

Network Thermal

# TNM-C3620TDR

Bi-spectrum AI Radiometric Camera QVGA thermal / 2MP visible

## Key Features

- Thermal: 320 x 240 (uncooled) @ 30fps <50mK (NETD), built-in 4.7mm thermal fixed lens (HFoV: 50°),
- Visible: 2MP @ 30fps, built-in 4mm fixed lens (HFoV: 87.6°)
- Triple triple codec H.265/H.264/MJPEG with Wisestream II and WiseStream III (based on AI engine) support
- WDR 150dB
- AI object detection (visible): Person/Face, Detection Shot
- Analytics events based on AI engine (visible): Virtual line (Crossing/Direction), Virtual area (Loitering/Intrusion/Enter/Exit), Motion detection, Audio detection, Virtual area(Appear/Disappear)
- Alarm events: Image upload (e-mail/FTP), Notification (e-mail), Recording (edge/NAS), Alarm output, Handover (PTZ preset), Send message by HTTP/ HTTPS/TCP message), Audio clip playback, MQTT (publication)
- Radiometric: whole FoV area or up 6 user programmable quadrangle ROIs, Temperature detection range from -20°C to 130°C (-4°F to 266°F)
- FIPS 140-2, Level 2
- 1x micro SD card (256GB x1)
- PoE+/12VDC
- This product is subject to the Thermal agreement

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.

© Hanwha Vision CO., LTD. All rights reserved.

# TNM-C3620TDR

Bi-spectrum AI Radiometric Camera
QVGA thermal / 2MP visible





## Specifications

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

## Lens

| | | | |
|---|---|---|---|
| Focal Length (mm) | | 4.7 | 4 |
| Max Aperture Ratio (F number) | Wide | 1.0 | 1.6 |
| Angular Field of View | Horizontal | 50.0° | 87.6° |
| | Vertical | 36.4° | 46.4° |
| | Diagonal | 65.3° | 104.5° |
| iFoV | | 2.553 mRad | |
| Min. Object Distance | | 1m(3.28ft) | |
| Focus Control | | Fixed | |

## Operational

| | | |
|---|---|---|
| Day & Night | | Auto(ICR) |
| Backlight Compensation | | BLC, HLC, SSDR |
| Wide Dynamic Range (dB) | | 150 |
| Digital Noise Reduction | | SSNR V |

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.

© Hanwha Vision CO., LTD. All rights reserved.

## Operational

| | | | |
|---|---|---|---|
| **Digital Image Stabilization** | | Support(built-in gyro sensor) | |
| **Motion Detection** | Quantity | 8ea | |
| | Shape | 8point Polygonal zones | |
| **Privacy Masking** | Quantity | 24ea | |
| | Shape | Polygonal zones | |
| | Color / Option | Gray, Green, Red, Blue, Black, White, Mosaic | |
| **Gain Control** | | | Low, Middle, High |
| **White Balance** | | | ATW, AWC, Manual, Indoor, Outdoor |
| **LDC** | | | Support |
| **Electronic Shutter** | Mode | | Minimum, Maximum, Anti flicker |
| | Speed Range | | 2~1/12,000sec |
| **Video Rotation** | | Flip, Mirror | |
| **Alarm Interface** | In/Out | Input 1ea, Output 2ea | |
| **Alarm Triggers** | | Analytics, Network disconnect, Alarm input, MQTT subscription | |
| **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,Alarm output,<br>Handover: PTZ preset,<br>MQTT: publication | |
| **Audio In** | | Selectable(mic in/line in) | |
| **Audio Out** | | Line out | |
| **Color Pallettes** | | Whitehot, Blackhot, Rainbow, Rainbow2, Sepia, Red, Iron, Custom | |

## Analytics

| | | | |
|---|---|---|---|
| **Classified Object Type** | | | Person, Face |
| **Analytics Events** | Based on AI Engine | | Object detection |
| | Normal | Motion detection, Virtual area(Intrusion, Enter/Exit), Virtual line(Crossing, Direction) , Temperature detection | Motion detection, Tampering, Audio detection, Virtual area(Lotering, Intrusion, Enter/Exit, Appear/Disappear), 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 Pallettes** | | Support | |
| **Spot Temperature Reading** | | Support | |
| **ROI Condition Monitoring** | | Above, Below, Increase, Decrease | |

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.

© Hanwha Vision CO., LTD. All rights reserved.

## Network

| | | |
|---|---|---|
| **Ethernet** | | Metal shielded RJ-45(10/100BASE-T) |
| **Video Compression** | | H.265: Main,<br>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** | | Manual, WiseStream II |
| **Bitrate Control** | | H.265/H.264: CBR or VBR,<br>MJPEG: VBR |
| **Streaming** | Unicast | Up to 20 users |
| | Multicast | Support |
| | Multiple Streaming | Up to 6 profiles |
| **Protocol** | | IPv4, IPv6, TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, FTP, SMTP, ICMP, IGMPv2, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, UPnP, Bonjour, LLDP, SRTP(TCP, UDP Unicast), MQTT |
| **Application Programming Interface** | ONVIF | S, T, M |
| | Others | SUNAPI(HTTP API) |
| **Direct Cloud Connection** | | Optional (needs gateway) |

## Security

| | |
|---|---|
| **OS / Firmware Protect** | Encrypted firmware, Secure boot, Signed firmware |
| **User authentication** | Digest authentication |
| **Network authentication** | IEEE 802.1X(EAP-TLS, EAP-LEAP, EAP-PEAP, MSCHAPv2) |
| **Secure Communication** | HTTPS, WSS(WebSocket Secure), SRTP |
| **Access Control** | IP-based access control |
| **Data Protect** | Encryption credentials, Encrypt compress for live recording file export |
| **Audit** | Access / System / Event Log management |
| **Device 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 |

## General

| | | |
|---|---|---|
| **Memory** | RAM | 4GB |
| | Flash | 512MB |
| **Edge Storage** | Micro SD/SDHC/SDXC | Max. 256GB x 1slot |

## Environmental & Electrical

| | | |
|---|---|---|
| **Operating Condition** | Temperature | -10°C~+55°C(+14°F~+131°F) |
| | Humidity | 0~95% RH(non-condensing) |
| **Storage Condition** | Temperature | -30°C~+60°C(-22°F~+140°F) |
| | Humidity | 0~95% RH(non-condensing) |

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.

© Hanwha Vision CO., LTD. All rights reserved.

## Environmental & Electrical

| | | |
|---|---|---|
| **Input Voltage** | | PoE+(IEEE802.3at, Class4), 12VDC |
| **Power Consumption** | PoE | Max. 17.0W, typical 12.5W |
| | 12VDC | Max. 14.5W, typical 11.0W |

## Mechanical

| | |
|---|---|
| **Color** | White |
| **Material** | Aluminum |
| **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 |
| **Environment** | 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) |

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.

© Hanwha Vision CO., LTD. All rights reserved.

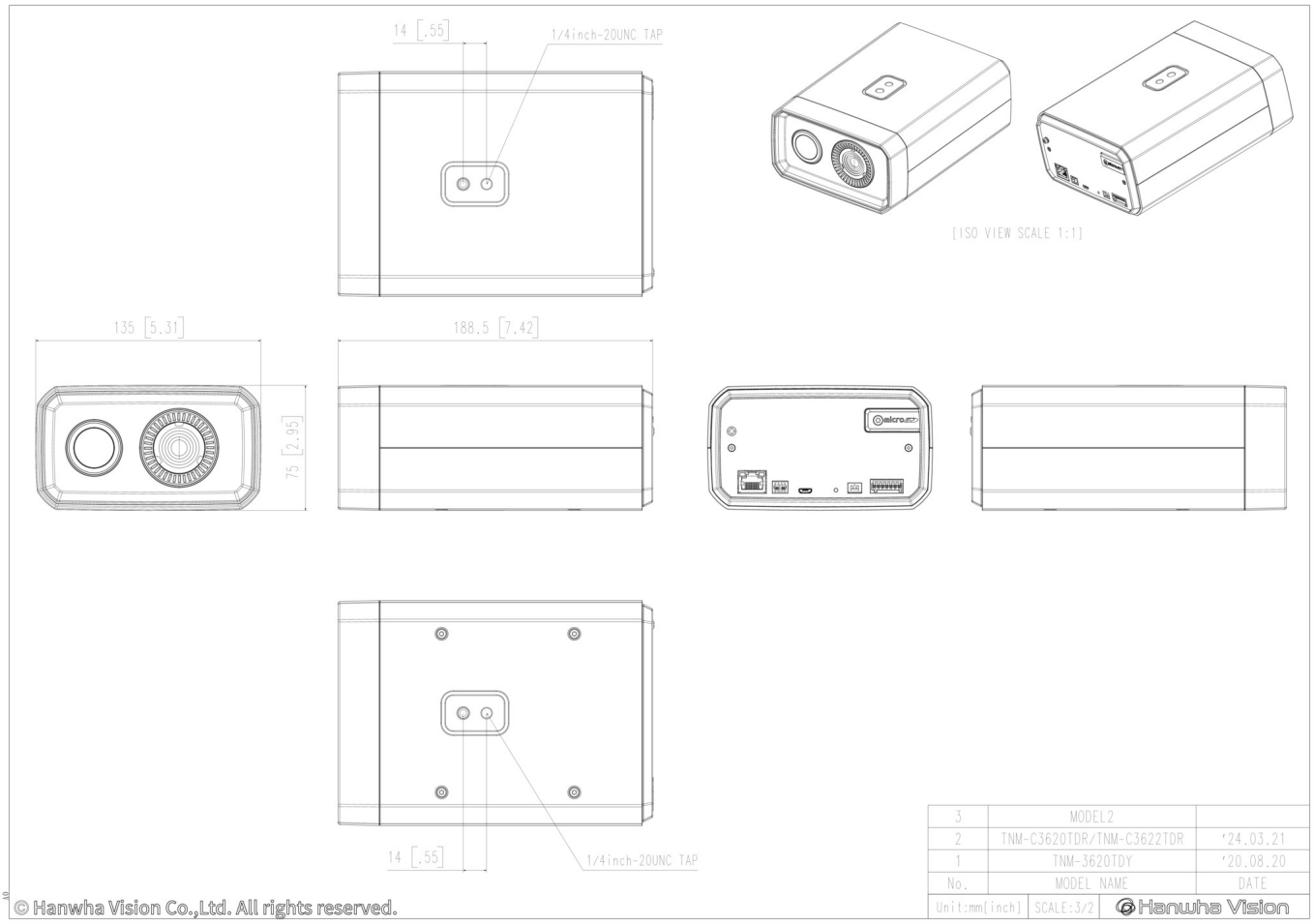
# TNM-C3620TDR

Bi-spectrum AI Radiometric Camera
QVGA thermal / 2MP visible



## CAD

**Unit:** mm [inch]




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.

© Hanwha Vision CO., LTD. All rights reserved.