



Network

BOX

# XNB-A6004

2MP AI Box Camera



## Key Features

- 2MP Image Resolution
- Crowd Detection Business Intelligence
- FIPS 140-3 Level 3 Certified
- WisePower Power Monitoring
- Color: 0.02Lux, BW: 0.002Lux
- WiseNR II , WiseStream
- Analytics events based on AI

※ The lens module is sold separately

## XNB-A6004

2MP AI Box Camera



## Specifications

| Video                       |                                         |                                                                                      |
|-----------------------------|-----------------------------------------|--------------------------------------------------------------------------------------|
| Imaging Device              | Size                                    | 1/2.8"                                                                               |
|                             | Type                                    | CMOS                                                                                 |
| Resolution                  |                                         | 1920x1080, 1280x960, 1280x720, 1024x768, 800x600, 640x480, 640x360, 320x240, 320x180 |
| Max. Framerate              | H.265/H.264                             | 60fps/50fps(60Hz/50Hz)(WDR off) / 30fps/25fps(60Hz/50Hz)(WDR on)                     |
|                             | MJPEG                                   | 30fps                                                                                |
| Min. Illumination (Lux)     | Color(1/30sec, 30IRE)                   | 0.02                                                                                 |
|                             | BW(1/30sec, 30IRE)                      | 0.002                                                                                |
| 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, SSDR                                                                  |
| Wide Dynamic Range (dB)     |                                         | 150                                                                                  |
| 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

|                                          |             |                                                                                                                                                                                                                                                                                  |
|------------------------------------------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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      | Support extra alarm I/O via optional I/O box                                                                                                                                                                                                                                     |
| 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                                                                                                                                                                              |
| 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                                                                                                                                               |
| Business Intelligence  | Based on AI Engine | People counting, Queue management, Heatmap, Vehicle counting, Crowd counting                                                                                                                                 |

## Network

|                   |  |                                                                                                                    |
|-------------------|--|--------------------------------------------------------------------------------------------------------------------|
| Ethernet          |  | Metal shielded RJ-45(10/100BASE-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: 48kHz(64kbps) |
| Smart Codec       |  | WiseStream(Based on AI engine)                                                                                     |
| Bitrate Control   |  | H.265/H.264: CBR or VBR,<br>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. 7.5W, typical 6.0W    |
|                           | 12VDC | Max. 6.9W, typical 5.6W    |
| 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]

