

DH-IPC-PT2449Z-Z5-A1S-PV

4MP 5x Smart Dual Light Pan & Tilt Network Camera



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

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

Super AI Coding

With advanced AI object detection and scene recognition technology, Super AI Coding integrates ROI, BAE, and ABR to achieve higher encoding efficiency than H.265 and H.264 while effectively reducing storage and transmission costs without compromising video quality.

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.

- 4-MP 1/3" CMOS image sensor, low luminance, and high definition image.
- Outputs max 4 MP (2560 × 1440)@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, AI H.264/H.265 (Super AI Coding), flexible coding, applicable to various bandwidth and storage environments.
- WDR, 3D NR, HLC, BLC, digital watermarking, applicable to various monitoring scenes.
- Intelligent monitoring: Intrusion, tripwire.
- 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.
- Audio: 1 in, 1 out; max 512 GB Micro SD card; built-in dual Mic and 1-ch speaker
- 12 VDC (±25%)/PoE (802.3af) power supply, easy for installation.
- IP66 and IK10 protection.
- Supports SMD Plus and Auto Tracking Lite.



WDR

With advanced Wide Dynamic Range (WDR) technology, Dahua network camera provides clear details in the environment of strong brightness contrast. The bright and dark area can get clear video even in high brightness environment or with backlight shadow.

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.

Technical Specification

Camera

Image Sensor	1/3" CMOS
Max. Resolution	2560 (H) × 1440 (V)
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100,000 s
Min. Illumination	0.005 lux@F1.8 (Color, 30 IRE) 0.0005 lux@F1.8 (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 30 m (98.43 ft) (Warm light)
Illuminator On/Off Control	Auto; Manual
Illuminator Number	4 (IR LED); 4 (Warm light)

Lens

Optical Zoom	5×
Lens Type	Module
Lens Mount	Module
Focal Length	2.7 mm–13.5 mm
Max. Aperture	F1.8
Field of View	H: 28°–90°; V: 16°–48°; D: 32°–107°
Close Focus Distance	1 m (3.28 ft)

	Lens	Detect	Observe	Recognize	Identify
	2.7 mm–13.5 mm	210.0 m (688.98 ft)	83.0 m (272.31 ft)	42.0 m (137.80 ft)	21.0 m (68.90 ft)
DORI Distance	*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 Tracking	Auto Tracking Lite

Video

Video Compression	H.265; H.264; H.264H; H.264B; MJPEG (Only supported by sub stream)
AI Coding	AI H.265; AI H.264 (Super AI Coding) *Includes smart codec technology, Smart H.265+ and Smart H.264+
Video Frame Rate	Main stream: 2560 × 1440@(1–25/30 fps)

Video Frame Rate	Sub stream: 704 × 576@(1–25 fps)/704 × 480@(1–30 fps) Third stream: 352 × 288@1 fps/352 × 240@1 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	4M (2560 × 1440); 3M (2304 × 1296); 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	VBR; CBR
Video Bit Rate	H.264: 32 kbps–6144 kbps H.265: 12 kbps–6144 kbps
Day/Night	Auto(ICR)/Color/B/W
BLC	Yes
HLC	Yes
WDR	120 dB
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)
Image Stabilization	Electronic Image Stabilization (EIS)
Smart Illumination	Yes
Smart Dual Light	Yes
Defog	Electronic
Digital Zoom	16×
Image Rotation	0°/180°
Mirror	Yes
Privacy Masking	4 areas
LDC	Yes

Audio

Built-in MIC	Yes, built-in dual Mic
Built-in Speaker	Yes, built-in speaker; Max power consumption: 2 W; max sound level at 10 cm: 110 dB * Test results from laboratory
Audio Compression	G.711a; G.711Mu; PCM; G.726

Alarm

Alarm Event	No SD card; SD card full; SD card error; network disconnection; IP conflict; illegal access; motion detection; video tampering; tripwire; intrusion; audio detection; voltage detection; SMD; security exception
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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; NTP; Multicast; ICMP; IGMP; NFS; P2P; Auto Registration
Interoperability	ONVIF (Profile S & Profile G & Profile T); CGI
User/Host	6 (Total bandwidth: 36 M)
Storage	FTP; SFTP; Micro SD card (supports max 512 GB)
Browser	IE; Chrome; Firefox
Management Software	SmartPSS Lite; DSS; DMSS; DoLink Care
Mobile Client	iOS; Android
Security	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; SSL/TLS 1.2; AES 256

Function

Light Warning	Warm light warning Flash duration: 5 s–180 s Flash frequency: high, medium, low
Sound Warning	Offers 3 sound alarms and supports importing custom sound alarms. Sound: 0–100. Play times can be set from 1 to 10.

PTZ

Pan/Tilt Range	Pan: 0° to 355° Tilt: 0° to 90°
Manual Control Speed	Pan: 0.1°/s–60°/s; Tilt: 0.1°/s–50°/s
Preset	80
Preset Speed	Pan: 60°/s; Tilt: 50°/s
Tour	8 (up to 6 presets per tour)
Power-off Memory	Yes
Idle Motion	Preset; Tour
PTZ Locked	YES

Certification

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

Audio Input	1 channel (Bare wire)
Audio Output	1 channel (Bare wire)

Power

Power Supply	12 VDC (±25%); PoE (802.af)
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: 2.10 W (12 VDC); 2.87 W (PoE) Max (PT rotation + illuminator intensity): 11.65 W (12 VDC); 12.95 W (PoE)

Environment

Operating Temperature	–30 °C to +60 °C (–22 °F to +140 °F)
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Operating Humidity	≤95% (RH), non-condensing
Storage Temperature	–30 °C to +60 °C (–22 °F to +140 °F)
Storage Humidity	≤95% (RH), non-condensing
Protection	IP66; IK10; TVS 4000V lightning proof; surge protection; voltage transient protection
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	107.1 mm × Φ130.0 mm (4.22" × Φ5.12")
Net Weight	0.68 kg (1.50 lb)
Gross Weight	0.89 kg (1.96 lb)

Ordering Information

Type	Model	Description
IP CAMERA	DH-IPC-PT2449Z-Z5-A1S-PV	4MP 5x Smart Dual Light Pan & Tilt Network Camera
	DH-PFB220C	Ceiling Mount Bracket
	DH-PFA106	Mount Adapter
	DH-PFB305W	Wall Mount Bracket
Accessories (Optional)	DH-PFA151	Corner Mount Bracket
	DH-PFA150	Pole Mount Bracket
	DH-PFA152-E	Pole Mount Bracket
	DH-PFB2203W	Wall Mount Bracket
	DH-PFM320-010EN	DC12V 1A Power Adapter
	DH-PFM325D-1210EN	DC12V 1A Power Adapter
	DH-PFM325D-1215EN	DC12V 1.5A Power Adapter
	DH-PFM320-020EN	DC12V 2A Power Adapter
	DH-PFM320D-EN	DC12V 2A Power Adapter
	PFM900-E	Integrated Mount Tester
	DHI-TF-P100/512GB	MicroSD Card

Accessories

Optional:



DH-PFB220C
Ceiling Mount Bracket



DH-PFA106
Mount Adapter



DH-PFB305W
Wall Mount Bracket

Optional:



DH-PFA151
Corner Mount Bracket



DH-PFA150
Pole Mount Bracket



DH-PFA152-E
Pole Mount Bracket



DH-PFB2203W
Wall Mount Bracket



DH-PFM320-010EN
DC12V 1A Power Adapter



DH-PFM325D-1210EN
DC12V 1A Power Adapter



DH-PFM325D-1215EN
DC12V 1.5A Power
Adapter



DH-PFM320-020EN
DC12V 2A Power Adapter



DH-PFM320D-EN
DC12V 2A Power Adapter

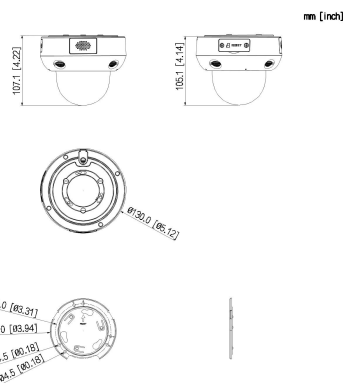


PFM900-E
Integrated Mount Tester



DHI-TF-P100/512GB
MicroSD Card

Dimensions (mm[inch])



Ceiling Mount	Ceiling Mount	Wall Mount
/	DH-PFA106+DH-PFB220C	DH-PFA106+DH-PFB305W
Pole Mount		
DH-PFB2203W+DH-PFA156		