DH-IPC-HDBW3649F-AS-IL-Black

6MP Smart Dual Light Fixed-focal Dome WizSense Network Camera



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

With advanced deep learning algorithm, Dahua WizSense 3 Series network camera supports intelligent functions, such as perimeter protection and smart motion detection. With starlight technology, this series camera provides a better image effect in the condition of low illuminance.

Functions

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.

Perimeter Protection

With deep learning algorithm, Dahua Perimeter Protection technology can recognize human and vehicle accurately. In restricted area (such as pedestrian area and vehicle area), the false alarms of intelligent detection based on target type (such as tripwire, intrusion, fast moving, parking detection, loitering detection and gathering detection) are largely reduced.

- 6-MP 1/2.7" CMOS image sensor, low luminance, and high definition image.
- Outputs max. 6 MP (3288 ×1850)@25/30 fps.
- H.265 codec, high compression rate, ultra-low bit rate.
- Built-in multi-core light, the max. IR distance is 30 m and the max. warm light distance is 30 m.
- ROI, SMART H.264+/H.265+, AI H.264/H.265, flexible coding, applicable to various bandwidth and storage environments.
- Rotation mode, WDR, 3D NR, HLC, BLC, digital watermarking, applicable to various monitoring scenes.
- Intelligent monitoring: Intrusion, tripwire (the two function support the classification and accurate detection of vehicle and human), stay detection, loitering detection, face detection (full image).
- Abnormality detection: Motion detection, video tampering, scene changing, audio detection, no SD card, SD card full, SD card error, network disconnection, IP conflict, illegal access, and voltage detection.
- Alarm: 1 in, 1 out; audio: 1 in, 1 out; supports max. 512 G Micro SD card; built-in Mic.
- 12 VDC/PoE power supply.
- IP67, IK10 protection.
- Supports SMD 4.0, AI SSA.
- SMD area can be set in warm light areas that support triggering alarms.



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.

Protection (IP67, IK10, Wide Voltage)

IP67: The camera passes a series of strict test on dust and soak. It has dust-proof function, and the enclosure can work normally after soaking in 1 m deep water for 30 minutes.
IK10: The enclosure can stand the punch more than 5 times from a 5 kg hammer falling from a height of 40 cm (Impact energy is 20J).
Wide voltage: The camera allows ±30% (for some power supplies) input voltage tolerance (wide voltage range), and it is widely applied to outdoor environment with instable voltage.

Technical Specification

Camera

Image Sensor	1/2.7" CMOS
Max. Resolution	3288 (H) × 1850 (V)
ROM	256 MB
RAM	1 GB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100,000 s
Min. Illumination	0.008 lux@F1.6 (Color, 30 IRE) 0.0008 lux@F1.6 (B/W, 30 IRE) 0 lux (Illuminator on)
S/N Ratio	>56 dB
Illumination Distance	2.1 mm: Up to 20 m (65.62 ft) (IR); Up to 20 m (65.62 ft) (Warm light) 2.8 mm: Up to 30 m (98.43 ft) (IR); Up to 30 m (98.43 ft) (Warm light)
Illuminator On/Off Control	Auto;Manual
Illuminator Number	4 (Multi-core (IR + warm) light)
Angle Adjustment	Pan: –30° to 30° Tilt: 0° to 80° Rotation: 0° to 360°

Lens

Lens Type		Fixed-focal			
Lens Mount		M12			
Focal Length		2.1 mm; 2.8 mm			
Max. Aperture		F1.6			
Field of View		2.1 mm: H: 141.1°; V: 74.5°; D: 170.1° 2.8 mm: H: 108.4°; V: 60°; D: 127.1°			
Iris Control		Fixed			
Close Focus Distance		2.1 mm: 1.0 m (3.28 ft) 2.8 mm: 1.4 m (4.59 ft)			
DORI Distance	Lens	Detect	Observe	Recognize	Identify
	2.1 mm	57.8 m (189.63 ft)	23.1 m (75.79 ft)	11.6 m (38.06 ft)	5.8 m (19.03 ft)
	2.8 mm	70.3 m (230.64 ft)	28.1 m (92.19 ft)	14.1 m (46.26 ft)	7.0 m (22.97 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.				

Intelligence

IVS (Perimeter Protection)	Intrusion, tripwire (the two functions support the classification and accurate detection of vehicle and human), loitering detection, and stay detection
SMD	SMD 4.0
AcuPick	Uses deep learning algorithms and works with back-end devices to accurately match targets, such as people and motor vehicles, and search through live and recorded videos to quickly locate targets.
AI SSA	Adopt deep learning algorithms to adjust the parameters of the image to suit the conditions.
Face Detection (Full Image)	Face detection; snapshot; snapshot optimization; optimal face snapshot upload; face exposure; face snapshot set as face or one-inch photo; snapshot strategies (real-time snapshot, quality priority and optimization snapshot); face angle filter; optimization time setting.
Smart Search	Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event videos

Video

AI Coding	AI H.264/H.265; *includes SmartCodec Technology，Smart H.264+ / H.265+
Video Frame Rate	Main stream: 3288 × 1850@(1–25/30 fps) Sub stream: 1920 × 1080@(1–25/30 fps) Third stream: 1920 × 1080@(1–25/30 fps) *The values above are the max. frame rates of each stream; for multiple streams, the values will be subjected to the total encoding capacity.
Streaming Capability	3 streams
Resolution	6M (3288 × 1850/3200 × 1800); 5M (2960 × 1668/2880 × 1620); 4M (2688 × 1520/2560 × 1440); 3M (2304 × 1296); 1080p (1920 × 1080); 720p (1280 × 720); D1 (704 × 576/704 × 480); VGA (640 × 480); CIF (352 × 288/352 × 240)
Bit Rate Control	VBR;CBR;ABR
Video Bit Rate	H.264: 3 kbps–16384 kbps; H.265: 3 kbps–16384 kbps
Day/Night	Auto(ICR)/Color/B/W
BLC	Yes
HLC	Yes
WDR	120 dB
Scene Self-adaptation (SSA)	Yes
White Balance	Auto; natural; street lamp; outdoor; manual; regional custom
Gain Control	Auto/Manual
Noise Reduction	3D NR
Motion Detection	OFF/ON (4 areas, rectangular)
Region of Interest (RoI)	Yes (4 areas)
Smart Illumination	Yes
Smart Dual Light	Yes
Defog	Yes

Image Rotation	0°/90°/180°/270° (Support 90°/270° with 2688 × 1520 resolution and lower)
Mirror	Yes
Privacy Masking	8 areas
LDC	Yes

Audio

Built-in MIC	Yes, built-in Mic
Audio Compression	PCM; G.711a; G.711Mu; G.726; G.723

Alarm

Alarm Event	No SD card; SD card full; SD card error; network disconnection; IP conflict; illegal access; motion detection; video tampering; tripwire; intrusion; scene changing; audio detection; voltage detection; face detection; loitering detection; stay detection; people detection; motor vehicle detection; SMD; security error

Network

Network Port	RJ-45 (10/100 Base-T)
SDK and API	Yes
Network Protocol	IPv4; IPv6; HTTP; TCP; UDP; ARP; RTP; RTSP; RTCP; RTMP; SMTP; FTP; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP; Multicast; ICMP; IGMP; NFS; SAMBA; PPPoE; SNMP; P2P
Interoperability	ONVIF (Profile S & Profile G & Profile T & Profile M); CGI
User/Host	20 (Total bandwidth: 64 M)
Storage	FTP; SFTP; Micro SD card (support max. 512 GB); NAS
Browser	IE: IE11; Chrome; Firefox
Management Software	Smart PSS Lite; DSS; DMSS; DoLynk Care
Mobile Client	iOS;Android
Security	Video encryption;Firmware encryption;Configuration encryption;Digest;WSSE;Account lockout;Security logs;IP/MAC filtering;Generation and importing of X.509 certification;syslog;HTTPS;802.1x;Trusted boot;Trusted execution;Trusted upgrade;Session security;Security warning

Certification

Certifications	CE-LVD: EN62368-1; CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU

Port

Audio Input	1 channel (RCA port)
Audio Output	1 channel (RCA port)
Alarm Input	1 channel in: supports wet contact connection (max load 5 mA 3–5 VDC); supports dry contact connection
Alarm Output	1 channel out: wet contact, max load 300 mA 12 VDC

Power

Power Supply	12 VDC (±30%); PoE (802.3af)
Power Consumption	Basic: 3.8 W (12VDC); 8.7 W (PoE);
Power Consumption	Max.: 4.6 W (12 VDC); 10.1 W (PoE) (H.265 + WDR + warm light + intelligence on)

Environment

Operating Temperature	–40 °C to +60 °C (–40 °F to +140 °F)
Operating Humidity	≤ 95% (RH), non-condensing
Storage Temperature	–40 °C to +60 °C (–40 °F to +140 °F)
Storage Humidity	≤ 95% (RH), non-condensing
Protection	IP67; IK10
Anti-corrosion Level	Basic Protection *The products are designed for general use and are applicable even in areas with no specific requirements for anti-corrosion protection.

Structure

Casing Material	Metal
Product Dimensions	64.8 mm × Φ111.0 mm (2.55" × Φ4.37")
Net Weight	423 g (0.93 lb)
Gross Weight	590 g (1.30 lb)

Ordering Information

Type	Model	Description
IP CAMERA	DH-IPC-HDBW3649F-AS-IL-Black	6MP Smart Dual Light Fixed-focal Dome WizSense Network Camera
Accessories (Optional)	DH-PFB220C-B	Ceiling Mount Bracket
	DH-PFA109-B	Mount Adapter
	DH-PFB305W-B	Wall Mount Bracket
	DH-PFA151-B	Corner Mount Bracket
	DH-PFA150-B	Pole Mount Bracket
	DH-PFB2203W-B	Wall Mount Bracket
	DH-PFA156-B	Pole Mount Bracket
	DH-PFA136-B	Junction Box
	PFM900-E	Integrated Mount Tester

Accessories

Optional:



DH-PFB220C-B
Ceiling Mount Bracket



DH-PFA109-B
Mount Adapter



DH-PFB305W-B
Wall Mount Bracket

Optional:



DH-PFA151-B
Corner Mount Bracket



DH-PFA150-B
Pole Mount Bracket



DH-PFB2203W-B
Wall Mount Bracket



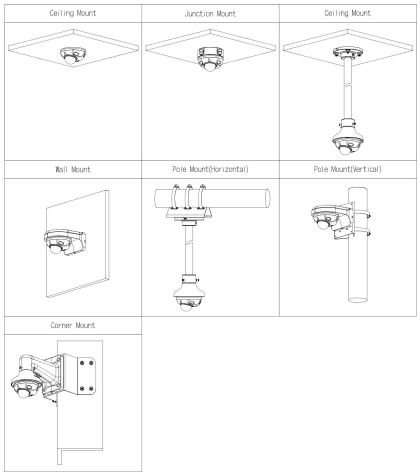
DH-PFA156-B
Pole Mount Bracket



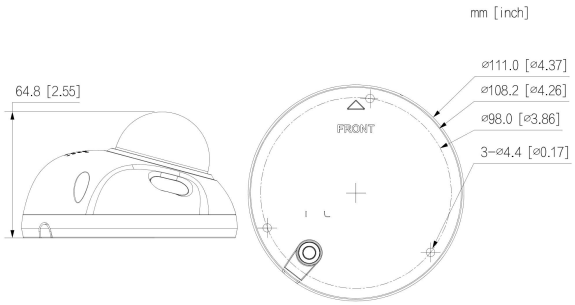
DH-PFA136-B
Junction Box



PFM900-E
Integrated Mount Tester



Dimensions (mm[inch])



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