



Network

Fisheye

# XNF-9013RV

12MP AI IR Fisheye Camera



## Key Features

- 1/2.3" 12MP CMOS
- 1.08mm fixed focal lens
- H.265, H.264, MJPEG codec supported
- Original view, Single panorama, Double panorama, Quad view
- On board dewarping, Digital PTZ
- extreme WDR (120dB), WiseStreamIII (Based on AI engine)
- Wise IR, IR viewable length 8m
- Virtual channel support
- Plugin support, selectable I/O port
- Video Analytics, Heatmap, People counting
- Queue management
- Hard coated dome cover
- Motion detection, Handover, IP66/IK10/NEMA4X
- Mobile use available, supports M12

## XNF-9013RV

12MP AI IR Fisheye Camera



### Specifications

| Video                         |                       |                                                                                                                                                                                                              |
|-------------------------------|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Imaging Device                | Size                  | 1/2.3"                                                                                                                                                                                                       |
|                               | Type                  | CMOS                                                                                                                                                                                                         |
| Resolution                    |                       | 3584x2688, 3584x1792, 3584x896, 3008x3008, 1920x960, 1920x480, 1792x1344, 1792x896, 1504x1504, 1080x1080, 1024x768, 960x960, 800x600, 768x768, 720x720, 704x576, 640x640, 640x480, 640x320, 640x160, 480x480 |
| Max. Framerate                | H.265/H.264           | 30fps/25fps(60Hz/50Hz)                                                                                                                                                                                       |
|                               | MJPEG                 | 30fps(@9MP Max. 5fps)                                                                                                                                                                                        |
| Min. Illumination (Lux)       | Color(1/30sec, 30IRE) | 0.39                                                                                                                                                                                                         |
|                               | BW(1/30sec, 30IRE)    | 0.039                                                                                                                                                                                                        |
| Video Out                     |                       | CVBS: 1.0 Vp-p / 75Ω composite for installation,<br>USB: Micro USB Type B                                                                                                                                    |
| Lens                          |                       |                                                                                                                                                                                                              |
| Focal Length (mm)             |                       | 1.08                                                                                                                                                                                                         |
| Max Aperture Ratio (F number) | Wide                  | 2.2                                                                                                                                                                                                          |
| Angular Field of View         | Horizontal            | 187°                                                                                                                                                                                                         |
|                               | Vertical              | 187°                                                                                                                                                                                                         |
|                               | Diagonal              | 187°                                                                                                                                                                                                         |
| Min. Object Distance          |                       | 0.5m(1.64ft)                                                                                                                                                                                                 |
| Focus Control                 |                       | Simple focus                                                                                                                                                                                                 |
| Pan / Tilt / Rotate           |                       |                                                                                                                                                                                                              |
| Pan / Tilt / Rotate Range     | Rotate                | Lens rotation                                                                                                                                                                                                |
| Operational                   |                       |                                                                                                                                                                                                              |
| Day & Night                   |                       | Auto(ICR)                                                                                                                                                                                                    |
| Backlight Compensation        |                       | BLC, HLC, 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                                                                                                                                                                                                                                                          |
|                                          | Color / Option | Gray, Green, Red, Blue, Black, White, Mosaic                                                                                                                                                                                                                                     |
| Gain Control                             |                | Off, Max gain, Manual                                                                                                                                                                                                                                                            |
| White Balance                            |                | ATW, NarrowATW, AWC, Manual, Indoor, Outdoor                                                                                                                                                                                                                                     |
| Electronic Shutter                       | Mode           | Minimum, Maximum, Anti flicker, Prefer shutter control(Based on AI engine)                                                                                                                                                                                                       |
|                                          | Speed Range    | 1/5~1/12,000sec                                                                                                                                                                                                                                                                  |
| Video Rotation                           |                | Flip, Mirror                                                                                                                                                                                                                                                                     |
| Alarm Interface                          | In/Out         | 2 configurable I/O ports                                                                                                                                                                                                                                                         |
| 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/SFTP,<br>File upload(video clip): 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 |
| Audio In                                 |                | Selectable(mic in/line in), Built-in mic                                                                                                                                                                                                                                         |
| Audio Out                                |                | Line out                                                                                                                                                                                                                                                                         |
| Light Type                               |                | IR LED                                                                                                                                                                                                                                                                           |
| Light Viewable Length                    | IR             | WiseIR 8m(26.25ft)(PoE), 13m(42.65ft)(PoE+)                                                                                                                                                                                                                                      |
| IR Wavelength                            |                | 850nm                                                                                                                                                                                                                                                                            |

## Analytics

|                        |                    |                                                                                                                    |
|------------------------|--------------------|--------------------------------------------------------------------------------------------------------------------|
| Classified Object Type |                    | Person, Face, Vehicle, License plate                                                                               |
| Attributes             | Vehicle            | Type(car, bus, truck, motorcycle, bicycle)                                                                         |
| Thumbnail              |                    | DetectionShot                                                                                                      |
| Analytics Events       | Based on AI Engine | Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit), Motion detection |
|                        | Normal             | Defocus detection, Tampering, Fog detection, Audio detection, Sound classification, Virtual area(Appear/Disappear) |
| Business Intelligence  | Based on AI Engine | People counting, Queue management, Heatmap, Vehicle counting                                                       |

## Network

|                   |  |                                                                                                                               |
|-------------------|--|-------------------------------------------------------------------------------------------------------------------------------|
| Ethernet          |  | Metal shielded RJ-45(10/100BASE-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,<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                                                                                        |

## Network

|                                   |                    |                                                                                                                                                                                                                             |
|-----------------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Streaming                         | Unicast            | Up to 20 users                                                                                                                                                                                                              |
|                                   | Multicast          | Support                                                                                                                                                                                                                     |
|                                   | Multiple Streaming | Up to 10 profiles                                                                                                                                                                                                           |
| 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 |
| 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, 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), HTPM(Hanwha Trusted Platform Module), SDcard partition encrypt(AES-256) |  |
| Security Certificate   | TPM 2.0 with FIPS 140-2 level2                                                                        |  |

## General

|              |                    |                               |
|--------------|--------------------|-------------------------------|
| Memory       | RAM                | 4GB                           |
|              | Flash              | 512MB                         |
| Edge Storage | Micro SD/SDHC/SDXC | Max. 512GB x 2slot(Total 1TB) |

## 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    | 0~90% RH(non-condensing)                                                 |
| Input Voltage       |             | PoE(IEEE802.3af, Class3), PoE+(IEEE802.3at, Class4), 12VDC               |
| Power Consumption   | PoE         | PoE mode: Max 12.95W,typical 9.4W,<br>PoE+ mode: Max 23.0W,typical 9.4W, |
|                     | 12VDC       | PoE mode: Max 12.9W,typical 9.0W,<br>PoE+ mode: Max 22.0W,typical 9.0W   |

## Mechanical

|       |       |
|-------|-------|
| Color | White |
|-------|-------|

## Mechanical

|                     |                                    |
|---------------------|------------------------------------|
| Material            | Aluminum                           |
| RAL Code            | RAL9003                            |
| Product Dimensions  | ø160x72mm(ø6.30x2.83")             |
| Product Weight      | 1170g(2.58 lb)                     |
| 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 | 34.9m(114.49ft) |
| Observe (63PPM/ 19PPF)    | Wide | 13.9m(45.60ft)  |
| Recognize (125PPM/ 38PPF) | Wide | 7.0m(22.96ft)   |
| Identify (250PPM/ 76PPF)  | Wide | 3.5m(11.48ft)   |

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CAD

Unit: mm [inch]

