Network  Bullet

# PNO-A9081RLP

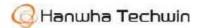4K LPR/ANPR IR Bullet Camera

FC | UL | CE | EHC

## Key Features

• Max. 4K resolution
• 0.05Lux@F1.6 (Color), 0Lux (B/W, IR LED on)
• Day & Night(ICR), WDR(120dB)
• IR Viewable Length 30m (98.42ft)
• H.265, H.264, MJPEG codec, WiseStream II
• 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)

* Supported features may vary by region. Please contact your regional manager for more details.

## Compatible Accessories (Optional)

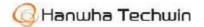SBP-302PM

# PNO-A9081RLP
## 4K LPR/ANPR IR Bullet Camera

## 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)<br>MJPEG: Max. 30fps/25fps(60Hz/50Hz) |
| **Min. Illumination** | Color: 0.05Lux(F1.6, 1/30sec)<br>BW: 0.005Lux(F1.6, 1/30sec), 0Lux(IR LED on) |
| **Video Out** | CVBS: 1.0 Vp-p / 75Ω composite, 720x480(N), 720x576(P) for installation<br>USB: Micro USB Type B, 1280x720 for installation |

### Lens

| | |
|---|---|
| **Focal Length (Zoom Ratio)** | 4.5~10mm(2.2x) motorized varifocal |
| **Max. Aperture Ratio** | F1.6(Wide)~F2.65(Tele) |
| **Angular Field of View** | H:101.4°(Wide)~45.5°(Tele) / V:53.6°(Wide)~25.5°(Tele) / D:120.7°(Wide)~52.3°(Tele) |
| **Min. Object Distance** | 0.5m(1.64ft) |
| **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 |
| **Digital Noise Reduction** | SSNR V |
| **Digital Image Stabilization** | Stabilization Support(built-in gyro sensor) |
| **Motion Detection** | 8ea, polygonal zones |
| **Privacy Masking** | 6ea, rectangle zones<br>- Color: Gray/Black/White |
| **Gain Control** | Low / Middle / High |
| **White Balance** | ATW / AWC / Manual / Indoor / Outdoor |
| **LDC** | Support |
| **Electronic Shutter Speed** | Minimum / Maximum / Anti flicker (1/5~1/12,000sec) |
| **Video Rotation** | Flip, Mirror, Hallway view(90/270) |
| **Analytics** | Defocus detection, Motion detection, Tampering, Audio detection, Sound classification, Shock detection |
| **Alarm I/O** | Input 1ea / Output 1ea / DC 12V Power(Max. 50mA) 1ea |
| **Alarm Triggers** | Analytics, Network disconnect, Alarm input |
| **Alarm Events** | File upload via FTP and e-mail<br>Notification via e-mail<br>SD/SDHC/SDXC or NAS recording at event triggers<br>Alarm output<br>Handover<br>Audio playback |
| **Audio In** | Selectable(mic in/line in/Built in mic)<br>Supply voltage: 2.5VDC(4mA), Input impedance: 2K Ohm |
| **Audio Out** | Line out, Max.output level: 1Vrms |
| **IR Viewable Length** | 30m(98.42ft) |

## 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<br>G.726(ADPCM) 8KHz, G.711 8KHz<br>G.726: 16Kbps, 24Kbps, 32Kbps, 40Kbps<br>AAC-LC: 48Kbps at 16KHz |
| **Smart Codec** | Manual(5ea area), WiseStream II |
| **Bitrate Control** | H.264/H.265: CBR or VBR<br>MJPEG: VBR |
| **Streaming** | Unicast(6 users) / Multicast<br>Multiple streaming(Up to 3 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) |
| **Security** | HTTPS(SSL) Login Authentication<br>Digest Login Authentication<br>IP Address Filtering<br>User access log<br>802.1X Authentication(EAP-TLS, EAP-LEAP)<br>Device Certificate(Hanwha Techwin Root CA)<br>Secure boot |
| **Application Programming Interface** | ONVIF Profile S/G/T<br>SUNAPI(HTTP API)<br>Wisenet open platform |

## General

| | |
|---|---|
| **Webpage Language** | English, French, German, Spanish, Italian, Chinese, Korean, Russian, Japanese, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek |
| **Edge Storage** | Pre-installed with 32GB Micro SD to support 10,000 LPR images |
| **Memory** | 4096MB RAM, 512MB Flash |

## Environmental & Electrical

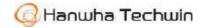| | |
|---|---|
| **Operating Temperature / Humidity** | -40°C ~ +55°C(-40°F ~ +131°F) / Less than 90% RH<br> * Start up should be done at above -30°C |
| **Storage Temperature / Humidity** | -50°C ~ +60°C(-58°F ~ +140°F) / Less than 90% RH |
| **Certification** | IP66/IP67, IK10, NEMA4X |
| **Input Voltage** | PoE+(IEEE802.3at), 12VDC |
| **Power Consumption** | PoE+: Max 20.0W, typical 17.00W<br>12VDC: Max 18.00W, typical 16.00W |

## Mechanical

| | |
|---|---|
| **Color / Material** | Dark gray / Aluminum |
| **Product Dimensions / Weight** | Ø91.0x368.6mm (3.58" x 14.51") (Without sunshield), Weight : 2.48Kg (5.47lb) |

## Wisenet Road AI LPR/ANPR/MMCR

| | | |
|---|---|---|
| **Solution** | Community Traffic | Parking Application |
| **Speed Description** | Moderate Speed | Low speed |
| **Lane Coverage** | 1 lane (3.6m/12ft Wide) (with built in IR) | |
| **Speed limit** | Up to 70kmh (45mph) (with built in IR) | Up to 40kmh (25mph) (with built in IR) |
| **Min. Forward Distance** | 12m (38ft) | 10m (33ft) |
| **Max. Forward Distance** | 12m (40ft) (with built in IR) | 13m (45ft) (with built in IR) |
| **Max. Horizontal Angle** | 25° | 30° |
| **Max. Vertical Angle** | 25° | 30° |
| **Horizontal Offset** | Up to 5m (18ft) | Up to 7m (24ft) |
| **Camera Height** | Up to 5m (18ft) | Up to 7m (24ft) |
| **Vehicle Recognition** | Make : 70+<br>Model : 600+<br>Color : 11 | |

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

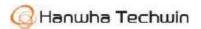ⓒ Hanwha Techwin Co., Ltd. All rights reserved. 03-2022

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**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, Australia, Newziland, Hongkong, Indonesia, Vietnam, Taiwan, Bahrain, Kuwait, Oman, Qatar, KSA (Kingdom of Saudi Arabia), UAE, South Africa

# PNO-A9081RLP
## 4K LPR/ANPR IR Bullet Camera

## CAD

**Unit:** mm [inch]



| 3 | PNO-A6081R | '21.04.26 |
| 2 | XNO-9082R/8082R | '20.05.21 |
| 1 | PNO-A9081R/A8081R | '19.10.14 |
| No. | MODEL NAME | DATE |
| Unit:mm[inch] | SCALE:1/1 | Hanwha Techwin |

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