



GT-CPT4Z750-DT-40X-S

Garantir Dual Sensor Long-Range Thermal + Visible PTZ

Network Camera delivers high-performance, real-time thermal and visible-spectrum video for advanced surveillance applications. Engineered with dual-sensor technology, it ensures continuous situational awareness through seamless thermal imaging and high-definition visible video, enabling reliable detection, recognition, and monitoring in both daylight and complete darkness.

Built for demanding outdoor deployments, the camera offers exceptional low-light performance and robust operation in extreme weather conditions, making it ideal for long-range perimeter security, border surveillance, forest monitoring, critical infrastructure protection, and wide-area situational awareness.

This advanced surveillance solution combines precision imaging, durability, and operational flexibility to meet the requirements of modern long-range security and monitoring systems. Adjustable frame rate, resolution, and bit rate settings allow flexible optimization based on available network bandwidth and application-specific requirements, ensuring efficient transmission without compromising image quality.

Key Features:

- Thermal imaging output for effective monitoring of heat signatures
- Reliable operation in fog, smoke, dust, and challenging lighting conditions
- Motorized **40x optical zoom** PTZ lens for flexible installation and precise monitoring
- Triple-streaming support: **H.264, H.265, Smart H.265, and MJPEG**
- Advanced image enhancement with **3D Digital Noise Reduction** and **True WDR**
- **ONVIF Profile S, G, T, and M** support for seamless system integration and interoperability
- **IP67-rated** water and dust resistance for reliable operation in harsh weather conditions
- Suitable for mission-critical surveillance in defence, industrial, and environmental applications

4 MP 40X DUAL SENSOR THERMAL PTZ CAMERA	
Parameters	Specifications
Thermal	
Image Sensor	Uncooled Vanadium Oxide (VOx) Focal Plane Arrays
Resolution	640x512 and Image can be scaled up to 1280x1024
Pixel Pitch	12µm
Spectral Range	8µm ~ 14µm (8,000nm ~ 14,000nm), LWIR
Thermal Sensitivity (NETD)	≤ 20mK
Lens (Motorized)	26 ~ 105mm, f/1.6
Focus	Motorized & Auto Focus
Field of View	26 ~ 105mm: 16.8° ~ 4.2° (H), 13.4° ~ 3.4° (V)
Human (1.8m x 0.5m) DRI (Detection/ Recognition/ Identification) Distance*	26mm: 1083m (D), 271m (R), 135m (I) 105mm: 4375m (D), 1094m (R), 547m (I)

Vehicle (4.0m x 1.5m) DRI (Detection/ Recognition/ Identification) Distance*	26mm: 3322m (D), 831m (R), 415m (I) 105mm: 13417m (D), 3354m (R), 1677m (I)
Fire Detection	(0.2m x 0.2m) 26mm ~ 105mm: 217m ~ 875m
	(1.0m x 1.0m) 26mm ~ 105mm: 1083m ~ 4375m
Temperature Detection	(0.2m x 0.2m) Up to 350m
	(1.0m x 1.0m) Up to 1750m
Image Setting	Brightness, Contrast, Sharpness, Mirror (Normal/ Horizontal/ Vertical/ Horizontal+Vertical), 2D/3D DNR (Auto/ Manual), FFC Control (Auto/ Manual), Privacy Masking
Image Display Modes	White Hot, Black Hot, Iron red, Rainbow, Copper, other colour palettes (up to 17 colours)
Temperature Measurement	
Range	-20°C to 150°C (-4°F to 302°F)
Accuracy	±2°C / ±2%
Response Time	≤ 30ms
Detection	Supports advanced temperature measurement with up to 20 configurable rules, including Spot, Line, and Area modes – comprising 1 full-screen rule and 19 additional customizable measurement regions.
Temperature Alarm	Supports multiple intelligent alarm modes, including threshold, temperature difference, range, and rapid temperature rise alarms for proactive thermal event detection.
Temperature Display	Displays the highest, lowest, or average temperature in the lower-left corner, with dynamic cursor-follow tracking for real-time thermal analysis.
Optical (Visible)	
Image Sensor	1/1.8" CMOS – Starvis (4MP)
Max. Resolution	2688 x 1520 (4MP)
Scanning System	Progressive Scan
Signal System	PAL/NTSC
SNR	≥50 dB
Min. Illumination	Color: 0.001 Lux (F1.6, AGC ON) B/W: 0.0005 Lux (F1.6, AGC ON) & 0 Lux with illuminator on
Lens Type	Motorized Zoom lens
Focal Length	6 to 240 mm
Optical Zoom	40x
Digital Zoom	16x
Focus	Auto, Semi-Auto & Manual
Aperture Range	F1.2 ~ F4.9
FOV	59.2° ~ 1.7° (H); 41.7° ~ 1.4° (V); 72.4° ~ 2.3° (V)
Iris	DC Auto Iris
Shutter Time	1s to 1/100,000s
Gain & Exposure Control	Auto & Manual
Digital Noise Reduction	2D/3D DNR
Defog	Smart Defog
Wide Dynamic Range (WDR)	120 dB (True WDR)

Day & Night	Auto IR Cut Filter
IR	Up to 750 Meter (850nm Laser), Auto & Manual
Image Settings	Rotate/Mirror Mode, Privacy Mask (up to 4 regions), Saturation, Brightness, Contrast, Sharpness, HLC, BLC, Day & Night (Auto, Day mode, Night mode & Timer) & Electronic Image Stabilization (EIS)
White Balance	Auto, Manual, Daylight, Shadow, Tungsten, Fluorescent
Region of Interest (ROI)	Up to 8 regions
Video & Audio	
Video Compression	Smart H.265, H.265, H.264, MJPEG
Primary Stream	Thermal: 25 fps (1280×1024, 1280×720, 640×512) Optical (Visible): 25/30 fps (2688×1520, 2304×1296) & 50/60 fps (1920×1080, 1280×720)
Secondary Stream	Thermal: 25 fps (D1, CIF) Optical (Visible): 25/30 fps (D1, VGA, CIF)
Tertiary Stream	Optical (Visible): 25/30 fps (VGA, CIF, QVGA)
Stream Settings	Resolution, Frame Rate, i-Frame, Video Compression, PAL/ NTSC, CBR/ VBR, Bit Rate
Video Bit Rate (Main Stream)	Thermal: 100 Kbps to 8 Mbps Optical (Visible): 100 Kbps to 16 Mbps
Bit Rate Control	Constant Bit Rate (CBR), Variable Bit Rate (VBR)
OSD	Title/ Week/ Date/ Time/ Text (option of different colours & sizes)
Audio Compression	Optical (Visible): G.711A, G.711U & RAW_PCM
Audio Bit Rate	Optical (Visible): 64 kbps & 128 kbps
Network, Security & Interface	
Protocols	IPv4, IPv6, TCP, UDP, HTTP, HTTPS, ICMP, ARP, DHCP, DNS, DDNS, FTP, RTP, RTSP, RTCP, NTP, SMTP (SSL/ TLS), PPPoE, UPnP, IGMP, QoS, SNMP, 802.1X, SRTP, WSS, Unicast, Multicast
Security	IP filtering, Video encryption (AES 128/256), User Authentication (Multiple user privileges), HTTPS Authentication, Digest Authentication, RTSP Authentication, 802.1x authentication (EAP-TLS), User Access Log, System & Event Log, Encrypted & Signed Firmware, Secure Boot, Brute-Force Attack Protection
Integration	ONVIF (S, G, T & M), SDK/API/CGI
Network	1, RJ45 10/100M Base-T Self Adaptive Ethernet Port
Alarm Interface	8 Inputs & 4 Outputs
Audio Interface	2 Input & 2 Output
CVBS Output	2x BNC (1 for Thermal & 1 for Optical)
Serial Interface	1x RS485
On-Board Storage	Built-in memory card slot, support microSD card, up to 1 TB
Heater & Fan	Yes
Wiper	Yes
Remote User Connection	User Account: ≤32; Concurrent User: ≤10
Client Application	Go-Connect

Smart Analytics & Events		
Analytics	Thermal	Motion detection, Intrusion detection, Line crossing (single/ dual), Entry & Exit Region, Loitering and Wrong Way detection with Human & Vehicle classification People count, Smoking detection, Fire Point detection and Human/ Vehicle/ Ship detection
	Optical (Visible)	Motion detection, Intrusion & Perimeter detection, Line crossing (single/ dual), Loitering, Wrong Parking, Crowd detection, Wrong Way detection, Running & Fall detection with Human & Vehicle classification People count, Fire & Smoke detection, Abnormal Audio detection and Human/ Vehicle/ Face detection
Alarms	Types	Input alarm, SD card alarm, Motion detection, Tampering, Analytics detection, Network alarm and Temperature alarm
	Notifications	Output alarm, Output Audio, Pre & Post alarm recording, Alarm based recording & snapshot, E-mail (SMTP) and FTP upload
Pan/ Tilt		
Pan Travel	0° to 360° (endless) Manual Speed: 0.01°/s to 60°/s Preset Speed: 60°/s	
Tilt Travel	-90° to +90° Manual Speed: 0.01°/s to 30°/s Preset Speed: 30°/s	
Presets	Up to 400 (Accuracy: ± 0.1°)	
PTZ Mode	Preset, Tour (12, up to 32 presets per tour), Track (6), Scan (8), Power-Off Memory, 3D Positioning, Idle Time, Speed setting (Auto & Manual)	
General		
Power	36V DC (DC power adaptor included in package, input is 230V AC), max 150W	
Operating Temperature	-40 °C to 60 °C	
Operating Humidity	0 to 95% Relative Humidity (non-condensing)	
Ingress Protection	IP67	
Vandal Resistant	IK10 (housing)	
Surge Protection	TVS6000V	
Reset Button	Yes	
Housing	Metal	
Dimensions	594x350x337 mm	
Net Weight	Approx. 26.7 kg	

Ordering Information:

GT-CPT4Z750-DT-40X-S

4MP IP PTZ Dual Sensor Thermal PTZ Camera with 40X Optical Zoom (Visible), 640*512 Thermal Resolution, 26~105mm Thermal Motorized Lens, 750 Meter IR and Wiper support.

*DRI ratings are calculated based on Johnson's Criteria under ideal conditions and may vary real-world results like atmospheric conditions, target size, and installation environment etc.; "Detection" indicates a target is visible only as a small pixel spot.

Product specifications and design are subject to change without prior notice.

Version: 1.1