

# AI-TM40X

## Thermal & Optical Network Positioning System



### Introduction

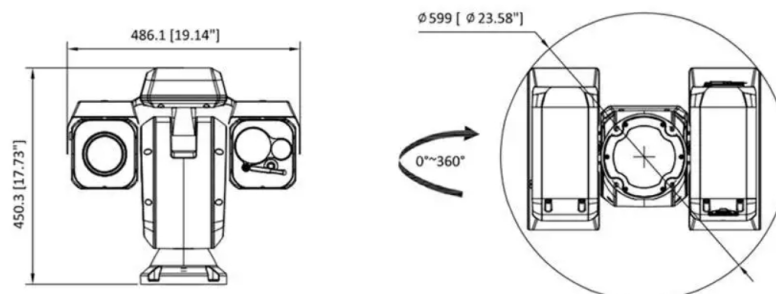
AI-TM40X Thermal & Optical Network Positioning System equipped built-in GPU which supports intelligent behavior analysis algorithm, can realize high-precision VCA detection and real alarm. It is applied to fire-prevention purposes in scenes such as transformer substation, recycling center, gas station factory. The pre-alarm system helps you discover unexpected events immediately and protects your property.



### KEYFEATURE

- ▶ Powerful perimeter protection functions, based on intelligent algorithm: Line crossing, intrusion, region entrance & exit
- ▶ Temperature exception alarm for fire prevention
- ▶ Fire detection smoke detection algorithm
- ▶ 384 × 288 resolution 17 μm, VOx UFPA, NETD ≤ 35 mK (25°C, F# = 1.0)
- ▶ Image processing technology: Liner, histogram, and self-adaptive thermal AGC mode, DDE, 3D DNR
- ▶ Pseudo-color Setting White-hot/Black-hot/Rainbow/Ironbow etc. up to 15 modes
- ▶ Thermal channel supports EIS, conflicted with intelligent function
- ▶ Support human/vehicle detection, fire point detection and smoke & fire detection Intrusion, Single line crossing, Double line crossing, Loitering, Wrong-way, Enter area, Leave area, People counting
- ▶ 3 temperature measurement rule types, 20 rules in total, 1 full screen, 19 others (spot, areas, line).

### DIMENSIONS



## SPECIFICATIONS

Thermal Module	
Image Sensor	VOx Uncooled Focal Plane Arrays
Resolution	384 × 288
Pixel Interval	17 μm
Response Waveband	8 μm to 14 μm (Spectral Range )
NETD	≤ 35 mK (@ 25°C, F# = 1.0)
Focal Length	50 mm
Focus Mode	Semi-auto & Manual
IFOV	0.34 mrad
Aperture	F1.0
Field of View	7.47° × 5.61° (H × V)
Min. Focusing Distance	7.5 m
Digital Zoom	×1, ×2, ×4, ×8
Optical Module	
Image Sensor	1/1.8" Progressive Scan CMOS
Resolution	2688 × 1520, 4 MP
Min. Illumination	Color: 0.0005 Lux @ (F1.5, AGC ON), B/W: 0.0001 Lux @ (F1.5, AGC ON)
Field of View	Wide: 1.86° × 1.05°; Tele: 66.02° × 40.34°
Focal Length	6 to 240 mm, 40x
Aperture (Range)	F1.3 to F4.0
Focus Mode	Semi-auto/Manual
Shutter Speed	1.1 s to 1/30,000 s
WDR	120 dB
Optical Defog	Yes
Image Effect	
Picture in Picture	Display partial image of thermal channel on the full screen of optical channel
Target Coloration	Yes. Supported in white hot and black hot mode.
PTZ	
Movement Range	Pan: 360° Continuous Rotate; Tilt: From -90°to + 40°(auto flip)
Pan Speed	Configurable, From 0.01°/s to 110°/s
Tilt Speed	Configurable, From 0.01°/s to 50°/s
Proportional Zoom	Yes
Presets	300 in total
Patrol Scan	8; Up to 32 Presets Per Patrol
Pattern Scan	4; More Than 10 Minutes Per Pattern
Power Off Memory	Yes

Park	Preset/Pattern Scan/Patrol Scan/Auto Scan/Tilt Scan/Random Scan/Frame
	Scan/Panorama Scan
PT Status	Turn On/Turn Off
Scheduled Task	Preset/Pattern Scan/Patrol Scan/Auto Scan/Tilt Scan/Random Scan/Frame
	Scan/Panorama Scan/Doom Reboot/Doom Adjust/Aux Output
<b>Illuminator</b>	
IR Distance	Up to 200 m
IR Intensity and Angle	Automatically adjusted
VCA	Support 4 VCA rule types (Line Crossing, Intrusion, Region Entrance, and Region Exiting), up to 10 scenes and 8 VCA rules for each scene
Temperature Measurement	Support 3 temperature measurement rule types, 273 presets as scene, 21 rules of each scene (10 points, 10 areas, and 1 line)
Temperature Range	-20°C to 550°C (-4°F to 1022°F)
Temperature Accuracy	Max. ( $\pm 2^{\circ}\text{C}$ , $\pm 2\%$ )
Fire Detection	Dynamic fire detection, up to 10 fire points detectable.
<b>Video and Audio</b>	
Main Stream	Optical channel
	50 Hz: 25 fps (2688 × 1520 , 1920 × 1080, 1280 × 960, 1280 × 720)
	60 Hz: 30 fps (2688 × 1520 , 1920 × 1080, 1280 × 960, 1280 × 720)
	Thermal channel
	50 fps (1920 × 1080, 1280 × 960, 1280 × 720, 704 × 576, 640 × 512, 384 × 288)
Sub-stream	Optical channel
	50 Hz: 25fps (704 × 576, 352 × 288)
	60 Hz: 30 fps (704 × 576, 352 × 288)
	Thermal channel
	50 fps (704 × 576, 640 × 512, 384 × 288)
Video Compression	Main stream: H.265+/H.265/H.264+/ H.264
	Sub-stream: H.265/H.264/MJPEG
Audio Compression	G .711u/G.711a/G.722. 1/MP2L2/G.726/PCM
<b>Network</b>	
Protocols	IPv4/IPv6, HTTP, HTTPS, 802. 1x, Qos, FTP, SMTP, UPnP, SNMP, DNS, DDNS, NTP, RTSP,
	RTCP, RTP, TCP, UDP, IGMP, ICMP, DHCP, PPPoE
Network Storage	MicroSD/SDHC/SDXC card (256 GB) local storage, and NAS (NFS, SMB/CIFS), auto
	network replenishment (ANR)
API	ISAPI, HIKVISION SDK, third-party management platform, ONVIF (Profile S, Profile G, Profile T)
Simultaneous Live View	Up to 20 channels
User/Host level	Up to 32 users, 3 levels: Administrator, Operator, User

Security	User authentication (ID and password), MAC address binding, HTTPS encryption, IEEE
	802.1x access control, IP address filtering
Client	CMS
Web Browser	Live view (plug-in allowed) : Internet Explorer 11 Live view (plug-in free) : Chrome 57.0
	+, Firefox 52.0 + Local service : Chrome 57.0 +, Firefox 52.0 +
<b>Interface</b>	
Alarm Input	7-ch inputs (0 to 5 VDC)
Alarm Output	2-ch relay outputs, alarm response actions configurable
Alarm Action	Preset/Patrol Scan/Pattern Scan/SD Card Record/Relay Output/Smart capture/FTP
	upload/Email linkage
Audio Input	1, 3.5 mm Mic in/Line in interface. Line input: 2 to 2.4 V [p-p], output impedance: 1 K $\Omega$
	$\pm 10\%$
Audio Output	Linear Level; Impedance: 600 $\Omega$
Communication Interface	1, RJ45 10 M/100 M Self-adaptive Ethernet interface.
	1, RS-485 interface
Analog Video Output	1.0 V [p-p]/75 $\Omega$ , BNC for thermal channel
<b>General</b>	
Web Client Language	32 languages
	English, Russian, Estonian, Bulgarian, Hungarian, Greek, German, Italian, Czech, Slovak,
	French, Polish, Dutch, Portuguese, Spanish, Romanian, Danish, Swedish, Norwegian,
	Finnish, Croatian, Slovenian, Serbian, Turkish, Korean, Traditional Chinese, Thai,
	Vietnamese, Japanese, Latvian, Lithuanian, Portuguese (Brazil)
Power	36 VDC $\pm 20\%$ , 48 VDC $\pm 20\%$ , two-core terminal block
Power Consumption	5 A, Max. 120 W
Work Temperature/Humidity	From -40°C to 65°C (-40°F to 149°F)
	Humidity: 95% or Less
Wiper	Yes
Protection Level	IP66 Standard; TVS 6000V Lightning Protection, Surge Protection and Voltage Transient
	Protection
Dimension	486.1 mm $\times$ 337.6 mm $\times$ 450.3 mm (19.14" $\times$ 13.29" $\times$ 17.73")
Weight	Approx. 20 kg (44.092 lb)