



Network

Bullet

TNO-C3032TRA

QVGA Radiometric AI Thermal Camera



Key Features

- AI based object classification (person, vehicle)
- High performance detector applied (17 μ m, NETD 30mK)
- QVGA resolution (384x288) with wide angle
- Wide temperature monitoring range -40 $^{\circ}$ ~ 550 $^{\circ}$ C (-40 $^{\circ}$ F ~ 1,022 $^{\circ}$ F)
- Smaller and light camera (Φ 147 * 233.5mm, 1.7KG) for easy and simple installation
- Maximum 8fps @ all resolutions (H.265/H.264/MJPEG)

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Specifications

映像	
映像素子	Uncooled micro bolometer (Spectral range: 8~14 μ m)
解像度	768x576, 384x288(original)
最大フレームレート	H.265/H.264/MJPEG: Max. 8fps
NETD	<30mK
ピクセルサイズ	17 μ m
映像出力	USB: Micro USB Type B, 768x576 for installation
レンズ	
焦点距離	9.7mm fixed focal
最大口径比	F1.0
画角	H: 37.9° / V: 28.7° / D: 46.7° (iFoV: 1.8 mRad)
最低被写体距離	2.8m
フォーカス制御	fixed
パンニング/チルト/回転	
パンニング/チルト/回転範囲	0°~350° / 0°~90° / 0°~350°
カメラ機能	
カメラタイトル	Displayed up to 85 characters
モーション検知	8ea, 8point polygonal zones
プライバシーマスク	6ea, Rectangle zones - color : Grey, Black, White
映像回転	Flip, Mirror, Hallway view(90-/270-)
インテリジェントビデオ	Classified object type: Person/Vehicle Support BestShot Analytics events based on AI engine - WiseMD, Object detection, Virtual line*(Crossing/Direction), Virtual area*(Loitering/Intrusion/Enter/Exit) Analytics events - Motion detection, Tampering, Audio detection, Sound classification, Shock detection, Virtual area(Appear/Disappear)
ビジネスインテリジェンス	Support (Temperature data)
シリアル通信	RS-485
アラーム入出力	2 configurable I/O ports
アラームトリガー	Analytics, Network disconnect, Alarm input, Time schedule, MQTT subscription
アラームイベント	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 - MQTT: publication

Design and specifications are subject to change without notice. The latest product information / specification can be found at HanwhaVision.com.

Hanwha Vision is formerly known as Hanwha Techwin.

音声入力	Selectable(mic in/line in)
音声出力	Line out
カラーパレット	Whitehot, Blackhot, Rainbow, Rainbow2, Sepia, Red, Iron, Custom, Hybrid palettes
温度検知	
温度検知範囲	-40°C~550°C(-40°F~1022°F)
温度検知精度	below 150°C: up to ±2°C Above 150°C: up to ±15% * based on measurements in a room temperature environment. Auto Temperature mode
温度検知	10 Polygonal ROI zones, whole FoV area
追加機能	Hybrid palettes, Spot temperature reading (ROI condition monitoring: Above/ Below/ Increase/ Decrease)
ネットワーク	
イーサネット	Metal shielded RJ-45(10/100/1000BASE-T)
映像圧縮	H.265/H.264: Main/Baseline/High, MJPEG
音声圧縮	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
スマートコーデック	Manual(5ea area), WiseStream II, WiseStreamIII(Based on AI engine)
ビットレート制御	H.264/H.265: CBR or VBR MJPEG: VBR
ストリーミング性能	Unicast(20 users) / Multicast Multiple streaming(Upto 10 profiles)
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), MQTT
応用インターフェイス	ONVIF Profile S/G/T/M SUNAPI(HTTP API) Wisenet open platform
Security	
OS / Firmware Protect	Secure boot, Signed firmware, Firmware encryption
User authentication	Digest Authentication, Prevent brute-force attack
Network authentication	802.1X Authentication(EAP-TLS, EAP-LEAP, EAP-PEAP MSCHAPv2)
Secure Communication	HTTPS, SRTP, WSS(Websocket secure)
Access Control	Access control based on IP address
Data Protect	Authentication information encryption, ZIP compression encryption
Audit	User Access/System/Event log management
Device ID	Device Certificate(Hanwha Private Root CA)
Secure Storage	TPM(Trusted platform module), SDcard partition encrypt
Security Certificate	TPM with FIPS 140-2 level 2
一般	
ウェブビューワー言語	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek
SDカード	Micro SD/SDHC/SDXC 1slot Max. 1TB
メモリー	2GB RAM, 512MB Flash
動作環境/電源	
動作温度/湿度	-40°C~+60°C(-40°F~+140°F) / 0~95% RH(non-condensing)
保管温度/湿度	-50°C~+60°C(-58°F~+140°F) / Less than 95% RH

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規格認証	IP66, IK10, NEMA4X
電源	PoE(IEEE802.3af, Class3), 12VDC
消費電力	PoE: Max 10.8W, typical 9W 12VDC: Max 9.4W, typical 7.7W
物理的仕様	
カラー/材質	White / Aluminum + PC
RAL コード	RAL9003
寸法/重量	ø93.8x233.5mm(ø3.69x/9.19"), 1700g(3.75 lb)
互換 Conduit hole / Gangbox	Conduit hole : SBP-060BA(Sold seperately) Gangbox : single, double, 4" octagon, 4" square
バックボックス	Included
Pole Mount	SBD-180PMW, SBP-300PMW2
Corner Mount	SBP-300KMW1
Cabinet	SBP-300NBW
Conduit Adaptor	SBP-060BA
Certifications & Standards	
EMC	EN 55032:2015/A11:2020 EN 50130-4:2011/A1:2014 EN 61000-3-2:2014 EN 61000-3-3:2013 FCC - 47 CFR Part 15, Subpart B Class A FCC - IC Regulation ICES 003 Issue 7 RCM - EN IEC 63000:2018 Class A VCCI - EN IEC 63000:2018 Class A KS - KS C 9832:2023 Class A KS - KS C 9835:2019 Class A
Safety	UL/CSA 62368-1
Environment	ROHS - EN IEC 63000:2018 IK10 - KS C IEC 62262: 2005 IP66 - IEC 60529:1989 +A1:1999+A2:2013 NEMA4X - NEMA 250-2014

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CAD

Unit:mm [inch]

