



Network

Dome

# XND-A9085RV

8MP AI IR Modular Dome Camera

## Key Features

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

## Compatible Devices



SBP-160HWM1



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-140CMT



SHD-1600FW



SHD-1602FPW



SBP-160WMW1



SBP-250WMW



SBP-400WMW



SBP-200WMW



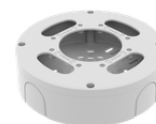
SBP-350WMW



SBP-115PFA



SBP-160TMW1



SBV-180BW

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



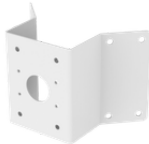
SBV-180WW



SBP-150PMW



SBD-180PMW



SBP-156KMW



SBP-156LMW1



SBP-150NBW



SPB-IND850W



SBC-161B



SPP-C45W

# XND-A9085RV

8MP AI IR Modular Dome Camera



## Specifications

| Video                         |                       |                                                                                                                                                        |
|-------------------------------|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Imaging Device                | Size                  | 1/1.8"                                                                                                                                                 |
|                               | Type                  | CMOS                                                                                                                                                   |
| Resolution                    |                       | 3840x2160, 3328x1872, 3072x1728, 2688x1512, 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                                                                                                                                    |

## 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), Built-in mic                                                                                                                                                                                                                                         |
| Audio Out                                |                                         | Line out                                                                                                                                                                                                                                                                         |
| Light Type                               |                                         | IR LED                                                                                                                                                                                                                                                                           |
| Light Viewable Length                    | IR                                      | WiseIR PoE+: 50m(164.04ft) 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                   |
| Thumbnail              |         | BestShot                                          |

## Analytics

|                       |                    |                                                                                                                                                                                                              |
|-----------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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) |
|                       | 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/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, IGMP, 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) |

## 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 | -25°C~+50°C(-13°F~+122°F)                                        |
|                               | Humidity    | 0~100% RH(condensing)                                            |
|                               | Others      | 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) |             | 0.0148m <sup>2</sup>                                             |
| Input Voltage                 |             | PoE(IEEE802.3af, Class3), PoE+(IEEE802.3at, Class4), 12VDC       |
| Power Consumption             | PoE         | PoE+ : Max. 14.2W,<br>typical 9.4W PoE : Max. 12.9W,typical 8.3W |
|                               | 12VDC       | Max. 14.5W, typical 9.5W                                         |
| WisePower                     |             | 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      |             | ø160x125mm(ø6.30x4.92")                                                                                                                                    |
| Product Weight          |             | 1,560g(3.44 lb)                                                                                                                                            |
| 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 IP52, IEC 62262 IK10, 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)**

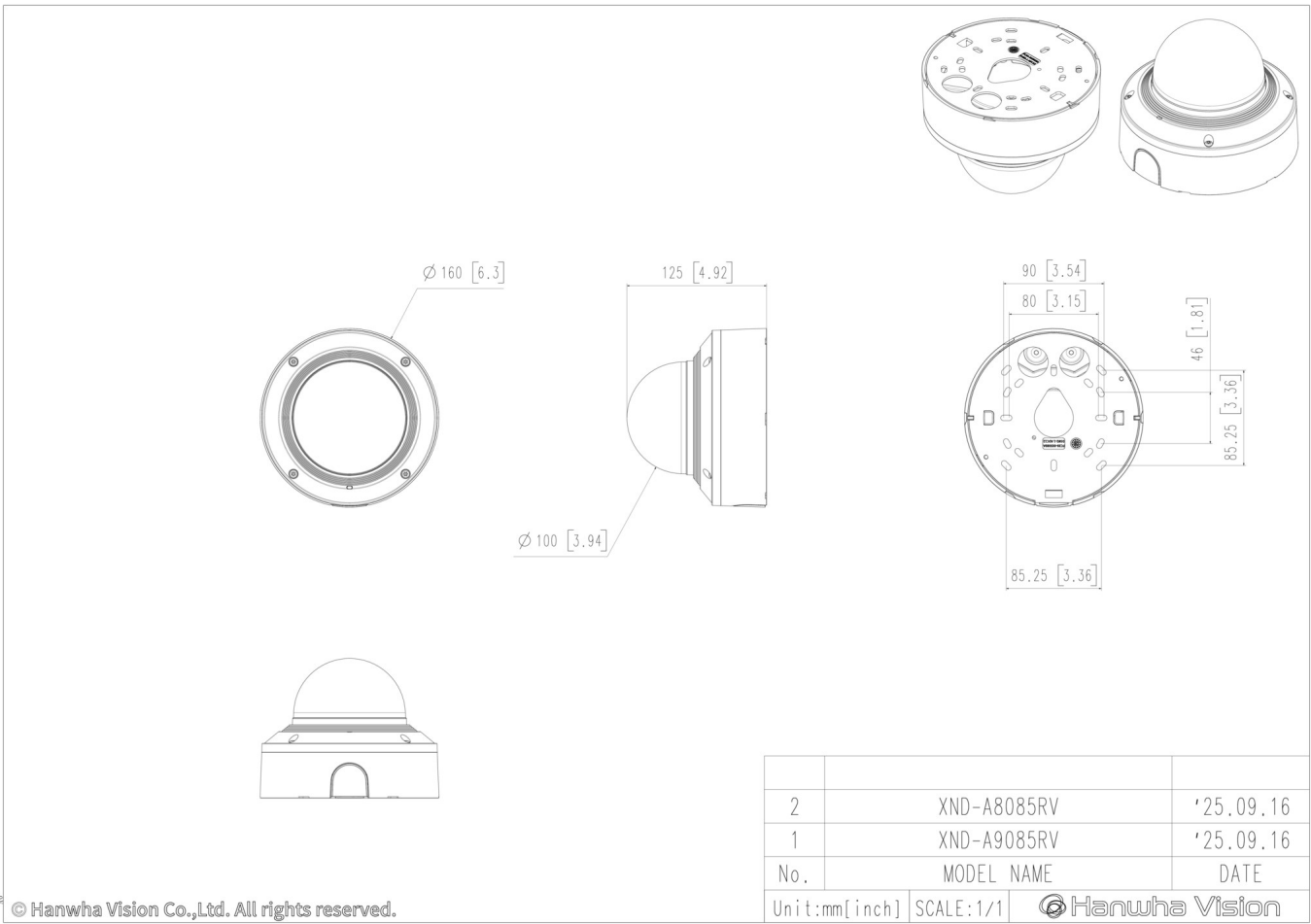
|                                  |      |                  |
|----------------------------------|------|------------------|
| <b>Detect (25PPM/ 8PPF)</b>      | Wide | 50.8m(166.77ft)  |
|                                  | Tele | 176.6m(579.49ft) |
| <b>Observe (63PPM/ 19PPF)</b>    | Wide | 20.3m(66.71ft)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

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CAD

Unit: mm [inch]



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