

PDN6CEI445H-XR

4MP 45x Starlight IR PTZ AI Network Camera



- 1/2.8" 4Megapixel STARVIS™ CMOS
- Powerful 45x optical zoom
- Starlight technology
- Max. 25/30fps@4MP
- Deep-learning-based auto tracking and perimeter protection
- IR distance up to 250m
- IP67 , IK10



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 Dahua AI series to offer various advanced applications such as Face Recognition, ANPR, Metadata, People Counting, traffic data statistics, etc. The complete lineup of Dahua 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 can provide large monitoring range and great detail. The camera has very excellent low light performance due to adopting the latest starlight technology. The camera is equipped with smooth control, high quality image and good protection, which make it can meet most of the requirements of video surveillance applications.

Functions

Starlight Technology

For challenging low-light applications, Dahua's Starlight Ultra-low Light Technology offers best-in-class light sensitivity, capturing color details in low light down to 0.005lux. 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.

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.

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

Dahua cameras operate in extreme temperature environments, rated for use in temperatures from -40°C ~ 70°C (-40°F ~ +158°F) with 95% humidity. The camera complies with the IK10 Vandal Resistance impact rating. Subjected to rigorous dust and water immersion tests and certified to the IP67 Ingress Protection rating makes it suitable for demanding outdoor applications.

Protection

The camera allows for ±25% input voltage tolerance, suitable for the unstable conditions for outdoor applications. Its 8KV lightning rating 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.

Technical Specification

Camera

Image Sensor	1/2.8" STARVIS™ CMOS
Effective Pixels	2560(H) x 1440(V), 4 Megapixels
Scanning System	Progressive
Electronic Shutter Speed	1/1s~1/30,000s
Minimum Illumination	Color: 0.005Lux@F1.6; B/W: 0.0005Lux@F1.6; 0Lux@F1.6 (IR on)
IR Distance	Distance up to 250m (820ft)
IR On/Off Control	Auto/Manual
IR LEDs	6

Lens

Focal Length	3.95mm~177.75mm
Max. Aperture	F1.6~ F4.95
Angle of View	H: 70.3° ~ 1.8°; V: 37° ~ 1°; D: 69.3° ~ 2°
Optical Zoom	45x
Focus Control	Auto/Manual
Iris Control	Auto/Manual
Close Focus Distance	10mm~ 3000mm

DORI Distance

*Note: The DORI distance is a "general proximity" of distance which makes it easy to pinpoint the right camera for your needs. The DORI distance is calculated based on sensor specification and lab test result according to EN 62676-4 which defines the criteria for Detect, Observe, Recognize and Identify respectively.

Detect	Observe	Recognize	Identify
3176m(10420ft)	1271m(4170ft)	635m(2083f)	318m(1043f)

PTZ

Pan/Tilt Range	Pan: 0° ~ 360° endless; Tilt: -20° ~ 90°, auto flip 180°
Manual Control Speed	Pan: 0.1° ~260° /s; Tilt: 0.1° ~120° /s
Preset Speed	Pan: 300° /s; Tilt: 200° /s
Presets	300
PTZ Mode	5 Patern, 8 Tour(up to 32 preset per tour), Auto Pan, 5 Auto 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	Activate Preset/ Scan/ Tour/ Pattern if there is no command in the specified period
Protocol	DH-SD, Pelco-P/D (Auto recognition)

Artificial Intelligence

Perimeter Protection	Tripwire, Intrusion. Support alarm triggering by target types(human and vehicle) Filtering out false alarms caused by animals, rustling leaves, bright lights, etc
Auto Tracking	Support
Video Structuralization	Support human, motor vehicle and non-motor vehicle image capture

General Intelligence

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

Video

Compression	H.265+/H.265/H.264+/H.264/MJPEG(Sub Stream)
Streaming Capability	3 Streams
Resolution	4M(2560×1440)/3M(2048×1536)/1080P(1920×1080)/720P(1280×720)/D1(704×576/704×480)/CIF(352×288/352×240)
Frame Rate	Main stream: 4M/3M(1~25/30fps), 1080P/1.3M/720P(1~25/30fps) Sub stream1: D1/CIF(1 ~ 25/30fps) Sub stream2: 1080P(1 ~ 25/30fps), 720P(1 ~ 25/30fps)
Bit Rate Control	CBR/VBR
Bit Rate	H.265/H.264: 3Kbps ~ 20480Kbps
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	Ultra DNR (2D/3D)
Motion Detection	Support
Region of Interest	Support
Electronic Image Stabilization (EIS)	Support
Defog	Support
Digital Zoom	16x
Flip	180°
Privacy Masking	Up to 24 areas

Audio

Compression	G.711a/G.711Mu/AAC/G.722 / G.726/G.729/ MPEG2-L2
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Network

Ethernet	RJ-45 (10Base-T/100Base-TX)
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, API
Streaming Method	Unicast / Multicast
Max. User Access	20 users
Edge Storage	NAS (Network Attached Storage), Local PC for instant recording, Micro SD card 256GB
Web Viewer	IE, Chrome, Firefox, Safari
Management Software	Smart PSS, DSS, DMSS
Smart Phone	iOS, Android

Certifications

Certifications	CE: EN55032/EN55024/EN50130-4 FCC: Part15 subpartB,ANSI C63.4- 2014
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Interface

RS485	1
Audio I/O	1/1
Alarm I/O	7/2

Electrical

Power Supply	AC24V/3A(±25%), PoE+(802.3at)
Power Consumption	13W, 26W(IR On, Heater On)

Environmental

Operating Conditions	-40°C ~ 70°C (-40°F ~ +158°F) / Less than 95% RH
Ingress Protection	IP67
Vandal Resistance	IK10

Construction

Casing	Metal
Dimensions	φ209×337.4mm
Net Weight	5.9kg(13lb)
Gross Weight	9.6kg(21.16lb)

Accessories

Included:



PFB305W
Wall Mount



AC24V/3A
Power Adapter

Optional:



PFA111
Mount Adapter



PFA140
Power Box



PFB300C
Ceiling Mount



PFA120
Junction Box



PFA150
Pole Mount



PFA151
Corner Mount



PFB303S
Parapet Mount

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

Dimensions (mm)

