

# TNO-4051T

VGA Thermal Camera

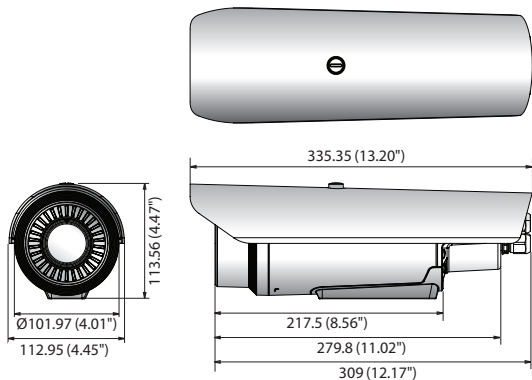


## Key Features

- Max. 640 x 480 resolution support
- Built-in 35mm fixed lens
- H.265, H.264, MJPEG codec
- Max. 30fps@all resolutions (H.265, H.264, MJPEG)
- Motion detection, Handover
- Tampering, Loitering, Directional detection, Audio detection, Sound classification, Shock detection, Temperature change detection
- SD / SDHC / SDXC memory slot (Max. 256GB)
- WiseStreamII support
- PoE, 24V AC, 12V DC
- IP66, NEMA4X

## Dimensions

Unit : mm (inch)



## TNO-4051T

<b>VIDEO</b>	
Imaging Device	Uncooled microbolometer, Pixel size : 17 $\mu$ m
Effective Pixels	640(H) x 480(V)
NETD	<50mK
Video Out	CVBS : 1.0Vpp / 75 $\Omega$ composite, 720 x 480(N), 720 x 576(P), for installation
<b>LENS</b>	
Focal Length (Zoom Ratio)	35mm fixed
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
Mount Type	Board-in type
<b>OPERATIONAL</b>	
Camera Title	Off / On - W/W : English / Numeric / Special characters - China : English / Numeric / Special / Chinese characters - Common : Multi-line (Max. 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
Video & Audio Analytics	Tampering, Loitering, Directional detection, Virtual line, 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
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, External output
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
Max. Framerate	H.265 / H.264 : Max. 30fps at all resolutions, MJPEG : Max. 30fps
WiseStreamII	Support
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, Max 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 IP address filtering, User access log, 802.1x authentication (EAP-TLS, EAP-LEAP)
Streaming Method	Unicast / Multicast
Max. 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), Wisenet 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 Non-plugin Webviewer - Supported Browser : Google Chrome 63, MS Edge 41, Mozilla Firefox 57 (Window 64bit only), Apple Safari 11 (Mac OS X only) Plug-in Webviewer - Supported Browser : MS Explore 11, Apple Safari 11 (Mac OS X only)
Central Management Software	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, 12V DC, PoE (IEEE802.3af)
Power Consumption	Max. 10.5W (24V AC), Max. 9W (12V DC), Max. 10W (PoE) Typical 8.9W (24V AC), Typical 7.5W (12V DC), Typical 8.6W (PoE)
<b>MECHANICAL</b>	
Color / Material	White (RAL-9003) / Aluminum
Dimensions (WxH)	Ø101.97 x 309mm (Ø4.01" x 12.17")
Weight	2,452g (5.41 lb)

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

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

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