



Network Thermal

TNO-L4040TR

VGA Thermal Camera

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Key Features

- Max. 640x480 resolution support
- Built-in 19mm fixed focal lens
- H.265, H.264, MJPEG codec
- Max. 8fps@all resolutions (H.265, H.264, MJPEG)
- Directional detection, Motion detection, Appear/Disappear, Enter/Exit, Loitering, Tampering, Virtual line, Audio detection, Temperature detection, Sound classification, Shock detection
- Micro SD / SDHC / SDXC memory 1-slot (Max. 256GB)
- Hallway View, WiseStreamII support
- Temperature Detect Range $-20^{\circ}\text{C} \sim 130^{\circ}\text{C}$ ($-4^{\circ}\text{F} \sim 266^{\circ}\text{F}$)
- Additional Hybrid palettes, Spot temperature reading
- PoE, 24VAC, 12VDC / IP66, IK10, NEMA4X

TNO-L4040TR

VGA Thermal Camera



Specifications

Video

Imaging Device	Type	Uncooled micro bolometer (640x480)
Resolution		640x480, 640x360, 320x240
Max. Framerate	H.265/H.264	8fps
	MJPEG	8fps
NETD		≤50mK
Pixel Size		17μm
Video Out		CVBS: 1.0 Vp-p / 75Ω composite for installation, USB: Micro USB Type B

Lens

Focal Length (mm)		19
Max Aperture Ratio (F-number)	Wide	1.0
Angular Field of View	Horizontal	32°
	Vertical	24.3°
	Diagonal	39.2°
Min. Object Distance		11m(36.09ft)
Focus Control		Fixed

Operational

Digital Image Stabilization	Support(built-in gyro sensor)	
Motion Detection	Quantity	8ea
	Shape	8point Polygonal zones
Privacy Masking	Quantity	24ea
	Shape	Polygonal zones
	Color / Option	Gray, Green, Red, Blue, Black, White, Mosaic
Video Rotation	Flip, Mirror, Hallway view(90°/270°)	
Alarm Interface	In/Out	Input 1ea, Output 2ea
Alarm Triggers	Analytics, Network disconnect, Alarm input, MQTT subscription	

Design and specifications are subject to change without notice. The latest product information / specification can be found at HanwhaVision.com
Hanwha Vision is formerly known as Hanwha Techwin.

Operational

Alarm Events When Alarm Trigger Occurred	File upload(image): e-mail/FTP, Notification: e-mail, Recording: SD/SDHC/SDXC or NAS recording at event triggers,Alarm output, Handover: PTZ preset, MQTT: publication
Audio In	Selectable(mic in/line in)
Audio Out	Line out
Color Pallettes	Whitehot, Blackhot, Rainbow, Rainbow2, Sepia, Red, Iron, Custom

Analytics

Analytics Events	Normal	Motion detection, Tampering, Audio detection, Sound classification, Shock detection, Virtual area(Lotering, Intrusion, Enter/Exit, Appear/Disappear), Virtual line(Crossing, Direction) , Temperature detection
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Radiometry

Temperature Detect Range	-20°C~130°C	
Temperature Accuracy	±5°C(≤100°C), ±20%(>100°C)	
Temperature Detection ROI Zones	Quantity	6ea
	Shape / Option	Quadrangle
Hybrid Pallettes	Support	
Spot Temperature Reading	Support	

Network

Ethernet	RJ-45(10/100BASE-T)	
Video Compression	H.265/H.264: Main/Baseline/High, MJPEG	
Audio Compression	G.711 u-law /G.726 selectable,G.726(ADPCM) 8kHz,G.711 8kHz, G.726: 16kbps,24kbps,32kbps,40kbps, AAC-LC: 48kbps at 16kHz	
Smart Codec	Manual, WiseStream II	
Bitrate Control	H.265/H.264: CBR or VBR, MJPEG: VBR	
Streaming	Unicast	Up to 20 users
	Multicast	Support
	Multiple Streaming	Up to 10 profiles
Protocol	IPv4, IPv6, TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, UPnP, Bonjour, LLDP, SRTP(TCP, UDP Unicast), MQTT, PIM-SM	
Application Programming Interface	ONVIF	S, G, T
	Others	SUNAPI(HTTP API), Hanwha Vision Open Platform

Security

OS / Firmware Protect	Encrypted firmware
User authentication	Digest authentication
Network authentication	IEEE 802.1X(EAP-TLS, EAP-LEAP)

Security

Secure Communication	HTTPS, SRTP
Access Control	IP-based access control
Audit	Access / System / Event Log management

General

Memory	RAM	1GB
	Flash	256MB
Edge Storage	Micro SD/SDHC/SDXC	Max. 256GB x 1slot

Environmental & Electrical

Operating Condition	Temperature	-40°C~+60°C(-40°F~+140°F)
	Humidity	0~90% RH(non-condensing)
Storage Condition	Temperature	-50°C~+60°C(-58°F~+140°F)
	Humidity	0~90% RH(non-condensing)
Input Voltage		PoE(IEEE802.3af, Class3), 24VAC, 12VDC
Power Consumption	PoE	Max. 10W, typical 8.6W
	12VDC	Max. 9W, typical 7.5W
	24VAC	Max. 10.5W, typical 8.9W

Mechanical

Color	White
Material	Aluminum
RAL Code	RAL9003
Product Dimensions	ø101.97x401.8mm(4.01x15.82")
Product Weight	3175g(7.01lb)

Certifications & Standards

Environment	IEC 60529 IP66, IEC 62262 IK10, NEMA 250 type 4X
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TNO-L4040TR

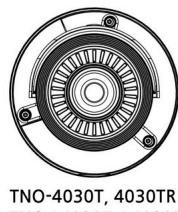
VGA Thermal Camera



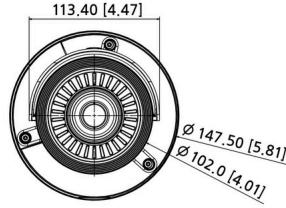
CAD

Unit: mm [inch]

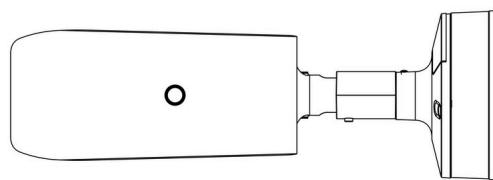
TNO-L4040T/L4040TR/L4050T VGA Thermal Camera



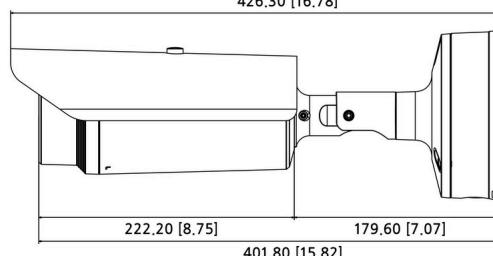
TNO-4030T, 4030TR
TNO-L4030T, L4030TR



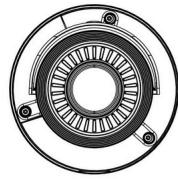
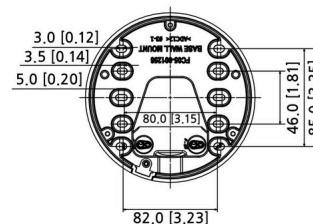
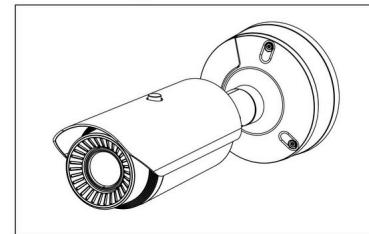
TNO-4040T, 4040TR
TNO-L4040T, L4040TR



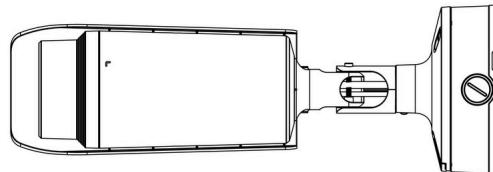
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Reference image



TNO-4050T, L4050T



Revision	V1.0
Revision Date	24/12/10
Paper Size	A0
Unit	mm [inch]
Scale	1:1

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