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-)
Analytics	Defocus/ Motion/ Tampering/ Audio/ Shock detection, Sound classification
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

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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 Authenticaton, 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 1slot (32GB Card preinstalled)
Memory	4096MB RAM, 1024MB Flash

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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
EPA(Effective Projected Area)	0.039 m2
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 12.7.W

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

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Available Countries	United States of America, Canada, Peru(LPR only), Columbia(LPR only), Albania, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Gibraltar, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Kosovo, Kazakhstan, Kyrgyzstan, Latvia, Liechtenstein, Lithuania, Luxembourg, Macedonia, Malta, Moldova, Monaco, Mongolia, Montenegro, Netherlands, Norway, Poland, Portugal, Romania, Russian Federation, San Marino, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Tajikistan, Turkey, Turkmenistan, Ukraine, United Kingdom, Uzbekistan, Australia (LPR only), Newziland (LPR only) Bahrain, Kuwait, Oman, Qatar, KSA, UAE, South Africa

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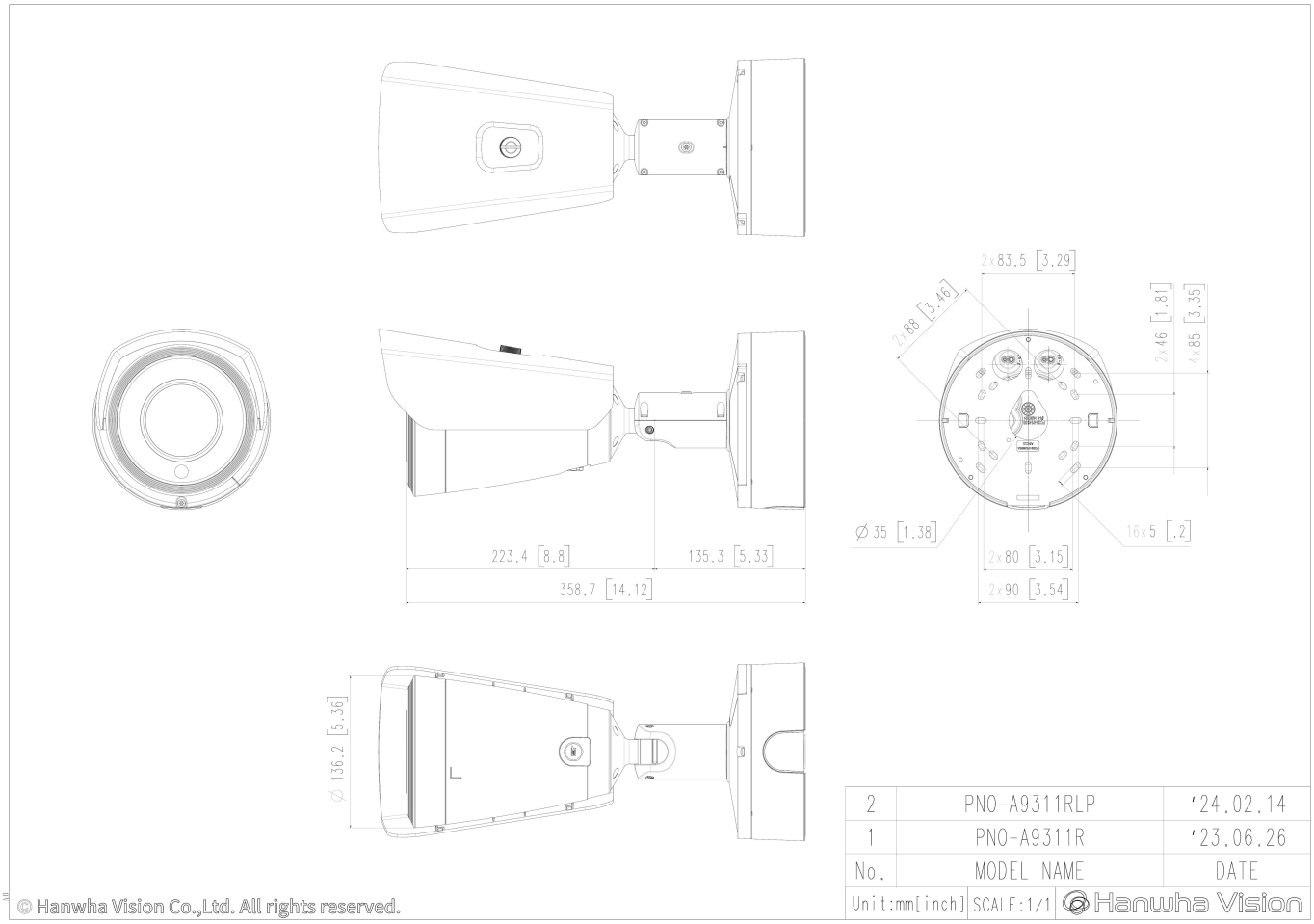
CAD

Unit:mm [inch]



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