DH-SD8A845QA-HNF

8MP 45x OIS IR Network PTZ Camera

WizMind

- 1/1.8" 8Megapixel STARVIS™ CMOS• 45× optical zoom, 16× digital zoom
- 45x optical zoom
- OIS
- IR distance up to 500 m
- Perimeter protection
- Auto-tracking
- Face recognition
- Metadata
- IP67
- Smart Wiper

| Face Recognition | Motor Vehicle Attributes | Non-motor Vehicle Attributes | Face Attributes | Perimeter Protection | 8Mp |

Series Overview

With CNN algorithm, Dahua WizMind speed dome supports intelligent functions like tripwire and intrusion; and supports video structuralization function that recognizes motor vehicle, non-motor vehicle, and human to analyze their detailed information (plate number, vehicle brand, age and gender, etc.). With PFA algorithm, the speed dome can get clear images all the time during zooming. In addition, silent motor driver integrated circuits enable the speed dome to make faint sounds during rotation.

Functions

Starlight Technology

For challenging low-light conditions, Dahua's Starlight Ultra-low Light Technology offers the best in light sensitivity, capturing color in vivid detail, even in lighting as low as 0.005 lux. The camera uses a set of optical features to balance light throughout the scene, producing clear images in dark environments.

Optical Image Stabilization (OIS)

With OIS, external jitter data can be obtained through the gyroscope to produce clear, high-quality images. The image stabilization algorithm drives the internal movable lens to accurately control the reverse movement of the lens in real time, changing the optical imaging route to offset the influence of external physical jitter. This eliminates image jitter, allowing the device to display clear images.

Perimeter Protection

Automatically filters out false alarms caused by animals, rustling leaves, bright lights, and more, and uses secondary recognition during target detection to improve alarm accuracy.

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, sunshield, ornament, calling, seatbelt, smoking, annual inspection sticker, and more. Non-motor vehicle information includes type, color, top type, top color, people number, and more.

Auto-tracking

This feature controls the pan, tilt and zoom actions of the camera to automatically track an object in motion, to keep it in view of the camera. Tracking can be triggered manually or automatically by defined rules. Once a rule is triggered, the camera can zoom in and track the defined target automatically.

Technical Specification

Camera

Image Sensor	1/1.8" CMOS
Pixel	8 MP
Max. Resolution	3840 (H) × 2160 (V)
ROM	8 GB
RAM	4 GB
Electronic Shutter Speed	1/1 s–1/30,000 s
Scanning System	Progressive
Min. Illumination	Color: 0.005 lux@F1.5 B/W: 0.0005 lux@F1.5 0 lux (IR light on)
Illumination Distance	500 m (1,640.42 ft) (IR)
Illuminator On/Off Control	Zoom Prio; Manual; Off
Illuminator Number	10 (IR)
Wiper	Smart Wiper

Lens

Focal Length	5.5 mm–248 mm			
Max. Aperture	F1.5–F5.3			
Field of View	H: 64.4°–2.0°; V: 38.4°–1.1°; D: 69.6°–2.3°			
Optical Zoom	45x			
Focus Control	Auto; semi-auto; manual			
Close Focus Distance	0.1 m–5 m (0.33 ft–16.40 ft)			
Iris Control	Auto			
DORI Distance	Detect	Observe	Recognize	Identify
	4,420 m (14,501.31 ft)	1,768 m (5,800.52 ft)	884 m (2,900.26 ft)	442 m (1,450.13 ft)

PTZ

Pan/Tilt Range	Pan: 0° to 360° endless Tilt: −30° to +90°, auto flip 180°
Manual Control Speed	Pan: 0°/s–240°/s Tilt: 0°/s–100°/s
Preset Speed	Pan: 90°/s; Tilt: 60°/s
Preset	300
Tour	8 (up to 32 preset per tour)
Pattern	5
Scan	5
Power-off Memory	Yes
Idle Motion	Preset; Pattern; Tour; Scan
PTZ Protocol	DH-SD Pelco-P/D (auto recognition)

Intelligence

Video Metadata	Support human body, human face, motor vehicle and non-motor vehicle image capture and attributes extraction.
IVS (Perimeter Protection)	Tripwire; intrusion; climbing fences; loitering detection; abandoned/missing object; fast moving; parking detection; people gathering; vehicle/human alarm classification
Face Recognition	Yes
Auto Tracking	Yes

Video

Video Compression	Smart H.265+; H.265; Smart H.264+; H.264M; H.264H; MJPEG (Sub Stream 1)
Streaming Capability	3 Streams
Resolution	4K (3840 × 2160); 4M (2560 × 1440); 1080p (1920 × 1080); 1.3M (1280 × 960); 720p (1280 × 720); D1 (704 × 576); VGA (640 × 480); CIF (352 × 288)
Video Frame Rate	50 Hz: Main stream: 3840 × 2160@25 fps/2560 × 1440@25 fps/1920 × 1080@25 fps/1280 × 960@25 fps/1280 × 720@25 fps Sub stream: 704 × 576@25 fps/640 × 480@25 fps/352 × 288@25 fps Third stream: 1920 × 1080@25 fps/1280 × 960@25 fps/1280 × 720@25 fps 60 Hz: Main stream: 3840 × 2160@30 fps/2560 × 1440@30 fps/1920 × 1080@30 fps/1280 × 960@30 fps/1280 × 720@30 fps Sub stream: 704 × 480@30 fps/640 × 480@30 fps/352 × 240@30 fps Third stream: 1920 × 1080@30 fps/1280 × 960@30 fps/1280 × 720@30 fps
Bit Rate Control	CBR; VBR
Video Bit Rate	H.264: 3328 kbps–16384 kbps H.265: 1280 kbps–9984 kbps
Day/Night	Auto (ICR); Color; B/W
BLC	Yes
WDR	Yes
HLC	Yes
White Balance	Auto; indoor; outdoor; tracking; manual; sodium lamp; natural light; street lamp
Gain Control	Auto; Manual
Noise Reduction	2D NR; 3D NR
Motion Detection	Yes
Region of Interest (RoI)	Yes
Image Stabilization	Optical
Defog	Optical
Digital Zoom	16x
Image Rotation	180°
Privacy Masking	Up to 24 areas can be set, with up to 8 areas in the same view
S/N Ratio	≥55 dB

Audio

Audio Compression	G.711a; G.711Mu; G726; MPEG2-Layer2; G722.1; G729

Network

Network Port	RJ-45 (100/1000 Base-T)
Network Protocol	HTTP; HTTPS; TCP/IP; IPv4; RTSP; UDP; SMTP; NTP; DHCP; DNS; DDNS; IPv6; 802.1x; SSL; QoS; FTP; UPnP; ICMP; SNMP; SNMP v1/v2c/v3 (MIB-2); IGMP; ARP; RTCP; RTP; PPPoE; IP Filter; RTMP; Bonjour; TCP; SMB; NFS
Interoperability	ONVIF (Profile S&G&T); CGI; Dahua SDK; API
User/Host	20 (Total bandwidth: 64 M)
Storage	FTP; Micro SD card (512 GB)
Browser	IE 7 and later versions Chrome 45 and later versions Firefox 52ESR and earlier versions
Mobile Client	iOS; Android; iPhone; iPad; Windows Phone

Port

Analog Output	1 channel (CVBS output, BNC)
RS-485	1 (baud rate: 1200 bps–9600 bps)
Audio Input	1 channel
Audio Output	1 channel
Alarm I/O	7/2
Audio I/O	1/1
Alarm Linkage	Capture; preset; tour; pattern; recordings on SD card; digital output; send email
Alarm Event	Motion/tampering detection; audio detection; disk full; disk fault; external alarm; security alarm; smart event; scene change

Power

Power Supply	36 VDC, 2.23 A (±25%) (included) Hi-PoE
Power Consumption	Basic: 21 W Max.: 45 W (IR + PTZ + wiper)

Environment

Operating Temperature	−40°C to +70°C (−40°F to +158°F)
Operating Humidity	≤95%
Protection	IP67; TVS 6000 V lightning proof; surge protection; voltage transient protection

Structure

Casing	ADC12
Product Dimensions	415.6 mm × Φ262 mm (16.36" × Φ10.31")
Net Weight	10 kg (22.05 lb)
Gross Weight	12 kg (26.46 lb)

Ordering Information

Type	Part Number	Description
8M WizMind PTZ Camera	DH-SD8A845QA-HNF	8MP 45x OIS IR Network PTZ Camera
	SD8A845QA-HNF	8MP 45x OIS IR Network PTZ Camera
Accessories	DC36V/2.23A	Power Adapter
	PFA118	Mount Adapter
	PFB306W	Wall Mount Bracket
	PFB710C	Ceiling Mount Bracket
	PFA150	Pole Mount Bracket
	PFB301C	Ceiling Mount Bracket
	PFA151	Corner Mount Bracket

Accessories

Included:

DC36V/2.23A
Power Adapter

PFA118
Mount Adapter

PFB306W
Wall Mount
Bracket

Optional:

PFB710C
Ceiling Mount
Bracket

PFA150
Pole Mount
Bracket

PFB301C
Ceiling Mount
Bracket

PFA151
Corner Mount
Bracket

Wall Mount	Ceiling Mount 1	Ceiling Mount 2
PFB306W	PFA118+PFB710C	PFA118+PFB301C
Pole Mount(Vertical)	Corner Mount	Pole Mount(Horizontal)
PFB306W+PFA150	PFB306W+PFA151	PFA118+PFB301C+PFA150

Dimensions (mm[inch])

Φ47.8 [Φ1.88]

415.9 [16.37]

Φ262.0 [Φ10.31]

Φ200.0 [Φ7.87]