

DH-ECA3A1404-HNR-XB-F

4MP 4x Explosion-proof IR WizMind Network Camera



WizMind

- 4MP 1/2.8" CMOS
- 4x optical zoom and 16x digital zoom
- Adopts anti-corrosion stainless steel 304, and 316L is customizable
- Starlight technology
- Max. 25/30 fps@4M
- IR distance up to 40 m
- SMD Plus
- Supports perimeter protection, smart capture, and face detection
- Optical Fiber



Launched by Dahua Technology, Dahua WizMind is a full portfolio of solutions composed of project-oriented products including IPC, 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

The product is equipped with neural network processor; it supports AI intelligent functions to effectively improve the detection accuracy, supports people, motor vehicle and non-motor capture, and supports perimeter protection.

Functions

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.

Perimeter Protection

Automatically filters out false alarms caused by animals, rustling leaves, bright lights, etc. Enables system to act secondary recognition for the targets. Improves alarm accuracy.

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.

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.

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 0.001 Lux. The camera uses a set of optical features to balance light throughout the scene, resulting in clear images in dark environments.

SMD Plus

With Deep-Learning Algorithm, Dahua SMD Plus filters the motion detection alarm triggered by non-concerned target and recognizes human and vehicle effectively, sending alarms when human and vehicle intrude.

Technical Specification

Camera

| | |
|----------------------------|----------------------------------------------------------------|
| Image Sensor | 1/2.8" CMOS |
| Pixel | 4MP |
| Max. Resolution | 2560 (H) × 1440 (V) |
| ROM | 4 GB |
| RAM | 1 GB |
| Electronic Shutter Speed | 1/1 s–1/30000 s |
| Scanning System | Progressive |
| Min. Illumination | Color: 0.005 Lux@F1.8 B/W: 0.0005 Lux@F1.8 0 Lux (IR on) |
| Illumination Distance | 40 m (131.23 ft) |
| Illuminator On/Off Control | Zoom Prio/Manual/SmartIR/Off |
| Illuminator Number | 3 IR lights |

Lens

| | | | | |
|----------------------|-----------------------------------------------------|---------------------|---------------------|--------------------|
| Focal Length | 2.8 mm–12 mm | | | |
| Max. Aperture | F1.8–F2.7 | | | |
| Field of View | H: 42.8°–91.9° V: 23.8°–49.4° D: 49.1°–109.4° | | | |
| Optical Zoom | 4x | | | |
| Focus Control | Auto/Semi-Auto/Manual | | | |
| Close Focus Distance | 0.2 m–0.5 m (0.66 ft–1.64 ft) | | | |
| Iris Control | Fixed | | | |
| DORI Distance | Detect | Observe | Recognize | Identify |
| | 240 m (787.40 ft) | 95 m (311.68 ft) | 48 m (157.48 ft) | 24 m (78.74 ft) |

PTZ

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|------------------|---------|
| Preset | 300 |
| Power-off Memory | Support |
| Idle Motion | Preset |

Artificial Intelligence

| | |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Smart Capture | Support human, motor vehicle and non-motor vehicle image capture. |
| Perimeter Protection | Tripwire and intrusion. Support alarm triggering by target types (human and vehicle). Support filtering false alarms caused by animals, rustling leaves, bright lights, etc. |
| Face Detection | Support |

Video

| | |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Compression | H.265; H.264B; H.264M; H.264H; MJPEG; H.265+; H.264+ |
| Streaming Capability | 3 streams |
| Resolution | 4M (2560 × 1440); 3M (2048 × 1536); 1080P (1920 × 1080); 1.3M (1280 × 960); 720P (1280 × 720); D1 (704 × 576); CIF (352 × 288) |

| | |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Frame Rate | Main stream: 4M/3M/1080P/960P/720P (1–25/30 fps) Sub stream 1: D1/CIF (1–25/30 fps) Sub stream 2: 1080P/960P/720P (1–25/30 fps) |
| Bit Rate Control | Variable/Constant |
| Bit Rate | H.264: 2816 Kbps–8192 Kbps |
| Day/Night | Auto (ICR)/Color/B/W |
| BLC | Support |
| WDR | 120 dB |
| HLC | Support |
| White Balance | Auto/Indoor/Outdoor/Tracking/Manual/Sodium lamp/ Natural light/Street lamp |
| Gain Control | Auto/Manual |
| Noise Reduction | 2D/3D |
| Motion Detection | Support |
| Region of Interest (RoI) | Support |
| Image Stabilization | Electronic |
| Defog | Electronic |
| Digital Zoom | 16x |
| Flip | 180° |
| Privacy Masking | Up to 24 areas, and up to 8 areas in the same view |
| S/N Ratio | 55 dB |

Audio

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|-------------|---------------------------------------------------------------|
| Compression | G.711a; G.711Mu; G.726; AAC; MPEG2-Layer2; G722.1; G729; G723 |
|-------------|---------------------------------------------------------------|

Network

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|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ethernet | 1 (crystal head, 10/100Base-T) |
| Protocol | IPv4; IPv6; HTTP; HTTPS; 802.1x; Qos; FTP; SMTP; UPnP; SNMP; DNS; DDNS; NTP; RTSP; RTP; TCP; UDP; IGMP; ICMP; DHCP; PPPoE; ARP; SNMP v1/v2c/v3 (MIB-2); RTCP; RTMP |
| Interoperability | ONVIF (Profile S&G&T); CGI |
| Streaming Method | Unicast/Multicast |
| User/Host | 20 |
| Storage | FTP; Micro SD card (256G); NAS |
| Browser | IE7 and later versions Chrome 42 and earlier versions Firefox 52 and earlier versions Safari |
| Management Software | Smart PSS; DSS; DMSS; IVSS |
| Mobile Phone | IOS; Android |

Certification

| | |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Certifications | CE: EN55032/EN55024/EN50130-4 FCC: Part15 subpartB, ANSI C63.4-2014 ATEX: II 2 G Ex db IIC T6 Gb, II 2 D Ex tb IIIC T80°C Db IECEX: Ex db IIC T6 Gb, Ex tb IIIC T80°C Db |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Port

| | |
|-------------|---|
| Audio Input | 1 |
|-------------|---|

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|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Audio Output | 1 |
| Two-way Audio | Support |
| Alarm Linkage | Capture; preset; record; alarm digital output; audio; send email |
| Alarm Event | Motion/tampering detection; audio detection; network disconnection detection; IP conflict detection; memory card state detection; memory space detection; abnormal power supply detection |
| Optical Fiber | 100M single fiber Transmission specification: 1310nm TX/1550nm RX Distance: 20 km (65616.80 ft) |

Power

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|-------------------|-------------------------------------|
| Power Supply | DC12V/1.5A±10% |
| Power Consumption | Basic: 4W Max.: 9W (IR light on) |

Environment

| | |
|-----------------------|---------------------------------------------------------------------------------|
| Operating Temperature | -40°C to +60°C (-40°F to +140°F) |
| Operating Humidity | ≤ 95% |
| Protection | IP68; TVS 6000V lightning proof; surge protection; voltage transient protection |

Structure

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|--------------|-----------------------------------------------------------------|
| Casing | SUS304/SUS316L (customizable) |
| Dimensions | 215 mm x 149 mm x 151 mm (8.46" x 5.87" x 5.94") (L x W x H) |
| Net Weight | 3 kg (6.61 lb) |
| Gross Weight | 6.3 kg (13.89 lb) |

Ordering Information

| Type | Model | Description |
|----------------------------|------------------------|--------------------------------------------------------|
| 4MP WizMind Network Camera | DH-ECA3A1404-HNR-XB-F | 4MP 4x Explosion-proof IR WizMind Network Camera, PAL |
| | DH-ECA3A1404N-HNR-XB-F | 4MP 4x Explosion-proof IR WizMind Network Camera, NTSC |
| Accessories | DH-EXB109 | Wall Mount Bracket |
| | DH-ZAZ100W | Universal Joint |
| | DH-GD1000 (1 m) | Flexible Tube |
| | DC12V/1.5A | Power Adapter |

Accessories

Optional:



DH-EXB109
Wall Mount Bracket



DH-ZAZ100W
Universal Joint



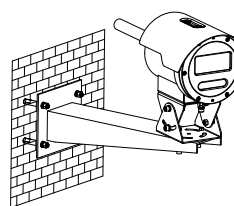
DH-GD1000 (1 m)
Flexible Tube



DC12V/1.5A
Power Adapter

Wall Mount

DH-EXB109+DH-ZAZ100W



Dimensions(mm[inch])

