

# DH-SD8C845FG-HNF

8MP 45x WizMind 1/1.2" CMOS Network PTZ Camera



**WizMind**

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.

## Series 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.

## Scene

For challenging low-light conditions, Dahua's Starlight Ultra-low Light Technology makes the camera highly sensitive, 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.

## Functions

### Face Recognition

Once facial attributes are extracted from captured faces, they are stored in a database where they can be easily searched 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 facial images, helping the camera achieve real-time face capturing and comparison.

- 1/1.2" 8Megapixel STARVIS CMOS.
- 45x optical zoom.
- Ultra light sensitivity.
- Max. 25/30 fps@4K.
- Auto-tracking.
- Perimeter protection.
- Face detection.
- Face recognition.
- Metadata.
- SMD Plus.
- IP67.
- Dual light fusion.
- Electronic defog.
- Wiper.



### Perimeter Protection

Automatically filters false alarms caused by animals, rustling leaves, bright lights, etc, and enables system to act secondary recognition for the targets, which improve alarm accuracy.

### Auto-tracking

This feature controls the pan/tilt/zoom actions of the camera to automatically track an object in motion and to keep it in the scene. The tracking action 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.

### Smart H.265+ & Smart H.264+

With advanced scene-adaptive rate control algorithm, Dahua smart encoding technology realizes the higher encoding efficiency than H.265 and H.264, provides high-quality video, and reduces the cost of storage and transmission.

## Technical Specification

### Camera

|                            |                                                                          |
|----------------------------|--------------------------------------------------------------------------|
| Image Sensor               | 1/1.2" 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: 0.0005 lux@F1.5<br>B/W: 0.0001 lux@F1.5<br>0 lux (Illuminator On) |
| Illumination Distance      | 80 m (262.47 ft) (Only White Light)<br>250 m (820.21 ft) (Only IR)       |
| Illuminator On/Off Control | Zoom Prio; Manual; Smart IR; Off                                         |
| Illuminator Number         | 10 (Dual light fusion)                                                   |
| Wiper                      | Yes                                                                      |

### Lens

|                      |                                             |                          |                         |                         |
|----------------------|---------------------------------------------|--------------------------|-------------------------|-------------------------|
| Focal Length         | 8 mm–360 mm                                 |                          |                         |                         |
| Max. Aperture        | F1.5–F5.7                                   |                          |                         |                         |
| Field of View        | H: 61.5°–2.1°; V: 36.7°–1.3°; D: 67.9°–2.7° |                          |                         |                         |
| Optical Zoom         | 45×                                         |                          |                         |                         |
| Focus Control        | Auto; semi-auto; manual                     |                          |                         |                         |
| Close Focus Distance | 0.5 m–5 m (1.64 ft–16.40 ft)                |                          |                         |                         |
| Iris Control         | Auto; manual; fixed                         |                          |                         |                         |
| DORI Distance        | Detect                                      | Observe                  | Recognize               | Identify                |
|                      | 4115.9 m<br>(13503.61 ft)                   | 1646.3 m<br>(5401.25 ft) | 823.2 m<br>(2700.79 ft) | 411.6 m<br>(1350.39 ft) |

### PTZ

|                      |                                                         |
|----------------------|---------------------------------------------------------|
| Pan/Tilt Range       | Pan: 0° to 360° endless<br>Tilt: –20° to +90° auto flip |
| Manual Control Speed | Pan: 0.1°/s–240°/s<br>Tilt: 0.1°/s–100°/s               |
| Preset Speed         | Pan: 240°/s;<br>Tilt: 100°/s                            |
| Preset               | 300                                                     |
| Tour                 | 8 (up to 32 presets per tour)                           |
| Pattern              | 5                                                       |
| Scan                 | 5                                                       |
| Power-off Memory     | Yes                                                     |
| Idle Motion          | Pattern; Preset; Scan; Tour                             |
| PTZ Protocol         | DH-SD<br>Pelco-P/D (Auto recognition)                   |

## Intelligence

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Video Metadata             | Motor vehicle, non-motor vehicle, face, and human body detection; tracking; optimization; capturing pictures; uploading high-quality face snapshots.<br>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.<br>Non-motor vehicle attributes: Type, vehicle color, number of people, top type and color, and hat.<br>Human body attributes: Top and bottom type and color, bag, hat, gender, and umbrella.<br>Face attributes: Gender, age, facial expressions, glasses, face mask, and mustache. |
| IVS (Perimeter Protection) | Tripwire; intrusion; climbing fences; loitering detection; abandoned/missing object; fast moving; parking detection; people gathering; vehicle/human alarm classification; linkage tracking                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Auto Tracking              | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SMD                        | SMD Plus                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

## Video

|                          |                                                                                                                                                                     |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Video Compression        | H.264H; H.264B; Smart H.265+; H.264; H.265; MJPEG(Sub Stream); Smart H.264+                                                                                         |
| Streaming Capability     | 3 streams                                                                                                                                                           |
| Resolution               | 4K (3840 × 2160); 4M (2560 × 1440); 1080p (1920 × 1080); 960p (1280 × 960); 720p (1280 × 720); D1 (704 × 576/704 × 480); VGA (640 × 480); CIF (352 × 288/352 × 240) |
| Video Frame Rate         | Main stream : 4K/4M/1080p/1.3M/720p(1-25/30 fps)<br>Sub stream 1: D1/VGA/CIF(1-25/30 fps)<br>Sub stream 2: 1080p/1.3M/720p(1-25/30 fps)                             |
| Bit Rate Control         | CBR/VBR                                                                                                                                                             |
| Video Bit Rate           | H.264: 768 kbps–16384 kbps<br>H.265: 256 kbps–10240 kbps                                                                                                            |
| Day/Night                | Auto (ICR)/Color/B/W                                                                                                                                                |
| BLC                      | Yes                                                                                                                                                                 |
| WDR                      | Yes                                                                                                                                                                 |
| HLC                      | Yes                                                                                                                                                                 |
| White Balance            | Auto; indoor; outdoor; ATW; 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      | Electronic (EIS)                                                                                                                                                    |
| Defog                    | Electronic                                                                                                                                                          |
| Digital Zoom             | 16×                                                                                                                                                                 |
| Image Rotation           | 180°                                                                                                                                                                |
| Privacy Masking          | Up to 24 areas can be set with 8 areas in the same view; supports various colors for privacy masking                                                                |
| S/N Ratio                | ≥ 55 dB                                                                                                                                                             |

## Audio

|                        |                                                                                                                                                                  |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Audio Compression      | G.711A; G.711Mu; G.726; MPEG2-Layer2; G722.1; G729; PCM                                                                                                          |
| <b>Network</b>         |                                                                                                                                                                  |
| Network Port           | RJ-45 (10/100 Base-T)                                                                                                                                            |
| Carrier Network System | Yes                                                                                                                                                              |
| Network Protocol       | FTP; RTMP; IPv6; Bonjour; IPv4; DNS; RTCP; PPPoE; NTP; RTP; 802.1x; HTTPS; SNMP; TCP/IP; DDNS; UPnP; NFS; ICMP; UDP; IGMP; HTTP; SSL; DHCP; SMTP; Qos; RTSP; ARP |
| Interoperability       | CGI; 35114A; ONVIF (Profile S&G&T)                                                                                                                               |
| Streaming Method       | Unicast/Multicast                                                                                                                                                |
| User/Host              | 20 (total bandwidth: 64 M)                                                                                                                                       |
| Storage                | NAS; FTP; Micro SD card (512 GB)                                                                                                                                 |
| Browser                | IE 9 and later versions<br>Chrome 41 and later versions<br>Firefox 50 and later versions<br>Safari 10 and later versions                                         |
| Management Software    | DSS; Smart Player; ConfigTool; NVR; Smart PSS; IVSS                                                                                                              |
| Mobile Client          | iOS; Android                                                                                                                                                     |

## Port

|               |                                                                                                                                                                                     |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Analog Output | 1 channel (CVBS output, BNC)                                                                                                                                                        |
| RS-485        | 1 (Baud rate: 1200 bps~115200 bps)                                                                                                                                                  |
| Audio Input   | 1 channel (LINE IN, bare wire)                                                                                                                                                      |
| Audio Output  | 1 channel (LINE OUT, bare wire)                                                                                                                                                     |
| Alarm Linkage | Capture; record; send email; preset; tour; pattern; alarm digital input                                                                                                             |
| Alarm Event   | Motion/Tampering detection; audio detection; network disconnection detection; IP conflict detection; memory card state detection; memory space detection; power exception detection |
| Alarm I/O     | 7/2                                                                                                                                                                                 |
| Audio I/O     | 1/1                                                                                                                                                                                 |

## Power

|                   |                                                                                    |
|-------------------|------------------------------------------------------------------------------------|
| Power Supply      | 36 VDC/2.23 A $\pm$ 25%<br>PoE (802.3bt) Only supports standard 802.3bt PoE Switch |
| Power Consumption | Basic: 18 W<br>Max.: 33 W (Illuminator On, PTZ)                                    |

## Environment

|                       |                                                                                  |
|-----------------------|----------------------------------------------------------------------------------|
| Operating Temperature | -40 °C to +70 °C (-40 °F to +158 °F)                                             |
| Operating Humidity    | $\leq$ 95%                                                                       |
| Protection            | IP67, TVS 8000 V lightning proof; surge protection; voltage transient protection |

## Structure

|                    |                                                               |
|--------------------|---------------------------------------------------------------|
| Product Dimensions | 442 mm $\times$ $\Phi$ 262 mm (17.40" $\times$ $\Phi$ 10.32") |
| Net Weight         | 9.6 kg (21.64 lb)                                             |
| Gross Weight       | 12.5 kg (27.56 lb)                                            |

## Ordering Information

| Type                          | Model                | Description                                    |
|-------------------------------|----------------------|------------------------------------------------|
| <b>8MP WizMind PTZ Camera</b> | DH-SD8C845FG-HNF     | 8MP 45x WizMind 1/1.2" CMOS Network PTZ Camera |
|                               | SD8C845FG-HNF        | 8MP 45x WizMind 1/1.2" CMOS Network PTZ Camera |
| <b>Accessories</b>            | DC36V/2.23A          | Power Adapter[Included]                        |
|                               | PFB306W-S            | Wall Mount Bracket[Included]                   |
|                               | PFB718C-SG           | Ceiling Mount Bracket[Optional]                |
|                               | PFB711C-SG           | Ceiling Mount Bracket[Optional]                |
|                               | PFA5500 + PFB306W-S  | Vertical Pole Mount Bracket[Optional]          |
|                               | PFA5500 + PFB718C-SG | Horizontal Pole Mount Bracket[Optional]        |
|                               | PFA151 + PFB306W-S   | Corner Mount Bracket                           |

## Accessories

### Included:



DC36V/2.23A  
Power Adapter



PFB306W-S  
Wall Mount Bracket

### Optional:



PFB718C-SG  
Ceiling Mount Bracket



PFB711C-SG  
Ceiling Mount Bracket



PFA5500 + PFB306W-S  
Vertical Pole Mount Bracket



PFA5500 + PFB718C-SG  
Horizontal Pole Mount Bracket



PFA151 + PFB306W-S  
Corner Mount Bracket

| Wall Mount<br>PFB306W-S | Ceiling Mount<br>PFB718C-SG | Ceiling Mount<br>PFB711C-SG |
|-------------------------|-----------------------------|-----------------------------|
|                         |                             |                             |
| Pole Mount (Vertical)   | Pole Mount (Horizontal)     | Corner Mount                |
| PFB306W-S+PFA5500       | PFB718C-SG+PFA5500          | PFB306W-S+PFA151            |
|                         |                             |                             |

**Dimensions (mm[inch])**

