X series xnd-a9084RV







XND-A9084RV

8MP AI IR 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)
- IP52, IK10
- 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



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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) MJPEG: Max. 30fps(@8MP Max. 5fps) |
| Min. Illumination | Color: 0.04Lux(F1.3, 1/30sec, 30IRE) BW: 0.004Lux(F1.3, 1/30sec, 30IRE), OLux(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) V: 58°(Wide)~26°(Tele) 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, SSDR |
| 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 - Color: gray/green/red/blue/black/white/purple/yellow - Mosaic Dynamic Privacy Mask(Based on Al engine) - Color: gray/green/red/blue/black/white/purple/yellow - 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) Prefer shutter control(Based on Al engine) |
| Josian and enocifications are subject to | shange without notice. The latest product information / specification can be found at Hanybal/isign com |

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| Video Rotation | Flip, mirror, hallway view(90°/270°) |
|--|--|
| Analytics | Classified object type: Person/Face/Vehicle(Type: car/bus/truck/motorcycle/bicycle)/License plate Attributes: Person(Gender, Clothing top/bottom color, Bag), Face(Age, Gender, Mask, Glasses), Vehicle(Type: car/bus/truck/motorcycle/bicycle, Color) Support BestShot |
| | Analytics events based on Al engine - Motion detection, Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit/Appear/Disappear), Slip & fall detection, Face mask detection, Social distancing detection |
| | Analytics events - Defocus detection, Tampering, Shock detection, Audio detection |
| Business Intelligence | Based on Al engine: People/Vehicle/Crowd counting, Queue management, Heatmap |
| Alarm I/O | 2 configurable I/O ports *Support extra alarm I/O via optional I/O box |
| Alarm Triggers | $Analytics, Network\ disconnection, Alarm\ input, Time\ schedule,\ MQTT\ subscription,\ Day/Night,\ Storage\ disruption$ |
| Alarm Events | When alarm trigger occurred - File upload(image): e-mail/FTP/SFTP - File upload(video clip): FTP/SFTP - Notification: e-mail - Recording: SD/SDHC/SDXC or NAS recording at event triggers - Alarm output - Handover: PTZ preset, send message by HTTP/HTTPS/TCP - Audio clip playback(WAV, MP3) - MQTT: publication |
| 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 |
| | |
| Network | |
| Network Ethernet | Metal shielded RJ-45(10/100BASE-T) |
| | Metal shielded RJ-45(10/100BASE-T) H.265/H.264: Main/Baseline/High MJPEG |
| Ethernet | H.265/H.264: Main/Baseline/High |
| Ethernet Video Compression | H.265/H.264: Main/Baseline/High MJPEG G.711(PCM): 8kHz(64Kbps) G.726(ADPCM): 8kHz(16/24/32/40Kbps) AAC-LC: 16kHz(48Kbps) |
| Ethernet Video Compression Audio Compression | H.265/H.264: Main/Baseline/High MJPEG G.711(PCM): 8kHz(64Kbps) G.726(ADPCM): 8kHz(16/24/32/40Kbps) AAC-LC: 16kHz(48Kbps) OPUS: 48kHz(64Kbps) |
| Ethernet Video Compression Audio Compression Smart Codec | H.265/H.264: Main/Baseline/High MJPEG G.711(PCM): 8kHz(64Kbps) G.726(ADPCM): 8kHz(16/24/32/40Kbps) AAC-LC: 16kHz(48Kbps) OPUS: 48kHz(64Kbps) WiseStream(Based on Al engine) H.264/H.265: CBR or VBR |
| Ethernet Video Compression Audio Compression Smart Codec Bitrate Control | H.265/H.264: Main/Baseline/High MJPEG G.711(PCM): 8kHz(64Kbps) G.726(ADPCM): 8kHz(16/24/32/40Kbps) AAC-LC: 16kHz(48Kbps) OPUS: 48kHz(64Kbps) WiseStream(Based on Al engine) H.264/H.265: CBR or VBR MJPEG: VBR Unicast(20 users) / Multicast |
| Ethernet Video Compression Audio Compression Smart Codec Bitrate Control Streaming | H.265/H.264: Main/Baseline/High MJPEG G.711(PCM): 8kHz(64Kbps) G.726(ADPCM): 8kHz(16/24/32/40Kbps) AAC-LC: 16kHz(48Kbps) OPUS: 48kHz(64Kbps) WiseStream(Based on Al engine) H.264/H.265: CBR or VBR MJPEG: VBR Unicast(20 users) / Multicast Multiple streaming(Up to 5 profiles, 3 virtual channel support) 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, |
| Ethernet Video Compression Audio Compression Smart Codec Bitrate Control Streaming Protocol | H.265/H.264: Main/Baseline/High MJPEG G.711(PCM): 8kHz(64Kbps) G.726(ADPCM): 8kHz(16/24/32/40Kbps) AAC-LC: 16kHz(48Kbps) OPUS: 48kHz(64Kbps) WiseStream(Based on Al engine) H.264/H.265: CBR or VBR MJPEG: VBR Unicast(20 users) / Multicast Multiple streaming(Up to 5 profiles, 3 virtual channel support) 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 ONVIF Profile S/G/T/M SUNAPI(HTTP API) |
| Ethernet Video Compression Audio Compression Smart Codec Bitrate Control Streaming Protocol Application Programming Interface | H.265/H.264: Main/Baseline/High MJPEG G.711(PCM): 8kHz(64Kbps) G.726(ADPCM): 8kHz(16/24/32/40Kbps) AAC-LC: 16kHz(48Kbps) OPUS: 48kHz(64Kbps) WiseStream(Based on Al engine) H.264/H.265: CBR or VBR MJPEG: VBR Unicast(20 users) / Multicast Multiple streaming(Up to 5 profiles, 3 virtual channel support) 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 ONVIF Profile S/G/T/M SUNAPI(HTTP API) |
| Ethernet Video Compression Audio Compression Smart Codec Bitrate Control Streaming Protocol Application Programming Interface Security | H.265/H.264: Main/Baseline/High MJPEG G.711(PCM): 8kHz(64Kbps) G.726(ADPCM): 8kHz(16/24/32/40Kbps) AAC-LC: 16kHz(48Kbps) OPUS: 48kHz(64Kbps) WiseStream(Based on Al engine) H.264/H.265: CBR or VBR MJPEG: VBR Unicast(20 users) / Multicast Multiple streaming(Up to 5 profiles, 3 virtual channel support) 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 ONVIF Profile S/G/T/M SUNAPI(HTTP API) Hanwha Vision Open Platform |
| Ethernet Video Compression Audio Compression Smart Codec Bitrate Control Streaming Protocol Application Programming Interface Security OS / Firmware Protect | H.265/H.264: Main/Baseline/High MJPEG G.711(PCM): 8kHz(64Kbps) G.726(ADPCM): 8kHz(16/24/32/40Kbps) AAC-LC: 16kHz(48Kbps) OPUS: 48kHz(64Kbps) WiseStream(Based on Al engine) H.264/H.265: CBR or VBR MJPEG: VBR Unicast(20 users) / Multicast Multiple streaming(Up to 5 profiles, 3 virtual channel support) 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 ONVIF Profile S/G/T/M SUNAPI(HTTP API) Hanwha Vision Open Platform Encrypted Firmware, Secure boot, Signed Firmware |
| Ethernet Video Compression Audio Compression Smart Codec Bitrate Control Streaming Protocol Application Programming Interface Security OS / Firmware Protect User authentication | H.265/H.264: Main/Baseline/High MJPEG G.711(PCM): 8kHz(64Kbps) G.726(ADPCM): 8kHz(16/24/32/40Kbps) AAC-LC: 16kHz(48Kbps) OPUS: 48kHz(64Kbps) WiseStream(Based on Al engine) H.264/H.265: CBR or VBR MJPEG: VBR Unicast(20 users) / Multicast Multiple streaming(Up to 5 profiles, 3 virtual channel support) 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 ONVIF Profile S/G/T/M SUNAPI(HTTP API) Hanwha Vision Open Platform Encrypted Firmware, Secure boot, Signed Firmware Digest Authentication, Prevent brute-force attack |
| Ethernet Video Compression Audio Compression Smart Codec Bitrate Control Streaming Protocol Application Programming Interface Security OS / Firmware Protect User authentication Network authentication | H.265/H.264: Main/Baseline/High MJPEG G.711(PCM): 8kHz(64Kbps) G.726(ADPCM): 8kHz(16/24/32/40Kbps) AAC-LC: 16kHz(48Kbps) OPUS: 48kHz(64Kbps) WiseStream(Based on Al engine) H.264/H.265: CBR or VBR MJPEG: VBR Unicast(20 users) / Multicast Multiple streaming(Up to 5 profiles, 3 virtual channel support) 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 ONVIF Profile S/G/T/M SUNAPI(HTTP API) Hanwha Vision Open Platform Encrypted Firmware, Secure boot, Signed Firmware Digest Authentication, Prevent brute-force attack 802.1X Authentication(EAP-TLS, EAP-LEAP, EAP-PEAP MSCHAPv2) |
| Ethernet Video Compression Audio Compression Smart Codec Bitrate Control Streaming Protocol Application Programming Interface Security OS / Firmware Protect User authentication Network authentication Secure Communication | H.265/H.264: Main/Baseline/High MJPEG G.711(PCM): 8kHz(64Kbps) G.726(ADPCM): 8kHz(16/24/32/40Kbps) AAC-LC: 16kHz(48Kbps) OPUS: 48kHz(64Kbps) WiseStream(Based on Al engine) H.264/H.265: CBR or VBR MJPEG: VBR Unicast(20 users) / Multicast Multiple streaming(Up to 5 profiles, 3 virtual channel support) 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 ONVIF Profile S/G/T/M SUNAPI(HTTP API) Hanwha Vision Open Platform Encrypted Firmware, Secure boot, Signed Firmware Digest Authentication, Prevent brute-force attack 802.1X Authentication(EAP-TLS, EAP-LEAP, EAP-PEAP MSCHAPv2) HTTPS, SRTP, WSS(Websocket secure) |

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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(AES-256) |
| 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 | -10°C~+50°C(-14°F~+122°F) / 0~100%RH(Condensing) Humidity control with AIR vent |
| Storage Temperature / Humidity | -50°C~+60°C(-58°F~+140°F) / 0~90% RH |
| EPA(Effective Projected Area) | 0.02㎡ |
| Certification | IP52, IK10 |
| Input Voltage | PoE(IEEE802.3af, Class3) |
| Power Consumption | PoE: Max. 11.2W, typical 8.4W Support Wisepower - Power monitoring(Max./Current/Avg.) - ECO mode |
| Mechanical | |
| Color / Material | White / Aluminum+PC Bubble: Hard-coated dome |
| Material Management | 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) Recycled plastic: 10.63% |
| RAL Code | RAL9003 |
| Product Dimensions / Weight | ø160x118mm(6.30x4.65"), 1.020g(2.25lb) |
| Compatible Conduit hole / Gangbox | 12.7mm(1/2")(M20) Single, double, 4" octagon, 4" square |
| Certifications & Standards | |
| EMC | FCC 47 CFR 15 Subpart B Class A ICES-3(A)/NMB-3(A) CE/UKCA - EN 55032 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/EN 62471 |
| Environment | IEC/EN 63000 IEC/EN 60529 IP52, IEC/EN 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 |
| Compatible Models | |
| Hanging Adaptor | SBP-160HMW1 |
| Back Box | SBV-180BW, SBV-180WW |
| Ceiling Mount (Assy) | SBP-150CMI, SBP-300CMI, SBP-300CMW1, SBP-900CMW, SBP-300CMTW, SBP-300CMTS |
| Ceiling Mount (Single Unit) | SBP-180CMB, SBP-140CMB, SBP-180CMS, SBP-900CMP, SBP-300CMP, SBP-150CMP, SBP-C15P, SBI C15H |

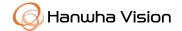
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| Wall Mount | SBP-160WMW1, SBP-400WMW, SBP-250WMW, SBP-300WMW, SBP-300WMW1 |
|---------------------------|--|
| Pole Mount | SBD-180PMW, SBP-300PMW2 |
| In-ceiling Mount | SHD-1600FPW, SHD-1600FW |
| Corner Mount | SBP-156KMW, SBP-300KMW1 |
| Parapet Mount | SBP-156LMW1, SBP-300LMW |
| Tilt Mount | SBP-160TMW1 |
| Cabinet | SBP-150NBW, SBP-300NBW |
| Interface Box | SPM-4210 |
| Other Compatible Models | SPP-C7400, SPB-VAN88W, SBP-140CMT, 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) |

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CAD Unit:mm [inch]

