



Network

BOX

# PNB-A9082

8MP AI Lens integrated Box Camera



## Key Features

- Maximum 8MP resolution (1/1.2" sensor)
- 5.9~13.3mm(2.25x) motorized varifocal
- Color: 0.015Lux(F1.5, 1/30sec, 30IRE)
- BW: 0.0015Lux(F1.5, 1/30sec, 30IRE)
- Analytics events based on AI engine : Object detection (Person/Face/Vehicle/License plate), IVA (Virtual line/Area, Enter/Exit, Loitering, Direction, Intrusion), Slip&Fall detection, Face mask detection, Social distancing detection
- Business intelligence based on AI engine : People/Vehicle/Crowd counting, Queue management, Heatmap
- Support BestShot and full attributes
- Support Dynamic Privacy Masking
- AI-based Image enhancement
- extremeWDR, WiseNR II (Based on AI engine), WiseStream(Based on AI engine)
- Support Wisepower(Power monitoring)
- Device certificate(Hanwha Vision Root CA), Secure storage(Secure element with FIPS 140-3 level3/CC EAL6+ certified), SBOM
- 2 SD slots edge storage

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## 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: Micro USB Type C	

### 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, SDR
Wide Dynamic Range (dB)	120
Digital Noise Reduction	WiseNR II (Based on AI engine), SSNR V
Digital Image Stabilization	Support
Defog	Support

## Operational

<b>Motion Detection</b>	Quantity	8ea
	Shape	8point Polygonal zones
<b>Privacy Masking</b>	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
<b>Gain Control</b>		Off, Max gain, Manual
<b>White Balance</b>		ATW, NarrowATW, AWC, Manual, Indoor, Outdoor
<b>LDC</b>		Support(Fill/stretch mode)
<b>Electronic Shutter</b>	Mode	Minimum, Maximum, Anti flicker, Prefer shutter control(Based on AI engine)
	Speed Range	2~1/30,000sec
<b>Video Rotation</b>		Flip, Mirror, Hallway view(90°/270°)
<b>Serial Interface</b>		RS-485(Samsung-T, Pelco-D/P, Panasonic, Bosch, AD, GE, Vicon, Honeywell)
<b>Alarm Interface</b>	In/Out	2 configurable I/O ports
	Others	12VDC output
<b>Alarm Triggers</b>		Analytics, Network disconnect, Alarm input, Time schedule, MQTT subscription, Day/Night, Storage disruption
<b>Alarm Events When Alarm Trigger Occurred</b>		File upload(image): e-mail/FTP/SFTP, File upload(video clip): FTP/SFTP, 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
<b>Audio In</b>		Selectable(mic in/line in), Built-in mic
<b>Audio Out</b>		Line out

## Analytics

<b>Classified Object Type</b>		Person, Face, Vehicle, License plate
<b>Attributes</b>	Person	Upper/Lower clothes color, Gender, Bag
	Vehicle	Type(car, bus, truck, motorcycle, bicycle), Color
	Face	Age, Gender, Face mask, Glasses
<b>Thumbnail</b>		BestShot
<b>Analytics Events</b>	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)
<b>Business Intelligence</b>	Based on AI Engine	People counting, Queue management, Heatmap, Vehicle counting, Crowd counting

## Network

<b>Ethernet</b>	Metal shielded RJ-45(10/100/1000BASE-T)
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## Network

<b>Video Compression</b>		H.265/H.264: Main/Baseline/High, MJPEG
<b>Audio Compression</b>		G.711(PCM): 8kHz(64kbps), G.726(ADPCM): 8kHz(16/24/32/40kbps), AAC-LC: 16kHz(48kbps), OPUS: 48kHz(64kbps)
<b>Smart Codec</b>		WiseStream(Based on AI engine)
<b>Bitrate Control</b>		H.265/H.264: CBR or VBR, MJPEG: VBR
<b>Streaming</b>	Unicast	Up to 20 users
	Multicast	Support
	Multiple Streaming	Up to 5 profiles, 3 virtual channel support
<b>Protocol</b>		IPv4, IPv6, TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, FTP, SFTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, UPnP, Bonjour, LLDP, CDP, SRTP(TCP, UDP Unicast), MQTT, Syslog
<b>Application Programming Interface</b>	ONVIF	S, G, T, M
	Others	SUNAPI(HTTP API), Hanwha Vision Open Platform
<b>Direct Cloud Connection</b>		Support

## Security

<b>OS / Firmware Protect</b>	Encrypted firmware, Secure boot, Signed firmware
<b>User authentication</b>	Digest authentication, Prevent brute-force attack
<b>Network authentication</b>	IEEE 802.1X(EAP-TLS, EAP-LEAP, EAP-PEAP, MSCHAPv2)
<b>Secure Communication</b>	HTTPS, WSS(WebSocket Secure), SRTP
<b>Access Control</b>	IP-based access control, MAC-based access control, Auto logout
<b>Data Protect</b>	Encryption credentials, Encrypt compress for live recording file export
<b>Audit</b>	Access / System / Event Log management
<b>Device ID</b>	Device certificate(Hanwha Vision Root CA)
<b>Secure Storage</b>	SDcard partition encrypt(AES-256), Secure element
<b>Supply Chain Security</b>	SBOM
<b>Security Certificate</b>	Secure element(FIPS 140-3 level3, CC EAL6+), Consumer IoT Security Standard (ETSI EN 303 645)

## General

<b>SoC</b>	Type	Wisenet 9
	Dual NPU	Support
<b>Memory</b>	RAM	4GB
	Flash	8GB eMMC
<b>Edge Storage</b>	Micro SD/SDHC/SDXC	Max. 1TB x 2slot(Total 2TB)
<b>Edge Storage(OnCloud)</b>	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

## 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)
Identify (250PPM/ 76PPF)	Wide	5.5m(17.97ft)
	Tele	16.9m(55.29ft)

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## CAD

Unit: mm [inch]

2	PNB-A9082	'25.03.11
1	PNB-A9092	'25.03.11
No.	MODEL NAME	DATE
Unit:mm[inch] SCALE:1/1		© Hanwha Vision

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