

# DH-SD6AL233XA-HNR

2MP 33x Starlight+ Laser WizMind Network PTZ Camera



WizMind

- 1/1.8" 2Megapixel CMOS
- Powerful 33x optical zoom
- Starlight+ technology
- Max. 50/60fps@1080P
- Deep-learning-based auto tracking and perimeter protection
- Support Hi-PoE
- Laser distance up to 550 m
- SMD PLUS
- IP67



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 verticals.

## 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, Dahua's Starlight Ultra-low Light Technology offers best-in-class light sensitivity, capturing color details in low light down to 0.001 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.

### 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.

### 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.

### SMD PLUS

With Deep-Learning Algorithm, Dahua SMD PLUS filters the motion detection alarm triggered by non-concerned target and recognizes human and vehicle effectively, sending alarms when human and vehicle intrude.

**Technical Specification**
**Camera**

Image Sensor	1/1.8" CMOS
Pixel	2MP
Max. Resolution	1920 (H) x 1080 (V)
ROM	4GB
RAM	1GB
Electronic Shutter Speed	1/3–1/30,000 s
Scanning System	Progressive
Min. Illumination	Color: 0.001 Lux@F1.5 B/W: 0.0001 Lux@F1.5 0 Lux (IR light on)
Illumination Distance	550 m ( 1804 ft )
Illuminator On/Off Control	Zoom Prio/Manual/SmartIR
Illuminator Number	Laser Module
Wiper	Support

**Lens**

Focal Length	5.8 mm–191.4 mm			
Max. Aperture	F1.5–F4.8			
Field of View	H: 60.1°–3.2°; V: 35.3° –1.8°; D: 67.9°–3.7°			
Optical Zoom	33x			
Focus Control	Auto/Semi-Auto/Manual			
Close Focus Distance	0.1 m–1 m (0.33 ft–3.28 ft)			
Iris Control	Auto/Manual			
DORI Distance	Detect	Observe	Recognize	Identify
	1655 m (5429.80 ft)	622 m (2040.68 ft)	331 m (1085.96 ft)	165 m (541.34 ft)

**PTZ**

Pan/Tilt Range	Pan: 0°–360° Tilt: -20°–+90°
Manual Control Speed	Pan: 0.1°/s–200°/s Tilt: 0.1°/s–120°/s
Preset Speed	Pan: 240°/s Tilt: 200°/s
Presets	300
Tour	8 (up to 32 presets per tour)
Pattern	5
Scan	5
Speed Adjustment	Support
Power-off Memory	Support
Idle Motion	Preset/Tour/Pattern/Scanning

Protocol	DH-SD Pelco-P/D (auto recognition)
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**General Intelligence**

Event Trigger	Motion detection, video tampering, scene changing, network disconnection, IP address conflict, illegal access, and storage anomaly.
IVS	Object Abandoned/Missing

**Artificial Intelligence**

Smart Capture	Support human, motor vehicle and non-motor vehicle image capture.
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.
SMD PLUS	Support
Auto Tracking	Support
Face Detection	Support

**Video**

Compression	H.265/H.265+/H.264+/H.264/MJPEG (sub stream)
Streaming Capability	3 streams
Resolution	1080p (1920 × 1080); 1.3M (1280 × 960); 720p (1280 × 720); D1 (704 × 576/704 × 480); CIF (352 × 288/352 × 240)
Frame Rate	Main stream: 1080p/1.3M/720p (1–50/60 fps) Sub stream 1: D1/CIF (1–25/30 fps) Sub stream 2: 1080p/1.3M/720p/D1/CIF (1–25/30 fps)
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/Tracking/Manual/Sodium lamp/ Natural light/Street lamp
Gain Control	Auto/Manual
Noise Reduction	2D/3D
Motion Detection	Support
Region of Interest	Support
Image Stabilization	Electronic
Defog	Support
Digital Zoom	16x
Flip	0°/180°
Privacy Masking	Up to 24 areas
Audio	
Compression	G.711A; G.711Mu; G.726; AAC; G.722.1; G.723; G.729; PCM; MPEG2-Layer2

**Certification**

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

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

**Network**

Ethernet	RJ-45 (10/100Base-T)
Protocol	IPv4; IPv6; HTTP; HTTPS; 802.1x; Qos; FTP; SMTP; UPnP; SNMPv1/v2c/v3(MIB-2); DNS; DDNS; NTP; RTSP; RTP; TCP; UDP; IGMP; ICMP; DHCP; PPPoE; ARP; RTCP; RTMP
Interoperability	ONVIF Profile S&G&T; CGI
Streaming Method	Unicast/Multicast
User/Host	20 (Total bandwidth 48M)
Storage	FTP; Micro SD card (256G); P2P
Browser	IE7 and newer versions Chrome 42 and older versions Firefox 52 and older versions Safari
Management Software	Smart Player; Smart PSS; DSS; Easy4ip
Mobile Phone	IOS/Android

**Power**

Power Supply	DC 36 V/2.23 A ± 25%; Hi-PoE
Power Consumption	20 W 33 W (Laser on)

**Environment**

Operating Temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Operating Humidity	≤ 95%RH
Protection	IP67; TVS 8000 V lightning proof; surge protection

**Structure**

Casing	Metal
Dimensions	Φ240 mm x 382 mm (9.45" x 15.04")
Net Weight	6.75 kg (14.88 lb)
Gross Weight	10.1 kg (22.27 lb)

**Ordering Information**

Type	Model	Description
2MP WizMind PTZ Camera	DH-SD6AL233XA-HNR	2MP 33x Starlight+ Laser WizMind Network PTZ Camera, WDR, PAL
	DH-SD6AL233XAN-HNR	2MP 33x Starlight+ Laser WizMind Network PTZ Camera, WDR, NTSC
	SD6AL233XA-HNR	2MP 33x Starlight+ Laser WizMind Network PTZ Camera, WDR, PAL
	SD6AL233XAN-HNR	2MP 33x Starlight+ Laser WizMind Network PTZ Camera, WDR, NTSC
Accessories	PFB303W	Wall Mount Bracket
	PFA111	Mount Adapter
	DC 36 V/2.23 A	Power 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:**



PFB303W  
Wall Mount Bracket



PFA111  
Mount Adapter



DC 36 V/2.23 A  
Power Adapter

**Optional:**



PFA140  
Power Box



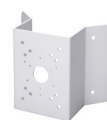
PFB300C  
Ceiling Mount Bracket



PFA120  
Junction Box



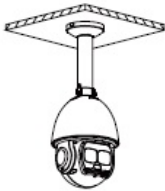

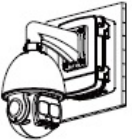

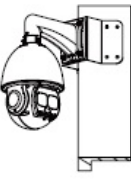

PFA150  
Pole Mount Bracket



PFA151  
Corner Mount Bracket



PFB303S  
Parapet Mount Bracket

<b>Ceiling Mount</b>	<b>Junction Mount</b>
PFA111 + PFB300C	PFA111 + PFB303W + PFA120
	
<b>Power Box Mount</b>	<b>Pole Mount</b>
PFA111 + PFB303W + PFA140	PFA111 + PFB303W + PFA150
	
<b>Corner Mount</b>	<b>Parapet Mount</b>
PFA111 + PFB303W + PFA151	PFA111+ PFB303S
	

**Dimensions (mm[inch])**

