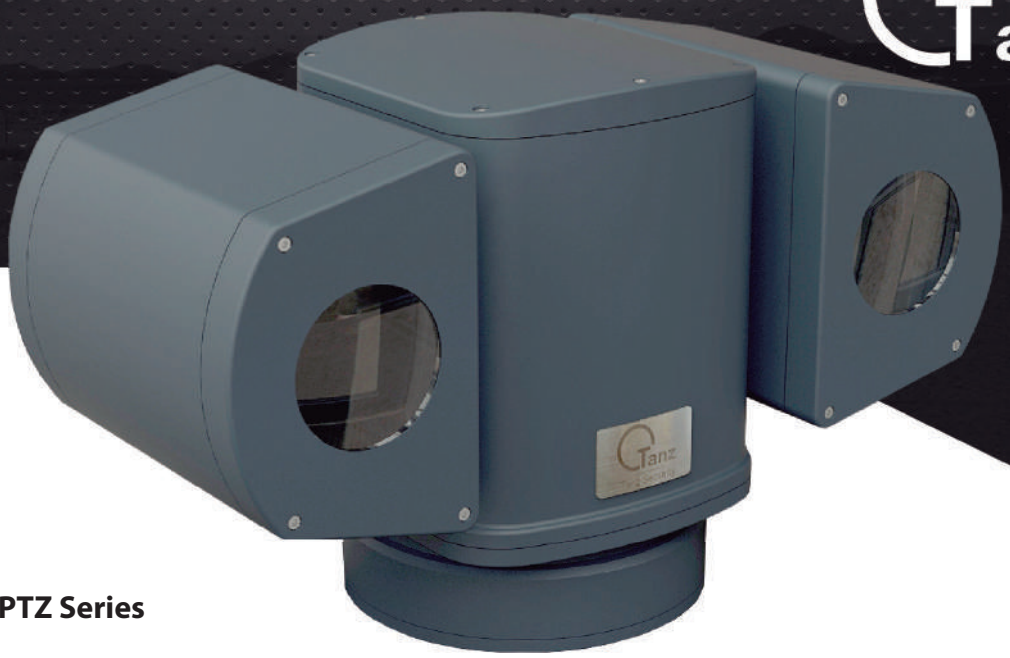
Dual sensor thermal PTZ camera
LWIR



Compact TCID2 Multisensor PTZ Series

TCID2 series PTZ is a compact multisensor system including a powerful thermal camera, and HD day/night zoom camera paired with multiple zoom options, especially designed for vehicle and other limited space installations.

A high precision and heavy-duty worm gear pan-tilt system, able to work 24/7 without any maintenance for many years. Making TCID2 compact PT an unparalleled performance model, resulting in accurate detection, recognition and identification of intruders and threats at over 7Km. distance for NATO targets and more than 2,2Km. for humans.

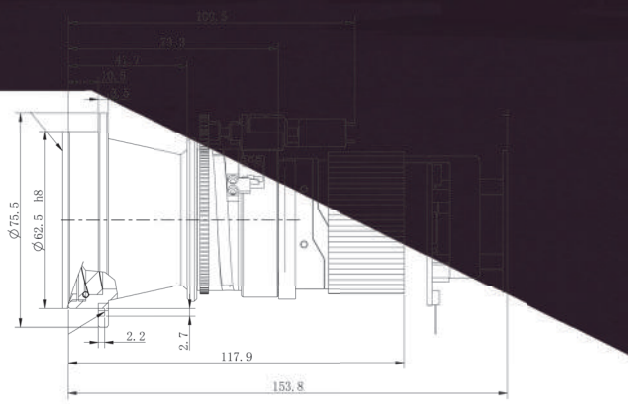
Integrated into an anti-corrosive stainless-steel or aluminum heavy-duty housing, making TCID2 perfect for seaport and harsh environment installations. TCID2 is IP66 and including fans/heaters to work in high and low temperature weather.

Key features:

- **HD Thermal resolution in 640x512 or 1280x1024 pixels**
- **High performance NETD thermal Vox sensors with 12µm. pixel**
- **Fixed thermal lens up to 55mm.**
- **2mp. - 8mp. day/night cameras, up to 365mm. zoom lens**
- **Starvis super low lux sensor**
- **30/60fps. video**
- **EIS/OIS video stabilization for perfect image video stability**
- **On-board or advanced video analytics**
- **High precission motor technology, accurate pan/tilt 0,01°**
- **Worm drive engine with long lasting / high repeatability**
- **High speed azimuth with -90/90° elevation**
- **24v. DC power**
- **IP66 waterproof housing**
- **High / Low temperature ready**
- **SUS316 Stainless steel or aluminum casting**
- **HELIOS C2 compatible**
- **Heater, fan**
- **Military connectors**
- **Onvif 2.5 and Profile S**

Specifications:

Model	TCID2 Series				
	Type	Dual sensor compact PTZ camera			
THERMAL CAMERA	Sensor	LWIR, uncooled Vox micro-bolometer			
	Wavelength	8-14µm.			
	NETD	<35mK@f/1,0 50Hz., 300K			
	Pixel pitch	12µm.			
	Resolutions	640x512			
	Display resolution	Up to 1280x1024			
	Color palette	10 colors			
	Image enhancement	Yes			
	Frames/second	25/30fps.			
	Focal length	13mm.	19mm.	25mm.	35mm.	55mm.
	HFOV	32,9º	22,9º	17,5º	13º	8º
	f. number	1.0	1.0	1.0	1.0	1.0
	Focus	Athermal fix lenses			
	Video compression	H.265, H.264, Mjpeg			
	Streams	Triple stream			
	Bitrate	256-6144Kbps. / 1536-7424Kbps. , VBR/CBR			
	Image settings	Contrast, Brightness, Mirror, Flip, sharpness, Image Enhancement, NR 2/3D			
	Motion detection/ROI	Yes			
	Standard analytics	Yes			
	Advanced video analysis	Tripwire, Cross Fence detection, Intrusion, Loitering detection			
	Fire detection	Yes			
DAY/NIGHT CAMERA	Sensor	Low lux CMOS sensor, base in module selection			
		Resolution	Zoom	Focal length	HFOV
		2 megapixel	35X	6-210mm.	61,2º-2,0º
		2 megapixel	42X	7-300mm.	43,3°-1,0°
		2 megapixel	58X OIS	6-365mm.	63,4°-1,2°
		8 megapixel	30X	6-180mm.	65,2°-2,4°
	Video compression	H.265, H.264, Mjpeg			
	Streams	Triple stream			
	Bitrate	1024-8,192Kbps., VBR/CBR (8192-16,384Kbps. MJPEG)			
	Image settings	Contrast, Brightness, Mirror, Flip, sharpness, Enhancement, 2/3DNR, AWB, BLC, HLC, WDR, Near Infrared			
	Day/Night	Day, night, auto			
	Frames/second	25/30fps. / 50/60fps.			
	Focus type	Autofocus, remote motorized			
	Defogging	Optical or digital, base in selection			
	Digital zoom	16X			
	Autofocus modes	Auto, semi auto, autotracking			
	Near infrared video	Depending in the selected module			



Long range thermal modules

DAY/NIGHT CAMERA	Video output	Digital
	Video analysis (D/N)	Tripwire, Cross fence, Intrusion, Abandoned-missing object, Fast moving, Parking detection, Crowd gathering estimation, Loitering Detection
	EIS/OIS	In D/N camera
	Local storage	Up to 256Gb. for each camera
GENERAL	Web browser	IE8 or above, Chrome, Edge, Firefox
	Pan/tilt movement	Pan 360º endless, tilt -90/90º
	Pan/tilt speed	0,01º-80º/Sec. - 0,01º-40º/Sec.*
	Accuracy	±0,01º
	Presets	256
	Tours	8
	Auto scan / Auto pan	Yes
	Patterns	5 (10min.)
	Groups	4
	Idle action / Start up	Yes
	Protocols	Pelco D
	Digital alarms	Motion detection, IVS alarms, memory full
	Alarm I/O	D/N 1/1 - IR 1/1
	RS485	Yes
	Serial baudrate	9600 Kbps.
	Audio	2 way (Optional)
	Connector	Military type
	Network	RJ45 1x Giga Ethernet
	Network protocols	IPv4/v6, RTSP/RTP/RTCP, TCP/UDP, HTTP, HTTPS, DHCP, DNS, FTP, DDNS, PPPoE, SMTP, SNMP V1/V2, IEEE802.X, Bonjour, IP filter, QoS, ICMP, IGMP, NTP
	Fan/Heater	Yes
	Platform	Onvif 2.5, Profile S
	Envirnonmental	-32º/55ºC. - 0/95% RH not condensing
	Power	24v.DC
	GE window	Yes
	Waterproof	IP66
	Weight	18Kg. without cameras / 6.2Kg. in aluminum
	Size	395x240x184mm.

Thermal - DRI Distances

Human target 1,8x0,5m.	Johnson´s criteria - NATO standard - 13mm. focal length
Detection	542m.
Recognition	135m.
Identification	68m.

Vehicle target 2,3x2,3m.	Johnson´s criteria - NATO standard - 13mm. focal length
Detection	1.661m.
Recognition	415m.
Identification	208m.

Human target 1,8x0,5m.	Johnson´s criteria - NATO standard - 19mm. focal length
Detection	792m.
Recognition	198m.
Identification	99m.

Vehicle target 2,3x2,3m.	Johnson´s criteria - NATO standard - 19mm. focal length
Detection	2.428m.
Recognition	607m.
Identification	303m.

Human target 1,8x0,5m.	Johnson´s criteria - NATO standard - 25mm. focal length
Detection	1.042m.
Recognition	260m.
Identification	130m.

Vehicle target 2,3x2,3m.	Johnson´s criteria - NATO standard - 25mm. focal length
Detection	3.194m.
Recognition	799m.
Identification	399m.

Coastal and Ground Radars Ready

Tanz Security multisensors are ready to be used with omnidirectional and directional radars for multiple applications, designed for coastal security, border control and other critical facility installations and for very long distances and covering very large areas.

Visible/NIR Optical Camera

TCID8 Series are designed and optimized for long-range surveillance. Using large size progressive scan CMOS sensors to capture more light and perform better in low lux scernarios, able to perform perfectly under 0,001 Lux. Including the latest technology in real-time image processing such as BLC, HLC, WDR, EIS, 2-3D DNR.

EIS and OIS optics

Select from availble lens options, all Tanz Security advanced zoom lenses include several zoom motor speeds and moving object tracking, available zoom options in 30X, 35X, 50X, x86, 90X providing narrow FOV as small as 0,3º.

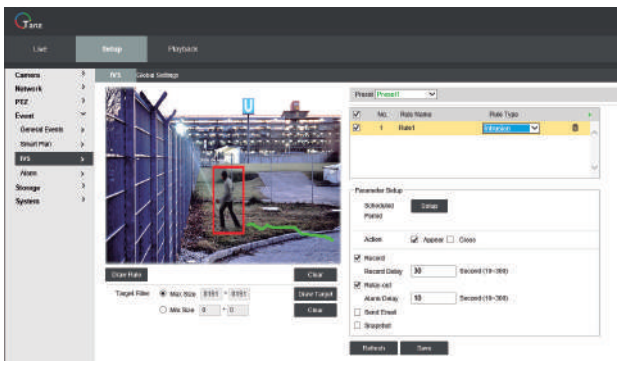
Select optical defogging providing 60fps. video or digital defogging to get rich details in long distance zoom lenses.

Video Analysis

TCID8 Series include advanced video analysis and digital video stabilization taking security cameras to a next level.

Tanz Security cameras are now including advanced video analytics to make the cameras smartest than ever, set the cameras to help in different risk auto-detection:

- **Tripwire**
- **Fence detection**
- **Intrusion**
- **Abandoned-Missing object**
- **Fast moving**
- **Parking detection**
- **Crowd gathering estimation**
- **Loitering detection.**



ARTIFICIAL INTELLIGENCE

Mid Range Thermal and DN Zoom Lenses

High flexibility lens for long distance surveillance applications such as border control or coastal surveillance applications. Capable to provide wide angle HFOV with 13mm. and very long distances and close HFOV with 55mm. narrow angle in thermal lenses and up to 300mm. in the DN zoom lenses.

Advanced Video Analysis and AI

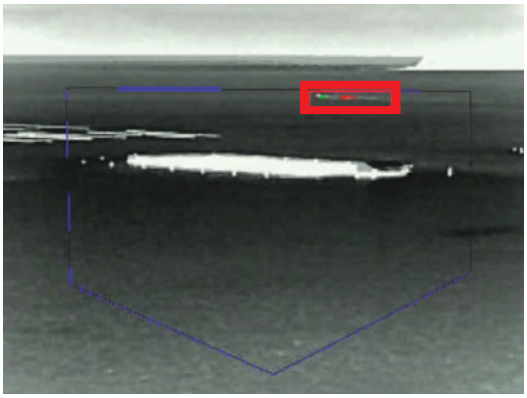
Advanced video analytics are designed to protect critical facilities, large protected areas, border control or military facilities from possible threats. Tanz Security video analytics are advanced algorithms capable to detect intrusions in very long distances and with very low false alarms.

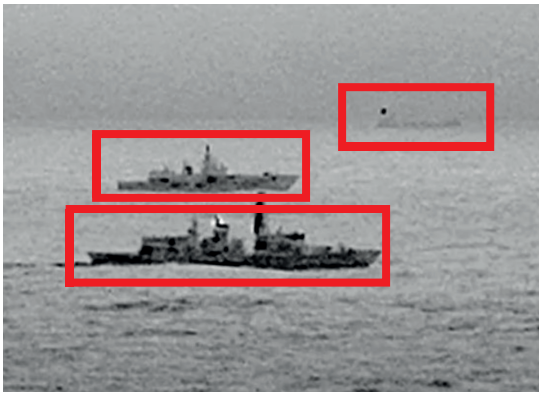
Avoid false alarms caused by white-listed objects into a controlled scenario. Tanz video analytics are able to determine and follow complex rules to avoid the usual analytics false alarms.

Tanz analytics are dedicated to specific type of video images. Differentiating color video and thermal video differences with specific algorithms for each type. This provides Tanz analytics a superior performance.

Thanks to the advance design of the software, we can protect areas located in far distances, and once a threat is detected make slew to cue tracking of the moving object.

The advanced analytics can implement AI (Artificial Intelligence) to classify and detect military vehicles, vessels and other spcific targets. The system includes a deep learning engine to teach the system tailored object detection.





Thermal - DRI Distances

Human target 1,8x0,5m.	Johnson´s criteria - NATO standard - 35mm. focal length
Detection	1.458m.
Recognition	365m.
Identification	182m.

Vehicle target 2,3x2,3m.	Johnson´s criteria - NATO standard - 35mm. focal length
Detection	4.472m.
Recognition	1.118m.
Identification	559m.

Human target 1,8x0,5m.	Johnson´s criteria - NATO standard - 55mm. focal length
Detection	2.292m.
Recognition	573m.
Identification	286m.

Vehicle target 2,3x2,3m.	Johnson´s criteria - NATO standard - 55mm. focal length
Detection	7.028m.
Recognition	1.757m.
Identification	878m.

* Different weather conditions and temperature changes may affect to final distances, the stated distances are references.
* Johnson´s Criteria / Thermal Imager- 2^{0} temp difference & σ=0.2 km^{-1} atmospheric attenuation factor / Day Imager- 1000 lux illumination and target contrast of 20%. Probability 50%.
* GE window included in all lenses under/and 55mm.
* Check lenses, sensors and options to define the proper configuration
* AI/Deep learning/Object classification and advanced features with HELIOS C2
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NATO OTAN

NATO/OTAN NCAGE: SHCT4

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