



Network

Thermal

TNO-C3082T

QVGA AI Tele lens Thermal Camera



Key Features

- QVGA resolution
- 60mm Focal Length
- Max. Framerate 8fps
- Min. Object Distance 88.3m
- High performance thermal sensitivity (NETD 20mK@25°C)
- AI based object classification
- NEMA4X, NEMA-TS2, MIL-STD-810H
- Secure element with FIPS 140-3 level3, CC EAL6+

Compatible Devices



SBP-160HMW1



SBP-140CMB



SBP-180CMB



SBP-180CMS



SBP-150CMP



SBP-300CMP



SBP-900CMP



SBP-C15H



SBP-C15NP



SBP-C35H



SBP-C15P



SBP-150CMI



SBP-300CMI



SBP-300CMW1



SBP-900CMW



SBP-300CMTW



SBP-300CMTS



SBP-250WMW



SBP-400WMW



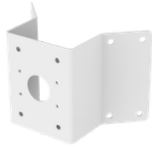
SBP-115PFA



SBP-150PMW



SBD-180PMW



SBP-156KMW



SBP-156LMW1



SBP-050NBW



SBP-150NBW



SBP-060BA



SBP-300MMW



SBP-300MMW1



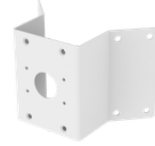
SBP-160MMW1



SBP-300BW1



SBP-300PMW2



SBP-300KMW1



SBP-300LMW



SBP-300NBW

TNO-C3082T

QVGA AI Tele lens Thermal Camera



Specifications

Video

| | | |
|----------------|-------------|-----------------------------------------------------------------------------|
| Imaging Device | Type | Uncooled micro bolometer (384x288) |
| Resolution | | 768x576, 384x288 |
| Max. Framerate | H.265/H.264 | 8fps |
| | MJPEG | 8fps |
| Spectral Range | | 8~14 μ m |
| NETD | | \leq 20mK@25°C, F1.0 |
| Pixel Size | | 17 μ m |
| Video Out | | USB: Micro USB Type B. Preview and installation ONLY. Requires WiFi dongle. |

Lens

| | | |
|-------------------------------|------------|----------------|
| Focal Length (mm) | | 60 |
| Max Aperture Ratio (F number) | Wide | 1.2 |
| Angular Field of View | Horizontal | 6.2° |
| | Vertical | 4.7° |
| | Diagonal | 7.7° |
| iFoV | | 0.283 mRad |
| Min. Object Distance | | 88.3m(289.7ft) |
| Focus Control | | Fixed |
| Lens Type | | Athermalized |

Pan / Tilt / Rotate

| | | |
|---------------------------|--------|---------|
| Pan / Tilt / Rotate Range | Pan | 0°~350° |
| | Tilt | 0°~90° |
| | Rotate | 0°~350° |

Operational

| | | |
|------------------|----------|------------------------|
| Motion Detection | Quantity | 8ea |
| | Shape | 8point Polygonal zones |

Operational

| | | |
|------------------------------------------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Privacy Masking | Quantity | 6ea |
| | Shape | Rectangular zones |
| | Color / Option | Gray, Black, White |
| Video Rotation | | Flip, Mirror, Hallway view(90°/270°) |
| Serial Interface | | RS-485 |
| Alarm Interface | In/Out | 2 configurable I/O ports |
| | Others | Support extra alarm I/O via optional I/O box |
| Alarm Triggers | | Analytics, Network disconnect, Alarm input, Time schedule, MQTT subscription |
| Alarm Events When Alarm Trigger Occurred | | File upload(image): e-mail/FTP/SFTP, File upload(video clip): FTP/SFTP, Notification: e-mail, Recording: SD/SDHC/SDXC or NAS recording at event triggers,Alarm output, Handover: PTZ preset, MQTT: publication |
| Audio In | | Selectable(mic in/line in) |
| Audio Out | | Line out |
| Color Palettes | | Whitehot, Blackhot, Rainbow, Rainbow2, Sepia, Red, Iron, Custom |

Analytics

| | | |
|------------------------|--------------------|---------------------------------------------------------------------------------------------------------------------|
| Classified Object Type | | Person, Vehicle |
| Thumbnail | | BestShot |
| Analytics Events | Based on AI Engine | Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit), Motion detection |
| | Normal | Motion detection, Tampering, Audio detection, Sound classification, Shock detection, Virtual area(Appear/Disappear) |

Radiometry

| | | |
|--------------------------|--|--------------------------|
| Hybrid Palettes | | Support |
| ROI Condition Monitoring | | None, Increase, Decrease |

Network

| | | |
|-------------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Ethernet | | Metal shielded RJ-45(10/100/1000BASE-T) |
| Video Compression | | H.265/H.264: Main/Baseline/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 | | Manual, WiseStream II , WiseStreamIII |
| Bitrate Control | | H.265/H.264: CBR or VBR, MJPEG: VBR |
| Streaming | Unicast | Up to 20 users |
| | Multicast | Support |
| | Multiple Streaming | Up to 10 profiles |

Network

| | | |
|-----------------------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Protocol | | IPv4, IPv6, TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, FTP, SFTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, UPnP, Bonjour, LLDP, CDP, SRTP(TCP, UDP Unicast), MQTT, Syslog |
| Application Programming Interface | ONVIF | S, G, T, M |
| | Others | SUNAPI(HTTP API), Hanwha Vision Open Platform |

Security

| | |
|------------------------|-------------------------------------------------------------------------|
| OS / Firmware Protect | Encrypted firmware, Secure boot, Signed firmware |
| User authentication | Digest authentication, Prevent brute-force attack |
| 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 | SDcard partition encrypt(AES-256), Secure element |
| Security Certificate | Secure element(FIPS 140-3 level3, CC EAL6+) |

General

| | | |
|--------------|--------------------|------------------|
| Memory | RAM | 2GB |
| | Flash | 512MB |
| Edge Storage | Micro SD/SDHC/SDXC | Max. 1TB x 1slot |

Environmental & Electrical

| | | |
|---------------------|---------------------------------|---------------------------|
| Operating Condition | Temperature | -40°C~+60°C(-40°F~+140°F) |
| | Humidity | 0~95% RH(non-condensing) |
| Storage Condition | Temperature | -50°C~+60°C(-58°F~+140°F) |
| | Humidity | 0~95% RH(non-condensing) |
| Input Voltage | PoE(IEEE802.3af, Class3), 12VDC | |
| Power Consumption | PoE | Max. 10.8W, typical 9W |
| | 12VDC | Max. 9.4W, typical 7.7W |

Mechanical

| | |
|-------------------------|----------------------------------------------------|
| Color | White |
| Material | Aluminum |
| RAL Code | RAL9003 |
| Product Dimensions | ø107.3x275mm(ø4.22x10.83") |
| Product Weight | 2340g(5.16 lb) |
| Compatible Conduit Hole | Support conduit compatibility via optional adaptor |

Mechanical

| | |
|---------------------|------------------------------------|
| Compatible Gang Box | Single, Double, 4" Octagon, Square |
|---------------------|------------------------------------|

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, RCM AS-NZS CISPR 32 Class A, KS C 9832 Class A, KS C 9835, IC Regulation ICES-003 Issue 7 Class A |
| Safety | UL 62368-1, CAN/CSA C22.2 NO. 62368-1 |
| Environment | IEC/EN 63000, 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, IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-6, IEC 60068-2-14, IEC 60068-2-27, IEC 60068-2-78, MIL-STD-810H 501.7, MIL-STD-810H 502.7, MIL-STD-810H 507.6, MIL-STD-810H 509.7, MIL-STD-810H 514.8, MIL-STD-810H 516.8 |

DRI (Johnson's Criteria)

| | | |
|----------------|------------------|------------------|
| Detection | Person(1.67PPM) | 2,127m(6,979ft) |
| | Vehicle(0.65PPM) | 5,436m(17,834ft) |
| Recognition | Person(6.67PPM) | 532m(1,745ft) |
| | Vehicle(2.61PPM) | 1,359m(4,459ft) |
| Identification | Person(13.33PPM) | 266m(872ft) |
| | Vehicle(5.22PPM) | 679m(2,229ft) |

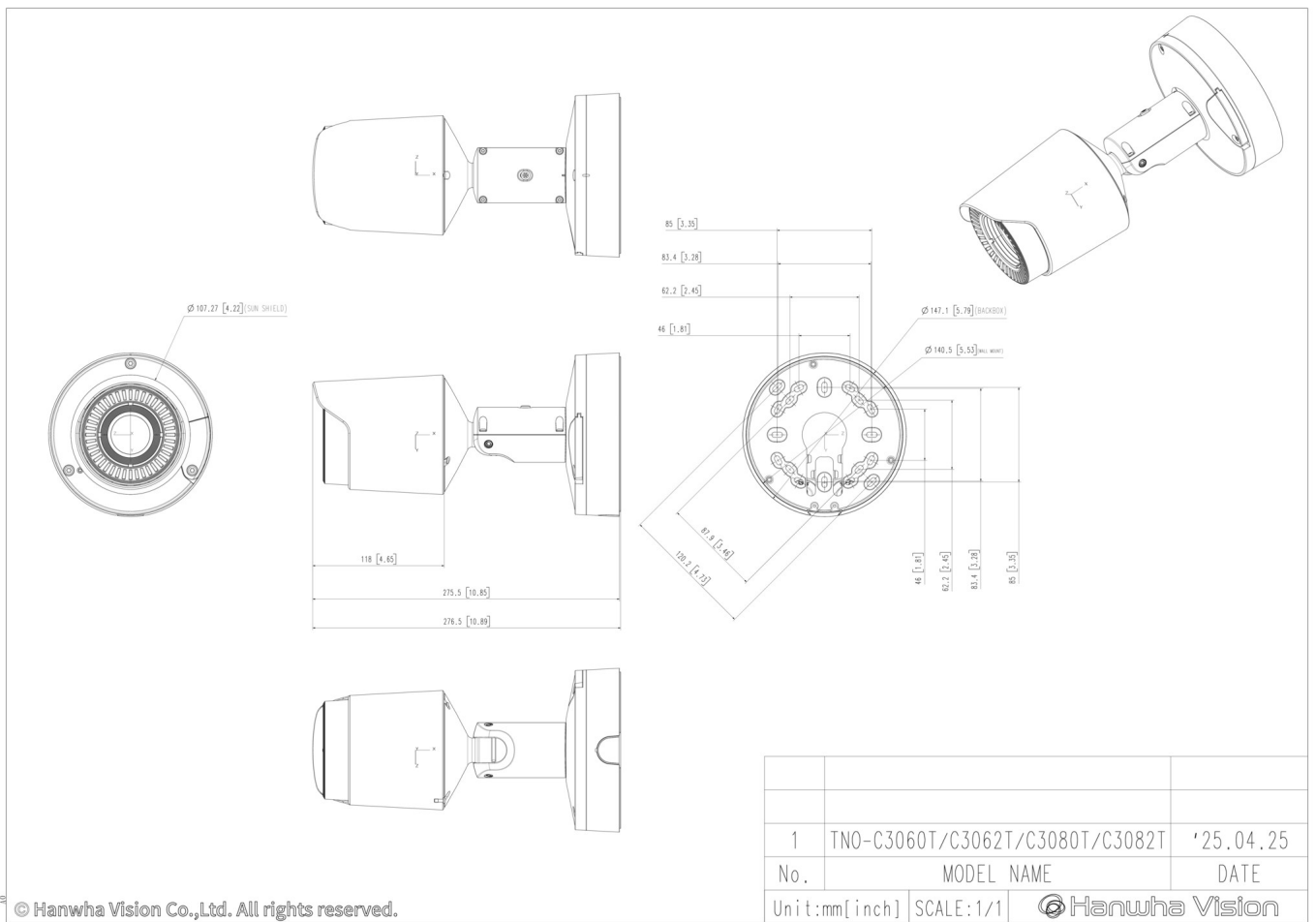
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CAD

Unit: mm [inch]



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