



Network

Bullet

# PNO-A9081R

4K AI IR Bullet Camera



## Key Features

- Maximum 4K resolution
- 0.05Lux@F1.6 (Color), 0Lux (B/W, IR LED on)
- Day & Night(ICR), WDR(120dB), WiseNR II (Using AI engine), prefer shutter
- H.265, H.264, MJPEG codec, WiseStream II , WiseStreamIII (Using AI engine)
- Video Analytics based on AI
  - Object detection and classification(Person, Face, Vehicle, License Plate)
  - Face mask detection, Social distancing detection
  - Attribute, BestShot
- Requires camera firmware v1.41.03 or later to use Face Mask Detection
- System requirements
  - SSM v2.10.8 or later, Genetec plugin v1.0 or later, Milestone plugin v1.0.2 or later, NVR model (XRN-6410DB4/B4, XRN-3210B4)

## Compatible Accessories (Optional)



SBP-302PM

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## 4K AI IR Bullet Camera



### Specifications

#### Video

<b>Imaging Device</b>	1/1.8" CMOS
<b>Resolution</b>	3840x2160, 3072x1728, 2592x1944, 2688x1520, 2560x1440, 2048x1536, 1920x1080, 1600x1200, 1280x1024, 1280x960, 1280x720, 1024x768, 800 x 600, 800 x 448, 720 x 576, 720x480, 640x480, 640x360
<b>Max. Framerate</b>	H.265/H.264: Max. 30fps/25fps(60Hz/50Hz) MJPEG: Max. 30fps/25fps(60Hz/50Hz)
<b>Min. Illumination</b>	Color: 0.05Lux(F1.6, 1/30sec) BW: 0.005Lux(F1.6, 1/30sec), 0Lux(IR LED on)
<b>Video Out</b>	CVBS: 1.0 Vp-p / 75Ω composite, 720x480(N), 720x576(P) for installation USB: Micro USB Type B, 1280x720 for installation

#### Lens

<b>Focal Length (Zoom Ratio)</b>	4.5~10mm(2.2x) motorized varifocal
<b>Max. Aperture Ratio</b>	F1.6(Wide)~F2.65(Tele)
<b>Angular Field of View</b>	H:101.4°(Wide)~45.5°(Tele) / V:53.6°(Wide)~25.5°(Tele) / D:120.7°(Wide)~52.3°(Tele)
<b>Min. Object Distance</b>	0.5m(1.64ft)
<b>Focus Control</b>	Simple focus
<b>Lens Type</b>	P iris

#### Operational

<b>Camera Title</b>	Displayed up to 85 characters
<b>Day &amp; Night</b>	Auto(ICR)
<b>Backlight Compensation</b>	BLC, WDR, SDR
<b>Digital Noise Reduction</b>	SSNR V, WiseNR II (using AI engine)
<b>Digital Image Stabilization</b>	Stabilization Support(built-in gyro sensor)
<b>Motion Detection</b>	8ea, polygonal zones
<b>Privacy Masking</b>	6ea, rectangle zones - Color: Gray/Black/White
<b>Gain Control</b>	Low / Middle / High
<b>White Balance</b>	ATW / AWC / Manual / Indoor / Outdoor
<b>LDC</b>	Support
<b>Electronic Shutter Speed</b>	Minimum / Maximum / Anti flicker (1/5~1/12,000sec) Auto prefer shutter control based on AI engine
<b>Video Rotation</b>	Flip, Mirror, Hallway view(90/270)
<b>Analytics</b>	Classified object type : Person/Face/Vehicle/License plate Attributes : Person(Gender, Color and Bag), Face(Age, Gender, Mask and Glasses), Vehicle(Type:car/bus/truck/motorcycle/bicycle and Color) Support Bestshot per object Analytics events based on AI engine - Object detection, Virtual line*(Crossing/Direction), Virtual area*(Loitering/Intrusion/Enter/Exit), Face mask detection, Digital auto tracking, Social distancing detection Analytics events - Defocus detection, Motion detection, Tampering, Audio detection, Sound classification, Shock detection, Virtual area(Appear/Disappear)  *Some of the video analytics only works with people and vehicle detection
<b>Business Intelligence</b>	People counting, Queue management, Heatmap based on AI engine
<b>Alarm I/O</b>	2 configurable I/O ports, DC 12V output(Max. 50mA)
<b>Alarm Triggers</b>	Analytics, Network disconnect, Alarm input

<b>Alarm Events</b>	File upload via FTP and e-mail Notification via e-mail SD/SDHC/SDXC or NAS recording at event triggers Alarm output Handover Audio playback
<b>Audio In</b>	Selectable(mic in/line in) Supply voltage: 2.5VDC(4mA), Input impedance: 2K Ohm
<b>Audio Out</b>	Line out, Max.output level: 1Vrms
<b>IR Viewable Length</b>	30m(98.42ft)

## Network

<b>Ethernet</b>	Metal shielded RJ-45(10/100/1000 BASE-T)
<b>Video Compression</b>	H.265/H.264: Main/High, MJPEG
<b>Audio Compression</b>	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
<b>Smart Codec</b>	Manual(5ea area), WiseStream II , WiseStreamIII(using AI engine)
<b>Bitrate Control</b>	H.264/H.265: CBR or VBR MJPEG: VBR
<b>Streaming</b>	Unicast(6 users) / Multicast Multiple streaming(Up to 3 profiles)
<b>Protocol</b>	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)
<b>Security</b>	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) Secure boot
<b>Application Programming Interface</b>	ONVIF Profile S/G/T/M SUNAPI(HTTP API) Wisenet open platform

## General

<b>Webpage Language</b>	English, French, German, Spanish, Italian, Chinese, Korean, Russian, Japanese, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek
<b>Edge Storage</b>	Micro SD/SDHC/SDXC 2slots 512GB
<b>Memory</b>	4096MB RAM, 512MB Flash

## Environmental & Electrical

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

## Mechanical

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

## DORI (EN62676-4 standard)

<b>Detect (25PPM/ 8PPF)</b>	Wide: 62.9m(206.34ft) / Tele: 183m(600.33ft)
<b>Observe (63PPM/ 19PPF)</b>	Wide: 25.1m(82.34ft) / Tele: 73.3m(240.46ft)
<b>Recognize (125PPM/ 38PPF)</b>	Wide: 12.6m(41.33ft) / Tele: 36.6m(120.07ft)
<b>Identify (250PPM/ 76PPF)</b>	Wide: 6.3m(20.67ft) / Tele: 18.3m(60.03ft)

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CAD

Unit: mm [inch]

