

DHI-TPC-BF5401-T

Thermal Network Bullet Camera



- Vanadium oxide uncooled focal plane detector.
- AI functions: heat detection, tripwire, intrusion, and human/vehicle classification.
- Temperature measurement range of -20°C to $+550^{\circ}\text{C}$.
- Wide input voltage 12 VDC $\pm 20\%$, and PoE.
- IP67 rated.

Featuring the thermal channel, Thermal Network Bullet Camera measures temperature through the thermal channel, with high accuracy Max ($\pm 2^{\circ}\text{C}$, $\pm 2\%$). the camera supports multiple temperature measurement rules of spot, line and region at the same time, and generates alarm when the temperature is abnormal, which can help user find potential hazard.

Technical Specification

Thermal Camera

| | |
|----------------------------|---|
| Image Sensor | Vanadium Oxide Uncooled Focal Plane Detector |
| Effective Pixels | 400 (H) \times 300 (V) |
| Pixel Size | 17 μm |
| Thermal Sensitivity (NETD) | $\leq 40 \text{ mK}@f/1.0$ |
| Spectral Range | 8 μm –14 μm |
| Image Setting | Brightness/Sharpness/ROI/AGC/FFC/3D DNR |
| Color Palettes | 18 (white hot/black hot/fusion/rainbow/golden autumn/midday/iron red/amber/jade/sunset/icefire/painting/pomegranate/emerald /spring/summer/autumn/winter) |

Thermal Lens

| | |
|---------------|--|
| Lens Type | Fixed/F1.0 |
| Focus Control | Athermalized, Focus-free |
| Focal Length | 7.5 mm; 13 mm; 25 mm; 35 mm |
| Angle of View | 7.5 mm: H: 53.7°; V: 39.7° 13 mm: H: 30.2°; V: 22.6° 25 mm:H: 15.5°; V: 11.6° 35 mm:H: 11.1°; V: 8.3° |

Temperature Measurement

| | |
|-------------------|---|
| Temperature Range | Low Temperature Mode: -20°C to $+150^{\circ}\text{C}$ (-4°F to $+302^{\circ}\text{F}$) High Temperature Mode: 0°C to $+550^{\circ}\text{C}$ ($+34^{\circ}\text{F}$ to $+1022^{\circ}\text{F}$) |
| Focus Control | Max ($\pm 2^{\circ}\text{C}$, $\pm 2\%$) Operating Temperature: -20°C to $+60^{\circ}\text{C}$ (-4°F to $+140^{\circ}\text{F}$) |
| Focus Control | Spot: 12 Line: 12 Area: 12 Support 12 rules simultaneously |

Video

| | |
|-------------|---------------------|
| Compression | H.265; H.264; MJPEG |
|-------------|---------------------|

| | |
|--------------------------------|---|
| Frame Rate | Main Stream: Thermal: 1280 \times 1024; 720p; 400 \times 300@25/30 fps Sub Stream: Thermal: 640 \times 512; 400 \times 300@25/30 fps |
| Bit Rate Control | CBR/VBR |
| Bit Rate | H.264: 640–8192 Kbps |
| Motion Detection | Off/On (4 zone, Rectangle) |
| Region of Interest | Off/On (4 zone) |
| Digital Zoom | 4 \times (19 levels) |
| Flip | 180° |
| Mirror | Off/On |
| Privacy Masking | Off/On (4 area, Rectangle) |
| Audio | |
| Compression | G.711A; G.711Mu; AAC; PCM |
| Intelligence | |
| IVS | Tripwire, Intrusion |
| Advanced Intelligent Functions | Heat detection & alarm, Cold/Hot spot trace, Human/Vehicle classification |
| Network | |
| Ethernet | RJ-45 |
| Protocol | IPv4/IPv6; HTTP; HTTPS; SSL; TCP/IP; UDP; UPnP; ICMP; IGMP; SNMP; RTSP; RTP; SMTP; NTP; DHCP; DNS; PPPOE; DDNS; FTP; IP Filter; QoS; Bonjour; 802.1x |
| Interoperability | ONVIF Profile S & G, API |
| Streaming Method | Unicast/Multicast |
| Max. User Access | 10 Users/20 Users |
| Edge Storage | Micro SD (256GB) Memory status display (Normal / Error / Active / Formatting / Lock), NAS (Network Attached Storage), Local PC for instant recording |
| Web Viewer | >IE8; <Chrome42; <Firefox42 |
| Management Software | SmartPSS; DSS |

| | |
|-----------------|---|
| Smart Phone | Android; iOS |
| Certifications | |
| Certification | CE (EN 60950: 2000) FCC (FCC Part 15 SubpartB) |
| Port | |
| Video Interface | 1 Port (CVBS/BNC) |
| Audio Interface | 1/1 In/Out |
| RS485 | Yes |
| Alarm | 2/2 In/Out |

| | |
|-------------------|------------------|
| Electrical | |
| Power Supply | 12 VDC /PoE/ePoE |
| Power Consumption | Max. 13 W |

| | |
|---------------------|---|
| Environmental | |
| Operating Condition | -40°C to +70°C (-40°F to +158°F)/Less than 95% RH * Start up should be done at above -40°C (-40°F) |
| Storage Conditions | -40°C to +70°C (-40°F to +158°F)/Less than 95% RH |
| Ingress Protection | IP67 |

| | |
|--------------|--|
| Construction | |
| Casing | Metal |
| Dimensions | 291 mm × 103 mm × 97 mm (11.46" × 4.06" × 3.82") |
| Net Weight | 1.5 Kg (3.31 lb) |
| Gross Weight | 1.9 Kg (4.19 lb) |

| DRI Distance | | | |
|--------------|--|---|---|
| Focal Length | Detection Distance ^① | Recognition Distance ^② | Identification Distance ^③ |
| 7.5 mm | Vehicle: 676 m (2,217.85 ft); Human: 221 m (725.07 ft) | Vehicle: 169 m (554.46 ft); Human: 55 m (180.45 ft) | Vehicle: 85 m (278.87 ft); Human: 28 m (91.86 ft) |
| 13 mm | Vehicle: 1,173 m (3,848.43 ft); Human: 382 m (1,253.28 ft) | Vehicle: 293 m (961.29 ft); Human: 96 m (314.96 ft) | Vehicle: 147 m (482.28 ft); Human: 48 m (157.48 ft) |
| 25 mm | Vehicle: 2,255 m (7,398.29 ft); Human: 735 m (2,411.42 ft) | Vehicle: 564 m (1,850.39 ft); Human: 184 m (603.67 ft) | Vehicle: 282 m (925.20 ft); Human: 92 m (301.84 ft) |
| 35 mm | Vehicle: 3,157 m (10,357.61 ft); Human: 1,029 m (3,375.98 ft) | Vehicle: 789 m (2,588.58 ft); Human: 257 m (843.18 ft) | Vehicle: 395 m (1,295.93 ft); Human: 129 m (423.23 ft) |

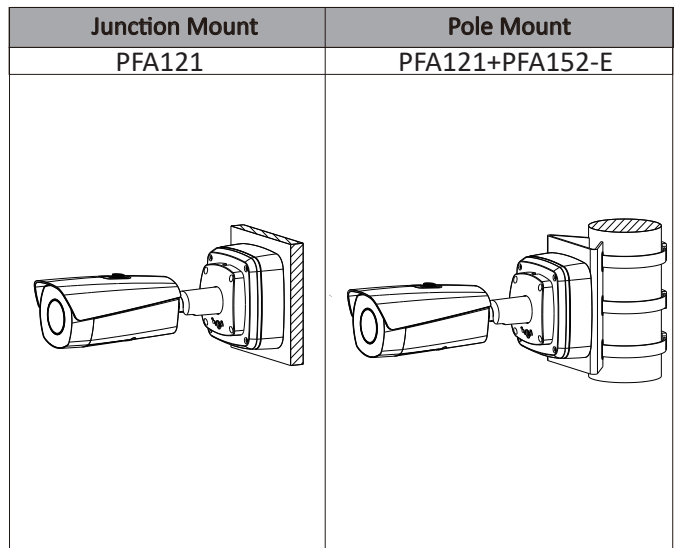
- ① Detection Distance: Detects objects, but cannot recognize their characteristics (objects must cover more than 1.5 pixels of the image).
- ② Recognition Distance: Classifies objects into general categories, such as human, vehicle (the object must cover more than 6 pixels of the image).
- ③ Identification Distance: Classifies objects into specific categories based on their characteristics, such as engineering truck, car (the object must cover more than 12 pixels of the image).

Note:
The table is the standard theoretical calculation and is for reference only. The distances within it are subject to actual conditions including atmospheric conditions, target size, the installation site, and more. For the intelligent detection distance, refer to the table of Perimeter Protection Distance (IVS Distance) above.

| Ordering Information | | |
|------------------------|---------------------|---------------------------------|
| Type | Part Number | Description |
| DHI-TPC-BF5401-T | DHI-TPC-BF5401-TB7 | Thermal: 400 × 300; 7.5 mm lens |
| | DHI-TPC-BF5401-TB13 | Thermal: 400 × 300; 13 mm lens |
| | DHI-TPC-BF5401-TB25 | Thermal: 400 × 300; 25 mm lens |
| | DHI-TPC-BF5401-TB35 | Thermal: 400 × 300; 35 mm lens |
| Accessories (Optional) | PFA121 | Junction box |
| | PFA152-E | Pole Mount |
| | PFM320D | Power Adapter |

Accessories

Optional:



Dimensions(mm)

