Hanwha Vision



Network Fisheye

# XNF-A9014R

12MP AI IR Fisheye Camera

## Key Features

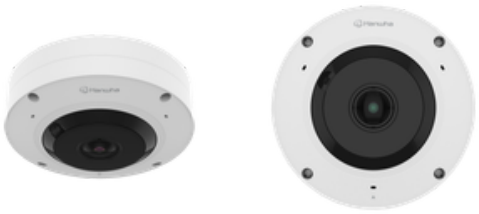
- 12MP Image Resolution
- 30fps Max. Framerate
- 20m IR Length
- IP42 Rated
- 1.76mm fixed stereo graphic type lens
- Digital Rotation
- Dual NPU for AI-based Image Enhancement
- Object detection, Intelligent Video Analytics, Motion detection
- People/Vehicle/Crowd counting, Queue management, Heatmap
- BestShot and color attributes

Design and specifications are subject to change without notice. The latest product information / specification can be found at HanwhaVision.com
Hanwha Vision is formerly known as Hanwha Techwin.

© Hanwha Vision CO., LTD. All rights reserved.

# XNF-A9014R

12MP AI IR Fisheye Camera



## Specifications

### Video

| | | |
|---|---|---|
| **Imaging Device** | Size | 1/1.6" |
| | Type | CMOS |
| **Resolution** | | 3584x2688, 3584x1792, 3584x896, 3536x3536, 3008x3008, 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 |

Design and specifications are subject to change without notice. The latest product information / specification can be found at HanwhaVision.com
Hanwha Vision is formerly known as Hanwha Techwin.

© Hanwha Vision CO., LTD. All rights reserved.

## 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 20m(65.61ft) |
| **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) |

Design and specifications are subject to change without notice. The latest product information / specification can be found at HanwhaVision.com
Hanwha Vision is formerly known as Hanwha Techwin.

© Hanwha Vision CO., LTD. All rights reserved.

## Network

| | | |
|---|---|---|
| **Video Compression** | | H.265: Main,<br>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 |

Design and specifications are subject to change without notice. The latest product information / specification can be found at HanwhaVision.com
Hanwha Vision is formerly known as Hanwha Techwin.

© Hanwha Vision CO., LTD. All rights reserved.

## General

| | | |
|---|---|---|
| **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~+55°C(+14°F~+131°F) |
| | Humidity | 0~95% RH(non-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. 20W, 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** | | Ø160x60.4mm(6.23x2.38") |
| **Product Weight** | | 1000g(2.20lb) |
| **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 IP42 |

## DORI (EN62676-4 standard)

| | | |
|---|---|---|
| **Detect (25PPM/ 8PPF)** | Wide | 43.4m(142.24ft) |
| **Observe (63PPM/ 19PPF)** | Wide | 17.3m(56.89ft) |
| **Recognize (125PPM/ 38PPF)** | Wide | 8.7m(28.45ft) |
| **Identify (250PPM/ 76PPF)** | Wide | 4.3m(14.22ft) |

Design and specifications are subject to change without notice. The latest product information / specification can be found at HanwhaVision.com
Hanwha Vision is formerly known as Hanwha Techwin.

© Hanwha Vision CO., LTD. All rights reserved.

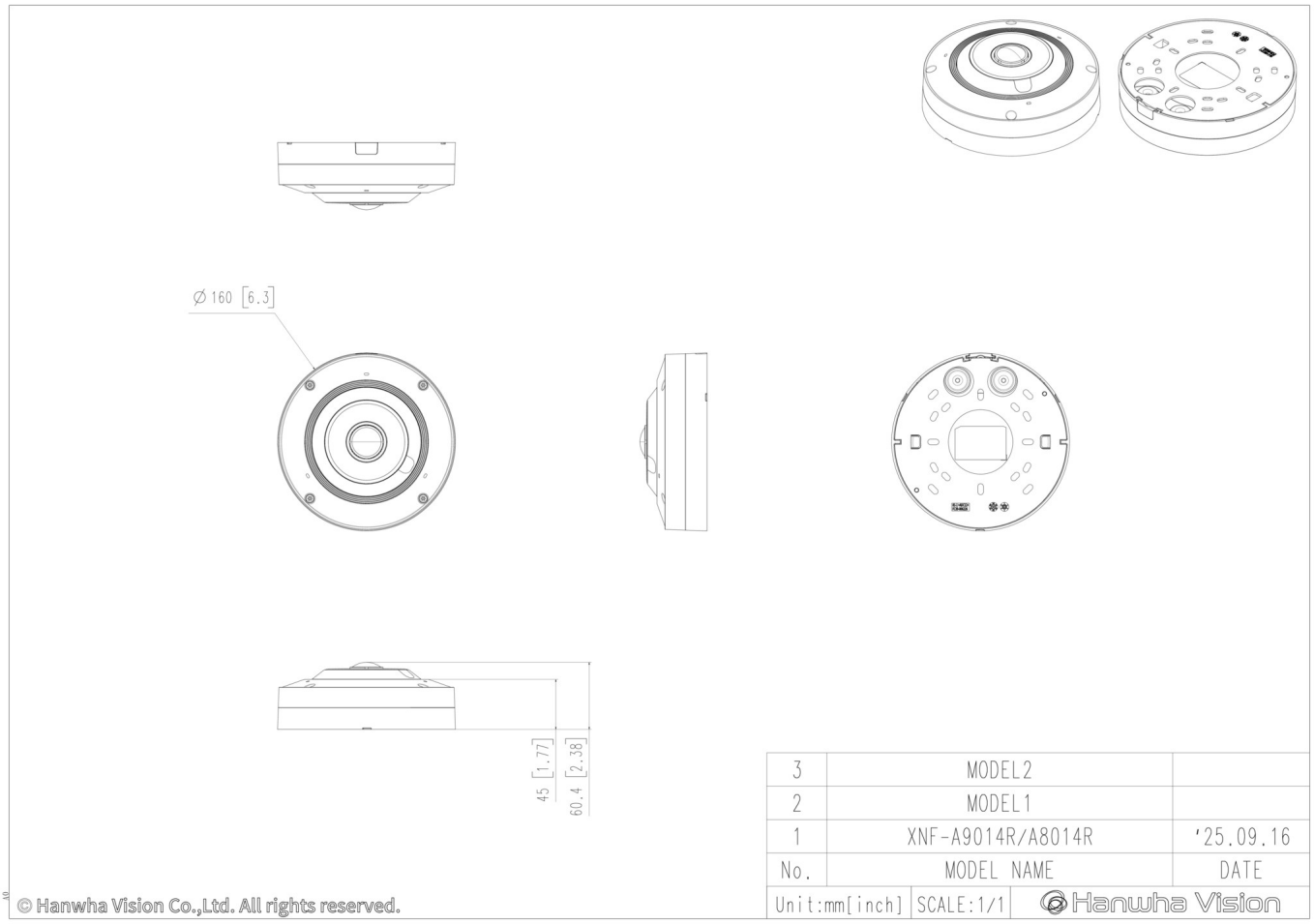
# XNF-A9014R

12MP AI IR Fisheye Camera



## CAD

**Unit:** mm [inch]




Design and specifications are subject to change without notice. The latest product information / specification can be found at HanwhaVision.com
Hanwha Vision is formerly known as Hanwha Techwin.

© Hanwha Vision CO., LTD. All rights reserved.

## Compatible Devices


SBP-160HMW1


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


SHD-1601FW


SHD-1601FPW


SBP-160WMW1


SBP-250WMW


SBP-400WMW


SBP-115PFA


SBV-180BW


SBV-180WW


SBP-160TMW1


SBP-150PMW


SBD-180PMW


SBP-156KMW


SBP-156LMW1


SBP-150NBW


SBC-161BF


SPP-C7400

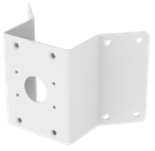

SPP-C1200M


SBP-300WMW


SBP-300WMW1


SBP-300BW1


SBP-300PMW2


SBP-300KMW1


SBP-300LMW


SBP-300NBW

Design and specifications are subject to change without notice. The latest product information / specification can be found at HanwhaVision.com
Hanwha Vision is formerly known as Hanwha Techwin.

© Hanwha Vision CO., LTD. All rights reserved.