



Network

BOX

# XNB-A9004

8MP AI Box Camera



## Key Features

- 8MP resolution
- Dual NPU for AI-based Image enhancement
- H.265/H.264: Max. 30fps/25fps(60Hz/50Hz)
- MJPEG: Max. 30fps (@8MP Max. 5fps)
- 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, Motion detection
- Business intelligence based on AI engine : People/Vehicle/Crowd counting, Queue management, Heatmap
- Support BestShot and full attributes
- Support Dynamic Privacy Masking
- extremeWDR, WiseNR II (Based on AI engine), WiseStream(Based on AI engine)
- Device certificate(Hanwha Vision Root CA), Secure storage(Secure element with FIPS 140-3 level3/CC EAL6+ certified), SBOM

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## Specifications

Video		
Imaging Device	Size	1/1.8"
	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)	0.04
	BW(1/30sec, 30IRE)	0.004
Video Out		USB: USB Type C. Preview and installation ONLY. Requires WiFi dongle.
Lens		
Focus Control		Simple focus
Lens Type		DC auto iris, P iris(IR corrected), Manual, I-CS
Mount Type		C mount, CS mount
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
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

## Operational

<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	Support extra alarm I/O via optional I/O box
<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
<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(10/100BASE-T)
<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

## Network

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, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, UPnP, Bonjour, LLDP, CDP, SRTP(TCP, UDP Unicast), MQTT, SMTP(StartTLS), 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, 802.1AE(MACsec)
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), Security Built-in Process Certification (IEC 62443-4-1)

## 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)
Input Voltage		PoE(IEEE802.3af, Class3), 12VDC

### Environmental & Electrical

Power Consumption	PoE	Max. 10.7W, typical 9.5W
	12VDC	Max. 9.9W, typical 8.7W
WisePower		Power monitoring, Eco mode
Power Redundance Failover		Support

### Mechanical

Color		Black
Material		Aluminum
Material Management	Declaration	RoHS(EU RoHS directive 2011/65/EU and IEC/EN 63000:2018), REACH(Regulation (EC) No. 1907/2006), Conflict mineral policy(Section 1502 of US Dodd Frank Act)
RAL Code		RAL9005
Product Dimensions		81(W)x67(H)x165(D)mm(3.19x2.64x6.48")
Product Weight		851g(1.88lb)

### Certifications & Standards

EMC	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 60068-2-1, IEC 60068-2-2, IEC 60068-2-6, IEC 60068-2-14, IEC 60068-2-27, IEC 60068-2-78

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**CAD**

Unit: mm [inch]

