

Network Thermal

TNM-C4962TD

バイスペクトラムVGAサーマル可視センサーカメラ

Key Features

- 8 Frames per second
- IP66, IP67, IK10 Rated
- 8MP Visible Resolution
- 2MP Thermal Resolution
- VGA サーマル解像度
- レンズ : 25mm 固定サーマル & 10.9~29mm モーター駆動バリフォーカル可視
- デイ & ナイト(ICR), WDR(120dB)
- ノイズリダクション : WiseNR II (AIエンジンに基づく、可視のみ)
- スマートコーデック : WiseStream III (AIエンジンに基づく、可視), WiseStream II (サーマル)
- AIに基づくビデオ分析
- 壁 & ポールマウント一体型デザイン

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Specifications

映像		Thermal	Visible
Imaging Device	サイズ		1/1.8"
	タイプ	Uncooled micro bolometer (640x480)	CMOS
解像度		1280x960, 1280x720, 1024x768, 800x600, 800x448, 720x576, 720x480, 640x480, 640x360	3840x2160, 3072x1728, 2688x1520, 2592x1944, 2560x1440, 2048x1536, 1920x1080, 1600x1200, 1280x1024, 1280x960, 1280x720, 1024x768, 800x600, 800x448, 720x576, 720x480, 640x480, 640x360
Max. Framerate	H.265/H.264	8fps	30fps/25fps(60Hz/50Hz)
	MJPEG	3fps	1fps
	その他	Max. 15fps when both channel AI on	
Spectral Range		8~14㎛	
NETD		≤60mK	
Pixel Size		12㎛	
Min. Illumination (Lux)	Color(1/30sec, 30IRE)		0.06
	BW(1/30sec, 30IRE)		0.005
Video Out		USB: Micro USB Type B. Preview and installation ONLY. Requires WiFi dongle.	

レンズ			
Focal Length (mm)		25	10.9~29
Max Aperture Ratio (F number)	Wide	1.0	1.7
	Tele		1.73
視野角度	Horizontal	17°	42°~15°
	Vertical	13°	23°~8°
	Diagonal	22°	49°~17°
iFoV		0.48mRad	
Min. Object Distance		26m(85.30ft)	2.5m(8.20ft)
Focus Control		Fixed	シンプルフォーカス

Pan / Tilt / Rotate		
Pan / Tilt / Rotate Range	Pan	-170°~+170°
	Tilt	-40°~50°

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Pan / Tilt / Rotate

シーケンス	Preset(255ea)

技能

Day & Night			Auto(ICR)
Backlight Compensation			BLC, WDR, SSDR
Wide Dynamic Range (dB)			120
Digital Noise Reduction			WiseNR II (Based on AI engine), SSNR V
Digital Image Stabilization			Support(built-in gyro sensor)
モーション検知	Quantity	8ea	
	Shape	8point Polygonal zones	
Privacy Masking	Quantity	6ea	
	Shape	Rectangular zones	
	Color / Option	灰色, 黒, 白	
ゲイン制御			低, 中, 高
ホワイトバランス			ATW, AWC, 手動, 室内, 屋外
LDC			サポート
Electronic Shutter	モード		最小, 最大, アンチフリッカー, Prefer shutter control(Based on AI engine)
	Speed Range		1/5~1/12,000sec
Alarm Interface	In/Out	4 configurable I/O ports	
Alarm Triggers		分析, ネットワーク切断, アラーム入力	
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,アラーム出力, Handover: PTZ preset,send message by HTTP/HTTPS/TCP,Audio clip playback	
オーディオ入力		Selectable(mic in/line in)	
オーディオ出力		Line out	
Color Pallettes		Whitehot, Blackhot, Rainbow, Rainbow2, Sepia, Red, Iron, Custom	

分析

Classified Object Type		人, 車両	人, 顔, 車両, ナンバープレート
属性	車両		Type(car, bus, truck, motorcycle, bicycle)
サムネイル		ベストショット	
分析イベント	Based on AI Engine	対象物検知, 仮想線 (交差·方向) , 仮想領域 (ロータリング、侵入、Enter、Exit) , 停車車両, 渋滞	
	通常	モーション検知, 温度変化検知	焦点ぼけ検知, モーション検知, タンパリング, 音声検出, サウンド分類, 衝撃検知, Virtual area(Lotering, Intrusion, Enter/Exit, Appear/Disappear)
Business Intelligence	通常	車両カウント	

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ネットワーク

Ethernet		Metal shielded RJ-45(10/100/1000BASE-T)
映像圧縮		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
ビットレートコントロール		H.265/H.264: CBR or VBR, MJPEG: VBR
Streaming	Unicast	最大 6ユーザー
	マルチキャスト	サポート
	Multiple Streaming	最大 3プロファイル
プロトコル		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, CDP, SRTP(TCP, UDP Unicast)
Application Programming Interface	ONVIF	s, T
	その他	SUNAPI(HTTP API), Hanwha Vision Open Platform
Direct Cloud Connection		サポート

セキュリティ

OS / Firmware Protect	Encrypted firmware, Secure boot, Signed firmware
ユーザー認証	ダイジェスト認証
Network authentication	IEEE 802.1X(EAP-TLS, EAP-LEAP, EAP-PEAP, MSCHAPv2)
Secure Communication	HTTPS, WSS(WebSocket Secure)
Access Control	IP-based access control
Data Protect	Encryption credentials, Encrypt compress for live recording file export
Audit	Access / System / Event Log management
デバイスID	Device certificate(Hanwha Vision Root CA)
Secure Storage	HTPM(Hanwha Trusted Platform Module), SDcard partition encrypt(AES-256)
Security Certificate	TPM 2.0 with FIPS 140-2 level2

一般

メモリ	RAM	4GB
	フラッシュ	512MB
Edge Storage	Micro SD/SDHC/SDXC	Max. 256GB x 2slot(Total 512GB)

Environmental & Electrical

動作条件	温度	-40°C~+60°C(-40°F~+140°F)
	湿度	0~95% RH(non-condensing)
	その他	Start up should be done at above -30°C
保管条件	温度	-50°C~+60°C(-58°F~+140°F)
	湿度	0~90% RH(non-condensing)

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Environmental & Electrical

Input Voltage		PoE+(IEEE802.3at, Class4), 12VDC
消費電力	PoE	Max. 23.5W, Typ 16.0W
	12VDC	Max. 19.5W, Typ 14.0W

Mechanical

カラー	白
材料	アルミニウム
RAL Code	RAL9003
Product Dimensions	353.4(W)x287.5(H)x191.2(D)mm(13.92x11.32x7.53")
Product Weight	4.53kg(9.99lb)

Certifications & Standards

EMC	FCC 47 CFR 15 Subpart B Class A, ICES-3(A)/NMB-3(A), CE/UKCA - EN55032 Class A, EN 50130-4, EN 61000-3-2, EN 61000-3-3, VCCI CISPR 32 Class A, RCM AS-NZS CISPR 32 Class A, KS C 9832 Class A, KS C 9835
Safety	UL 62368-1, CAN/CSA C22.2 NO. 62368-1
環境	IEC 60529 IP66, IEC 60529 IP67, IEC 62262 IK10, NEMA TS 2-2013 (2.2.7, 2.2.8, 2.2.9), NEMA 250 type 4X

DORI (EN62676-4 standard)

Detect (25PPM/ 8PPF)	Wide		200.1m(656.40ft)
	Tele		583.4m(1913.89ft)
Observe (63PPM/ 19PPF)	Wide		80.0m(262.56ft)
	Tele		233.3m(765.56ft)
Recognize (125PPM/ 38PPF)	Wide		40.0m(131.28ft)
	Tele		116.7m(382.78ft)
Identify (250PPM/ 76PPF)	Wide		20.0m(65.64ft)
	Tele		58.3m(191.39ft)

DRI (Johnson's Criteria)

Detection	Person(1.67PPM)	1,255m(4,117ft)	
	Vehicle(0.65PPM)	3,207m(10,520ft)	
Recognition	Person(6.67PPM)	314m(1,029ft)	
	Vehicle(2.61PPM)	802m(2,630ft)	
Identification	Person(13.33PPM)	157m(515ft)	
	Vehicle(5.22PPM)	401m(1,315ft)	

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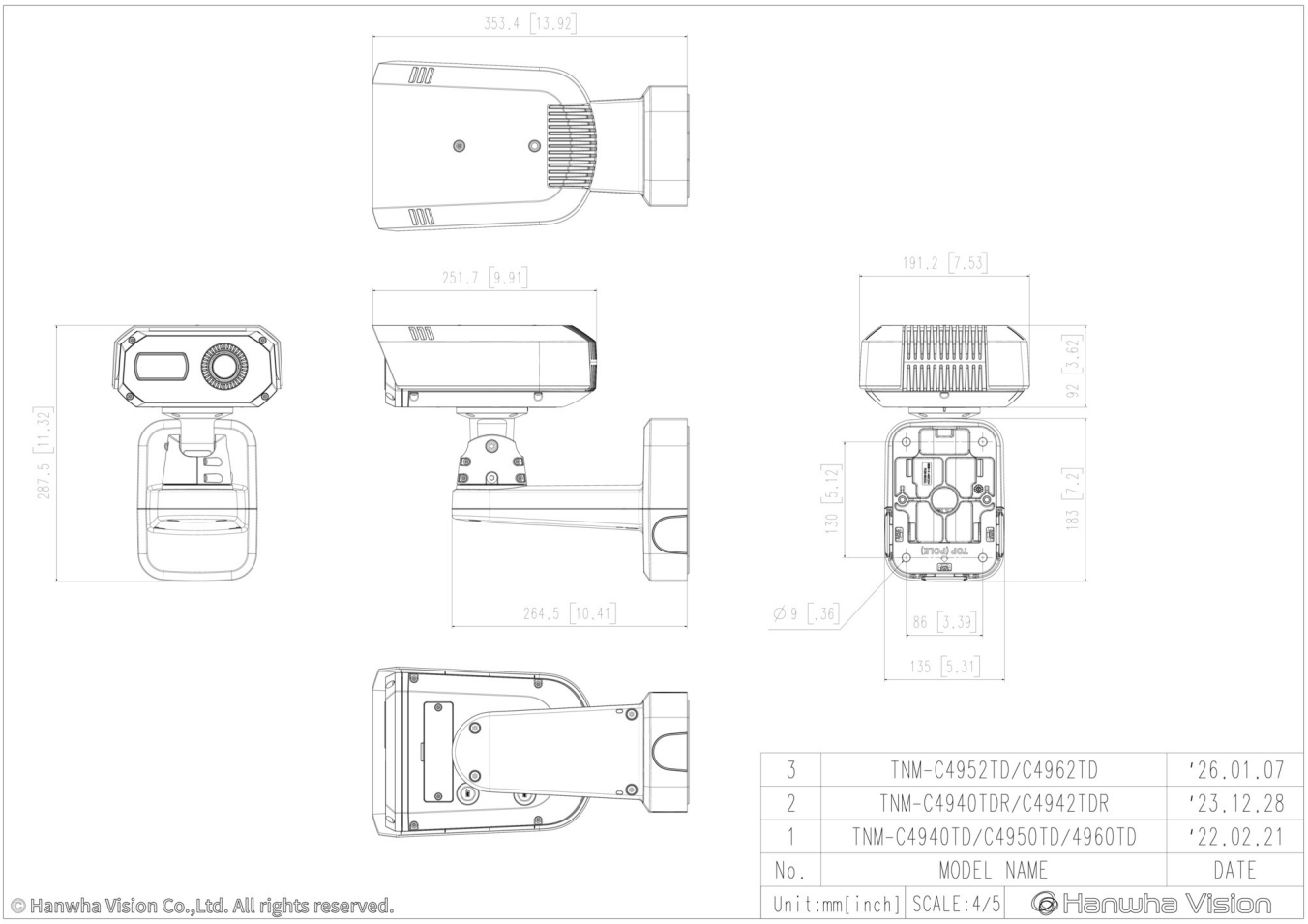
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CAD

Unit: mm [inch]



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