

DH-IPC-HDW3841EM-S-S2

8MP IR Fixed-focal Eyeball 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

Dahua WizSense 3 Series Network Camera greatly saves on bandwidth and storage space through its Al Coding technology. Driven by its advanced deep learning algorithms, the camera supports intelligent functions such as perimeter protection, smart motion detection (SMD), Quick Pick, and Al SSA (Al Scene Self-adaptation), making it easy and convenient to use. Starlight technology and its large aperture lens also allow the camera to produce clear, vivid images even in poor lighting conditions.

Functions

SMD 4.0

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. With an AI NVR, Quick Pick technology becomes available, allowing you to easily search for and pick out human and vehicle targets from SMD event videos, prioritizing the highest matches.

AI SSA

Dahua AI Scene Self-adaptation (AI SSA) adopts deep learning algorithms to detect environmental conditions, such as rain, fog, backlight, low light and flicker, to adjust the parameters of the image to suit the conditions, ensuring that clear images are always produced.

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

- 8-MP 1/2.8" CMOS image sensor, excellent low luminance performance and high definition of images.
- Outputs max. 8MP (3840 × 2160) @25/30 fps.
- H.265 codec, high compression rate, ultra-low bit rate.
- · Built-in IR LED, max. IR distance: 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 detection: Intrusion, tripwire (support the classification and accurate detection of vehicle and human).
- Abnormality detection: Motion detection, privacy masking, scene changing, audio detection, no SD card, SD card full, SD card error, network disconnection, IP conflict, illegal access, and voltage detection.
- · Max. 256 G Micro SD card. built-in Mic.
- 12 VDC/PoE power supply facilitates installation.
- IP67 protection.
- SMD 4.0, AI SSA.













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) are largely reduced.

Protection (IP67, Wide Voltage)

IP67: The camera passes a series of strict test on dust and soak. It has dust-proof function, and the enclosure can works normal after soaking in 1 m deep water for 30 minutes.

Wide voltage: The camera allows $\pm 30\%$ (for some power supplies) input voltage tolerance (wide voltage range), and it is widely applied to outdoor environment with instable voltage.

Cyber Security

Dahua network cameras employ a series of security technologies, including security authentication and authorization, access control protocols, trusted protection, encrypted transmission and encrypted storage. These technologies improve the camera's defense against external cyber threats and prevent malicious programs from comprising the device.

Page	Technical	Specification	on						Main stream: 3840 × 2160 @ (1–25/30) fps
Max. Resolution	Camera							Video Frame Rate	
Stream Capability Str	Image Sensor		1/2.8" CMOS					video France Nate	*The values above are the max. frame rates of each stream; for multiple streams, the values will be subjected
RAM	Max. Resolution		3840 (H) × 2160 (V)						
Max	ROM		128 MB					Stream Capability	
Resolution Claude Squity 12M 1280 / 960; 70M 1280 / 960; 70M 1280 / 740; 740; 740; 740; 740; 740; 740; 740;	RAM		1 GB						1728/2592 × 1944); 4M (2688 × 1520); 3.6M (2560 ×
Min.	Scanning Sys	stem	Progressive					Resolution	(1920 × 1080); 1.3M (1280 × 960); 720p (1280 × 720); D1
Min. Illumination Occop Lange Late	Electronic Shutter Speed		Auto/Manua	1/3 s-1/100,0	00 s			Dia Data Cambral	(640 × 480)
Syn Ratio	Min. Illumination		0.0007 lux@F1.4 (B/W, 30 IRE)						H.264: 3 kbps–8192 kbps
Illumination Distance 30 m (164 H)	S/N Ratio							Day/Night	· · ·
More 2 (M LED First 120 dB 1	Illumination	Distance	30 m (164 ft)						
More 120 dB Pant	Illuminator (On/Off Control							
Pan: 10"-360", Tilt: 0"-78", Rotation: 0"-360" Scene Self-adaptation (ISA) Ves	Illuminator N	Number	2 (IR LED)						
Lens Fixed Focal White Balance	Pan/Tilt/Rotation Range		Pan: 0°-360°	; Tilt: 0°–78°; Ro	otation: 0°–360)°			
Lens Type	Lens							· ·	
Focal Length 2.8 mm; 3.6 mm Motion Detection OFF/ON (4 areas, rectangular) Motion Detection OFF/ON (4 areas, rectangular) Motion Detection OFF/ON (4 areas, rectangular) Presided of View 2.8 mm; Horizontal:84*, vertical: 47°; diagonal: 97° Iris Control Fixed Close Focus Distance 2.8 mm; 1.5 m (4.9 ft) 3.6 mm; 2 m (6.6 ft) DORI DISTANCE 2.8 mm 2.8 mm	Lens Type		Fixed-focal					White Balance	
Max. Aperture F1.4 F1.6 Motion Detection OFF/ON (4 areas, rectangular) Field of View 2.8 mm: Horizontal:107°, vertical: 56°, diagonal: 127° 3.6 mm: Horizontal:84°; vertical: 47°; diagonal: 127° Defog Yes Fixed Fixed 2.8 mm: 1.5 m (4.9 ft) 3.6 mm: 2 m (6.6 ft) Lens Detect Observe Recognize Identify (15.16 ft) (57.41 ft) (28.87 ft) Mirror Yes Joseph Gary 73 ft) (15.16 ft) (57.41 ft) (28.87 ft) Fixed 2.8 mm (87.7 m (33.1 m 20.4 m (66.93 ft) (15.36 ft)) (33.46 ft) Intelligence Intelligence Tripwire, intrusion (support the classification and accurate detection of vehicle and human) Al SSA Yes Alarm Quick Pick With Al NVR, quickly pick up the human/vehicle targets that users are interested in from SMD events wideos Wideo Compression H.265; H.264; H.2648; MJPEG (only supported by the sub stream) Video Compression H.265; H.264; H.2648; MJPEG (only supported by the sub stream) Al Coding Al Loding Al H.265 Motion Detection OFF/ON (4 areas, rectangular) Region of Interest (RoI) Yes (As areas) Pefog Yes AFSA Yes AlFSA Ves Image Rotation O'9907/1807; O'9907/1807/270" (support 90°/270" with 2688×1520 resolution and lower) Mirror Yes Audio Built-in MIC Yes Audio Compression G.711a; G.711Mu; PCM; G.726; G.723 Alarm Alarm Event Alarm Privace, representation, pic conflict; illegal access; motion detection; pic conflict; illegal access; motion detection; violage detection; voltage detection; SMD; safety exception Network Network Port RJ 45 (10/100 Base-T) Smart L.264; H.264; H.2648; MJPEG (only supported by the sub stream) Al Coding Al Loding Al H.265 Motion Detection OFF/ON (4 areas) Areas Areas Areas Audio Audio Audio Alarm Event Alarm E	Lens Mount		M12					Gain Control	Auto
Field of View 2.8 mm: Horizontal:107°; vertical: 56°; diagonal: 97° Iris Control Fixed Close Focus Distance 2.8 mm: 1.5 m (4.9 ft) 3.6 mm: 2 m (6.6 ft) Lens Detect Dosry [28,77 m] 3.5 lm [287,73 m] 3.5 lm [287,73 m] 3.6 mm [287,73 m] 3.6 mm 102.1 m 3.6 mm 102.1 m 3.6 mm 102.1 m 3.6 mm 102.1 m 40.8 m (33.4.9 ft) (133.86 ft) Ves With Al NVR, quickly pick up the human/vehicle targets that users are interested in from SMD events Smart Search Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event videos Video Video Video Video Video Video Smart H.265; H.264†; H.264B; MJPEG (only supported by the sub stream) Al Corling Al LCorling Al H.265 Smart H.2654 Al H.265 Smart Detect Defog Yes AFSA Pes AFSA Yes Privacy Masking A areas Audio Audio Audio Audio Willing Audio Willing Audio Audio Audio Audio Audio Audio Alarm No SD card; SD card full; SD card error; service life warning (only supported by Dahua card); network disconnection; IP conflict; llegal access; motion detection; video tampering; intrusion; tripwire; scene changing; audio detection; voltage detection; SMD; safety exception Network Network Port Al Corling Al LCorling Al H.265 Smart H.264+ Al H.2654 Al H.2654 Al H.2654 Al H.2654 Al H.2654 Al H.2655 Smart H.2664 Al H.2655 Mart Privacy Masking As a man (28.87 ft) Al H.2655 Mart Privacy Masking Areas Audio Al Arm Audio Al Arm Audio Audio Alarm Alarm No SD card; SD card full; SD card error; service life warning (only supported by Dahua card); network disconnection; IP conflict; llegal access; motion detection; video tampering; intrusion; tripwire; scene changing; audio detection; voltage detection; SMD; safety exception Network Port Al Corling Al Corling Al Corling Al	Focal Length	1	2.8 mm; 3.6 mm					Noise Reduction	3D NR
Iris Control Fixed Close Focus Distance 2.8 mm: 1.5 m (4.9 ft) 3.6 mm: 2m (6.6 ft) Lens Detect Observe Recognize Lens Detect Observe Recognize Ivisiance 2.8 mm 10.2.1 m 3.6 mm 10.2.1 m 40.8 m 20.4 m 10.2 m (33.4.9 ft) 133.86 ft) Fixed Audio Intelligence Ivis (Perimeter Protection) Al SSA Yes With Al NVR, quickly pick up the human/vehicle targets that users are interested in from SMD events Smart Search Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event videos Video Video Video Compression H.265; H.264; H.264B; MJPEG (only supported by the sub stream) Al Coding Al H.265 Al Coding Al H.265	Max. Aperture		F1.4					Motion Detection	OFF/ON (4 areas, rectangular)
Defage Ves	Field of View	I						Region of Interest (RoI)	Yes (4 areas)
AFSA Yes	Iris Control							Defog	Yes
Lens Detect Observe Recognize Identify								AFSA	Yes
DORI Distance 2.8 mm 3.6 mm 3.8 mm 3.8 mm 3.8 mm 3.8 mm 3.8 mm 3.8 mm 3.4 mm 3.4 mm 4 areas Audio 5. Tipwire, intrusion (support the classification and accurate detection of vehicle and human) 4 ardio 4 areas Audio 5. Tipwire, intrusion (support the classification and accurate detection of vehicle and human) 4 areas Audio 4 areas Audio 4 areas Audio 5. Tipwire, intrusion (support the classification and accurate detection of vehicle and human) 4 areas Audio 5. Tipwire, intrusion (support the classification and accurate detection of vehicle and human) 4 areas Audio 5. Tipwire, intrusion (support the classification and accurate detection of vehicle and human) 4 areas Audio 4 areas Audio 6.711a; G.711Mu; PCM; G.726; G.723 Alarm Alarm Alarm Alarm Event Ala	Close Focus		3.6 mm: 2 m (6.6 ft)					Image Rotation	
Distance 102.1 m	DORI							Mirror	Yes
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Alarm Al	Intelligen	ce						Built-in MIC	Yes
Alarm Event With Al NVR, quickly pick up the human/vehicle targets that users are interested in from SMD events Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event videos Video Network No SD card; SD card full; SD card error; service life warning (only supported by Dahua card); network disconnection; IP conflict; illegal access; motion detection; video tampering; intrusion; tripwire; scene changing; audio detection; voltage detection; SMD; safety exception Network Video Compression H.265; H.264; H.264H; H.264B; MJPEG (only supported by the sub stream) Smart Codec Smart H.265+ Smart H.264+ Al Coding Al H.265 Network Protocol Network Protocol Network Protocol SMTP; FTP; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP;	IVS (Perimet	er Protection)						Audio Compression	G.711a; G.711Mu; PCM; G.726; G.723
Quick Pick With Al NVR, quickly pick up the human/vehicle targets that users are interested in from SMD events Alarm Event warning (only supported by Dahua card); network disconnection; IP conflict; illegal access; motion detection; video tampering; intrusion; tripwire; scene changing; audio detection; voltage detection; SMD; safety exception Video Network Video Compression H.265; H.264; H.264B; MJPEG (only supported by the sub stream) Network Port RJ-45 (10/100 Base-T) Smart Codec Smart H.265+ Smart H.264+ SDK and API Yes Al Coding Al H.265 Network Protocol SMTP; FTP; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP;	AI SSA		· ·					Alarm	
Smart Search Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event videos Network Video Network Network Port Smart Codec Smart H.265+ Smart H.264+ Al Coding Al H.265 Network Protocol Smart Protocol Network Protocol Network Protocol Network Protocol Smart Protocol Network Protocol Network Protocol Network Protocol Network Protocol	Quick Pick							Alarm Event	warning (only supported by Dahua card); network
Video Compression H.265; H.264; H.264B; MJPEG (only supported by the sub stream) Network Port RJ-45 (10/100 Base-T) Smart Codec Smart H.265+ Smart H.264+ SDK and API Yes Al Coding Al H.265 Network Protocol IPv4; IPv6; HTTP;TCP; UDP; ARP; RTSP; RTCP; RTMP; SMTP; FTP; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP; DNS; DDNS; QoS; UPnP; NTP;	Smart Search		intelligent search, event extraction and merging to event						detection; video tampering; intrusion; tripwire; scene changing; audio detection; voltage detection; SMD;
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Al Coding Al H.265 Network Protocol Network Protocol Network Protocol Mr); FTP; STTP; DDNS; QOS; UPPP; NTP; Mr); FTP; STTP; DHCP; DNS; QOS; UPPP; NTP;	Smart Codec							SDK and API	Yes
	Al Coding		AI H.265					Network Protocol	SMTP; FTP; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP;

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Cyber 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		
Interoperability	ONVIF (Profile S/Profile G/Profile T); CGI; P2P; Milestone; Genetec		
User/Host	20 (Total bandwidth: 64 M)		
Storage	FTP; SFTP; Micro SD card (support max. 256 G); NAS		
Browser	IE:IE11 Chrome Firefox		
Management Software	Smart PSS; DSS; DMSS		
Mobile Client	IOS; Android		
Certification			
Certifications	CE-LVD: EN62368-1; CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU; FCC: 47 CFR FCC Part 15, Subpart B; UL/CUL: UL62368-1 & CAN/CSA C22.2 No. 62368-1-14		

Power

Power Supply	12 VDC/PoE (802.3af)		
Power Consumption	Basic: 4.3 W (12 VDC); 4.9 W (PoE) Max. (WDR + IR intensity + Intelligence): 7.6 W (12 VDC); 8.9 W (PoE)		

Environment

Operating Temperature	$-40~^{\circ}\text{C}$ to +60 $^{\circ}\text{C}$ (–40 $^{\circ}\text{F}$ to 140 $^{\circ}\text{F}) / \text{Less than 95\% RH}$
Storage Temperature	-40 °C to +60 °C (-40 °F to 140 °F)
Protection	IP67

Structure

Casing	Metal
Product Dimensions	93.6 mm × Φ106.0 mm (3.69" × Φ4.17")
Net Weight	500 g (1.10 lb)
Gross Weight	770 g (1.70 lb)

Ordering Information					
Туре	Model	Description			
8MP Camera	DH-IPC-HDW3841EM-S-S2	8MP IR Fixed-focal Eyeball WizSense Network Camera			
	PFA139	Junction Box			
	PFB204W	Wall Mount			
	PFA106	Ceiling Mount			
Accessories	PFB220C	Ceiling Mount			
(Optional)	PFA152-E	Pole Mount			
	PFM321D	12 VDC 1 A Power Adapter			
	PFM900-E	Integrated Mount Tester			
	TF-P100	TLC SD Card			

Accessories

Optional:







PFB204W Wall Mount



PFB220C Ceiling Mount



PFA152-E Pole Mount



PFA106

Ceiling

Mount

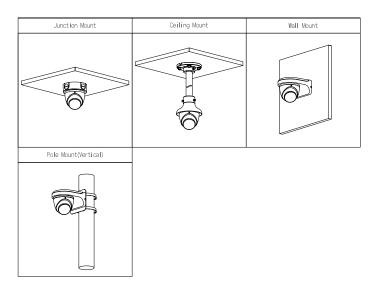
PFM321D 12 VDC 1 A Power Adapter



PFM900-E Integrated Mount Tester



TF-P100 TLC SD Card



Dimensions (mm[inch])

