

Network

# PNM-C32083RVQ

4K x 4CH AI IR Multi-directional Camera

## Key Features

- 360° Analytics events based on AI engine: Classified object (Person/Face/Vehicle/License plate)
- 360° Attributes search (Vehicle type: Car/Bus/Truck/Motorcycle/Bicycle)
- AI based loitering detection and line crossing detection
- AI based WiseNR II , Auto prefer shutter control, WiseStream III
- Compact size & semi-modular design
- Next level cybersecurity (TPM 2.0 with FIPS 140-2 level2)
- Reinforced durability (IP66, IK10, NEMA4X)

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4K x 4CH AI IR Multi-directional Camera



## Specifications

### Video

| | | |
|---|---|---|
| **Imaging Device** | Size | 1/2.8" |
| | Type | CMOS |
| **Resolution** | | 3840x2160, 1920x1080, 1280x1024, 1280x960, 1280x720, 1024x768, 800x600, 800x448, 720x576, 720x480, 640x480, 640x360, 320x240 |
| **Max. Framerate** | H.265/H.264 | 15fps/15fps(60Hz/50Hz) |
| | MJPEG | 15fps(@8MP Max. 5fps) |
| | Others | Max. 20fps when AI off(MJPEG@8MP Max. 5fps) |
| **Min. Illumination (Lux)** | Color(1/30sec, 30IRE) | 0.1 |
| | BW(1/30sec, 30IRE) | 0.01 |
| **Video Out** | | USB: Micro USB Type B. Preview and installation ONLY. Requires WiFi dongle. |

### Lens

| | | |
|---|---|---|
| **Focal Length (mm)** | | 3.3~5.7 |
| **Zoom Ratio** | Optical | 1.7x |
| **Max Aperture Ratio (F number)** | Wide | 1.5 |
| | Tele | 1.9 |
| **Angular Field of View** | Horizontal | 109°~56° |
| | Vertical | 55°~31° |
| | Diagonal | 136°~65° |
| **Min. Object Distance** | | 1.3m(4.27ft) |
| **Focus Control** | | Simple focus |
| **Lens Type** | | Fixed iris |

### Pan / Tilt / Rotate

| | | |
|---|---|---|
| **Pan / Tilt / Rotate Range** | Pan | 0°~360° |
| | Tilt | 0°~65° |
| | Rotate | 0°~90° |

### Operational

| | |
|---|---|
| **Day & Night** | Auto(ICR) |



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## Operational

| | | |
|---|---|---|
| **Backlight Compensation** | | BLC, WDR, SSDR |
| **Wide Dynamic Range (dB)** | | 120 |
| **Digital Noise Reduction** | | WiseNR II (Based on AI engine), SSNR V |
| **Motion Detection** | Quantity | 8ea |
| | Shape | 8point Polygonal zones |
| **Privacy Masking** | Quantity | 6ea |
| | Shape | Rectangular zones |
| | Color / Option | Gray, Black, White |
| **Gain Control** | | Low, Middle, High |
| **White Balance** | | ATW, AWC, Manual, Indoor, Outdoor |
| **LDC** | | Support |
| **Electronic Shutter** | Mode | Minimum, Maximum, Anti flicker, Prefer shutter control(Based on AI engine) |
| | Speed Range | 2~1/12,000sec |
| **Video Rotation** | | Flip, Mirror, Hallway view(90°/270°) - Each channel separately |
| **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, App event, Time schedule, 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,send message by HTTP/HTTPS/TCP,Audio clip playback,<br>MQTT: publication |
| **Audio In** | | Selectable(mic in/line in) |
| **Audio Out** | | Line out |
| **Light Type** | | IR LED |
| **Light Viewable Length** | IR | PoE+: WiseIR 15m(49.21ft) PoE++: WiseIR 20m(65.62ft) |
| **IR Wavelength** | | 850nm |

## Analytics

| | | |
|---|---|---|
| **Classified Object Type** | | Person, Face, Vehicle, License plate |
| **Attributes** | Person | Upper/Lower clothes color |
| | Vehicle | Type(car, bus, truck, motorcycle, bicycle), Color |
| **Thumbnail** | | BestShot |
| **Analytics Events** | Based on AI Engine | Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit) |
| | Normal | Defocus detection, Motion detection, Tampering, Audio detection, Sound classification, Virtual area(Appear/Disappear) |

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| | | |
|---|---|---|
| **Ethernet** | | Metal shielded RJ-45(10/100/1000BASE-T) |
| **Video Compression** | | H.265: Main,<br>H.264: Main/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, WiseStreamIII |
| **Bitrate Control** | | H.265/H.264: CBR or VBR,<br>MJPEG: VBR |
| **Streaming** | Unicast | Up to 10 users |
| | Multicast | Support |
| | Multiple Streaming | Up to 3 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, G, T, M |
| | Others | SUNAPI(HTTP API), Hanwha Vision Open Platform |
| **Direct Cloud Connection** | | Support |

## 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, 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** | TPM(Trusted platform module) |
| **Security Certificate** | Consumer IoT Security Standard (ETSI EN 303 645), Security Built-in Process Certification (IEC 62443-4-1) |

## General

| | | |
|---|---|---|
| **SoC** | Type | CV5 |
| **Memory** | RAM | 8GB |
| | Flash | 1GB |
| **Edge Storage** | Micro SD/SDHC/SDXC | Max. 512GB x 2slot(Total 1TB) |
| **Edge Storage(OnCloud)** | Micro SD/SDHC/SDXC | Max. 1TB x 2slots (Total 2TB) *Hanwha Vision branded microSD cards have been certified and recommended for OnCloud edge recording. |

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## Environmental & Electrical

| | | |
|---|---|---|
| **Operating Condition** | Temperature | -40°C~+55°C(-40°F~+131°F) |
| | Humidity | 0~95% RH(non-condensing) |
| | Others | Start up should be done at above -35°C, Humidity control with AIR vent |
| **Storage Condition** | Temperature | -50°C~+60°C(-58°F~+140°F) |
| | Humidity | 0~90% RH(non-condensing) |
| **Input Voltage** | | PoE+(IEEE802.3at, Class4), PoE++(IEEE802.3bt type3, Class6) |
| **Power Consumption** | PoE | PoE++: Max. 30W, typical 22W |
| | Others | PoE+: Max. 25.5W, typical 22W |

## Mechanical

| | |
|---|---|
| **Color** | White |
| **Material** | Aluminum, Hard-coated dome |
| **RAL Code** | RAL9003 |
| **Product Dimensions** | ø250x114.2mm(9.84x4.50") |
| **Product Weight** | 2,820g(6.22lb) |
| **Compatible Conduit Hole** | 19.1mm(3/4")(M25) |
| **Compatible Gang Box** | Single, Double, 4" Octagon, Square |

## 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, IEC 62471 |
| **Environment** | IEC/EN 63000, IEC 60529 IP66, IEC 62262 IK10, NEMA 250 type 4X |

## DORI (EN62676-4 standard)

| | | |
|---|---|---|
| **Detect (25PPM/ 8PPF)** | Wide | 54.8m(179.73ft) |
| | Tele | 144.4m(473.88ft) |
| **Observe (63PPM/ 19PPF)** | Wide | 21.9m(71.89ft) |
| | Tele | 57.8m(189.55ft) |
| **Recognize (125PPM/ 38PPF)** | Wide | 11.0m(35.95ft) |
| | Tele | 28.9m(94.78ft) |
| **Identify (250PPM/ 76PPF)** | Wide | 5.5m(17.97ft) |
| | Tele | 14.4m(47.39ft) |

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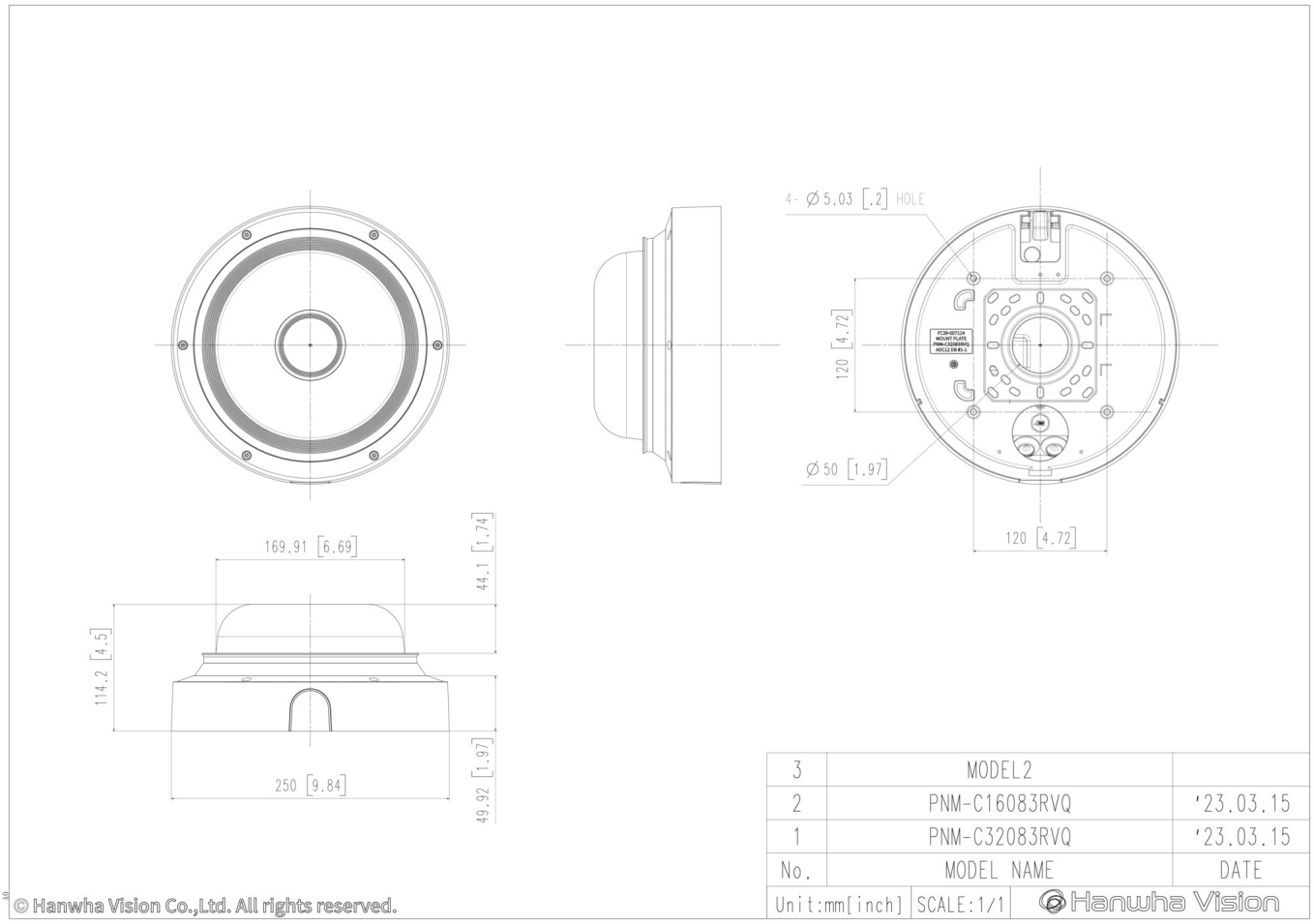
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## CAD

**Unit:** mm [inch]




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