ENS

PDN49I225H-XR

2MP 25x Starlight + IR PTZ AI Network Camera

· 1/2.8" 2Megapixel CMOS

· Powerful 25x optical zoom

· Starlight technology

· Max. 50/60fps@1080P

· Deep-learning-based auto tracking and perimeter protection

· Support PoE+

· SMD Plus

· IR distance up to 100m

· IP66

AI series products adopt the most advanced AI technologies, including deep learning algorithms that primarily target people and vehicles, which provides higher flexibility and accuracy for end-users. This enables the the AI series to offer various advanced applications such as Face Recognition, ANPR, Metadata, People Counting, traffic data statistics, etc. The complete lineup of the AI includes network (PTZ) cameras, network video recorders, servers, and more devices. Beyond seeing the world, the power of AI allows devices to perceive the environment and understand the world in a better way.

System Overview

Featuring powerful optical zoom and accurate pan/tilt/zoom performance, this camera provides an all-in-one solution for capturing long distance video surveillance for outdoor applications. Together with infrared illumination and Starlight Technology, the camera is the perfect solution for dark, lowlight 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.

Functions

Starlight Technology

For challenging low-light applications, the Starlight Ultra-low Light Technology offers best-in-class light sensitivity, capturing color details in low light down to 0.005 lux. The camera uses a set of optical features to balance light throughout the scene, resulting in clear images in dark environments.

Wide Dynamic Range

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.

False Alarm Filter | **WDR** | **0.005Lux** | **ICR D/N** | **IP66** | **PoE+**

Perimeter Protection

Automatically filtering out false alarms caused by animals, rustling leaves, bright lights, etc. Enables system to act secondary recognition for the targets. Improving alarm accuracy.

Environmental

The cameras operate in extreme temperature environments, rated for use in temperatures from -40 °C to +70 °C (-40 °F to +158 °F) with 95% humidity. Subjected to rigorous dust and water immersion tests and certified to the IP66 Ingress Protection rating makes it suitable for demanding outdoor applications.

Protection

The camera allows for 6KV lightning rating,which provides effective protection for both the camera and its structure against lightning.

Interoperability

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

SMD Plus

With Deep-Learning Algorithm, the SMD Plus filters the motion detection alarm triggered by non-concerned target and recognize human and vehicle effectively, sending alarms when human and vehicle intrudes.

Onvif

Technical Specification

Camera

Image Sensor	1/2.8" STARVIS™ CMOS
Effective Pixels	2MP
Max. Resolution	1920 (H) × 1080 (V)
ROM	4GB
RAM	1GB
Electronic Shutter Speed	1/1 s–1/30,000 s
Scanning System	Progressive
Min. Illumination	Color: 0.005Lux@F1.6 B/W: 0.0005Lux@F1.6 0Lux@F1.6 (IR light on)
IR Distance	100 m (328.08 ft)
IR On/Off Control	Zoom Prio/Manual/SmartIR
IR LEDs Number	6

Lens

Focal Length	4.8 mm–120 mm			
Max. Aperture	F1.6–F4.4			
Field of View	H: 62.8°–2.6°; V: 33.2°–1.7°; D: 67.3°–3.9°			
Optical Zoom	25x			
Focus Control	Auto/Semi-Auto/Manual			
Close Focus Distance	0.1 m–1.5 m (0.33 ft–4.92 ft)			
Iris Control	Auto/Manual			
DORI Distance	Detect	Observe	Recognize	Identify
	1613 m (5291.99 ft)	646 m (2119.42 ft)	323 m (1059.71 ft)	161 m (528.22 ft)

PTZ

Pan/Tilt Range	Pan: 0°–360° (endless) Tilt: -15°–90° (auto flip 180°)
Manual Control Speed	Pan: 0.1°–200°/s Tilt: 0.1°–120°/s
Preset Speed	Pan: 240°/s Tilt: 200°/s
Presets	300
Tour	8 (up to 32 presets per tour)
Pattern Number	5
Scanning Number	5
Speed Adjustment	Support
Power-off Memory	Support
Idle Motion	Preset/Tour/Pattern/Scanning
Protocol	DH-SD Pelco-P/D (auto recognition)

General Intelligence

Event Trigger	Motion detection, Video tampering, Scene changing, Network disconnection, IP address conflict, Illegal Access, Storage anomaly
General Intelligence	Object Abandoned/Missing

Artificial Intelligence

Perimeter Protection	Tripwire and intrusion. Support alarm triggering by target types (human and vehicle). Support filtering false alarms caused by animals, rustling leaves, bright lights, etc.
Auto Tracking	Support
SMD Plus	Support
Video Metadata	Support human, motor vehicle and non-motor vehicle image capture.

Video

Compression	H.265+/H.265/H.264+/H.264/MJPEG (sub stream)
Streaming Capability	3 streams
Resolution	1080P (1920 × 1080); 1.3 M (1280 × 960); 720P (1280 × 720); D1 (704 × 576/704 × 480); CIF (352 × 288/352 × 240)
Frame Rate	Main stream: 1080P/1.3 M/720P (1–50/60fps) Sub stream 1: D1/CIF (1–25/30fps) Sub stream 2: 1080P/1.3M/720P/D1/CIF (1–25/30fps)
Bit Rate Control	Variable Bit Rate/Constant Bit Rate
Bit Rate	H.265/H.264: 3 kbps–20480 kbps
Day/Night	Auto(ICR)/Color/B/W
BLC	Support
WDR	120 dB
HLC	Support
White Balance	Auto/Indoor/Outdoor/Track/Manual/Sodium lamp/Natural light/Street lamp
Gain Control	Auto/Manual
Noise Reduction	Ultra DNR (2D/3D)
Motion Detection	Support
Region of Interest	Support
Electronic Image Stabilization	Support
Electronic Defog	Support
Digital Zoom	16x
Flip	180°
Privacy Masking	Up to 24 areas, and up to 8 areas in the same view

Audio

Compression	G.711a; G.711Mu; AAC; G.722.1; G.726; MPEG2-Layer2; G.729

Network

Ethernet	RJ-45 (10/100Base-T)

Protocol	IPv4; IPv6; HTTP; HTTPS; SSL; TCP/IP; UDP; UPnP; ICMP; IGMP; SNMPv1/v2c/v3(MIB-2); ARP; RTCP; RTSP; RTP; SMTP; NTP; DHCP; DNS; PPPOE; DDNS; FTP; IP Filter; QoS; Bonjour; 802.1x
Interoperability	ONVIF Profile S&G; CGI
Streaming Method	Unicast/Multicast
User/Host	19
Edge Storage	NAS; Local PC; Micro SD card (256G)
Browser	IE7 and newer versions Chrome 45 and newer versions Firefox 52 and earlier versions Safari (no version restrictions)
Management Software	Smart PSS; DSS; DMSS
Smart Phone	IOS/Android

Certification

Certifications	CE: EN55032/EN55024/EN50130-4 FCC: Part15 subpartB, ANSI C63.4-2014 UL: UL60950-1+CAN/CSA C22.2, No. 60950-1

Port

Audio In	1
Audio Out	1
Alarm Port	2/1

Power

Power Supply	DC 12V/3A PoE+ (802.3at)
Power Consumption	13W 22W (IR on)

Environment

Operating Temperature	-40°C to +70°C (-40°F to +158°F)
Operating Humidity	≤95%
Ingress Protection	IP66; TVS 6000V lightning proof; Surge protection

Structure

Casing	Aluminium alloy ADC12
Dimensions	Φ160 mm × 295 mm (6.30" × 11.61")
Net Weight	3 kg (6.61 lb)
Gross Weight	4.2 kg (9.26 lb)

Accessories

Included:

PFB305W
Wall Mount

Optional:

PFA111
Mount Adapter

DC12V/3A
Power Adapter

PFA140
Power Box

PFB300C
Ceiling Mount

PFA120
Water-proof Junction Box

PFA150
Pole Mount

PFA151
Corner Mount

PFB303S
Parapet Mount

Ceiling Mount	Junction Mount	Power Box Mount
PFA111 + PFB300C	PFB305W + PFA120	PFB305W + PFA140
Pole Mount	**Corner Mount**	**Parapet Mount**
PFB305W + PFA150	PFB305W + PFA151	PFA111+ PFB303S

Dimensions (mm[inch])

50. 0[1. 97]

109. 3[4. 30]

295. 4[11. 63]

139. 5[5. 49]

φ160. 0[6. 30]