



Network

Bullet

# QNO-C8023R

5MP AI IR Bullet Camera



## Key Features

- Max. 5MP resolution
- Color: 0.05Lux(F1.6, 1/30sec), BW: 0.005Lux(F1.6, 1/30sec, 30IRE)
- Maximum 30fps@5MP (H.265/H.264)
- IR viewable length 30m (98.42ft)
- Day & Night (ICR), WDR (120dB), WiseNR II (Using AI engine)
- H.265, H.264, MJPEG, WiseStreamIII (Using AI engine)
- Dynamic Privacy Masking (Person/Vehicle)
- Analytics events based on AI engine (NPU) :
  - Object detection (Person/Vehicle - car, truck, bus, bicycle, motorcycle),
  - Color Attribute, BestShot
  - Motion detection, Virtual line(Crossing/Direction),
  - Virtual area(Loitering/Intrusion/Enter/Exit)
- IP66, IK10
- PoE: Max 8.1W

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5MP AI IR Bullet Camera



## Specifications

### Video

|                         |  |                        |
|-------------------------|--|------------------------|
| Imaging Device          | Size   | 1/2.8"                 |
|                         | Type   | CMOS                   |
| Resolution              | 2592x1944, 2560x1440, 1920x1080, 1280x960, 1280x720, 800x600, 800x448, 720x576, 720x480, 640x480, 640x360, 320x240 |                        |
| Max. Framerate          | H.265/H.264  | 30fps/25fps(60Hz/50Hz) |
|                         | MJPEG  | 30fps(@5MP Max. 5fps)  |
| Min. Illumination (Lux) | Color(1/30sec, 30IRE)  | 0.05                   |
|                         | BW(1/30sec, 30IRE)   | 0.005                  |
| Video Out               | USB: Micro USB Type B. Preview and installation ONLY. Requires WiFi dongle.  |                        |

### Lens

|                               |              |      |
|-------------------------------|--------------|------|
| Focal Length (mm)             | 4.0          |      |
| Max Aperture Ratio (F number) | Wide         | 1.6  |
| Angular Field of View         | Horizontal   | 80°  |
|                               | Vertical     | 59°  |
|                               | Diagonal     | 102° |
| Min. Object Distance          | 0.5m(1.64ft) |      |
| Focus Control                 | Fixed        |      |
| Lens Type                     | Fixed iris   |      |
| Mount Type                    | M12          |      |

### Pan / Tilt / Rotate

|                           |        |         |
|---------------------------|--------|---------|
| Pan / Tilt / Rotate Range | Pan    | 0°~360° |
|                           | Tilt   | 0°~100° |
|                           | Rotate | 0°~360° |

### Operational

|                         |               |
|-------------------------|---------------|
| Day & Night             | Auto(ICR)     |
| Backlight Compensation  | BLC, WDR, SDR |
| Wide Dynamic Range (dB) | 120           |

## Operational

|   |  |  |
|---|--|--|
| <b>Digital Noise Reduction</b>                  |  | WiseNR II (Based on AI engine), SSNR V   |
| <b>Motion Detection</b>                         | Quantity                                   | 8ea  |
|   | Shape                                      | 8point Polygonal zones   |
| <b>Privacy Masking</b>                          | Quantity                                   | 32ea   |
|   | Shape                                      | 4point Quadrangle zones  |
|   | Color / Option                             | Gray, Green, Red, Blue, Black, White   |
|   | Dynamic Privacy Masking:<br>Color / Option | Mosaic   |
| <b>Gain Control</b>                             |  | Low, Middle, High  |
| <b>White Balance</b>                            |  | ATW, AWC, Manual, Indoor, Outdoor  |
| <b>LDC</b>                                      |  | Support  |
| <b>Electronic Shutter</b>                       | Mode                                       | Minimum, Maximum, Anti flicker, Prefer shutter control(Based on AI engine)   |
|   | Speed Range                                | 1/5~1/25,000sec  |
| <b>Video Rotation</b>                           |  | Flip, Mirror, Hallway view(90°/270°)   |
| <b>Alarm Interface</b>                          | In/Out                                     | Input 1ea, Output 1ea  |
| <b>Alarm Triggers</b>                           |  | Analytics, Network disconnect, Alarm input, MQTT subscription  |
| <b>Alarm Events When Alarm Trigger Occurred</b> |  | File upload(image): e-mail/FTP/SFTP,<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 |
| <b>Audio In</b>                                 |  | Selectable(mic in/line in)   |
| <b>Audio Out</b>                                |  | Line out   |
| <b>Light Type</b>                               |  | IR LED   |
| <b>Light Viewable Length</b>                    | IR   | 30m(98.42ft)   |
| <b>IR Wavelength</b>                            |  | 850nm  |

## Analytics

|                               |                    |  |
|-------------------------------|--------------------|--|
| <b>Classified Object Type</b> |                    | Person, Vehicle  |
| <b>Attributes</b>             | Person             | Upper/Lower clothes color  |
|                               | Vehicle            | Type(car, bus, truck, motorcycle, bicycle), Color  |
| <b>Thumbnail</b>              |                    | BestShot   |
| <b>Analytics Events</b>       | Based on AI Engine | Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit), Motion detection |
|                               | Normal             | Defocus detection, Tampering, Virtual area(Appear/Disappear)   |
| <b>Business Intelligence</b>  | Based on AI Engine | People counting, Queue management, Heatmap, Vehicle counting   |

## Network

|                          |                               |
|--------------------------|-------------------------------|
| <b>Ethernet</b>          | RJ-45(10/100BASE-T)           |
| <b>Video Compression</b> | H.265/H.264: Main/High, MJPEG |

## Network

|  |                    |   |
|--|--------------------|---|
| <b>Audio Compression</b>                 |                    | 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   |
| <b>Smart Codec</b>                       |                    | Manual, WiseStreamIII   |
| <b>Bitrate Control</b>                   |                    | H.265/H.264: CBR or VBR,<br>MJPEG: VBR  |
| <b>Streaming</b>                         | Unicast            | Up to 20 users  |
|  | Multicast          | Support   |
|  | Multiple Streaming | Up to 5 profiles  |
| <b>Protocol</b>                          |                    | IPv4, IPv6, TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS,<br>SSL/TLS, DHCP, FTP, SFTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS,<br>QoS, UPnP, Bonjour, LLDP, CDP, SRTP(TCP, UDP Unicast), MQTT |
| <b>Application Programming Interface</b> | ONVIF              | S, G, T, M  |
|  | Others             | SUNAPI(HTTP API), Hanwha Vision Open Platform   |
| <b>Direct Cloud Connection</b>           |                    | Support   |

## Security

|                               |   |
|-------------------------------|---|
| <b>OS / Firmware Protect</b>  | Encrypted firmware, Secure boot, Signed firmware                        |
| <b>User authentication</b>    | Digest authentication, Prevent brute-force attack                       |
| <b>Network authentication</b> | IEEE 802.1X(EAP-TLS, EAP-LEAP, EAP-PEAP, MSCHAPv2)                      |
| <b>Secure Communication</b>   | HTTPS, WSS(WebSocket Secure), SRTP                                      |
| <b>Access Control</b>         | IP-based access control   |
| <b>Data Protect</b>           | Encryption credentials, Encrypt compress for live recording file export |
| <b>Audit</b>                  | Access / System / Event Log management                                  |
| <b>Device ID</b>              | Device certificate(Hanwha Vision Root CA)                               |
| <b>Secure Storage</b>         | SDcard partition encrypt(AES-256)                                       |

## General

|                              |                    |   |
|------------------------------|--------------------|---|
| <b>Memory</b>                | RAM                | 2GB   |
|                              | Flash              | 1GB   |
| <b>Edge Storage</b>          | Micro SD/SDHC/SDXC | Max. 256GB x 1slot  |
| <b>Edge Storage(OnCloud)</b> | Micro SD/SDHC/SDXC | Max. 1TB x 1slot *Hanwha Vision branded microSD cards have been certified and recommended for OnCloud edge recording. |

## Environmental & Electrical

|                            |             |  |
|----------------------------|-------------|--|
| <b>Operating Condition</b> | Temperature | -30°C~+55°C(-22°F~+131°F)  |
|                            | Humidity    | 0~100% RH(condensing)  |
|                            | Others      | Start up should be done at above -30°C, Humidity control with AIR vent |
| <b>Storage Condition</b>   | Temperature | -50°C~+60°C(-58°F~+140°F)  |
|                            | Humidity    | 0~95% RH(non-condensing)   |
| <b>Input Voltage</b>       |             | PoE(IEEE802.3af, Class3)   |

## Environmental & Electrical

|                   |     |                        |
|-------------------|-----|------------------------|
| Power Consumption | PoE | Max 8.1W, typical 4.0W |
|-------------------|-----|------------------------|

## Mechanical

|                     |                            |
|---------------------|----------------------------|
| Color               | White                      |
| Material            | Aluminum                   |
| RAL Code            | RAL9003                    |
| Product Dimensions  | ø93.4x245.8mm(ø3.68x9.68") |
| Product Weight      | 890g(1.96 lb)              |
| Compatible Gang Box | Single, Double, 4" Octagon |

## 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   |

## DORI (EN62676-4 standard)

|                           |      |                |
|---------------------------|------|----------------|
| Detect (25PPM/ 8PPF)      | Wide | 61.8m(202.7ft) |
| Observe (63PPM/ 19PPF)    | Wide | 24.7m(81.1ft)  |
| Recognize (125PPM/ 38PPF) | Wide | 12.4m(40.5ft)  |
| Identify (250PPM/ 76PPF)  | Wide | 6.2m(20.3ft)   |

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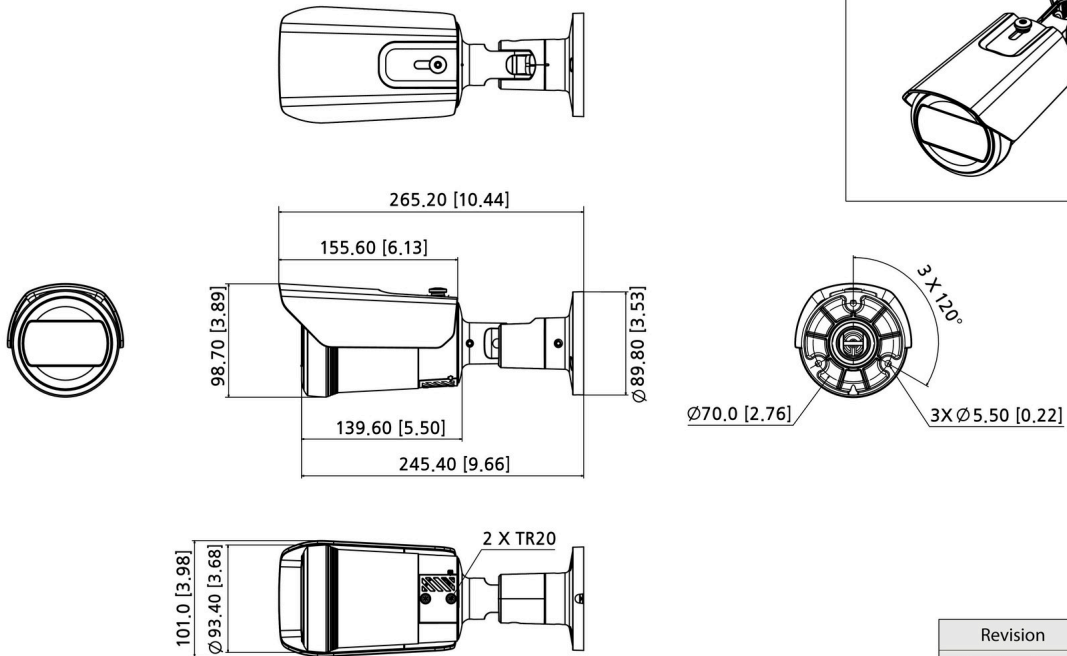
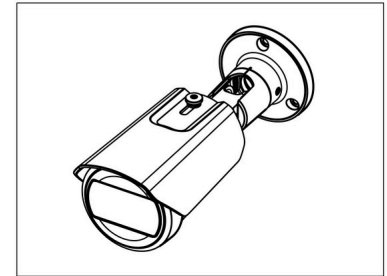


**CAD**

Unit: mm [inch]

## QNO-C8013R/C8023R BULLET CAMERA

Reference image



|               |           |
|---------------|-----------|
| Revision      | V1.0      |
| Revision Date | 24/12/20  |
| Paper Size    | A0        |
| Unit          | mm [inch] |
| Scale         | 1:1       |

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Same Model\_QNO-C6083R/C8083R/C9083R