

Network Bullet

# PNO-A9081RLP

Cámara tipo Bullet 4K IR AI con Wisenet Road AI (LPR)

## Key Features

- Máx. Resolución 4K
- 0.05Lux@F1.6 (Color), 0Lux (B/N, LED IR encendido)
- Día y noche(ICR), WDR(120dB)
- Longitud visible IR 30m (98.42ft)
- Códec H.265, H.264, MJPEG, WiseStream II
- Aplicación Wisenet Road AI (preinstalada)
- Reconocimiento de matrículas/números
- Reconocimiento de marca/modelo/color
- Notificación de lista negra/blanca
- Búsqueda inteligente (LP/NP, país, marca, modelo, color)

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## Specifications

### Video

| | | |
|---|---|---|
| **Imaging Device** | Size | 1/1.8" |
| | Type | CMOS |
| **Resolution** | | 3840x2160, 3072x1728, 2688x1520, 2592x1944, 2560x1440, 2048x1536, 1920x1080, 1600x1200, 1280x1024, 1280x960, 1280x720, 1024x768, 800x600, 800x448, 720x576, 720x480, 640x480, 640x360 |
| **Max. Framerate** | H.265/H.264 | 30fps/25fps(60Hz/50Hz) |
| | MJPEG | 30fps |
| **Min. Illumination (Lux)** | Color(1/30sec, 30IRE) | 0.05 |
| | BW(1/30sec, 30IRE) | 0.005 |
| **Video Out** | | CVBS: 1.0 Vp-p / 75Ω composite for installation,<br>USB: Micro USB Type B. Preview and installation ONLY. Requires WiFi dongle. |

### Lens

| | | |
|---|---|---|
| **Focal Length (mm)** | | 4.5~10 |
| **Zoom Ratio** | Optical | 2.2x |
| **Max Aperture Ratio (F number)** | Wide | 1.6 |
| | Tele | 2.65 |
| **Angular Field of View** | Horizontal | 101.4°~45.5° |
| | Vertical | 53.6°~25.5° |
| | Diagonal | 120.7°~52.3° |
| **Min. Object Distance** | | 0.5m(1.64ft) |
| **Focus Control** | | Simple focus |
| **Lens Type** | | P iris(IR corrected) |

### Operational

| | |
|---|---|
| **Day & Night** | Auto(ICR) |
| **Backlight Compensation** | BLC, WDR, SSDR |
| **Wide Dynamic Range (dB)** | 120 |
| **Digital Noise Reduction** | SSNR V |
| **Digital Image Stabilization** | Support(built-in gyro sensor) |

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## Operational

| | | |
|---|---|---|
| **Motion Detection** | Quantity | 8ea |
| | Shape | 8point Polygonal zones |
| **Privacy Masking** | Quantity | 6ea |
| | Shape | Rectangular zones |
| | Color / Option | Gray, Black, White |
| **Gain Control** | | Low, Middle, High |
| **White Balance** | | ATW, AWC, Manual, Indoor, Outdoor |
| **LDC** | | Support |
| **Electronic Shutter** | Mode | Minimum, Maximum, Anti flicker |
| | Speed Range | 1/5~1/12,000sec |
| **Video Rotation** | | Flip, Mirror, Hallway view(90°/270°) |
| **Alarm Interface** | In/Out | Input 1ea, Output 1ea |
| | Others | 12VDC output |
| **Alarm Triggers** | | Analytics, Network disconnect, Alarm input |
| **Alarm Events When Alarm Trigger Occurred** | | File upload(image): e-mail/FTP,<br>Notification: e-mail,Alarm output,<br>Handover: PTZ preset,send message by HTTP/HTTPS/TCP,Audio clip playback,NAS recording at event triggers |
| **Audio In** | | Selectable(mic in/line in) |
| **Audio Out** | | Line out |
| **Light Type** | | IR LED |
| **Light Viewable Length** | IR | WiseIR 30m(98.42ft) |
| **IR Wavelength** | | 850nm |

## Analytics

| | | |
|---|---|---|
| **Analytics Events** | Normal | Defocus detection, Motion detection, Tampering, Audio detection, Sound classification, Shock detection |

## Network

| | | |
|---|---|---|
| **Ethernet** | | Metal shielded RJ-45(10/100/1000BASE-T) |
| **Video Compression** | | H.265: Main,<br>H.264: Main/High,MJPEG |
| **Audio Compression** | | G.711 u-law /G.726 selectable,G.726(ADPCM) 8kHz,G.711 8kHz,<br>G.726: 16kbps,24kbps,32kbps,40kbps,<br>AAC-LC: 48kbps at 16kHz |
| **Smart Codec** | | Manual, WiseStream II |
| **Bitrate Control** | | H.265/H.264: CBR or VBR,<br>MJPEG: VBR |
| **Streaming** | Unicast | Up to 10 users |
| | Multicast | Support |
| | Multiple Streaming | Up to 5 profiles |

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## Network

| | | |
|---|---|---|
| **Protocol** | | IPv4, IPv6, TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, FTP, SMTP, ICMP, IGMPv2, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, UPnP, Bonjour, LLDP, SRTP(TCP, UDP Unicast) |
| **Application Programming Interface** | ONVIF | S, G, T |
| | Others | SUNAPI(HTTP API) |
| **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 |
| **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) |

## General

| | | |
|---|---|---|
| **Memory** | RAM | 4GB |
| | Flash | 512MB |
| **Edge Storage** | Micro SD/SDHC/SDXC | 1slot (32GB card preinstalled) dedicated to strong LPR images from Wisenet Road AI app only (not for video recording) |

## Environmental & Electrical

| | | |
|---|---|---|
| **Operating Condition** | Temperature | -40°C~+55°C(-40°F~+131°F) |
| | Humidity | 0~90% RH(non-condensing) |
| | Others | Start up should be done at above -30°C |
| **Storage Condition** | Temperature | -50°C~+60°C(-58°F~+140°F) |
| | Humidity | 0~90% RH(non-condensing) |
| **Input Voltage** | | PoE+(IEEE802.3at, Class4), 12VDC |
| **Power Consumption** | PoE | Max 20.00W, typical 17.00W |
| | 12VDC | Max 18.00W, typical 16.00W |

## Mechanical

| | |
|---|---|
| **Color** | Dark grey |
| **Material** | Aluminum |
| **Product Dimensions** | Ø91.0x368.6mm(3.58"x14.51")(Without sunshield) |
| **Product Weight** | 2.48kg(5.47lb) |

## Wisenet Road AI LPR/ANPR/MMCR

| | |
|---|---|
| **App Type** | CNN (Convolutional Neural Network) AI |

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## Wisenet Road AI LPR/ANPR/MMCR

| | | |
|---|---|---|
| **LPR Usage Condition** | NA | Community Traffic, Parking Application |
| | EU | Community Traffic, Parking Application |
| **Speed Description by Region** | NA | Low to Moderate Speed |
| | EU | Low to Moderate Speed |
| **Lane Coverage_NA** | 1 Lane | 3.6m/12ft wide (with built in IR) |
| | 2 Lanes | 8.1m/26ft wide (with built in IR) |
| **Lane Coverage_EU** | 1 Lane | 3.6m/12ft wide (with built in IR) |
| | 2 Lanes | 8.1m/26ft wide (with built in IR) |
| | 3 Lanes | 16.2m/53ft wide (with built in IR) |
| **Plate Capture Resolution_NA** | 1 Lane | 4K |
| | 2 Lanes | 4K |
| **Plate Capture Resolution_EU** | 1 Lane | 4K |
| | 2 Lanes | 4K |
| | 3 Lanes | 4K |
| **Speed Limit_NA** | 1 Lane | Up to 90km/h (56mph) |
| | 2 Lanes | Up to 70km/h (43mph) |
| **Speed Limit_EU** | 1 Lane | Up to 110km/h (68mph) |
| | 2 Lanes | Up to 100km/h (62mph) |
| | 3 Lanes | Up to 45km/h (28mph) |
| **Min. Forward Distance_NA** | 1 Lane | 6m (19.7ft) |
| | 2 Lanes | 8m (26.2ft) |
| **Min. Forward Distance_EU** | 1 Lane | 6m (19.7ft) |
| | 2 Lanes | 6m (19.7ft) |
| | 3 Lanes | 9m (29.5ft) |
| **Max. Forward Distance_NA** | 1 Lane | 15m (49.2ft) |
| | 2 Lanes | 15m (49.2ft) |
| **Max. Forward Distance_EU** | 1 Lane | 20m (65.6ft) |
| | 2 Lanes | 20m (65.6ft) |
| | 3 Lanes | 20m (65.6ft) |
| **Max. Horizontal Angle by Region** | NA | 30° for highway, 45° for traffic observation |
| | EU | 30° for highway, 45° for traffic observation |
| **Max. Vertical Angle by Region** | NA | 30° |
| | EU | 30° |
| **Vehicle Recognition** | | Make: 100+ makes Model: 4700+ models Color: 11 colors |

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## Wisenet Road AI LPR/ANPR/MMCR

| | |
|---|---|
| **Available Countries** | Albania, Armenia, Austria, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Cyprus, Czechia, Denmark, Estonia, Finland, France, Greece, Germany, Hungary, Ireland, Iceland, Italy, Lithuania, Luxembourg, Latvia, Montenegro, North Macedonia, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovenia, Slovakia, Spain, Switzerland, Turkey, United Kingdom, United States of America, Canada, Russian Federation, Azerbaijan, Uzbekistan, Ukraine, Kyrgyzstan, Kazakhstan, Tajikistan, Georgia, Turkmenistan, Vietnam, Indonesia, Bahrain, Kuwait, Oman, Qatar, KSA, UAE, South Africa, Hongkong/Taiwan (LPR only), Australia/New Zealand (LPR only), Peru/Columbia (LPR only), Liechtenstein, Mexico, Moldova, Monaco, San Marino, Sweden, Croatia, Czech Republic, Gibraltar, Israel, Kosovo, Macedonia, Mongolia |
| **Integration Options** | JSON over HTTP, UTMC 1, UTMC 2, NVR, Wisenet WAVE |
| **VMS Support** | Wisenet WAVE, Wisenet SSM, Genetec Security Center, Milestone Xprotect, Genetec AutoVu |

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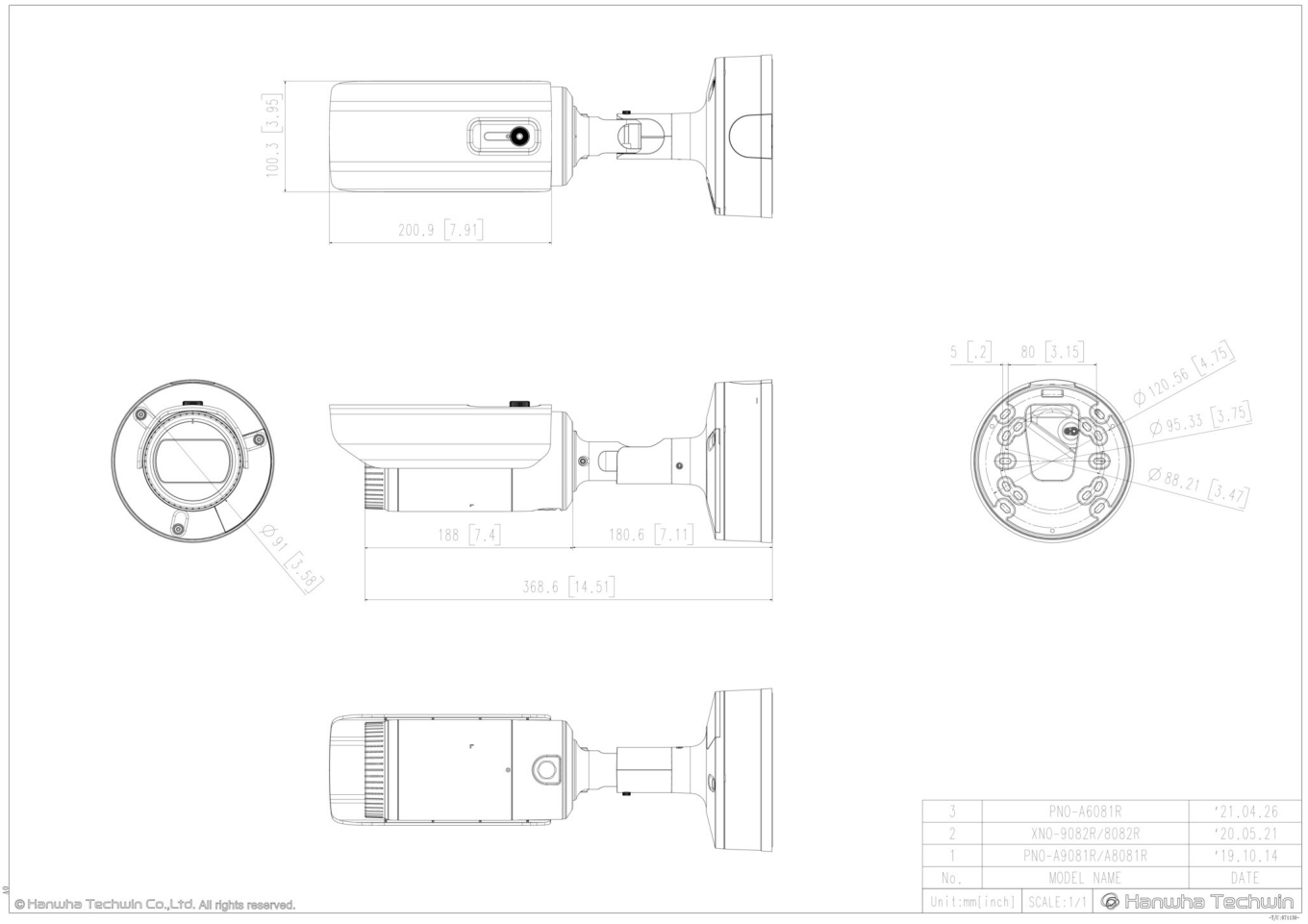
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## CAD

**Unit:** mm [inch]




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