



Network

Bullet

# XNO-A9084R

8MP AI IR Bullet Camera



## Key Features

- 4.4~9.3mm (2.1x) motorized varifocal
- 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
- Business intelligence based on AI engine :  
People/Vehicle/Crowd counting, Queue management, Heatmap
- Support BestShot and full attributes
- Support Dynamic Privacy Masking
- AI-based Image enhancement
- extremeWDR, WiseNR II (Based on AI engine), WiseStream(Based on AI engine)
- WiseIR: IR viewable length 50 m (164.04 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)
- 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	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: Micro USB Type C	
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, Manual	
Lens Type	P iris(IR corrected)	
Pan / Tilt / Rotate		
Pan / Tilt / Rotate Range	Pan	0°~350°
	Tilt	0°~90°
	Rotate	0°~350°
Operational		
Day & Night	Auto(ICR)	
Backlight Compensation	BLC, HLC, WDR, SSDR	

## Operational

<b>Wide Dynamic Range (dB)</b>		120
<b>Digital Noise Reduction</b>		WiseNR II (Based on AI engine), SSNR V
<b>Digital Image Stabilization</b>		Support
<b>Defog</b>		Support
<b>Motion Detection</b>	Quantity	8ea
	Shape	8point Polygonal zones
<b>Privacy Masking</b>	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
<b>Gain Control</b>		Off, Max gain, Manual
<b>White Balance</b>		ATW, NarrowATW, AWC, Manual, Indoor, Outdoor
<b>LDC</b>		Support(Fill/stretch mode)
<b>Electronic Shutter</b>	Mode	Minimum, Maximum, Anti flicker, Prefer shutter control(Based on AI engine)
	Speed Range	2~1/30,000sec
<b>Video Rotation</b>		Flip, Mirror, Hallway view(90°/270°)
<b>Alarm Interface</b>	In/Out	2 configurable I/O ports
	Others	Support extra alarm I/O via optional I/O box
<b>Alarm Triggers</b>		Analytics, Network disconnect, Alarm input, Time schedule, MQTT subscription, Day/Night, Storage disruption
<b>Alarm Events When Alarm Trigger Occurred</b>		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, MQTT: publication
<b>Audio In</b>		Selectable(mic in/line in)
<b>Audio Out</b>		Line out
<b>Light Type</b>		IR LED
<b>Light Viewable Length</b>	IR	WiseIR 50m(164.04ft)
<b>IR Wavelength</b>		850nm

## Analytics

<b>Classified Object Type</b>		Person, Face, Vehicle, License plate
<b>Attributes</b>	Person	Upper/Lower clothes color, Gender, Bag
	Vehicle	Type(car, bus, truck, motorcycle, bicycle), Color
	Face	Age, Gender, Face mask, Glasses
<b>Thumbnail</b>		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(10/100BASE-T)	
Video Compression	H.265/H.264: Main/Baseline/High, MJPEG	
Audio Compression	G.711(PCM): 8kHz(64kbps), G.726(ADPCM): 8kHz(16/24/32/40kbps), AAC-LC: 16kHz(48kbps), OPUS: 16kHz(64kbps)	
Smart Codec	WiseStream(Based on AI engine)	
Bitrate Control	H.265/H.264: CBR or VBR, 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, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, UPnP, Bonjour, LLDP, CDP, SRTP(TCP, UDP Unicast), MQTT, SMTP(StartTLS), Syslog	
Application Programming Interface	ONVIF	S, G, T, M
	Others	SUNAPI(HTTP API), Hanwha Vision Open Platform
Direct Cloud Connection	Support	

## Security

OS / Firmware Protect	Encrypted firmware, Secure boot, Signed firmware	
User authentication	Digest authentication, Prevent brute-force attack	
Network authentication	IEEE 802.1X(EAP-TLS, EAP-LEAP, EAP-PEAP, MSCHAPv2)	
Secure Communication	HTTPS, WSS(WebSocket Secure), SRTP	
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), Security Built-in Process Certification (IEC 62443-4-1)	

## General

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

## Environmental & Electrical

Operating Condition	Temperature	-40°C~+60°C(-40°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)		0.02m <sup>2</sup>
Input Voltage		PoE(IEEE802.3af, Class3)
Power Consumption	PoE	Max. 11.2W, typical 8.4W
Wisepower		Power monitoring, ECO mode

## Mechanical

Color		White
Material		Aluminum, PC(Polycarbonate), Hard-coated window
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		ø93.4x276.6mm(3.68x10.89")
Product Weight		1,630g(3.59lb)
Compatible Conduit Hole		Support conduit compatibility via optional adaptor
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, IEC 62262 IK10, 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

**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)

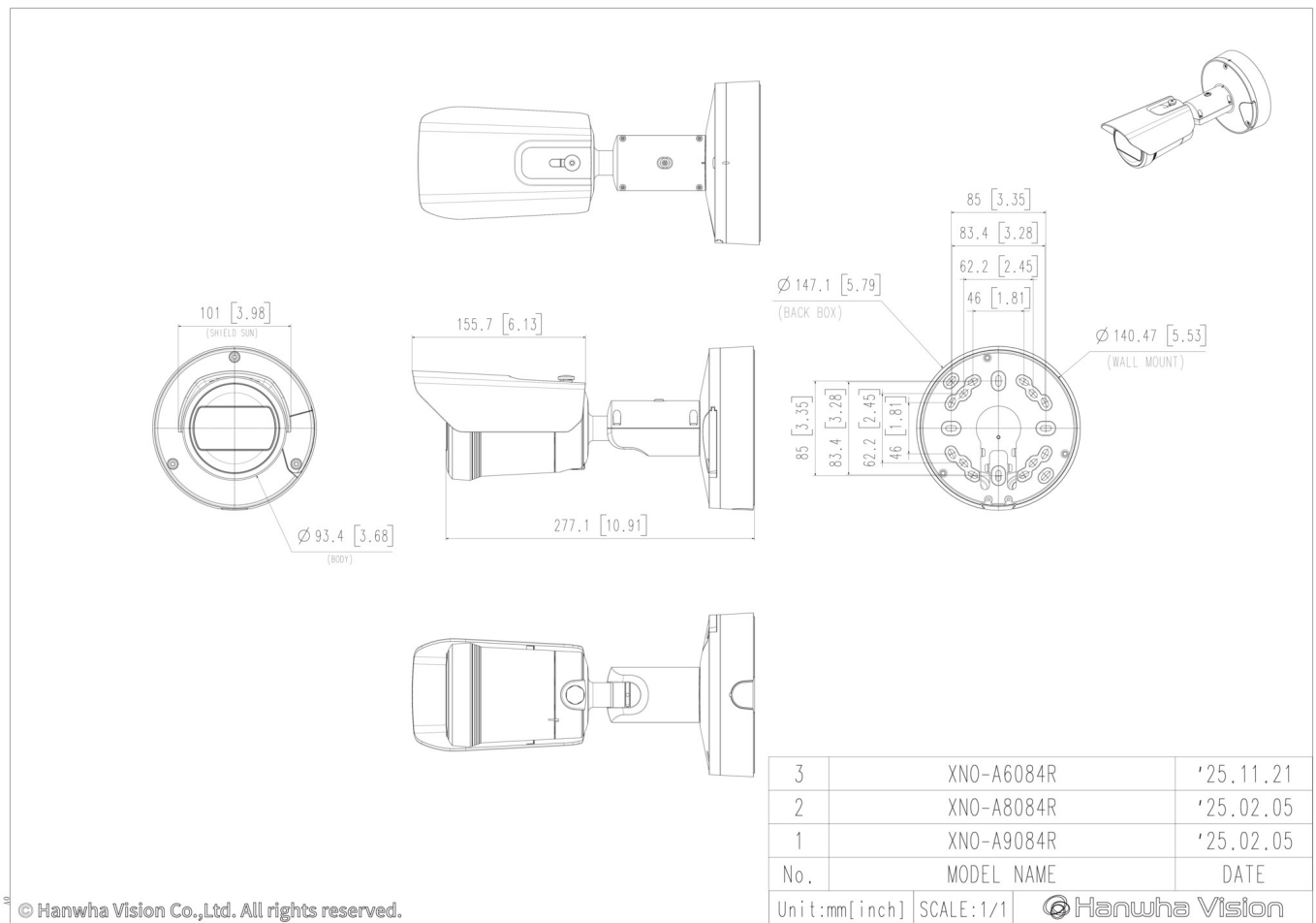
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**CAD**

Unit: mm [inch]



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