



System Overview

The DHI-HY-FT443HFP Flame Detection Network Camera Pro is an intelligent thermal imaging product developed specifically to meet the needs of the fire protection industry. Adopts dual-channel design of visible light and thermal imaging, it supports triple IR flame detection, fulfilling the requirements for integrated security and fire protection. It supports 25 pseudo-color modes and multiple functions including real-time temperature detection, fire early warning, cold and hot spot alerts, temperature alarms, smoke and flame shape detection, stereo analysis (smoking detection), and IVS (Tripwire and Intrusion detection).

Scene

It is applicable to a wide range of settings with fire emergency plan needs, such as schools, stadiums, airports, factories and warehouses.

Functions

Firefighting Thermal Imaging

Support real-time temperature detection, fire early warning, cold/hot spot alerts, and temperature alarms.

Offer adjustable 25 pseudo-color modes including Iron Red, Hot Iron, Medical, Arctic, Black Hot, Human Body Screening, Red Trace, Blue Hot, and Green Hot.

Infrared Pyroelectric

Support 3.8um + 4.5um + 5.0um triple IR flame detection, the core components are protected by nitrogen, with strong anti-interference ability.

Intelligent Detection

Support smart functions such as smoke and flame shape detection, stereo analysis (smoking detection), and IVS (Tripwire and Intrusion detection).

- Industry leading uncooled VOx focal plane detector with high sensitivity
- Supports flame detection, cold and hot spot alarm and industrial temperature detection
- Supports sound and LED indication, and supports binocular fusion
- AI functions: smoke and flame shape detection, stereo analysis (smoking detection), and IVS (Tripwire and Intrusion detection)
- Visible light adopts a 5MP 1/2.7 inch CMOS image sensor, which has good low illumination effect and high image clarity
- Support multi-level user management, humanized monitoring, and permission management
- Support H.265 encoding with high compression ratio, achieving ultra-low bitstream transmission
- Support 3-way alarm input and 2-way alarm output functions, support 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 illuminator and white light, with a maximum illumination distance of 50 meters
- Supports DC12V-24V/POE power supply
- IP67 Rated

Composite Detection

Support composite detection function, which can filter false alarms such as high temperature background objects and sunlight in complex scenes.

Intelligent Encoding (H.265+ & H.264+)

Dahua's intelligent encoding technology employs advanced sceneadaptive bitrate control algorithms to achieve higher encoding efficiency than (H.265 & H.264). It provides high-quality video while significantly reducing storage and transmission costs.

Audible and Visual Warning

Support alarm event linkage for light warning and sound warning (with multiple built-in voice options and support for user-defined voice import), achieving deterrence during the event and effective intervention.

Remote Intercom

The device is equipped with a built-in microphone (MIC) and speaker, enabling remote intercommunication through the platform and APP.

Alarm Output

The device is equipped with built-in alarm input and output interfaces, enabling linkage output.

Technical Specification

General	
Appearance	Bullet
Type	Industrial Temperature Monitoring
Triple IR Flame Detection	3.8μm,4.5μm,5.0μm
Target size	33cm*33cm, 20cm*20cm
Detection Distance	28m, 20m
Sensitivity	4-level settable

Thermal	
Detector Type	Vanadium oxide uncooled focal plane detector
Effective Pixels	256 (H) × 192 (V)
Pixel Pitch	12 μm
Spectral Range	8 μm–14 μm
Sensitivity (NETD)	≤50mK@f/1,300K,30Hz
Focal Length	3.2 mm (0.13")
Field of View	H: 57°; V: 44°
Thermal Focus Control	Fixed-focal
Close Focus Distance	0.5 m (1.64 ft)
Aperture	F1.1
Thermal Noise Reduction	3D NR
Image Flip	Normal, corridor mode, reflection
Color Palettes	25 (Iron Red/Hot Iron/Medical/Arctic/Rainbow 1/ Rainbow 2/Black Hot/Human Screening/Painting/ Blue Hot/Green Hot/Medical 1/Medical 2/Medical 3/Rainbow 3/Painting 2/Painting 3/Icefire/Reverse Icefire/Layer/Brown/Winter/Highlight/Amber)
Temperature Monitoring Distance	1 m-5 m (3.28 ft-16.4 ft)
Temperature Monitoring Range	-10°C to +500°C (+14°F to 932°F)
Temperature Monitoring 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. The temperature detection unit is Fahrenheit and Celsius, which can be set

Flame Detection Distance	
Focal Length	3.2 mm
Distance	35 m (114.83 ft)

Note: The table displays the measured distances obtained from using the target size 20 cm x 20 cm (7.87" × 7.87") for testing in an environment where the temperature is 23 °C and the relative humidity is below 60%

Temperature Detection Range	
Distance	Min. Distance: 1m(3.25ft) Max.Distance: 5m(16.40ft)

Note: The table displays the measured distances obtained from using the target size 10 cm x 10 cm (3.94" × 3.94") for testing in an environment where the temperature is 23 °C and the relative humidity is below 60%

Visible	
Image Sensor	1/2.7" CMOS
Max. Resolution	2592(H)×1944(V)
Pixel	5 MP
Scanning System	Progressive
Min. Illumination	Color: 0.005 lux B/W: 0.0005 lux 0 lux (IR on)
Visible AGC	Auto; Manual
Visible Noise Reduction	2D NR; 3D NR
S/N Ratio	≥ 55 dB
White Balance	Automatic/Indoor/Outdoor/Tracking/Manual/Daylight/ Streetlights
Electronic Shutter Speed	1 s to 1/30000 s (manual/auto)
BLC	Yes
WDR	DWDR
HLC	Yes
Day/Night	Auto (ICR)
Iris Control	Fixed
Image Flip	Normal (0°), Flip (90°/270°), Reflection (180°)
Exposure Compensation	Yes
Visible Focus Control	Fixed-focal
Focal Length	4 mm (0.16")
Field of View	H: 78°; V: 41°
Close Focus Distance	1.7 m (5.58 ft)
Aperture	F1.6
Illuminator Type	Infrared
Illuminator On/Off Control	Auto; Manual
Illumination Distance	50 m (160.04 ft)

Smoke and Flame Shape Detection	
Smoke Shape Detection	30m, target size:0.1m²
Flame Shape Detection	30m, target size:0.1m²

Smoking Detection	
Distance	Recommend Distance: 3 m (9.84 ft) Max.Distance: 5 m (16.4 ft)

Perimeter Protection Distance (IVS Distance)	
Distance (Vehicle)	110 m (360.89 ft)
Distance (Human)	40 m (131.23 ft)

Audio and Video

Video Compression	H.265; H.264; H.264H; H.264B; MJPEG
Resolution	Main Stream: 5M (2592×1944) 4M (2688×1520) / 1080P(1920×1080) (by default)/1.3M (1280×960)/720P (1280×720) Sub stream: D1 (704× 576)(by default)/VGA(640x480)/CIF (352x288)
Video Frame Rate	Main Stream:1fps~25fps adjustable, 25fps by default Sub stream: 1fps~25fps adjustable, 25fps 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
Indicator	Status for Fault, Power, and Alarm
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; Dahua SDK; 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: 1000 MB)
Default	Support one-click restore
Error Detection	Network Disconnection; IP Address Conflict
Security	Username and password; MAC address; HTTPS; IEEE802.1x; network access control
User Management	Supports up to 10 users, with multi-level user permission management divided into 2 levels: management group and user group
Malfunction Detection	Network disconnection detection; IP conflict detection
Maximum Supported Micro SD Card	256 GB

Intelligence

Flame Detection	Yes
Cold & Hot Spot Detection	Yes
Temperature Alarm	Yes
Advance Intelligence	Smoke and Flame Shape Detection IVS (Tripwire and Intrusion detection) Stereo Analysis (Smoking Detection) Human & Vehicle Classification

Port

Network Port	1 RJ-45 Port, supports 10M/100M/1000M
Alarm Input	3-way wet node, supports DC 3-5V, 5mA

Alarm Output	2-way (dry contact, supports maximum 30V 1A current/ maximum for AC50V potential, 0.5A current)
Audio Input	1 channel (RCA connector)
Audio Output	1 channel (RCA connector)
Alarm Linkage	Trigger switch Output / Email / Snapshot

Power

Operating Voltage	DC12-24V (±30%); POE (802.3af)
Power Supply	DC12V-24V/POE
Power Consumption	Basic: 4.2W (DC12V); Max.: 13.1W (DC12V)

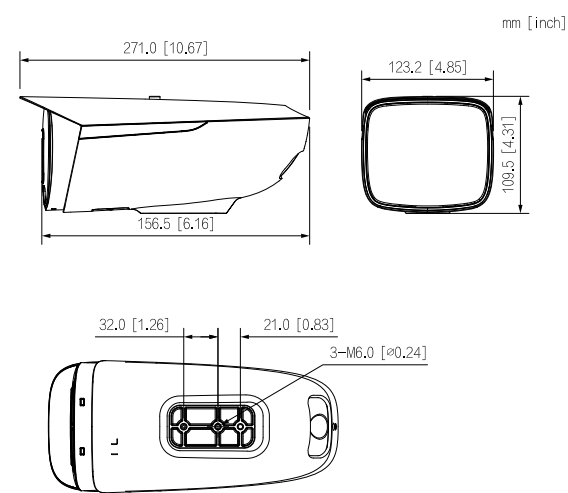
Environment

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

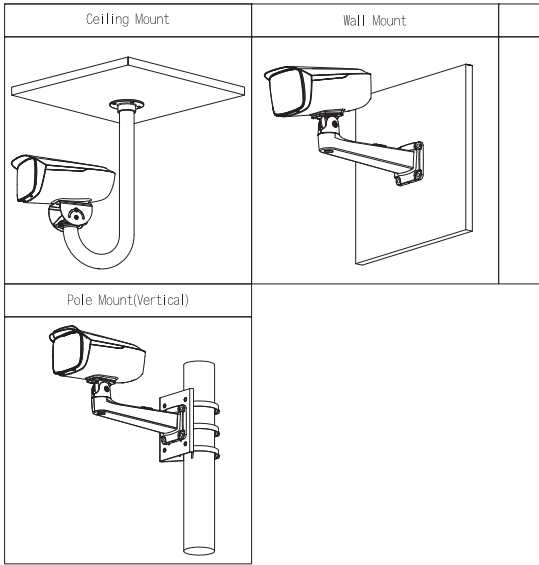
Construction

Protection	IP67
Product Dimensions	271.0 mm×123.2 mm×109.5 mm (10.67 × 4.85" x4.31")
Packaging Dimensions	366.0 mm×176.0 mm×178.0 mm (14.41" × 6.93" × 7.01")(L × W × H)
Net Weight	1.71 kg (3.77 lb)
Gross Weight	1.99kg (24.39 lb)
Installation	Wall mount; Ceiling mount; Pole mount
Power Adapter	Optional
Lens	Standard

Dimensions (mm[inch])



Installation



Ordering Information

Type	Part Number	Description
Flame Detection Bullet Network Camera	DHI-HY-FT443HFP	Thermal: 3.2 mm lens Visible: 5 MP 4 mm lens
Accessories (optional)	PFM300	Power Adapter
	PFA160 PFA150 DH-PFB605W	Pole Mount Bracket
	PFB603C	Ceiling Mount Bracket
	PFB605W	Wall Mount Bracket
	PFM320D	Power Adapter

Accessories

Optional



PFM300
Power Adapter



PFA150
Power Mount Bracket



PFB603C
Ceiling Mount Bracket



PFB605w
Wall Mount Bracket



PFM320D
Power Adapter



PFA160
Power Mount Bracket