



Network

Thermal

## TNU-4051T

VGA Thermal Positioning Camera



### Key Features

- Max. 640 x 480 resolution support
- Built-in 35mm fixed lens
- H.265, H.264, MJPEG codec, WiseStreamII support
- Max. 30fps@all resolutions (H.265, H.264)
- microSD/SDHC/SDXC memory slot (Max. 256GB)
- 24V AC, NEMA 4X

※ Bridge firmware is required to upgrade from 1.00~1.2X versions to the latest version.

For more details, please refer to the [UPGRADE NOTIFICATION] or [Release Note] included with your firmware (ZIP file).

### Compatible Devices



SBU-500WM

## TNU-4051T

VGA Thermal Positioning Camera



### Specifications

#### Video

|                |             |                                                         |
|----------------|-------------|---------------------------------------------------------|
| Imaging Device | Type        | Uncooled micro bolometer (640x480)                      |
| Resolution     |             | 640x480, 640x360, 320x240                               |
| Max. Framerate | H.265/H.264 | 30fps/25fps(60Hz/50Hz)                                  |
|                | MJPEG       | 30fps                                                   |
| Spectral Range |             | 8~14 $\mu$ m                                            |
| NETD           |             | $\leq 50$ mK                                            |
| Pixel Size     |             | 17 $\mu$ m                                              |
| Video Out      |             | CVBS: 1.0 Vp-p / 75 $\Omega$ composite for installation |

#### Lens

|                               |            |               |
|-------------------------------|------------|---------------|
| Focal Length (mm)             |            | 35            |
| Max Aperture Ratio (F number) | Wide       | 1.0           |
| Angular Field of View         | Horizontal | 17.2°         |
|                               | Vertical   | 13°           |
|                               | Diagonal   | 22°           |
| iFoV                          |            | 0.47mRad      |
| Min. Object Distance          |            | 36m(118.11ft) |
| Focus Control                 |            | Fixed         |

#### Pan / Tilt / Rotate

|                           |        |                                                      |
|---------------------------|--------|------------------------------------------------------|
| Pan / Tilt / Rotate Range | Pan    | 360° Endless                                         |
|                           | Tilt   | -90°~40°                                             |
|                           | Others | None, None                                           |
| Pan Speed                 | Preset | Max. 120°/sec                                        |
|                           | Manual | 0.025°/sec~120°/sec                                  |
| Tilt Speed                | Preset | Max. 40°/sec                                         |
|                           | Manual | 0.025°/sec~40°/sec                                   |
| Sequence                  |        | Preset(300ea), Preset(300ea), Group(6ea), Group(6ea) |
| Preset Accuracy           |        | $\pm 0.3^\circ$                                      |

## Operational

|                                          |          |                                                                                                                                                              |
|------------------------------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Direction Indicator                      |          | Support                                                                                                                                                      |
| Digital Image Stabilization              |          | Support(built-in gyro sensor)                                                                                                                                |
| Motion Detection                         | Quantity | 8ea                                                                                                                                                          |
|                                          | Shape    | 8point Polygonal zones                                                                                                                                       |
| Alarm Interface                          | In/Out   | Input 1ea, Output 1ea                                                                                                                                        |
| Alarm Triggers                           |          | Analytics, Network disconnect, Alarm input                                                                                                                   |
| Alarm Events When Alarm Trigger Occurred |          | File upload(image): e-mail/FTP,<br>Notification: e-mail,<br>Recording: SD/SDHC/SDXC or NAS recording at event triggers,Alarm output,<br>Handover: PTZ preset |
| Audio In                                 |          | Selectable(mic in/line in)                                                                                                                                   |
| Audio Out                                |          | Line out                                                                                                                                                     |
| Color Palettes                           |          | Whitehot, Blackhot, Rainbow, Rainbow2, Sepia, Red, Iron, Custom                                                                                              |

## Analytics

|                  |        |                                                                                                                                                                                                                        |
|------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Analytics Events | Normal | Motion detection, Tampering, Audio detection, Sound classification, Shock detection, Virtual area(Lotering, Intrusion, Enter/Exit, Appear/Disappear), Virtual line(Crossing, Direction) , Temperature change detection |
|------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## 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,G.726(ADPCM) 8kHz,G.711 8kHz,<br>G.726: 16kbps,24kbps,32kbps,40kbps,<br>AAC-LC: 48kbps at 16kHz                                                                                      |
| Smart Codec                       |                    | WiseStream II                                                                                                                                                                                                      |
| Bitrate Control                   |                    | H.265/H.264: CBR or VBR,<br>MJPEG: VBR                                                                                                                                                                             |
| Streaming                         | Unicast            | Up to 20 users                                                                                                                                                                                                     |
|                                   | Multicast          | Support                                                                                                                                                                                                            |
|                                   | 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, UPnP, Bonjour, LLDP, SRTP(TCP, UDP Unicast), PIM-SM |
| Application Programming Interface | ONVIF              | S, G, T                                                                                                                                                                                                            |
|                                   | Others             | SUNAPI(HTTP API), Hanwha Vision Open Platform                                                                                                                                                                      |

## Security

|                        |  |                                        |
|------------------------|--|----------------------------------------|
| User authentication    |  | Digest authentication                  |
| Network authentication |  | IEEE 802.1X(EAP-TLS, EAP-LEAP)         |
| Secure Communication   |  | HTTPS                                  |
| Access Control         |  | IP-based access control                |
| Audit                  |  | Access / System / Event Log management |

## General

|              |                    |                    |
|--------------|--------------------|--------------------|
| Memory       | RAM                | 1GB                |
|              | Flash              | 256MB              |
| Edge Storage | Micro SD/SDHC/SDXC | Max. 256GB x 1slot |

## Environmental & Electrical

|                     |             |                                      |
|---------------------|-------------|--------------------------------------|
| Operating Condition | Temperature | -40°C~+55°C(-40°F~+131°F)            |
|                     | Humidity    | 0~90% RH(non-condensing)             |
| Storage Condition   | Temperature | -50°C~+60°C(-58°F~+140°F)            |
|                     | Humidity    | 0~90% RH(non-condensing)             |
| Input Voltage       |             | 24VAC                                |
| Power Consumption   | 24VAC       | Max. 84W(Heater on), 62W(Heater off) |

## Mechanical

|                    |                                               |
|--------------------|-----------------------------------------------|
| Color              | White                                         |
| Material           | Aluminum                                      |
| RAL Code           | RAL9003                                       |
| Product Dimensions | 219(W) × 528(H) × 335(D)mm(8.62x20.79x13.19") |
| Product Weight     | 11.7kg(25.79lb)                               |

## Certifications & Standards

|             |                                  |
|-------------|----------------------------------|
| Environment | IEC 60529 IP66, NEMA 250 type 4X |
|-------------|----------------------------------|

## TNU-4051T

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**CAD**

**Unit:** mm [inch]

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|                   |  |                   |             |                     |         |
|-------------------|--|-------------------|-------------|---------------------|---------|
| ITEM              |  | PART NO.          | DESCRIPTION | QTY                 | REMARKS |
| FILE NAME         |  | FINISH            | DRW NO./图号  | 외주<br>EXTERNAL VIEW |         |
| MATERIAL/材質       |  | APPROV            | DESIGN      | ON                  |         |
| CHECK             |  | E                 | NOTE/注意     |                     |         |
| SCALE             |  | UNIT              | CE          |                     |         |
| 1.000             |  | MM                |             |                     |         |
| DATE              |  | /                 |             |                     |         |
| A                 |  | B                 | C           |                     |         |
| 1.16              |  | 1.16              | 1.16        |                     |         |
| 16.63             |  | 16.63             | 16.63       |                     |         |
| 63.500            |  | 63.50             | 63.50       |                     |         |
| 250.000           |  | 250.00            | 250.00      |                     |         |
| 500.000           |  | 500.00            | 500.00      |                     |         |
| 1000.000          |  | 1000.00           | 1000.00     |                     |         |
| GENERAL TOLERANCE |  |                   |             |                     |         |
| DIM               |  |                   |             |                     |         |
| 1.16              |  |                   |             |                     |         |
| 1.16              |  |                   |             |                     |         |
| 16.63             |  |                   |             |                     |         |
| 63.500            |  |                   |             |                     |         |
| 250.000           |  |                   |             |                     |         |
| 500.000           |  |                   |             |                     |         |
| 1000.000          |  |                   |             |                     |         |
| Hanauma Technuin  |  |                   |             |                     |         |
| SIZE              |  | A0                |             |                     |         |
| MODEL             |  | TNV-4041T / 4061T |             |                     |         |
| NO./型号            |  | SHEET 1 OF 1      |             |                     |         |

