

Network Thermal

# TNO-L4040TR

VGA Thermal Camera

## Key Features

- VGA Image Resolution
- 19mm Focal Length
- -20°C~130°C (-4°F~266°F) Temperature Detection
- IP66, IK10 Rated
- Max. 640x480 resolution support
- Max. 8fps at all resolutions (H.265, H.264, MJPEG)
- Micro SD / SDHC / SDXC memory 1-slot (Max. 256GB)

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# 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** | | 17㎛ |
| **Video Out** | | CVBS: 1.0 Vp-p / 75Ω composite for installation,<br>USB: Micro USB Type B. Preview and installation ONLY. Requires WiFi dongle. |

### 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 |

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## Operational

| | | |
|---|---|---|
| **Alarm Events When Alarm Trigger Occurred** | | File upload(image): e-mail/FTP,<br>Notification: e-mail,<br>Recording: SD/SDHC/SDXC or NAS recording at event triggers,Alarm output,<br>Handover: PTZ preset,<br>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 |

## 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: Main,<br>H.264: Main/Baseline/High,MJPEG |
| **Audio Compression** | | G.711 u-law /G.726 selectable,G.726(ADPCM) 8kHz,G.711 8kHz,<br>G.726: 16kbps,24kbps,32kbps,40kbps,<br>AAC-LC: 48kbps at 16kHz |
| **Smart Codec** | | Manual, WiseStream II |
| **Bitrate Control** | | H.265/H.264: CBR or VBR,<br>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, IGMPv2, 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 |

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## Security

| | | |
|---|---|---|
| **Network authentication** | | IEEE 802.1X(EAP-TLS, EAP-LEAP) |
| **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), 12VDC, 24VAC |
| **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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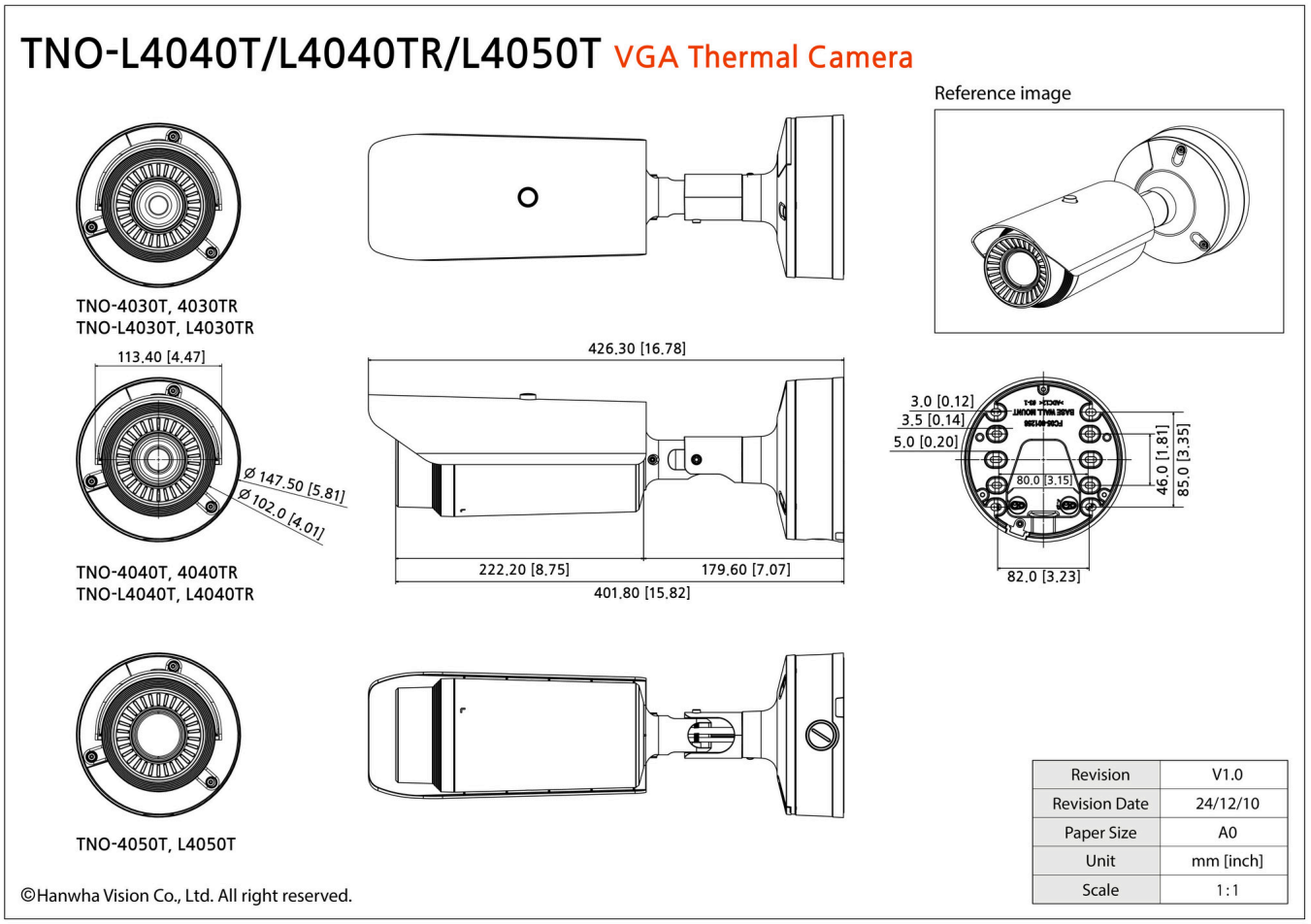
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## CAD

Unit: mm [inch]




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