

# DH-SD8A840PA-HNF-5G

8MP 40x 5G Starlight WizMind Network PTZ Camera



Wiz Mind

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

Embedded with an advanced AI chip, this series of cameras provides an all-in-one solution for video surveillance of large areas. Outranking conventional cameras with its extended monitoring range, it automatically tracks targets. It also produces vivid images whether day or night, using infrared technology. It is suitable for a wide variety of scenarios, such as advanced defense areas that require high levels of control. You can also have the camera custom-made with an anti-corrosion structure and IK10.

#### Functions

#### Protection (IP67, TVS 8000 V)

 $\mathsf{IP67},\mathsf{TVS}$  8000 V lightning proof, surge protection, and voltage transient protection.

#### Wide Dynamic Range

The camera produces vivid images, even in high-contrast lighting conditions, by using industry-leading wide dynamic range (WDR) technology. For scenes that quickly alternate between bright and low lighting, WDR adjusts to fully capture both the bright and dark areas of a scene, producing superior quality videos.

#### 5G

Equipped with built-in high-performance 5G mobile communication module, the network camera supports 5G network connection and two networking methods: Non-Standalone (NSA) and Standalone (SA). It is backward compatible with 4G connection (The module is different for band compatibility). It can be registered on the platform through wireless connection, and can transmit videos, pictures, intelligent feature information, and alarm events. Through the client, you can remotely monitor and operate in real time.

- 1/1.8" 8Megapixel STARVIS™ CMOS.
- 40× optical zoom.
- Starlight technology.
- Max. 25/30fps@4K.
- IR distance up to 500 m.
- Auto Tracking 3.0.
- Face recognition.
- IP67.
- 5G.



#### Smart H.265+

Smart H.265+ is the optimized implementation of the H.265 codec that uses a scene-adaptive encoding strategy, dynamic GOP, dynamic ROI, a flexible multi-frame reference structure and intelligent noise reduction to deliver high-quality videos without straining the network. Smart H.265+ technology outranks standard H.265 video compression, reducing bit rate and storage requirements by up to 70%.

#### IVS

With advanced video algorithm, Dahua IVS technology supports intelligent functions, such as tripwire and intrusion.

#### **Face Recognition**

Face attributes are extracted from captured faces, and stored in a database where they can be conveniently searched for and compared against other images. Once a successful match is found, the system outputs the result. The Dahua Face Recognition camera supports a built-in database that stores up to 10,000 face images, allowing the camera to capture and compare face images in real time.

#### Video Metadata

Metadata is information on the attributes of targets that is extracted during monitoring. It can be used for data retrieval. There are four kinds of metadata supported by Dahua PTZ WizMind cameras: Human face, human body, motor vehicle and non-motor vehicle. Face information includes gender, age, glasses, masks, beards, and more. Human body information includes hat, top, top color, bottom, bottom color, bag, and more. Motor vehicle information includes plate color, type, vehicle color, sun visor, ornament, calling, seatbelt, smoking, annual inspection sticker, and more. Non-motor vehicle information includes type, color, top type, top color, people number, and more.

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PriorityPriory	Technical Specification				Intelligence		
image SensorL.H.P. CAUSUnder SensorMark manage SensorMark may be any sensor senso							
NetNote:Net:N	Image Sensor	1/1.8" CMOS					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.
Aika ResolutionSimply > July > J	Pixel	8 MP				Video Metadata	
Tetering Stutiet SquareMarcal SquareMana Lodge due grant and bectom type and type a	Max. Resolution	3840 (H) × 2160 (V)					
ROMDEEventual Sector Se	Electronic Shutter Speed						
<form>RAM92Image: Participant Partic</form>	ROM						
Seaming System     Progressive     VS (Perimeter Protection)     decision, particular, signature, decision, particular, signature, decision, particular, signature, decision, particular, signature, signater, signature, signature, si	RAM	2G					
Min. IlluminationGran Output Size III and Index III and IIII and IIIII and IIIII and IIIII and IIIIII and IIIIIIIIII	Scanning System	Progressive				IVS (Perimeter Protection)	detection; abandoned/missing object; fast moving;
inturnation Distance ison into Gam Phose weights on the performance of the per	Min. Illumination	B/W: 0.0005 lux@F1.4					alarm classification; linkage tracking Supports face detection, optimization, tracking, capturing pictures, uploading high-quality face snapshots, and face enhancement; Supports attributes extraction. 6 attributes and 8 expressions: Gender,
Identities Only Off ControlScore Price Water we not the capture of the	Illumination Distance	500 m (1,640.42 ft) (IR)				Face Recognition	surprise, calm, happy and confused), mask, mustache;
Itiminator Number10 (Pi)Image: Pine Pine Pine Pine Pine Pine Pine Pine	Illuminator On/Off Control	Zoom Prio; Manual					strategies include real-time capturing, optimization,
Auto TrackingAuto TrackingVesLens $5 \text{ mm-22} \text{ mm}^2$ $4 \text{ Auto Tracking}$ $4 \text{ Auto Tracking}$ $3 \text{ Auto Tracking}$	Illuminator Number	10 (IR)					Supports up to 5 face databases; registers person one
Lens       Yideo         Focal Length       5.6m22 wideo       Video Compression       Stream)Smart H.265+H.264,MIPEGSub         Max. Aperture       11.4 - 4.5       Video Compression       Stream)Smart H.265+H.264,MIPEGSub         Fold of View       H: 63.9 - 2.1 / wideo       Stream)Smart H.265+H.264,MIPEGSub         Optical Zoom       40x       Video Compression       Stream)Smart H.265+H.264,MIPEGSub         Focus Ontrol       Auto: ymmul       Streaming Capability       Streaming Capability         Focus Ontrol       Auto: ymmul       Immul       Mini stream: KM/MUSB0/9600/1200 (200 × 300), 200 (1200 × 300, 200	Wiper	Smart wiper					
Focal LengthS.6 mm-223 mmMax. ApertureF1.4-F4.5Video Compression $L26414L-2644K.Smart H.2654H.M264AMPEG(SubStream),Smart H.26414L-264MField of ViewH: 63.9+-211; V: 37.3+-1.2; D: 71.2+-2.4+Video CompressionL26414L-264K.Smart H.2654H.M264AMPEG(SubStream),Smart H.2654H.M264AMPEG(SubOptical Zoom4:I: 2: - 2: - 2: - 1: - 2: - 2: - 1: - 2: - 2$	Lens					_	Yes
Nax. ApertureFL4-F4.5FUSE VESTEVideo CompressionStream), Smart H.264+H.264MField of View $H:63.9^{-2.17}, V: 37.3^{-1.27}, V: 71.2^{-2.44} HStreaming CapabilityStreaming CapabilityStreaming CapabilityOptical Zoom4^{-2.17}, V: 37.3^{-1.27}, V: 71.2^{-2.44} HStreaming CapabilityStreaming CapabilityStreaming CapabilityFocus Control4^{-2.17}, V: 37.3^{-1.27}, V: 71.2^{-2.44} HStreaming CapabilityStreaming CapabilityStreaming CapabilityFocus Control4^{-2.17}, V: 37.3^{-2.17}, V: 71.2^{-2.44} HStreaming CapabilityStreaming CapabilityStreaming CapabilityFocus Control4^{-2.17}, V: 37.3^{-2.17}, V: 71.2^{-2.44} HStreaming CapabilityStreaming CapabilityStreaming CapabilityCose Focus Distance5^{-2.17}, V: 71.2^{-2.44}Streaming CapabilityStreaming CapabilityStreaming CapabilityStreaming CapabilityDoRID Istance5^{-2.17}, V: 71.2^{-2.44}Streaming CapabilityStreaming CapabilityStreaming CapabilityStreaming CapabilityDORID Istance5^{-2.17}, V: 71.2^{-2.44}Streaming CapabilityStreaming CapabilityStreaming CapabilityStreaming CapabilityPTZ5^{-2.17}, V: 71.2^{-2.44}Streaming CapabilityStreaming CapabilityStreaming CapabilityStreaming CapabilityDollar Istance1, 738.080.0IdentifyIdentifyStreaming CapabilityStreaming CapabilityPTZ1, 738.080.0440.0IdentifyStreaming CapabilityStreaming Capability$	Focal Length	5.6 mm-223	mm			Video	
Optical Zoom40×Image: Test in the senantial of the senant	Max. Aperture	F1.4-F4.5				Video Compression	
Optical 200in         Aux         Second to a constraint of the second to a constrain	Field of View	H: 63.9°–2.1°; V: 37.3°–1.2°; D: 71.2°–2.4°				Streaming Capability	3 streams
Product Control       Auto; semi-uti/semi-set/semi-set/semi-set/semi-semi-semi-semi-semi-semi-semi-semi-	•		40×			Resolution	1080); 960p (1280 × 960); 720p (1280 × 720); D1 (704
Init ControlAuto; Mau:Sub stream 1: D1/C/F@ (1-2-5/30 fps) Sub stream 2: 1080/960/720@(1-25/30 fps)PTZParce </td <td></td> <td></td> <td colspan="3">Auto; semi-auto; manual</td> <td></td> <td>Main stream: 4K/4M/1080p/960p/720p @(1–25/30</td>			Auto; semi-auto; manual				Main stream: 4K/4M/1080p/960p/720p @(1–25/30
DORI Distance         Detect         Observe         Recognite         Iterative           4,400.0 m         1,738.0 m         880.0 m         4400.m         X265:256 kbps-9994 kbps           PTZ           Day/Night         Auto (ICR)/Color/B/W           Pan/Tilt Range         Pan: 0't 0' 360' endless Tilt: -30''s, auto flip: 5''         BLC         Veice           Manual Control Speed         Pan: 0't/s-240's Tilt: 0.0's-75''s         Fan: 0.0's-240's Tilt: 0.0's-75''s         Manual Control Speed         Veice         Veice           Preset Speed         00         Fan: 201/s-240's Tilt: 0.0's-75''s         Veice         Manual Control Speed         Nation (Infort; Manual; sodium lamp; atural light; strete lamp           Preset Speed         00         Same         Same         Manual Control Speed         Nation (Infort; Manual; sodium lamp; atural light; strete lamp           Pattern         300         Veice         Same         Noise Reduction         Nation (Infort; Manual; sodium lamp; atural light; strete lamp           Scan         Same         Same         Same         Perset Sean, Tour         Veice         Noise Reduction         Nation (Infort; Manual; Sodium Lamp; atural light; strete lamp           Ide Motion         Same         Same         Same         Samual; Samual; Same         Samual; Samual; Same						Video Frame Rate	Sub stream 1: D1/CIF@ (1–25/30 fps)
DRI Distance       440.00 m 1,738.0m 880.0m 440.0m (A435.57)       Video Bit Rate       L265: 122 kbps-16334 kbps (A555.56 kbps-9984 kbps (A		Detect	Observe	Recognize	Identify	Bit Rate Control	CBR/VBR
Pan/Tilk Range     Pan: 0° to 360° endless Tilt: -30° to 490°, auto flip 180°     BLC     Yes       Manual Control Speed     Pan: 0.1/s-2407/s Tilt: 0.1/s-757's     BLC     VDR     120dB       Preset Speed     Pan: 2207/s; Tilt: 1007/s     HLC     Yes       Preset Speed     300     Mite Balance     Auto; indoor; outdoor; ATW; manual; sodium lamp; natural light; street lamp       Preset     300     Gain Control     Auto; manual       Pattern     5     Scan     5     Noise Reduction       Power-off Memory     Yes     Defog     Optical Defog       Idle Motion     Pattern; Preset; Scan; Tour     Digital Zoom     16x       PTZ Protocol     Diff-SD     Mite seasangition     16x	DORI Distance	'	1,738.0 m	880.0 m	440.0 m	Video Bit Rate	
Pan/Tilt RangeTilt: -30° to +90°, auto flip 180°Kore (Construction)Manual Control SpeedPar: 0.1/s75'sKVR120dBPreset SpeedPar: 220'/s, Tilt: 100'/sHLCYesPreset Speed300White BalanceMuti; indoor; outdoor; ATW; manual; sodium lamp; natural light; street lampPreset300Gain ControlAto; manualPour\$1000000000000000000000000000000000000	PTZ					Day/Night	Auto (ICR)/Color/B/W
Nanual Control SpeedPan: 0.1%-240% Tilt: 0.1%-75%WDR120dBPreset SpeedPan: 220%; Tilt: 100%HLC%sPreset Speed300White BalanceMuto; indoor; outdoor; ATW; manual; sodium lamp; natural light; street lampPreset300Gain ControlAuto; manualPattern5Noise Reduction2D NR; 3D NRScan5DefogOptical DefogPower-off MemoryYesDefogOptical DefogIdle MotionPaten;Preset;Scan;TourDigital Zoom16%PTZ ProtocolDH-SD Defog (Justa menning)Image Rotation180°	Pan/Tilt Range			1008		BLC	Yes
Manual Control SpeedTitl: 0.1%s-75%HLCYesPreset SpeedPan: 220%; Titl: 100%White BalanceAuto; indoor; outdoor; ATW; manual; sodium lamp; natural light; street lampPreset300Gain ControlAuto; manualTour8 (up to 32 presets per tour)Gain ControlAuto; manualPattern5Noise Reduction20 NR; 3D NRScan5Patern, Preset; Scan; TourPatern, Preset; Scan; TourDefogIdle MotionPatern; Preset; Scan; TourDigital Zoom16×PTZ ProtocolDH-SD Discon DifferenceBane ProtocolBane Protocol	-					WDR	120dB
Preset300White BalanceAuto; motod); outdoor; Art v; manual; solution (and v); natural light; street lampFour8 (up to 32 presets per tour)Gain ControlAuto; manualPattern5Noise Reduction2D NR; 3D NRScan5Region of Interest (Rol)YesPower-off MemoryYesDefogOptical DefogIdle MotionPattern; Preset; Scan; TourDefog16×PTZ ProtocolDH-SD DefogDefog180°	Manual Control Speed					HLC	Yes
Four     Sup to 32 presets per tour)     Gain Control     Auto; manual       Pattern     5     Noise Reduction     2D NR; 3D NR       Scan     5     Region of Interest (Rol)     Ves       Power-off Memory     Yes     Defog     Optical Defog       Idle Motion     Pattern;Preset;Scan;Tour     Digital Zoom     16×       PTZ Protocol     DH-SD     Defog     180°	·					White Balance	
PatternSNoise Reduction2D NR; 3D NRScan5Region of Interest (Rol)YesPower-off MemoryYesDefogOptical DefogIdle MotionPattern;Preset;Scan;TourDigital Zoom16×PTZ ProtocolDH-SD DefogBene Motion180°	Preset					Gain Control	Auto; manual
Scan     5       Power-off Memory     Yes       Idle Motion     Pattern;Preset;Scan;Tour       DH-SD     DH-SD       DH-SD     Defent       DH-SD     Defent       DH-SD     Defent       DH-SD     Defent       DH-SD     Defent       DH-SD     Defent	Tour					Noise Reduction	2D NR; 3D NR
Scan     5       Power-off Memory     Yes       Idle Motion     Pattern;Preset;Scan;Tour       DH-SD     DH-SD       DH-SD     Defense       DH-SD     Defense       Defense     Defe	Pattern					Region of Interest (RoI)	Yes
Power-off Memory     Yes       Idle Motion     Pattern;Preset;Scan;Tour       DH-SD     Image Rotation       PTZ Protocol     Delos D() (Auto seconsition)						Defog	Optical Defog
Idle Motion     Pattern;Preset;Scan;Tour       DH-SD     Image Rotation       PTZ Protocol     Description	Power-off Memory					-	16×
PTZ Protocol Delso D/O (Auto recognition)	Idle Motion					-	180°
Privacy Masking Up to 24 areas can be set, with up to 8 areas in the	PTZ Protocol	DH-SD Pelco-P/D (Auto recognition)				-	Up to 24 areas can be set, with up to 8 areas in the

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S/N Ratio	≥55 dB	
Audio		
Audio Compression	G.711a; G.711Mu; G7221; G726; MP2L2; G729	
Network		
Network Port	RJ-45 (10/100 Base-T)	
4G	Yes	
Carrier Network System	4G;5G	
Wireless Carrier Frequency Band	5G NR: N1/2/3/5/7/8/25/38/40/41/48/66/77/78/79 LTE-TDD: Band 34/38/39/40/41/42/48 LTE-FDD: Band 1/2/3/4/5/7/19/25/30/32/66 UMTS: Band 1/2/3/4/5/8/19	
Network Protocol	TCP; FTP; RTMP; IPv6; IPv4; DNS; RTCP; PPPoE; NTP; RTP; 802.1x; HTTPS; SNMP; DDNS; UPnP; ICMP; UDP; IGMP; HTTP; DHCP; SMTP; SNMPv1/v2c/v3 (MIB-2); Qos; RTSP; ARP	
Interoperability	ONVIF (ProfileS&G&T); CGI; Dahua SDK	
Streaming Method	Unicast/Multicast	
User/Host	20 (total bandwidth: 64 M)	
Storage	FTP; Micro SD card (512 GB); NAS	
Browser	IE 9 and later versions Chrome 41 and later versions Firefox 50 and later versions iOS 10 and later versions	
Management Software	DMSS; DSS pro	
Mobile Client	iOS; Android	
Certification		
Certifications	CE: EN55032/EN55024/EN50130-4/EN55035/ EN61000-3-2/EN61000-3-3/EN62368-1 FCC: Part15 subpartB	
Port		
Analog Output	1 channel (CVBS output, BNC)	
RS-485	1 (baud rate: 1200 bps–9600 bps)	
Audio Input	1 channel (LINE IN, bare wire)	
Audio Output	1 channel (LINE OUT,bare wire)	
Alarm Linkage	Capture; preset; tour; pattern; recordings; alarm digital input; send email	
Alarm Event	Motion/Tampering detection; audio detection; network disconnection detection; IP conflict detection; memory card state detection; memory space detection	
Alarm I/O	7/2	
Audio I/O	1/1	
Power		
Power Supply	36 VDC/3 A±25%	
Power Consumption	Basic: 22 W Max.: 53 W (illuminator + PTZ + pulling stream in 5G)	
Environment		
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 temperature	-40 C t0 +70 C (-40 F t0 +158 F)
Storage Humidity	≤95%
Protection	IP67, TVS 8000 V lightning proof; surge protection; voltage transient protection
Structure	
Product Dimensions	415.9 mm × Φ262.0 mm (16.37" × Φ10.32")
Net Weight	8.5 kg (18.74 lb)
Gross Weight	13.3 kg (29.32 lb)

Ordering Information					
Туре	Model	Description			
8M WizMind PTZ Camera	DH-SD8A840PA-HNF-5G	8MP 40x 5G Starlight WizMind Network PTZ Camera			
	DC36V/2.23A	Power Adapter			
	PFB306W	Wall Mount Bracket			
	PFA118	Mount Adapter			
	PFB710C	Ceiling Mount Bracket			
Accessories	PFA150	Pole Mount Bracket			
	PFB301S-E	Plane Mount Bracket			
	PFA120	Junction Box			
	PFB301C	Ceiling Mount Bracket			
	PFA151	Corner Mount Bracket			

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### Accessories

### Included:



DC36V/2.23A Power Adapter

Optional:



PFA118 Mount Adapter



PFB301S-E Plane Mount Bracket



PFA151 Corner Mount Bracket



PFB306W Wall Mount Bracket



PFB710C Ceiling Mount Bracket



PFA120 Junction Box



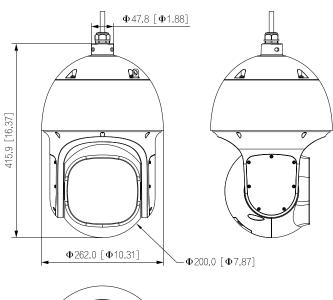
PFA150 Pole Mount Bracket

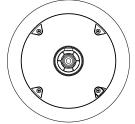


PFB301C Ceiling Mount Bracket

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Wall Mount	Ceiling Mount	Ceiling Mount
PFB306W+PFA120	PFA118+PFB710C	PFA118+PFB301C
<b>B</b>		Ö
Pole Mount(Vertical)	Corner Mount	Pole Mount(Horizontal)
PFB306W+PFA150	PFB306W+PFA151	PFA118+PFB301C+PFA150
Plane Mount		
PFA118+PFB301S-E		

### Dimensions (mm[inch])





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