

DH-TPC-PT8621B

Thermal Network Hybrid PTZ Camera



- 640x512 VOx uncooled thermal sensor technology
- Athermalized lens(thermal), focus-free
- 2 Megapixel progressive scan CMOS
- Powerful optical zoom lens(thermal&visible)
- Support fire detection & alarm
- Max 30°/s pan speed, 360° endless pan rotation
- Up to 300 presets, 5 auto scan, 8 tour, 5 pattern
- 2/1 alarm in/out
- Micro SD memory, IP66



System Overview

Featuring a dual lens Pan/Tilt/Zoom (PTZ) camera, this series provides an all-in-one solution that is especially beneficial for long distance video surveillance in outdoor applications. Together with Dahua Thermal and Starlight technology, the camera's long range capabilities are able to be utilized even at night. The series combines one thermal camera for monitoring in total darkness and one camera with Starlight functionality and a motorized lens for confirming details up close.

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

Fire Detection & Alarm

With built-in fire detection functionality, the camera has the ability to detect fires from long range. Because thermal cameras are sensitive to temperature, they provide higher fire detection accuracy than standard cameras, making them particularly fit for applications such as forest fire prevention.

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, the camera is designed for extreme temperature environments. Subjected and certified to rigorous dust and water immersion tests, the IP66 rating makes it suitable for demanding outdoor applications. For environments with rain, sleet, snow and fog, an integrated wiper(optional) provides users with clear visibility at all times.

Protection

The camera Supporting wide range voltage input(100–300V AC), suitable for the most unstable conditions for outdoor applications. Its 6 kV lightning rating provides effective protection for both the camera and its structure against lightning.

Technical Specification			
General			
Structure	Multi-sensor PTZ camera		
Thermal			
Detector Type	Vanadium oxide uncooled focal plane detector		
Effective Pixels	640x512		
Pixel Pitch	17μm		
Spectral Range	8μm–14μm		
Thermal Sensitivity (NETD)	≤40mK		
Focal Length	100mm; 20mm–100mm; 30mm–150mm; 38mm–190mm		
Field of View	100mm: horizontal: 6.2°; vertical: 5.0° 20mm–100mm: horizontal: 31.6°–6.2°; vertical: 25.1°–5.0° 30mm–150mm: horizontal: 20.6°–4.2°; vertical: 16.5°–3.3° 38mm–190mm: horizontal: 16.7°–3.5°; vertical: 12.5°–2.6°		
Focus Mode	Auto; manual		
Aperture	100mm: F1.0 20mm–100mm: F1.0 30mm–150mm: F1.2 38mm–190mm: F1.2		
Detection Distance	100mm: vehicle: 7843m (2574ft); human: 2941m (9649ft) 20mm–100mm: vehicle: 7843m (2574ft); human: 2941m (9649ft) 30mm–150mm: vehicle: 11765m (38599ft); human: 4412m (14475ft) 38mm–190mm: vehicle: 14902m (2552ft); human: 5588m (18333ft)		
Recognition Distance	100mm: vehicle: 1961m (6434ft); human: 756m (2480ft) 20mm–100mm: vehicle: 1961m (6434ft); human: 756m (2480ft) 30mm–150mm: vehicle: 2941m (9649ft); human: 1134m (14475ft) 38mm–190mm: vehicle: 3725m (12221ft); human: 1437m (4715ft)		
Identification Distance	100mm: vehicle: 980m (3215ft); human: 378m (1240ft) 20mm–100mm: vehicle: 980m (3215ft); human: 378m (1240ft) 30mm–150mm: vehicle: 1471m (4826ft); human: 567m (1860ft) 38mm–190mm: vehicle: 1863m (6112ft); human: 718m (2356ft)		
Digital Detail Enhancement (DDE)	Yes		
AGC	Auto; manual		
Noise Reduction	2D NR; 3D NR		
Color Palettes	18 color modes selectable such as Whitehot/Blackhot/Ironrow/Icefire.		
Visible			
Image Sensor	6.6mm-330mm: 1/2.8 inch CMOS 21mm-500mm: 1/1.9 inch CMOS 12.5mm-750mm: 1/1.9 inch CMOS 16.7mm-1000mm: 1/1.9 inch CMOS		
Effective Pixels	1920x1080		
Max. Resolution	2MP		
		Horizontal Definition	≥1100TVL
		Min. Illumination	6.6mm–330mm: color: 0.016Lux@F1.5; black & white: 0.0175Lux@F1.5 21mm–500mm; 12.5mm–750mm; 16.7mm–1000mm: color: 0.002Lux @ (F1.5, AGC ON); black & white: 0.0005Lux @ (F1.5, AGC ON)
		AGC	Auto; manual
		Noise Reduction	2D NR; 3D NR
		S/N Ratio	>55dB
		White Balance	Auto/manual/indoor/outdoor/tracking/outdoor auto/sodium lamp auto/sodium lamp
		Electronic Defog	Yes
		Electronic Image Stabilization (EIS)	6.6mm–330mm: Optical Image Stabilization(OIS) 21mm–500mm: Yes 12.5mm–750mm: Yes 16.7mm–1000mm: Yes
		Optical Defog	6.6mm–330mm: Yes 21mm–500mm: None 12.5mm–750mm: Yes 16.7mm–1000mm: Yes
		Electronic Shutter Speed	1/1s–1/100000s (auto or manual)
		BLC	Yes
		WDR	Yes
		HLC	Yes
		Digital Zoom	6.6mm–330mm: 16× 21mm–500mm: None 12.5mm–750mm: None 16.7mm–1000mm: None
		Day/Night	Auto (ICR); color/B/W
		Focus Mode	Auto; semi-auto; manual
		Focal Length	6.6mm–330mm (thermal lens: 100mm); 21mm-500mm (thermal lens: 20mm–100mm); 12.5mm-750mm (thermal lens: 30mm–150mm); 16.7mm-1000mm (thermal lens: 38mm–190mm)
		Field of View	6.6mm–330mm: horizontal: 42.34°–1.10°; vertical: 24.68°–0.62° 21mm-500mm: horizontal: 23.5°–1.0°; vertical: 17.6°–0.8° 12.5mm-750mm: horizontal: 31.29°–0.32°; vertical: 19.36°–0.20° 16.7mm-1000mm: horizontal: 20.51°–0.22°; vertical: 15.54°–0.17°
		Close Focus Distance	6.6mm–330mm: 1.2m 21mm-500mm: 1m–10m 12.5mm-750mm: 1m–10m 16.7mm-1000mm: 1m–10m
		Optical Zoom	6.6mm–330mm: 50× 21mm–500mm: 24× 12.5mm–750mm: 60× 16.7mm–1000mm: 60×
		Aperture	6.6mm–330mm: F1.8–F6.5 21mm-500mm: F3.9 12.5mm-750mm: F3.6 16.7mm-1000mm: F3.5
		Audio and Video	
		Video Compression	H.265; H.264M; H.264H; H.264B; MJPEG

Resolution	Thermal: Main stream(1280×1024,1280×720,640×512); (1280×1024 by default); sub stream(640×512,320×256) (640×512 by default) Visible: Main stream (1920×1080, 1280×720, 704×576) (1920×1080 by default); sub stream (704×576, 352×288) (704×576 by default)
Video Frame Rate	Thermal: 50Hz: Main stream (1280×1024@25fps/1280×960@25fp s/1280×720@25fps/400×300@25fps), sub stream (640×512@25fps/640×480@25fps/400×300@25fps) 60Hz: Main stream (1280×1024@30fps/1280×960@30fp s/1280×720@30fps/400×300@30fps), sub stream (640×512@30fps/640×480@30fps/400×300@30fps) Visible: 50Hz: Main stream (1920×1080@25fps/1280×7 20@25fps/704×576@25fps), sub stream (704×576@25fps/352×288@25fps) 60Hz: Main stream (1920×1080@30fps/1280×7 20@30fps/704×480@30fps), sub stream (704×480@30fps/352×240@30fps)
Audio Compression	G.711a; G.711mu; PCM
Image Encoding Format	JPEG

PTZ

Pan/Tilt Range	Pan: 0°–360° endless;
Manual Control Speed	Pan: 0.01°–30°/s; Tilt: 0.01°–12°/s
Preset Speed	Pan: 0.01°–30°/s; Tilt: 0.01°–12°/s
Preset	300
PTZ Mode	5 Auto Scan, 8 Tour, 5 Pattern, Auto Pan
Speed Setup	Human-oriented focal length/ speed adaptation
Power Up Action	Auto restore to previous PTZ and lens status after power failure
Idle Motion	Activate Preset/ Scan/ Tour/ Pattern if there is no command in the specified period
Protocol	DH-SD, Pelco-P/D (Auto recognition)

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; GB/T28181; CGI; PSIA; 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);

Smart Event

General IVS Analytics	Tripwire/intrusion
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Professional and Intelligent

Fire Detection	Yes
Cold/Hot Spot Trace	Auto tracking of the hottest spot and the coldest spot in the thermal image
Auto Tracking	Yes

Port

Network	1 10M/100M Ethernet port (RJ-45)
Alarm Input	2 channels
Alarm Output	1 channels
Audio Input	1 channel
Audio Output	1 channel
RS-485	1 channel

Power

Power Supply	100–300V AC and power adapter provided
Power Consumption	<100W (normal power consumption) <260W (with heater on) (maximum power consumption)

Environment

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

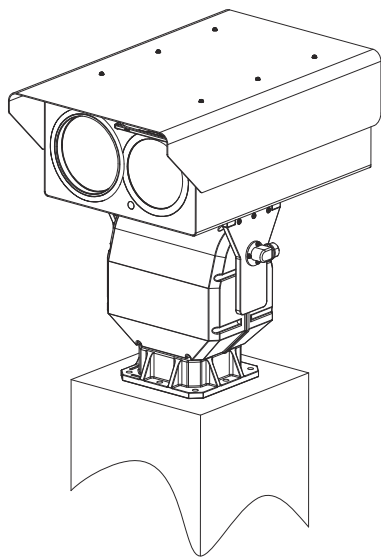
Physical Characteristics

Protection Grade	IP66, anti-surge 6KV, anti-elctrostatic 8KV (touched by objects), anti-elctrostatic 15KV (air)
Dimensions	640mm×400mm×612mm (25.20"x15.75"x24.09")
Packaging Dimensions	877mm×567mm×892mm (34.53"x22.32"x35.12")
Net Weight	≤50kg (≤110.23lb)
Gross Weight	≤75kg (≤165.35lb)

Ordering Information

Type	Part Number	Description
DH-TPC-PT8621B	DH-TPC-PT8621BP/N-BM100ZD310B	Thermal: 640x512 100mm lens Visible: 2MP 6.6-330mm lens
	DH-TPC-PT8621BP/N-B20100ZC510B	Thermal: 640x512 20-100mm lens Visible: 2MP 21-500mm lens
	DH-TPC-PT8621BP/N-B30150ZF711B	Thermal: 640x512 30-150mm lens Visible: 2MP 12.5-750mm lens
	DH-TPC-PT8621BP/N-B38190ZF1011B	Thermal: 640x512 38-190mm lens Visible: 2MP 16.7-1000mm lens

Installation Diagram



Dimensions (mm[inch])

