# T series TNO-4040TR

Hanwha Vision

Network  Bullet

# TNO-4040TR
## VGA H.265 Radiometric Thermal Camera

FC | UL LISTED | CE | EAC | NDAA

## Key Features

- Max. 640 x 480 resolution support
- Built-in 19mm 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 detection, Hallway view
- SD / SDHC / SDXC memory slot (Max. 256GB)
- WiseStreamII support
- PoE, 24V AC, 12V DC
- IP66, NEMA4X, IK10

## Compatible Devices

SBP-303PM

Hanwha Vision

# TNO-4040TR

VGA H.265 Radiometric Thermal
Camera

## Specifications

### Video

| | |
|---|---|
| Imaging Device | Uncooled micro bolometer |
| Resolution | 640x480, 640x360, 320x240 |
| Max. Framerate | H.265/H.264: Max. 30fps/25fps(60Hz/50Hz)<br>MJPEG: Max. 30fps/25fps(60Hz/50Hz) |
| 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) | 19mm fixed focal |
| Max. Aperture Ratio | F1.0 |
| Angular Field of View | H: 32° / V: 24.3° / D: 39.2° |
| Min. Object Distance | 11m(36.09ft) |
| 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 |

### Radiometry

| | |
|---|---|
| Temperature Detect Range | -20°C~130°C(-4°F~266°F) |

Design and specifications are subject to change without notice. The latest product information / specification can be found at HanwhaVision.com.
Hanwha Vision is formerly known as Hanwha Techwin.

| | |
|---|---|
| Temperature Accuracy | ±5°C(≤100°C), ±20%(>100°C) |
| Temperature Detection | 6 Quadrangle ROI zones, whole FoV area |
| Additional | Hybrid palettes, Spot temperature reading |

## Network

| | |
|---|---|
| Ethernet | RJ-45(10/100BASE-T) |
| Video Compression | H.265/H.264: Main/Baseline/High, MJPEG |
| 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 |
| Security | HTTPS(SSL) login authentication<br>Digest login authentication<br>IP address filtering<br>User access log<br>802.1X authentication(EAP-TLS, EAP-LEAP) |
| Application Programming Interface | ONVIF Profile S/G/T<br>SUNAPI(HTTP API)<br>Wisenet open platform |

## General

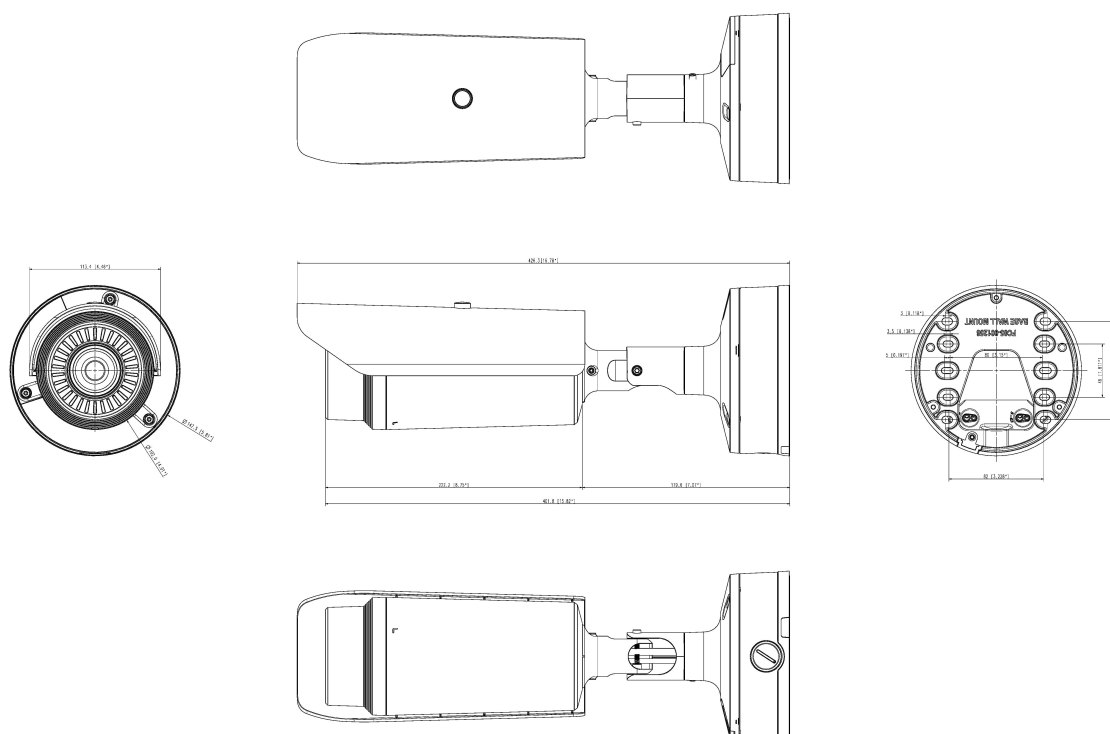| | |
|---|---|
| Webpage Language | English, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek |
| Edge Storage | Micro SD/SDHC/SDXC 1slot 256GB |
| Memory | 1024MB RAM, 256MB Flash |

## 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 | Φ101.97x401.8mm(4.01x15.82") / 3,175g(7.01lb) |

# TNO-4040TR

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Camera

## CAD

Apperance TNO-4030TR
Unit : mm [inch]