



Network

# PNM-C32083RVQ

4K x 4CH AI IR PTRZ Mult-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, WiseStreamIII
- 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 PTRZ Mult-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) |
|-------------|-----------|

## 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             | None, 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             | Motion detection, Tampering, Audio detection, Sound classification, Virtual area(Appear/Disappear) |

## Network

|                                   |                    |                                                                                                                                                                                                                        |
|-----------------------------------|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ethernet                          |                    | Metal shielded RJ-45(10/100/1000BASE-T)                                                                                                                                                                                |
| Video Compression                 |                    | H.265/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,<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, 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. |

## 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)   |

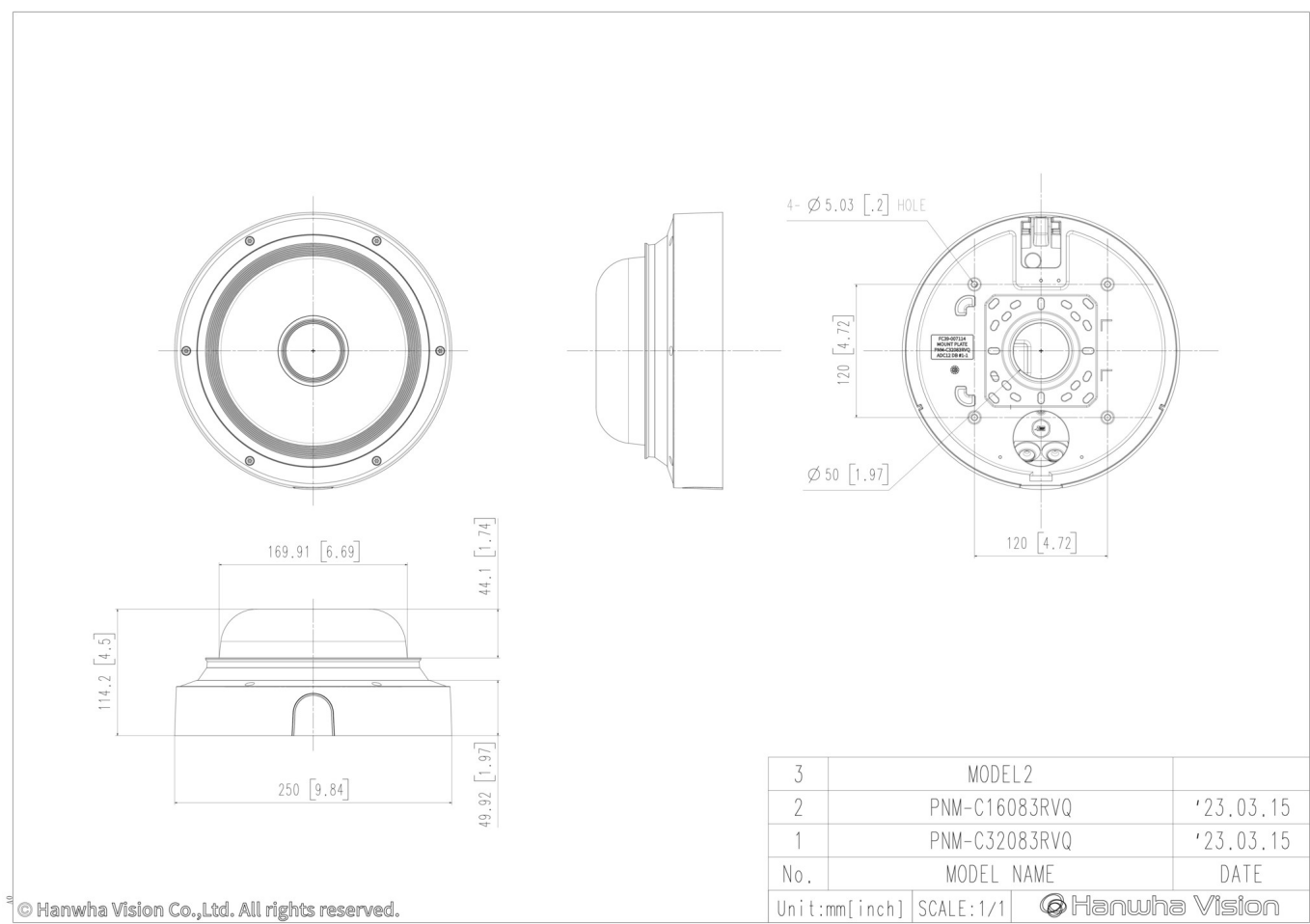
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Camera



CAD

Unit: mm [inch]



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