

# DH-SD6AL445GB-HNV-IR

4MP 45x Starlight IR Network PTZ Camera



WizMind

Launched by Dahua Technology, Dahua WizMind is a full portfolio of solutions composed of project-oriented products including IPC, NVR, PTZ, XVR, Thermal and software platform which adopts industry-leading deep learning algorithms. Focusing on customer's requirements, WizMind provides precise, reliable and comprehensive AI solutions for industry verticals.

## 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@2560 × 1440.
- 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/laser 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
<b>Video</b>	
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	120 dB
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

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S/N Ratio	≥ 55 dB
<b>Audio</b>	
Audio Compression	PCM; G.711a; G.711Mu; G.726; MPEG2-Layer2; G722.1; G729; G723
<b>Network</b>	
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
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 protecton; voltage transient protecton; IP67

**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 45x 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
	PFB301C	Ceiling Mount
	PFB301S-E	Plane Mount
	PFB303S	Parapet 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



PFB301C Ceiling Mount



PFB301S-E Plane Mount



PFB303S Parapet Mount

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

**Dimensions (mm[inch])**

