**Dahua** TECHNOLOGY

# DH-SD8A240VI-HNI
## 2MP 40x Starlight IR PTZ Network Camera

· 1/1.9" 2Megapixel CMOS
· Powerful 40x optical zoom
· Starlight technology
· Max. 50/60fps@1080P
· Support Hi-PoE
· Smart wiper
· IR distance up to 450m
· IP67

| H.265 | WDR | 0.001Lux | ICR D/N | IP67 | Hi-PoE |

## System Overview

Featuring powerful optical zoom and accurate pan/tilt/zoom performance, this camera provides an all-in-one solution for capturing long distance video surveillance for outdoor applications. Together with infrared illumination and Starlight Technology, the camera is the perfect solution for dark, lowlight applications. The series combines a day/night mechanical IR cut filter for the highest image quality in variable lighting conditions during the day, and True WDR for applications with direct sunlight or glare.

## Functions

### Starlight Technology
For challenging low-light applications, Dahua's Starlight Ultra-low Light Technology offers best-in-class light sensitivity, capturing color details in low light down to 0.001lux. The camera uses a set of optical features to balance light throughout the scene, resulting in clear images in dark environments.

### Wide Dynamic Range
The camera achieves vivid images, even in the most intense contrast lighting conditions, using industry-leading wide dynamic range (WDR) technology. For applications with both bright and low lighting conditions that change quickly, True WDR (120 dB) optimizes both the bright and dark areas of a scene at the same time to provide usable video.

### 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 Wiper
With Dahua smart wiper technology, the wiper can be started/stopped automatically when the build-in rain senor discerns whether it rains. The technology could offer better surveillance performance against wet weather and reduce dependence on manual operation.

### 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, flexible multi-frame reference structure and intelligent noise reduction to deliver high-quality video without straining the network. Smart H.265+ technology reduces bit rate and storage requirements by up to 70% when compared to standard H.265 video compression.

### PFA Technology
PFA technology has innovatively introduced new methods of judgment to ensure the accuracy and predictability of the direction of subject distance adjustment. The result is a set of advanced focusing algorithms. PFA ensures clarity of the image throughout the process of zooming and shortens focus time. The realization of PFA technology substantially improves user experience and increases product value.

### Environmental
Dahua cameras operate in extreme temperature environments, rated for use in temperatures from -40 °C to +70 °C (-40 °F to +158 °F) with 95% humidity. Subjected and certified to rigorous dust and water immersion tests, the IP67 rating makes it suitable for demanding outdoor applications.

### Protection
The camera allows for ±25% input voltage tolerance, suitable for the most unstable conditions for outdoor applications. Its 8KV lightning rating provides effective protection for both the camera and its structure against lightning.

### Interoperability
The camera conforms to the ONVIF (Open Network Video Interface Forum) specifications, ensuring interoperability between network video products regardless of manufacturer.

ONVIF

## Technical Specification

### Camera

| | |
|---|---|
| Image Sensor | 1/1.9" CMOS |
| Effective Pixels | 1920(H) x 1080(V), 2 Megapixels |
| Scanning System | Progressive |
| Electronic Shutter Speed | 1/1s~1/30,000s |
| Minimum Illumination | Color: 0.001Lux@F1.4; B/W: 0.0001Lux@F1.4; 0Lux@F1.4 (IR on) |
| S/N Ratio | More than 55dB |
| IR Distance | Distance up to 450m (1476ft) |
| IR On/Off Control | Auto/Manual |
| IR LEDs | 10 |
| Smart Wiper | Support |

### Lens

| | |
|---|---|
| Focal Length | 5.6mm~223mm |
| Max. Aperture | F1.4~ F4.8 |
| Angle of View | H: 60.6° ~ 1.8° |
| Optical Zoom | 40x |
| Focus Control | Auto/Manual |
| Close Focus Distance | 100mm~ 1000mm |

### DORI Distance

*Note: The DORI distance is a "general proximity" of distance which makes it easy to pinpoint the right camera for your needs. The DORI distance is calculated based on sensor specification and lab test result according to EN 62676-4 which defines the criteria for Detect, Observe, Recognize and Identify respectively.

| Detect | Observe | Recognize | Identify |
|---|---|---|---|
| 2340m(7677ft） | 930m （3051ft） | 460m(1509ft) | 230m(755ft) |

### PTZ

| | |
|---|---|
| Pan/Tilt Range | Pan: 0° ~ 360° endless; Tilt: -30° ~ 90°,auto flip 180° |
| Manual Control Speed | Pan: 0.1° ~240° /s; Tilt: 0.1° ~100° /s |
| Preset Speed | Pan: 240° /s; Tilt: 120° /s |
| Presets | 300 |
| PTZ Mode | 5 Pattern, 8 Tour, Auto Pan ,Auto Scan |
| Speed Setup | Human-oriented focal Length/ speed adaptation |
| Power up Action | Auto restore to previous PTZ and lens status after power failure |
| Idle Motion | Activate Preset/ Scan/ Tour/ Pattern if there is no command in the specified period |
| Protocol | DH-SD, Pelco-P/D (Auto recognition) |

### Intelligence

| | |
|---|---|
| Event Trigger | Motion detection, Video tampering , Scene changing, Network disconnection, IP address conflict, Illegal Access, Storage anomaly |
| Auto Tracking | Support |

| | |
|---|---|
| IVS | Tripwire, Intrusion, Abandoned/Missing |
| Advanced Intelligent Functions | Face Detection, Heat Map |

### Video

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|---|---|
| Compression | H.265+/H.265/H.264+/ H.264 |
| Streaming Capability | 3 Streams |
| Resolution | 1080P(1920×1080)/1.3M(1280x960)/720P(1280×720)/D1(704×576/704×480)/CIF(352×288/352×240) |
| Frame Rate | Main stream: 1080P/1.3M/720P(1~50/60fps) |
| | Sub stream1: D1/CIF(1 ~ 25/30fps) |
| | Sub stream2: 1080P/1.3M/720P (1 ~ 25/30fps) |
| Bit Rate Control | CBR/VBR |
| Bit Rate | H.265/H.264: 448K ~ 8192Kbps |
| Day/Night | Auto(ICR) / Color / B/W |
| Backlight Compensation | BLC / HLC / WDR(120dB) |
| White Balance | Auto, ATW, Indoor, Outdoor, Manual |
| Gain Control | Auto / Manual |
| Noise Reduction | Ultra DNR (2D/3D) |
| Motion Detection | Support |
| Region of Interest | Support |
| Electronic Image Stabilization (EIS) | Support |
| Optical Defog | Support |
| Digital Zoom | 16x |
| Flip | 180° |
| Privacy Masking | Up to 24 areas |

### Audio

| | |
|---|---|
| Compression | G.711a/G.711Mu/AAC/G.722 / G.726/MPEG2-L2 |

### Network

| | |
|---|---|
| Ethernet | RJ-45 (10Base-T/100Base-TX) |
| Protocol | IPv4/IPv6, HTTP, HTTPS, SSL, TCP/IP, UDP, UPnP, ICMP, IGMP, SNMP, RTSP, RTP, SMTP, NTP, DHCP, DNS,PPPOE,DDNS,FTP, IP Filter,QoS,Bonjour,802.1x |
| Interoperability | ONVIF Profile S&G, API |
| Streaming Method | Unicast / Multicast |
| Max. User Access | 20 users |
| Edge Storage | NAS (Network Attached Storage),Local PC for instant recording, Micro SD card 256GB |
| Web Viewer | IE, Chrome, Firefox, Safari |
| Management Software | Smart PSS, DSS, DMSS |
| Smart Phone | IOS, Android |

### Certifications

| | |
|---|---|
| Certifications | CE: EN55032/EN55024/EN50130-4<br>FCC: Part15 subpartB,ANSI C63.4- 2014<br>UL: UL60950-1+CAN/CSA C22.2,No.60950-1 |

**Interface**

| | |
|---|---|
| Video Interface | 1 port(BNC, 1.0V[p-p], 75Ω) |
| RS485 | 1 |
| Audio Interface | 1/1 |
| Alarm I/O | 7/2 |

**Electrical**

| | |
|---|---|
| Power Supply | AC 24V/3A(±25%),  Hi-PoE |
| Power Consumption | 26W, 38W (IR on, Heater on) |

**Environmental**

| | |
|---|---|
| Operating Conditions | -40°C ~ 70°C (-40°F ~ +158°F) / Less than 95% RH |
| Ingress Protection | IP67 |
| Vandal Resistance | N/A |

**Construction**

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|---|---|
| Casing | Metal |
| Dimensions | Φ262(mm) x 415.6(mm) |
| Net Weight | 8.5kg(18.74lb) |
| Gross Weight | 14.3kg(31.53lb) |

## Ordering Information

| Type | Part Number | Description |
|---|---|---|
| 2MP  PTZ Camera | DH-SD8A240VI-HNI | 2MP 40x Starlight IR PTZ Network Camera, WDR, PAL |
| | DH-SD8A240VIN-HNI | 2MP 40x Starlight IR PTZ Network Camera, WDR, NTSC |
| | SD8A240VI-HNI | 2MP 40x Starlight IR PTZ Network Camera, WDR, PAL |
| | SD8A240VIN-HNI | 2MP 40x Starlight IR PTZ Network Camera, WDR, NTSC |
| Accessories | PFB306W | Wall Mount |
| | AC24V/3A | Power Adapter |
| | PFA120 | Junction Box |
| | PFA140 | Power Box |
| | PFA150 | Pole Mount |
| | PFA151 | Corner Mount |

## Accessories

Included:



PFB306W
Wall Mount

AC24V/3A
Power Adapter

Optional：



PFA120
Junction Box

PFA140
Power Box

PFA150
Pole Mount



PFA151
Corner Mount

| Junction Mount | Power Box Mount |
|---|---|
| PFB306W + PFA120 | PFB306W + PFA140 |
|  |  |
| **Corner Mount** | **Pole Mount** |
| PFB306W + PFA151 | PFB306W + PFA150 |
|  |  |

## Dimensions (mm)



25.9mm
160.0mm
415.6mm
225.6mm
262.0mm