

DH-PTZ4M231-HNR-XA-GHW

2MP 31x Starlight IR WizMind PTZ Network Camera



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 customers requirements, WizMind provides precise, reliable and comprehensive AI solutions for industry verticals.

System Overview

WizMind PTZ 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 WizMind series to offer various advanced applications such as Face Recognition, ANPR, Metadata, People Counting, traffic data statistics, etc. The complete lineup of Dahua WizMind includes network (PTZ) cameras, network video recorders, servers, and more devices. Beyond seeing the world, the power of WizMind allows devices to perceive the environment and understand the world in a better way.

Functions

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.

Starlight Technology

For challenging low-light conditions, Dahua's Starlight Ultra-low Light Technology offers the best in light sensitivity, capturing color in vivid detail, even in lighting as low as 0.005 lux. The camera uses a set of optical features to balance light throughout the scene, producing clear images in dark environments.

PFA Technology

PFA technology has introduced new methods of judgment that ensure the accuracy and predictability of the direction of subject distance adjustment. The result is a set of advanced focusing algorithms that ensure image clarity when zooming and that shorten focus time. This makes the camera highly advanced in its functions, substantially improving the quality of your experience.

- · 1/1.8" 2Megapixel STARVIS™ CMOS
- \cdot 31× optical zoom
- · Starlight+ technology
- · Max. 25/30 fps@1080p
- \cdot IR distance up to 100 m
- \cdot Auto-tracking
- · Perimeter protection
- · Face detection
- · Construction monitoring
- · SMD Plus
- \cdot GPS positioning, displaying accurate longitude and latitude
- · Dual 4G (SIM 1/SIM 2)
- Dual SD card expansion (TF1/TF2)
- · Bluetooth, Wi-Fi (2.4G/5G), AP (2.4G/5G)



Environment (-20 °C to +55 °C, IP66)

Developed to operate in extreme conditions, the camera can function in temperatures ranging from -20 °C to +55 °C (-4 °F to +131 °F) at 95% humidity. It was subjected to rigorous dust and water immersion tests, gaining its IP66 Ingress Protection certification, making it suitable for demanding outdoor applications.

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 (120 dB) adjusts to fully capture both the bright and dark areas of a scene, producing superior quality videos.

Video Metadata

Metadata is information on the attributes of targets that is extracted during monitoring. It can be used for data retrieval. There are four kinds of metadata supported by Dahua PTZ WizMind cameras: Human face, human body, motor vehicle and non-motor vehicle. Face information includes gender, age, glasses, masks, beards, and more. Human body information includes hat, top, top color, bottom, bottom color, bag, and more. Motor vehicle information includes plate color, type, vehicle color, sunshield, ornament, calling, seatbelt, smoking, annual inspection sticker, and more. Non-motor vehicle information includes type, color, top type, top color, people number, and more.

Face Detection

Supports 6 attributes and 8 expressions: Gender, age, glasses, 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.

Construction Monitoring

Helmet detection; helmet color recognition; workwear detection; lone working detection; absence detection.

Auto-tracking

This feature controls the pan, tilt and zoom actions of the camera to automatically track an object in motion, to keep it in view of the camera. Tracking 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.

Scene

The product can be widely used in low-light places that need large-scale high-speed monitoring, have high requirements for image quality, and need to see all kinds of details of the target, such as rivers, forests, roads, airports, lookout posts, squares, parks, scenic areas, streets, stations, large venues, and the periphery of residential areas.

Technical Specification

Camera

Image Sensor	1/1.8" CMOS			
Pixel	2 MP			
Max. Resolution	1920 (H) × 1080 (V)			
ROM	4 GB			
RAM	1 GB			
Electronic Shutter Speed	1/1 s-1/30,000 s			
Scanning System	Progressive			
Min. Illumination	Color: 0.001 lux@F1.6 B/W: 0.0001 lux@F1.6 0 lux (IR light on)			
Illumination Distance	100 m (328.08 ft) (IR)			
Illuminator On/Off Control	Zoom Prio; Manual; Smart IR; Off			
Illuminator Number	3 (IR light)			
Lens				
Focal Length	6 mm–186 mm			
Max. Aperture	F1.6-F4.0			
Field of View	H: 59.8°–2.8°; V: 33.7°–1.9°; D: 63.3°–4°			
Optical Zoom	31×			
Focus Control	Auto; semi-auto; manual			
Close Focus Distance	0.5 m-7 m (1.64 ft-22.97 ft)			
Iris Control	Auto; manual			
DORI Distance	Detect	Observe	Recognize	Identify
	2,565.5 m (8,416.99 ft)	1,013.4 m (3,324.80 ft)	513.1 m (1,683.40 ft)	256.6 m (841.86 ft)
PTZ				
Pan/Tilt Range	Pan: 0° to 360° endless Tilt: –90° to +30°, auto flip 180°			
Manual Control Speed	Pan: 0.1°/s-118°/s Tilt: 0.1°/s-68.2°/s			

Preset Speed	Pan: 169°/s; Tilt: 160°/s	
Preset	300	
Tour	8 (up to 32 presets per tour)	
Pattern	5	
Scan	5	
Power-off Memory	Yes	
Idle Motion	Preset; Tour; Pattern; Scanning	
PTZ Protocol	DH-SD Pelco-P/D (auto recognition)	
Intelligence		
Smart Capture	Support human, motor vehicle and non-motor vehicle image capture.	
IVS (Perimeter Protection)	Tripwire; intrusion; climbing fences; loitering detection; abandoned/missing object; fast moving; parking detection; people gathering; vehicle/human alarm classification	
Face Detection	Yes	
Construction Monitoring	Helmet detection; helmet color recognition; workwear detection; lone working detection; absence detection	
Auto Tracking	Yes	
Video		
Video Compression	H.265; H.264B; H.264M; H.264H; MJPEG; Smart H.265+; Smart H.264+	
Streaming Capability	3 streams	
Resolution	1080p (1920 × 1080); 960p (1280 × 960); 720p (1280 × 720); D1 (704 × 576/704 × 480); CIF (352 × 288/352 × 240)	
Video Frame Rate	Main stream: 1920 × 1080@25 fps/1280 × 960@25 fps/1280 × 720@25 fps Sub stream 1: 704 × 576@25 fps/352 × 288@25 fps Sub stream 2: 1920 × 1080@25 fps/1280 × 960@25 fps/1280 × 720@25 fps	
Bit Rate Control	CBR; VBR	
Video Bit Rate	Default resolution of the main stream: H.264: 32 kbps–8192 kbps H.265: 32 kbps–8192 kbps	
Day/Night	Auto (ICR); Color; B/W	
BLC	Yes	
WDR	120 dB	
HLC	Yes	
White Balance	Auto; indoor; outdoor; tracking; manual; sodium lamp; natural light; street lamp	
Gain Control	Auto; manual	
Noise Reduction	2D NR; 3D NR	
Motion Detection	Yes	
Region of Interest (RoI)	Yes	
Image Stabilization	Electronic (EIS)	
Defog	Electronic	
Digital Zoom	16x	

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Image Rotation	180°
Privacy Masking	Up to 24 areas can be set, with up to 8 areas in the same view; color block and mosaic selectable
S/N Ratio	>55 dB
Audio	
Audio Compression	G.711a; G.711Mu; G.726; AAC; MPEG2-Layer2; G722.1; G729; G723
Network	
Network Port	RJ-45 (10/100 Base-T)
Wi-Fi	Yes
Wi-Fi–Wireless Standard	IEEE 802.11 a/b/g/n/ac
4G-Wireless Frequency Range	4G_LTE (FDD): B1/B2/B3/B4/B5/B7/B8/B20 3G_WCDMA/HSDPA/HSUPA/HSPA+: Band 1/ 2/5/8 2G_GSM/GPRS/EDGE: 850/900/1800/1900 MHz
Wi-Fi–Wireless Transmission Rate	433 Mbps
4G	Yes
Network Protocol	IPv4; IPv6; HTTP; HTTPS; 802.1x; QoS; FTP; SMTP; UPnP; SNMP; DNS; DDNS; NTP; RTSP; RTP; TCP; UDP; IGMP; ICMP; DHCP; PPPoE; ARP; SNMP v1/v2c/ v3 (MIB-2); RTCP; RTMP
Interoperability	ONVIF (Profile S&G&T); CGI
Streaming Method	Unicast; Multicast
User/Host	20 (total bandwidth: 64 M)
Storage	FTP; Micro SD card (max. 1 T); NAS
Browser	IE 7 and later versions Chrome 42 and earlier versions Firefox 52 and earlier versions Safari
Management Software	Smart PSS; DSS; DMSS; Easy4ip; IVSS
Mobile Client	iOS; Android
Function	
Others	Dual SIM cards Dual SD cards Access point Bluetooth On-screen status display
Certification	
Certifications	CE; FCC
Port	
RS-485	1 (1200 bps-9600 bps)
Audio Input	1
Audio Output	1
Two-way Audio	Yes
Alarm Input	1 (on-off value input: 0–5 VDC)
Alarm Output	1
Alarm Linkage	Capture; preset; tour; pattern; recording; triggering on-off value output; audio; sending email

Alarm Event	Motion/tampering detection; audio detection; network disconnection detection; IP conflict detection; memory card state detection; memory space detection; power exception detection		
Power			
Power Supply	12 VDC, 5 A (± 15%) (included)		
Battery Life on a Full Charge	11 h		
Power Consumption	Basic: 9 W Max.: 32 W (illuminator on, battery charging, PTZ working)		
Environment			
Operating Temperature	–20 °C to +55 °C (–4 °F to +131 °F)		
Operating Humidity	≤95%		
Protection	IP66; TVS 6000 V lightning proof; surge protection; voltage transient protection		
Structure			
Casing	ADC12; AZ91D		
Product Dimensions	Φ160 mm × 265 mm (Φ6.30" × 10.43")		
Net Weight	3.7 kg (8.15 lb)		
Gross Weight	13 kg (28.66 lb)		

Ordering Information				
Туре	Model	Description		
2M Camera	DH-PTZ4M231- HNR-XA-GHW	2MP 31x Starlight IR WizMind PTZ Network Camera, PAL		
	DH-PTZ4M231N- HNR-XA-GHW	2MP 31x Starlight IR WizMind PTZ Network Camera, NTSC		
	PTZ4M231-HNR- XA-GHW	2MP 31x Starlight IR WizMind PTZ Network Camera, PAL		
	PTZ4M231N-HNR- XA-GHW	2MP 31x Starlight IR WizMind PTZ Network Camera, NTSC		
Accessories		Aluminum Trolley Case		
		Mounting Plate		
		Power Adapter		
		Power Cord		
		12-core Aviation Connector Cable		
		Steel Wire Rope		
		Battery		
	18650/2S4P	Backup Battery		
	SDPH002	8-core Aviation Connector Cable (audio, alarm, power supply)		
	SDPH003	Tripod		
	SDPH004	Base Charger		

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Accessories

Included:



Mounting Plate



Power Cord

Battery

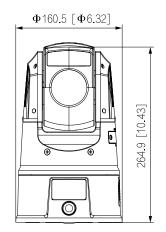
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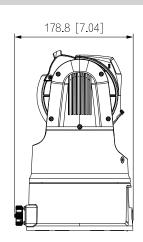


12-core Aviation Connector Cable

Steel Wire Rope

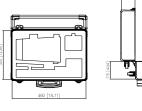


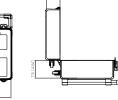












18650/2S4P Backup Battery

SDPH004 Base Charger

SDPH002 8-core Aviation Connector Cable (audio, alarm, power supply)

SDPH003 Tripod





