DH-TPC-BF5401-T

Thermal Network Bullet Camera

· 400 × 300 uncooled VOx thermal sensor technology

· Athermalized lens (thermal), focus-free

· Support temperature measurement

· Various lens optional (7.5/13/25 mm)

· 2/2 alarm in/out

· Micro SD memory, IP67, PoE,ePoE

System Overview

Featuring a fixed lens bullet camera, this series provides an all-in-one solution that is especially beneficial for temperature measurement. Together with Thermal technology, the camera's long range capabilities are able to be utilized even at night.

Functions

Uncooled VOx Technology

Dahua thermal cameras use uncooled VOx sensor technology. Their small size and better performance make them a cost-effective solution for thermal security.

High Sensitivity

High thermal sensitivity (<40 mK) allows cameras to capture more image details and temperature difference information.

Temperature Measurement

Dahua thermal cameras (-T models) provide remote temperature monitoring functionality with the ability to set temperature threshold alarms. Object temperatures can be monitored in daytime or at night, making them ideal for usage in power plant or oil extraction applications where overheating can be dangerous. When the temperature exceeds the set threshold, an alarm is triggered. The temperature range is between-20 °C to 550 °C.

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. A camera with IVS quickly and accurately responds to monitoring events in a specific area.

Environmental

With a temperature range of -40°C to +70°C (-40°F to 158°F) , the camera is designed for extreme temperature environments. Subjected and certified to rigorous dust and water immersion tests, the IP67 rating makes it suitable for demanding outdoor applications.

Protection

The camera allows for wide input voltage tolerance, suitable for the most unstable conditions for outdoor applications. Its 6KV lightning rating provides effective protection for both the camera and its structure against lightning.

Technical Specification

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
Focal Length	7.5 mm; 13 mm; 25 mm
Field of View	7.5 mm: horizontal: 53.7°, vertical: 39.7° 13 mm: horizontal: 30°, vertical: 22.6° 25 mm: horizontal: 15.5°, vertical: 11.6°
Focus Mode	Fixed-focal
Aperture	F1.0

	Lens	Detection	Recognition	Identification
DRI Distance Based on the reference: human (1.8 m × 0.5 m) vehicle (4 m × 1.4 m)	7.5 mm	Vehicle: 558 m (21968.50 ft) Human: 221 m (8700.78 ft)	Vehicle: 147 m (5787.40 ft) Human: 57 m (2244.10 ft)	Vehicle: 74 m (2913.39 ft) Human: 28 m (1102.36 ft)
	13 mm	Vehicle: 1020 m (40157.48 ft) Human: 382 m (15039.37 ft)	Vehicle: 255 m (10039.37 ft) Human: 98 m (3858.27 ft)	Vehicle: 127 m (5000.00 ft) Human: 49 m (1929.13 ft)
	25 mm	Vehicle: 1961 m (77204.72 ft) Human: 735 m (28937.01 ft)	Vehicle: 490 m (19291.34 ft) Human: 189 m (7440.95 ft)	Vehicle: 245 m (9645.67 ft) Human: 95 m (3740.16 ft)

Digital Detail Enhancement (DDE)	Yes
Thermal Image Stabilization	Electronic Image Stabilization
AGC	Auto; manual
Noise Reduction	2D NR; 3D NR
Image Flip	90°/180°/mirror
Color Palettes	18 color modes selectable such as Whitehot/Blackhot/Ironrow/Icefire.
Temperature Measurement Range	Low temperature mode: -20°C (-4°F) to +150°C (302°F) High temperature mode: 0°C (34°F) to +550°C (1022°F)
Temperature Accuracy	Max (±2°C , ±2%) Operating temperature: -20°C (-4°F) to +60°C (140°F)
Temperature Mode	Spot: 12 Line: 12 Area: 12 Support 12 rules simultaneously

Audio and Video

Video Compression	H.265; H.264; H.264H; H.264B; MJPEG
Resolution	Main stream: (1280 × 1024/1280 × 960/1280 × 720/400 × 300), 1280 × 960 by default; Sub stream: (640 × 512/640 × 480/400 × 300@), 400 × 300 by default
Audio Compression	G.711a; G.711mu; AAC; PCM
Image Encoding Format	JPEG

General Function

Two-way Talk	Yes
Network Protocol	HTTP; TCP; ARP; RTSP; RTP; UDP; RTCP; SMTP; FTP; DHCP; DNS; DDNS; PPPOE; IPv4/v6; SNMP; QoS; UPnP; NTP
Region of Interest (ROI)	Yes
Edge Storage	FTP; Micro SD card (256G, hot plug)
Interoperability	ONVIF; CGI; Dahua SDK
Browser	IE: IE8 and the later, and explorer with IE core Google: 42 and the earlier Firefox: 42 and the earlier Safari: 10 and the earlier
User/Host	20 channels at most (the total bandwidth 64M)
Security	Authorized username and password; attached MAC address; encrypted HTTPS; IEEE 802.1x; controlled network access
User Management	Support 20 users at most and users are classified as two groups-administrator group and user group.
Malfunction Detection	Network disconnection; IP addresses conflict; SD card error (status or storage space)

Professional and Intelligent

|	
Advanced Intelligent Functions	Fire detection & alarm, Cold/Hot spot tracking, Human/Vehicle classification, Auto Tracking
IVS Analytics	Tripwire/intrusion

Port

Analog Video Output	1 channel of CVBS output with BNC port
Network	1 10M/100M Ethernet port (RJ-45)
Alarm Input	2 channels
Alarm Output	2 channels
Audio Input	1 channel
Audio Output	1 channel
Alarm Linkage	SD card recording/on-off output/siren and light/email/PTZ/snapshot
Alarm Event	Motion detection/privacy mask/audio detection/SD card abnormality/network abnormality/anti-burn warning

RS-485	1 channel

Power

Power Supply	12V±20% DC, 1.2A, PoE (802.3af), ePoE
Power Consumption	Basic: 5.0W Maximum: 13W (power adapter excluded)

Environment

Operating Temperature	-40°C to +70°C (-40°F to 158°F)
Operating Humidity	≤95%
Storage Temperature	-50°Cto +80°C (-58°F to 176°F)
Self-Adaptive	Auto heating to protect the chip under the cold environment

Physical Characteristics

Protection Grade	IP67, anti-surge 6KV, anti-elctrostatic 8KV (touched by objects), anti-elctrostatic 15KV (air)
Dimensions	291 mm × 103.7 mm × 97 mm (11.46" × 4.06" × 3.82")
Packaging Dimensions	365 mm × 175 mm × 176 mm (14.37" × 6.89" × 6.93")
Net Weight	≤1.4 kg (3.09 lb)
Gross Weight	≤1.9 kg (4.19 lb)
Power Adaptor	Selectable
Lens	Contained

Certification

Certifications	CE; FCC

Accessories

DH-PFA121-V2
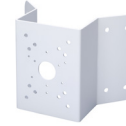
DH-PFA151

DH-PFA152-E

Wall Mount	Corner Mount	Pole Mount
PFA121	PFA121+PFA151	PFA121+PFA150

Dimensions (mm [inch])

70.0（2.76''）

70.0(2.76'')

291.0（11.46''）

103.7（4.08''）

96.7(3.81'')
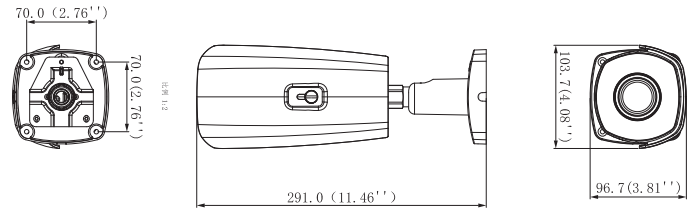
Ordering Information

Type	Part Number	Description
DH-TPC-BF5401-T	DH-TPC-BF5401P-TB7	(with temperature measurement function) Thermal: 400 × 300 7.5 mm lens
	DH-TPC-BF5401N-TB7	
	DH-TPC-BF5401P-TB13	(with temperature measurement function) Thermal: 400 × 300 13 mm lens
	DH-TPC-BF5401N-TB13	
	DH-TPC-BF5401P-TB25	(with temperature measurement function) Thermal: 400 × 300 25 mm lens
	DH-TPC-BF5401N-TB25	