



Network

BOX

# PNB-A9001

4K AI Box Camera



## Key Features

- Maximum 4K resolution
- 0.03Lux@F1.2(Color)
- 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

## Compatible Devices



SHB-4301HP



STB-4150V



Occupancy  
Monitoring  
Application



AI Plug-in

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4K AI Box 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) MJPEG: Max. 30fps/25fps(60Hz/50Hz)
Min. Illumination	Color: 0.03Lux(F1.2, 1/30sec) B/W : 0.003Lux(F1.2, 1/30sec)
Video Out	CVBS: 1.0 Vp-p / 75Ω composite, 720x480(N), 720x576(P) for installation 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	Displayed up to 85 characters
Day & Night	Auto(ICR)
Backlight Compensation	BLC, WDR, SSDR
Digital Noise Reduction	WiseNR II (using AI engine) SSNR V
Digital Image Stabilization	Stabilization Support(built-in gyro sensor)
Motion Detection	8ea, polygonal zones
Privacy Masking	6ea, rectangle zones - 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) Auto prefer shutter control based on AI engine
Video Rotation	Flip, Mirror, Hallway view(90-/270-)
Analytics	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, Social distancing detection, Slip&Fall detection Analytics events - Defocus detection, Motion detection, Tampering, Audio detection, Sound classification, Shock detection, Virtual area(Appear/Disappear) Support WiseDetector for Adding custom objects  *Some of the video analytics only works with people and vehicle detection

Design and specifications are subject to change without notice. The latest product information / specification can be found at [HanwhaVision.com](https://www.hanwhavision.com).

Hanwha Vision is formerly known as Hanwha Techwin.

Business Intelligence	People/Vehicle/Crowd 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	2 configurable I/O ports, DC 12V output(Max. 50mA)
Alarm Triggers	Analytics, Network disconnect, Alarm input, App event, Time schedule, MQTT subscription
Alarm Events	When alarm trigger occurred - File upload(image): e-mail/FTP - Notification: e-mail - Recording: SD/SDHC/SDXC or NAS recording at event triggers - Alarm output - Handover: PTZ preset, send message by HTTP/HTTPS/TCP - Audio clip playback - MQTT: publication
Audio In	Selectable(mic in/line in/Built in mic)
Audio Out	Line out

<b>Network</b>	
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 G.726(ADPCM) 8KHz, G.711 8KHz G.726: 16Kbps, 24Kbps, 32Kbps, 40Kbps AAC-LC: 48Kbps at 16KHz
Smart Codec	Manual(5ea area), WiseStream II , WiseStreamIII(using AI engine)
Bitrate Control	H.264/H.265: CBR or VBR MJPEG: VBR
Streaming	Unicast(6 users) / Multicast Multiple streaming(Up to 6 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), MQTT
Application Programming Interface	ONVIF Profile S/G/T/M SUNAPI(HTTP API) Hanwha Vision Open Platform WiseAI application included Oncloud edge recording, compatible with Hanwha Vision's Micro SD cards up to 1TB

<b>Security</b>	
OS / Firmware Protect	Encrypted Firmware, Secure boot, Signed Firmware
User authentication	Digest Authenticaon, Prevent brute-force attack
Network authentication	IEEE 802.1X (EAP-TLS, EAP-LEAP, EAP-PEAP, MSCHAPv2)
Secure Communication	HTTPS, WSS (WebSocket Secure)
Access Control	IP-based access control
Data Protect	Encryption Credentials, Encrypt compress for live recording file
Audit	Access / System / Event Log management
Device ID	Device certificate (Hanwha Techwin Root CA)
Secure Storage	SDcard partition encrypt

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

<b>Environmental &amp; Electrical</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

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Input Voltage	PoE+(IEEE802.3at), 12VDC
Power Consumption	PoE+: Max 16.50W, typical 12.50W 12VDC: Max 13.50W, typical 10.80W
Mechanical	
Color / Material	Body: Black / Aluminum
Product Dimensions / Weight	81x67x165mm(3.19x2.64x6.48"), Weight : 0.88kg(1.94lb)

PNB-A9001

4K AI Box Camera



CAD

Unit:mm [inch]

