

# DHI-TPC-BF5401

## Thermal Network Bullet Camera



- Vanadium oxide uncooled focal plane detector.
- AI functions: heat detection, tripwire, intrusion, and human/vehicle classification.
- Wide input voltage 12 VDC  $\pm$  20%, and PoE.
- IP67 rated.

Featuring thermal channel, Thermal Network Bullet Camera offers various AI functions such as heat detection, tripwire, intrusion, and human/vehicle classification. The camera is widely applied in outdoor scenes of the medium-distance perimeter protection and heat detection.

### Technical Specification

#### Thermal Camera

Detector Type	Vanadium oxide uncooled focal plane detector
Effective Pixels	400 (H) $\times$ 300 (V)
Pixel Size	17 $\mu$ m
Thermal Sensitivity (NETD)	40 mK
Spectral Range	8 $\mu$ m–14 $\mu$ m
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°
Detection Distance <sup>①</sup>	7.5 mm: Vehicle: 490 m (1,607.61 ft); Human: 221 m (725.07 ft) 13 mm: Vehicle: 850 m (2,788.71 ft); Human: 382 m (1,253.28 ft) 25 mm: Vehicle: 1,634 m (5,360.89 ft); Human: 735 m (2,411.42 ft) 35 mm: Vehicle: 2,288 m (7,506.56 ft); Human: 1,030 m (3,379.27 ft)
Recognition Distance <sup>②</sup>	7.5 mm: Vehicle: 126 m (413.39 ft); Human: 57 m (187.01 ft) 13 mm: Vehicle: 219 m (718.50 ft); Human: 98 m (321.52 ft) 25 mm: Vehicle: 420 m (1,377.95 ft); Human: 189 m (620.08 ft) 35 mm: Vehicle: 588 m (1,929.13 ft); Human: 265 m (869.42 ft)

Identification Distance <sup>③</sup>	7.5 mm: Vehicle: 63 m (206.69 ft); Human: 28 m (91.86 ft) 13 mm: Vehicle: 109 m (357.61 ft); Human: 49 m (160.76 ft) 25 mm: Vehicle: 210 m (688.98 ft); Human: 95 m (311.68 ft) 35 mm: Vehicle: 294 m (964.57 ft); Human: 132 m (433.07 ft)
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#### Note:

- ① Detection Distance: Detects objects, but cannot recognize their characteristics (objects must cover more than 3.6 pixels of the image).
- ② Recognition Distance: Classifies objects into general categories, such as human, vehicle (the object must cover more than 14 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 28 pixels of the image).

### 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
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### Intelligence

IVS	Tripwire, Intrusion
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Advanced Intelligent Functions	Heat detection & alarm, Cold/Hot spot trace, Human/Vehicle classification
<b>Network</b>	
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

<b>Certifications</b>	
Certification	CE (EN 60950: 2000); FCC (FCC Part 15 SubpartB )

<b>Interface</b>	
Video Interface	1 Port (CVBS/BNC)
Audio Interface	1/1 In/Out
RS485	Yes
Alarm	2/2 In/Out

<b>Electrical</b>	
Power Supply	12 VDC/PoE/ePoE
Power Consumption	Max. 13 W

<b>Environmental</b>	
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

<b>Construction</b>	
Casing	Metal
Dimensions	291 mm × 103 mm × 97 mm (11.46" × 4.06" × 3.82") (L × W × H)
Net Weight	1.5 Kg (3.31 lb)
Gross Weight	1.9 Kg (4.19 lb)

<b>Ordering Information</b>		
Type	Part Number	Description
DHI-TPC-BF5401	DH-ITPC-BF5401-B7	Thermal:400 × 300; 7.5 mm lens
	DHI-TPC-BF5401-B13	Thermal:400 × 300; 13 mm lens
	DHI-TPC-BF5401-B25	Thermal:400 × 300; 25 mm lens
	DHI-TPC-BF5401-B35	Thermal:400 × 300; 35 mm lens

**Accessories**

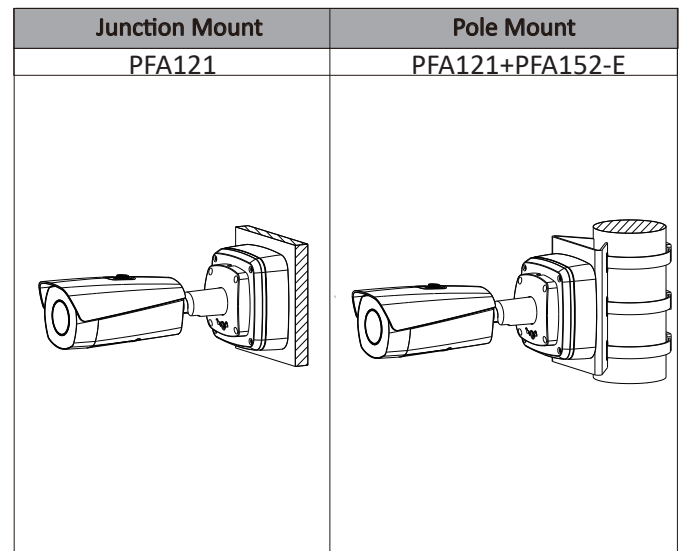
Optional:



PFA121  
Junction box



PFA152-E  
Pole Mount



**Dimensions(mm)**

