



Network

Рыбий глаз

# QNF-C9010

12MP AI Fisheye Camera



## Key Features

- 12MP Image Resolution
- 1.76mm Focal Length
- AI Object Classification Person, Vehicle, Color
- IP42 Rated
- 1/1.6" 12MP CMOS
- 1.76mm fixed stereo graphic type lens
- Color: 0.02Lux(F1.8, 1/30sec), BW: 0.001Lux(F1.8, 1/30sec)
- Digital Rotation
- Resolution/Framerate
  - Original view: Max. 20fps@3008x3008
  - Double panorama: Max. 20fps@3584x1792
  - Single panorama: Max. 20fps@3584x896
  - Quad view: Max. 20fps@3584x2688
  - Q1/Q2/Q3/Q4(4:3): Max. 20fps@1792x1344
- Day & Night (ICR), WDR (120dB), WiseNR II (Using AI engine)
- H.265, H.264, MJPEG, WiseStreamIII (Using AI engine)
- Analytics events based on AI engine
  - Object detection (Person/Vehicle)
  - Color Attribute, BestShot
  - Motion detection, Virtual line (Crossing/Direction), Virtual area (Loitering/Intrusion/Enter/Exit)
- PoE: Max 7.3W

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12MP AI Fisheye Camera



## Specifications

| Video                         |                       |                                                                                                                                                                                                                                                  |
|-------------------------------|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Imaging Device                | Size                  | 1/1.6"                                                                                                                                                                                                                                           |
|                               | Type                  | CMOS                                                                                                                                                                                                                                             |
| Resolution                    |                       | 3584x2688, 3584x1792, 3584x896, 3008x3008, 2560x2560, 2048x1536, 1920x1920, 1920x960, 1920x480, 1792x1344, 1504x1504, 1280x1280, 1280x640, 1280x320, 1024x768, 1024x512, 1024x256, 800x800, 768x576, 640x640, 640x320, 640x160, 512x384, 480x480 |
| Max. Framerate                | H.265/H.264           | 20fps/20fps(60Hz/50Hz)                                                                                                                                                                                                                           |
|                               | MJPEG                 | 5fps                                                                                                                                                                                                                                             |
| Min. Illumination (Lux)       | Color(1/30sec, 30IRE) | 0.02                                                                                                                                                                                                                                             |
|                               | BW(1/30sec, 30IRE)    | 0.001                                                                                                                                                                                                                                            |
| Video Out                     |                       | USB: Micro USB Type B. Preview and installation ONLY. Requires WiFi dongle.                                                                                                                                                                      |
| Lens                          |                       |                                                                                                                                                                                                                                                  |
| Focal Length (mm)             |                       | 1.76                                                                                                                                                                                                                                             |
| Max Aperture Ratio (F number) | Wide                  | F1.8                                                                                                                                                                                                                                             |
| Angular Field of View         | Horizontal            | 185°                                                                                                                                                                                                                                             |
|                               | Vertical              | 185°                                                                                                                                                                                                                                             |
|                               | Diagonal              | 185°                                                                                                                                                                                                                                             |
| Min. Object Distance          |                       | 0.5m(1.64ft)                                                                                                                                                                                                                                     |
| Pan / Tilt / Rotate           |                       |                                                                                                                                                                                                                                                  |
| Pan / Tilt / Rotate Range     | Others                | Digital Rotation                                                                                                                                                                                                                                 |
| Operational                   |                       |                                                                                                                                                                                                                                                  |
| Day & Night                   |                       | Auto(ICR)                                                                                                                                                                                                                                        |
| 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                                                                                                                                                                                                                           |

## Operational

|                                          |             |                                                                                                                                                                                                            |
|------------------------------------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Privacy Masking                          | Quantity    | 32ea                                                                                                                                                                                                       |
|                                          | Shape       | 4point Quadrangle zones                                                                                                                                                                                    |
| Gain Control                             |             | Low, Middle, High                                                                                                                                                                                          |
| White Balance                            |             | ATW, AWC, Manual, Indoor, Outdoor                                                                                                                                                                          |
| Electronic Shutter                       | Mode        | Minimum, Maximum, Anti flicker                                                                                                                                                                             |
|                                          | Speed Range | 1/5~1/12,000sec                                                                                                                                                                                            |
| Digital PTZ                              |             | Support                                                                                                                                                                                                    |
| Video Rotation                           |             | Flip, Mirror                                                                                                                                                                                               |
| Alarm Triggers                           |             | Analytics, Network disconnect                                                                                                                                                                              |
| Alarm Events When Alarm Trigger Occurred |             | File upload(image): e-mail/FTP/SFTP,<br>Notification: e-mail,<br>Recording: SD/SDHC/SDXC or NAS recording at event triggers,<br>Handover: PTZ preset, send message by HTTP/HTTPS/TCP,<br>MQTT: publication |

## Analytics

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

## Network

|                                   |                    |                                                                                                                                                                                                                               |
|-----------------------------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ethernet                          |                    | RJ-45(10/100BASE-T)                                                                                                                                                                                                           |
| Video Compression                 |                    | H.265/H.264: Main/High, MJPEG                                                                                                                                                                                                 |
| Smart Codec                       |                    | Manual, WiseStream(Based on AI engine)                                                                                                                                                                                        |
| Bitrate Control                   |                    | H.265/H.264: CBR or VBR,<br>MJPEG: VBR,<br>MJPEG: VBR                                                                                                                                                                         |
| Streaming                         | Unicast            | Up to 20 users                                                                                                                                                                                                                |
|                                   | Multicast          | Support                                                                                                                                                                                                                       |
|                                   | Multiple Streaming | Up to 5 profiles                                                                                                                                                                                                              |
| Protocol                          |                    | IPv4, IPv6, TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, FTP, SFTP, SMTP, ICMP, IGMPv2, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, UPnP, Bonjour, LLDP, CDP, 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, 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                             |
| Audit                  | Access / System / Event Log management             |
| Device ID              | Device certificate(Hanwha Vision Root CA)          |
| Secure Storage         | SDcard partition encrypt(AES-256)                  |

## General

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

## Environmental & Electrical

|                     |             |                           |
|---------------------|-------------|---------------------------|
| Operating Condition | Temperature | -10°C~+40°C(+14°F~+104°F) |
|                     | Humidity    | 0~90% RH(non-condensing)  |
| Storage Condition   | Temperature | -50°C~+60°C(-58°F~+140°F) |
|                     | Humidity    | 0~90% RH(non-condensing)  |
| Input Voltage       |             | PoE(IEEE802.3af, Class3)  |
| Power Consumption   | PoE         | Max 7.3W, typical 4.3W    |

## Mechanical

|                    |                      |
|--------------------|----------------------|
| Color              | White                |
| Material           | Plastic              |
| RAL Code           | RAL9003              |
| Product Dimensions | ø99x52mm(ø3.9x2.05") |
| Product Weight     | 360g(0.79lb)         |

## 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 IP42                                                                                                                                                                             |

## DORI (EN62676-4 standard)

|                      |      |                 |
|----------------------|------|-----------------|
| Detect (25PPM/ 8PPF) | Wide | 36.9m(121.03ft) |
|----------------------|------|-----------------|

**DORI (EN62676-4 standard)**

|                           |      |                |
|---------------------------|------|----------------|
| Observe (63PPM/ 19PPF)    | Wide | 14.8m(48.42ft) |
| Recognize (125PPM/ 38PPF) | Wide | 7.4m(24.21ft)  |
| Identify (250PPM/ 76PPF)  | Wide | 3.7m(12.10ft)  |

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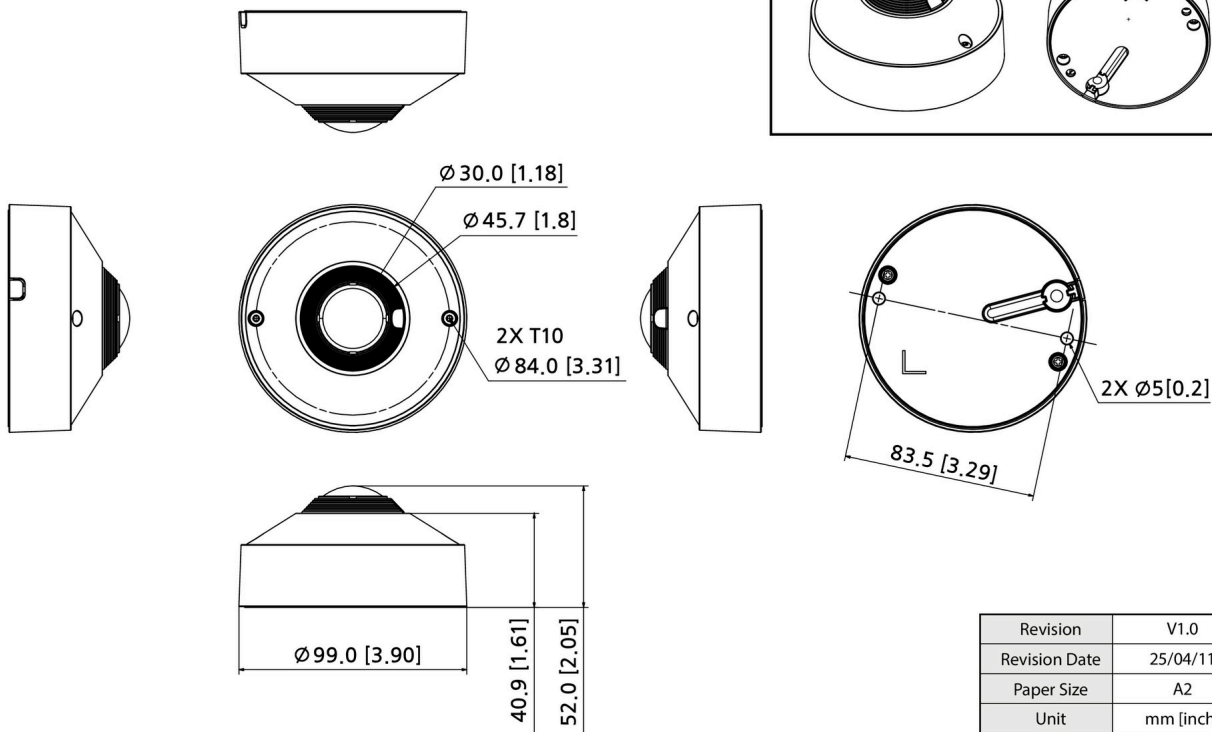
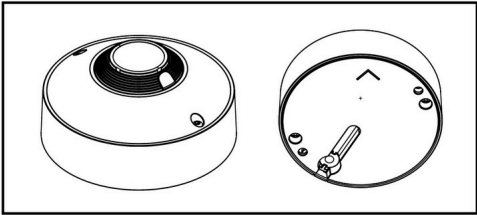


CAD

Unit: mm [inch]

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Reference image



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|               |           |
|---------------|-----------|
| Revision      | V1.0      |
| Revision Date | 25/04/11  |
| Paper Size    | A2        |
| Unit          | mm [inch] |
| Scale         | 1:1       |

**Compatible Devices**

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SBP-150CMI



SBP-300CMI



SBP-300CMW1



SBP-900CMW



SBP-300CMTW



SBP-300CMTS