

# TNO-4041T

VGA Thermal Camera

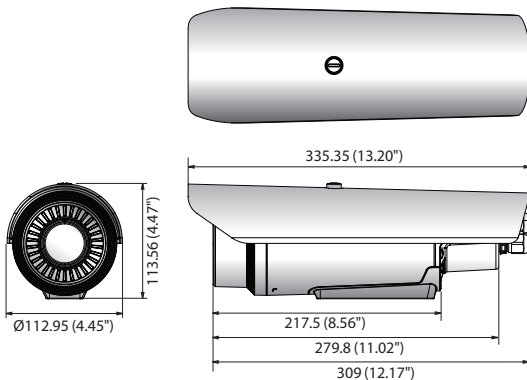


## Key Features

- 640 x 480 resolution support
- Built-in 19mm fixed lens
- H.265, H.264, MJPEG codec
- 30fps@all resolutions (H.265, H.264, MJPEG)
- Motion detection, Handover
- Tampering, Loitering, Directional/Virtual Line Detection, Enter/Exit, Appear/Disappear, Audio Detection, Sound Classification, Shock detection, Temperature change detection
- SD / SDHC / SDXC memory slot (Maximum 256GB)
- WiseStream II support
- PoE, 24V AC, 12V DC / IP66, NEMA4X, IK10

## Dimensions

Unit : mm (inch)



| TNO-4041T                         |                                                                                                                                                                                                                                            |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>VIDEO</b>                      |                                                                                                                                                                                                                                            |
| Imaging Device                    | Uncooled microbolometer, Pixel size : 17 $\mu$ m                                                                                                                                                                                           |
| Effective Pixels                  | 640(H) x 480(V)                                                                                                                                                                                                                            |
| NETD                              | <50mK                                                                                                                                                                                                                                      |
| Spectral Range                    | 8 ~ 14 $\mu$ m                                                                                                                                                                                                                             |
| Video Out                         | CVBS : 1.0 Vpp / 75 $\Omega$ composite, 720 x 480 for installation                                                                                                                                                                         |
| <b>LENS</b>                       |                                                                                                                                                                                                                                            |
| Focal Length (Zoom Ratio)         | 19mm fixed                                                                                                                                                                                                                                 |
| Maximum Aperture Ratio            | F1.0                                                                                                                                                                                                                                       |
| Angular Field of View             | H : 32° / V : 24.3° / D : 39.2°                                                                                                                                                                                                            |
| Minimum Object Distance           | 11m (36.09ft)                                                                                                                                                                                                                              |
| Focus Control                     | Fixed                                                                                                                                                                                                                                      |
| Lens / Mount Type                 | Board-in type                                                                                                                                                                                                                              |
| <b>OPERATIONAL</b>                |                                                                                                                                                                                                                                            |
| Camera Title                      | Off / On<br>- English / Numeric / Special characters / International characters<br>- Multi-line (Maximum 5), Color (Gray / Green / Red / Blue / Black / White), Transparency, Auto scale by resolution                                     |
| Motion Detection                  | Off / On (8ea, 8point polygonal zones), Handover                                                                                                                                                                                           |
| Privacy Masking                   | Off / On (32ea, polygonal zones)<br>- Color : Gray / Green / Red / Blue / Black / White - Mosaic                                                                                                                                           |
| Flip / Mirror                     | Off / On                                                                                                                                                                                                                                   |
| Video & Audio Analytics           | Tampering, Loitering, Directional/Virtual Line detection, Enter/Exit, (Dis) Appear, Audio detection, Motion detection, Sound classification, Shock detection, Temperature change detection                                                 |
| Alarm I/O                         | Input 1ea / Output 2ea                                                                                                                                                                                                                     |
| Digital Image Stabilization       | Off / On (Built-in Gyro sensor)                                                                                                                                                                                                            |
| Remote Control Interface          | RS485, RS422                                                                                                                                                                                                                               |
| RS-485 Protocol                   | Pelco D/P, Samsung T, Honeywell, Bosch, Panasonic, Sungin, AD, Vicon, GE                                                                                                                                                                   |
| Alarm Triggers                    | Alarm input, Motion detection, Video & Audio analytics, Network disconnect                                                                                                                                                                 |
| Alarm Events                      | File upload Via FTP, E-mail, Notification Via E-mail, Local storage (SD/SDHC/SDXC) or NAS recording at event triggers, Alarm output, Handover                                                                                              |
| Pixel count                       | Support                                                                                                                                                                                                                                    |
| <b>NETWORK</b>                    |                                                                                                                                                                                                                                            |
| Ethernet                          | RJ-45 (10/100 BASE-T)                                                                                                                                                                                                                      |
| Video Compression Format          | H.265 / H.264 (MPEG-4 part 10/AVC) : Main / Baseline / High, MJPEG                                                                                                                                                                         |
| Resolution                        | 640 x 480, 640 x 360, 320 x 240                                                                                                                                                                                                            |
| Maximum Framerate                 | H.265 / H.264 : Maximum 30fps at all resolutions, MJPEG : Maximum 30fps                                                                                                                                                                    |
| Smart Codec                       | Manual (Sea area), WiseStream II                                                                                                                                                                                                           |
| Video Quality Adjustment          | H.265 / H.264 / MJPEG : Target Bitrate Level Control                                                                                                                                                                                       |
| Bitrate Control Method            | H.265 / H.264 : CBR or VBR, MJPEG : VBR                                                                                                                                                                                                    |
| Streaming Capability              | Multiple streaming (Up to 10 profiles)                                                                                                                                                                                                     |
| Audio In                          | Selectable (Mic in / Line in), Supply voltage : 2.5V DC (4mA), Input impedance : approx. 2K Ohm                                                                                                                                            |
| Audio Out                         | Line out, Maximum output level : 1 Vrms                                                                                                                                                                                                    |
| Audio Compression Format          | G.711 u-law / G.726 selectable, G.726 (ADPCM) 8KHz, G.711 8KHz, G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps, AAC-LC : 48Kbps at 8 / 16 / 32 / 48KHz                                                                                             |
| Audio Communication               | Bi-directional (2-Way)                                                                                                                                                                                                                     |
| IP                                | IPv4, IPv6                                                                                                                                                                                                                                 |
| Protocol                          | TCP/IP, UDP/IP, RTP (UDP), RTP (TCP), RTCP, RTPSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3 (MIB-2), ARP, DNS, DDNS, QoS, UPnP, Bonjour                                                                |
| Security                          | HTTPS(SSL) login authentication, Digest login authentication<br>IP address filtering, User access log, 802.1x authentication (EAP-TLS, EAP-LEAP)                                                                                           |
| Streaming Method                  | Unicast / Multicast                                                                                                                                                                                                                        |
| Maximum User Access               | 20 users at Unicast mode                                                                                                                                                                                                                   |
| Edge Storage                      | SD/SDHC/SDXC (up to 256GB)<br>- Motion images recorded in the SD/SDHC/SDXC memory card can be downloaded.<br>NAS (Network Attached Storage), Local PC for instant recording                                                                |
| Application Programming Interface | ONVIF Profile S/G, SUNAPI (HTTP API), Open Platform                                                                                                                                                                                        |
| Webpage Language                  | English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek                                                                                        |
| Web Viewer                        | Supported OS : Windows 7, 8.1, 10, Mac OS X 10.10, 10.11, 10.12<br>- Supported Browsers:<br>Google Chrome 63, Microsoft Edge 41, Microsoft Internet Explorer 11, Mozilla Firefox 57 (Windows 64-bit only), Apple Safari 11 (Mac OS X only) |
| Central Management Software       | Wisenet WAVE, SmartViewer, SSM                                                                                                                                                                                                             |
| <b>ENVIRONMENTAL</b>              |                                                                                                                                                                                                                                            |
| 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                                                                                                                                                                                          |
| Ingress Protection                | IP66, NEMA 4X                                                                                                                                                                                                                              |
| Vandal Resistance                 | IK10                                                                                                                                                                                                                                       |
| <b>ELECTRICAL</b>                 |                                                                                                                                                                                                                                            |
| Input Voltage / Current           | 24V AC $\pm$ 10%, 12V DC $\pm$ 10%, PoE (IEEE802.3af, class 3)                                                                                                                                                                             |
| Power Consumption                 | Maximum 10.5W (24V AC), Maximum 9W (12V DC), Maximum 10W (PoE)                                                                                                                                                                             |
| <b>MECHANICAL</b>                 |                                                                                                                                                                                                                                            |
| Color / Material                  | White / Aluminum                                                                                                                                                                                                                           |
| Dimensions (WxH)                  | Ø101.97 x 309mm (Ø4.01" x 12.17")                                                                                                                                                                                                          |
| Weight                            | 2,501g (5.51 lb)                                                                                                                                                                                                                           |

\* The latest product information / specification can be found at [hanwhasecurity.com](http://hanwhasecurity.com)

\* Design and specifications are subject to change without notice.

\* Wisenet is the proprietary brand of **Hanwha Techwin**, formerly known as Samsung Techwin.