DH-IPC-HDBW2449F-AS-E2-IL

2 × 4 MP Smart Dual Light Fixed-focal Dual-Directional Dome WizSense Network Camera

Wiz Sense

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.

System Overview

With advanced deep learning algorithm, Dahua WizSense 2 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

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.

SMD Plus

With intelligent algorithm, Dahua Smart Motion Detection technology can categorize the targets that trigger motion detection and filter the motion detection alarm triggered by non-concerned targets to realize effective and accurate alarm.

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.

Smart H.265+ & Smart H.264+

With advanced scene-adaptive rate control algorithm, Dahua smart encoding technology realizes the higher encoding efficiency than H.265 and H.264, provides high-quality video, and reduces the cost of storage and transmission.

- 4-MP 1/2.7" CMOS image sensor, low luminance, and high definition image.
- Outputs max. 4 MP (2688 × 1520)@20 fps, and supports 2560 × 1440(2560 × 1440) @25/30 fps.
- Built-in multi-core light, the max. IR distance is 30 m and the max. warm light distance is 20 m.
- ROI, SMART 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.
- Abnormality detection: Motion detection, video tampering, audio detection, no SD card, SD card full, SD card error, network disconnection, IP conflict, illegal access, and voltage detection.
- Intelligent monitoring: Intrusion, tripwire (the two function support the classification and accurate detection of vehicle and human).
- Dual-channel intelligence can be enabled at the same time and independent of each other.
- Flexstream**:** Supports dual-channel images previewed in the first channel, saving license costs.
- Alarm: 1 in, 1 out; audio: 1 in, 1 out; supports max. 256 G Micro SD card; built-in Mic.
- 12 VDC/PoE power supply.
- IP67 and IK10 protection.
- SMD Plus.

4Mp | Smart Dual Light | SMD Plus | Perimeter Protection | Smart Codec | Full-color

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	Channel 1: 1/2.7" CMOS Channel 2: 1/2.7" CMOS
Max. Resolution	Channel 1: 2688 (H) × 1520 (V) Channel 2: 2688 (H) × 1520 (V)
ROM	4 GB
RAM	1 GB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100,000 s
Min. Illumination	0.006 lux@F1.6 (Color,30 IRE) 0.0006 lux@F1.6 (B/W,30 IRE) 0 lux (Illuminator on)
S/N Ratio	>56 dB
Illumination Distance	Up to 30 m (98.43 ft) (IR) Up to 20 m (65.62 ft) (Warm light)
Illuminator On/Off Control	Auto;Manual
Illuminator Number	8 (Multi-core (IR + warm) light)
Angle Adjustment	Channel 1: Pan: −90° to 90°; Tilt: 0° to 55°; Rotation: 0° to 360°; Channel 2: Pan: −90° to 90°; Tilt: 0° to 55°; Rotation: 0° to 360°

Lens

Lens Type	Channel 1: Fixed-focal Channel 2: Fixed-focal
Lens Mount	Channel 1: M12 Channel 2: M12
Focal Length	2.8 mm; 3.6 mm
Max. Aperture	2.8mm: F1.6 3.6mm: F1.6
Field of View	2.8 mm: H: 101.5°; V: 54.7°; D:120.8° 3.6 mm: H: 82.7°; V: 45.3°; D:96.6°
Iris Control	Channel 1: Fixed Channel 2: Fixed
Close Focus Distance	2.8 mm: 1.1 m (3.61 ft) 3.6 mm: 1.5 m (4.92 ft)

DORI Distance	Lens	Detect	Observe	Recognize	Identify
	2.8 mm	63.6 m (208.66 ft)	25.4 m (83.33 ft)	12.7 m (41.67 ft)	6.4 m (21.00 ft)
	3.6 mm	77.8 m (255.25 ft)	31.1 m (102.03 ft)	15.6 m (51.18 ft)	7.8 m (25.59 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)
SMD	SMD Plus

Smart Search	Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event videos

Video

Video Compression	H.265; H.264; H.264H; H.264B; MJPEG (Only supported by sub stream)
Smart Codec	Smart H.265+; Smart H.264+
Video Frame Rate	Main stream: 2688 × 1520@(1–20 fps)/2560 ×1440@(1–25/30 fps) sub stream: 704 × 576@(1–25 fps)/704 × 480@(1–30fps) third stream: 1920 × 1080@(1–25/30 fps) *The values above are the max. frame rates of each stream; for multple streams, the values will be subjected to the total encoding capacity.
Stream Capability	3 streams
Resolution	4M (2688 × 1520/2560 × 1440); 3M (2304 × 1296/2048 × 1536); 1080p (1920 × 1080); 1.3M (1280 × 960); 720p (1280 × 720); D1 (704 × 576/704 × 480); VGA (640 × 480); CIF (352 × 288/352 × 240)
Bit Rate Control	ABR;CBR;VBR
Video Bit Rate	Channel 1: H.264: 3 kbps–10240 kbps; H.265: 3 kbps–10240 kbps; Channel 2: H.264: 3 kbps–10240 kbps; H.265: 3 kbps–10240 kbps
Day/Night	Channel 1: Auto(ICR)/Color/B/W Channel 2: Auto(ICR)/Color/B/W
BLC	Yes
HLC	Yes
WDR	120dB
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
Image Rotation	0°/90°/180°/270° (Support 90°/270° with 2688 × 1520 resolution and lower)
Mirror	Yes
Privacy Masking	4 areas

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; external alarm; SMD; security exception

Network

Network Port	RJ-45 (10/100/1000 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; PPPoE; SNMP; P2P; Bonjour
Security	Trusted execution;Session security;Digest;Security logs;WSSE;Account lockout;Security warning;syslog;802.1x;IP/MAC filtering;HTTPS;Trusted upgrade;Trusted boot;Generation and importing of X.509 certification
Interoperability	ONVIF (Profile S & Profile G &Profile T); CGI
User/Host	20 (Total bandwidth: 80 M)
Storage	FTP; SFTP; Micro SD card (support max. 256 GB); NAS
Browser	Chrome: Chrome 88.0.4324.190 and later; Firefox: Firefox 47.0.2 and later
Management Software	Smart PSS Lite; DSS; DMSS; DoLynk Care
Mobile Client	iOS;Android

Certification

Certification	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: wet contact, 5 mA 3–5 VDC
Alarm Output	1 channel out: wet contact, 300 mA 12 VDC

Power

Power Supply	12 VDC/PoE+ (802.3at)
Dual Power Backup	When the power adapter and PoE provide power at the same time, disconnect one of them. The device will continue to work, but will not restart.
Power Consumption	Basic: 4.8 W (12 VDC); 6.6 W (PoE) Max.: 13 W (12 VDC); 15.8 W (PoE) (H.265 + intelligence on+ WDR + warm light intensity)

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

Structure

Casing Material	Metal
Product Dimensions	164 mm × 84 mm × 69.4 mm (6.46" × 3.31" × 2.73") (L × W × H)
Net Weight	0.63 kg (1.39 lb)
Gross Weight	0.80 kg (1.76 lb)

Ordering Information

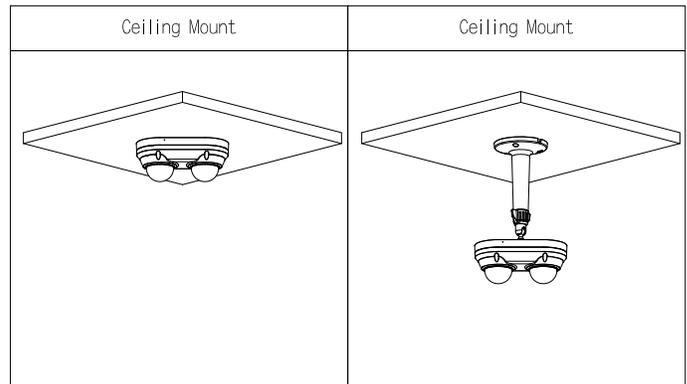| Type	Model	Description
IP CAMERA	DH-IPC-HDBW2449F-AS-E2-IL	2 × 4 MP Smart Dual Light Fixed-focal Dual-Directional Dome WizSense Network Camera
Accessories (Optional)	DH-PFB110W	Ceiling Mount Bracket
	DH-PFM320D-EN	DC12V2A power adapter
	PFM900-E	Integrated Mount Tester
	DHI-TF-P100/256GB	MicroSD Card

Accessories

Optional:

DH-PFB110W
Ceiling Mount Bracket

DH-PFM320D-EN
DC12V2A power adapter

PFM900-E
Integrated
Mount Tester

DHI-TF-P100/256GB
MicroSD Card

Ceiling Mount	Ceiling Mount

Dimensions (mm[inch])

150.6 [5.93]

69.4 [2.73]
44.2 [1.74]

∅84.0 [∅3.31]

2−∅4.5 [∅0.18]

1/4−20UNC▽6

84.0 [3.31]

164.0 [6.46]