

DH-PSDW83242M-A360-D845L-S3

32 MP Multi-Sensor 360° Panoramic PTZ Hubble WizMind Network Camera



Xinghan WizMind

Launched by Dahua Technology, Dahua WizMind is a full portfolio of solutions composed of project-oriented products including IPC, IVSS, NVR, PTZ, XVR, Thermal and software platform which adopts industry-leading deep learning algorithms. Focusing on customer's requirements, WizMind provides precise, reliable and comprehensive AI solutions for verticals.

System Overview

The Channel 1 (Panoramic) + Channel 2 (PTZ) can splice up to a 360° horizontal view to give you a wider view. Working with high-speed PTZ, the camera can display the details. With advanced video analysis algorithm, the camera supports linkage between panorama and details, and situation analysis.

Functions

Panoramic Splicing

With advanced splicing algorithm, Dahua Panoramic Splicing technology deletes overlapped area and splices multiple images to be a complete panorama. The field of view of the spliced image can be up to 180°, which largely improves surveillance efficiency and user experience. Generally, after splicing, the field of view of eight-sensor camera can be 360°.

AR Panorama

Dahua AR panorama technology generates wide-field of view through panoramic merging and splicing. The software overlaps the cameras as tags in the image. Click the tag to display the corresponding camera video, which makes monitoring visual and convenient, and improves command efficiency.

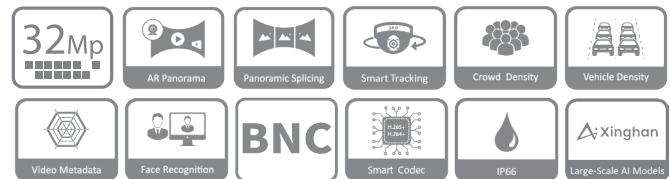
Crowd Density

Detects the number of people and the level of crowd density within an area. It adopts the Xinghan Large-Scale AI Model-Vision technology, enabling it to identify smaller pixels than standard devices and recognize people carrying umbrellas even in low-light conditions. This greatly improves the accuracy of crowd statistics at night and in rainy scenes.

Vehicle Density

With deep learning algorithm, Dahua Vehicle Density technology analyses the vehicle situation in the image, such as vehicle number in selected area. You can set threshold, and when the number is larger or

- Panoramic parameters: 8 × 4 MP 1/1.8" CMOS image sensors. Outputs max. 32 MP (11520 × 2700)@25/30 fps.
- PTZ parameters: 1 × 8 MP 1/1.8" CMOS image sensors. Outputs max. 8 MP (3840 × 2160)@25/30 fps.
- Channel 2 (PTZ): Built-in illuminators (2 × IR and 7 × laser), max. illumination distance: 500 m.
- Channel 2 (PTZ): 45x optical zoom, 16x digital zoom.
- H.265 codec, high compression rate, ultra-low bit rate.
- 3D NR, HLC, BLC, applicable to various monitoring scenes.
- ROI, SMART H.264+/H.265+, flexible coding, applicable to various bandwidth and storage environments.
- Alarm: 7 in, 3 out; audio: 2 in, 2 out; RS-485; BNC; supports max. 512 G SD card.
- Channel 1 (Panoramic): Three switchable intelligent resources: Perimeter protection, crowd map (Large-Scale AI Models), vehicle density.
- Channel 2 (PTZ): Three switchable intelligent resources: Perimeter protection, video metadata, face recognition.
- GPS/BDS positioning.



smaller than the threshold, it triggers linkage.

Face Recognition

Dahua Face Recognition technology extracts the features of captured faces and compares them with that in face database to recognize the person identity.

Video Metadata

With deep learning algorithm, Dahua Video Metadata technology can detect, track, capture vehicle, non-motor vehicle and people, and select the best images, and extract attributes.

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.

Smart Tracking

With advanced algorithm, Dahua network camera can detect targets, track targets with speed dome, and view details.

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.

Technical Specification	
Camera	
Image Sensor	1/1.8" CMOS
Max. Resolution	11520 (H) × 2700 (V)
ROM	Channel 1 (Panoramic): 8 GB Channel 2 (PTZ): 8 GB
RAM	Channel 1 (Panoramic): 4 GB Channel 2 (PTZ): 4 GB
Scanning System	Progressive
Electronic Shutter Speed	Channel 1 (Panoramic): Auto/Manual 1/3 s-1/100,000 s Channel 2 (PTZ): Auto/Manual 1/1 s-1/300,000 s
Min. Illumination	Channel 1 (Panoramic):0.001 lux @F1.0(Color, 30 IRE); 0.0001 lux@F1.0 (B/W, 30 IRE) Channel 2 (PTZ):0.001 lux @F1.5(Color, 30 IRE); 0.0001 lux @F1.5(B/W, 30 IRE); 0 lux (Illuminator on)
S/N Ratio	>56 dB
Illumination Distance	Channel 1 (Panoramic): NA Channel 2 (PTZ): Up to 500 m (1640.42 ft) (Laser)
Illuminator On/Off Control	Auto; Zoomprio; Manual
Illuminator Number	Channel 1 (Panoramic):NA Channel 2 (PTZ):7(LASER LED); 2(IR LED)
Lens	
Lens Type	Channel 1 (Panoramic): Fixed-focal Channel 2 (PTZ): Motorized vari-focal
Lens Mount	Channel 1 (Panoramic): M16 Channel 2 (PTZ): Module
Focal Length	Channel 1 (Panoramic): 2.8 mm Channel 2 (PTZ): 5.5 mm–248 mm
Max. Aperture	Channel 1 (Panoramic): F1.0 Channel 2 (PTZ): F1.5–F5.3
Field of View	Channel 1 (Panoramic): H: 360°; V: 105° Channel 2 (PTZ): H: 2.02°–64.4°; V: 1.14°–38.37°; D: 2.29°
Iris Control	Channel 1 (Panoramic): Fixed Channel 2 (PTZ): Auto
Close Focus Distance	Channel 1 (Panoramic):1.4 m (4.59 ft) Channel 2 (PTZ): 0.1 m–5 m (0.33 ft–16.4 ft) (T to W)

DORI Distance	Lens	Detect	Observe	Recognize	Identify
	Channel 1 (Panoramic)	57.9 m (189.96 ft)	23.2 m (76.11 ft)	11.6 m (38.06 ft)	5.8 m (19.03 ft)
	Channel 2 (PTZ)	4420 m (14501.31 ft)	1768 m (5800.52 ft)	884 m (2900.26 ft)	442 m (1450.13 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	
Intelligence Description	Channel 1 (Panoramic): Perimeter protection, crowd distribution map(Large-Scale AI Models), vehicle density. Channel 2 (PTZ): Perimeter protection, video metadata, face recognition
IVS (Perimeter Protection)	Channel 1 (Panoramic): Tripwire; intrusion; parking detection Channel 2 (PTZ): Tripwire, intrusion, fast moving (the three functions support the classification and accurate detection of vehicle and human); parking detection, loitering detection, and people gathering
Face Recognition	Face detection; track; snapshot; snapshot optimization; optimal face snapshot upload; face enhancement; face exposure; face attributes extraction including 6 attributes (gender, age, glasses, expressions, mask, and beard) and 8 expressions (angry, sad, disgusted, scared, surprised, calm, happy, confused); 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. Supports adding 5 group face databases; registering person one by one or in batches; setting face similarity; and supports face comparison with the face database containing up to 10,000 face pictures
Vehicle Density	Vehicle density; Parking upper limit; traffic congestion alarm
Crowd Distribution Map	Crowd map(Large-Scale AI Models), global crowd density; crowd density in area; people counting in area
Video Metadata	Motor vehicle, non-motor vehicle, face, human body detection; track; snapshot; snapshot optimization; optimal face snapshot upload. Motor vehicle attributes: license plate, vehicle type, vehicle color, vehicle logo and other attributes : seatbelt, smoking, calling. Non-motor vehicle attributes: type, color, number of people, top type and color, helmet. Human body attributes: gender, top/bottom type and color, bag, hat and umbrella. Face attributes: gender, age, expressions, glasses, face mask and beard
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 the sub stream)
Smart Codec	Smart H.265+; Smart H.264+
Video Frame Rate	Channel 1 (Panoramic): Main stream: 11520 × 2700@(1-25/30fps) Sub stream: 2048 × 680@(1-25/30fps) Third stream: 1920 × 1080@(1-25/30fps) Channel 2 (PTZ): Main stream: 3840 × 2160@(1-25/30fps) Sub stream: 704 × 576@(1-25/30fps) Third stream: 1920 × 1080@(1-25/30fps)
Stream Capability	3 streams

Resolution	Channel 1 (Panoramic): Main stream: 11520 × 2700; 8192 × 1800; 7680 × 1680; 5760 × 1264; 4096 × 900 Sub Stream: 2048×452 Third Stream: 3840 × 832; 2560 × 560 Channel 2 (PTZ): Main stream: 3840 × 2160; 2560 × 1440; 1920 × 1080; 1280 × 960; 1280 × 720 Sub Stream: 704 × 576; 352 × 288 Third Stream: 1920 × 1080; 1280 × 960; 1280 × 720
Bit Rate Control	CBR/VBR
Video Bit Rate	Channel 1 (Panoramic): H.264: 127 kbps–20736 kbps H.265: 50 kbps–12544 kbps Channel 2 (PTZ): H.264: 32 kbps–27740 kbps H.265: 12 kbps –16572 kbps
Day/Night	Auto(ICR)/Color/B/W
BLC	Yes
HLC	Yes
WDR	Channel 1 (Panoramic): DWDR Channel 2 (PTZ): 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)	Channel 1 (Panoramic): Yes (4 areas) Channel 2 (PTZ): Yes (8 areas)
Image Stabilization	Channel 1 (Panoramic): NA Channel 2 (PTZ): Optical Image Stabilization
Defog	Channel 1 (Panoramic): NA Channel 2 (PTZ): Optical defog
Image Rotation	0°/180° (Channel 2 (PTZ)
Image Correction	Channel 1 (Panoramic): No Channel 2 (PTZ): No
Privacy Masking	Channel 1 (Panoramic): 4 areas Channel 2 (PTZ): 24 areas (8 for each preset)

Audio

Audio Compression	PCM; G.711a; G.711Mu; G.726; G.723
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Alarm

Alarm Event	Channel 1 (Panoramic): External alarm; No SD card; SD card full; SD card error; network disconnection; IP conflict; illegal access; voltage detection; motion detection; video tampering; scene changing; audio detection; intensity change; tripwire; intrusion; parking detection; crowd density; traffic congestion; parking upper limit Channel 2 (PTZ): Tripwire; intrusion; parking detection; crossing virtual fence; fast moving; abandoned object; missing object; crowd gathering; loitering detection; face recognition; video metadata
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Network

Network Port	RJ-45(10/100/1000 Base-T)
SDK and API	Yes

Network Protocol	IPv4; IPv6; HTTP; HTTPS; TCP; UDP; ARP; RTP ; RTSP; RTCP; RTMP; SMTP; FTP; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP; Multicast; ICMP; IGMP; NFS; SAMBA; PPPoE; 802.1x; SNMP
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
Interoperability	ONVIF (Profile S/Profile G/Profile T); CGI
User/Host	20 (Total bandwidth: 400 M)
Storage	FTP; SFTP; NFS; SMB; Micro SD card (support max. 512 GB)
Browser	IE: IE 9, IE 10 and IE11 Chrome: Chrome 42 and earlier Firefox: Firefox 52 and earlier
Management Software	DSS

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
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PTZ Dome

Pan/Tilt Range	Pan: 0° to 360° endless Tilt: –11° to 90°, auto flip 180°
Manual Control Speed	Pan PTZ speed: 240°/s, Pan preset speed: 240°/s Tilt PTZ speed: 100°/s, Tilt preset speed: 100°/s
Positioning Accuracy	Pan: 0.05° Tilt: 0.05°
Remote PTZ Reset	Yes
Preset	300
Tour	8 (up to 32 presets per tour)
Pattern	5
Scan	5
Power-off Memory	Yes
Idle Motion	Preset/Pattern/Tour/Scan
Time Task	Yes
Three-dimensional Positioning	Yes
PTZ Limit	Yes
Position Display	Yes
Information Display	Yes
Time Display	Yes

Port

Optical Module Specification	SFP optical module, single mode, single fiber 20 KmTX-1310 nm/RX-1550 nm
Optical Fiber	FC
Optical Fiber Module Type	Gigabit SFP optical module, single mode, single fiber TX-1550 nm/RX-1310 nm
Audio Input	2 channels (terminal)
Audio Output	2 channels (terminal)
Alarm Input	7 channels in: 5mA 3V–5V DC

Alarm Output	3 channels out: 1,000mA 30V DC/500mA 50V AC
Analog Output	1 channel (CVBS output: BNC)
Power	
Power Supply	36 VDC
Power Consumption	Basic: 51.48 W (36 VDC) Max. (Basic power consumption + WDR + intelligence on + IR on + PTZ operation): 71.9 W (36 VDC) Heating: Channel 1 (Panoramic): 6 W (36 VDC); PTZ: 5.4 W

Environment	
Operating Temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Operating Humidity	≤95%
Storage Humidity	-40 °C to +70 °C (-40 °F to +158 °F)
Protection	IP66; Anti-Corrosion Protection (optional)
Anti-corrosion Level	Moderate Protection(-ATC model support) *The products feature high-grade anti-corrosion protection, making them well-suited for environments with standard corrosion resistance requirements. They perform reliably from 2 km (1.24 mi) and above in coastal areas and in locations prone to acid rain exposure.

Structure	
Casing Material	Metal + plastic
Product Dimensions	Φ383 mm × 462 mm (15.07" × Φ18.19")
Net Weight	14.7 kg (32.41 lb)
Gross Weight	19.8 kg (43.65 lb)

Ordering Information		
Type	Model	Description
Panoramic + Channel 2 (PTZ)	DH-PSDW83242M-A360-D845L-S3	32 MP Multi-Sensor 360° Panoramic PTZ Hubble WizMind Network Camera
	PSDW83242M-A360-D845L-S3	32 MP Multi-Sensor 360° Panoramic PTZ Hubble WizMind Network Camera
Accessories	36 VDC 5A Power Adapter	36 VDC 5A Power Adapter
	PBW059-00	Mount Adapter
	PFB710W-SG	Wall Mount Bracket
	PFB7320W-SG	Wall / Pole Mount Bracket
	PFB710C-SG	Ceiling Mount Bracket
	PFA153-SG	Pole Mount Bracket
	TF-P100	MicroSD Memory Card

Accessories

Included:



36 VDC 5A
Power Adapter



PBW059-00
Mount Adapter

Optional:



PFB710W-SG
Wall Mount
Bracket



PFB7320W-SG
Wall / Pole Mount
Bracket



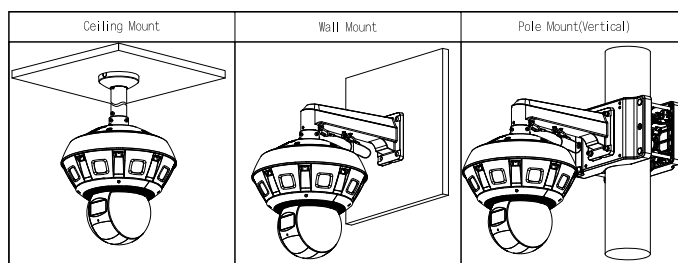
PFB710C-SG
Ceiling Mount
Bracket



PFA153-SG
Pole Mount
Bracket



TF-P100
MicroSD
Memory Card



Dimensions (mm[inch])

