

DH-PSDW82442M-A270-D440-S3

24 MP Multi-Sensor 270° Panoramic PTZ Hubble WizMind Network Camera



WizMind

Launched by Dahua Technology, Dahua WizMind is a full portfolio of solutions composed of project-oriented products including IPC, 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.

Series Overview

The Panoramic Network Camera + PTZ Camera can splice up to a 270° 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 360°, which largely improves surveillance efficiency and user experience. Generally, after splicing, the field of view of eight-sensor camera can be 360°.

Smart Tracking

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

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 and intrusion) are largely reduced.

Crowd Density

With deep learning algorithm, Dahua Crowd Density technology can detect the crowd density on the image, and display it on heat map; it can detect people quantity and density in selected area and set threshold. When the number or density is larger or smaller than the threshold, it triggers linkage.

- Channel 1 (Panoramic): 6 × 4 MP 1/1.8" CMOS image sensors. Field of View: Horizontal: 1 × 270°, Vertical: 103°.
- Channel 2 (PTZ): 1 × 4 MP 1/1.8" CMOS image sensors.
- Channel 2 (PTZ): 40x optical zoom, 16x digital zoom.
- Channel 2 (PTZ): Illumination distance up to 400 m.
- Channel 1 (Panoramic): Three switchable intelligent resources: Perimeter protection, Crowd map, Vehicle density.
- Channel 2 (PTZ): Three switchable intelligent resources: Perimeter protection, Video metadata, Face recognition.
- AR panorama technology; various AR tags can be overlaid.
- Smart tracking. GPS/BDS positioning.
- Smart H265+/H264+ encoding.
- WDR, 3D NR, HLC, BLC, applicable to various monitoring scenes.
- Alarm: 7 in, 3 out; audio: 2 in, 2 out; 1 channel BNC, 1 channel RS-485 (baud rate can be set). supports max. 512 G SD card.



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 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.

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.

Region of Interest (ROI)

Dahua Regions Of Interest (ROI) technology allows you to select the monitoring area of interest to improve image effect in the selected area.

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.

Scene

Applicable to various industries such as traffic, culture, education, health, public security and more

Technical Specification

Camera

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|----------------------------|---|
| Image Sensor | Channel 1 (Panoramic): 1/1.8" 4 Megapixel progressive CMOS Channel 2 (PTZ): 1/1.8" 4 Megapixel progressive CMOS |
| Pixel | Channel 1 (Panoramic): 24 MP Channel 2 (PTZ): 4 MP |
| Max. Resolution | Channel 1 (Panoramic): 8192 (H) × 2700 (V) Channel 2 (PTZ): 2560 (H) × 1440 (V) |
| ROM | Channel 1 (Panoramic): 8 GB Channel 2 (PTZ): 8 GB |
| RAM | Channel 1 (Panoramic): 4 GB Channel 2 (PTZ): 2 GB |
| Scanning System | Progressive |
| Electronic Shutter Speed | Auto/Manual 1/3 s–1/100,000 s |
| Min. Illumination | Channel 1 (Panoramic): 0.0005 lux@F1.0 (Color,30 IRE) 0.0001 lux@F1.0 (B/W,30 IRE) Channel 2 (PTZ): 0.001 lux@F1.4 (Color,30 IRE) 0.0005 lux @F1.4(B/W,30 IRE); 0 lux (Illuminator on) |
| S/N Ratio | >56 dB |
| Illumination Distance | Channel 1 (Panoramic): No Channel 2 (PTZ): Up to 400 m (1312.34 ft) |
| Illuminator On/Off Control | Auto; Manual; Zoomprio |
| Illuminator Number | Channel 1 (Panoramic): No Channel 2 (PTZ): 7 (IR LED) |
| Pan/Tilt/Rotation Range | Pan: 0° to 360° Tilt: -11° to 90° |
| Built-in Battery | Channel 1 (Panoramic): Horizontal welding/lithium battery/3 V Channel 2 (PTZ): Horizontal welding/lithium battery/3 V |

Lens

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|---------------|---|
| Lens Type | Channel 1 (Panoramic) : Fixed-focal Channel 2 (PTZ): 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–220 mm |
| Max. Aperture | Channel 1 (Panoramic) : F1.0 Channel 2 (PTZ): F1.4 |
| Field of View | Channel 1 (Panoramic): H: 270° V: 103° Channel 2 (PTZ): H: 2.2°–61.8° V: 1.3°–36.3° D: 2.4°–69.2° |

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|----------------------|---|---|------------------------|-----------------------|----------------------|
| Iris Control | | Channel 1 (Panoramic): No Channel 2 (PTZ): P-iris | | | |
| Close Focus Distance | | Channel 1 (Panoramic): 1.4 m (4.59 ft) Channel 2 (PTZ): 0.5 m–2 m (1.64 ft–6.56 ft) (T to) | | | |
| 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) | 3030 m (9940.94 ft) | 1204 m (3950.13 ft) | 606 m (1988.19 ft) | 303 m (994.10 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

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| IVS | Channel 1 (Panoramic): Yes Channel 2 (PTZ): Yes |
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Intelligence

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| Intelligence Description | Channel 1 (Panoramic): Perimeter protection, crowd map, 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; parking detection; crossing virtual fence, fast moving, abandoned object, missing object, crowd gathering, loitering detection |
| Face Recognition | Channel 1 (Panoramic): No Channel 2 (PTZ): 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) 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 | Channel 1 (Panoramic): Vehicle density; parking upper limit; traffic congestion alarm Channel 2 (PTZ): No |
| Crowd Distribution Map | Channel 1 (Panoramic): Crowd map, global crowd density; crowd density in area; people counting in area; Channel 2 (PTZ): No |
| Video Metadata | Channel 1 (Panoramic): NA Channel 2 (PTZ): Motor vehicle, non-motor vehicle, face, and human body detection; optimization; capturing pictures; uploading high-quality face snapshots Motor vehicle attributes: License plate, plate color, vehicle type, vehicle color, vehicle logo, vehicle model/year, sun visor, seatbelt, smoking, calling, ornament, and annual inspection sticker. Non-motor vehicle attributes: Type, vehicle color, number of people, top type and color, and hat. Human body attributes: Top and bottom type and color, bag, hat, gender, and umbrella. Face attributes: Gender, age, facial expressions, glasses, face mask, and mustache. |
| Smart Search | Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event videos |

Video

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| Video Compression | H.265; H.264; H.264H; H.264B; MJPEG (Only supported by the sub stream) |
| Smart Codec | Smart H.264+ Smart H.265+ |
| Video Frame Rate | Channel 1 (Panoramic) : Main stream: 8192×2700 @ (1–25/30 fps) sub stream: 2048×680 @ (1–25/30 fps) third stream: 3840×1248 @ (1–25/30 fps) Channel 2 (PTZ): Main stream: 2560×1440@ (1–25/30 fps) sub stream: 704×576@ (1–25/30 fps) third stream: 1920×1080@ (1–25/30 fps) |
| Stream Capability | 3 streams |
| Resolution | Channel 1 (Panoramic) : Main stream: 8192 × 2700; 7680 × 2520; 5760 × 1896; 4096 × 1360 sub stream: 2048 × 680; 1600 × 532; 1280 × 420 third stream: 3840 × 1248; 2560 × 840 Channel 2 (PTZ): Main stream: 2560 × 1440; 1920 × 1080; 1280 × 960; 1280 × 720 sub stream: 704 × 576; 640 × 480; 352 × 288 third stream: 1920 × 1080; 1280 × 960; 1280 × 720 |
| Bit Rate Control | CBR/VBR |
| Video Bit Rate | Channel 1 (Panoramic): H.264: 127 kb/s–32768 kb/s H.265: 50 kb/s–32768 kb/s Channel 2 (PTZ): H.264: 32 kb/s–15872 kb/s H.265: 12 kb/s–9472 kb/s |
| Day/Night | Channel 1 (Panoramic): No Channel 2 (PTZ): ICR |
| BLC | Yes |
| HLC | Yes |
| WDR | Channel 1 (Panoramic): 120 dB Channel 2 (PTZ): 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) |
| Default Bit Rate with Default Resolution | Channel 1 (Panoramic): 8192 kb/s (8192 × 2700) Channel 2 (PTZ): 6144 kb/s (2560 × 1440) |
| Region of Interest (RoI) | Channel 1 (Panoramic) : Yes (4 areas) Channel 2 (PTZ): Yes (8 areas) |
| Image Stabilization | Channel 1 (Panoramic): No Channel 2 (PTZ): No |
| Defog | Channel 1 (Panoramic): No Channel 2 (PTZ): Optical defog |
| Privacy Masking | Channel 1 (Panoramic) : 4 areas Channel 2 (PTZ): 24 areas (8 for each preset) |
| Image Correction | Channel 1 (Panoramic): No Channel 2 (PTZ): No |

Audio

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| Audio Compression | PCM; G.711a; G.711Mu; G.726; G.723, G.711a by default |
| Audio Sampling | 8 kHz; 16 kHz; 32 kHz; 48 kHz; 64 kHz |

Alarm

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| 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

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|---------------------|---|
| Network Port | RJ-45 (10/100/1000 Base-T) |
| SDK and API | Yes |
| 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 |
| 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; SAMBA; PPPoE; SNMP; P2P |
| Interoperability | ONVIF (Profile S/Profile G/ Profile T); CGI |
| User/Host | 20 (Total bandwidth: 400 M) |
| Storage | FTP; SFTP; Micro SD card (support max. 512 GB); NAS; SMB |
| Browser | IE: IE11 Chrome Firefox |
| Management Software | SmartPSS Lite; DSS |
| Mobile Client | NA |

PTZ

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| Pan/Tilt Range | Pan: 0° to 360° endless Tilt: –11° to 90°, auto flip 180° |
| Manual Control Speed | Pan: 240°/s Tilt: 100°/s" |
| Telephoto Speed Limit | Yes |
| Positioning Accuracy | Pan: 0.1° Tilt: 0.1° |
| Positioning Accuracy Automatic Calibration | Yes |
| Remote Lens Reset | Yes |
| 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 |
| 3D Positioning | Yes |

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| PTZ Limit | Yes |
| Position Display | Yes |
| Information Display | Yes |
| Time Display | Yes |
| PTZ Restart | Yes |

Certification

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| 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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Port

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|------------------------------|---|
| RS-485 | 1 (baud rate range:1200 bps–115200 bps) |
| 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

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| Operating Voltage | 36 VDC (±50%) |
| Power Supply | 36 VDC |
| Power Consumption | Basic: 59 W (36 VDC) Max. (Basic power consumption + WDR + intelligence on + IR on + PTZ operation): 99 W (36 VDC) |

Environment

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|-----------------------|--------------------------------------|
| Operating Temperature | –40 °C to +70 °C (–40 °F to +158 °F) |
| Operating Humidity | ≤95% |
| Storage Temperature | –40 °C to +70 °C (–40°F to +158°F) |
| Storage Humidity | ≤95% |
| Protection | IP66 |

Structure

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|----------------------|---|
| Casing | Metal + plastic |
| Product Dimensions | Φ383 mm × 462 mm (15.08" × Φ18.19") |
| Packaging Dimensions | 500 mm × 500 mm × 658 mm (19.69" × 19.69" × 25.91") (L × W × H) |
| Net Weight | 14.4 kg (31.75 lb) |
| Gross Weight | 20.3 kg (44.75 lb) |
| Installation | Wall mount; ceiling mount; pole mount |
| Power Adapter | Included |

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|--------------|---|
| Lens | Included |
| Power Output | 12 VDC power output, max. current 165 mA, peak current 700 mA |
| Others | |
| Calibration | Manual/Auto |

Ordering Information

| Type | Model | Description |
|-------------|----------------------------|---|
| 24MP Camera | DH-PSDW82442M-A270-D440-S3 | 24 MP Multi-Sensor 270° Panoramic PTZ Hubble WizMind Network Camera |
| | PSDW82442M-A270-D440-S3 | 24 MP Multi-Sensor 270° Panoramic PTZ Hubble WizMind Network Camera |
| Accessories | ADS-180EL-36-1 360180E | Power Adapter |
| | PBW059-00 | Mount Adapter |
| | PFB710C-SG | Ceiling Mount Bracket |
| | PFB710W-SG | Wall / Pole Mount Bracket |
| | PFB7320W-SG | Wall / Pole Mount Bracket |
| | PFA153-SG | Pole Mount Bracket |
| | TF-P100 | MicroSD Memory Card |

Accessories

Included:



ADS-180EL-36-1
360180E
Power Adapter



PBW059-00
Mount Adapter

Optional:



PFB710C-SG
Ceiling Mount
Bracket



PFB710W-SG
Wall/Pole Mount
Bracket



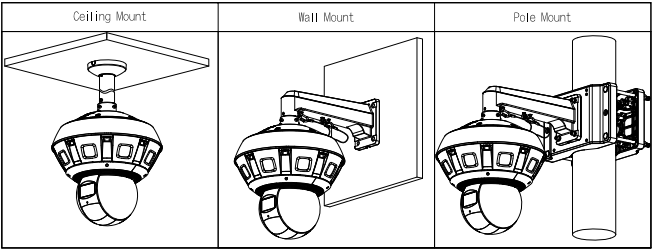
PFB7320W-SG
Wall / Pole Mount
Bracket



PFA153-SG
Pole Mount
Bracket



TF-P100
MicroSD
Memory Card



Dimensions (mm[inch])

