

# DHI-TPC-PT8621C

## Thermal Network Anti-corrosion Hybrid PTZ Camera



- 640 x 512 VOx uncooled thermal sensor technology
- Athermalized lens (thermal), focus-free
- 2Megapixel progressive scan CMOS
- Powerful optical zoom lens (thermal & visible)
- Supports fire detection alarm and boat detection
- 360° endless pan rotation
- Up to 300 presets, 5 auto scan, 8 tour, 5 pattern
- Laser illumination
- Anti-corrosion

### 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.

### Scene

This camera is ideal for use by coastal cities, the mariculture industry and port management departments. It is suitable for coastal areas scenarios that require perimeter protection, fire detection, and port monitoring.

### Functions

#### Uncooled VOx Technology

Dahua thermal cameras use uncooled VOx sensor technology. The detector is small-sized, and highly sensitive allowing the camera to reveal images in greater detail, giving you more visual information on a monitored site. It also improves the accuracy of temperature measurements, ensuring that even minute temperature changes are detected.

#### AI Functions

Supports multiple intelligent functions such as fire detection, tripwire, intrusion, and person and vehicle classification detection. It supports alarm linkages, such as sending emails and triggering external alarms.

#### Environment (−40 °C to +70 °C)

Developed to operate in extreme conditions, the camera can function in temperatures ranging from −40 °C to +70 °C (−40 °F to +158 °F). It was subjected to rigorous dust and water immersion tests, gaining its IP66 certification, making 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.

#### Anti-corrosion

With its anti-corrosion design, it is applicable for use in coastal cities and ports with salt, and dense fog.

**Technical Specification**

**Thermal**

Detector Type	Vanadium oxide uncooled focal plane detector			
Effective Pixels	640 (H) × 512 (V)			
Pixel Pitch	17 μm			
Spectral Range	8 μm–14 μm			
Sensitivity (NETD)	≤40 mK			
Focal Length	20 mm–100 mm; 30 mm–150 mm; 38 mm–190 mm			
Field of View	20 mm–100 mm	H: 19.3°–3.9°; V: 14.5°–2.9°		
	30 mm–150 mm	H: 12.9°–2.6°; V: 9.7°–1.9°		
	38 mm–190 mm	H: 10.2°–2.1°; V: 7.7°–1.5°		
Focus Control	Auto; Manual			
Aperture	20 mm–100 mm	F1.0		
	30 mm–150 mm	F1.2		
	38 mm–190 mm	F1.2		
DRI Distance Human (1.8 m × 0.5 m) Vehicle (4 m × 1.4 m)	Focal Length	Detection Distance	Recognition Distance	Identification Distance
	20 mm–100 mm	Vehicle: 7,843 m (25,731.63 ft) Human: 2,941 m (9,648.95 ft)	Vehicle: 1,961 m (6,433.73 ft) Human: 756 m (2,480.31 ft)	Vehicle: 980 m (3,215.22 ft) Human: 378 m (1,240.16 ft)
	30 mm–150 mm	Vehicle: 11,765 m (38,599.08 ft) Human: 4,412 m (14,475.07 ft)	Vehicle: 2,941 m (9,648.96 ft) Human: 1,134 m (3,720.47 ft)	Vehicle: 1,471 m (4,826.16 ft) Human: 567 m (1,860.24 ft)
	38 mm–190 mm	Vehicle: 14,902 m (48,891.08 ft) Human: 5,588 m (18,333.33 ft)	Vehicle: 3,725 m (12,221.19 ft) Human: 1,437 m (4,714.57 ft)	Vehicle: 1,863 m (6,112.20 ft) Human: 718 m (2,355.64 ft)
<p>Note:</p> <p>① DRI Distance: The optimal values calculated according to Johnson's Criteria. They are for reference only. The actual performance depends on environmental conditions.</p> <p>② D (Detection Distance): Detects objects, but cannot recognize their characteristics. Detected objects only cover a small amount of pixels (objects must cover more than 3.6 pixels of the image).</p> <p>③ R (Recognition Distance): Classifies objects into general categories, such as human, vehicle, and building (the object must cover more than 14 pixels of the image).</p> <p>④ I (Identification Distance): Classifies objects into specific categories based on their characteristics, such as soldier, pickup truck, and gas station (the object must cover more than 28 pixels of the image).</p>				
Digital Detail Enhancement (DDE)	Yes			
Image Stabilization	Electronic Image Stabilization (EIS)			
AGC	Auto; Manual			
Noise Reduction	2D NR; 3D NR			
Image Flip	180°			
Color Palettes	18 (white hot; black hot; fusion; rainbow; globow; ironbow1; ironbow2; sepia; color1; color2; icefire; rain; red hot; green hot; spring; summer; autumn; winter)			
<b>Visible</b>				
Image Sensor	1/1.8" CMOS			
Max. Resolution	1920 × 1080			

Pixel	2 MP	
Horizontal Definition	≥1,100 TVL	
Focal Length	15.6 mm–500 mm; 12.5 mm–750 mm; 16.7 mm–1,000 mm	
Field of View	15.6 mm–500 mm	H: 23.11°–0.44°; V: 17.30°–0.33°
	12.5 mm–750 mm	H: 31.29°–0.32°; V: 19.36°–0.20°
	16.7 mm–1,000 mm	H: 20.51°–0.22°; V: 15.54°–0.17°
Optical Zoom	15.6 mm–500 mm	32×
	12.5 mm–750 mm	60×
	16.7 mm–1,000 mm	60×
Min. Illumination	Color: 0.002 lux@ (F1.5, AGC ON) Black & white: 0.0005 lux@ (F1.5, AGC ON)	
AGC	Auto; Manual	
Noise Reduction	2D NR; 3D NR	
S/N Ratio	>55 dB	
White Balance	Auto; manual; indoor; outdoor; tracking; sodium lamp; street lamp; natural	
Defog	Electronic defog; optical defog	
Image Stabilization	Electronic Image Stabilization (EIS)	
Electronic Shutter Speed	1/1 s–1/100,000 s	
BLC	Yes	
WDR	Yes	
HLC	Yes	
Digital Zoom	16×	
Day/Night	Auto (ICR); Color; B/W	
Image Flip	180°	
Exposure Compensation	Yes	
Focus Control	Auto; semi-auto; manual	
Close Focus Distance	1 m–10 m	
Aperture	15.6 mm–500 mm	F3.9
	12.5 mm–750 mm	F3.6
	16.7 mm–1,000 mm	F3.5

**Audio and Video**

Video Compression	H.265; H.264; H.264H; H.264B; MJPEG	
Resolution	Thermal: Main Stream: 1280 × 1024 (default); 1280 × 720, 640 × 512 Sub Stream: 640 × 512 (default); 320 × 256 Visible: Main Stream: 1920 × 1080 (default); 1280 × 720; 704 × 576 Sub Stream: 704 × 576 (default); 352 × 288	

Video Frame Rate	Thermal: 50 Hz: Main Stream: 1280 × 1024@25 fps/1280 × 960@25 fps/1280 × 720@25 fps/400 × 300@25 fps Sub Stream: 640 × 512@25 fps/640 × 480@25 fps/400 × 300@25 fps 60 Hz: Main Stream: 1280 × 1024@30 fps/1280 × 960@30 fps/1280 × 1024@30 fps/400 × 300@30 fps Sub Stream: 640 × 512@30 fps/640 × 480@30 fps/400 × 300@30 fps Visible: 50 Hz: Main Stream: 1920 × 1080@25 fps/1280 × 720@25 fps/704 × 576@25 fps Sub Stream: 704 × 576@25 fps/352 × 288@25 fps 60 Hz: Main Stream: 1920 × 1080@30 fps/1280 × 720@30 fps/704 × 480@30 fps Sub Stream: 704 × 480@30 fps/352 × 240@30 fps
Audio Encoding	G.711a; G.711mu; PCM
Image Encoding Format	JPEG

#### PTZ

Pan/Tilt Range	Pan: 0° to 360° endless Tilt: -45° to +60°
Manual Control Speed	Pan: 0.01°/s-30°/s Tilt: 0.01°/s-12°/s
Preset Speed	Pan: 0.01°/s-30°/s Tilt: 0.01°/s-12°/s
Preset	300
Tour	8
Pattern	5
Scan	5
Idle Motion	Preset; tour; pattern; scanning; horizontal rotation
Wiper	Yes

#### Laser Illumination

Consumption	10 W
Wavelength	808±5 nm
Distance	≥1000 m

#### Function

Two-way Audio	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
Storage	FTP; Micro SD Card (Max 256 GB)
Interoperability	ONVIF; CGI; PSIA; DAHUA SDK
Browser	IE: IE 8 and the later Chrome: 42 and earlier Firefox: 42 and earlier Safari: 10 and earlier
User/Host	Up to 20 (total bandwidth: 64 MB)
User Management	Up to 20 users; supports multi-level user permissions (2 levels); management group and user group
PIP	Yes

#### Intelligence

General IVS Analytics	Tripwire/intrusion
Fire Detection	Yes
Cold/Hot Spot Trace	Yes
Smoke Detection	Yes
Boat Detection	Yes

#### Port

Analog Output	1 × (BNC, 1.0 V[p-p], 75 Ω) port
Network Port	1 × 10 M/100 M Ethernet port (RJ-45)
Alarm Input	2
Alarm Output	1
Audio Input	1
Audio Output	1
RS-485	1

#### Power

Power Supply	100-300 VAC
Power Consumption	Basic <100 W Max. <260 W (heater on)

#### Environment

Operating Temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Operating Humidity	≤95%
Storage Temperature	-50 °C to +80 °C (-58 °F to +176 °F)

#### Physical Characteristics

Protection	IP66; TVS 6000 V lightning proof; surge protection; voltage transient protection
Product Dimensions	655 mm × 515 mm × 617 mm (25.79" × 20.28" × 24.29") (L × W × H)
Packaging Dimensions	883 mm × 685 mm × 898 mm (34.76" × 26.97" × 35.35") (L × W × H)
Net Weight	≤75 kg (165.35 lb)
Gross Weight	≤85 kg (187.40 lb)
Installation	Plane mount
Power Adapter	Included

#### Certification

Certifications	CE; FCC
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**Ordering Information**

Model	Description
DHI-TPC-PT8621C-B20100ZF511BL-AC	Visible: 15.6 mm–500 mm Thermal: 20 mm–100 mm
DHI-TPC-PT8621C-B30150ZF711BL-AC	Visible: 12.5 mm–750 mm Thermal: 30 mm–150 mm
DHI-TPC-PT8621C-B38190ZF1011BL-AC	Visible: 16.7 mm–1,000 mm Thermal: 38 mm–190 mm

**IVS Range**

Focal Length	20 mm–100 mm	30 mm–150 mm	38 mm–190 mm
Human (1.8 m × 0.5 m)	700 m	1,050 m	1,330 m
Vehicle (1.4 m × 4.0 m)	2,100 m	3,150 m	3,990 m

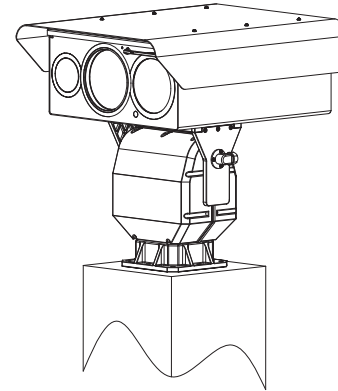
Note:  
The table displays the optimal distance obtained from testing in an environment where the temperature is 23 °C and the relative humidity is below 60%.  
The table is for reference only. The distances within it are subject to actual conditions including atmospheric conditions, target size, the installation site, and more.

**Fire Detection Distance**

Focal Length	20 mm–100 mm	30 mm–150 mm	38 mm–190 mm
Recommended Distance	3,000 m	4,500 m	5,500 m
Max. Distance	6,000 m	10,000 m	11,000 m

Note:  
The table displays the measured distances obtained from using the target size 2 m x 2 m for testing in an environment where the temperature is 23 °C and the relative humidity is below 60%.  
The table is for reference only. The distances within it are subject to actual conditions including atmospheric conditions, target size, the installation site, and more.

**Installation**



**Dimensions (mm[inch])**

