



# DH-TPC-BF1241

# WizSense Thermal Network Bullet Camera



Launched by Dahua Technology, WizSense is a series of AI products and solutions that adopt independent AI chip and deep learning algorithm. It focuses on human and vehicle with high accuracy, enabling users to fast act on defined targets. Based on Dahua's advanced technologies, WizSense provides intelligent, simple and inclusive products and solutions.

### **System Overview**

Featuring a dual lens, fixed camera, this series provides an all-in-one solution for capturing video surveillance for indoor and outdoor applications. Together with Thermal and Visible Technology, the camera is the perfect solution for dark, small area monitoring applications. The series combines one thermal camera for monitoring in total darkness and one visible camera with Smart IR for confirming details.

#### **Functions**

#### **Uncooled VOx Technology**

Dahua thermal cameras use uncooled VOx sensor technology. Because of small size and better performance, it's cost-effective solution for thermal security.

## **High Sensitivity**

High thermal sensitivity (< 50 mK) makes cameras capture more image details and temperature difference information.

#### Fire Detection & Alarm

With built-in fire detect function, the camera has the ability to detect fire in a long distance. Thermal camera is sensitive to temperature, so the accuracy of fire detection will be higher than visible camera.

- Uncooled VOx thermal sensor technology
- · Athermalized lens (thermal camera), focus-free
- 1/2.7" 4Megapixel progressive scan CMOS
- · Wi-Fi Optional
- · Support ROI, motion detection, color palettes
- · Smoking and call behaviour detection
- · Support fire detection & alarm
- · Built-in 1/1 alarm in/out
- · Micro SD memory, IP67, PoE
- · Smart linkage with strobe light & audio
- · Dual image fusion (visible and thermal images)

#### Intelligent Video System (IVS)

With built-in intelligent video analytics, the camera has the ability to detect and analyze moving objects for improved video surveillance. The camera provides optional standard intelligence at the edge allowing detection of multiple object behaviors such as motion detection. IVS also supports tripwire analytics, allowing the camera to detect when a pre-determined line has been crossed.

#### **Smoking Detection**

Dahua thermal camera can provide a real-time monitoring, in the use of deep-learning AI technology, to automatically detect people's smoking behavior and provide intelligent voice and light warning (loudspeaker and white light, etc.) in an effort to dissuade smoker, and avoid potential risk and loss.

#### **Environmental**

With a temperature range of -30 °C to +60 °C (-22 °F to +140 °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

Supporting  $\pm 20\%$  input voltage tolerance, this camera suits even the most unstable conditions for outdoor applications. Its 6kV lightning rating provides protectection against the camera and its structure from the effects of lightning.

Technical Specificat	ion				WDR	DWDR	
Thermal				HLC	Yes		
Detector Type	Vanadium Oxide Uncooled FPA				White Balance	Auto/Manual/Indoor/Outdoor/Tracking/Street lamp/ Natural	
Max. Resolution	256 × 192				AGC	Auto; Manual	
Pixel Pitch	12 μm				Noise Reduction	2D NR; 3D NR	
Spectral Range	8 μm−14 μm				S/N Ratio	≥ 55 dB	
Thermal Sensitivity (NETD)	< 50 mK (@f/1.0,2	< 50 mK (@f/1.0,25Hz,300K)			Region of Interest (RoI)	Yes	
Focal Length	3.5 mm	7 mm	10 mm		Image Flip	90°; 180°; 270°	
Field of View	H: 50.6°, V 37.8°	H: 24°, V: 18°	H: 17.3°, V: 13.1°		Exposure Compensation	Yes	
Close Focus Distance	0.5 m (1.64 ft)	1.0 m (3.28 ft)	2.0 m (6.56 ft)		Intelligence		
Effective Distance	D: 146 m (479 ft) R: 38 m (125 ft)	D: 292 m (958 ft) R: 75 m (246 ft)	D: 417 m (1368 ft) R: 107 m (351 ft)		General Intelligence	Tripwire, Intrusion	
Human (1.8 m × 0.5 m)  Effective Distance Vehicle (4.0 m × 1.4 m)	I: 19 m (622 ft)	I: 38 m (125 ft)	I: 54 m (177 ft)  D: 1111 m (3645 ft) R: 278 m (912 ft) I: 139 m (456 ft)		Advanced Intelligence	Fire Detection & Alarm Cold & Hot Spot Trace Human & Vehicle Classification Smoking Detection Call Detection	
Aperture	F1.0				Video and Audio		
Digital Detail	F1.0				Video Compression	H.265/H.264M/H.264H/H.264B/MJEPG	
Enhancement (DDE)	Yes					Thermal: Main Stream: 1280 × 960 (1.3M)/XVGA (1024 × 768)/VGA	
Digital Zoom	16 × Auto; Manual 2D NR; 3D NR				Resolution	(640 × 480)/256 × 192, 1280 × 960 by default Sub Stream: VGA (640 × 480)/256 × 192, 256 × 192 by default Visual: Main Stream: 2336 × 1752/1080P (1920 × 1080)/720P (1280 × 720)/D1 (704 × 576), 2336 × 1752 by default Sub Stream: 720P (1280 × 720)/D1 (704 × 576)/CIF (352 ×	
AGC							
Noise Reduction							
Image Flip	90°; 180°; 270°						
Color Palettes	18 (Whitehot/Blackhot/Ironrow/Icefire/Fusion/Rainbow/Globow/Iconbow1/Iconbow2, etc.)					288), 352 × 288 by default Thermal	
Fusion Mode	3 (Warm color; cool color; Ironred)				Frame Rate	50Hz: (main stream) 1 fps–25 fps adjustable, 25 fps by default; (sub stream) 1 fps–25 fps adjustable, 15 fps by default (60Hz: (main stream) 1 fps–30 fps adjustable, 30 fps by default; (sub stream) 1 fps–30 fps adjustable, 15 fps by default  Visual  50Hz: (main stream) 1 fps–25 fps adjustable, 25 fps by	
Visible							
Image Sensor	1/2.7" CMOS	1/2.7" CMOS					
Max. Resolution	2336 × 1752						
Pixel	4MP					default; (sub stream) 1 fps–25 fps adjustable, 15 fps by default 60Hz: (main stream) 1 fps–30 fps adjustable, 30 fps by default; (sub stream) 1 fps–30 fps adjustable, 15 fps by	
Electronic Shutter Speed	1/30000 s-1 s						
Min. Illumination	Color: 0.05 Lux Black & white: 0.00 0 Lux (IR on)	05 Lux			Audio Compression	default G.711a; G.711mu; PCM	
IR Illumination Distance	≥ 30 m (98.43 ft)				Network		
IR Illuminator On/Off Control	Auto; Manual			Protocol	HTTPS; HTTP; TCP; ARP; RTSP; RTP; UDP; RTCP; SMTP; FTP DHCP; DNS; DDNS; PPPOE; IPv4/v6; SNMP; QoS; UPnP;		
Focal Length	4 mm	8 mm	12 mm			NTP	
Aperture	F1.6	F2.0	F2.0		Edge Storage	Micro SD card (256 G)	
Field of View	H: 71.2° V: 52° D: 92.6°	H: 33.4° V: 25° D: 41.9°	H: 22° V: 16.6° D: 26.9°		Interoperability Browser	ONVIF; CGI  IE: IE8 and the later, and explorer with IE core Google: 42 and the earlier	
Focus Control	Fixed				Firefox: 42 and the earlier		
Close Focus Distance	1.0 m (3.28 ft)	2.5 m (8.2 ft)	2.5 m (8.2 ft)		User/Host	10	
Day/Night	Auto (ICR); Color a	nd B/W			Security	Authorized username and password; attached MAC address; encrypted HTTPS; IEEE 802.1x; controlled	
BLC	Yes					network access	

Certification			
Certifications	CE: EN55032:2015; EN61000-3-2:2014 FCC:CFR 47 FCC Part15 subpart B; ANSI C63.4-2014		
Port			
Network	1 10M/100M Ethernet port (RJ-45)		
Audio Input	1		
Audio Output	1		
Alarm Input	1		
Alarm Output	1		
RS-485	1 pair		
Wi-Fi Optional	Standard No.:802.11 Frequency: 2.4GHz Transmission rate: 150Mbps Transmission distance: 150 m (no shield, no disturbance)		
Power			
Power Supply	12V±20% DC/PoE		
Power Consumption	Basic: <8W (LED off) Max: <14W (LED on heater on)		

rower Consumption	Max: <14W (LED on, heater on)		
Environment			
Operating Temperature	-30°C to +60°C (-22°F to +140°F)		
Storage Temperature	-30°C to +70°C (-22°F to +158°F)		
Operating Humidity	≤ 95%		
Protection	IP67, anti-surge 6KV, anti-elctrostatic 6KV (touched by objects), anti-elctrostatic 8KV (air)		
Structure			
Product Dimensions	205.5mm × 90.4 mm × 90.1 mm (8.09" × 3.56" × 3.55")		
Packaging Dimensions	279 mm × 187 mm × 138 mm (10.98" × 7.36" × 5.43")		
Net Weight	≤ 0.9 kg (1.98 lb)		
Gross Weight	≤ 1.3 kg (2.87 lb)		

Ordering Information			
Туре	Part Number	Description	
Thermal Camera	DH-TPC-BF1241P-D3F4	Thermal: 256 × 192 3.5 mm lens	
	DH-TPC-BF1241N-D3F4	Visible: 4MP 4 mm lens	
	DH-TPC-BF1241P-D7F8	Thermal: 256 × 192 7 mm lens	
	DH-TPC-BF1241N-D7F8	Visible: 4MP 8 mm lens	
	DH-TPC-BF1241P-D10F12	Thermal: 256 × 192 10 mm lens	
	DH-TPC-BF1241N-D10F12	Visible: 4MP 12 mm lens	
	DH-TPC-BF1241P-D3F4-WIFI	Thermal: 256 × 192 3.5 mm lens	
	DH-TPC-BF1241N-D3F4-WIFI	Visible: 4MP 4 mm lens	
	DH-TPC-BF1241P-D7F8-WIFI	Thermal: 256 × 192 7 mm lens	
	DH-TPC-BF1241N-D7F8-WIFI	Visible: 4MP 8 mm lens	
	DH-TPC-BF1241P-D10F12-WIFI	Thermal: 256 × 192 10 mm lens	
	DH-TPC-BF1241N-D10F12-WIFI	Visible: 4MP 12 mm lens	

Accessories	PFA152-E (Optional)	Pole-mount bracket	
	PFA130-E (Optional)	Junction box	
	PFM320D (Optional)	Power adapter	

IVS Range			
Focal Length	3.5 mm	7 mm	10 mm
Human (1.8 m × 0.5 m)	26 m	52.5 m	75 m
Vehicle (1.4 m × 4.0 m)	72.5 m	146.5 m	209 m

Note: The table is for reference only. IVS coverage range is stongly infuenced by the site condition, such as the size of the target, atmospheric conditions, the physical installation.

## **Accessories**







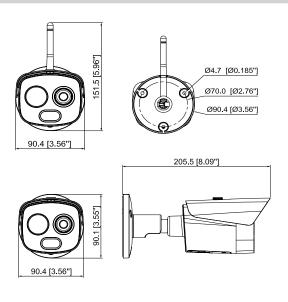
Junction box



Power adapter

Junction Box	Pole Mount

# Dimensions (mm[inch])



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