



Network

Bullet

TNO-L4040TR

VGA Thermal Camera



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	Uncooled micro bolometer
Resolution	640x480, 640x360, 320x240
Max. Framerate	H.265/H.264/MJPEG: Max. 8fps
NETD	<50mK
Pixel Size	17µm
Video Out	CVBS: 1.0 Vp-p / 75Ω composite, 720x480(N), 720x576(P) for installation USB: Micro USB Type B, 1280x720 for installation

Lens

Focal Length (Zoom Ratio)	19mm fixed focal
Max. Aperture Ratio	F1.0
Angular Field of View	H: 32° / V: 24.3° / D: 39.2°
Min. Object Distance	11m(36.09ft)
Focus Control	Fixed

Operational

Camera Title	Displayed up to 85 characters
Digital Image Stabilization	Support(built-in gyro sensor)
Motion Detection	8ea, 8point polygonal zones
Privacy Masking	24ea, polygonal zones - Color: Grey/Green/Red/Blue/Black/White - Mosaic
Video Rotation	Flip, Mirror, Hallway view(90-/270-)
Analytics	Directional detection, Motion detection, Appear/Disappear, Enter/Exit, Loitering, Tampering, Virtual line, Audio detection, Temperature detection, Sound classification, Shock detection
Alarm I/O	Input 1ea / Output 2ea
Alarm Triggers	Analytics, Network disconnect, Alarm input, MQTT subscription
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) Supply voltage: 2.5VDC(4mA), Input impedance: 2K Ohm
Audio Out	Line out, Max.output level: 1Vrms
Color Palettes	Whitehot, Blackhot, Rainbow, Rainbow2, Sepia, Red, Iron, Custom

Radiometry

Temperature Detect Range	-20°C~130°C(-4°F~266°F)
Temperature Accuracy	±5°C(≤100°C), ±20%(>100°C)

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.

Temperature Detection	6 Quadrangle ROI zones, whole FoV area
Additional	Hybrid palettes, Spot temperature reading
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(5ea area), WiseStream II
Bitrate Control	H.264/H.265: CBR or VBR MJPEG: VBR
Streaming	Unicast(20 users) / Multicast 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, PIM-SM, UPnP, Bonjour, LLDP, SRTP, MQTT
Application Programming Interface	ONVIF Profile S/G/T SUNAPI(HTTP API) Wisenet open platform
Security	
OS / Firmware Protect	Firmware encryption
User authentication	Digest Authentication, Prevent brute-force attack
Network authentication	802.1X Authentication(EAP-TLS, EAP-LEAP, EAP-PEAP MSCHAPv2)
Secure Communication	HTTPS, SRTP, WSS(Websocket secure)
Access Control	Access control based on IP address
Data Protect	Authentication information encryption, ZIP compression encryption
Audit	User Access/System/Event log management
Device ID	Device Certificate(Hanwha Private Root CA)
General	
Webpage Language	English, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek
Edge Storage	Micro SD/SDHC/SDXC 1slot 256GB
Memory	1024MB RAM, 256MB Flash
Environmental & Electrical	
Operating Temperature / Humidity	-40°C ~ +60°C (-40°F ~ +140°F) / Less than 90% RH
Storage Temperature / Humidity	-50°C ~ +60°C (-58°F ~ +140°F) / Less than 90% RH
Certification	IP66, IK10, NEMA4X
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 / Material	White / Aluminum
RAL Code	RAL9003
Product Dimensions / Weight	ø101.97x401.8mm(4.01x15.82") / 3,124g(6.89lb)