

# TNO-4050T

VGA Thermal Camera

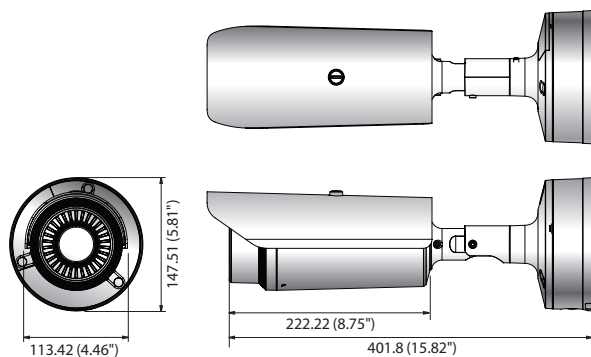


## Key Features

- 640 x 480 resolution support
- Built-in 35mm 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)
- Hallway View, WiseStream II support
- PoE, 24V AC, 12V DC / IP66, NEMA4X

## Dimensions

Unit : mm (inch)



TNO-4050T	
<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 USB : Micro USB type B, 1280 x 720, for installation
<b>LENS</b>	
Focal Length (Zoom Ratio)	35mm fixed
Maximum Aperture Ratio	F1.0
Angular Field of View	H : 17.2° / V : 13° / D : 22°
Minimum Object Distance	36m (118.11ft)
Focus Control	Fixed
Lens / Mount Type	Board-in type
<b>OPERATIONAL</b>	
Camera Title	Off / On - English / Numeric / Special characters / International characters - 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) - Color : Gray / Green / Red / Blue / Black / White - Mosaic
Flip / Mirror	Off / On, Hallway : 90° / 270°
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)
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 (5ea 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, RTSP, 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 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) - Motion images recorded in the SD/SDHC/SDXC memory card can be downloaded. 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, 10, Mac OS X 10.10, 10.11, 10.12 - Supported Browsers : 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
<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)	$\varnothing$ 147.51 x 401.8mm ( $\varnothing$ 5.81" x 15.82")
Weight	3,175g (7.0 lb)

※ This product is subject to US export licensing requirements. Exports without an export license or other applicable authorization to most countries is prohibited by law

\* 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.