



Network

Thermal

# TNM-C3622TDR

Bi-Spectrum AI Thermal Camera



## Key Features

- Bi-spectrum monitoring with 2MP visible & QVGA thermal
- AI based Object classification with visible channel only (person)
- Remote Temperature Monitoring within -20 ~ 130°C range
- 6 of quadrangle ROI areas for temperature monitoring
- Compact and Light-weight for Indoor purpose

## TNM-C3622TDR

Bi-Spectrum AI Thermal Camera



### Specifications

| 映像                      |                       | Thermal                                                                                                                                 | Visible                                                                                                           |
|-------------------------|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| Imaging Device          | サイズ                   |                                                                                                                                         | 1/2.8"                                                                                                            |
|                         | タイプ                   | Uncooled micro bolometer (320x240)                                                                                                      | CMOS                                                                                                              |
| 解像度                     |                       | 1280x960, 640x480, 320x240                                                                                                              | 1920x1080, 1280x1024, 1280x960, 1280x720, 1024x768, 800x600, 800x448, 720x576, 720x480, 640x480, 640x360, 320x240 |
| Max. Framerate          | H.265/H.264           | 8fps                                                                                                                                    | 30fps/25fps(60Hz/50Hz)                                                                                            |
|                         | MJPEG                 | 8fps                                                                                                                                    | 30fps                                                                                                             |
| Spectral Range          |                       | 8~14 $\mu$ m                                                                                                                            |                                                                                                                   |
| NETD                    |                       | $\leq$ 50mK                                                                                                                             |                                                                                                                   |
| Pixel Size              |                       | 12 $\mu$ m                                                                                                                              |                                                                                                                   |
| Min. Illumination (Lux) | Color(1/30sec, 30IRE) |                                                                                                                                         | 0.05                                                                                                              |
|                         | BW(1/30sec, 30IRE)    |                                                                                                                                         | 0.005                                                                                                             |
| Video Out               |                       | CVBS: 1.0 Vp-p / 75 $\Omega$ composite for installation,<br>USB: Micro USB Type B. Preview and installation ONLY. Requires WiFi dongle. |                                                                                                                   |

### レンズ

|                               |            |            |        |
|-------------------------------|------------|------------|--------|
| Focal Length (mm)             |            | 4.7        | 4      |
| Max Aperture Ratio (F number) | Wide       | F1.0       | 1.6    |
| 視野角度                          | Horizontal | 50°        | 87.6°  |
|                               | Vertical   | 37°        | 46.4°  |
|                               | Diagonal   | 66°        | 104.5° |
| iFoV                          |            | 2.553mRad  |        |
| Min. Object Distance          |            | 1m(3.28ft) |        |
| Focus Control                 |            | Fixed      | Fixed  |

### 技能

|                         |  |                |
|-------------------------|--|----------------|
| Day & Night             |  | Auto(ICR)      |
| Backlight Compensation  |  | BLC, WDR, SSDR |
| Wide Dynamic Range (dB) |  | 150            |

## 技能

|                                          |                |                                                                                                                                                                              |
|------------------------------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Digital Noise Reduction                  |                | 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       | 24ea                                                                                                                                                                         |
|                                          | Shape          | Polygonal zones                                                                                                                                                              |
|                                          | Color / Option | 灰色, 緑, Red, 青, 黒, 白, モザイク                                                                                                                                                    |
| 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                                                                                                                                                             |
|                                          | Speed Range    | 2~1/12,000sec                                                                                                                                                                |
| ビデオ回転                                    |                | FLIPモード, ミラー                                                                                                                                                                 |
| Alarm Interface                          | In/Out         | Input 1ea, Output 2ea                                                                                                                                                        |
| Alarm Triggers                           |                | 分析, ネットワーク切断, アラーム入力, MQTT購読                                                                                                                                                 |
| Alarm Events When Alarm Trigger Occurred |                | File upload(image): e-mail/FTP,<br>Notification: e-mail,<br>Recording: SD/SDHC/SDXC or NAS recording at event triggers,アラーム出力,<br>Handover: PTZ preset,<br>MQTT: publication |
| オーディオ入力                                  |                | Selectable(mic in/line in)                                                                                                                                                   |
| オーディオ出力                                  |                | Line out                                                                                                                                                                     |
| Color Palettes                           |                | Whitehot, Blackhot, Rainbow, Rainbow2,<br>Sepia, Red, Iron, Custom                                                                                                           |

## 分析

|                        |                    |                                                                                                                                                                                      |
|------------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Classified Object Type |                    | 人, 顔                                                                                                                                                                                 |
| 分析イベント                 | Based on AI Engine | 対象物検知                                                                                                                                                                                |
|                        | 通常                 | モーション検知, Virtual area(Intrusion/Enter/Exit), Virtual line(Crossing, Direction), 温度検知<br>モーション検知, タンパリング, 音声検出, Virtual area(Intrusion/Enter/Exit), Virtual line(Crossing, Direction) |

## Radiometry

|                                 |                |                            |
|---------------------------------|----------------|----------------------------|
| Temperature Detect Range        |                | -20°C~130°C                |
| Temperature Accuracy            |                | ±5°C(≤100°C), ±20%(>100°C) |
| Temperature Detection ROI Zones | Quantity       | 6ea                        |
|                                 | Shape / Option | Quadrangle                 |
| Hybrid Palettes                 |                | サポート                       |
| Spot Temperature Reading        |                | サポート                       |
| ROI Condition Monitoring        |                | 以上, 以下, 増加, 減少             |

## ネットワーク

|                                   |                    |                                                                                                                                                                                                                        |
|-----------------------------------|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ethernet                          |                    | Metal shielded RJ-45(10/100BASE-T), RJ-45(10/100BASE-T)                                                                                                                                                                |
| 映像圧縮                              |                    | H.265/H.264: Main/Baseline/High, MJPEG                                                                                                                                                                                 |
| Audio Compression                 |                    | G.711 u-law /G.726 selectable,G.726(ADPCM) 8kHz,G.711 8kHz,<br>G.726: 16kbps,24kbps,32kbps,40kbps,<br>AAC-LC: 48kbps at 16kHz                                                                                          |
| Smart codec                       |                    | 手動, WiseStream II                                                                                                                                                                                                      |
| ビットレートコントロール                      |                    | H.265/H.264: CBR or VBR,<br>MJPEG: VBR                                                                                                                                                                                 |
| Streaming                         | Unicast            | 最大 20ユーザー                                                                                                                                                                                                              |
|                                   | マルチキャスト            | サポート                                                                                                                                                                                                                   |
|                                   | Multiple Streaming | 最大 6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,<br>SSL/TLS, DHCP, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS,<br>UPnP, Bonjour, LLDP, SRTP(TCP, UDP Unicast), MQTT |
| Application Programming Interface | ONVIF              | s, T, M                                                                                                                                                                                                                |
|                                   | その他                | SUNAPI(HTTP API)                                                                                                                                                                                                       |
| Direct Cloud Connection           |                    | Optional (needs gateway)                                                                                                                                                                                               |

## 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 1slot |

## Environmental & Electrical

|      |    |                           |
|------|----|---------------------------|
| 動作条件 | 温度 | -10°C~+55°C(+14°F~+131°F) |
|      | 湿度 | 0~95% RH(non-condensing)  |
| 保管条件 | 温度 | -30°C~+60°C(-22°F~+140°F) |
|      | 湿度 | 0~95% RH(non-condensing)  |

## Environmental & Electrical

|               |       |                                  |
|---------------|-------|----------------------------------|
| Input Voltage |       | PoE+(IEEE802.3at, Class4), 12VDC |
| 消費電力          | PoE   | Max. 17.0W, typical 12.5W        |
|               | 12VDC | Max. 14.5W, typical 11.0W        |

## Mechanical

|                    |                                          |
|--------------------|------------------------------------------|
| カラー                | 白                                        |
| 材料                 | アルミニウム                                   |
| RAL Code           | RAL9003                                  |
| Product Dimensions | 135(W)x75(H)x188.5(D)mm(5.31x2.95x7.42") |
| Product Weight     | 1.7kg(3.77lb)                            |

## Certifications & Standards

|        |                                                                                                                                                                                 |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EMC    | FCC 47 CFR 15 Subpart B Class A, CE/UKCA - EN55032 Class A, EN 50130-4, EN 61000-3-2, EN 61000-3-3, VCCI CISPR 32 Class A, IC Regulation ICES 003: 2016 ANSI C63.4 2014 Class A |
| Safety | UL 62368-1, CAN/CSA C22.2 NO. 62368-1                                                                                                                                           |
| 環境     | IEC/EN 63000                                                                                                                                                                    |

## DORI (EN62676-4 standard)

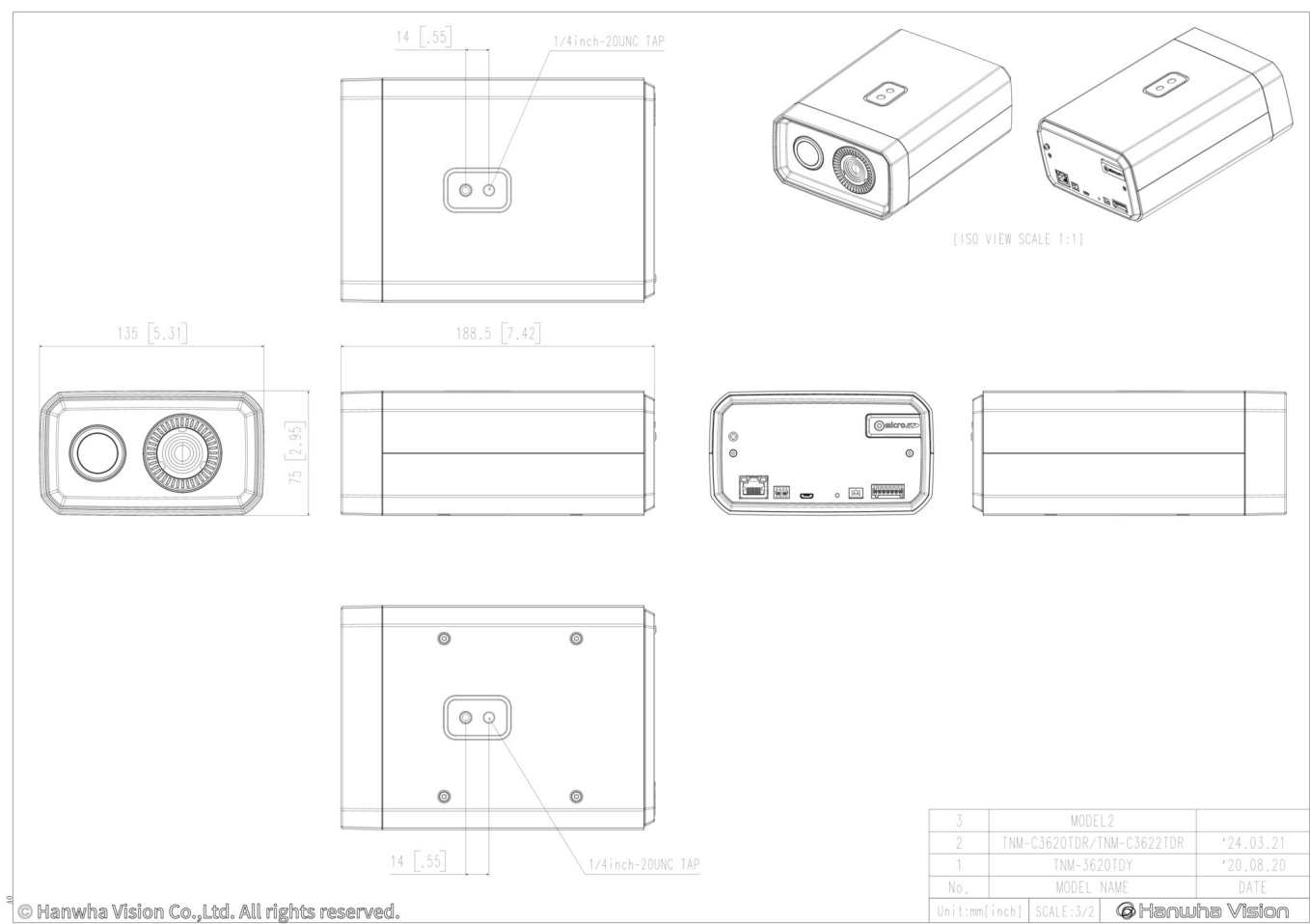
|                           |      |  |                |
|---------------------------|------|--|----------------|
| Detect (25PPM/ 8PPF)      | Wide |  | 80.1m(262.8ft) |
| Observe (63PPM/ 19PPF)    | Wide |  | 32.0m(105.1ft) |
| Recognize (125PPM/ 38PPF) | Wide |  | 16.0m(52.6ft)  |
| Identify (250PPM/ 76PPF)  | Wide |  | 8.0m(26.3ft)   |

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CAD

Unit: mm [inch]



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