



Network

Dome

# XNV-A9084R

8MP AI IR Vandal Dome Camera



## Key Features

- 4.4~9.3mm (2.1x) motorized varifocal
- Dual NPU for AI-based Image enhancement
- Analytics events based on AI engine :  
Object detection (Person/Face/Vehicle/License plate),  
IVA (Virtual line/Area, Enter/Exit, Loitering, Direction, Intrusion),  
Slip&Fall detection, Face mask detection,  
Social distancing detection, Motion detection
- Business intelligence based on AI engine :  
People/Vehicle/Crowd counting, Queue management, Heatmap
- Support BestShot and full attributes
- Support Dynamic Privacy Masking
- extremeWDR, WiseNR II (Based on AI engine), WiseStream(Based on AI engine)
- WiseIR: IR viewable length 40 m (131.23 ft)
- IP66, IP67, NEMA4X, IK10
- NEMA TS-2 (2.2.7.2-8, 2.2.8, 2.2.9)
- Support Wisepower(Power monitoring, ECO mode)
- Use recycled plastic
- Device certificate(Hanwha Vision Root CA),  
Secure storage  
(Secure element with FIPS 140-3 level3/CC EAL6+ certified), SBOM

# XNV-A9084R

8MP AI IR Vandal Dome Camera



## Specifications

### Video

|                   |                                                                                                                                                                   |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Imaging Device    | 1/1.8" CMOS                                                                                                                                                       |
| Resolution        | 3840x2160, 3328x1872, 3072x1728, 2592x1944, 2688x1512, 2560x1440, 1920x1080, 1600x1200, 1280x960, 1280x720, 1024x768, 800x600, 640x480, 640x360, 320x240, 320x180 |
| Max. Framerate    | H.265/H.264: Max. 30fps/25fps(60Hz/50Hz)<br>MJPEG: Max. 30fps(@8MP Max. 5fps)                                                                                     |
| Min. Illumination | Color: 0.04Lux(F1.3, 1/30sec, 30IRE)<br>BW: 0.004Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)                                                                       |
| Video Out         | USB: Micro USB Type C for installation                                                                                                                            |

### Lens

|                           |                                                                              |
|---------------------------|------------------------------------------------------------------------------|
| Focal Length (Zoom Ratio) | 4.4~9.3mm(2.1x) motorized varifocal                                          |
| Max. Aperture Ratio       | F1.3(Wide)~F2.15(Tele)                                                       |
| Angular Field of View     | H: 113°(Wide)~47°(Tele)<br>V: 58°(Wide)~26°(Tele)<br>D: 138°(Wide)~54°(Tele) |
| Min. Object Distance      | 0.5m(1.64ft)                                                                 |
| Focus Control             | Simple focus, manual                                                         |
| Lens Type                 | P-iris(IR corrected)                                                         |

### Pan / Tilt / Rotate

|                           |                            |
|---------------------------|----------------------------|
| Pan / Tilt / Rotate Range | 0°~360° / 0°~75° / 0°~355° |
|---------------------------|----------------------------|

### Operational

|                             |                                                                                                                                                                                                                      |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Camera Title                | Displayed up to 85 characters                                                                                                                                                                                        |
| Day & Night                 | Auto(ICR)                                                                                                                                                                                                            |
| Backlight Compensation      | BLC, HLC, WDR, SDR                                                                                                                                                                                                   |
| Wide Dynamic Range          | 120dB                                                                                                                                                                                                                |
| Digital Noise Reduction     | SSNR V , WiseNR II (Based on AI engine)                                                                                                                                                                              |
| Digital Image Stabilization | Support                                                                                                                                                                                                              |
| Defog                       | Support                                                                                                                                                                                                              |
| Motion Detection            | 8ea, 8point polygonal zones                                                                                                                                                                                          |
| Privacy Masking             | 32ea, 8point polygonal zones<br>- Color: gray/green/red/blue/black/white/purple/yellow<br>- Mosaic<br>Dynamic Privacy Mask(Based on AI engine)<br>- Color: gray/green/red/blue/black/white/purple/yellow<br>- Mosaic |
| Gain Control                | Off / Max Gain / Manual                                                                                                                                                                                              |
| White Balance               | ATW / NarrowATW / AWC / Manual / Indoor / Outdoor                                                                                                                                                                    |
| LDC                         | Support(Fill/Stretch mode)                                                                                                                                                                                           |
| Electronic Shutter Speed    | Minimum / Maximum / Anti flicker(2~1/30,000sec)<br>Prefer shutter control(Based on AI engine)                                                                                                                        |

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Hanwha Vision is formerly known as Hanwha Techwin.

|                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Video Rotation                    | Flip, mirror, hallway view(90°/270°)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Analytics                         | <p>Classified object type: Person/Face/Vehicle(Type: car/bus/truck/motorcycle/bicycle)/License plate</p> <p>Attributes: Person(Gender, Clothing top/bottom color, Bag), Face(Age, Gender, Mask, Glasses), Vehicle(Type: car/bus/truck/motorcycle/bicycle, Color)</p> <p>Support BestShot</p> <p>Analytics events based on AI engine</p> <ul style="list-style-type: none"> <li>- Motion detection, Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit/Appear/Disappear), Slip &amp; fall detection, Face mask detection, Social distancing detection</li> </ul> <p>Analytics events</p> <ul style="list-style-type: none"> <li>- Defocus detection, Tampering, Shock detection, Audio detection</li> </ul> |
| Business Intelligence             | Based on AI engine: People/Vehicle/Crowd counting, Queue management, Heatmap                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Alarm I/O                         | <p>2 configurable I/O ports</p> <p>*Support extra alarm I/O via optional I/O box</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Alarm Triggers                    | Analytics, Network disconnection, Alarm input, Time schedule, MQTT subscription, Day/Night, Storage disruption                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Alarm Events                      | <p>When alarm trigger occurred</p> <ul style="list-style-type: none"> <li>- File upload(image): e-mail/FTP/SFTP</li> <li>- File upload(video clip): FTP/SFTP</li> <li>- Notification: e-mail</li> <li>- Recording: SD/SDHC/SDXC or NAS recording at event triggers</li> <li>- Alarm output</li> <li>- Handover: PTZ preset, send message by HTTP/HTTPS/TCP</li> <li>- Audio clip playback(WAV, MP3)</li> <li>- MQTT: publication</li> </ul>                                                                                                                                                                                                                                                                                                             |
| Audio In                          | Selectable(mic in/line in)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Audio Out                         | Line out                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Light Type                        | IR LED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Light Viewable Length             | WiseIR 40m(131.23ft)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| IR Wavelength                     | 850nm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Network</b>                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Ethernet                          | Metal shielded RJ-45(10/100BASE-T)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Video Compression                 | H.265/H.264: Main/Baseline/High<br>MJPEG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Audio Compression                 | <p>G.711(PCM): 8kHz(64Kbps)</p> <p>G.726(ADPCM): 8kHz(16/24/32/40Kbps)</p> <p>AAC-LC: 16kHz(48Kbps)</p> <p>OPUS: 48kHz(64Kbps)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Smart Codec                       | WiseStream(Based on AI engine)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Bitrate Control                   | H.264/H.265: CBR or VBR<br>MJPEG: VBR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Streaming                         | Unicast(20 users) / Multicast<br>Multiple streaming(Up to 5 profiles, 3 virtual channel support)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Protocol                          | IPv4, IPv6, TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, FTP/SFTP, SMTP(StartTLS), ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, UPnP, Bonjour, LLDP, SRTP(TCP, UDP Unicast), CDP, MQTT, Syslog                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Application Programming Interface | ONVIF Profile S/G/T/M<br>SUNAPI(HTTP API)<br>Hanwha Vision Open Platform                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Security</b>                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| OS / Firmware Protect             | Encrypted Firmware, Secure boot, Signed Firmware                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| User authentication               | Digest Authentication, Prevent brute-force attack                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Network authentication            | 802.1X Authentication(EAP-TLS, EAP-LEAP, EAP-PEAP MSCHAPv2)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Secure Communication              | HTTPS, SRTP, WSS(Websocket secure)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Access Control                    | IP-based access control, MAC-based access control, Auto logout                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Data Protect                      | Encryption Credentials, Encrypt compress for live recording file export                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

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|                       |                                                              |
|-----------------------|--------------------------------------------------------------|
| Audit                 | Access / System / Event Log management                       |
| Device ID             | Device Certificate(Hanwha vision Root CA)                    |
| Secure Storage        | Secure element, SDcard partition encrypt                     |
| Supply Chain Security | SBOM                                                         |
| Security Certificate  | ETSI EN 303 645, Secure element(FIPS 140-3 level3, CC EAL6+) |

## General

|                  |                                                                                                                                                                            |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Webpage Language | English, Korean, Simplified Chinese, Traditional Chinese, French, Italian, Spanish, German, Japanese, Russian, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek |
| Edge Storage     | Micro SD/SDHC/SDXC 1slot 1TB                                                                                                                                               |
| Memory           | 4GB RAM, 8GB eMMC                                                                                                                                                          |

## Environmental & Electrical

|                                  |                                                                                                                                                                                 |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating Temperature / Humidity | -40°C~+50°C(-40°F~+122°F)<br>+74°C(+165°F)(MAX) based on NEMA-TS 2(2.2.7)<br>* Start up should be done at above -30°C<br>0~100%RH(Condensing)<br>Humidity control with AIR vent |
| Storage Temperature / Humidity   | -50°C~+60°C(-58°F~+140°F) / 0~90% RH                                                                                                                                            |
| EPA(Effective Projected Area)    | 0.02m <sup>2</sup>                                                                                                                                                              |
| Certification                    | IP66/IP67, NEMA4X, IK10, NEMA-TS 2(2.2.7.2-8, 2.2.8, 2.2.9)                                                                                                                     |
| Input Voltage                    | PoE(IEEE802.3af, Class3)                                                                                                                                                        |
| Power Consumption                | PoE: Max. 11.2W, typical 8.4W<br>Support Wisepower<br>- Power monitoring(Max./Current/Avg.)<br>- ECO mode                                                                       |

## Mechanical

|                                   |                                                                                                                                                                                           |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Color / Material                  | White / Aluminum<br>Bubble: Hard-coated dome                                                                                                                                              |
| Material Management               | RoHS(EU RoHS directive 2011/65/EU and IEC/EN 63000:2018)<br>REACH(Regulation (EC) No. 1907/2006)<br>Conflict mineral policy(Section 1502 of US Dodd Frank Act)<br>Recycled plastic: 4.49% |
| RAL Code                          | RAL9003                                                                                                                                                                                   |
| Product Dimensions / Weight       | ø160x118mm(6.30x4.65"), 1,220g(2.69lb)                                                                                                                                                    |
| Compatible Conduit hole / Gangbox | 12.7mm(1/2")(M20)<br>Single, double, 4" octagon, 4" square                                                                                                                                |

## Certifications & Standards

|             |                                                                                                                                                                                                                         |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EMC         | FCC 47 CFR 15 Subpart B Class A<br>ICES-3(A)/NMB-3(A)<br>CE/UKCA<br>- EN 55032 Class A, EN 50130-4, EN 61000-3-2, EN 61000-3-3<br>VCCI CISPR 32 Class A<br>RCM AS/NZS CISPR 32 Class A<br>KS C 9832 Class A , KS C 9835 |
| Safety      | UL 62368-1, CAN/CSA C22.2 NO. 62368-1<br>IEC/EN 62471                                                                                                                                                                   |
| Environment | IEC/EN 63000<br>IEC/EN 60529 IP66/IP67, IEC/EN 62262 IK10, NEMA 250 Type 4X, NEMA-TS 2(2.2.7.2-8, 2.2.8, 2.2.9)<br>IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-6, IEC 60068-2-14, IEC 60068-2-27, IEC 60068-2-78          |

## Compatible Models

|                      |                                                                           |
|----------------------|---------------------------------------------------------------------------|
| Hanging Adaptor      | SBP-160HWM1                                                               |
| Back Box             | SBV-180BW, SBV-180WW                                                      |
| Ceiling Mount (Assy) | SBP-150CMI, SBP-300CMI, SBP-300CMW1, SBP-900CMW, SBP-300CMTW, SBP-300CMTS |

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|                             |                                                                                            |
|-----------------------------|--------------------------------------------------------------------------------------------|
| Ceiling Mount (Single Unit) | SBP-180CMB, SBP-140CMB, SBP-180CMS, SBP-900CMP, SBP-300CMP, SBP-150CMP, SBP-C15P, SBP-C15H |
| Wall Mount                  | SBP-160WMW1, SBP-400WMW, SBP-250WMW, SBP-300WMW, SBP-300WMW1                               |
| Pole Mount                  | SBD-180PMW, SBP-300PMW2                                                                    |
| In-ceiling Mount            | SHD-1600FPW, SHD-1600FW                                                                    |
| Corner Mount                | SBP-156KMW, SBP-300KMW1                                                                    |
| Parapet Mount               | SBP-156LMW1, SBP-300LMW                                                                    |
| Tilt Mount                  | SBP-160TMW1                                                                                |
| Cabinet                     | SBP-150NBW, SBP-300NBW                                                                     |
| Weather Cap                 | SBV-161WCW                                                                                 |
| Interface Box               | SPM-4210                                                                                   |
| Other Compatible Models     | SPP-C7400, SPB-VAN88W, SBP-115PFA                                                          |

|                           |                                                |
|---------------------------|------------------------------------------------|
| DORI (EN62676-4 standard) |                                                |
| Detect (25PPM/ 8PPF)      | Wide: 50.8m(166.77ft) / Tele: 176.6m(579.49ft) |
| Observe (63PPM/ 19PPF)    | Wide: 20.3m(66.71ft) / Tele: 70.7m(231.80ft)   |
| Recognize (125PPM/ 38PPF) | Wide: 10.2m(33.35ft) / Tele: 35.3m(115.90ft)   |
| Identify (250PPM/ 76PPF)  | Wide: 5.1m(16.68ft) / Tele: 17.7m(57.95ft)     |