



Network

Bullet

PNO-A9311RLP

4K 31x Zoom LPR/ANPR/MMCR IR Bullet Camera



Key Features

- Maximum 4K resolution
- 6.91~214.7mm (31x) zoom
- IR viewable length 70m(229.66ft)
- 0.075Lux@F1.36 (Color), 0.0075Lux (B/W, IR LED on)
- Day & Night(ICR), WDR(120dB)
- H.265, H.264, MJPEG codec, WiseStream II
- Reinforced durability (IP66/IP67, IK10, NEMA4X)
- ONVIF Profile S/G/T/M, SUNAPI(HTTP API), Wisenet open platform
- Next level cybersecurity (TPM with FIPS 140-2 level2)
- Wisenet Road AI application (Pre-installed)
 - License/Number Plate Recognition
 - Make/Model/Color Recognition
 - Black/White list notification
 - Smart Search (LP/NP, Country, brand, model, color)

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Specifications

Video	
Imaging Device	1/1.8" CMOS
Resolution	3840x2160, 3072x1728, 2592x1944, 2688x1520, 2560x1440, 2048x1536, 1920x1080, 1600x1200, 1280x1024, 1280x960, 1280x720, 1024x768, 800 x 600, 800 x 448, 720 x 576, 720x480, 640x480, 640x360
Max. Framerate	H.265/H.264: Max. 30fps/25fps(60Hz/50Hz) MJPEG: Max. 30fps
Min. Illumination	Color: 0.075Lux(F1.36, 1/30sec, 30IRE) BW: 0.0075Lux(F1.36, 1/30sec, 30IRE), 0Lux(IR LED on)
Video Out	CVBS: 1.0 Vp-p / 75Ω composite, 720x480(N), 720x576(P) for installation USB: Micro USB Type B, 1280x720 for installation
Lens	
Focal Length (Zoom Ratio)	6.91~214.7mm (31x) motorized varifocal
Max. Aperture Ratio	F1.36(Wide)~F4.6(Tele)
Angular Field of View	H: 60.92°(Wide)~2.2°(Tele) V: 35.26°(Wide)~1.24°(Tele) D: 69.18°(Wide)~2.52°(Tele)
Min. Object Distance	3m(9.84ft)
Focus Control	Simple focus
Lens Type	P iris
Operational	
Camera Title	Displayed up to 85 characters
Day & Night	Auto(ICR)
Backlight Compensation	BLC, WDR, SSDR
Wide Dynamic Range	120dB
Digital Noise Reduction	SSNR V
Digital Image Stabilization	Support(built-in gyro sensor)
Motion Detection	8ea, polygonal zones
Privacy Masking	3ea, rectangle zones - Color: Gray/Black/White
Gain Control	Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor
Electronic Shutter Speed	Minimum / Maximum / Anti flicker (1/5~1/12,000sec)
Video Rotation	Flip, Mirror, Hallway view(90-/270-)
Alarm I/O	2 configurable I/O ports, DC 12V output(Max. 50mA)
Alarm Triggers	Analytics, Network disconnect, Alarm input, App event, Time schedule, MQTT subscription

Alarm Events	When alarm trigger occurred - File upload(image): e-mail/FTP - Notification: e-mail - Recording: NAS recording at event triggers - Alarm output - Handover: PTZ preset, send message by HTTP/HTTPS/TCP - Audio clip playback - MQTT: publication
Audio In	Selectable(mic in/line in)
Audio Out	Line out
Light Type	IR LED (850nm)
IR Viewable Length	WiseIR 70m(229.66ft)

Network	
Ethernet	Metal shielded RJ-45(10/100/1000 BASE-T)
Video Compression	H.265/H.264: Main/High, MJPEG
Audio Compression	G.711 u-law /G.726 Selectable G.726(ADPCM) 8KHz, G.711 8KHz G.726: 16Kbps, 24Kbps, 32Kbps, 40Kbps AAC-LC: 48Kbps at 16KHz
Smart Codec	Manual(5ea area), WiseStream II
Video Quality Adjustment	H.264/H.265: Target bitrate level control MJPEG: Target bitrate level control
Bitrate Control	H.264/H.265: CBR or VBR MJPEG: VBR
Streaming	Unicast(6 users) / Multicast Multiple streaming(Up to 6 profiles)
Protocol	IPv4, IPv6, TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, UPnP, Bonjour, LLDP, SRTP (TCP, UDP Unicast), MQTT
Security	HTTPS(SSL) Login Authentication Digest Login Authentication IP Address Filtering User access log 802.1X Authentication(EAP-TLS, EAP-LEAP) Device Certificate(Hanwha Techwin Root CA) TPM 2.0 with FIPS 140-2 level2 Secure boot, Verify firmware forgery
Application Programming Interface	ONVIF Profile S/G/T/M SUNAPI(HTTP API)

Security	
OS / Firmware Protect	Encrypted Firmware, Secure boot, Signed Firmware
User authentication	Digest Authenticaon, Prevent brute-force attack
Network authentication	IEEE 802.1X (EAP-TLS, EAP-LEAP, EAP-PEAP, MSCHAPv2)
Secure Communication	HTTPS, WSS (WebSocket Secure)
Access Control	IP-based access control
Data Protect	Encryption Credentials, Encrypt compress for live recording file
Audit	Access / System / Event Log management
Device ID	Device certificate (Hanwha Techwin Root CA)
Secure Storage	TPM, SDcard partition encrypt
Security Certificate	TPM with FIPS 140-2 level 2

General	
Webpage Language	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek
Edge Storage	Micro SD/SDHC/SDXC 2slot Max. 512GB(256GBx2)
Memory	4096MB RAM, 1024MB Flash

Design and specifications are subject to change without notice. The latest product information / specification can be found at HanwhaVision.com

Hanwha Vision is formerly known as Hanwha Techwin.

Environmental & Electrical

Operating Temperature / Humidity	-40°C ~ +55°C (-40°F ~ +131°F) / Less than 90% RH * Start up should be done at above -30°C
Storage Temperature / Humidity	-50°C ~ +60°C (-58°F ~ +140°F) / Less than 90% RH
Certification	IP66/IP67, IK10, NEMA4X
Input Voltage	PoE+(IEEE802.3at, Class4), 12VDC
Power Consumption	PoE+: Max 25.5W, typical 14.0W 12VDC: Max 24.0W, typical 12.7W

Mechanical

Color / Material	White / Aluminum Hard-coated window
RAL Code	RAL9003
Product Dimensions / Weight	ø136.2x358.7mm(ø5.36x14.12")(Without sunshield), 3200g(7.05lb) * backbox: ø160mm(ø6.30")
Compatible Conduit hole / Gangbox	19.1mm(3/4")(M25) 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
Safety	UL 62368-1, CAN/CSA C22.2 NO. 62368-1 IEC/EN 62471
Environment	IEC/EN 63000 IEC/EN 60529 IP66/67, IEC/EN 62262 IK10

DORI (EN62676-4 standard)

Detect (25PPM/ 8PPF)	Wide: 130.6m(428.4ft) / Tele: 4,000m(13,122ft)
Observe (63PPM/ 19PPF)	Wide: 52.2m(171.4ft) / Tele: 1600m(5,249ft)
Recognize (125PPM/ 38PPF)	Wide: 26.1m(85.7ft) / Tele: 800m(2,625ft)
Identify (250PPM/ 76PPF)	Wide: 13.1m(42.8ft) / Tele: 400m(1,312ft)

Wisenet Road AI LPR/ANPR/MMCR

Solution	City Traffic
Speed Description	High Speed
Lane Coverage	Up to 2 lanes (5m/18ft Wide)
Speed limit	Up to 100kmh (65mph)
Min. Forward Distance	18m (60ft)
Max. Forward Distance	75m (250ft)
Max. Horizontal Angle	25°
Max. Vertical Angle	25°
Horizontal Offset	Up to 12m (24ft)
Camera Height	Up to 12m (24ft)
Vehicle Recognition	Make : 70+ Makes Model : 600+ models Color : 11 colors
Available Countries	United States of America, Canada

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CAD

Unit:mm [inch]

