

DHI-HY-FT431LFP

Flame Detection Network Camera



System Overview

Together with Visible and Thermal technology, this flame detection network camera provides an all-in-one solution for video surveillance. This camera has the ability to detect flame from long range, supports cold and hot spot alarm function and industrial temperature detection alarm functions, enables flame tracking and positioning, and provides intelligent visual and audible warning. Featuring remote intercom and alarm input/output functionality, it realizes convenient linkage.

Functions

Flame Detection

Integrating thermal and video surveillance, detect flame based on abnormal temperature and conform details through the camera.

Smart H.265+ & Smart H.264+

With advanced scene-adaptive rate control algorithm, Dahua smart encoding technology realizes the higher encoding efficiency than H.265 and H.264, provides high-quality video, and reduces the cost of storage and transmission.

Sound and LED Indication

Supports the light alarm and voice alarm when flame is detected, to realize the deterrence and effective intervention. The camera is built in multiple voices for selection, and supports customized voice importing.

Remote Intercom

Built-in MIC and speaker enable remote intercom between software platform and App.

Alarm Output

Built-in alarm input and output port to realize linkage output.

- Industry leading uncooled VOx focal plane detector with high sensitivity
- Supports fire detection alarm, cold and hot spot alarm, and industrial temperature detection alarm functions
- Supports sound and LED indication, and supports binocular fusion
- Visible light adopts a 4MP 1/2.7 inch CMOS image sensor, which has good low illumination effect and high image clarity
- Support multi-level user management, humanized monitoring, confidentiality, and permission management
- Supports H.265 encoding with high compression ratio, achieving ultra-low bitstream transmission
- Supports 1-way alarm input and 1-way alarm output functions, supports max. 256 G Micro SD card
- Built in MIC and high volume speakers, high decibel alarm sound 70dB $\geq 1m$ (A-weighted)
- Built in high-efficiency infrared fill light, with a maximum infrared monitoring distance of 25 meters
- Supports DC12V/POE power supply mode for easy engineering installation
- Supports IP67 protection level

Scene

This device is applicable to most places where both fire alarm and video surveillance are needed, such as:

- Community
- Shopping mall
- Warehouse
- Libraries and archive rooms
- Garbage rooms

| Technical Specification | |
|--------------------------------|--|
| General | |
| Appearance | Bullet |
| Type | Radiometry |
| Thermal | |
| Detector Type | Vanadium oxide uncooled focal plane detector |
| Effective Pixels | 120 (H) × 90 (V) |
| Pixel Pitch | 17 μm |
| Spectral Range | 8 μm–14 μm |
| Sensitivity (NETD) | < 60mK (@f/1.0, 300K) |
| Focal Length | 1.2 mm |
| Field of View | Horizontal: 90° Vertical: 67.5° |
| Thermal Focus Control | Fixed-focal |
| Close Focus Distance | 0.5 m (1.65 ft) |
| Aperture | F1.1 |
| Flame Detection Distance | 10 m, flame size of 10 cm x 10 cm |
| Thermal Noise Reduction | 3D NR |
| Image Flip | Normal, corridor mode, reflection |
| Color Palettes | Supports 12 adjustable pseudo colors including White Heat, Lava, Iron Red, Hot Iron, Medical, Arctic, Rainbow, Black Heat, Human Screening, Red Paint, Blue Heat, and Green Heat |
| Temperature Detection Range | -10°C to +200°C (+14°F to 392°F) |
| Temperature Detection Accuracy | MAX (±5°C, ±5%) |
| Temperature Detection Mode | 1. Support real-time point temperature detection function 2. There are three rules for measuring temperature simultaneously: points, lines, and polygons 3. Supports temperature alarm function 4. Supports cold and hot spot alarm function 5. The temperature detection unit is Fahrenheit and Celsius, which can be set |
| Visible | |
| Image Sensor | 1/2.7" CMOS |
| Max. Resolution | 2688(H)×1520(V) |
| Pixel | 4 MP |
| Scanning System | Progressive |
| Min. Illumination | Color: 0.0052 lux B/W: 0.0028 lux 0 lux (IR on) |
| Visible AGC | Auto; Manual |
| Visible Noise Reduction | 2D NR; 3D NR |
| S/N Ratio | ≥ 55 dB |
| White Balance | Auto/indoor/outdoor/track/manual/natural/street lamp |

| | |
|----------------------------|---|
| Electronic Shutter Speed | 1/3 s–1/100000 s (manual/auto) |
| BLC | Yes |
| WDR | DWDR |
| HLC | Yes |
| Day/Night | Auto (ICR); Color and B/W |
| Iris Control | Fixed |
| Image Flip | Normal (0 °), corridor mode (90 °/270 °), Mirror/Flip (180 °) |
| Exposure Compensation | Yes |
| Visible Focus Control | Fixed-focal |
| Focal Length | 4 mm |
| Field of View | H: 85° V: 44° D: 99° |
| Close Focus Distance | 1 m (3.28 ft) |
| Aperture | F1.6 |
| Illuminator Type | 2 (IR LED) |
| Illuminator On/Off Control | Auto; Manual |
| Illumination Distance | 25 m (80.35 ft) |

Audio and Video

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|-----------------------|--|
| Video Compression | H.265; H.264; H.264H; H.264B; MJPEG |
| Resolution | Visible: Main stream: (4M (2688×1520)/1080P (1920 × 1080)/1.3M (1280 × 960)/720P (1280 × 720), default (1920 × 1080) Sub stream: (D1 (704 × 576)/VGA (640×480)/CIF (352×288)), default (704×576) |
| Video Frame Rate | Visible: Main stream: 1 fps–25 fps adjustable, 25 fps by default Sub stream: 1 fps–25 fps adjustable, 25 fps by default |
| Audio Compression | MPEG2-Layer2; G.711a; G.711mu; AAC; PCM; G.722.1; G.726 |
| Image Encoding Format | JPEG |
| Audio Sampling | 8K; 16K |

Function

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|-----------------------|---|
| Built-in MIC | Yes |
| Built-in Speaker | Yes |
| Sound and Light Alarm | Yes |
| Network Protocol | HTTPS; HTTP; TCP; ARP; RTSP; RTP; UDP; RTCP; SMTP; FTP; DHCP; DNS; DDNS; PPPOE; IPv4/v6; SNMP; QoS; UPnP; NTP |
| Privacy Masking | Yes (4 areas) |
| Storage | FTP; NAS; SFTP |
| Interoperability | ONVIF; CGI; Wisualarm |
| Browser | IE: IE 9 and later (Edge is not supported) Chrome: 42 and earlier Firefox: 42 and earlier |
| User/Host | Up to 10 (total bandwidth: 100 MB) |

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|-----------------------|---|
| Default | Support one-click restore |
| Security | Username and password; MAC address; HTTPS; IEEE802.1x; network access control |
| User Management | Up to 10 users |
| Malfunction Detection | ICON network disconnection detection; IP conflict detection |

Intelligence

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|-------------------------------------|-----------------|
| Heat Detection | Yes |
| Heat Detection Distance (recommend) | 10 m (32.81 ft) |

Port

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|---------------|--------------------------------------|
| Network Port | 1 RJ-45 PoE 10M/100M Ethernet ports |
| Alarm Input | 1 channel in: 5mA 3V–5V DC |
| Alarm Output | 1 channel out: 300mA 12V DC |
| Alarm Linkage | Trigger switch output/email/snapshot |

Power

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|-------------------|------------------------------|
| Power Supply | DC12V(±30%)/POE |
| Power Consumption | Basic: 1.8 W Max.: 5.16 W |

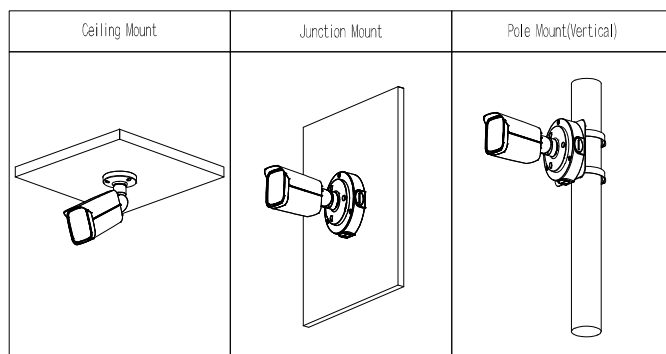
Environment

| | |
|-----------------------|----------------------------------|
| Operating Temperature | –40°C to +60°C (-40°F to +140°F) |
| Operating Humidity | ≤ 95% |

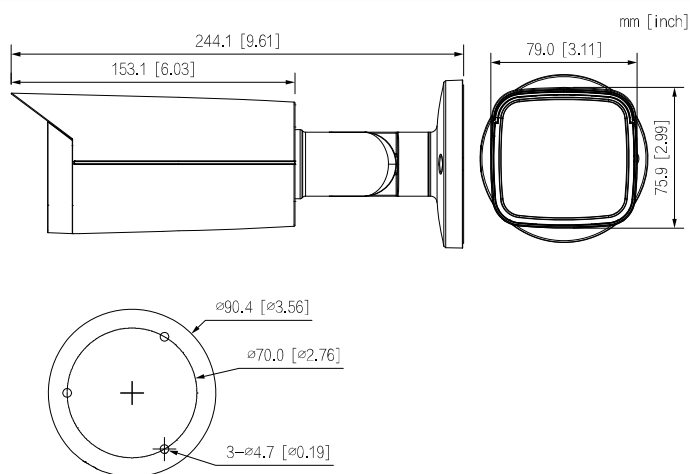
Construction

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|----------------------|---|
| Protection | IP67 |
| Product Dimensions | 244.1 mm×79.0 mm×75.9 mm (9.61" × 3.11" × 2.99") |
| Packaging Dimensions | 307.0 mm×155.0 mm×143.0 mm (12.09" × 6.10" × 5.63") (L × W × H) |
| Net Weight | 0.8 kg (1.77 lb) |
| Gross Weight | 1.1kg (2.43 lb) |
| Installation | Wall mount; Ceiling mount; Vertical pole mount |
| Power Adapter | Optional |
| Lens | Standard |
| Certifications | CE; UKCA |

Installation



Dimensions (mm[inch])



Accessories

Optional:



PFA130-E
Water-proof
Junction Box



PFA152-E
Pole Mount Bracket



DHI-TF-P100
Micro SD Card
P100 256GB



PFM321D
12 VDC 1A
Power Adapter

Ordering Information

| Type | Part Number | Description |
|--------------------------------|-----------------------|--------------------------------|
| Flame Detection Network Camera | DHI-HY-FT431LFP-TD1F4 | Flame Detection Network Camera |
| Accessories (optional) | PFM321D | 12 VDC 1A Power Adapter |
| | PFA130-E | Water-proof Junction Box |
| | PFA152-E | Pole Mount Bracket |
| | DHI-TF-P100 | Dahua micro SD Card P100 256GB |