

# DH-SD6AL445GB-HNV-IR

4MP 45 Starlight IR NETWORK PTZ CAMERA



**WizSense**

Launched by Dahua Technology, WizSense is a series of AI products and solutions that adopts 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, 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, and True WDR for locations with direct sunlight and glare.

## Functions

### 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.

- 1/2.8" 4Megapixel STARVIS™ CMOS.
- 45x optical zoom.
- Starlight technology.
- Max. 25/30 fps@1080p.
- IR distance up to 300 m.
- Auto tracking 3.0.
- Perimeter protection.
- Face detection.
- Video Metadata.
- SMD 4.0.
- IP67.



### Face Detection

Supports 6 attributes and 8 expressions: Gender, age, glasses, face mask, beard and expressions (anger, sadness, disgust, fear, surprise, calm, happiness, and confusion). It also supports face cutout settings: Face, and single inch photo. Three snapshot methods are also featured: Real-time snapshot, priority snapshot, and quality priority.

### 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.

## Technical Specification

### Camera

Image Sensor	1/2.8" CMOS
Pixel	4 MP
Max. Resolution	2560 (H) × 1440 (V)
ROM	4 GB
RAM	1 GB
Electronic Shutter Speed	1 s–1/30,000 s
Scanning System	Progressive
Min. Illumination	Color: 0.005 lux@F1.6 B/W: 0.0005 lux@F1.6 0 lux (IR light on)
Illumination Distance	300 m (984.25 ft)
Illuminator On/Off Control	Zoom prio; Manual; Auto; Off
Illuminator Number	7 (IR)
Wiper	Wiper

### Lens

Focal Length	3.95 mm–177.7 mm			
Max. Aperture	F1.6–F4.95			
Field of View	H: 63.2°–1.8°; V: 37.6°–1.1°; D: 70.8°–2.1°			
Optical Zoom	45×			
Focus Control	Auto; semi-auto; manual			
Close Focus Distance	0.1 m–1 m (0.33 ft–3.28 ft)			
Iris Control	Auto; manual; iris prio			
DORI Distance	Detect	Observe	Recognize	Identify
	3,555 m (11,663.39 ft)	1,404.2 m (4,606.96 ft)	711 m (2,332.68 ft)	355.5 m (1,166.34 ft)

### PTZ

Pan/Tilt Range	Pan: 0° to 360° endless Tilt: –20° to +90°, auto flip 180°
Manual Control Speed	Pan: 0.1°/s–200°/s Tilt: 0.1°/s–120°/s
Preset Speed	Pan: 240°/s; Tilt: 200°/s
Preset	300
Tour	8 (up to 32 presets per tour)
Pattern	5
Scan	5
Power-off Memory	Yes
Idle Motion	Pattern; Preset; Scan; Tour
PTZ Protocol	DH-SD Pelco-P/D (Auto recognition)

## Intelligence

Video Metadata	Motor vehicle, non-motor vehicle, face, and human body detection; optimization; capturing pictures; uploading high-quality face snapshots. Attribute extraction of motor vehicle is also supported, where 10 attributes can be detected.
IVS (Perimeter Protection)	Tripwire; intrusion; crossing fence detection; loitering detection; abandoned/missing object; fast moving; parking detection; people gathering; human alarm classification; linkage tracking
Face Detection	Supports face detection, optimization, capturing pictures, uploading high-quality face snapshots and enhancing face images. Attribute Extraction is also supported, where 6 attributes and 8 expressions can be detected. Face cutout is also offered, where you can cutout one face at a time and customize the size to be a one-inch photo. The supported methods for capturing snapshots are real-time capturing, quality first, and selecting a preferred image among a group of snapshots.
Auto Tracking	Yes
SMD	SMD4.0
Quick Pick	Yes

## Video

Video Compression	H.264H; H.264B; Smart H.265+; H.264; H.265; MJPEG (Sub Stream); Smart H.264+
Streaming Capability	3 streams
Resolution	4M (2560 × 1440); 3M (2048 × 1536); 3M (2304 × 1296); 1080p (1920 × 1080); 1.3M (1280 × 960); 720p (1280 × 720); D1 (704 × 576/704 × 480); VGA (640 × 480); CIF (352 × 288/352 × 240)
Video Frame Rate	Main stream: 4M/3M/1080p/1.3M/720p@(1-25/30 fps) Sub stream 1: D1/VGA/CIF@(1-25/30 fps) Sub stream 2: 1080p/1.3M/720p@(1-25/30 fps)
Bit Rate Control	CBR/VBR
Video Bit Rate	H.264: 96 kbps–14,848 kbps H.265: 38 kbps–8,960 kbps
Day/Night	Color; B/W; Auto; Electronic
BLC	Yes
WDR	120dB
HLC	Yes
White Balance	Auto; indoor; outdoor; tracking; manual; sodium lamp; natural light; street lamp
Gain Control	Auto; manual; gain prio
Noise Reduction	2D NR; 3D NR
Motion Detection	Yes
Region of Interest (RoI)	Yes
Image Stabilization	EIS
Defog	Electronic
Digital Zoom	16×
Image Rotation	180°

Privacy Masking	Up to 24 areas can be set, with up to 8 areas in the same view; multiple colors available
S/N Ratio	≥ 55 dB

## Audio

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

Network Port	RJ-45 (10/100 Base-T)
Network Protocol	FTP; RTMP; IPv6; Bonjour; IPv4; DNS; RTCP; PPPoE; NTP; RTP; 802.1x; HTTPS; SNMP; TCP/IP; DDNS; UPnP; NFS; ICMP; UDP; IGMP; HTTP; SSL; DHCP; SMTP; Qos; RTSP; ARP
Interoperability	CGI; SDK; ONVIF (Profile S&G&T)
Streaming Method	Unicast/Multicast
User/Host	20 (total bandwidth: 64 M)
Storage	Micro SD card (512 GB); FTP/SFTP; NAS
Browser	IE 9 and later versions Chrome 41 and later versions Firefox 52 and later versions Safari 10 and later versions
Management Software	DMSS;DSS Pro
Mobile Client	iOS;Android

## Certification

Certifications	CE: E234884-A6503-IT-1 and 4789976478-2.4-1 FCC: 4790130386-1
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## Port

Alarm I/O	7/2
Audio I/O	1/1
RS-485	1 (baud rate: 1200 bps–115200 bps)
Audio Input	1 channel (LINE IN, bare wire)
Audio Output	1 channel (LINE OUT, bare wire)
Alarm Linkage	Capture; Recording; send email; preset; tour; pattern; alarm digital input
Alarm Event	Motion/tampering detection; audio detection; network disconnection detection; IP conflict detection; memory card state detection; memory space detection

## Power

Power Supply	36 VDC, 2.23 A ± 25% HI-PoE
Battery Life on a Full Charge	0
Power Consumption	Basic: 13 W Max: 27 W (illuminator+PTZ)

## Environment

Operating Temperature	–40 °C to +70 °C (–40 °F to +158 °F)
Operating Humidity	≤ 95%
Protection	TVS 6000 V lightning proof; surge protection; voltage transient protection

## Structure

Product Dimensions	382 mm × Φ239.8 mm (15.04" × Φ9.44")
Net Weight	6.8 kg (14.99 lb)
Gross Weight	9.2 kg (20.28 lb)

## Ordering Information

Type	Model	Description
SD6AL Series	DH-SD6AL445GB-HNV-IR	4MP 45 Starlight IR NETWORK PTZ CAMERA
Accessories	DC36V/2.23A	Power Adapter
	PFA111	Mount adapter
	PFB303W	Bracket
	PFB300C	Ceiling Mount
	PFA150	Vertical pole mount
	PFA151+PFB303W	Corner Mount
	PFA150+DH-PFB300C	Horizontal Pole Mount

## Accessories

### Included:



DC36V/2.23A  
Power Adapter



PFA111  
Mount adapter



PFB303W  
Bracket

### Optional:



PFB300C  
Ceiling Mount  
Bracket



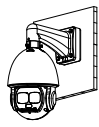
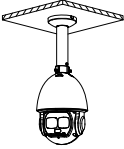
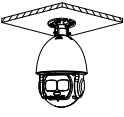

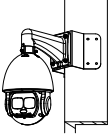
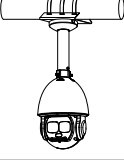
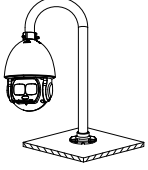
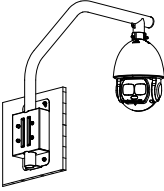
PFA150  
Pole Mount  
Bracket



PFA151+PFB303W  
Corner Mount  
Bracket



PFA150+PFB300C  
Horizontal Pole  
Mount

Wall Mount PFA111+PFB303W+PFA120	Ceiling Mount PFA111+PFB300C	Ceiling Mount PFA111+PFB301C
		
Pole Mount(Vertical) PFA111+PFB303W+PFA150	Corner Mount PFA111+PFB303W+PFA151	Pole Mount(Horizontal) PFA111+PFB300C+PFA150
		
Plane Mount PFB301S-E	Parapet Mount PFA111+PFB303S	
		

Dimensions (mm[inch])

