# VKD MH8050D

## 8 MP Box WizMind Network Camera

- 8-MP 1/1.8" CMOS image sensor, low luminance, and high definition image.
- Outputs max. 8 MP (3840 × 2160) @30 fps.
- ROI, SMART H.264+/H.265+, flexible coding, applicable to various bandwidth and storage environments.
- Rotation mode, WDR, 3D NR, HLC, BLC, digital watermarking, applicable to various monitoring scenes.
- Alarm: 2 in, 2 out; audio: 1 in, 1 out; RS-485, BNC;  supports max. 256 G Micro SD card, built-in Mic.
- Supports P-Iris, the camera can control the iris more precisely for better image effect.
- 24 VAC/12 VDC/PoE power supply.
- ePoE
- SMD 3.0

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

With starlight solution and deep learning algorithm, Dahua WizMind 5 Series network camera has various intelligent functions, including face capture, perimeter protection and people counting, which greatly improve the accuracy of video analysis.

## Functions

### Face Detection

Dahua Face Detection technology can detect the face in the image. With deep learning algorithm, the technology supports detecting, tracking, capturing and selecting the best face image, and then outputs face snapshot.

### Face Attributes

With deep learning algorithm, the network camera can recognize face attributes, such as gender, age, expression, glasses, mouth mask, and beard.

### Perimeter Protection

With deep learning algorithm, Dahua Perimeter Protection technology can recognize human and vehicle accurately. In restricted area (such as pedestrian area and vehicle area), the false alarms of intelligent detection based on target type (such as tripwire, intrusion, fast moving, parking detection, loitering detection and gathering detection) are largely reduced.

### People Counting

With deep learning algorithm, Dahua People Counting technology can track and process moving human body targets to realize the accurate statistics of enter No., leave No., and In Area No. Working with management platform, it outputs yearly/monthly/daily reports to meet your requirements.

### ePoE

Dahua's innovative ePoE technology offers a new solution to transmit power and data over long distances between cameras and network switch, allowing more flexible design of surveillance system, improving reliability, reducing installation time and saving money. ePoE technology encompasses pure network systems where a single CAT6 cable can carry signals up to 300 m (984 ft) at 100 Mbps, 800 m (2625 ft) at 10 Mbps.

### Cyber Security

Dahua network cameras employ a series of security technologies, including security authentication and authorization, access control protocols, trusted protection, encrypted transmission and encrypted storage. These technologies improve the camera's defense against external cyber threats and prevent malicious programs from compromising the device.

### Protection (wide voltage)

Wide voltage: The camera allows ±30% (for some power supplies) input voltage tolerance (wide voltage range), and it is widely applied to outdoor environment with instable voltage.

## Technical Specification

### Camera

| | |
|---|---|
| Image Sensor | 1/1.8"CMOS |
| Max. Resolution | 3840 (H) × 2160 (V) |
| ROM | 128 MB |
| RAM | 1 GB |
| Scanning System | Progressive |
| Electronic Shutter Speed | Auto/Manual 1/3 s–1/100,000 s |
| Min. Illumination | With 10.5 mm–42 mm lens:<br>0.004 lux@F1.5 (Color, 30 IRE)<br>0 lux (Illuminator on) |
| S/N Ratio | >56 dB |

### Lens

| | |
|---|---|
| Mount Type | C/CS |

### Smart Event

| | |
|---|---|
| IVS | Abandoned object; missing object |
| Heat Map | Yes |

### Professional, intelligent

| | |
|---|---|
| IVS (Perimeter Protection) | Tripwire; intrusion; fast moving (the three functions support the classification and accurate detection of vehicle and human); loitering detection; people gathering; parking detection |
| Face Detection | Face detection; track; snapshot optimization; snapshot; face enhancement; face exposure; face matting setting: face, single inch photo; three snapshot methods: real-time snapshot, optimized snapshot, quality priority snapshot; face angle filter; optimization time setting |
| People Counting | Support the counting of enter number, leave number and pass number, and displaying and outputting yearly/monthly/daily reports.<br>Support the counting of number in area, and 4 rules configuration. Count number of people or stay time and link alarm.<br>Support queue management, and 4 rules configuration. Count number of people or stay time and link alarm |
| 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 (Only supported by the sub stream) |
| Smart Codec | Smart H.265+/H.264+ |
| Video Frame Rate | Main stream: 3840× 2160 (1 fps–25/30 fps)<br>Sub stream: D1 (1 fps–25/30 fps)<br>Third stream: 1080p (1 fps–25/30 fps)<br>*The values above are the max. frame rates of each stream; for multiple streams, the values will be subjected to the total encoding capacity |
| Stream Capability | 3 streams |
| Resolution | 3840 × 2160; 3072 × 2048; 3072 × 1728; 2592 × 1944; 2688 × 1520; 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: 3 kbps-20480 kbps<br>H.265: 3 kbps-20480 kbps |

| | |
|---|---|
| BLC | Yes |
| HLC | Yes |
| WDR | 120dB |
| White Balance | Auto; natural; street lamp; outdoor; manual; regional custom |
| Gain Control | Auto; manual |
| Noise Reduction | 3D NR |
| Motion Detection | OFF/ON (4 areas, rectangular) |
| Region of Interest (RoI) | Yes (4 areas) |
| Image Stabilization | Electronic Image Stabilization (EIS) |
| Defog | Yes |
| Image Rotation | 0°/90°/180°/270° (Support 90°/270° with 4 M resolution and lower) |
| Mirror | Yes |
| Privacy Masking | 8 areas |

### Audio

| | |
|---|---|
| Built-in MIC | Yes |
| Audio Compression | PCM; G.711a; G.711Mu; G.726; G.723 |

### Alarm

| | |
|---|---|
| Alarm Event | No SD card; SD card full; SD card error; network disconnection; IP conflict; illegal access; motion detection; video tampering; defocus detection; scene changing; intrusion; tripwire; abandoned object; missing object; fast moving; parking detection; loitering detection; people gathering; input abnormal detection; intensity change detection; people counting; face detection; people counting in area; stay alarm; people No. exception detection; queue management |

### Network

| | |
|---|---|
| Network Port | RJ-45 (10/100 Base-T) |
| SDK and API | Yes |
| Cyber Security | Video encryption; configuration encryption; Digest; WSSE; account lockout; security logs; generation and importing of X.509 certification; HTTPS; trusted boot; trusted execution; trusted upgrade |
| Network Protocol | IPv4; IPv6; HTTP; HTTPS; TCP; UDP; ARP; RTP; RTSP; RTCP; RTMP; SMTP; FTP; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP; Multicast; ICMP; IGMP; NFS; SAMBA; PPPoE; 802.1x; SNMP |
| Interoperability | ONVIF (Profile S/Profile G/Profile T); CGI; Milestone; P2P |
| User/Host | 20 (Total bandwidth: 80 M) |
| Storage | FTP; SFTP; Micro SD card (Support max. 256 G); NAS |
| Browser | IE: IE8 and later<br>Chrome<br>Firefox |
| Management Software | Smart PSS; DSS; DMSS |
| Mobile Client | iOS; Android |

### Certification

| | |
|---|---|
| Certifications | CE-LVD: EN62368-1<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

| | |
|---|---|
| Audio Input | 1 channel (3.5 mm JACK port) |
| Audio Output | 1 channel (3.5 mm JACK port) |
| Alarm Input | 2 channels in: 5 mA 3V–5 VDC |
| Alarm Output | 2 channels out: 300 mA 12 VDC |

## Power

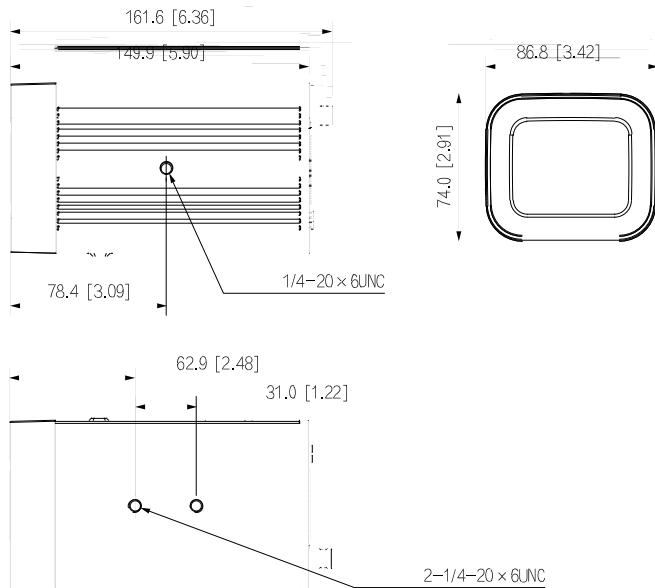| | |
|---|---|
| Power Supply | 12 VDC (±25%)/24V AC (±30%)/PoE (802.3at)/ePoE |
| Power Consumption | Basic power consumption: 7.9W (12 VDC); 9.3 W (24 VAC); 9.9W (PoE)<br>Max. power consumption (H.265 + max. stream + intelligent function): 10.5W (12 VDC); 12.3 W (24 VAC); 13.1W (PoE) |

## Environment

| | |
|---|---|
| Operating Temperature | −30 °C to +60 °C (−22 °F to +140 °F)/Less than 95% RH |
| Storage Temperature | −30 °C to +60 °C (−22 °F to +140 °F) |

## Structure

| | |
|---|---|
| Casing | Metal |
| Product Dimensions | 161.6 mm × 86.8 mm × 74.0 mm (6.4" × 3.4" × 2.9") |
| Net Weight | 800 g (1.8 lb) |
| Gross Weight | 900 g (2.0 lb) |

## Dimensions (mm[inch])



161.6 [6.36]
149.9 [5.90]
86.8 [3.42]
74.0 [2.91]
78.4 [3.09]
1/4−20 × 6UNC
62.9 [2.48]
31.0 [1.22]
2−1/4−20 × 6UNC

## Accessories

### Optional:



PFB120WS
Wall Mount
Bracket

PFB110W
Ceiling mount
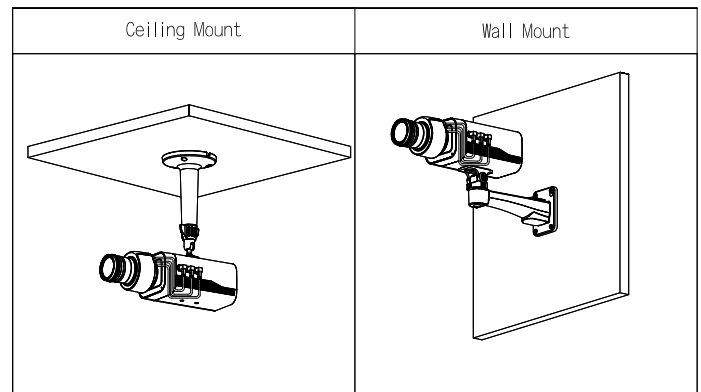Bracket

PFL010542-A12PE
10.5-42 mm

PFH610V Series
Housings

12 VDC 1A Power
Adapter

LR1002-1ET/1EC
Single-port Long Reach
Ethernet over Coax
Extender

PFM900-E
Integrated Mount
Tester

| Ceiling Mount | Wall Mount |
|---|---|
|  |  |

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