DHI-HY-FT431LDP

Flame Detection Network Camera



- 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 light alarm linkage, 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, convenient linkage
- Built in MIC and high volume speakers, high decibel alarm sound 70dB ≥ 1m (A-weighted)
- Built in high-efficiency infrared fill light, with a maximum infrared monitoring distance of 15 meters
- Support DC12V/POE power supply mode for easy engineering installation
- Supports IP66 protection level

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 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.

Visible and Audible Alarm Notification
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.

Flame Tracking
Identifying and positioning flame.

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.

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	Eyeball
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	10m, 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 detecting 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	1 (IR LED)
Illuminator On/Off Control	Auto; Manual
Illumination Distance	15 m (49.21 ft)

Audio and Video

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 (640x480)/CIF (352x288)), default (704x576)
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

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; GB/T28181; CGI; Imou
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)
Default	Support one-click restore

Security	Authorized username and password; attached MAC address; encrypted HTTPS; IEEE 802.1x; controlled network access
User Management	Up to 10 users
Malfunction Detection	ICON network disconnection detection; IP conflict detection

Intelligence

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

Port

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

Power Supply	DC12V(±30%)/POE
Power Consumption	Basic: 1.8 W Max.: 3 W

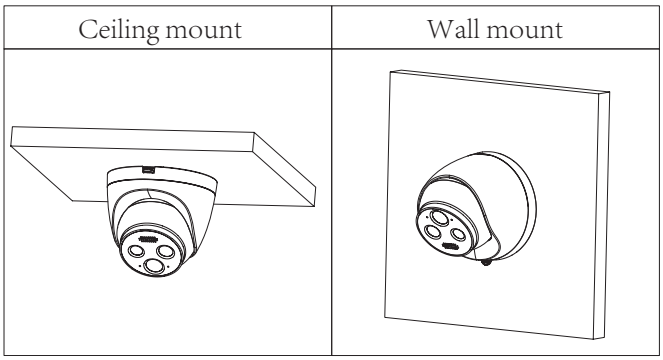
Environment

Operating Temperature	–10°C to +55°C (+14°F to +131°F)
Operating Humidity	≤ 95%
Storage Temperature	–20°C to +70°C (–4°F to +158°F)

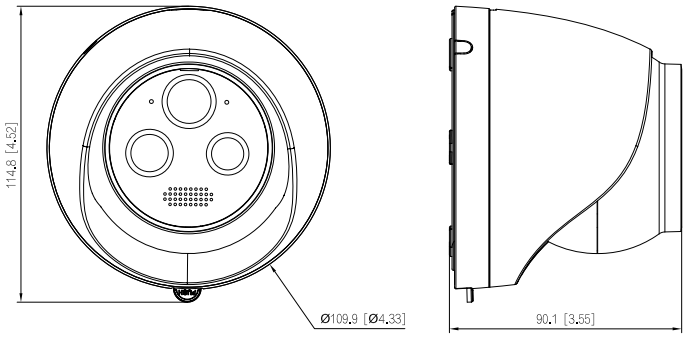
Construction

Protection	IP66
Product Dimensions	ϕ109.9 mm × 90.1 mm (ϕ4.32" × 3.54")
Packaging Dimensions	157 mm*157 mm*138 mm (6.17" × 6.17" × 5.43")(L × W × H)
Net Weight	0.35 kg (0.78 lb)
Gross Weight	0.5 kg (1.12 lb)
Installation	Wall mount; Ceiling mount; Vertical pole mount
Power Adapter	Optional
Lens	Standard
Certifications	CE; FCC

Installation



Dimensions (mm[inch])



Ordering Information

Type	Part Number	Description
Flame Detection Network Camera	DHI-HY-FT431LDP	Flame Detection Network Camera
Accessories (optional)	PFM300-E	DC Adapter
	PFM301-E	Power
	DH-PFB205W-E	Wall mounted bracket

Accessories

Optional:



PFM300-E
DC Adapter



PFM301-E
Power

Rev 001.001 © 2023 Dahua. All rights reserved. Design and specifications are subject to change without notice.
Pictures in the document are for reference only, and the actual product shall prevail.