# DH-IPC-HFW7842H-Z

## 8MP AI IR Bullet Network Camera

· 8MP, 1/1.8" CMOS image sensor, low illuminance, high image definition

· Max outputs 8MP (3840×2160) @25fps/30fps

· H.264&H.265 coding, high compression ration

· Wide dynamic, day/night, 3D noise reduction, AWB, HLC, BLC

· ROI, SVC, SMART H.264/H.265, flexible coding, applicable to various bandwidth and storage environments

· With deep learning algorithm, it supports people counting, face detection, perimeter protection, ANPR and video metadata.

· 24V AC/POE/12V DC power support

· · Five streams for three-channel HD video

· IP67, IK10 protection grade

### System Overview

With Hisilicon advanced chip, image sensor and deep learning algorithm, Dahua Ultra-AI series network camera supports various intelligent functions and meet customers' requirements in different scenes. Adopting excellent image processing technology, Dahua AI network camera performs good in WD and low illuminance environment. For intelligent functions, it supports face detection, people counting, perimeter protection, video structurization (vehicle, non-motor vehicle, personnel detection and snapshot), and ANPR. The camera provides better solution to image processing and intelligent application.

### EPOE

Dahua ePoE technology, designed internally, adopts advanced 2D-PAM3 coding modulation from physical layer, and realizes full duplex transmission over 800 meters at the speed of 10Mbps, or 300 meters at the speed of 100Mbps via Cat 5 or coaxial cable media. Besides, it supports PoE and PoC power supply technology which has greatly simplified construction and wiring. Dahua ePoE technology offer a new way to accomplish long distance transmission between IP camera and network switch. It allows more flexible surveillance system design, improves reliability and saves construction and wiring cost.

### Functions

#### Face Capture

Face capture is a software application that automatically captures faces from within a digital image or a video frame from a video source. Dahua cameras use advanced deep learning algorithms and are trained by a large number of face data sources, enabling the camera to locate faces quickly and accurately from the video source and capture facial images

#### People Counting

People counting adopts deep learning algorithm to detect human body target, and track the target in real time, which realizes independent statistics of entry number and exit number. And the accuracy rate is up to 98%.

#### Video Structurization

Video structurization adopts deep learning algorithm to detect vehicle, non-motor vehicle and people in the image, track the target in real time, and then snapshot the target and extract attribute.

#### Smart H.265+

Smart H.265+ is an effective coding method based on H.265. Comparing with H.265, smart H.265+ improves efficiency more than 70% through auto scene judgement, dynamic ROI and dynamic GOP. Smart H.265+ provides better solution to save storage, bandwidth and power consumption.

### Perimeter Protection

Dahua's Perimeter Protection functions significantly improved accuracy. Perimeter Protection reduces false alarms and decreases pixel count requirements for object detection. Perimeter Protection features custom tripwires based on object type for automation in limited access areas such as pedestrian or vehicle-only zones. This combination of advanced AI analytics and real-time alerts to a desktop or to a mobile client reduces system requirements and resources resulting in greater surveillance system efficiency.

## Technical Specification

### Camera

| | |
|---|---|
| Image Sensor | 1/1.8"8Megapixel progressive CMOS |
| Effective Pixels | 3840 (H) × 2160 (V) |
| ROM | 4 GB |
| RAM | 2 GB |
| Scanning System | Progressive |
| Electronic Shutter Speed | Auto/Manual 1/3 s–1/100000 s |
| Min. Illumination | 0.005 Lux@F1.2 (Color, 1/3 s, 30 IRE) |
| IR Distance | Distance up to 50m (164.04 ft) |
| IR On/Off Control | Auto |
| IR LEDs Number | 4 (IR LEDs) |
| Pan/Tilt/Rotation Range | Horizontal: 0°–360°<br>Vertical: 0°–90°<br>Rotation: 0°–360° |

### Lens

| | |
|---|---|
| Lens Type | Electric zoom |
| Mount Type | Module interface |
| Focal Length | 2.7–12 mm (zoom 4x) |
| Max. Aperture | F1.2 |
| Field of View | Horizontal: 111° (W)–47° (T)<br>Vertical: 59° (W)–26° (T)<br>Diagonal: 135° (W)–51° (T) |
| Optical Zoom | 4 times |
| Iris Type | Auto aperture |
| Close Focus Distance | W: 1 M (3.29ft)<br>T: 2.5 M (8.20ft) |

| DORI Distance | Lens | Detect | Observe | Recognize | Identify |
|---|---|---|---|---|---|
| | W | 87.2 m (286.09 ft) | 34.9 m (114.50 ft) | 17.4 m (57.09 ft) | 8.7 m (49.54 ft) |
| | T | 186.7 m (612.53 ft) | 74.7 m (245.07 ft) | 37.3 m (122.38 ft) | 18.6 m (131.23 ft) |

### Smart event

| | |
|---|---|
| General IVS Analytics | Tripwire, intrusion, loitering detection, people gathering, fast moving and parking detection. |

### Professional, intelligent

| | |
|---|---|
| Perimeter Protection | Tripwire, intrusion (Classification of vehicle and people), fast moving, loitering detection, parking detection and people gathering. |
| Face Snapshot | Yes |
| Face Detection | Face detection, track, priority, snapshot, face enhancement, face exposure, face attribute extract, 6 attributes and 8 expressions: Gender, age, glasses, expressions (anger, sadness, disgust, fear, surprise, calm, happiness and confusion), mask, beard Face matting setting: face, single inch photo Three snapshot methods: real-time snapshot, priority snapshot, quality priority<br>Face angle filter Priority time setting |

| | |
|---|---|
| ANPR | ANPR, track, priority, snapshot<br>Vehicle attributes: license plate, vehicle type, vehicle color,vehicle brand<br>Other attributes: sun visor, seat belt, smoking, phoning, in-car accessories, annual vehicle inspection mark |
| Video Structurization | Vehicle detection, non-motor vehicle detection, personnel detection, face detection, track, snapshot, optimization, report high quality picture, vehicle attributes (license plate, vehicle type, vehicle color, and vehicle brand), other attributes (sun visor, seatbelt, smoking, phoning, in-car accessories, and annual vehicle inspection mark), non-motor vehicle attributes: vehicle type, vehicle color,driver number, cloth type, cloth color, and hat), personnel attribute (cloth type, trousers type, cloth color, trousers color, knapsack, and gender), face attribute (gender, age , glasses, mask, and beard) |
| People Counting | People counting (count the entry number, exit number and pass number), display and output daily/monthly/ annual statistics, No. in area |
| 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 |
| Smart Codec | H.264: Yes<br>H.265: Yes |
| Video Frame Rate | Main Stream: 3840 × 2160 (1–25/30 fps)<br>sub stream 1: 704 × 576 (1–25/30 fps)<br>sub stream 2: 1920 × 1080 (1–25/30 fps)<br>sub stream 3: 1920 × 1080 (1–25/30 fps)<br>sub stream 4: 704 × 576 (1–25/30 fps) |
| Stream Capability | 5 streams |
| Resolution | 8M (3840 × 2160), 6M (3072 × 2048/3072 × 1728), 5M (2592 × 1944), 4M (2688 × 1520), 3M (2048 × 1536/2304 × 1296), 1080p(1920 × 1080), 1.3M (1280 × 960), 720p (1280 × 720), D1 (704 × 576/704 × 480), VGA (640 × 480), CIF (352 × 288/352 × 240) |
| Bit Rate Control | CBR/VBR |
| Video Bit Rate | H.264: 32 kbps-16384 kbps<br>H.265: 12 kbps-16384 kbps |
| Day/Night | ICR switch |
| BLC | Yes |
| WDR | 120 dB |
| White Balance | Auto/natural/street lamp/outdoor/manual/regional Custom |
| Gain Control | Manual |
| Noise Reduction | 3DNR |
| Motion Detection | Yes |
| Region of Interest(RoI) | Yes (4 areas) |
| Electronic Image Stabilization(EIS) | Yes |
| Smart IR | Yes (Adjust by user) |
| Defog | Yes |
| Image Rotation | 0°/90°/180°/270° (Supports 90°/270° with 1080p resolution or below.) |
| Mirror | Yes |

| Privacy Masking | 4 areas |
|---|---|

## Audio

| Audio Compression | G.711a, G.711Mu, G726, AAC |
|---|---|

## Network

| Network | RJ-45 (100/1000 Base-T) |
|---|---|
| Protocol | HTTP, TCP, ARP, RTSP, RTP, UDP, RTCP, SMTP, FTP, DHCP, DNS, DDNS, PPPoE, IPv4/v6, SNMP, QoS, UPnP, NTP |
| Interoperability | ONVIF(Profile S/Profile G); CGI; P2P; RTMP |
| Scene self-adaptation | Yes |
| User/Host | 20 |
| Edge Storage | FTP; Micro SD card (512 G); NAS; SFTP |
| Browser | IE: Versions later than IE9<br>Google: Versions later than Chrome 42    Firefox: Versions later than Firefox 48.0.2 |
| Management Software | Smart PSS, DSS PRO, NVR, IVSS |
| Mobile Phone | IOS, Android |

## Certification

| Certifications | CE-LVD: EN60950-1<br>CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU<br>FCC: 47 CFR FCC Part 15, Subpart B<br>UL/CUL: UL60950-1 CAN/CSA C22.2 No.60950-1-07 |
|---|---|

## Port

| RS-485 | 1 (Bit rate: 1200 bps-115200 bps) |
|---|---|
| Audio Input | Audio Interface: 1/1 channel In/Out |
| Audio Output | |
| Alarm Input | 3 channel In: 5mA 5V DC<br>2 channel Out: 1000mA 30V DC/500mA 50V AC |
| Alarm Output | |

## Power

| Power Supply | 12V DC/24V AC/POE |
|---|---|
| Power Consumption | <17.3W |

## Environment

| Operating Temperature | -40°C to +60°C (-40°F to +140°F) |
|---|---|
| Operating Humidity | ≤95% |
| Storage Temperature | -40°C to +60°C (-40°F to +140°F) |
| Ingress Protection | IP67, IK10 |

## Structure

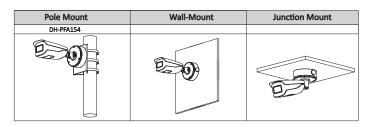| Casing | Metal + Plastic |
|---|---|
| Dimensions | 340.1 mm × 108.5 mm × 92.9 mm (13.39" × 4.27" × 3.66") (L × W × H) |
| Net Weight | 1.6 kg (3.53 lb) |
| Gross Weight | 2.4 kg (5.29 lb) |

## Ordering Information

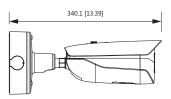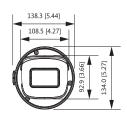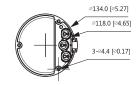| Type | Part Number | Description |
|---|---|---|
| 8MP Camera | DH-IPC-HFW7842HP-Z | 8MP AI IR Bullet Network Camera |
| | IPC-HFW7842HP-Z | 8MP AI IR Bullet Network Camera |
| | DH-IPC-HFW7842HN-Z | 8MP AI IR Bullet Network Camera |
| | IPC-HFW7842HN-Z | 8MP AI IR Bullet Network Camera |
| Accessories (optional) | PFA154 | Pole Mount |

## Accessories

**Optional:**

PFA154
Pole Mount

| Pole Mount | Wall-Mount | Junction Mount |
|---|---|---|
| DH-PFA154 | | |

## Dimensions (mm/inch)

340.1 [13.39]

138.3 [5.44]
108.5 [4.27]
92.9 [3.66]
134.0 [5.27]

⌀134.0 [⌀5.27]
⌀118.0 [⌀4.65]
3-⌀4.4 [⌀0.17]

**alhua**
TECHNOLOGY