



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).

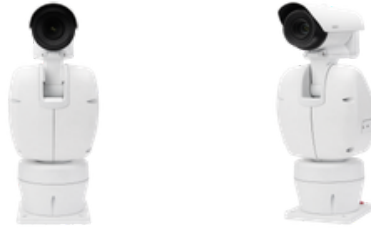
### Compatible Devices



SBU-500WM

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### 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		$\leq$ 50mK
Pixel Size		17 $\mu$ m
Video Out		CVBS: 1.0Vp-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°

## 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, Notification: e-mail, Recording: SD/SDHC/SDXC or NAS recording at event triggers,Alarm output, 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
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## 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, G.726: 16kbps,24kbps,32kbps,40kbps, AAC-LC: 48kbps at 16kHz
Smart Codec		WiseStream II
Bitrate Control		H.265/H.264: CBR or VBR, 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

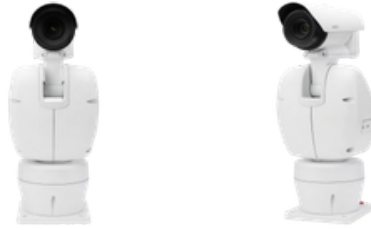
Color	White
Material	Aluminum
RAL Code	RAL9003
Product Dimensions	219(W) × 528(H) × 335(D)mm(8.62x20.79x13.19")
Product Weight	11.7kg(25.79lb)

## Certifications & Standards

Environment	IEC 60529 IP66, NEMA 250 type 4X
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**CAD**

**Unit:** mm [inch]

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GENERAL TOLERANCE/			
CLASS	A	B	C
1-4	±0.05	±0.10	±0.25
1-16	±0.07	±0.20	±0.35
16-63	±0.10	±0.30	±0.50
63-250	±0.15	±0.55	±0.90
250-500	±0.30	±0.90	±1.50
500-1000	±0.50	±1.50	±2.50

FILE NAME	MATERIAL/材質	FINISH	DRW. NO./圖號
SCALE	TOLERANCE	DESIGN	CHECK
UNIT	CE	APPROV	E
DATE		DATE	
Hanwha Technwin		SIZE	MODEL NO./型號
		AD	TNU-4041T / 4051T
			SHEET 1 OF 1

ITEM	PART NO.	DESCRIPTION	QTY	REMARK

