



Network

Bullet

# TNO-L4050T

VGA Thermal Camera



## Key Features

- Max. 640x480 resolution support
- Built-in 35mm 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
- PoE, 24VAC, 12VDC / IP66, IK10, NEMA4X

# TNO-L4050T

## 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<br>USB: Micro USB Type B, 1280x720 for installation |

### Lens

|                           |                            |
|---------------------------|----------------------------|
| Focal Length (Zoom Ratio) | 35mm fixed focal           |
| Max. Aperture Ratio       | F1.0                       |
| Angular Field of View     | H: 17.2° / V: 13° / D: 22° |
| Min. Object Distance      | 36m(118.11ft)              |
| 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<br>- Color: Grey/Green/Red/Blue/Black/White<br>- 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<br>- File upload(image): e-mail/FTP<br>- Notification: e-mail<br>- Recording: SD/SDHC/SDXC or NAS recording at event triggers<br>- Alarm output<br>- Handover: PTZ preset<br>- MQTT: publication |
| Audio In                    | Selectable(mic in/line in)<br>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  |

### Network

|                   |  |
|-------------------|--|
| Ethernet          | RJ-45(10/100BASE-T)                    |
| Video Compression | H.265/H.264: Main/Baseline/High, MJPEG |

Design and specifications are subject to change without notice. The latest product information / specification can be found at [HanwhaVision.com](http://HanwhaVision.com).

Hanwha Vision is formerly known as Hanwha Techwin.

|                                   |  |
|-----------------------------------|--|
| Audio Compression                 | G.711 u-law / G.726 Selectable<br>G.726(ADPCM) 8KHz, G.711 8KHz<br>G.726: 16Kbps, 24Kbps, 32Kbps, 40Kbps<br>AAC-LC: 48Kbps at 16KHz  |
| Smart Codec                       | Manual(5ea area), WiseStream II  |
| Bitrate Control                   | H.264/H.265: CBR or VBR<br>MJPEG: VBR  |
| Streaming                         | Unicast(20 users) / Multicast<br>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<br>SUNAPI(HTTP API)<br>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<br>12VDC: Max. 9W, typical 7.5W<br>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) |