

# PNB-A9001

4K AI Network Box Camera



## Key Features

- Max. 4K resolution
- 0.03Lux@F1.2(Color)
- Day & Night(ICR), WDR(120dB)
- H.265, H.264, MJPEG codec, WiseStreamII
- Video Analytics based on AI
  - Object detection and classification(Person, Face, Vehicle, License Plate)
  - Attribute, BestShot
- Compatible with Wisenet Retail Insight v2.0 for Business Intelligence
  - Age/gender based People counting
  - Heatmap
  - Queue management

**Video**

|                   |                                                                                                                             |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Imaging Device    | 1/1.8" 8MP CMOS                                                                                                             |
| Effective Pixels  | 3864(H)x2180(V)                                                                                                             |
| Min. Illumination | Color: 0.03Lux(F1.2, 1/30sec)                                                                                               |
| 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**

|               |                                    |
|---------------|------------------------------------|
| Focus Control | Simple focus                       |
| Lens Type     | DC auto iris, P iris, Manual, I-CS |
| Mount Type    | C mount, CS mount                  |

**Operational**

|                             |                                                                  |
|-----------------------------|------------------------------------------------------------------|
| Camera Title                | Off / On (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             | 6ea, rectangle zones<br>- Color: Grey/Green/Red/Blue/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**

- Classified object type : Person/Face/Vehicle/License plate with attributes, BestShot per object
- Analytics events based on AI engine : Object detection, Directional detection, Digital auto tracking, Enter/Exit, Loitering, Virtual line
- Analytics events : Defocus detection, Motion detection, Appear/Disappear, Tampering, Audio detection, Sound classification, Shock detection

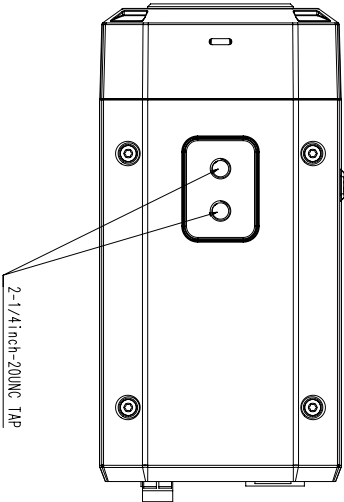
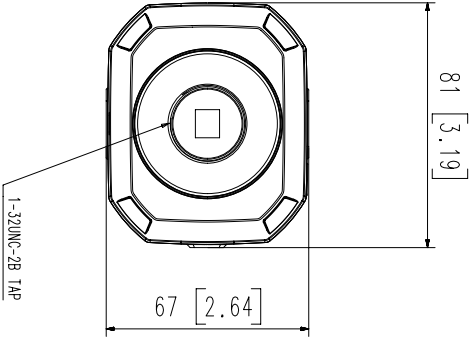
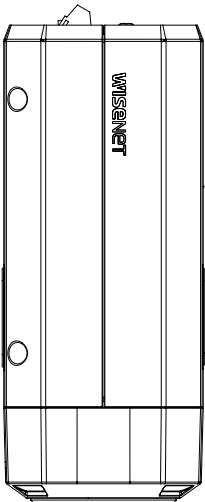
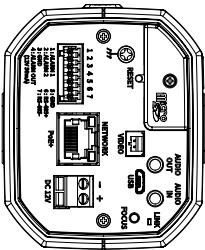
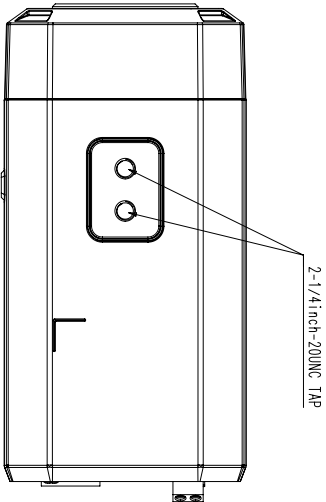
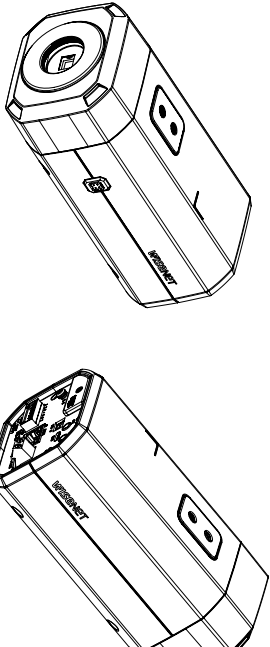
|                       |                                                                                                                                          |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Business Intelligence | People counting, Queue management, Heatmap based on AI engine                                                                            |
| Serial Interface      | RS-485(Samsung-T, Pelco-D/P, Panasonic, Bosch, AD, GE, Vicon, Honeywell)                                                                 |
| 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 |
| 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                                                                                                        |

**Network**

|                   |                               |
|-------------------|-------------------------------|
| Ethernet          | RJ-45(10/100/1000BASE-T)      |
| Video Compression | H.265/H.264: Main/High, MJPEG |

|                                   |                                                                                                                                                                                                                 |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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. 15fps/12fps(60Hz/50Hz)                                                                                                                                  |
| Smart Codec                       | Manual(5ea area), WiseStream II                                                                                                                                                                                 |
| Bitrate Control                   | H.264/H.265: CBR or VBR<br>MJPEG: VBR                                                                                                                                                                           |
| Streaming                         | Unicast(20 users) / Multicast<br>Multiple streaming(Up to 3 profiles)                                                                                                                                           |
| 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                                                                              |
| 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)             |
| Edge Storage                      | Micro SD/SDHC/SDXC 2slots 512GB                                                                                                                                                                                 |
| Application Programming Interface | ONVIF Profile S/G/T<br>SUNAPI(HTTP API)<br>Wisenet open platform                                                                                                                                                |
| Web Viewer                        | Supported OS: Windows 8.1, 10, Mac OS X 10.12, 10.13, 10.14<br>Recommended Browser: Google Chrome<br>Supported Browser : MS Explore11, MS Edge, Mozilla Firefox(Window 64bit only), Apple Safari(Mac OS X only) |
| Memory                            | 4096MB RAM, 512MB Flash                                                                                                                                                                                         |
| <b>Environmental</b>              |                                                                                                                                                                                                                 |
| Operating Temperature / Humidity  | -10°C ~ +55°C(+14°F ~ +131°F) / Less than 90% RH                                                                                                                                                                |
| Storage Temperature / Humidity    | -50°C ~ +60°C(-58°F ~ +140°F) / Less than 90% RH                                                                                                                                                                |
| <b>Electrical</b>                 |                                                                                                                                                                                                                 |
| Input Voltage                     | PoE+(IEEE802.3at), 12VDC                                                                                                                                                                                        |
| Power Consumption                 | PoE+: Max 16.50W, typical 12.50W<br>12VDC: Max 13.50W, typical 10.80W                                                                                                                                           |
| <b>Mechanical</b>                 |                                                                                                                                                                                                                 |
| Color / Material                  | Body: Black / Aluminum                                                                                                                                                                                          |
| Product dimensions / weight       | 81x67x165mm(3.19x2.64x6.48"), Weight : 0.88kg(1.94lb)                                                                                                                                                           |

- The latest product information / specification can be found at [hanwha-security.com](http://hanwha-security.com)
- Design and specifications are subject to change without notice.
- Wisenet is the proprietary brand of Hanwha Techwin, formerly known as Samsung Techwin.



|                                                     |            |           |
|-----------------------------------------------------|------------|-----------|
| 3                                                   | 이름 MODEL2  |           |
| 2                                                   | PNB-A8001  | '19.09.24 |
| 1                                                   | PNB-A9001  | '19.09.24 |
| No.                                                 | MODEL NAME | DATE      |
| Unit : mm [inch]    SCALE : 4/5    © Hanwha Techwin |            |           |