

# DH-IPC-MFW5241T2-E3-ASE

3 × 2 MP Triple-Sight Perimeter Protection Bullet WizMind Network Camera



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

The Triple-Sight Long Range Perimeter Protection Bullet WizMind Network Camera leverages its deep learning algorithms and multi-channel ultra-long-range perimeter detection technology to accurately detect targets over long ranges and accurately classify humans and vehicles. By employing Micro-PTZ and illumination by area technology, the monitoring range and illumination can be precisely adjusted, enhancing the quality of images and the effectiveness of intelligent detection. The camera is dustproof, waterproof and vandal-proof, and has IP67 and IK10 certification.

## Functions

### Long-Range Perimeter Protection

The camera features long-range perimeter protection that reaches up to 100 meters by leveraging multi-channel fusion and illumination by area technology. 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 and intrusion) are largely reduced.

### Illumination by Area

This technology allows you to independently control the lighting in multiple areas of the image, enabling the device to easily adapt to different scenes, save power and perform more efficiently.

### AI-ISP

With AI ISP technology, the camera is able to easily adapt to scenes, producing high quality images that reveal the fine details of targets.

- 3 × 2MP 1/2.8" CMOS image sensor, low luminance, and high definition image.
- Outputs max. 2 MP (1920 × 1080)@25 fps through channel1-3.
- H.265 codec, high compression rate, ultra-low bit rate.
- Built-in 8 IR LEDs, and the max. illumination distance is up to 100 m.
- Supports long-range perimeter protection. The camera can detect humans and vehicles up to 100 m away and more.
- WDR, 3D NR, HLC, BLC, digital watermarking, applicable to various monitoring scenes.
- With deep learning algorithm, it supports Perimeter Protection, including Intrusion and tripwire (the two functions support the classification and accurate detection of vehicle and human).
- Abnormality detection: Motion detection, video tampering, scene changing, audio detection, no SD card, SD card full, SD card error, network disconnection, IP conflict, illegal access, and voltage detection.
- Alarm: 2 in, 2 out; audio: 1 in, 1 out; supports max. 1TB Micro SD card; built-in dual Mic and speaker, supports two-way talk.
- ePoE.
- IP67 and IK10 protection.



### Two-way Talk

With its built-in high-sensitivity microphone and high-power speaker, the camera realizes two-way talk through the mobile app.

### 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 (IP67, IK10, Wide Voltage)

IP67: The camera passes a series of strict test on dust and soak. It has dust-proof function, and the enclosure can work normally after soaking in 1 m deep water for 30 minutes.

IK10: The enclosure can stand the punch more than 5 times from a 5 kg hammer falling from a height of 40 cm (Impact energy is 20J).

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               | Channel 1-3: 1/2.8" CMOS                                                                                                                                                                                                                                                                                                       |
| Max. Resolution            | Channel 1-3: 1920 (H) × 1080 (V)                                                                                                                                                                                                                                                                                               |
| ROM                        | 4 GB                                                                                                                                                                                                                                                                                                                           |
| RAM                        | 2 GB                                                                                                                                                                                                                                                                                                                           |
| Scanning System            | Progressive                                                                                                                                                                                                                                                                                                                    |
| Electronic Shutter Speed   | Auto/Manual 1/3 s–1/100,000 s                                                                                                                                                                                                                                                                                                  |
| Min. Illumination          | Channel 1:<br>0.0007 lux@F1.6 (Color, 30 IRE)<br>0.0004 lux@F1.6 (B/W, 30 IRE)<br>0 lux (Illuminator on)<br>Channel 2:<br>0.004 lux@F2.0 (Color, 30 IRE)<br>0.0005 lux@F2.0 (B/W, 30 IRE)<br>0 lux (Illuminator on)<br>Channel 3:<br>0.008 lux@F2.8 (Color, 30 IRE)<br>0.0008 lux@F2.8 (B/W, 30 IRE)<br>0 lux (Illuminator on) |
| S/N Ratio                  | >56 dB                                                                                                                                                                                                                                                                                                                         |
| Illumination Distance      | Up to 100 m (328.08 ft) (IR)                                                                                                                                                                                                                                                                                                   |
| Illuminator On/Off Control | Auto; Manual                                                                                                                                                                                                                                                                                                                   |
| Illuminator Number         | 8 (IR LED)                                                                                                                                                                                                                                                                                                                     |
| Angle Adjustment           | Triaxial adjustment:<br>Pan: 0°–360°<br>Tilt: 0°–70°<br>Rotation: 0°–360°<br>Micro PTZ:<br>Tilt: -5°–10°                                                                                                                                                                                                                       |
| Gradienter                 | The horizontal gradient is visualized, simplifying installation.                                                                                                                                                                                                                                                               |

### Lens

|                      |                                                                                                                             |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Lens Type            | Fixed-focal                                                                                                                 |
| Lens Mount           | M12                                                                                                                         |
| Focal Length         | Channel 1: 3.6 mm<br>Channel 2: 12 mm<br>Channel 3: 25 mm                                                                   |
| Max. Aperture        | Channel 1: F1.6<br>Channel 2: F2.0<br>Channel 3: F2.8                                                                       |
| Field of View        | Channel 1: H: 100.4°; V: 85.9°; D: 46.7°<br>Channel 2: H: 29.5°; V: 25.7°; D: 14.4°<br>Channel 3: H: 14.9°; V: 13°; D: 7.4° |
| Iris Control         | Channel 1-3: Fixed                                                                                                          |
| Close Focus Distance | Channel 1: 1.1 m (3.61 ft)<br>Channel 2: 8.6 m (28.22 ft)<br>Channel 3: 19.6 m (64.30 ft)                                   |

|               |                                                                                                                                                                                                                                                                                                                                                                                 |                         |                        |                       |                       |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|------------------------|-----------------------|-----------------------|
|               | Lens                                                                                                                                                                                                                                                                                                                                                                            | Detect                  | Observe                | Recognize             | Identify              |
|               | Channel 1                                                                                                                                                                                                                                                                                                                                                                       | 53.7 m<br>( 176.18 ft)  | 21.5 m<br>(70.54 ft)   | 10.7 m<br>(35.10 ft)  | 5.4 m<br>(17.72 ft)   |
|               | Channel 2                                                                                                                                                                                                                                                                                                                                                                       | 172.4 m<br>(172.4 ft)   | 69.0 m<br>(226.38 ft)  | 34.5 m<br>(113.19 ft) | 17.2 m<br>(56.43 ft)  |
|               | Channel 3                                                                                                                                                                                                                                                                                                                                                                       | 331.0 m<br>(1085.96 ft) | 132.4 m<br>(434.38 ft) | 66.2 m<br>(217.19 ft) | 33.1 m<br>(108.60 ft) |
| DORI Distance | *DORI (Detect, Observe, Recognize, Identify) is a standard system (EN-62676-4) for defining the ability of a person viewing the video to distinguish persons or objects within a covered area. The numbers in this table do not reflect intelligent function distances. For intelligent function distances, refer to installation and commissioning manual/project design tool. |                         |                        |                       |                       |

### Intelligence

|                            |                                                                                                                  |
|----------------------------|------------------------------------------------------------------------------------------------------------------|
| Intelligence Notes         | Channel 1–3: Perimeter protection<br>*Alarms are output through channel 1.                                       |
| IVS (Perimeter Protection) | Intrusion, tripwire (the two functions support the classification and accurate detection of vehicle and human)   |
| Smart 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 sub stream)                                                                                                                                                                       |
| Video Frame Rate            | Channel 1-3:<br>Main stream: 1920 × 1080@(1–25 fps)<br>sub stream: 704 × 576@(1–25 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           | 2 streams                                                                                                                                                                                                                                |
| Resolution                  | 1080p (1920×1080)                                                                                                                                                                                                                        |
| Bit Rate Control            | VBR; CBR                                                                                                                                                                                                                                 |
| Video Bit Rate              | Channel 1-3:<br>H.264: 3 kbps–8192 kbps<br>H.265: 3 kbps–8192 kbps                                                                                                                                                                       |
| Day/Night                   | Auto(ICR)/Color/B/W                                                                                                                                                                                                                      |
| BLC                         | Yes                                                                                                                                                                                                                                      |
| HLC                         | Yes                                                                                                                                                                                                                                      |
| WDR                         | DWDR                                                                                                                                                                                                                                     |
| Scene Self-adaptation (SSA) | Yes                                                                                                                                                                                                                                      |
| 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)                                                                                                                                                                                                                            |
| Illumination By Area        | Yes, 6 areas                                                                                                                                                                                                                             |
| Smart Illumination          | Yes                                                                                                                                                                                                                                      |
| Defog                       | Yes                                                                                                                                                                                                                                      |
| Privacy Masking             | 8 areas                                                                                                                                                                                                                                  |

## Audio

|                   |                                    |
|-------------------|------------------------------------|
| Built-in MIC      | Yes, built-in dual Mic             |
| Built-in Speaker  | Yes, built-in speaker              |
| Audio Compression | G.711a; G.711Mu; PCM; 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; tripwire; intrusion; security exception; scene changing; audio detection; voltage detection; external alarm |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Network

|                     |                                                                                                                                                                                                                                                                            |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Network Port        | RJ-45 (10/100 Base-T)                                                                                                                                                                                                                                                      |
| SDK and API         | Yes                                                                                                                                                                                                                                                                        |
| Network Protocol    | IPv4; IPv6; HTTP; TCP; UDP; ARP; RTP; RTSP; RTCP; RTMP; SMTP; FTP; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP; Multicast; ICMP; IGMP; NFS; SAMBA; PPPoE; SNMP; P2P; Bonjour                                                                                                     |
| Cyber Security      | Video encryption;Firmware encryption;Configuration encryption;Digest;WSSE;Account logout;Security logs;IP/MAC filtering;Generation and importing of X.509 certificate;syslog;HTTPS;802.1x;Trusted boot;Trusted execution;Trusted upgrade;Session security;Security warning |
| Interoperability    | ONVIF (Profile S & Profile G & Profile T & Profile M); CGI                                                                                                                                                                                                                 |
| User/Host           | 20 (Total bandwidth: 80 M)                                                                                                                                                                                                                                                 |
| Storage             | FTP; SFTP; Micro SD card (support max. 1 TB); NAS                                                                                                                                                                                                                          |
| Browser             | IE: IE 9 and later<br>Edge: Edge 79 and later<br>Chrome: Chrome 102 and later<br>Firefox: Firefox 88 and later                                                                                                                                                             |
| Management Software | Smart PSS Lite; DSS; DMSS; DoLink Care                                                                                                                                                                                                                                     |
| Certification       |                                                                                                                                                                                                                                                                            |
| Certifications      | CE-LVD: EN62368-1;<br>CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU                                                                                                                                                                                           |

## Port

|              |                                                               |
|--------------|---------------------------------------------------------------|
| RS-485       | 1 (baud rate range: 1200 bps–115200 bps)                      |
| Audio Input  | 1 channel (RCA port)                                          |
| Audio Output | 1 channel (RCA port)                                          |
| Alarm Input  | 2 channels in: wet contact, 5 mA 3–5 VDC                      |
| Alarm Output | 2 channels out: wet contact, 300 mA 12 VDC                    |
| Power Output | 12 VDC power output, max. current 165 mA, peak current 700 mA |

## Power

|                   |                                                                                                                                                |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Power Supply      | 12 VDC (±30%); PoE+(802.3at); ePoE                                                                                                             |
| Dual Power Backup | When the power adapter and PoE provide power at the same time, disconnect one of them. The device will continue to work, but will not restart. |
| Power Consumption | Basic: 4.3 W (12 VDC); 5.5 W (PoE)<br>Max.: 22.1 W (12 VDC); 23.6 W (PoE) (intelligence on + IR on + speaker on)                               |

## Environment

|                       |                                      |
|-----------------------|--------------------------------------|
| Operating Temperature | –40 °C to +60 °C (–40 °F to +140 °F) |
| Operating Humidity    | ≤95% (RH), non-condensing            |
| Storage Temperature   | –40 °C to +60 °C (–40 °F to +140 °F) |
| Storage Humidity      | ≤95% (RH), non-condensing            |
| Protection            | IP67; IK10                           |

## Structure

|                    |                                                                     |
|--------------------|---------------------------------------------------------------------|
| Casing Material    | Metal                                                               |
| Product Dimensions | 278.6 mm × 124.0 mm × 140.4 mm (10.97" × 4.88" × 5.53") (L × W × H) |
| Net Weight         | 2 kg (4.41 lb)                                                      |
| Gross Weight       | 2.64 kg (5.82 lb)                                                   |

## Ordering Information

| Type                   | Model                    | Description                                                              |
|------------------------|--------------------------|--------------------------------------------------------------------------|
| 2MP Camera             | DH-IPC-MFW5241T2P-E3-ASE | 3 × 2 MP Triple-Sight Perimeter Protection Bullet WizMind Network Camera |
|                        | PFA124                   | Water-proof Junction Box                                                 |
| Accessories (Optional) | PFA156                   | Pole Mount Bracket                                                       |
|                        | PFM320D                  | 12 VDC 2 A Power Adapter                                                 |
|                        | PFM900-E                 | Integrated Mount Tester                                                  |
|                        | TF-P100                  | MicroSD Memory Card                                                      |

## Accessories

Optional:



PFA124  
Water-proof Junction Box



PFA156  
Pole Mount Bracket



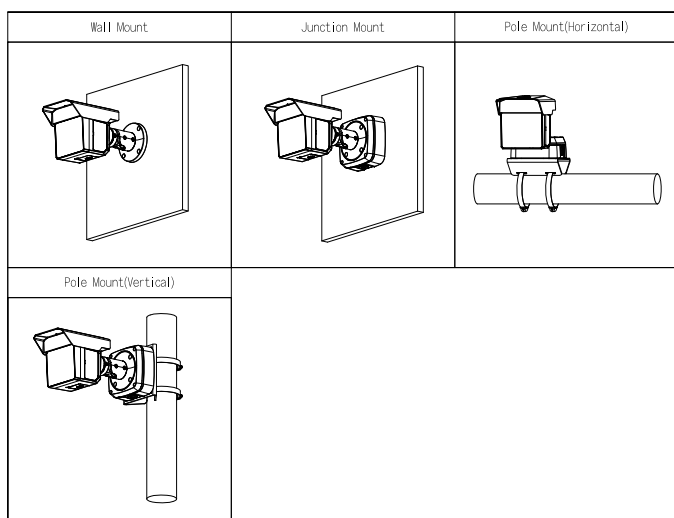
PFM320D  
12 VDC 2 A Power  
Adapter



PFM900-E  
Integrated Mount Tester



TF-P100  
MicroSD  
Memory Card



## Dimensions (mm[inch])

