

# DH-SD6CE445XA-HNR (Special)

## 4MP 45x Starlight IR WizSense Network PTZ 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.
- Face detection.
- SMD Plus.
- IR distance up to 250 meters.
- IP67, IK10.



Launched by Dahua Technology, WizSense is a series of AI products and solutions that adopt independent AI chip and deep learning algorithm. It focuses on human and vehicle with high accuracy, enabling users to fast act on defined targets. Based on Dahua's advanced technologies, WizSense provides intelligent, simple and inclusive products and solutions.

### System Overview

With its powerful optical zoom, and accurate pan and tilt capabilities, the PTZ camera provides an all-in-one solution for long distance video surveillance of outdoor scenes. Together with infrared illumination and Starlight Technology, the camera is a great solution for dark, low light conditions. The series combines a day and night mechanical IR cut filter to produce high quality images in variable lighting conditions during the day.

### Functions

#### Starlight Technology

With advanced image processing technology and optical technology, Dahua Starlight technology can provide clear colorful video in the environment of low illuminance. It widely applies to various environments of low illuminance.

#### Wide Dynamic Range

The camera produces vivid images, even in high-contrast lighting conditions, by using industry-leading wide dynamic range (WDR) technology. For scenes that quickly alternate between bright and low lighting, WDR adjusts to fully capture both the bright and dark areas of a scene, producing superior quality videos.

#### 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 filters out false alarms caused by animals, rustling leaves, bright lights, and more, and uses secondary recognition during target detection to improve 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.

#### SMD Plus

With intelligent algorithm, Dahua Smart Motion Detection technology can categorize the targets that trigger motion detection and filter the motion detection alarm triggered by non-concerned targets to realize effective and accurate alarm.

#### PFA Technology

PFA technology has innovatively introduced new methods of judgment to ensure the accuracy and predictability of the direction of subject distance adjustment. The result is a set of advanced focusing algorithms. PFA ensures clarity of the image throughout the process of zooming and shortens focus time. The realization of PFA technology substantially improves user experience and increases product value.

## Technical Specification

### Camera

Image Sensor	1/2.8" STARVIS™ CMOS
Pixels	4 MP
Max. Resolution	2688(H) × 1520(V)
ROM	4G
RAM	1G
Scanning System	Progressive
Electronic Shutter Speed	1/1 s–1/30,000 s
Minimum Illumination	Color: 0.005 Lux@F1.6; B/W: 0.0005 Lux@F1.6; 0 Lux@F1.6 (IR on)
Illumination Distance	Distance up to 250 m (820 ft)
Illumination On/Off Control	Auto/Manual
Illuminator Number	6

### Lens

Focal Length	3.95 mm–177.75 mm
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	10 mm–3,000 mm

### DORI Distance

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

### 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
Tour	8 (up to 32 presets per tour)
Pattern	5
Pan	5
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, and other factors.
Auto Tracking	Yes
Video Metadata	Support human, motor vehicle and non-motor vehicle image capture
SMD Plus	Yes
Face Detection	Yes

## 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 (2688 × 1520)/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 (1–25/30 fps), 1080p/1.3M/720p (1–25/30 fps) Sub stream1: D1/CIF (1–25/30 fps) Sub stream2: 1080p (1–25/30 fps), 720p (1–25/30 fps)
Bit Rate Control	CBR/VBR
Bit Rate	H.265/H.264: 3 Kbps–20,480 Kbps
Day/Night	Auto (ICR) / Color / B/W
BLC	Yes
WDR	120 dB
HLC	Yes
White Balance	Auto, ATW, Indoor, Outdoor, Manual
Gain Control	Auto / Manual
Noise Reduction	Ultra DNR (2D/3D)
Motion Detection	Yes
Region of Interest (RoI)	Yes
Image Stabilization	Electronic
Defog	Yes
Optical Zoom	16x
Flip	180°
Privacy Masking	Up to 24 areas
Audio	
Compression	G.711a/G.711Mu/G.722 / G.726/G.729/MPEG2-L2

**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, RTMP, RTP, SMTP, NTP, DHCP, DNS, PPPOE, DDNS, FTP, IP Filter, QoS, Bonjour, 802.1x
Interoperability	ONVIF Profile S&G&T, API
Streaming Method	Unicast / Multicast
User/Host	20 users
Storage	NAS (Network Attached Storage), Local PC for instant recording, Micro SD card 256GB
Browser	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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**Port**

RS485	1
Audio I/O	1 (Line in; bare wire)/1 (Line out; bare wire)
Alarm I/O	7/2

**Power**

Power Supply	DC 24 V/2.5 A ± 25%; PoE+(802.3at)
Power Consumption	13 W, 26 W (IR On, Heater On)

**Environment**

Operating Conditions	Operating Temperature -40 °C to 70 °C (-40 °F to +158°F) Operating Humidity ≤ 95% (RH)
Protection	IP67, IK10

**Structure**

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

**Ordering Information**

Type	Part Number	Description
4MP WizSense PTZ Camera	DH-SD6CE445XA-HNR	4MP 45x Starlight IR WizSense Network PTZ Camera, WDR, PAL
	DH-SD6CE445XAN-HNR	4MP 45x Starlight IR WizSense Network PTZ Camera, WDR, NTSC
	SD6CE445XA-HNR	MP 45x Starlight IR WizSense Network PTZ Camera, WDR, PAL
	SD6CE445XAN-HNR	MP 45x Starlight IR WizSense Network PTZ Camera, WDR, NTSC
Accessories	PFB305W	Wall Mount Bracket
	DC 24 V/2.5 A	Power Adapter
	PFA111	Mount Adapter
	PFA140	Power Box
	PFB300C	Ceiling Mount Bracket
	PFA120	Junction Box
	PFA150	Pole Mount Bracket
	PFA151	Corner Mount Bracket
	PFB303S	Parapet Mount Bracket

**Accessories**

Included:



PFB305W  
Wall Mount Bracket



DC 24 V/2.5 A  
Power Adapter

Optional:



PFA111  
Mount Adapter



PFA140  
Power Box



PFB300C  
Ceiling Mount Bracket



PFA120  
Junction Box



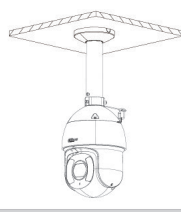

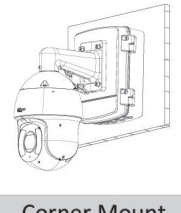

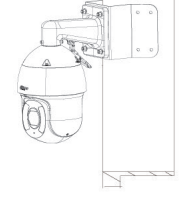
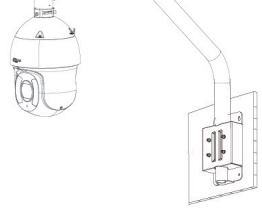
PFA150  
Pole Mount Bracket



PFA151  
Corner Mount Bracket



PFB303S  
Parapet Mount Bracket

<p><b>Ceiling Mount</b> PFA111 + PFB300C</p> 	<p><b>Junction Mount</b> PFB305W</p> 
<p><b>Power Box Mount</b> PFB305W + PFA140</p> 	<p><b>Pole Mount</b> PFB305W + PFA150</p> 
<p><b>Corner Mount</b> PFB305W + PFA151</p> 	<p><b>Parapet Mount</b> PFA111+ PFB303S</p> 

**Dimensions (mm[inch])**

