DH-SD6E245MB-HNR-A-PV1

2MP 45x Smart Dual Illumination Active Deterrence Network PTZ Camera

Xinghan ACUPICK WizSense

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.

Series Overview

The Three-in-One Camera (TiOC) solution combines 24/7 monitoring, active deterrence and real-time alarms with artificial intelligence into one smart, innovative solution. TiOC PTZ cameras adopt auto-tracking 3.0 technology, greatly improving the monitoring scope of key targets. For distributors and installers, it not only saves time, but also reduces cost.

Functions

Smart Dual Light

Dahua Smart Dual Light technology adopts smart algorithm to detect targets. Usually, the IR illuminator is on at night; when the target appears in the monitoring area, the white light is on, and the camera records the full-color video and information of key events. That is, the camera links snapshot and video with full-color image. When the target is out of the monitoring area, the white light is off and the IR illuminator is on, which reduces light pollution efficiently.

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.

- 1/2.8" 2Megapixel STARVIS™ CMOS
- 45x optical zoom
- Starlight technology
- Max. 50/60fps@2M
- IR distance up to 250m
- Xinghan Large-Scale AI Models
- Warm light distance up to 100m
- Built-in dual mics and a speaker for two-way talk
- Sound and light alarm (red and blue lights)
- WizTracking
- Perimeter protection
- Face detection
- Acupick
- SMD 4.0
- IP67
- IK10

IVS

With advanced video algorithm, Dahua IVS technology supports intelligent functions, such as tripwire and intrusion.

SMD4.0

Dahua Smart Motion Detection technology works with intelligent algorithms to classify targets that trigger motion detection alarms. It filters out objects that are not targets, such as small and large animals, to avoid triggering false alarms.

Xinghan Large-Scale AI Models-Vision

Xinghan Large-Scale AI Models-Vision seamlessly expands the storage and operational capacity of algorithmic models through the powerful integration of edge AI model algorithms and NPU computing power. Engineered with a lightweight transformer architecture and enhanced by model distillation and quantization techniques, it optimizes the computing power consumption of ViT operators. This enables the system to collaborate on multiple tasks simultaneously through joint inference between small and large models optimized for edge devices.

AcuPick

This industry-leading search technology effectively utilizes both front-end and back-end intelligence to help with searching through massive video data to quickly and conveniently locate targets with greater precision.

Technical Specification

Camera

Image Sensor	1/2.8" CMOS
Pixel	2 MP
Max. Resolution	1920 (H) × 1080 (V)
Electronic Shutter Speed	1s–1/30000s
Scanning System	Progressive
Min. Illumination	0.005 lux@F1.6 (Color, 30 IRE) 0.0005 lux@F1.6 (B/W, 30 IRE) 0 lux (Illuminator on)
Illumination Distance	100 m (328.08 ft) (Warm light); 250 m (820.21 ft) (IR)
Illuminator On/Off Control	Zoom Prio; Manual; Auto; Off
Illuminator Number	6 (Dual light fusion)

Lens

Focal Length	3.95 mm–177.25 mm
Max. Aperture	F1.6–F4.95
Field of View	H: 65.7°–1.9°; V: 39.4°–1.1°; D: 73.1°–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
Iris Control Type	DC-Iris

	Lens	Detect	Observe	Recognize	Identify
DORI Distance	W	54.5 m (178.75 ft)	21.5 m (70.61 ft)	10.9 m (35.75 ft)	5.5 m (17.87 ft)
	T	2451.7 m (8043.71 ft)	968.4 m (3177.27 ft)	490.3 m (1608.74 ft)	245.2 m (804.37 ft)
	*DORI (Detect, Observe, Recognize, Identify) is a standard system (EN-62676-4) for defining the ability of a person viewing the video to distinguish persons or objects within a covered area. The numbers in this table do not reflect intelligent function distances. For intelligent function distances, refer to installation and commissioning manual/project design tool.				

PTZ

Pan/Tilt Range	Pan: 0° to 360° endless; Tilt: –20° to +90°, auto flip 180°
Manual Control Speed	Pan: 0°/s–260°/s; Tilt: 0°/s–140°/s
Preset Speed	Pan: 300°/s; Tilt:200°/s
Preset	300
Tour	8
Pattern	5
Scan	5
Power-off Memory	Yes
Idle Motion	Preset;Pattern;Tour;Scan
PTZ Protocol	DH-SD
PTZ Protocol	Pelco-P/D(Auto recognition)

Intelligence

Video Metadata	Supports detection of motor vehicles, non-motor vehicles, faces and human bodies, optimization, capturing pictures, and uploading high-quality face snapshots. It extracts attributes from motor vehicles and non-motors, detecting up to 10 attributes for motor vehicles and 8 for non-motor vehicles. It also extracts attributes from human faces and bodies, detecting up to 6 attributes for faces, and 8 for bodies.
IVS (Perimeter Protection)	Tripwire; intrusion; crossing fence detection; loitering detection; abandoned/missing object; fast moving; parking detection; people gathering; human alarm classification; linkage tracking. Offers Perimeter Protection Large-Scale AI Models to extend the target detection range and reduce the rate of false alarm. Supports self-learning, it filters out false alarms.
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.
Construction Monitoring	Detects 6 helmet colors: Red, orange, yellow, blue, white, and black. An alarm will be triggered when a person is not wearing a helmet or when the color of the helmet that they are wearing does not match the configured color. It also supports compliance detection for work uniforms. Up to 5 work uniform sample libraries can be uploaded, which together can contain up to 1,000 images (the images must be 1080p and in the JPG format). An alarm will be triggered when the similarity between the detected work uniform and the samples in the library is below the set threshold (that is, below the minimum compliance standard for work uniforms). The system supports detecting the attributes of work uniforms such as the color of the uniform, and whether or not the person is wearing a mask and wearing shoe covers. An alarm will be triggered when the target is detected as not meeting the set requirements. It also detects and triggers alarms when only one person is in the construction site, and when no one is present in the detection area such as when a worker leaves their post or an area is left unmanned.
Smart Tracking	WizTracking
SMD	SMD 4.0
AcuPick	Uses deep learning algorithms and works with backend devices to accurately match targets, such as people and motor vehicles, and search through live and recorded videos to quickly locate targets
Auto Patrol	After an IVS event occurs, the PTZ camera immediately initiates automated patrol of predefined key points to quickly cover potential risk areas and detect unknown threats in real time.

Active Deterrence

Light Warning	Red and blue warning light Flash duration: 5 s–30 s Flash frequency: high, medium, low

Sound Warning	Built in 11 voice alarm contents, supporting custom import of 10 voice contents; Sound: 0-100 adjustable; The playback frequency can be adjusted from 1 to 10 times;

Video

Video Compression	Smart H.265+;H.265;Smart H.264+;H.264;H.264B;H.264H;MJPEG(Sub Stream 1)
Streaming Capability	3 streams
Resolution	1080p (1920 × 1080); 960p (1280 × 960); 720p (1280 × 720); D1 (704 × 576/704 × 480); VGA（640 × 480); CIF (352 × 288/352 × 240)
Video Frame Rate	Main stream: 1080p/1.3M/720p@(1–50/60 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	H264: 64 kbps–11264 kbps H265: 25 kbps–6912 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; Gain prio
Noise Reduction	2D NR; 3D NR
Motion Detection	Yes
Region of Interest (RoI)	Yes
Image Stabilization	Electronic Image Stabilization (EIS)
Defog	Electronic
Digital Zoom	16x
Image Rotation	180°
Privacy Masking	Up to 24 areas can be set, with up to 8 areas in the same view Multiple colors and mosaic available
S/N Ratio	≥55 dB

Audio

Audio Compression	PCM; G.711a; G.711Mu; G.726; MPEG2-Layer2; G722.1; G729; G723
Built-in MIC	Yes, built-in dual Mic
Built-in Speaker	Yes, built-in speaker

Network

Network Port	RJ-45 (10/100 Base-T)
Network Protocol	HTTP;HTTPS;TCP/IP;IPv4;RTSP;UDP;SMTP;NTP;DHCP;DNS;DDNS;IPv6;802.1x;SSL;QoS;FTP;UPnP;ICMP;SNMP;IGMP;ARP;RTCP;RTP;PPPoE;RTMP;Bonjour;SMB;NFS
Interoperability	CGI;SDK;ONVIF (Profile S & Profile G & Profile T & Profile M)
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 50 and later versions Safari 10 and later versions
Management Software	DMSS;DSS Pro
Mobile Client	iOS;Android

Certification

Certifications	CE:EN55035;EN IEC61000-3-2;EN55032;EN60950;EN62368-1

Port

RS-485	1 (Bit range: 1200 bps–9600 bps)
Audio Input	1 channel (LINE IN, bare wire,built-in mic (mutually exclusive)）
Audio Output	1 channel (LINE OUT,bare wire;built-in speaker (mutually exclusive)）
Alarm Input	7 channels in: supports wet contact connection (max load 5 mA 3–5 VDC); supports dry contact connection
Alarm Output	2 channels out: dry contact, max load 1,000 mA 30 VDC/500 mA 50 VAC
Alarm Linkage	Capture; recording; send email; preset; tour; pattern; alarm digital output; audio
Alarm Event	Motion/tampering detection; audio detection; network disconnection detection; IP conflict detection; memory card state detection; memory space detection

Power

Power Supply	24 VDC (± 25%), 2.5 A; PoE+ (802.3at)
Power Consumption	Basic: 12 W Max. (WDR + IR on + PTZ operation + Alarm): 20 W (24 VDC)
Power Adapter	Included

Environment

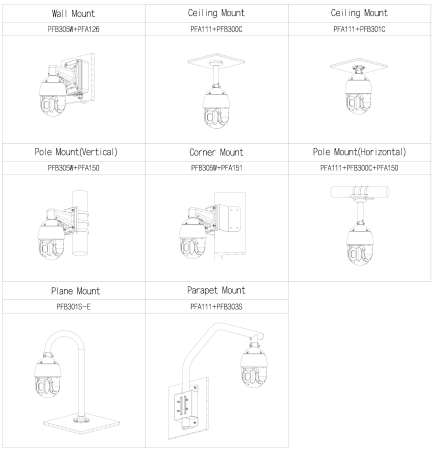
Operating Temperature	–40 °C to +70 °C (–40 °F to +158 °F)
Operating Humidity	≤95%
Protection	IP67;IK10;TVS 6000 V lightning proof; surge protection; voltage transient protection

Structure

Product Dimensions	208 mm × 202 mm × 325 mm (8.19" × 7.95" × 12.8") (L × W × H)
Net Weight	4.45 kg (9.81 lb)
Gross Weight	6.62 kg (14.59 lb)

Ordering Information

Type	Model	Description
Network PTZ Camera	DH-SD6E245MB-HNR-A-PV1	2MP 45x Smart Dual Illumination Active Deterrence Network PTZ Camera
Accessories	PFB305W	Wall Mount Bracket
	DC24V/2.5A	Power Adapter
	DH-PFB301S-E	Plane Mount Bracket
	DH-PFB300C	Ceiling Mount Bracket
	PFA111	Mount Adapter
	DH-PFA151	Corner Mount Bracket
	DH-PFA126	Water-proof Junction Box
	DH-PFA150	Pole Mount Bracket
	DH-PFB303S	Parapet Mount Bracket
	PFM900-E	Integrated Mount Tester



Accessories

Included:

PFB305W
Wall Mount Bracket

DC24V/2.5A
Power Adapter

Optional:

DH-PFB301S-E
Plane Mount Bracket

DH-PFB300C
Ceiling Mount Bracket

PFA111
Mount Adapter

DH-PFA151
Corner Mount Bracket

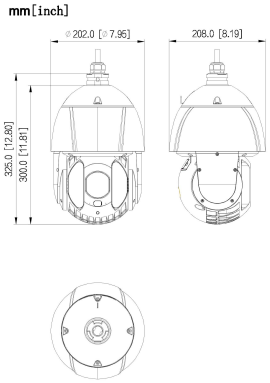
DH-PFA126
Water-proof Junction Box

DH-PFA150
Pole Mount Bracket

DH-PFB303S
Parapet Mount Bracket

PFM900-E
Integrated Mount Tester

Dimensions (mm[inch])



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