dahua TECHNOLOGY

DH-PSDW8842S-A180-D425

8 MP Multi-Sensor 180° Panoramic PTZ Mini 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.

- Panoramic parameters: 4 × 2 MP 1/1.8" CMOS image sensors.
  PTZ parameters: 1 × 4 MP 1/1.8" CMOS image sensors.
- PTZ camera: 25× optical zoom,16× digital zoom.
- H.265 codec, high compression rate, ultra-low bit rate.
- WDR, 3D NR, HLC, BLC, applicable to various monitoring scenes.
- ROI, SMART H.264+/H.265+, flexible coding, applicable to various bandwidth and storage environments.
- Smart tracking.
- Built-in dual MICs, built-in speaker, support two-way talk.
- Intelligent Functions: Panoramic Network Camera: Perimeter Protection; PTZ Camera: Perimeter Protection, Face Detection and Video Metadata.

| 8Mp | Panoramic Splicing | Smart Tracking | Perimeter Protection | Distortion Correction | Face Detection | Video Metadata |
| WDR | IP67 | BNC |

System Overview

Mini Hubble Panoramic Network Camera brings together the power of the bullet camera and PTZ camera into one powerful design. This all-in-one camera harnesses the expanse of its panoramic view to track targets and detect details in the monitored scene. The bullet camera combines 4 sensors that work in tandem to realize 180° panoramic surveillance. It has a large aperture lens that leverages flowing light technology to detect targets even in poor lighting, and supports image correction and editing video recordings on the platform. The PTZ camera cooperates with the bullet camera to perform smart tracking and quickly detect details in the monitored scene. Advanced algorithms are integrated into the functions of the Bullet camera and PTZ camera, allowing them to perform detection and trigger a variety of alarms such as tripwire, intrusion, face detection and video metadata. The PTZ camera can also be set to automatically or manually track targets, allowing the all-in-one camera to meet the security needs of complex scenes.

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°.

Smart Tracking

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

Distortion Correction

With advanced distortion correction algorithm, Dahua Distortion Correction corrects the image distortion in both horizontal and vertical directions to be consistent with the actual situation.

Face Detection

Dahua Face Detection technology can detect the face in the image. With deep learning algorithm, the technology supports detecting, tracking, capturing and selecting the best face image, and then outputs face snapshot.

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.

Technical Specification

Camera

Image Sensor	Panoramic network camera: 1/1.8"CMOS PTZ camera: 1/1.8"CMOS
Max. Resolution	Panoramic network camera: 4096 × 1800 PTZ camera: 2560 × 1440
ROM	Panoramic network camera: 4 GB PTZ camera: 4 GB
RAM	Panoramic network camera: 4 GB PTZ camera: 1 GB
Scanning System	Progressive
Electronic Shutter Speed	Panoramic network camera: Auto/Manual 1/3 s-1/100,000 s PTZ Camera: Auto/Manual 1/1 s-1/300,000 s
Min. Illumination	Panoramic network camera:0.001 lux @F1.0(Color, 30 IRE); 0.0001 lux@F1.0(B/W, 30 IRE) PTZ camera:0.001 lux @F1.6(Color, 30 IRE); 0.0001 lux @ F1.6(B/W, 30 IRE); 0 lux (Illuminator on)
S/N Ratio	Panoramic network camera: 51 dB PTZ camera: 51.5 dB
Illumination Distance	Panoramic network camera: NA PTZ camera: ≥100 m (328.08 ft) (IR on)
Illuminator On/Off Control	Auto; Zoomprio; Manual
Illuminator Number	Panoramic network camera: NA PTZ camera: 4(IR LED)

Lens

Lens Type	Panoramic network camera: Fixed-focal PTZ camera: Motorized vari-focal
Lens Mount	Panoramic network camera: M16 PTZ camera: Module
Focal Length	Panoramic network camera: 2.8 mm PTZ camera: 5.3 mm–134 mm, optical zoom (25 times)
Max. Aperture	Panoramic network camera: F1.0 PTZ camera: F1.6–F4.0
Field of View	Panoramic network camera: H: 180°; V: 103° PTZ camera: H: 3.5°–58°; V: 2°–35°; D: 2°–64°
Iris Control	Panoramic network camera: Fixed PTZ camera: Auto
Close Focus Distance	Panoramic network camera:1.4 m (4.59 ft) PTZ camera: 0.5 m–7 m (1.64 ft–22.96 ft)

DORI Distance	Lens	Detect	Observe	Recognize	Identify
	Panoramic network camera	57.9 m (189.96 ft)	23.2 m (76.11 ft)	11.6 m (38.05 ft)	5.8 m (19.02 ft)
	PTZ camera	1688 m (5538.05 ft)	675 m (2214.56 ft)	337 m (1105.64 ft)	168 m (551.18 ft)

Intelligence

IVS (Perimeter Protection)	Panoramic network camera: Intrusion, tripwire PTZ camera: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 Detection	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.
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, seatbelt, smoking, calling,etc. 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, gender, 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; MJPEG (Only supported by the sub stream)
Smart Codec	Smart H.265+; Smart H.264+
Video Frame Rate	Panoramic network camera: Main stream: 4096 × 1800@(1-25/30fps) Sub stream: 1024 × 452@(1-25/30fps) Third stream: 1920 × 832@(1-25/30fps) PTZ camera: Main stream: 2688 × 1520@(1-25/30fps) Sub stream: 704 × 480@(1-25/30fps) Third stream: 1920 × 1080@(1-25/30fps)
Stream Capability	3 streams
Resolution	Panoramic network camera: Main stream: 4096 × 1800; 3840 × 1680; 2880 × 1264; 2048 × 900 Sub Stream: 1024 × 452 Third Stream: 1920 × 832; 1280 × 560 PTZ camera: Main stream: 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	Panoramic network camera: H.264: 3328 kbps–16640 kbps H.265: 1280 kbps–9984 kbps PTZ camera: H.264: 2816 kbps – 13056 kbps H.265: 1024 kbps –7936 kbps
Day/Night	Auto (ICR)/Color/B/W
BLC	Yes
HLC	Yes
WDR	Panoramic network camera: WDR (120 dB) PTZ camera: WDR (120 dB)
White Balance	Panoramic network camera: Auto; natural; street lamp; outdoor; manual; regional custom PTZ camera: Auto; indoor; outdoor; tracking; manual; sodium lamp; natural; street lamp
Gain Control	Auto; Manual
Noise Reduction	3D NR
Motion Detection	OFF/ON (4 areas, rectangular)
Region of Interest (RoI)	Yes (4 areas)
Image Stabilization	Panoramic network camera: NA PTZ camera: Electronic Image Stabilization (EIS)
Smart Illumination	Panoramic network camera:NA PTZ camera:Yes
Defog	Panoramic network camera: NA PTZ camera: Yes

Image Rotation	0°/180° (PTZ camera)
Privacy Masking	Panoramic network camera: 4 areas PTZ camera: 8 areas

Audio

Built-in MIC	Yes
Built-in Speaker	Yes
Audio Compression	PCM; G.711a; G.711Mu; G.726; G.723

Alarm

Alarm Event	No SD card; SD card full; SD card error; network disconnection; IP conflict; illegal access; motion detection; video tampering; tripwire; intrusion; parking detection; scene changing; audio detection; voltage detection; external alarm; video metadata; security exception

Network

Network Port	RJ-45(10/100/1000 Base-T)
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; SAMBA; PPPoE; 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; Milestone
User/Host	14 (Total bandwidth: 176 M)
Storage	Micro SD card (support max. 512GB); FTP; SFTP; NFS; SMB
Browser	IE: IE11 Chrome Firefox
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

PTZ Dome

Pan/Tilt Range	Pan: 0° to 360° endless Tilt: −10° to 90°, auto flip 180°
Manual Control Speed	Pan: 0.1°/s–120°/s Tilt: 0.1°/s–50°/s
Positioning Accuracy	Pan: 0.1° Tilt: 0.1°
Remote PTZ Reset	Yes
Preset	300
Tour	8 Tour (up to 32 preset 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

Audio Input	2 channels (terminal)
Audio Output	1 channel (terminal)
Alarm Input	3 channels in: 5 mA 3–5 VDC
Alarm Output	2 channels out: 1,000 mA 30 VDC/500 mA 50 VAC
Analog Output	1 channel (CVBS output: BNC)

Power

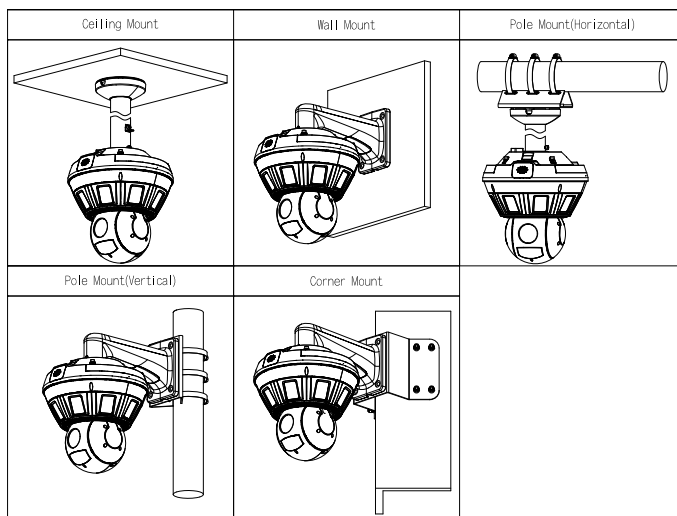|	
Power Supply	36 VDC
Power Consumption	Basic: 35 W (36 VDC) Max. (Basic power consumption + WDR + intelligence on + IR on + PTZ operation): 45 W (36 VDC)

Environment

Operating Temperature	−40 °C – +60 °C (−104 °F to +140 °F)
Operating Humidity	≤95%
Storage Temperature	−40°C to +70°C (−104°F to +158°F)
Protection	IP67

Structure

Casing Material	Metal + plastic
Product Dimensions	326 mm × Φ280 mm (12.83" × Φ11.02")
Packaging Dimensions	394 mm × 352 mm × 468 mm (15.51" × 13.86" × 18.43")
Net Weight	7 kg (15.43 lb)
Gross Weight	10.4 kg (22.93 lb)

Ordering Information

Type	Model	Description
Panoramic + PTZ camera	DH-PSDW8842S-A180-D425	8 MP Multi-Sensor 180° Panoramic PTZ Mini Hubble Wizmind Network Camera
	PSDW8842S-A180-D425	8 MP Multi-Sensor 180° Panoramic PTZ Mini Hubble Wizmind Network Camera
Accessories	36 VDC 5A Power Adapter	36 VDC 5A Power Adapter
	PFB303W-SG	Wall Mount Bracket
	PFB300C-S	Ceiling Mount Bracket
	PFA150-SG	Pole Mount Bracket
	PFA151	Corner Mount Bracket
	TF-P100	MicroSD Memory Card

Ceiling Mount / Wall Mount / Pole Mount(Horizontal) / Pole Mount(Vertical) / Corner Mount

Accessories

Included:

36 VDC 5A
Power Adapter

Optional:

PFB303W-SG
Wall Mount
Bracket

PFB300C-S
Ceiling Mount
Bracket

PFA150-SG
Pole Mount
Bracket

PFA151
Corner Mount
Bracket

TF-P100
MicroSD
Memory Card

Dimensions (mm[inch])

G1 1/2

⌀280.0 [⌀11.02]

296.8 [11.69]

326.8 [12.87]

⌀160.0 [⌀6.30]