DHI-HY-FT443MFP

Flame Detection Bullet Network Camera



- Supports flame detection, cold and hot spot alarm and industrial temperature detection
- AI function: smoke and flame shape detection, stereo analysis (smoking detection), and IVS (tripwire and intrusion detection)
- 5 Megapixel progressive scan CMOS
- Supports IP passlist and blocklist, MAC passlist and blocklist
- Built-in infrared illuminator and white light, with a maximum illumincation distance of 50 meters
- Supports DC12V-24V/POE power supply
- IP67 Rated

System Overview

The DHI-HY-FT443MFP Flame Detection Bullet Network Camera is an intelligent thermal imaging product developed specifically to meet the needs of the fire protection industry. It can be applied in both indoor and outdoor fire protection scenarios, fulfilling the requirements for integrated security and fire protection. The main functions it supports include: real-time temperature measurement, 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 measurement, 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.

Intelligent Detection
Support smart functions such as smoke and flame shape detection, stereo analysis (smoking detection), and IVS (tripwire and intrusion detection).

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 sharp Industrial Temperature Monitoring

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 mm (0.12''), 7 mm (0.28'')
Field of View	3 mm (0.12"): H: 57°; V: 44°; D: 70° 7 mm (0.28"): H: 24°; V: 18°; D: 30°
Close Focus Distance	3 mm (0.12"): 0.4 m (1.31 ft) 7 mm (0.28"): 1.3 m (4.27 ft)
Aperture	F1.1
Thermal Noise Reduction	3D NR
Temperature Monitoring Distance	3 mm: 0.5 m-2.5 m (1.64 ft-8.20 ft) 7 mm: 1 m-8 m (3.28 ft-26.25 ft)
Temperature Monitoring Range	-10°C to +500°C (+14°F to 932°F)
Temperature Monitoring Accuracy	MAX (±5°C, ±5%)

Flame Detection Distance

Focal Length	3 mm/7 mm
Distance	35 m (114.83 ft)/85 m (278.87 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
Min. Illumination	Color: 0.00056 lux B/W: 0.00064 lux 0 lux (IR on)
Visible AGC	Auto; Manual
Visible Noise Reduction	2D NR; 3D NR
S/N Ratio	≥ 45 dB
Field of View	4 mm: H: 87°; V: 56°; D: 95° 6 mm: H: 51°; V: 31°; D: 59°
Electronic Shutter Speed	1 s to 1/30000 s (manual/auto)
Strong Light Suppression	Yes
BLC	Yes
WDR	DWDR
White Balance	Automatic/Indoor/Outdoor/Tracking/Manual/Daylight/Streetlights
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"), 6 mm (0.24")
Close Focus Distance	4 mm (0.16"): 1 m (3.28 ft) 6 mm (0.24"): 2 m (6.56 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)/1.3M (1280×960)/720P (1280×720)
Supported Resolutions Sub	D1 (704x576)/VGA (640x480)/CIF(352x288)
Video Frame Rate	1fps~25fps adjustable
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; Internet Protocol Version 4 (IPv4) /v6;SNMP; Quality of Service (QoS); UPnP; NTP
Privacy Masking	Yes (4 areas)
Storage	FTP; NAS; SFTP
Interoperability	ONVIF; CGI; Dahua SDK; Vision Cloud
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
Maximum Supported Micro SD Card	256 GB

Intelligence

General Intelligence	Tripwire; Intrusion
Adavance Intelligence	Flame Detection Alarm Cold & Hot Spot Alarm Human & Vehicle Classification Stereo analysis (Smoking Detection)

Port

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

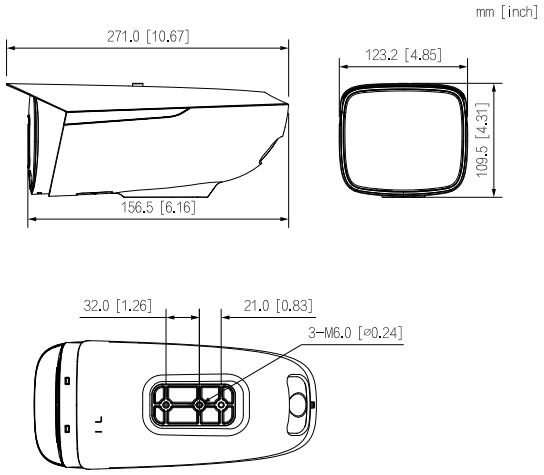
Environment

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

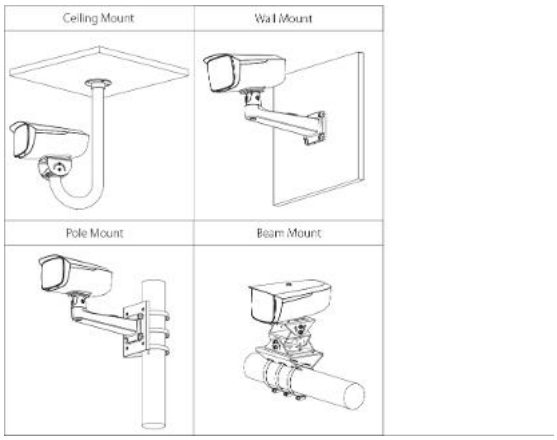
Construction

Protection	IP67
Installation	Wall mount; Ceiling mount; Pole mount
Power Adapter	Optional

Dimensions (mm[inch])



Installation



Accessories

Optional



PFM300
Power Adapter



PFA150
Power Mount Bracket



PFB603C
Ceiling Mount Bracket



PFB605w
Wall Mount Bracket



PFM320D
Power Adapter

Ordering Information

Type	Part Number	Description
Flame Detection Bullet Network Camera	DHI-HY-FT443MFP-TD3F4	Thermal: 256 × 192 3 mm lens Visible: 5 MP 4 mm lens
	DHI-HY-FT443MFP-TD7F6	Thermal: 256 × 192 7 mm lens Visible: 5 MP 6 mm lens
Accessories (optional)	PFM300	Power Adapter
	PFA150	Pole Mount Bracket
	PFB603C	Ceiling Mount Bracket
	PFB605W	Wall Mount Bracket
	PFM320D	Power Adapter