

Network Dome

# XNV-A9085R

## 8MP AI IR Modular Outdoor Vandal Dome Camera

## Key Features

- 8MP Image Resolution
- 4.4~9.3mm Focal Length
- 50m IR Length(PoE+)
- DC12V, PoE, PoE+ Multiple Power
- 50m IR Length (PoE+)
- Dual NPU for AI-based Image Enhancement
- Magnetic modular design for easy setup and replacement
- Case tampering detection for proactive action

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8MP AI IR Modular Outdoor Vandal Dome Camera



## Specifications

### Video

| | | |
|---|---|---|
| **Imaging Device** | Size | 1/1.8" |
| | Type | CMOS |
| **Resolution** | | 3840x2160, 3328x1872, 3072x1728, 2688x1512, 2592x1944, 2560x1440, 1920x1080, 1600x1200, 1280x960, 1280x720, 1024x768, 800x600, 640x480, 640x360, 320x240, 320x180 |
| **Max. Framerate** | H.265/H.264 | 30fps/25fps(60Hz/50Hz) |
| | MJPEG | 30fps(@8MP Max. 5fps) |
| **Min. Illumination (Lux)** | Color(1/30sec, 30IRE) | 0.04 |
| | BW(1/30sec, 30IRE) | 0.004 |
| **Video Out** | | USB: USB Type C. Preview and installation ONLY. Requires WiFi dongle. |

### Lens

| | | |
|---|---|---|
| **Focal Length (mm)** | | 4.4~9.3 |
| **Zoom Ratio** | Optical | 2.1x |
| **Max Aperture Ratio (F number)** | Wide | 1.3 |
| | Tele | 2.15 |
| **Angular Field of View** | Horizontal | 113°~47° |
| | Vertical | 58°~26° |
| | Diagonal | 138°~54° |
| **Min. Object Distance** | | 0.5m(1.64ft) |
| **Focus Control** | | Simple focus |
| **Lens Type** | | P iris(IR corrected) |

### Pan / Tilt / Rotate

| | | |
|---|---|---|
| **Pan / Tilt / Rotate Range** | Pan | 0°~360° |
| | Tilt | -45°~85° |
| | Rotate | 0°~355° |

### Operational

| | |
|---|---|
| **Day & Night** | Auto(ICR) |
| **Backlight Compensation** | BLC, HLC, WDR, SSDR |

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## Operational

| | | |
|---|---|---|
| **Wide Dynamic Range (dB)** | | 120 |
| **Digital Noise Reduction** | | WiseNR II (Based on AI engine), SSNR V |
| **Digital Image Stabilization** | | Support |
| **Defog** | | Support |
| **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 |
| **LDC** | | Support(Fill/stretch mode) |
| **Electronic Shutter** | Mode | Minimum, Maximum, Anti flicker, Prefer shutter control(Based on AI engine) |
| | Speed Range | 2~1/30,000sec |
| **Video Rotation** | | Flip, Mirror, Hallway view(90°/270°) |
| **Alarm Interface** | In/Out | 2 configurable I/O ports |
| | Others | 12VDC output, 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) |
| **Audio Out** | | Line out |
| **Light Type** | | IR LED |
| **Light Viewable Length** | IR | WiseIR<br>PoE+: 50m(164.04ft)<br>PoE: 30m(98.43ft) |
| **IR Wavelength** | | 850nm |

## Analytics

| | | |
|---|---|---|
| **Classified Object Type** | | Person, Face, Vehicle, License plate |
| **Attributes** | Person | Upper/Lower clothes color, Gender, Bag |
| | Vehicle | Type(car, bus, truck, motorcycle, bicycle), Color |
| | Face | Age, Gender, Face mask, Glasses |
| **Similarity Search** | | Support |

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## Analytics

| | | |
|---|---|---|
| **Thumbnail** | | BestShot |
| **Analytics Events** | Based on AI Engine | Object detection, Virtual line(Crossing/Direction), Motion detection, Face mask detection, Social distancing detection, Slip & fall detection, Virtual area(Loitering/Intrusion/Enter/Exit/Appear/Disappear), Advanced loitering detection, Tailgating detection |
| | 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(10/100/1000BASE-T) |
| **Video Compression** | | H.265: Main,<br>H.264: Main/Baseline/High,MJPEG |
| **Audio Compression** | | G.711(PCM): 8kHz(64kbps),<br>G.726(ADPCM): 8kHz(16/24/32/40kbps),<br>AAC-LC: 16kHz(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, 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, ICMP, IGMPv2, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, UPnP, Bonjour, LLDP, CDP, SRTP(TCP, UDP Unicast), MQTT, 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 |
| **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) |

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## General

| | | |
|---|---|---|
| **SoC** | Type | Wisenet 9 |
| | Dual NPU | Support |
| **Memory** | RAM | 4GB |
| | Flash | 8GB eMMC |
| **Edge Storage** | Micro SD/SDHC/SDXC | Max. 1TB x 2slot(Total 2TB) |
| **Edge Storage(OnCloud)** | Micro SD/SDHC/SDXC | Max. 1TB x 2slots (Total 2TB) *Hanwha Vision branded microSD cards have been certified and recommended for OnCloud edge recording. |

## Environmental & Electrical

| | | |
|---|---|---|
| **Operating Condition** | Temperature | -50°C~+60°C(-58°F~+140°F) |
| | Humidity | 0~100% RH(condensing) |
| | Others | +74°C(+165°F)(Max) based on NEMA-TS 2(2.2.7), Start up should be done at above -30°C, Humidity control with AIR vent |
| **Storage Condition** | Temperature | -50°C~+60°C(-58°F~+140°F) |
| | Humidity | 0~90% RH(non-condensing) |
| **EPA(Effective Projected Area)** | | 0.017㎡ |
| **Input Voltage** | | PoE(IEEE802.3af, Class3), PoE+(IEEE802.3at, Class4), 12VDC |
| **Power Consumption** | PoE | PoE+: Max. 19.7W, typical 9.4W<br>PoE: Max. 11.6W, typical 8.3W |
| | 12VDC | Max 20.6W, typical 9.5W |
| **WisePower** | | Power mode, Power monitoring |

## Mechanical

| | | |
|---|---|---|
| **Color** | | White |
| **Material** | | Aluminum, Hard-coated dome |
| **Material Management** | Declaration | RoHS(EU RoHS directive 2011/65/EU and IEC/EN 63000:2018), REACH(Regulation (EC) No. 1907/2006), Conflict mineral policy(Section 1502 of US Dodd Frank Act) |
| **RAL Code** | | RAL9003 |
| **Product Dimensions** | | ø180x125mm(ø7.09x4.92") |
| **Product Weight** | | 1,860g(4.10lb) |
| **Compatible Conduit Hole** | | 19.1mm(3/4")(M25) |
| **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 60529 IP67, ISO 20653 IP6K9K, IEC 62262 IK11, NEMA TS 2-2013 (2.2.7, 2.2.8, 2.2.9), NEMA 250 type 4X, IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-6, IEC 60068-2-14, IEC 60068-2-27, IEC 60068-2-78 |



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## AI Detection Distance

| | | |
|---|---|---|
| **Person(1.8m/5.9ft)** | Wide | up to 35m(116ft) |
| | Tele | up to 85m(278ft) |
| **Vehicle(1.45m/4.8ft)** | Wide | up to 47m(153ft) |
| | Tele | up to 112m(368ft) |

## 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) |

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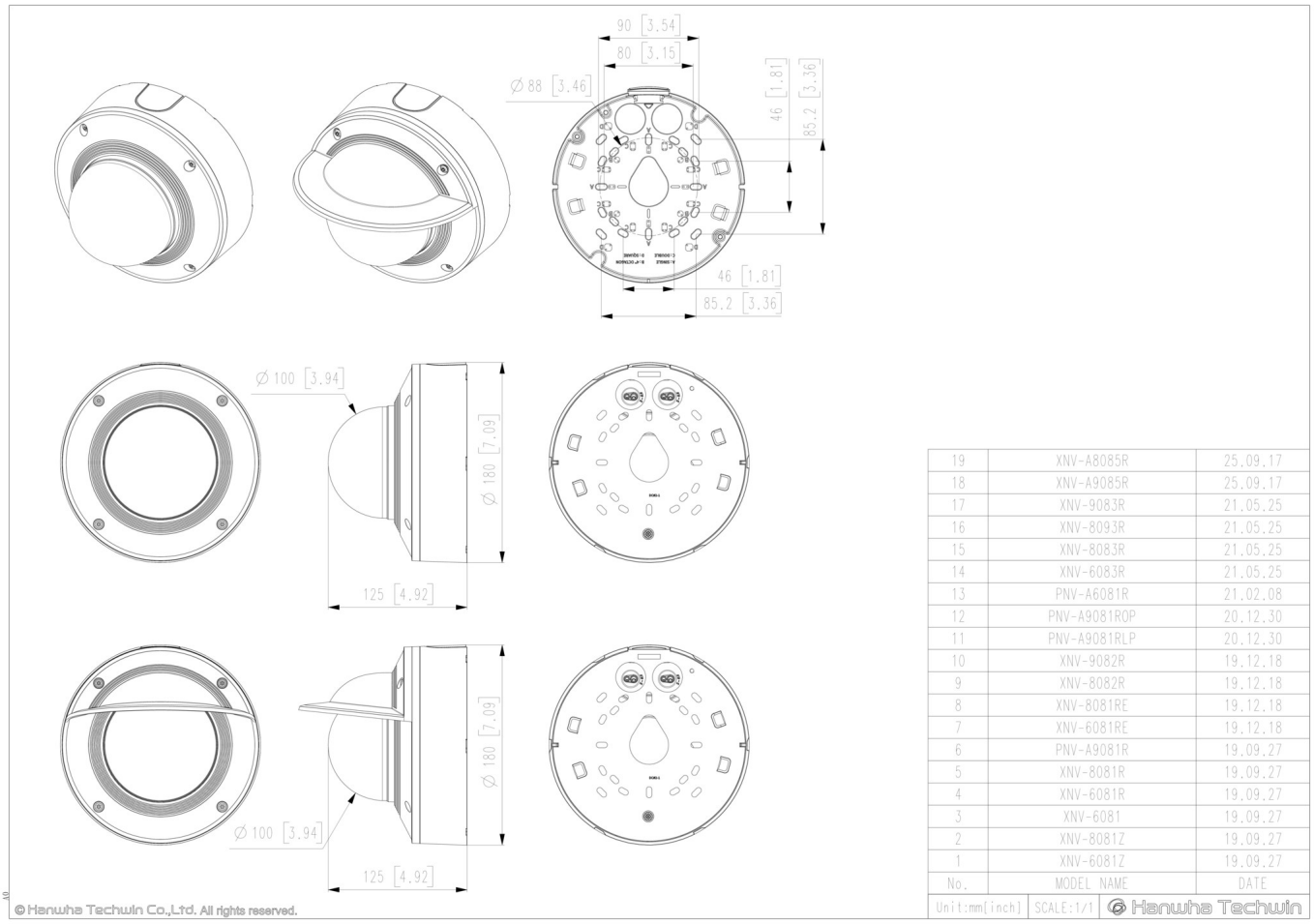
# XNV-A9085R

8MP AI IR Modular Outdoor Vandal Dome Camera



## CAD

Unit: mm [inch]




| No. | MODEL NAME | DATE |
|---|---|---|
| 19 | XNV-A8085R | 25.09.17 |
| 18 | XNV-A9085R | 25.09.17 |
| 17 | XNV-9083R | 21.05.25 |
| 16 | XNV-8093R | 21.05.25 |
| 15 | XNV-8083R | 21.05.25 |
| 14 | XNV-6083R | 21.05.25 |
| 13 | PNV-A6081R | 21.02.08 |
| 12 | PNV-A9081ROP | 20.12.30 |
| 11 | PNV-A9081RLP | 20.12.30 |
| 10 | XNV-9082R | 19.12.18 |
| 9 | XNV-8082R | 19.12.18 |
| 8 | XNV-8081RE | 19.12.18 |
| 7 | XNV-6081RE | 19.12.18 |
| 6 | PNV-A9081R | 19.09.27 |
| 5 | XNV-8081R | 19.09.27 |
| 4 | XNV-6081R | 19.09.27 |
| 3 | XNV-6081 | 19.09.27 |
| 2 | XNV-8081Z | 19.09.27 |
| 1 | XNV-6081Z | 19.09.27 |

Unit:mm[inch] | SCALE:1/1 | Hanwha Techwin

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## Compatible Devices



SBP-180HMW1



SBD-180PMW



SBP-180C



SBP-180CMB



SBP-180CMS



SBV-180BW



SBV-180WW



SBP-060S



SBP-140CMB



SBP-115PFA



SBP-150CMP



SBP-300CMI



SBP-300CMP



SBP-300CMTS



SBP-300CMTW



SBP-300CMW1



SBP-900CMP



SBP-900CMW



SBP-C15H



SBP-C15NP



SBP-C15P



SBP-C35H



SBP-150CMI



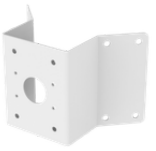
SBP-150NBW



SBP-150PMW



SBP-150S



SBP-156KMW



SBP-156LMW1



SHD-1370FPW



SBP-250WMW



SBP-400WMW



SPP-C45W



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