



Network

Multi-sensor

TNM-C4950TD

Bi-spectrum AI Thermal Camera



Key Features

- Bi-spectrum: VGA thermal & 8MP visible sensor
- Dual (thermal & visible) channel by one device, one IP
- Maximum 30fps @ all resolutions (H.265/H.264)
- Lens : 13.5mm fixed thermal & 10.9~29mm motorized varifocal visible
- Day & Night(ICR), WDR(120dB)
- Noise reduction : WiseNR II (Based on AI engine, visible only)
- Smart codec : WiseStream III (Based on AI engine, visible), WiseStream II (thermal)
- Video Analytics based on AI (visible)
- IP66/IP67, NEMA4X
- PoE+(IEEE802.3at), 12VDC
- Wall & Pole mount all-in-one design

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Specifications

Video		Thermal	Visible
Imaging Device	Uncooled micro bolometer		1/1.8" CMOS
Resolution	1280x960, 1280x720, 1024x768, 800x600, 800x448, 720x576, 720x480, 640x480, 640x360		3840x2160, 3072x1728, 2592x1944, 2688x1520, 2560x1440, 2048x1536, 1920x1080, 1600x1200, 1280x1024,1280x960, 1280x720, 1024x768, 800x600, 800x448, 720x576, 720x480, 640x480, 640x360
Max. Framerate	H.265/H.264: Max. 30fps MJPEG: Max. 3fps		H.265/H.264: Max. 30fps/25fps(60Hz/50Hz) MJPEG: Max. 1fps/1fps(60Hz/50Hz)
NETD	<60mK		None
Pixel Size	12μm		None
Min. Illumination	None		Color: 0.06Lux(F1.7, 1/30sec) BW: 0.005Lux(F1.7, 1/30sec)
Video Out	USB : Micro USB Type B, 1280x720 for installation		
Lens			
Focal Length (Zoom Ratio)	13.5mm fixed focal		10.9~29mm(2.6x) motorized varifocal
Max. Aperture Ratio	F1.0		F1.7(Wide)~F1.73(Tele)
Angular Field of View	H: 31.9, V: 24.2, D: 39.5		H:42.0°(Wide)~15.0°(Tele) / V:22.8°(Wide)~8.4°(Tele) / D:48.7°(Wide)~17.1°(Tele)
Min. Object Distance	7.6m(24.93ft)		Wide: 2.5m(8.20ft) / Tele: 6m(19.68ft)
Focus Control	Fixed		Simple focs
Operational			
Camera Title	Displayed up to 85 characters		
Day & Night	None		Auto(ICR)
Backlight Compensation	None		BLC, WDR, SDDR
Wide Dynamic Range	None		WDR(120dB)
Digital Noise Reduction	None		SSNR V, WiseNR II
Digital Image Stabilization	None		Support(built-in gyro sensor)
Motion Detection	8ea, polygonal zones		
Privacy Masking	6ea, rectangle zones - Color: Gray/Black/White		
Gain Control	None		Low / Middle / High
White Balance	None		ATW / AWC / Manual / Indoor / Outdoor
LDC	None		Support
Electronic Shutter Speed	None		Minimum / Maximum / Anti flicker(1/5~1/12,000sec) Auto prefer shutter control(Based on AI engine)
Analytics	- Analytics events : Directional detection, Motion detection, Enter/Exit, Virtual line, Temperature Change detection		- Analytics events based on AI engine(NPU) : Object detection (Person/Face/Vehicle(car/truck/bus/bicycle/motorcycle)/License plate), Bestshot, IVA (Virtual line/Area, Enter/Exit, Loitering, direction, intrusion), Stopped vehicle, Traffic jam - Analytics events : Defocus detection, Motion detection, Tampering, Audio detection, Sound classification, Shock detection, Appear/Disappear
Alarm I/O	4 configurable I/O ports		
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, Send message by HTTP/HTTPS/TCP) - Audio clip playback		

Audio In	Selectable(mic in/line in) 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 None

Network

Ethernet	Metal shielded RJ-45(10/100/1000BASE-T)
Video Compression	H.265/H.264: Main/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 Manual(5ea area), WiseStreamIII
Bitrate Control	H.264/H.265: CBR or VBR MJPEG: VBR
Streaming	Unicast(6 users) / Multicast Multiple streaming(Up to 3 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)
Security	TPM 2.0 (FIPS 140-2 level 2) HTTPS(SSL) login authentication Digest login authentication IP address filtering User access log 802.1X authentication(EAP-TLS, EAP-LEAP, EAP-PEAP MSCHAPv2) Device certificate(Hanwha Techwin Root CA, pre-installed) Secure boot, Secure firmware
Application Programming Interface	ONVIF Profile S/T SUNAPI(HTTP API) Wisenet open platform (visible channel only)

General

Webpage Language	English, French, German, Spanish, Italian, Chinese, Korean, Russian, Japanese, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek
Edge Storage	Micro SD/SDHC/SDXC 2slots 512GB
Memory	4GB RAM, 512MB FLASH

Environmental & Electrical

Operating Temperature / Humidity	-40°C to +60°C(-58°F to +140°F) * Start up should be done at above -30°C less than 95% RH(non-condensing)
Storage Temperature / Humidity	-50°C to +60°C(-58°F to +140°F) / Less than 95% RH(Non-condensing)
Certification	IP66/IP67, IK10, NEMA4X, NEMA TS 2(2.2.8, 2.2.9)
Input Voltage	PoE+(IEEE802.3at, Class4), 12VDC
Power Consumption	PoE+ : Max 23.5W 12VDC : Max 19.5W

Mechanical

Color / Material	White / Aluminum
RAL Code	RAL9003
Product Dimensions / Weight	353.4 * 287.5 * 191.2mm (13.92 * 11.32 * 7.53in) / 4.533kg
Detect (25PPM/ 8PPF)	None Wide: 200.1m(656.40ft) / Tele: 583.4m(1913.89ft)
Observe (63PPM/ 19PPF)	None Wide: 80.0m(262.56ft) / Tele: 233.3m(765.56ft)
Recognize (125PPM/ 38PPF)	None Wide: 40.0m(131.28ft) / Tele: 116.7m(382.78ft)
Identify (250PPM/ 76PPF)	None Wide: 20.0m(65.64ft) / Tele: 58.3m(191.39ft)

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CAD

Unit: mm [inch]

