DH-PSDW81642M-A180-D440

4×4MP Multi-Sensor Panoramic + PTZ WizMind Network Camera

- Panoramic network camera: Four 1/1.8”4Megapixel progressive CMOS
  PTZ camera: One 1/1.8”4Megapixel progressive CMOS
- Support 180-degree panoramic view
- Starlight+ technology
- Support Smart H265+/H264+ encoding
- Day/Night (ICR); 3D NR; AWB; AGC; BLC
- IR distance up to 400 m
- Smart tracking
- Tripwire
- Intrusion
- Crowd map
- Vehicle density

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 180° 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 four-sensor camera can be 180°.

Smart Tracking

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

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.

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.

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.

ROI

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

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.

Cyber Security

Dahua network camera is equipped with a series of key security technologies, such as security authentication and authorization, access control, trusted protection, encrypted transmission, and encrypted storage, which improve its security defense and data protection, and prevent malicious programs from invading the device.

Technical Specification

Camera

Image Sensor	1/1.8"4Megapixel progressive CMOS
Max. Resolution	5520(H) × 2700 (V)
ROM	Panoramic network camera: 4 GB PTZ camera: 32 GB
RAM	Panoramic network camera: 8 GB PTZ camera: 4 GB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100,000 s
Min. Illumination	Panoramic network camera: 0.001 Lux (Color); 0.0002 Lux (B/W) PTZ camera: 0.001 Lux (Color); 0.0001 Lux (B/W); 0 Lux (IR on)
S/N Ratio	> 56 dB
Illumination Distance	PTZ camera: ≥ 400 m (1312 ft) (IR LED)
Illuminator On/Off Control	Auto/Manual/Zoomprio
Illuminator Number	7 (IR LED)
Pan/Tilt/Rotation Range	Pan: 0° to 355° Tilt: –12° to 90° Rotation: 0°–355°

Lens

Lens Type	Panoramic network camera: Fixed-focal PTZ camera: Vari-focal
Mount Type	Panoramic network camera: M12 PTZ camera: Module
Focal Length	Panoramic network camera: 2.8 mm PTZ camera: 5.5 mm–220 mm
Max. Aperture	Panoramic network camera: F1.6 PTZ camera: F1.35–F4.8
Field of View	Panoramic network camera: Horizontal: 180° Vertical: 111° PTZ camera: Horizontal: 2.27°–61.4° Vertical: 1.3°–35.99° Diagonal: 2.62°–68.18°
Iris Type	Panoramic network camera: Fixed PTZ camera: Auto
Close Focus Distance	Panoramic network camera: 1.4 m (4.6 ft) PTZ camera: 0.5 m–2 m (1.6 ft–6.6 ft)

	Lens	Detect	Observe	Recognize	Identify
DORI Distance	Panoramic network camera	57.9 m (190.0 ft)	23.2 m (76.1 ft)	11.6 m (38.1 ft)	5.8 m (19.0 ft)
	PTZ camera	2873.1 m (9426.2 ft)	1149.2 m (3770.3 ft)	574.6 m (1885.2 ft)	287.3 m (942.6 ft)

Professional, intelligent

IVS (Perimeter Protection)	Tripwire; intrusion
Crowd Distribution Map	Crowd map, global crowd density; crowd density in area; people counting in area; smart track for crowd density exception
Vehicle Density	Parking upper limit; traffic congestion alarm
Intelligent 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.264+ Smart H.265+
Video Frame Rate	Panoramic network camera: Main stream: 5520× 2700@1–25/30 fps Sub stream 1: 2048 × 680@1–25/30 fps Sub stream 2: 3840 × 1248@1–25/30 fps PTZ camera: Main stream: 2560 × 1440@1–25/30 fps Sub stream 1: 704 × 480@1–25/30 fps Sub stream 2: 1920 × 1080@–25/30 fps
Stream Capability	3 streams
Resolution	Panoramic network camera: Main stream: 5520 × 2700; 4600 × 2252; 3840× 1880; 2880 × 1408 Sub stream 1:1920 × 940; 1280 × 620; 1024 × 496 Sub stream 2:2560 × 1252; 1366 × 668 PTZ camera: Main stream: 2560 × 1400; 2048 × 1536; 1920 × 1080; 1280 × 960; 1280 × 720 Sub stream 1:704 × 576/704 × 480; 352 × 288/352 × 240 Sub stream 2:1920 × 1080; 1280 × 960; 1280 × 720
Bit Rate Control	CBR/VBR
Video Bit Rate	Panoramic network camera: H.264:96kbps ~ 42797kbps H.265:38kbps ~ 25889kbps PTZ camera: H.264:32kbps ~ 14848kbps H.265:12kbps ~ 8960kbps
Day/Night	Auto (ICR)/Color/B/W
BLC	Yes
HLC	Yes
WDR	Panoramic network camera: DWDR PTZ camera: 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)	Panoramic network camera: Yes (4 areas) PTZ camera: Yes (4 areas)
Electronic Image Stabilization (EIS)	Panoramic network camera: Not support PTZ camera: Yes
Smart Illumination	Yes
Defog	Panoramic network camera: NA PTZ camera: Optical defog
Flip	Panoramic network camera: NA PTZ camera: 180°
Privacy Masking	Panoramic network camera: 4 areas PTZ camera: 24 areas

Audio

Audio Compression	PCM;G.711A;G.711Mu;G.726;G.723

Alarm

Alarm Event	No SD card; SD card full; SD card error; SD card service life warning; network disconnection; IP conflict; illegal access; motion detection; video tampering; tripwire; intrusion; scene changing; audio detection; intensity change; voltage detection; external alarm; safety exception; crowd congestion; vehicle congestion; parking upper limit
Audio Sampling	8 KHz; 16 KHz; 32 KHz; 48 KHz; 64 KHz

Network

Network	RJ-45 (10/100/1000 Base-T)
SDK and API	Yes
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	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; Milestone;Genetec
User/Host	20 (Total bandwidth: 1000 M)
Storage	Micro SD card (support max. 256 G); FTP; SFTP; NFS; SMB
Browser	IE: IE9; IE10; IE11 Chrome: 42 and earlier Firefox: 52 and earlier
Management Software	NVR5X-I,EVS50&70,EVS71,NVD0905,M70,IVSS7X,DSS Pro,DSS Express,DSS-T9160,DSS-C9160,Smartplayer

PTZ Dome

Pan Range	Pan: 0° to 360° endless Tilt: –12° to 90°, auto flip 180
Manual Control Speed	Pan: 240°/s Tilt: 100°/s
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
Three-dimensional Positioning	Yes
PTZ Limit	Yes
Position Display	Yes
Information Display	Yes
Time Display	Yes

Certifications

Certifications	CE-LVD: EN62368-1 CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU FCC: 47 CFR FCC Part 15, Subpart B UL/CUL: UL60950-1 CAN/CSA C22.2 No.60950-1-07

Port

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 outputs, NBC port)
Optical Module Specification	SFP optical module, single mode, single fiber 20KmTX-1310nm/RX-1550nm
Optical Fiber	FC
Optical Fiber Module Type	Gigabit SFP optical module, single mode, single fiber TX-1550nm/RX-1310nm

Power

Power Supply	36V DC
Operating Voltage	36V DC (±50%)
Power Consumption	Basic power consumption: 33.7W (36V DC) Max. power consumption (Basic power consumption + WDR + intelligent functions enabled + IR on + PTZ operation): Panoramic network camera: 71.9W (36V DC); PTZ camera: 5.4W

Environmental

Operating Conditions	–40°C to +70°C (–40°F to +158°F)/Less than 95% RH
Storage Temperature	–40°C to +70°C (–40°F to +158°F)
Protection Grade	IP66; IK10 (optional)

Structure

Casing	Metal + plastic
Dimensions	Φ383 mm × 389.8 mm (Φ15.1" × 15.3")
Box Dimensions	500 mm × 500 mm × 658 mm (19.7" × 19.7" × 25.9") (L × W × H)
Net Weight	14.7 kg (32.4 lb)
Gross Weight	19.8 kg (43.7 lb)
Installation	Wall mount; ceiling mount; pole mount
Power Adapter	Standard
Lens	Standard
Power Output	12V DC power output, max. current 165mA

Others

Position	GPS/BDS
Calibration	Manual/Auto

Ordering Information

Type	Part Number	Description
16MP Camera	DH-PSDW81642M-A180-D440	4×4MP Multi-Sensor Panoramic + PTZ WizMind Network Camera, PAL/NTSC
Accessories (Optional)	PFB710C-SG	Ceiling Mounted
	PFB710W-SG	Wall Mounted
	PFA153-SG	Pole Mounted
	PBW059-00	Mount Adapter

Accessories

Included:

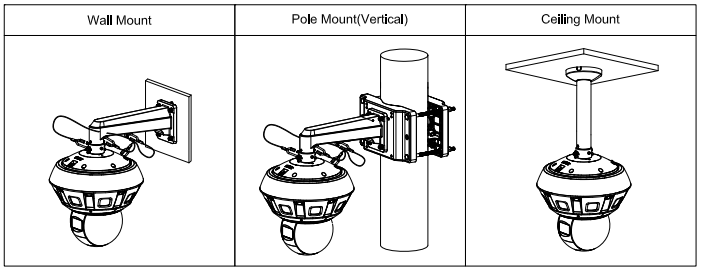
PBW059-00
Mount Adapter

Optional:

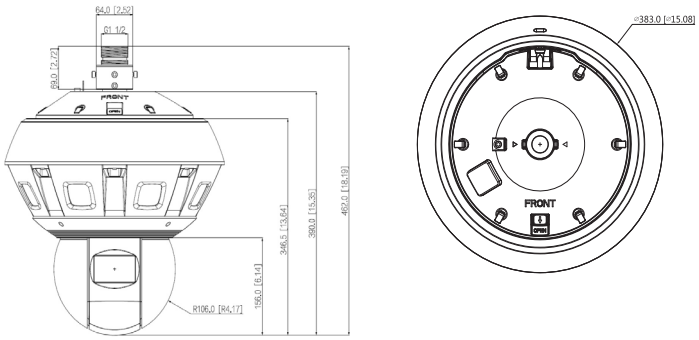
DH-PFA153-SG
Pole-mounted bracket

PFB710C-SG
Hang-mounted bracket

PFB710W-SG
Wall-mounted bracket



Dimensions (mm [inch])



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