

DH-IPC-HDBW4231E-S

2MP IR Fixed-focal Dome Network Camera



Series Overview

With advanced H.265 encoding technology, Dahua Pro series network camera has efficient video encoding capacity, which saves bandwidth and storage space. This series camera adopts starlight technology, intelligent IR technology, and intelligent image analysis. It supports dust-proof function, waterproof function and vandal-proof function, complying with the standards of IP67 and IK10 (Supported by some select models).

Functions

Motion Detection

When moving objects appear in the monitoring image, Dahua Motion Detection technology triggers alarm or records.

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.

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.

- 2-MP 1/2.8" CMOS image sensor, low luminance, and high definition image.
- Outputs max. 2 MP (1920 × 1080)@25 fps/30 fps.
- H.265 codec, high compression rate, ultra-low bit rate.
- Built-in IR LED, and the max. illumination distance is 50 m.
- Rotation mode, WDR, 3D NR, HLC, BLC, digital watermarking, applicable to various monitoring scenes.
- ROI, SMART H.264+/H.265+, flexible coding, applicable to various bandwidth and storage environments.
- 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.
- · Supports max. 256 G Micro SD card; built in Mic.
- 12 VDC/PoE power supply, easy for installation.
- IP67 and IK10 protection.













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 compromising the device.

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

Camera	Technical Specification							Main stream: 1920 × 1080@(1–25/30 fps)	
Image Sector 17.8 °CMOS 17.8 °CMOS 17.7 °CM 1			UII					fps) Video Frame Rate Third st *The va stream;	
Max. Resolution			1/2.8" CMOS						*The values above are the max. frame rates of each
PAM 25 MB									
Recolution			128 MB					Stream Capability	3 streams
Seaming System Propressive Discretic Shutter Speed Autry Manual 1/2 x - 1/100,000 n							Resolution		
Min. Illumination Cool Judge 1 6 (Colds 2 of 10									(352 × 288/352 × 240)
Min. Illumination 0.002 lose 1.6 (60x 6.0 RE) 0.000 lose 0.000 lo							Bit Rate Control	CBR/VBR	
SAN Ratio 256 dB BLC Ves	·		0.002 lux@F1.6 (Color, 30 IRE)						H.265: 12 kbps-6144 kbps
Humination Distance			0 lux (Illuminator on)						
Huminator On/Off Control Auto A			>56 dB						
Multical Number 3 (REED)	Illumination	Distance	Up to 50 m (164.04 ft) (IR)						
Angle Adjustment Para 0"—355" Tit: 0"—55" Rotation: 0"—355" Tit: 0"—55" Rotation: 0"—355" Tit: 0"—55" Rotation: 0"—355" Tit: 0"—55" Rotation: 0"—355" Lens Lens Type Fixed focal Lens Mount M12 Focal Length 2.8 mm; 3.6 mm; 6 mm Max. Aperture F1.6 Field of View 3.6 mm; 1.3 mil. 1	Illuminator C	On/Off Control	Auto				WDR		
Augic Adjustment Tilt 0"-65" Rotation: 0"-355" Lens Type Fixed-focal Lens Mount M12 Focal Length 2.8 mm; 3.6 mm; 6 mm Max. Aperture Field of View 3.6 mm; 18 mile; 45 to 1.05 mile; 54 to 29° to 1.24" 3.6 mm; 18 mile; 45 to 1.05 mile; 6 mile; 10 m	Illuminator N	Number					White Balance	· · · · · · · · · · · · · · · · · · ·	
Lens Type Fixed-focal Lens Mount M12 Focal Length 2.8 mm; 8.6 mm; 6 mm Max. Aperture F1.6 Field of View 3.6 mm; 18.83°; V.44°; D. 105° 6 mm; 15.54°; V.29°; D. 63° Iris Control Fixed Lens Detect Observe Recognize Identify (58.07°th) (28.87 th) (13.48 th) (13.87 th) (13.	Angle Adjust	ment	Tilt: 0°-65°				Gain Control	Auto;Manual	
Lens Mount M12 Smm; 3.6 mm; 6 mm Smart Illumination Yes (4 areas)	Lans		Rotation: U'-355				Noise Reduction	3D NR	
Region of interest (Rol) Ves. (4 areas)			Fixed-focal				Motion Detection	OFF/ON (4 areas, rectangular)	
Focal Length 2.8 mm; 3.6 mm; 6 mm Smart Illumination Ves							Region of Interest (RoI)	Yes (4 areas)	
Max. Aperture F1.6 Image Rotation 0"/90/1807/270" (Support 90"/270" with 1080p resolution and lower) Field of View 3.6 mm: H: 104"; V: 55"; D: 124" 3.6 mm: H: 88"; V: 44"; D: 105" 6 mm: H: 54"; V: 29"; D: 63" Privacy Masking 4 areas Liris Control Fixed Audio Audio Close Focus Distance 2.8 mm: 0.8 m (2.62 ft) 3.6 mm: 13 m (4.27 ft) 6 mm: 2.6 m (8.53 ft) Audio Compression G.711a; G.711Mu; PCM; G.726 Lens Detect Observe Recognize Identify 6 mm: 2.6 m (5.8.07 ft) (28.87 ft) (14.44 ft) (28.87 ft) (14.44 ft) (28.87 ft) (14.44 ft) (28.87 ft) (14.44 ft) (28.87 ft) (19.36 ft) Alarm No SD card; SD card full; SD card error; network disconnection; Pc conflict, lifegal access, motion detection; video lampering; rigower; intrusion; audio detection; violage detection; security exception Network DORI Distance 8.5.4 m (8.54 m) (112.20 ft) (56.10 ft) (28.22 ft) Network Port RL-45 (10/100 Base-T) *DORI (Detect, Observe, Recognize, Identify is a standard system (ENESST6-4) for defining the ability of a person viewing the video to this table do not reflect intelligent function distances. For intelligent function distances, refer to installation and commissioning manual/ project design tool. Network Port RL-45 (10/100 Base-T) STM and API <td< td=""><td></td><td>1</td><td colspan="3"></td><td></td><td>Smart Illumination</td><td>Yes</td></td<>		1					Smart Illumination	Yes	
Field of View 2.8 mm; H; 1.8 y; V; 44'; D; 105' 6 mm; H; 54'; V; 29'; D; 63' Close Focus Distance 2.8 mm; 0.8 m (2.62 ft) 3.6 mm; 1.3 m (4.27 ft) 6 mm; 2.5 m (8.53 ft) Close Focus Distance 2.8 mm; 0.8 m (2.62 ft) 3.6 mm; 1.3 m (4.27 ft) 6 mm; 2.5 m (8.53 ft) Lens							Image Rotation		
Iris Control Fixed Audio			·				Mirror	Yes	
Close Focus Distance 2.8 mm: 0.8 m (2.62 ft) 3.6 mm: 2.6 m (8.53 ft) Lens Detect Deserve Recognize Lens Detect Disarce 2.8 mm 44.1 m (144.69 ft) (58.07 ft) (28.87 ft) (14.44 ft) 3.6 mm: 13.8 m (4.4.1 m (193.24 ft) (193.24 ft) (77.43 ft) (38.71 ft) (193.6 ft) DORI Distance Built-in MIC Yes, built-in Mic Alarm Alarm Alarm No SD card; SD card full; SD card error; network disconnection; IP conflict; illegal access; motion detection; video tampering; tripwire; intrusion; audio detection; voltage	Field of View	<i>I</i>					Privacy Masking	4 areas	
Close Focus Distance 2.8 mm	Iris Control		Fixed	Fixed				Audio	
Lens Detect Observe Recognize Identify 2.8 mm	Class Farmel	Distance	· · ·				Built-in MIC	Yes, built-in Mic	
2.8 mm	Close Focus	Distance	, ,				Audio Compression	G.711a; G.711Mu; PCM; G.726	
2.8 mm (144.69 ft) (58.07 ft) (28.87 ft) (14.44 ft) 3.6 mm 58.9 m (193.24 ft) (77.43 ft) (38.71 ft) (19.36 ft) DORI Distance 6 mm 85.4 m (280.51 ft) (112.20 ft) (121.20 ft) (121.20 ft) (156.10 ft) (28.22 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, refer to installation and commissioning manual/ project design tool. Smart Event INS Tripwire; intrusion (144.69 ft) (28.87 ft) (14.44 ft) (19.44 ft) (19.36 ft)		Lens	Detect	Observe	Recognize	Identify		Alarm	
DORI Distance 6 mm 85.4 m (280.51 ft) (112.20 ft) (56.10 ft) (28.22 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. Smart Event Interoperability Ves Interoperability Network Port 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; Boujour; P2P Interoperability ONVIF (Profile S; Profile G; Profile T); CGI User/Host Video Video Compression H.265; H.264; H.264H; H.264B; MIPEG (Only supported by the sub stream) Network Port SDK and API Yes Network Protocol IPv4; IPv6; HTTP; TCP; UDP; ARP; RTP; RTSP; RTCP; RTMP; Multicast; ICMP; IGMP, NFS; PPPoE; Boujour; P2P Somart Event Interoperability ONVIF (Profile S; Profile G; Profile T); CGI User/Host Storage FTP; SFTP; Micro SD card (support max. 256 GB); NAS Video Compression H.265; H.264; H.264H; H.264B; MIPEG (Only supported by the sub stream)			(144.69 ft) 58.9 m	(58.07 ft) 23.6 m	(28.87 ft) 11.8 m	(14.44 ft) 5.9 m		Alarm Event	disconnection; IP conflict; illegal access; motion detection; video tampering; tripwire; intrusion; audio
Distance 6 mm (280.51 ft) (112.20 ft) (56.10 ft) (28.22 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, refer to installation and commissioning manual/ project design tool. Smart Event Interoperability ONVIF (Profile S; Profile G; Profile T); CGI	DORI							Network	
(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. Smart Event INEWORK 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; Boujour; P2P Interoperability ONVIF (Profile S; Profile G; Profile T); CGI User/Host 20 (Total bandwidth: 48 M) Video Video Compression H.265; H.264; H.264H; H.264B; MJPEG (Only supported by the sub stream) H.265; H.264; H.264H; H.264B; MJPEG (Only supported by the sub stream)	Distance		(280.51 ft)	(112.20 ft)	(56.10 ft)	(28.22 ft)		Network Port	RJ-45 (10/100 Base-T)
this table do not reflect intelligent function distances. For intelligent function distances, refer to installation and commissioning manual/ project design tool. Network Protocol Network Pr		(EN-62676-4)	76-4) for defining the ability of a person viewing the video to					SDK and API	Yes
IVS Tripwire; intrusion User/Host 20 (Total bandwidth: 48 M) Video Storage FTP; SFTP; Micro SD card (support max. 256 GB); NAS Video Compression H.265; H.264; H.264B; MJPEG (Only supported by the sub stream) Browser IE; Chrome; Firefox	this table do function dista		not reflect intelligent function distances. For intelligent nces, refer to installation and commissioning manual/					Network Protocol	
Video Storage FTP; SFTP; Micro SD card (support max. 256 GB); NAS Video Compression H.265; H.264; H.264B; MJPEG (Only supported by the sub stream) Browser IE; Chrome; Firefox	Smart Event							Interoperability	ONVIF (Profile S; Profile G; Profile T); CGI
Video Compression H.265; H.264; H.264B; MJPEG (Only supported by the sub stream) Browser IE; Chrome; Firefox	IVS		Tripwire; intrusion					User/Host	20 (Total bandwidth: 48 M)
by the sub stream) Browser IE; Chrome; Firefox	Video							Storage	FTP; SFTP; Micro SD card (support max. 256 GB); NAS
Smart Codec Smart H.265+; Smart H.264+ Management Software Smart PSS Lite; DSS; DMSS	Video Compression						Browser	IE; Chrome; Firefox	
	Smart Codec						Management Software	Smart PSS Lite; DSS; DMSS	

Mobile Client	iOS;Android	
Cyber Security	Configuration encryption;Trusted execution;Digest;Security logs;WSSE;Account lockout;syslog;Video encryption;802.1x;IP/MAC filtering;HTTPS;Trusted upgrade;Trusted boot;Firmware encryption;Generation and importing of X.509 certification	
Certification		
	CE IVD. ENGAGO 1	

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

Power

Power Supply	12 VDC/PoE
Power Consumption	Basic: 1.6 W (12 VDC); 2.4 W (PoE) Max. (H.265+ intelligence on + WDR + IR on): 4.6 W (12 VDC); 5.6 W (PoE)

Environment

Operating Temperature	-40 °C to +60 °C (-40 °F to +140 °F)		
Operating Humidity	≤95%		
Storage Temperature	-40 °C to +60°C (-40 °F to +140 °F)		
Storage Humidity	≤95%		
Protection	IP67; IK10		

Structure

Casing Material	Metal		
Product Dimensions	81.0 mm × Φ109.9 mm (3.19" × Φ4.33")		
Net Weight	0.34 kg (0.75 lb)		
Gross Weight	0.49 kg (1.08 lb)		

Ordering Information				
Туре	Model	Description		
2MP Camera	DH-IPC-HDBW4231E-S	2MP IR Fixed-focal Dome Network Camera		
	PFA136	Junction Box		
	PFB203W	Wall Mount Bracket		
	PFA109	Mount Adapter		
	PFB220C	Ceiling Mount Bracket		
	PFA152-E	Pole Mount Bracket		
Accessories	PFA150	Pole Mount Bracket		
(Optional)	DH-PFB305W	Corner Mount		
	DH-PFA151	Corner Mount		
	PFA200W	Rain Shade		
	PFM321D	12 VDC 1 A Power Adapter		
	PFM900-E	Integrated Mount Tester		
	TF-P100	MicroSD Memory Card		

Accessories

Optional:



PFA136 Junction Box



PFB203W Wall Mount Bracket



PFA109 Mount Adapter



PFB220C Ceiling Mount Bracket



PFA152-E Pole Mount Bracket



PFA150 Pole Mount Bracket



DH-PFB305W Corner Mount



DH-PFA151 Corner Mount



PFA200W Rain Shade



PFM321D 12 VDC 1 A Power Adapter



PFM900-E Integrated Mount Tester



TF-P100 MicroSD Memory Card

Γ		
Ceiling Mount	Junction Mount	Ceiling Mount
Wall Mount	Pole Mount(Vertical)	Pole Mount(Horizontal)
Corner Mount		

Dimensions (mm[inch])

