



Network

Fisheye

# XNF-A8014RV

6MP AI IR Fisheye Camera



## Key Features

- 6MP Image Resolution
- 30fps Max. Framerate
- 17m IR Length
- IP66, IK10 Rated
- 1.76mm fixed stereo graphic type lens
- Digital Rotation
- Dual NPU for AI-based Image Enhancement
- Object detection, Intelligent Video Analytics, Motion detection
- People/Vehicle/Crowd counting, Queue management, Heatmap
- BestShot and color attributes

## XNF-A8014RV

6MP AI IR Fisheye Camera



### Specifications

| Video                         |                       |                                                                                                                                                                                                                                             |
|-------------------------------|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Imaging Device                | Size                  | 1/1.6"                                                                                                                                                                                                                                      |
|                               | Type                  | CMOS                                                                                                                                                                                                                                        |
| Resolution                    |                       | 2560x2560, 2560x1920, 2560x1280, 2560x640, 1920x960, 1920x480, 1792x1344, 1600x1600, 1280x1280, 1280x960, 1280x640, 1280x320, 1024x768, 1024x512, 1024x256, 800x800, 800x600, 640x640, 640x480, 640x320, 640x160, 480x480, 320x240, 160x160 |
| Max. Framerate                | H.265/H.264           | 30fps/25fps(60Hz/50Hz)                                                                                                                                                                                                                      |
|                               | MJPEG                 | 5fps                                                                                                                                                                                                                                        |
|                               | Others                | Max. 20fps in PoE mode                                                                                                                                                                                                                      |
| Min. Illumination (Lux)       | Color(1/30sec, 30IRE) | 0.02                                                                                                                                                                                                                                        |
|                               | BW(1/30sec, 30IRE)    | 0.001                                                                                                                                                                                                                                       |
| Lens                          |                       |                                                                                                                                                                                                                                             |
| Focal Length (mm)             |                       | 1.76                                                                                                                                                                                                                                        |
| Max Aperture Ratio (F number) | Wide                  | 1.8                                                                                                                                                                                                                                         |
|                               | Tele                  | 1.8                                                                                                                                                                                                                                         |
| Angular Field of View         | Horizontal            | 185°                                                                                                                                                                                                                                        |
|                               | Vertical              | 185°                                                                                                                                                                                                                                        |
|                               | Diagonal              | 185°                                                                                                                                                                                                                                        |
| Min. Object Distance          |                       | 0.5m(1.64ft)                                                                                                                                                                                                                                |
| Pan / Tilt / Rotate           |                       |                                                                                                                                                                                                                                             |
| Pan / Tilt / Rotate Range     | Rotate                | Digital 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                                                                                                                                                                                                      |
| Digital Image Stabilization   |                       | Support                                                                                                                                                                                                                                     |
| Defog                         |                       | Support                                                                                                                                                                                                                                     |

## Operational

|                                          |                                         |                                                                                                                                                                                                                                                                                  |
|------------------------------------------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Motion Detection                         | Quantity                                | 8ea                                                                                                                                                                                                                                                                              |
|                                          | Shape                                   | 8point Polygonal zones                                                                                                                                                                                                                                                           |
| Privacy Masking                          | Quantity                                | 32ea                                                                                                                                                                                                                                                                             |
|                                          | Shape                                   | 8point Polygonal zones                                                                                                                                                                                                                                                           |
|                                          | Color / Option                          | Gray, Green, Red, Blue, Black, White, Mosaic, Purple, Yellow                                                                                                                                                                                                                     |
|                                          | Dynamic Privacy Masking: Color / Option | Gray, Green, Red, Blue, Black, White, Mosaic, Purple, Yellow                                                                                                                                                                                                                     |
| 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                             | 2~1/30,000sec                                                                                                                                                                                                                                                                    |
| Digital PTZ                              |                                         | Support                                                                                                                                                                                                                                                                          |
| Video Rotation                           |                                         | Flip, Mirror                                                                                                                                                                                                                                                                     |
| 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, Time schedule, MQTT subscription, Case tampering, Day/Night, Storage disruption                                                                                                                                                      |
| 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 3mics                                                                                                                                                                                                                                       |
| Audio Out                                |                                         | Line out                                                                                                                                                                                                                                                                         |
| Light Type                               |                                         | IR LED                                                                                                                                                                                                                                                                           |
| Light Viewable Length                    | IR                                      | WiseIR up to 17m(55.77ft)                                                                                                                                                                                                                                                        |
| 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), Motion detection, Virtual area(Loitering/Intrusion/Enter/Exit/Appear/Disappear) |
|                        | Normal             | Defocus detection, Tampering, Audio detection, Shock detection                                                                      |
| Business Intelligence  | Based on AI Engine | People counting, Queue management, Heatmap, Vehicle counting, Crowd counting                                                        |

## Network

|          |                                    |
|----------|------------------------------------|
| Ethernet | Metal shielded RJ-45(10/100BASE-T) |
|----------|------------------------------------|

## Network

|                                   |                    |                                                                                                                                                                                                                                                 |
|-----------------------------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Video Compression                 |                    | H.265/H.264: Main/Baseline/High, MJPEG                                                                                                                                                                                                          |
| Audio Compression                 |                    | Opus 8/16kHz,<br>G.711(PCM): 8kHz(64kbps),<br>G.726(ADPCM): 8kHz(16/24/32/40kbps),<br>OPUS: 16kHz(64kbps),<br>AAC-LC: 16/32/44.1/48kHz(48kbps),<br>OPUS: 48kHz(64kbps)                                                                          |
| Smart Codec                       |                    | WiseStream(Based on AI engine)                                                                                                                                                                                                                  |
| Bitrate Control                   |                    | H.265/H.264: CBR or 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, ICMP, IGMPv2, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, UPnP, Bonjour, LLDP, CDP, SRTP(TCP, UDP Unicast), MQTT, SMTP(StartTLS), Syslog |
| 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, 802.1AE(MACsec)                                           |
| Access Control         | IP-based access control, MAC-based access control, Auto logout                                |
| 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         | SDcard partition encrypt(AES-256), Secure element                                             |
| Supply Chain Security  | SBOM                                                                                          |
| Security Certificate   | Secure element(FIPS 140-3 level3, CC EAL6+), Consumer IoT Security Standard (ETSI EN 303 645) |

## General

|                       |                    |                                                                                                                       |
|-----------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------|
| SoC                   | Type               | Wisenet 9                                                                                                             |
|                       | Dual NPU           | Support                                                                                                               |
| Memory                | RAM                | 4GB                                                                                                                   |
|                       | Flash              | 8GB eMMC                                                                                                              |
| Edge Storage          | Micro SD/SDHC/SDXC | Max. 1TB 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 | -40°C~+55°C(-40°F~+131°F)                                                         |
|                           | Humidity    | 0~100% RH(condensing)                                                             |
|                           | Others      | In PoE+ mode, IR illuminator will turn off if the temperature is higher than 50°C |
| Storage Condition         | Temperature | -50°C~+60°C(-58°F~+140°F)                                                         |
|                           | Humidity    | 0~95% RH(non-condensing)                                                          |
| Input Voltage             |             | PoE(IEEE802.3af, Class3), PoE+(IEEE802.3at, Class4), 12VDC                        |
| Power Consumption         | PoE         | Max. 19.8W, typical 10.5W                                                         |
|                           | 12VDC       | Max 20.0W, typical 10.9W                                                          |
| WisePower                 |             | Power mode, Power monitoring                                                      |
| Power Redundance Failover |             | Support                                                                           |

## Mechanical

|                     |             |                                                          |
|---------------------|-------------|----------------------------------------------------------|
| Color               |             | White                                                    |
| Material            |             | Aluminum, Hard-coated dome                               |
| Material Management | Declaration | RoHS(EU RoHS directive 2011/65/EU and IEC/EN 63000:2018) |
| RAL Code            |             | RAL9003                                                  |
| Product Dimensions  |             | Ø160x75mm(6.23x2.95")                                    |
| Product Weight      |             | 1020g(2.25lb)                                            |
| Compatible Gang Box |             | Single, Double, 4" Octagon, Square                       |

## Certifications & Standards

|             |                                                                                                                                                                                                                                                                                       |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EMC         | EN 50121-4, 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, EN 50121-3-2                                                    |
| Safety      | UL 62368-1, CAN/CSA C22.2 NO. 62368-1, IEC 62471                                                                                                                                                                                                                                      |
| Environment | IEC/EN 63000, IEC 60529 IP66, IEC 62262 IK10, NEMA TS 2-2013 (2.2.7, 2.2.8, 2.2.9), NEMA 250 type 4X, EN 50155, IEC 62236-4, EN 50121-4, EN 50498, IEC/EN 61373, EN 45545, IEC 62236-3-2, IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-6, IEC 60068-2-14, IEC 60068-2-27, IEC 60068-2-78 |

## DORI (EN62676-4 standard)

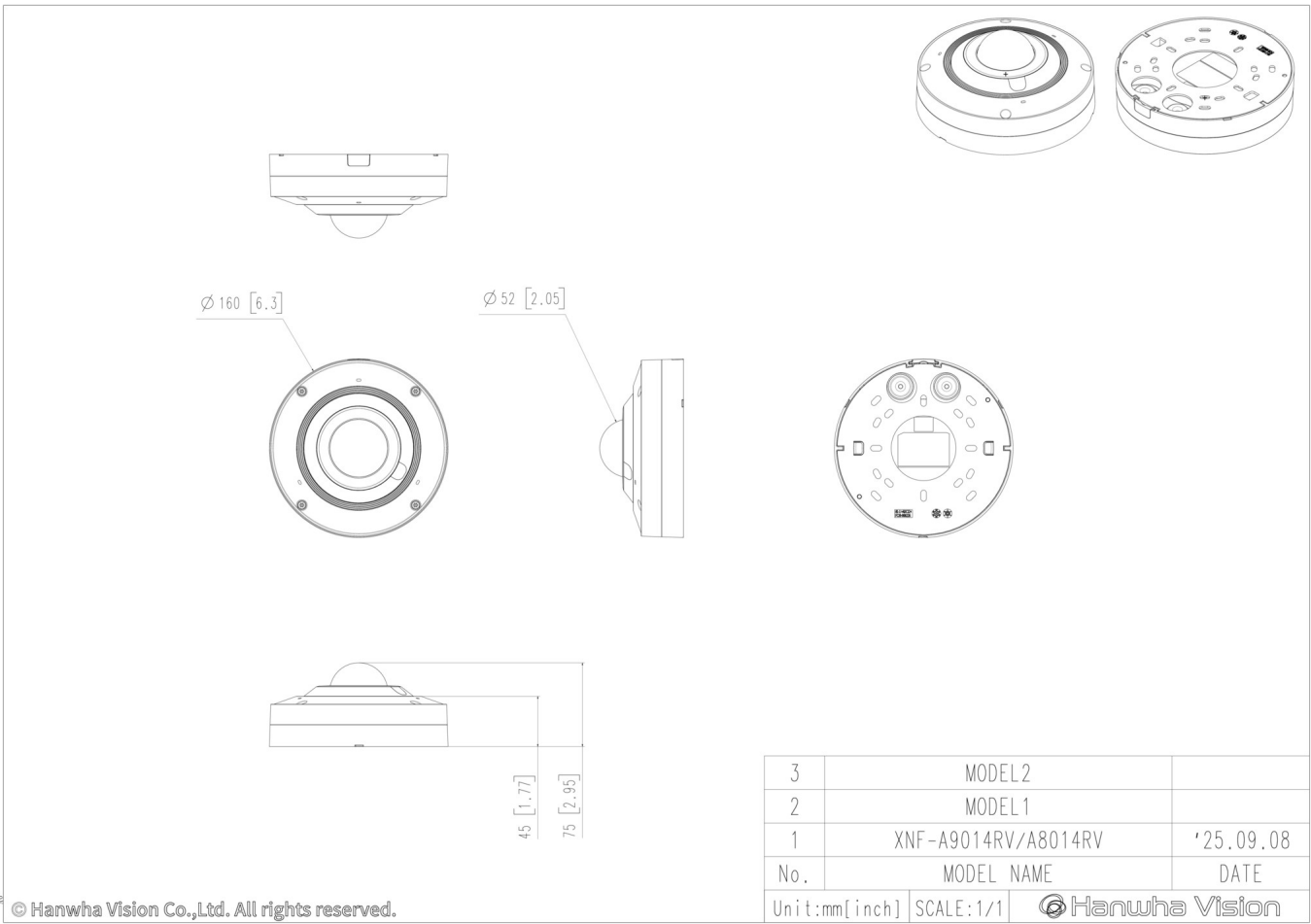
|                           |      |                 |
|---------------------------|------|-----------------|
| Detect (25PPM/ 8PPF)      | Wide | 31.4m(102.97ft) |
| Observe (63PPM/ 19PPF)    | Wide | 12.6m(41.19ft)  |
| Recognize (125PPM/ 38PPF) | Wide | 6.3m(20.59ft)   |
| Identify (250PPM/ 76PPF)  | Wide | 3.1m(10.30ft)   |

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6MP AI IR Fisheye Camera



CAD

Unit: mm [inch]



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## Compatible Devices



SBP-160HMMW1



SBP-140CMB



SBP-180CMB



SBP-180CMS



SBP-150CMP



SBP-300CMP



SBP-900CMP



SBP-C15H



SBP-C15NP



SBP-C35H



SBP-C15P



SBP-150CMI



SBP-300CMI



SBP-300CMW1



SBP-900CMW



SBP-300CMTW



SBP-300CMTS



SBP-160WMMW1



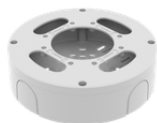
SBP-250WMMW



SBP-400WMMW



SBP-115PFA



SBV-180BW



SBV-180WW



SBP-160TMW1



SBP-150PMW



SBD-180PMW



SBP-156KMW



SBP-156LMW1



SBP-150NBW



SPP-C7400



SBP-300WMMW



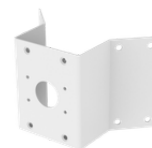
SBP-300WMMW1



SBP-300BW1



SBP-300PMW2



SBP-300KMW1



SBP-300LMW



SBP-300NBW