



Network

BOX

# PNB-A9082

8MP Box AI camera



## Key Features

- 8MP Image Resolution
- 5.9~13.3mm Focal Length
- Integrated Lens Box Camera
- WisePower Power Monitoring
- Powered by WN9, Network AI Box Camera
- 0.03Lux@F1.5 (Color), 0Lux (B/W IR LED On)
- 5.9~13.3mm (2.25x)
- FoV H:109°~49°
- Motorized Varifocal Lens
- H.265/H.264/MJPEG Codec
- USB Port for Easy Installation
- Selectable microphone input (mic in/line in/built-in)
- AI-Based WiseStream
- WiseNR II (using AI engine)
- Day & Night (ICR)
- extremeWDR (120dB)
- DIS with Built-In Gyro Sensor
- Handover
- Dynamic Privacy Mask
- AI Engine Based Analytics
  - Motion & Object Detection
  - Line Crossing
  - IVA Area
  - Slip & Fall
  - Sound Classification

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8MP Box AI camera



## Specifications

| Video                         |                       |                                                                                                                                                                   |
|-------------------------------|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Imaging Device                | Size                  | 1/1.2"                                                                                                                                                            |
|                               | Type                  | CMOS                                                                                                                                                              |
| Resolution                    |                       | 3840x2160, 3328x1872, 3072x1728, 2688x1512, 2592x1944, 2560x1440, 1920x1080, 1600x1200, 1280x960, 1280x720, 1024x768, 800x600, 640x480, 640x360, 320x240, 320x180 |
| Max. Framerate                | H.265/H.264           | 30fps/25fps(60Hz/50Hz)                                                                                                                                            |
|                               | MJPEG                 | 30fps(@8MP Max. 5fps)                                                                                                                                             |
| Min. Illumination (Lux)       | Color(1/30sec, 30IRE) | 0.015                                                                                                                                                             |
|                               | BW(1/30sec, 30IRE)    | 0.0015                                                                                                                                                            |
| Video Out                     |                       | USB: USB Type C. Preview and installation ONLY. Requires WiFi dongle.                                                                                             |
| Lens                          |                       |                                                                                                                                                                   |
| Focal Length (mm)             |                       | 5.9~13.3                                                                                                                                                          |
| Zoom Ratio                    | Optical               | 2.25                                                                                                                                                              |
| Max Aperture Ratio (F number) | Wide                  | 1.5                                                                                                                                                               |
|                               | Tele                  | 2.9                                                                                                                                                               |
| Angular Field of View         | Horizontal            | 109°~49°                                                                                                                                                          |
|                               | Vertical              | 59°~27°                                                                                                                                                           |
|                               | Diagonal              | 128°~56°                                                                                                                                                          |
| Min. Object Distance          |                       | 0.8m(2.62ft)                                                                                                                                                      |
| Focus Control                 |                       | Simple focus                                                                                                                                                      |
| Lens Type                     |                       | P iris(IR corrected)                                                                                                                                              |
| Operational                   |                       |                                                                                                                                                                   |
| Day & Night                   |                       | Auto(ICR)                                                                                                                                                         |
| Backlight Compensation        |                       | BLC, HLC, WDR, SSDR                                                                                                                                               |
| Wide Dynamic Range (dB)       |                       | 120                                                                                                                                                               |
| Digital Noise Reduction       |                       | WiseNR II (Based on AI engine), SSNR V                                                                                                                            |
| Digital Image Stabilization   |                       | Support                                                                                                                                                           |
| Defog                         |                       | Support                                                                                                                                                           |

## Operational

|                                          |                                         |                                                                                                                                                                                                                                                                                  |
|------------------------------------------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Motion Detection                         | Quantity                                | 8ea                                                                                                                                                                                                                                                                              |
|                                          | Shape                                   | 8point Polygonal zones                                                                                                                                                                                                                                                           |
| Privacy Masking                          | Quantity                                | 32ea                                                                                                                                                                                                                                                                             |
|                                          | Shape                                   | 8point Polygonal zones                                                                                                                                                                                                                                                           |
|                                          | Color / Option                          | Gray, Green, Red, Blue, Black, White, Mosaic, Purple, Yellow                                                                                                                                                                                                                     |
|                                          | Dynamic Privacy Masking: Color / Option | Gray, Green, Red, Blue, Black, White, Mosaic, Purple, Yellow                                                                                                                                                                                                                     |
| Gain Control                             |                                         | Off, Max gain, Manual                                                                                                                                                                                                                                                            |
| White Balance                            |                                         | ATW, NarrowATW, AWC, Manual, Indoor, Outdoor                                                                                                                                                                                                                                     |
| LDC                                      |                                         | Support(Fill/stretch mode)                                                                                                                                                                                                                                                       |
| Electronic Shutter                       | Mode                                    | Minimum, Maximum, Anti flicker, Prefer shutter control(Based on AI engine)                                                                                                                                                                                                       |
|                                          | Speed Range                             | 2~1/30,000sec                                                                                                                                                                                                                                                                    |
| Video Rotation                           |                                         | Flip, Mirror, Hallway view(90°/270°)                                                                                                                                                                                                                                             |
| Serial Interface                         |                                         | RS-485(Samsung-T, Pelco-D/P, Panasonic, Bosch, AD, GE, Vicon, Honeywell)                                                                                                                                                                                                         |
| Alarm Interface                          | In/Out                                  | 2 configurable I/O ports                                                                                                                                                                                                                                                         |
|                                          | Others                                  | 12VDC output                                                                                                                                                                                                                                                                     |
| Alarm Triggers                           |                                         | Analytics, Network disconnect, Alarm input, Time schedule, MQTT subscription, Day/Night, Storage disruption                                                                                                                                                                      |
| Alarm Events When Alarm Trigger Occurred |                                         | File upload(image): e-mail/FTP/SFTP,<br>File upload(video clip): FTP/SFTP,<br>Notification: e-mail,<br>Recording: SD/SDHC/SDXC or NAS recording at event triggers.Alarm output,<br>Handover: PTZ preset,send message by HTTP/HTTPS/TCP,Audio clip playback,<br>MQTT: publication |
| Audio In                                 |                                         | Selectable(mic in/line in), Built-in mic                                                                                                                                                                                                                                         |
| Audio Out                                |                                         | Line out                                                                                                                                                                                                                                                                         |

## Analytics

|                        |                    |                                                                                                                                                                                                              |
|------------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Classified Object Type |                    | Person, Face, Vehicle, License plate                                                                                                                                                                         |
| Attributes             | Person             | Upper/Lower clothes color, Gender, Bag                                                                                                                                                                       |
|                        | Vehicle            | Type(car, bus, truck, motorcycle, bicycle), Color                                                                                                                                                            |
|                        | Face               | Age, Gender, Face mask, Glasses                                                                                                                                                                              |
| Similarity Search      |                    | Support                                                                                                                                                                                                      |
| Thumbnail              |                    | BestShot                                                                                                                                                                                                     |
| Analytics Events       | Based on AI Engine | Object detection, Virtual line(Crossing/Direction), Motion detection, Face mask detection, Social distancing detection, Slip & fall detection, Virtual area(Loitering/Intrusion/Enter/Exit/Appear/Disappear) |
|                        | Normal             | Defocus detection, Tampering, Audio detection, Shock detection, Virtual area(Appear/Disappear)                                                                                                               |
| Business Intelligence  | Based on AI Engine | People counting, Queue management, Heatmap, Vehicle counting, Crowd counting                                                                                                                                 |

## Network

|                                   |                    |                                                                                                                                                                                                                                       |
|-----------------------------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ethernet                          |                    | Metal shielded RJ-45(10/100/1000BASE-T)                                                                                                                                                                                               |
| Video Compression                 |                    | H.265/H.264: Main/Baseline/High, MJPEG                                                                                                                                                                                                |
| Audio Compression                 |                    | G.711(PCM): 8kHz(64kbps),<br>G.726(ADPCM): 8kHz(16/24/32/40kbps),<br>AAC-LC: 16kHz(48kbps),<br>OPUS: 16kHz(64kbps)                                                                                                                    |
| Smart Codec                       |                    | WiseStream(Based on AI engine)                                                                                                                                                                                                        |
| Bitrate Control                   |                    | H.265/H.264: CBR or VBR,<br>MJPEG: VBR                                                                                                                                                                                                |
| Streaming                         | Unicast            | Up to 20 users                                                                                                                                                                                                                        |
|                                   | Multicast          | Support                                                                                                                                                                                                                               |
|                                   | Multiple Streaming | Up to 5 profiles, 3 virtual channel support                                                                                                                                                                                           |
| Protocol                          |                    | IPv4, IPv6, TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, FTP, SFTP, SMTP, ICMP, IGMPv2, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, UPnP, Bonjour, LLDP, CDP, SRTP(TCP, UDP Unicast), MQTT, Syslog |
| Application Programming Interface | ONVIF              | S, G, T, M                                                                                                                                                                                                                            |
|                                   | Others             | SUNAPI(HTTP API), Hanwha Vision Open Platform                                                                                                                                                                                         |
| 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, MAC-based access control, Auto logout                                |
| 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)                                                     |
| Secure Storage         | SDcard partition encrypt(AES-256), Secure element                                             |
| Supply Chain Security  | SBOM                                                                                          |
| Security Certificate   | Secure element(FIPS 140-3 level3, CC EAL6+), Consumer IoT Security Standard (ETSI EN 303 645) |

## General

|                       |                    |                                                                                                                                    |
|-----------------------|--------------------|------------------------------------------------------------------------------------------------------------------------------------|
| SoC                   | Type               | Wisenet 9                                                                                                                          |
|                       | Dual NPU           | Support                                                                                                                            |
| Memory                | RAM                | 4GB                                                                                                                                |
|                       | Flash              | 8GB eMMC                                                                                                                           |
| Edge Storage          | Micro SD/SDHC/SDXC | Max. 1TB x 2slot(Total 2TB)                                                                                                        |
| Edge Storage(OnCloud) | Micro SD/SDHC/SDXC | Max. 1TB x 2slots (Total 2TB) *Hanwha Vision branded microSD cards have been certified and recommended for OnCloud edge recording. |

## Environmental & Electrical

|                               |             |                                  |
|-------------------------------|-------------|----------------------------------|
| Operating Condition           | Temperature | -10°C~+55°C(+14°F~+131°F)        |
|                               | Humidity    | 0~95% RH(non-condensing)         |
| Storage Condition             | Temperature | -50°C~+60°C(-58°F~+140°F)        |
|                               | Humidity    | 0~90% RH(non-condensing)         |
| EPA(Effective Projected Area) |             | 0.0153m <sup>2</sup>             |
| Input Voltage                 |             | PoE+(IEEE802.3at, Class4), 12VDC |
| Power Consumption             | PoE         | Max. 13.6W, typical 12.7W        |
|                               | 12VDC       | Max. 11.5W, typical 10.9W        |
| WisePower                     |             | Power monitoring                 |
| Power Redundance Failover     |             | Support                          |

## Mechanical

|                    |                                       |
|--------------------|---------------------------------------|
| Color              | Black                                 |
| Material           | Aluminum                              |
| RAL Code           | RAL9005                               |
| Product Dimensions | 82(W)x76(H)x190(D)mm(3.23x2.99x7.48") |
| Product Weight     | 900g(1.98lb)                          |

## Certifications & Standards

|             |                                                                                                                                                                                                                      |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EMC         | EN 50121-4, FCC 47 CFR 15 Subpart B Class A, ICES-3(A)/NMB-3(A), CE/UKCA - EN55032 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, KS C 9832 Class A, KS C 9835 |
| Safety      | UL 62368-1, CAN/CSA C22.2 NO. 62368-1, IEC 62471                                                                                                                                                                     |
| Environment | IEC/EN 63000, IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-6, IEC 60068-2-14, IEC 60068-2-27, IEC 60068-2-78                                                                                                            |

## AI Detection Distance

|                      |      |                   |
|----------------------|------|-------------------|
| Person(1.8m/5.9ft)   | Wide | up to 47m(156ft)  |
|                      | Tele | up to 112m(367ft) |
| Vehicle(1.45m/4.8ft) | Wide | up to 64m(210ft)  |
|                      | Tele | up to 151m(495ft) |

## DORI (EN62676-4 standard)

|                           |      |                  |
|---------------------------|------|------------------|
| Detect (25PPM/ 8PPF)      | Wide | 54.8m(179.73ft)  |
|                           | Tele | 168.5m(552.89ft) |
| Observe (63PPM/ 19PPF)    | Wide | 21.9m(71.89ft)   |
|                           | Tele | 67.4m(221.16ft)  |
| Recognize (125PPM/ 38PPF) | Wide | 11.0m(35.95ft)   |
|                           | Tele | 33.7m(110.58ft)  |

**DORI (EN62676-4 standard)**

|                             |      |                |
|-----------------------------|------|----------------|
| Identify (250PPM/<br>76PPF) | Wide | 5.5m(17.97ft)  |
|                             | Tele | 16.9m(55.29ft) |

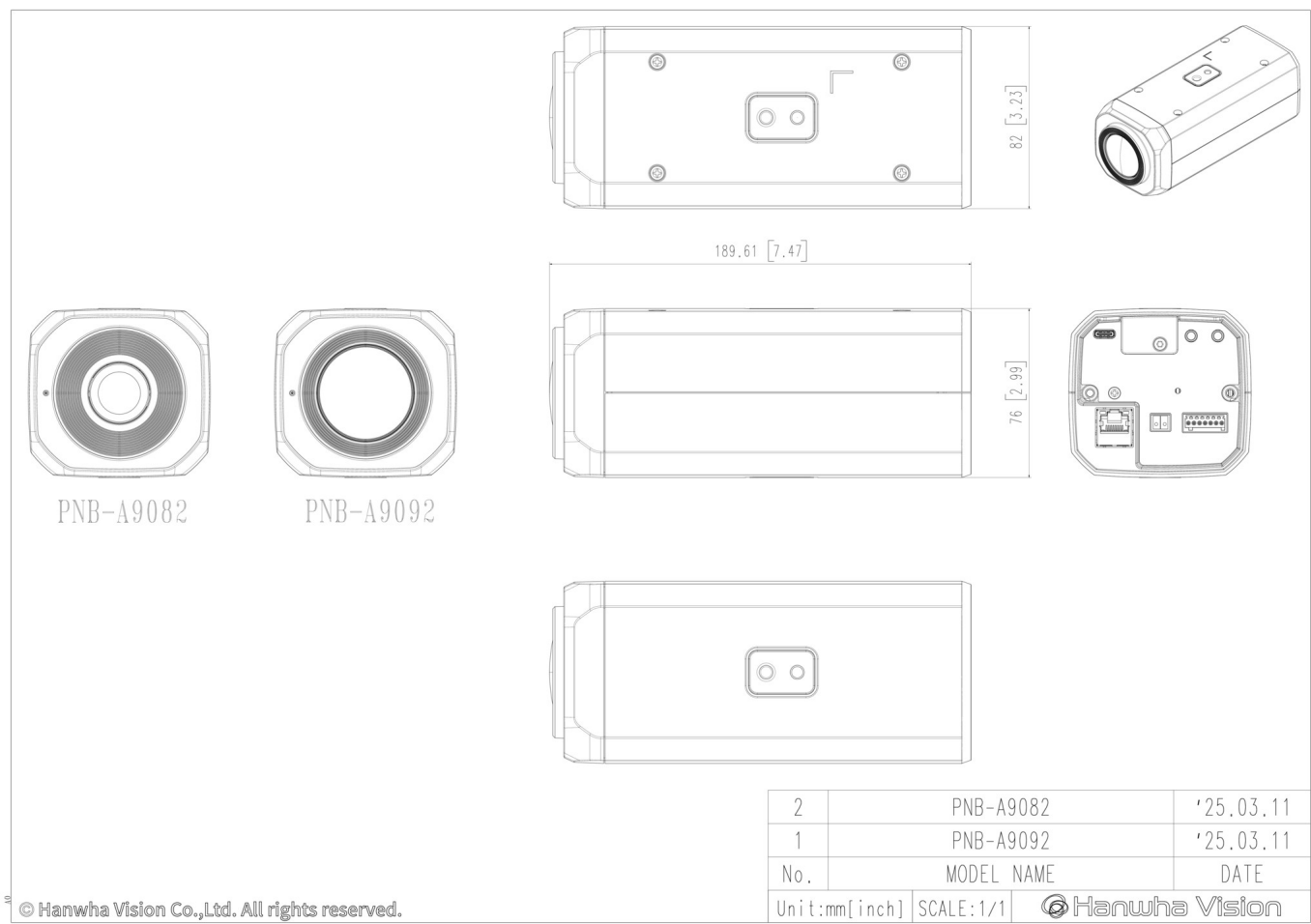
PNB-A9082

8MP Box AI camera



CAD

Unit: mm [inch]



## Compatible Devices

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SHB-4200H



SHB-4200



SHB-4301HP



SHB-4300H