DHI-TPC-BF5421-T

Thermal Network Hybrid Bullet Camera



- Vanadium oxide uncooled focal plane detector.
- Uses a 1/2.8 inch CMOS image sensor.
- Supports fire detection, smoking detection, tripwire, intrusion, call detection, target classification, and alarm linkages.
- Features temperature measurement.
- Built-in white light and speaker.
- View videos on the web, app, PC and more.
- Micro SD memory, IP67, PoE, ePoE.
- Supports up to 18 color palettes.

System Overview

Leveraging the latest in thermal technology, the thermal network hybrid bullet camera features visual and thermal channels providing you with an all-in-one video monitoring solution. It supports 18 color palettes and is applicable for use in indoor and outdoor scenarios such as factories, substations and machine rooms.

Scene

Applicable for use in scenarios that need to measure device temperatures such as factories, stations, substations and machine rooms.

Functions

Uncooled Vox Technology

Blends a vanadium oxide uncooled focal plane detector with compact volume and high thermal sensitivity (NETD) to accurately capture image details and detect temperature differences.

Fire Detection & Alarm

Harnesses a self-developed, core fire detection technology to maintain high accuracy levels and a low false alarm rate. It is widely used for fire detection in various industries.

Temperature Measurement

Uses a self-developed, temperature measurement technology to maintain highly accurate temperature measurements in windless indoor conditions with relatively stable temperatures.

AI Intelligence

Adopts smart dual illuminators technology, to accurately detect violations such as calling and smoking.

Intelligent Video System (IVS)

IVS is a built-in video analytics algorithm that delivers intelligent functions to monitor a scene for tripwire violations, intrusion detection, and abandoned or missing objects.

Sound and Light Alarm

When an abnormal event is detected by a thermal or visible-light channel, the white light and loudspeaker will switch on to release a visual or voice prompt, then it will begin recording and take snapshots.

Technical Specification

General

Appearance	Thermal Network Hybrid Bullet Camera		
Type	Radiometry		

Thermal

Detector Type	Vanadium oxide uncooled focal plane detector		
Effective Pixels	400 × 300		
Pixel Pitch	17 μm		
Spectral Range	8 μm –14 μm		
Thermal Sensitivity (NETD)	≤ 40 mK@f/1.0		
Focal Length	7.5 mm	13 mm	25 mm
Field of View	H: 53.7° V: 39.7°	H: 30° V: 22.6°	H: 15.5° V: 11.6°
Focus Control	Athermalized		
Aperture	F1.0		
Focal Length	7.5 mm	13 mm	25 mm
DRI Effective Distance Human (1.8 m × 0.5 m)	D: 221 m R: 57 m I: 28 m	D: 382 m R: 98 m I: 49 m	D: 735 m R: 189 m I: 95 m
DRI Effective Distance Vehicle (4.0 m × 1.5 m)	D: 558 m R: 147 m I: 74 m	D: 1020 m R: 225 m I: 127 m	D: 1961 m R: 490 m I: 245 m

Digital Detail Enhancement (DDE)	Yes
Digital Zoom	19 levels
AGC	Auto/Manual
Noise Reduction	2D NR/3D NR
Image Flip	0°; 90°; 180°; 270°/Mirror
Color Palettes	18 (white hot/black hot/fusion/rainbow/globow/ironbow1/ironbow2/sepia/color1/color2/icefire/rain/red hot/green hot/spring/summer/autumn/winter)
Temperature Measurement Range	Low Temperature Mode: –20 °C to +150 °C (–4 °F to +302 °F) High Temperature Mode: +100 °C to +550 °C (+212 °F to +1022 °F)
Temperature Measurement Error	Max. (±2 °C, ±2%) Operating temperature: –20 °C to +60 °C (–4 °F to +140 °F)
Temperature Measurement Mode	Spot: 12 Line: 12 Area: 12 Support 12 rules simultaneously

Visible

Image Sensor	1/2.8"CMOS	
Max. Resolution	1920 × 1080	
Pixel	2 MP	
Horizontal Definition	≥ 1100 TVL	
Min. Illumination	Color: 0.01 lux Black & white: 0.001 lux 0 lux (IR on)	
AGC	Auto/Manual	
Noise Reduction	2D NR/3D NR	
S/N Ratio	> 55 dB	
White Balance	Auto/Manual/Indoor/Outdoor/Tracking/Sodium lamp/Street lamp/Natural	
Defog	Electronic defog	
Electronic Shutter Speed	1 s–1/30,000 s (auto/manual)	
BLC	Yes	
WDR	Yes	
HLC	Yes	
Day/Night	Auto (ICR)/Color/B/W	
Iris Control	Fixed	
Image Flip	0°; 90°; 180°; 270°/Mirror	
Exposure Compensation	Yes	
Focal Length	4 mm	8 mm
Field of View	H: 84.1° V: 45.4°	H: 38.4° V: 22.2°
Aperture	F2.0	F1.9
Illuminator Type	IR	
Illuminator On/Off Control	Auto/Manual	
Illumination Distance	35 m (114.5 ft)	50 m (164.0 ft)
Illuminator Angle	60°	45°

Audio and Video

Video Compression	H.265; H.264M; H.264H; H.264B
Resolution	Thermal Main stream: 1280 × 1024; 1280×960; 1280 × 720; 400 × 300; 192 × 144; 1280×960 (default) Sub stream: 640 × 512; 640 × 480; 400 × 300; 192 × 144; 400 × 300 (default) Visible Main stream: 1080p (1920 × 1080); 720p (1280 × 720); D1 (704 × 576); 1080p (default) Sub stream: D1 (704 × 576); CIF (352 × 288); 352 × 288 (default)
Video Frame Rate	Thermal (50 Hz): Main stream: 1 fps–25 fps Sub stream: 1 fps–25 fps Visible (50 Hz): Main stream: 1 fps–25 fps Sub stream: 1 fps–25 fps Thermal (60 Hz): Main stream: 1 fps–30 fps Sub stream: 1 fps–30 fps Visible (60 Hz): Main stream: 1 fps–30 fps Sub stream: 1 fps–30 fps
Video Compression	G.711a; G.711mu; PCM
Image Encoding Format	JPEG

Function

Two-way Audio	Yes
Sound and Light Alarm	Local audio and white light alarm prompts
Network Protocol	HTTP; HTTPS; TCP; ARP; RTSP; RTP; UDP; RTCP; SMTP; FTP; DHCP; DNS; DDNS; PPPOE; IPv4/v6; SNMP; QoS; UPnP; NTP; Multicast; SFTP; 802.1x
Region of Interest (RoI)	Yes
Regional Focus	NA
Storage	FTP; Micro SD card (optional 512 GB, hot swapping)
Interoperability	CGI
Browser	IE: IE8 and later Chrome: 42 and earlier Firefox: 42 and earlier
User/Host	Up to 20 (total bandwidth: 64 MB)
Security	Authorized username and password; attached MAC address; encrypted HTTPS; IEEE 802.1x; controlled network access
User Management	Up to 20 users; supports multi-level user permissions (2 levels): management group and user group
Malfunction Detection	Network disconnection detection; IP conflict detection; memory card state detection; memory space detection

Intelligence

Fire Detection	Yes
Cold/Hot Spot Trace	Yes
Target Distinction	Human/Vehicle classification

Target Filtering	Yes
Smoking Detection	Yes
Call Detection	Yes

Port

Analog Output	1 × CVBS output; BNC port
Network Port	1 × RJ-45 (10/100 Base-T)
Alarm Input	2
Alarm Output	1
Alarm Linkage	Recording; digital output; built-in sound and light alarm; email; snapshot; access control
Audio Input	1
Audio Output	1
RS-485	1

Power

Power Supply	12 VDC ± 20%, PoE (802.3af), ePoE
Power Consumption	Basic: < 8 W (12 VDC) Max. (adapter excluded): < 18 W

Environment

Operating Temperature	–40 °C to +70 °C (–40 °F to +158 °F)
Operating Humidity	≤ 95%

Physical Characteristics

Protection	IP67
Product Dimensions	262.0 mm × 11.6 mm × 110.6 mm (10.31" × 0.46" × 4.35") (L × W × H)
Packaging Dimensions	Package: 365 mm × 175 mm × 176 mm (14.37" × 6.89" × 6.93") (L × W × H) Protection box: 902 mm × 380 mm × 380 mm (35.51" × 14.96" × 14.96") (L × W × H)
Net Weight	≤ 1.8 kg (3.97 lb)
Gross Weight	≤ 2.5kg (5.51 lb)
Installation	Wall mount; pole mount; corner mount
Power	Optional: S024-1A120200HE; S024-1A120200HK; S024-1A120200HU
Bracket	Wall mount: DH-PFA122 (optional) Corner mount: DH-PFA151 (optional) Pole mount: DH-PFA152-E (optional)

Ordering Information

Type	Model	Description
Radiometry	DHI-TPC-BF5421-TB7F4	Thermal Network Hybrid Bullet Camera
	DHI-TPC-BF5421-TB13F8	Thermal Network Hybrid Bullet Camera
	DHI-TPC-BF5421-TB25F8	Thermal Network Hybrid Bullet Camera
Accessories (Optional)	PFA122	Wall mount
	PFA151	Pole mount
	PFA152-E	Corner mount

Accessories

Optional:



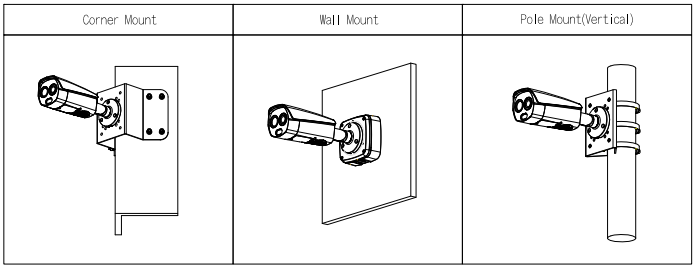
PFA122
Wall mount



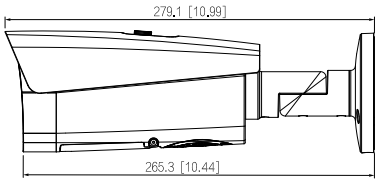
PFA151
Pole mount

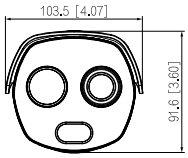


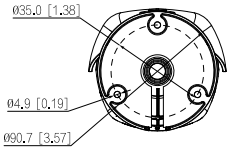
PFA152-E
Corner mount



Dimensions (mm[inch])







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