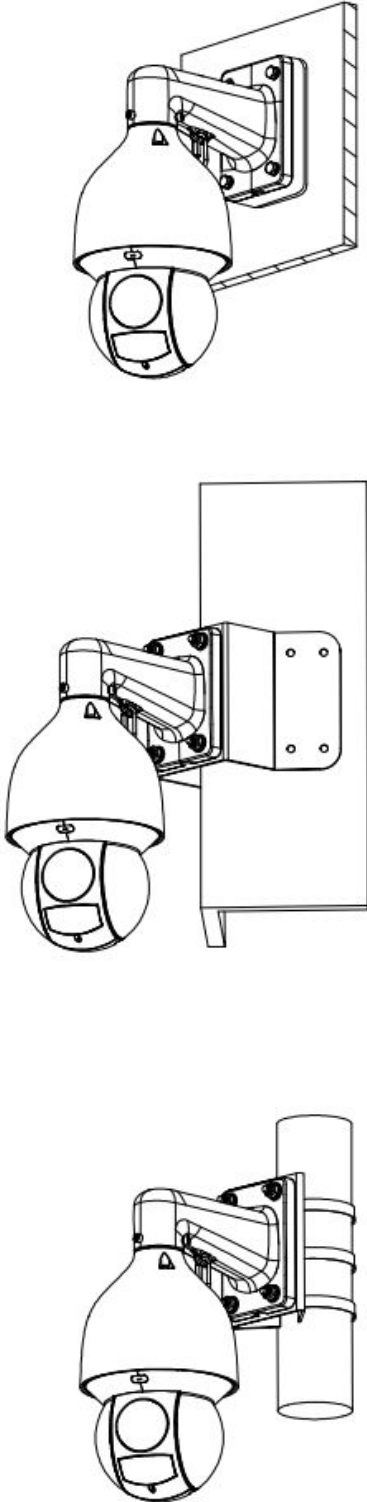
Video Metadata

Non-Automobile Vehicle Attributes	Detects Motor Vehicles and personal Vehicles, supports extraction of up to 10 attributes
Personnel Attribute	Detects Faces and Human Body Attributes, supports extraction of up to 10 attributes

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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Accessories



Dimensions (mm/in)

