

WISeNeT X series
eXtreme performance



WISeNET X series

THE MOST POWERFUL CHIPSET Wisenet 5



Wisenet **X** series is supercharged by the most powerful
chipset ever incorporated into a full camera range.
The Wisenet 5 chip uses an all-new architecture that enables faster processing.
That means you get the best video performance just as you need it.

EXCEPTIONAL CLARITY

Be amazed by the World's Best WDR

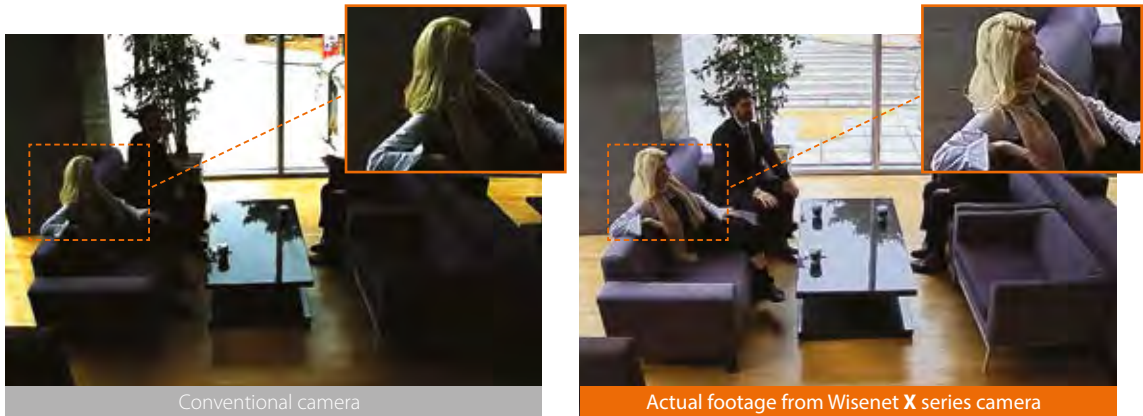


Introducing Wisenet X series, an advanced technology that optimally adjusts lighting levels with extreme accuracy, even with backlight.



The World's best WDR 150dB

An existing WDR image is captured by composing 2 frames with different exposures. The Wisenet X series with **150dB** WDR uses 4 frames to create a more natural image. Motion blur is a critical weakness of existing WDR, but this new technology removes all movement, providing clear and vivid images.



※ Wisenet X series 5M cameras support 120dB.

SEE THE UNSEEN

Wisenet **X** series, the power that suppresses darkness

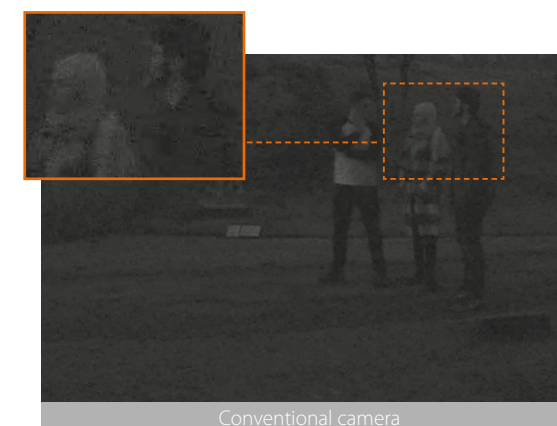


e**X**cellence in dark environments.

e**X**perience the outstandingly clear images of Wisenet **X** series.

Monitor colour images, even in low-light

With the new powerful chipset used in the Wisenet **X** series and **Hanwha Techwin**'s outstanding lens technology, images can be monitored in low-light environments including colour without IR LED. Vivid images can now be captured regardless of the environment or the time of day.



Conventional camera



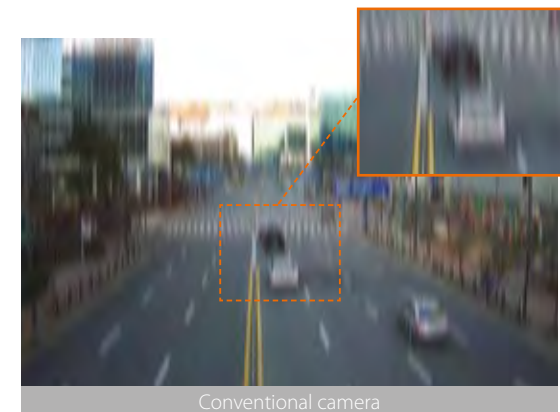
Actual footage from Wisenet **X** series camera

CAPTURE EVERY MOMENT

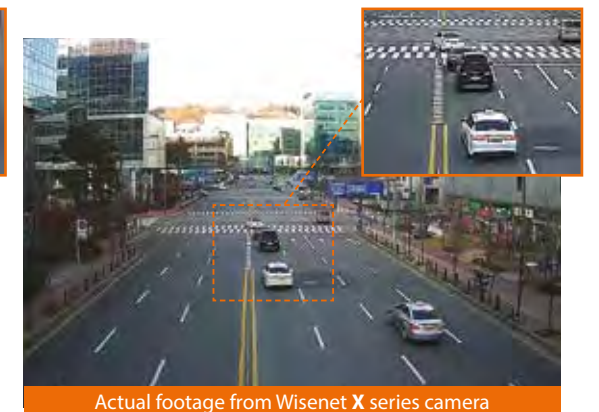


More accurate stabilisation using gyro sensors

Gyro sensors have been added to the technology used in existing cameras for more accurate stabilisation. Stabilisation comes into effect when a camera is disturbed by wind or vibrations.



Conventional camera



Actual footage from Wisenet X series camera

ADVANCED COMPRESSION

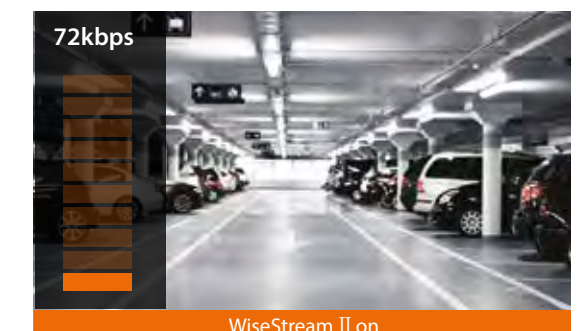
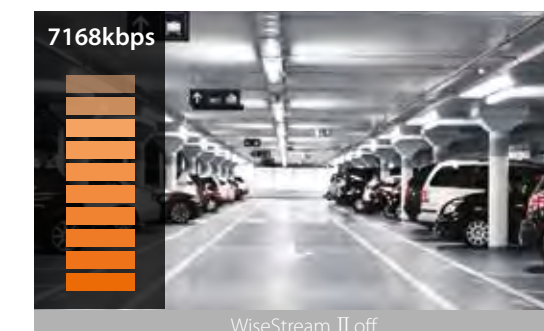
WiseStream II - the Wise Choice



Reduce storage space with **Hanwha Techwin's** eXclusive compression technology, WiseStream II.

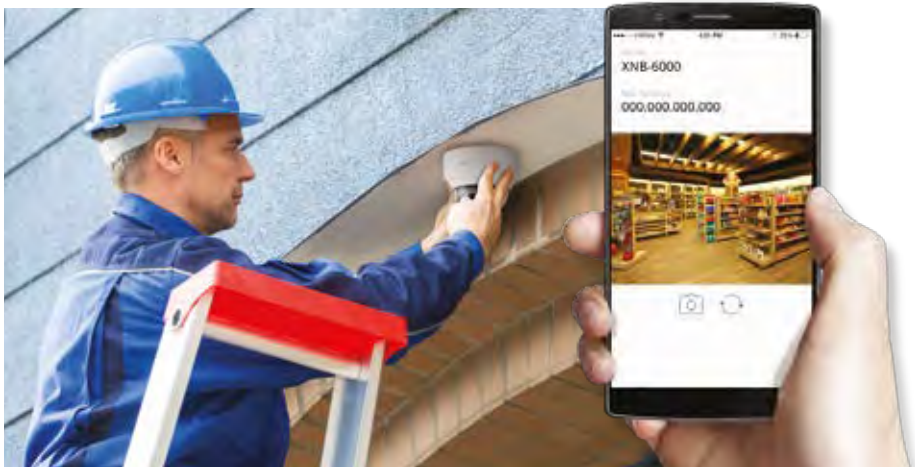
Improve bandwidth by up to 99% using WiseStream II

Using WiseStream II, **Hanwha Techwin's** video compression technology, the Wisenet **X** series reduces data by up to 99% compared to current H.264 technology, when combined with H.265 compression. System costs are also greatly reduced without comprising image quality.



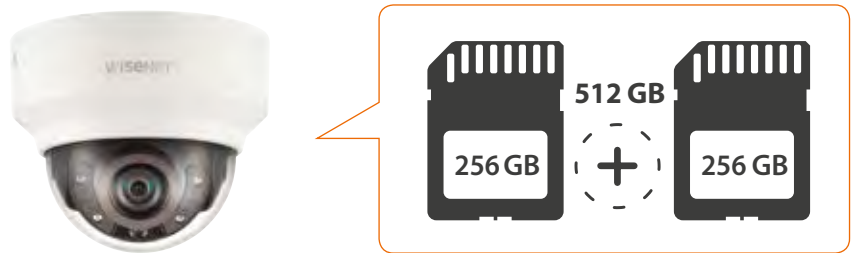
More convenient installation with USB

Using the USB port, the installer can easily connect Wisenet **X** series cameras and mobile devices through Wi-Fi. Viewing and lens angles can be checked immediately after installation. No additional devices are required, saving both time and money.



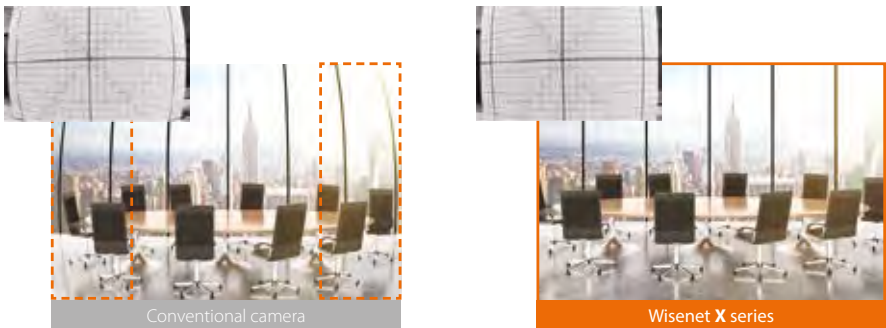
eXtra storage with dual SD slots

Dual SD slots allow up to **512 GB** to be saved automatically to the camera, keeping data safe in the event of an unstable network.



Minimise Lens Distortion

Lens Distortion may typically appear in videos causing straight lines close to the edge to curve outwards. With the Lens Distortion Correction technology available on the Wisenet **X** series, imperfections in images can easily be repaired.



Enhanced Video and Audio Analytics

Wisenet **X** series comes with a variety of e**X**clusive new Video and Audio Analytics, providing enhanced monitoring solutions and market intelligence.

Behaviour Analytics	Appear, Disappear, Loitering
Crossing	Virtual line, Enter/Exit, Directional Detection
Image quality enhancement	Defocus Detection, Fog detection
Detection	Motion Detection, Tampering, Face Detection, Audio detection
Statistics for Market Intelligence	Heat mapping , People counting, Queue management
Audio Analytics Sound classification	Explosion  Breaking glass  Gun shot  Scream 

※ bold: new added

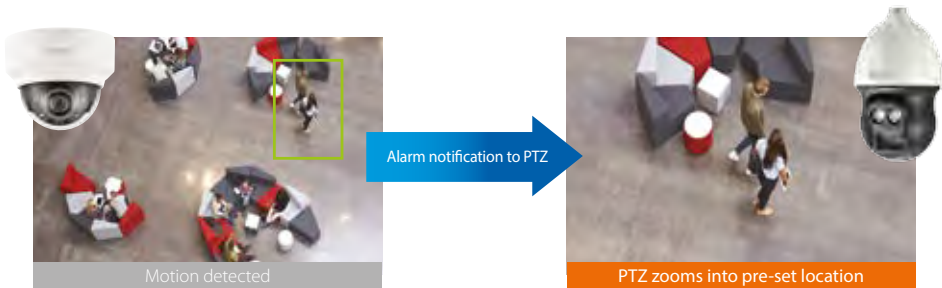
Fog Detection

Wisenet **X** series delivers outstanding image quality in foggy weather with the Fog Detection. Any change in an image is automatically deleted with the defog function to provide a clear image.



Handover to PTZ

The handover feature allows a PTZ camera* to receive an alarm (motion detection) from a Wisenet **X** series camera operating on the same IP video surveillance system. Once the notification is received, the PTZ camera will zoom into the assigned camera pre-set location. This feature improves the efficiency of the surveillance system by decreasing the reliance on the system operator on tracking events, and by increasing the likelihood that critical events in a surveillance area will be captured and recorded. ※ PNP-9200RH / XNP-6370RH



XNB-8000

5M Network Camera



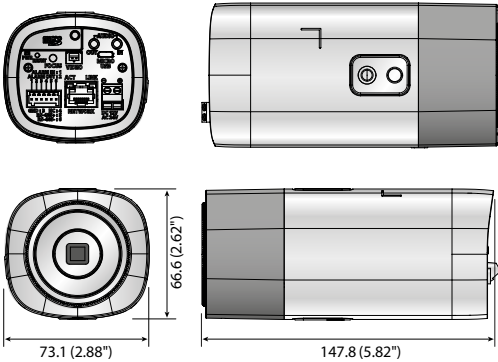
* Lens not included

Key Features

- Max. 5megapixel (2560 x 1920) resolution
- 0.07Lux@F1.2 (Color), 0.007Lux@F1.2 (B/W)
- Max. 30fps@all resolutions (H.265/H.264)
- H.265, H.264, MJPEG codec supported, Multiple streaming
- Day & Night (ICR), WDR (120dB), P-Iris, Defog
- Digital image stabilization with built-in Gyro sensor
- Loitering, Directional detection, Fog detection, Audio detection, Digital auto tracking, Sound classification, Tampering
- Motion detection, Handover
- SD/SDHC/SDXC memory slot (Max. 512GB)
- Hallway view, WiseStream II support
- LDC support (Lens Distortion Correction)
- PoE / 24V AC, 12V DC, Bi-directional audio support

Dimensions

Unit : mm (inch)



Accessories (Optional)



XNB-8000	
VIDEO	
Imaging Device	1/1.8" 6M CMOS
Total Pixels	3,096(H) x 2,094(V)
Effective Pixels	2,616(H) x 1,976(V)
Scanning System	Progressive Scan
Min. Illumination	Color : 0.07Lux (F1.2, 1/30sec), B/W : 0.007Lux (F1.2, 1/30sec)
S / N Ratio	50dB
Video Out	CVBS : 1.0Vpp / 75Ω composite, 720 x 480(N), 720 x 576(P), for installation USB : micro USB type B, 1280 x 720 for installation
LENS	
Focus Control	Simple focus / Manual, Remote control via network, Button control (Manual, Simple focus)
Lens Type	Manual / DC auto iris, P-Iris
Mount Type	C / CS
OPERATIONAL	
Camera Title	Off / On (Displayed up to 85 characters) - W/W : English / Numeric / Special characters - China : English / Numeric / Special / Chinese characters - Common : Multi-line (Max. 5), Color (Grey / Green / Red / Blue / Black / White), Transparency, Auto scale by resolution
Day & Night	Auto (ICR) / Color / B/W / External / Schedule
Backlight Compensation	Off / BLC / HLC (Masking / Dimming), WDR
Wide Dynamic Range	120dB
Contrast Enhancement	SSDR (Off / On)
Digital Noise Reduction	SSNRV (2D+3D noise filter) (Off / On)
Digital Image Stabilization	Off / On (Built-in Gyro sensor)
Defog	Off / Auto (Input from fog detection) / Manual
Motion Detection	Off / On (8ea, 8point polygonal zones), Handover
Privacy Masking	Off / On (32ea, Polygonal) - Color : Grey / Green / Red / Blue / Black / White, Mosaic
Gain Control	Off / Low / Middle / High / Manual
White Balance	ATW / AWC / Manual / Indoor / Outdoor (Included mercury & Sodium)
Contrast	Level adjustment
LDC (Lens Distortion Correction)	Off / On (5 levels with min / max)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker (2 ~ 1/12,000sec)
Digital PTZ	24x, Digital PTZ (Preset, Group)
Flip / Mirror	Off / On, Hallway view : 90°/270° Tampering, Loitering, Directional detection, Defocus detection, Fog detection, Virtual line, Enter / Exit, (Dis)Appear, Audio detection, Face detection, Motion detection, Digital auto tracking, Sound classification
Video & Audio Analytics	
Alarm I/O	Input 1ea / Output 1ea
Remote Control Interface	RS-485
RS-485 Protocol	Samsung-T/E, Pelco-P/D, Sungjin, Panasonic, Honeywell, AD, Vicon, GE, Bosch
Alarm Triggers	Alarm input, Motion detection, Video & Audio analytics, Network disconnect
Alarm Events	File upload via FTP, E-mail, Notification via E-mail, Local storage (SD/SDHC/SDXC) or NAS recording at event triggers, External output, DPTZ preset
Pixel Counter	Support
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.265 / H.264 (MPEG-4 part 10/AVC) : Main / Baseline / High, MJPEG
Resolution	2560 x 1920, 2560 x 1440, 1920 x 1080, 1600 x 1200, 1280 x 1024, 1280 x 960, 1280 x 720, 1024 x 768, 800 x 600, 800 x 448, 720 x 576, 720 x 480, 640 x 480, 640 x 360, 320 x 240
Max. Framerate	H.265 / H.264 : Max. 30fps at all resolutions, MJPEG : Max. 30fps
Smart Codec	Manual mode (Area-based : 5ea)
WiseStream II	Support
Video Quality Adjustment	H.265 / H.264 : Target bitrate level control, MJPEG : Target bitrate level control
Bitrate Control Method	H.265 / H.264 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 10 profiles)
Audio In	Selectable (Mic in / Line in), Max output level : 1Vrms
Audio Out	Supply voltage : 2.5V DC (4mA), Input impedance : approx. 2K Ohm Line out, Max output level : 1Vrms
Audio Compression Format	G.711 u-law/G.726 selectable, G.726 (ADPCM) 8KHz, G.711 8KHz
Audio Communication	G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps, AAC-LC : 48Kbps at 8/16/32/48KHz
IP	Bi-directional (2-way)
Protocol	IPv4, IPv6 TCP/IP, UDP/IP, RTP (UDP), RTP (TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3 (MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour
Security	HTTPS (SSL) login authentication, Digest login authentication
Streaming Method	IP address filtering, User access log, 802.1X authentication (EAP-TLS, EAP-LEAP)
Max. User Access	Unicast / Multicast 20 users at unicast mode
Edge Storage	SD/SDHC/SDXC 2slot (Up to 512GB) - Continuous recording (1st slot to 2nd slot)
Application Programming Interface	NAS (Network Attached Storage), Local PC for instant recording
Webpage Language	ONVIF profile S/G, SUNAPI (HTTP API), Wisenet Open Platform English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek
Web Viewer	Supported OS : Windows 7, 8.1, 10, Mac OS X 10.10, 10.11, 10.12 Non-plugin Webviewer - Supported Browser : Google Chrome 54, MS Edge 38, Mozilla Firefox 49 (Window 64bit only), Apple Safari 9 * Mac OS X only Plug-in Webviewer - Supported Browser : MS Explore 11, Apple Safari 9 * Mac OS X only
Central Management Software	SmartViewer, SSM
ENVIRONMENTAL	
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
ELECTRICAL	
Input Voltage / Current	24V AC ±10%, 12V DC ±10%, PoE (IEEE802.3af)
Power Consumption	Max. 7.5W (12VDC), Max. 8.5W (PoE), Max. 8.5W (24VAC)
MECHANICAL	
Color / Material	Black, Ivory / Plastic
Dimensions (WxH)	73.1 x 66.6 x 147.8mm (2.88" x 2.62" x 5.82")
Weight	420g (0.93lb)

* The latest product information / specification can be found at hanwha-security.eu
* Design and specifications are subject to change without notice.

XNO-8080R

5M Network IR Bullet Camera

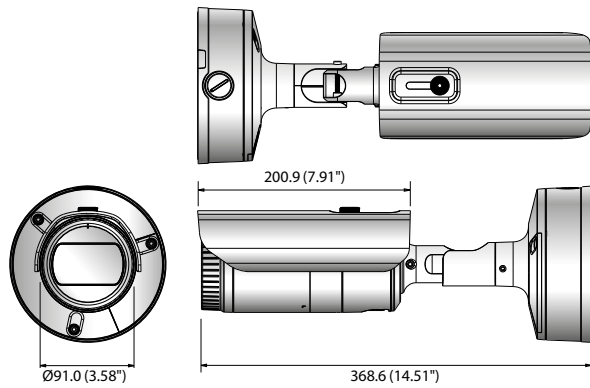


Key Features

- Max. 5megapixel (2560 x 1920) resolution
- 3.7 ~ 9.4mm (2.5x) motorized varifocal lens
- Max. 30fps@all resolutions (H.265/H.264)
- H.265, H.264, MJPEG codec supported, Multiple streaming
- Day & Night (ICR), WDR (120dB), Defog
- Loitering, Directional detection, Fog detection, Audio detection, Digital auto tracking, Sound classification, Tampering
- Motion detection, Handover
- SD/SDHC/SDXC memory slot (Max. 512GB)
- Hallway view, WiseStream II support
- IR viewable length 50m, IP67/IP66, NEMA 4X, IK10
- LDC support (Lens Distortion Correction)
- PoE / 24V AC, 12V DC, Bi-directional audio support

Dimensions

Unit : mm (inch)



Accessories (Optional)



XNO-8080R	
VIDEO	
Imaging Device	1/1.8" 6M CMOS
Total Pixels	3,096(H) x 2,094(V)
Effective Pixels	2,616(H) x 1,976(V)
Scanning System	Progressive Scan
Min. Illumination	Color : 0.07Lux (F1.2, 1/30sec), B/W : 0Lux (IR LED on)
S / N Ratio	50dB
Video Out	CVBS : 1.0Vpp / 75Ω composite, 720 x 480(N), 720 x 576(P), for installation USB : micro USB type B, 1280 x 720 for installation
LENS	
Focal Length (Zoom Ratio)	3.7 ~ 9.4mm (2.5x) motorized varifocal
Max. Aperture Ratio	F1.2
Angular Field of View	H : 100.2° ~ 38.7° / V : 72.7° ~ 29.0° / D : 132.0° ~ 48.6°
Min. Object Distance	0.5m (1.64ft)
Focus Control	Simple focus (Motorized V/F) / Manual, Remote control via network (Manual, Simple focus)
Lens / Mount Type	DC auto iris, P-Iris / Board-in type
OPERATIONAL	
IR Viewable Length	50m (164.04ft) Off / On (Displayed up to 85 characters) - W/W : English / Numeric / Special characters - China : English / Numeric / Special / Chinese characters - Common : Multi-line (Max. 5), Color (Grey / Green / Red / Blue / Black / White), Transparency, Auto scale by resolution
Camera Title	Auto (ICR) / Color / B/W / External / Schedule
Day & Night	Off / BLC / HLC (Masking / Dimming), WDR
Backlight Compensation	120dB
Wide Dynamic Range	SSDR (Off / On)
Contrast Enhancement	SSNRV (2D+3D noise filter) (Off / On)
Digital Noise Reduction	Off / On
Digital Image Stabilization	Off / Auto (Input from fog detection) / Manual
Defog	Off / On (8ea, 8point polygonal zones), Handover
Motion Detection	Off / On (32ea, Polygonal) - Color : Grey / Green / Red / Blue / Black / White, Mosaic
Privacy Masking	Off / Low / Middle / High / Manual
Gain Control	ATW / AWC / Manual / Indoor / Outdoor (Included mercury & Sodium)
White Balance	Level adjustment
Contrast	Off / On (5 levels with min / max)
LDC (Lens Distortion Correction)	Minimum / Maximum / Anti flicker (2 ~ 1/12,000sec)
Electronic Shutter Speed	24x, Digital PTZ (Preset, Group)
Digital PTZ	Off / On, Hallway view : 90°/270° Tampering, Loitering, Directional detection, Defocus detection, Fog detection, Virtual line, Enter / Exit, (Dis)Appear, Audio detection, Face detection, Motion detection, Digital auto tracking, Sound classification
Flip / Mirror	Input 1ea / Output 1ea
Video & Audio Analytics	
Alarm I/O	Alarm input, Motion detection, Video & Audio analytics, Network disconnect
Alarm Triggers	File upload via FTP, E-mail, Notification via E-mail, Local storage (SD/SDHC/SDXC) or NAS recording at event triggers, External output, DPTZ preset
Alarm Events	Support
Pixel Counter	
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.265 / H.264 (MPEG-4 part 10/AVC) : Main / Baseline / High, MJPEG
Resolution	2560 x 1920, 2560 x 1440, 1920 x 1080, 1600 x 1200, 1280 x 1024, 1280 x 960, 1280 x 720, 1024 x 768, 800 x 600, 800 x 448, 720 x 576, 720 x 480, 640 x 480, 640 x 360, 320 x 240
Max. Framerate	H.265 / H.264 : Max. 30fps at all resolutions, MJPEG : Max. 30fps
Smart Codec	Manual mode (Area-based : 5ea)
WiseStream II	Support
Video Quality Adjustment	H.265 / H.264 : Target bitrate level control, MJPEG : Target bitrate level control
Bitrate Control Method	H.265 / H.264 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 10 profiles)
Audio In	Selectable (Mic in / Line in), Supply voltage : 2.5V DC (4mA), Input impedance : approx. 2K Ohm
Audio Out	Line out, Max output level : 1Vrms
Audio Compression Format	G.711 u-law/G.726 selectable, G.726 (ADPCM) 8KHz, G.711 8KHz
Audio Communication	G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps, AAC-LC : 48Kbps at 8/16/32/48KHz
IP	Bi-directional (2-way)
Protocol	IPv4, IPv6 TCP/IP, UDP/IP, RTP (UDP), RTP (TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3 (MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour
Security	HTTPS (SSL) login authentication, Digest login authentication
Streaming Method	IP address filtering, User access log, 802.1X authentication (EAP-TLS, EAP-LEAP)
Max. User Access	Unicast / Multicast 20 users at unicast mode
Edge Storage	SD/SDHC/SDXC 2slot (Up to 512GB) - Continuous recording (1st slot to 2nd slot)
Application Programming Interface	NAS (Network Attached Storage), Local PC for instant recording
Webpage Language	ONVIF profile S/G, SUNAPI (HTTP API), Wisenet Open Platform English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek
Web Viewer	Supported OS : Windows 7, 8.1, 10, Mac OS X 10.10, 10.11, 10.12 Non-plugin Webviewer - Supported Browser : Google Chrome 54, MS Edge 38, Mozilla Firefox 49 (Window 64bit only), Apple Safari 9 * Mac OS X only Plug-in Webviewer - Supported Browser : MS Explore 11, Apple Safari 9 * Mac OS X only
Central Management Software	SmartViewer, SSM
ENVIRONMENTAL	
Operating Temperature / Humidity	-40°C ~ +55°C (-40°F ~ +131°F) / Less than 90% RH
Storage Temperature / Humidity	-50°C ~ +60°C (-58°F ~ +140°F) / Less than 90% RH
Ingress Protection / Vandal	
Resistance	IP67, IP66, NEMA 4X / IK10
ELECTRICAL	
Input Voltage / Current	24V AC ±10%, 12V DC ±10%, PoE (IEEE802.3af)
Power Consumption	Max. 12.5W (12VDC), Max. 12.95W (PoE), Max. 14.5W (24VAC)
MECHANICAL	
Color / Material	Dark gray / Aluminum
Dimensions (WxH)	Ø91.0 x 368.6mm (Ø3.58" x 14.51") (Without sunshield)
Weight	2.18Kg (4.81lb)

* The latest product information / specification can be found at hanwha-security.eu
* Design and specifications are subject to change without notice.

XNO-8020R/8030R/8040R

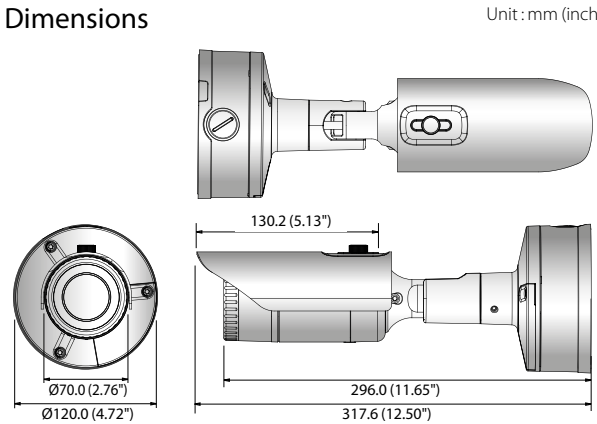
5M Network IR Bullet Camera



Key Features

- Max. 5megapixel (2560 x 1920) resolution
- Built-in 3.7mm fixed lens (XNO-8020R)
4.6mm fixed lens (XNO-8030R)
7mm fixed lens (XNO-8040R)
- Max. 30fps@all resolutions (H.265/H.264)
- H.265, H.264, MJPEG codec supported, Multiple streaming
- Day & Night (ICR), WDR (120dB), Defog
- Loitering, Directional detection, Fog detection, Audio detection, Digital auto tracking, Sound classification, Heatmap, People counting, Queue management, Tampering
- Motion detection, Handover
- SD/SDHC/SDXC memory slot (Max. 512GB), PoE / 12V DC
- Hallway view, WiseStream II support
- IR viewable length 30m, IP67/IP66, NEMA 4X, IK10
- LDC support (Lens Distortion Correction)

Dimensions



Accessories (Optional)



SBP-302PM

XNO-8020R/8030R/8040R	
VIDEO	
Imaging Device	1/1.8" 6M CMOS
Total Pixels	3,096(H) x 2,094(V)
Effective Pixels	2,616(H) x 1,976(V)
Scanning System	Progressive Scan
Min. Illumination	Color : 0.16Lux (F1.6, 1/30sec), B/W : 0Lux (IR LED on)
S / N Ratio	50dB
Video Out	CVBS : 1.0Vpp / 75Ω composite, 720 x 480(N), 720 x 576(P), for installation USB : micro USB type B, 1280 x 720 for installation
LENS	
Focal Length (Zoom Ratio)	3.7mm fixed (XNO-8020R), 4.6mm fixed (XNO-8030R), 7mm fixed (XNO-8040R)
Max. Aperture Ratio	F1.6
Angular Field of View	H : 97.5° / V : 71.9° / D : 126.2° (XNO-8020R), H : 77.9° / V : 57.9° / D : 98.7° (XNO-8030R), H : 50.7° / V : 37.8° / D : 63.8° (XNO-8040R)
Min. Object Distance	0.4m (1.31ft)
Focus Control	Manual
Lens / Mount Type	Fixed / Board-in type
OPERATIONAL	
IR Viewable Length	30m (98.43ft) Off / On (Displayed up to 85 characters) - W/W : English / Numeric / Special characters - China : English / Numeric / Special / Chinese characters - Common : Multi-line (Max. 5), Color (Grey / Green / Red / Blue / Black / White), Transparency, Auto scale by resolution
Camera Title	
Day & Night	
Backlight Compensation	Auto (ICR) / Color / B/W / External / Schedule
Wide Dynamic Range	Off / BLC / HLC (Masking / Dimming), WDR
Contrast Enhancement	SSDR (Off / On)
Digital Noise Reduction	SSNRV (2D+3D noise filter) (Off / On)
Digital Image Stabilization	Off / On
Defog	Off / Auto (Input from fog detection) / Manual
Motion Detection	Off / On (8ea, 8point polygonal zones), Handover
Privacy Masking	Off / On (32ea, Polygonal) - Color : Grey / Green / Red / Blue / Black / White, Mosaic
Gain Control	Off / Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor (Included mercury & Sodium)
Contrast	Level adjustment
LDC (Lens Distortion Correction)	Off / On (5 levels with min / max)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker (2 ~ 1/12,000sec)
Digital PTZ	24x, Digital PTZ (Preset, Group)
Flip / Mirror	Off / On, Hallway view : 90°/270° Tampering, Loitering, Directional detection, Defocus detection, Fog detection, Virtual line, Enter / Exit, (Dis)Appear, Audio detection, Face detection, Motion detection, Digital auto tracking, Sound classification, Heatmap, People counting, Queue management
Video & Audio Analytics	
Alarm I/O	Input 1ea / Output 1ea
Alarm Triggers	Alarm input, Motion detection, Video & Audio analytics, Network disconnect
Alarm Events	File upload via FTP, E-mail, Notification via E-mail, Local storage (SD/SDHC/SDXC) or NAS recording at event triggers, External output, DPTZ preset
Pixel Counter	Support
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.265 / H.264 (MPEG-4 part 10/AVC) : Main / Baseline / High, MJPEG
Resolution	2560 x 1920, 2560 x 1440, 1920 x 1080, 1600 x 1200, 1280 x 1024, 1280 x 960, 1280 x 720, 1024 x 768, 800 x 600, 800 x 448, 720 x 576, 720 x 480, 640 x 480, 640 x 360, 320 x 240
Max. Framerate	H.265 / H.264 : Max. 30fps at all resolutions, MJPEG : Max. 30fps
Smart Codec	Manual mode (Area-based : 5ea)
WiseStream II	Support
Video Quality Adjustment	H.265 / H.264 : Target bitrate level control, MJPEG : Target bitrate level control
Bitrate Control Method	H.265 / H.264 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 10 profiles)
Audio In	Selectable (Mic in / Line in), Supply voltage : 2.5V DC (4mA), Input impedance : approx. 2K Ohm
Audio Out	Line out, Max output level : 1Vrms
Audio Compression Format	G.711 u-law/G.726 selectable, G.726 (ADPCM) 8KHz, G.711 8KHz G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps, AAC-LC : 48Kbps at 8/16/32/48KHz
Audio Communication	Bi-directional (2-way)
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour HTTPS(SSL) login authentication, Digest login authentication
Security	IP address filtering, User access log, 802.1X authentication (EAP-TLS, EAP-LEAP)
Streaming Method	Unicast / Multicast
Max. User Access	20 users at unicast mode
Edge Storage	SD/SDHC/SDXC 2slot (Up to 512GB) - Continuous recording (1st slot to 2nd slot) NAS (Network Attached Storage), Local PC for instant recording
Application Programming Interface	ONVIF profile S/G, SUNAPI (HTTP API), Wisenet Open Platform
Webpage Language	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek
Web Viewer	Supported OS : Windows 7, 8.1, 10, Mac OS X 10.10, 10.11, 10.12 Non-plugin Webviewer - Supported Browser : Google Chrome 54, MS Edge 38, Mozilla Firefox 49(Window 64bit only), Apple Safari 9 * Mac OS X only Plug-in Webviewer - Supported Browser : MS Explore 11, Apple Safari 9 * Mac OS X only
Central Management Software	
ENVIRONMENTAL	
Operating Temperature / Humidity	-30°C ~ +55°C (-22°F ~ +131°F) / Less than 90% RH * Start up should be done at above -20°C (-4°F)
Storage Temperature / Humidity	-50°C ~ +60°C (-58°F ~ +140°F) / Less than 90% RH
Ingress Protection / Vandal Resistance	IP67, IP66, NEMA 4X / IK10
ELECTRICAL	
Input Voltage / Current	12V DC ±10%, PoE (IEEE802.3af)
Power Consumption	Max. 9.3W (12VDC), Max. 10.3W (PoE)
MECHANICAL	
Color / Material	Dark gray / Aluminum
Dimensions (WxH)	Ø70.0 x 296.0mm (Ø4.72" x 11.65") (Without sunshield)
Weight	1.22Kg (2.69lb)

* The latest product information / specification can be found at hanwha-security.eu
* Design and specifications are subject to change without notice.

XND-8080R

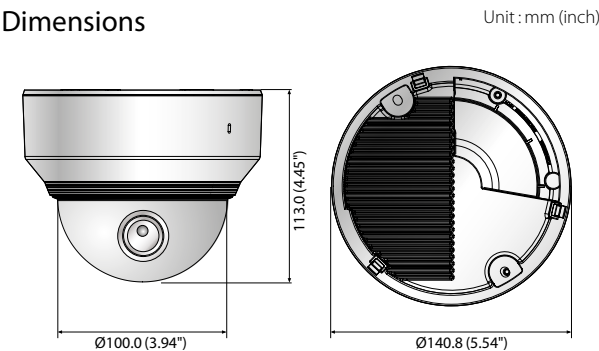
5M Network IR Dome Camera



Key Features

- Max. 5megapixel (2560 x 1920) resolution
- 3.9 ~ 9.4mm (2.4x) motorized varifocal lens
- Max. 30fps@all resolutions (H.265/H.264)
- H.265, H.264, MJPEG codec supported, Multiple streaming
- Day & Night (ICR), WDR (120dB), Defog
- Loitering, Directional detection, Fog detection, Audio detection, Digital auto tracking, Sound classification, Tampering
- Motion detection, Handover
- SD/SDHC/SDXC memory slot (Max. 512GB)
- Hallway view, WiseStream II support
- IR viewable length 30m, IK08
- LDC support (Lens Distortion Correction)
- PoE / 12V DC, Bi-directional audio support

Dimensions



Accessories (Optional)



XND-8080R	
VIDEO	
Imaging Device	1/1.8" 6M CMOS
Total Pixels	3,096(H) x 2,094(V)
Effective Pixels	2,616(H) x 1,976(V)
Scanning System	Progressive Scan
Min. Illumination	Color : 0.07Lux (F1.3, 1/30sec), B/W : 0Lux (IR LED on)
S / N Ratio	50dB
Video Out	CVBS : 1.0Vpp / 75Ω composite, 720 x 480(N), 720 x 576(P), for installation USB : micro USB type B, 1280 x 720 for installation
LENS	
Focal Length (Zoom Ratio)	3.9 ~ 9.4mm (2.4x) motorized varifocal
Max. Aperture Ratio	F1.3
Angular Field of View	H : 92.1° ~ 38.7° / V : 67.2° ~ 29.0° / D : 119.9° ~ 48.6°
Min. Object Distance	0.5m (1.64ft)
Focus Control	Simple focus (Motorized V/F) / Manual, Remote control via network (Manual, Simple focus)
Lens / Mount Type	DC auto iris, P-Iris / Board-in type
PAN / TILT / ROTATE	
Pan / Tilt / Rotate Range	0° ~ 354° / 0° ~ 67° / 0° ~ 355°
OPERATIONAL	
IR Viewable Length	30m (98.43ft) Off / On (Displayed up to 85 characters) - W/W : English / Numeric / Special characters - China : English / Numeric / Special / Chinese characters - Common : Multi-line (Max. 5), Color (Grey / Green / Red / Blue / Black / White), Transparency, Auto scale by resolution
Camera Title	
Day & Night	
Backlight Compensation	Auto (ICR) / Color / B/W / External / Schedule
Wide Dynamic Range	Off / BLC / HLC (Masking / Dimming), WDR
Contrast Enhancement	SSDR (Off / On)
Digital Noise Reduction	SSNRV (2D+3D noise filter) (Off / On)
Digital Image Stabilization	Off / On
Defog	Off / Auto (Input from fog detection) / Manual
Motion Detection	Off / On (8ea, 8point polygonal zones), Handover
Privacy Masking	Off / On (32ea, Polygonal) - Color : Grey / Green / Red / Blue / Black / White, Mosaic
Gain Control	Off / Low / Middle / High / Manual
White Balance	ATW / AWC / Manual / Indoor / Outdoor (Included mercury & Sodium)
Contrast	Level adjustment
LDC (Lens Distortion Correction)	Off / On (5 levels with min / max)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker (2 ~ 1/12,000sec)
Digital PTZ	24x, Digital PTZ (Preset, Group)
Flip / Mirror	Off / On, Hallway view : 90°/270° Tampering, Loitering, Directional detection, Defocus detection, Fog detection, Virtual line, Enter / Exit, (Dis)Appear, Audio detection, Face detection, Motion detection, Digital auto tracking, Sound classification
Video & Audio Analytics	
Alarm I/O	Input 1ea / Output 1ea
Alarm Triggers	Alarm input, Motion detection, Video & Audio analytics, Network disconnect
Alarm Events	File upload via FTP, E-mail, Notification via E-mail, Local storage (SD/SDHC/SDXC) or NAS recording at event triggers, External output, DPTZ preset
Pixel Counter	Support
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.265 / H.264 (MPEG-4 part 10/AVC) : Main / Baseline / High, MJPEG
Resolution	2560 x 1920, 2560 x 1440, 1920 x 1080, 1600 x 1200, 1280 x 1024, 1280 x 960, 1280 x 720, 1024 x 768, 800 x 600, 800 x 448, 720 x 576, 720 x 480, 640 x 480, 640 x 360, 320 x 240
Max. Framerate	H.265 / H.264 : Max. 30fps at all resolutions, MJPEG : Max. 30fps
Smart Codec	Manual mode (Area-based : 5ea)
WiseStream II	Support
Video Quality Adjustment	H.265 / H.264 : Target bitrate level control, MJPEG : Target bitrate level control
Bitrate Control Method	H.265 / H.264 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 10 profiles)
Audio In	Selectable (Mic in / Line in), Supply voltage : 2.5V DC (4mA), Input impedance : approx. 2K Ohm
Audio Out	Line out, Max output level : 1Vrms
Audio Compression Format	G.711 u-law/G.726 selectable, G.726 (ADPCM) 8KHz, G.711 8KHz G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps, AAC-LC : 48Kbps at 8/16/32/48KHz
Audio Communication	Bi-directional (2-way)
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour HTTPS(SSL) login authentication, Digest login authentication
Security	IP address filtering, User access log, 802.1X authentication (EAP-TLS, EAP-LEAP)
Streaming Method	Unicast / Multicast
Max. User Access	20 users at unicast mode
Edge Storage	SD/SDHC/SDXC 2slot (Up to 512GB) - Continuous recording (1st slot to 2nd slot) NAS (Network Attached Storage), Local PC for instant recording
Application Programming Interface	ONVIF profile S/G, SUNAPI (HTTP API), Wisenet Open Platform
Webpage Language	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek
Web Viewer	Supported OS : Windows 7, 8.1, 10, Mac OS X 10.10, 10.11, 10.12 Non-plugin Webviewer - Supported Browser : Google Chrome 54, MS Edge 38, Mozilla Firefox 49(Window 64bit only), Apple Safari 9 * Mac OS X only Plug-in Webviewer - Supported Browser : MS Explore 11, Apple Safari 9 * Mac OS X only
Central Management Software	
ENVIRONMENTAL	
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
Vandal Resistance	IK08
ELECTRICAL	
Input Voltage / Current	12V DC ±10%, PoE (IEEE802.3af)
Power Consumption	Max. 9W (12VDC), Max. 10W (PoE)
MECHANICAL	
Color / Material	Ivory / Plastic
Dimensions (WxH)	Ø140.8 x 113.0mm (Ø5.54" x 4.45")
Weight	628g (1.38lb)

* The latest product information / specification can be found at hanwha-security.eu
* Design and specifications are subject to change without notice.

XND-8080RV

5M Network IR Dome Camera

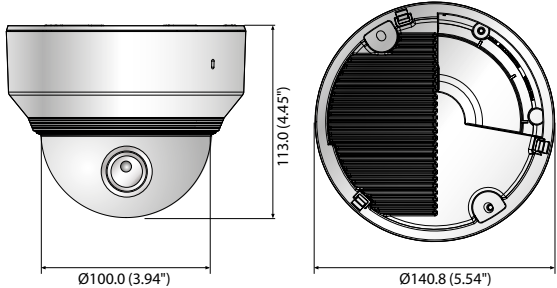


Key Features

- Max. 5megapixel (2560 x 1920) resolution
- 3.9 ~ 9.4mm (2.4x) motorized varifocal lens
- Max. 30fps@all resolutions (H.265/H.264)
- H.265, H.264, MJPEG codec supported, Multiple streaming
- Day & Night (ICR), WDR (120dB), Defog
- Loitering, Directional detection, Fog detection, Audio detection, Digital auto tracking, Sound classification, Tampering
- Motion detection, Handover
- SD/SDHC/SDXC memory slot (Max. 512GB)
- Hallway view, WiseStream II support
- IR viewable length 30m, IK08
- LDC support (Lens Distortion Correction)
- PoE / 12V DC, Bi-directional audio support

Dimensions

Unit : mm (inch)



Accessories (Optional)



XND-8080RV	
VIDEO	
Imaging Device	1/1.8" 6M CMOS
Total Pixels	3,096(H) x 2,094(V)
Effective Pixels	2,616(H) x 1,976(V)
Scanning System	Progressive Scan
Min. Illumination	Color : 0.07Lux (F1.3, 1/30sec), B/W : 0Lux (IR LED on)
S / N Ratio	50dB
Video Out	CVBS : 1.0Vpp / 75Ω composite, 720 x 480(N), 720 x 576(P), for installation USB : micro USB type B, 1280 x 720 for installation
LENS	
Focal Length (Zoom Ratio)	3.9 ~ 9.4mm (2.4x) motorized varifocal
Max. Aperture Ratio	F1.3
Angular Field of View	H: 92.1° ~ 38.7° / V: 67.2° ~ 29.0° / D: 119.9° ~ 48.6°
Min. Object Distance	0.5m (1.64ft)
Focus Control	Simple focus (Motorized V/F) / Manual, Remote control via network (Manual, Simple focus)
Lens / Mount Type	DC auto iris, P-Iris / Board-in type
PAN / TILT / ROTATE	
Pan / Tilt / Rotate Range	0° ~ 354° / 0° ~ 67° / 0° ~ 355°
OPERATIONAL	
IR Viewable Length	30m (98.43ft)
Camera Title	Off / On (Displayed up to 85 characters) - W/W : English / Numeric / Special characters - China : English / Numeric / Special / Chinese characters - Common : Multi-line (Max. 5), Color (Grey / Green / Red / Blue / Black / White), Transparency, Auto scale by resolution
Day & Night	Auto (ICR) / Color / B/W / External / Schedule
Backlight Compensation	Off / BLC / HLC (Masking / Dimming), WDR
Wide Dynamic Range	120dB
Contrast Enhancement	SSDR (Off / On)
Digital Noise Reduction	SSNRV (2D+3D noise filter) (Off / On)
Digital Image Stabilization	Off / On
Defog	Off / Auto (Input from fog detection) / Manual
Motion Detection	Off / On (8ea, 8point polygonal zones), Handover
Privacy Masking	Off / On (32ea, Polygonal) - Color : Grey / Green / Red / Blue / Black / White, Mosaic
Gain Control	Off / Low / Middle / High / Manual
White Balance	ATW / AWC / Manual / Indoor / Outdoor (Included mercury & Sodium)
Contrast	Level adjustment
LDC (Lens Distortion Correction)	Off / On (5 levels with min / max)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker (2 ~ 1/12,000sec)
Digital PTZ	24x, Digital PTZ (Preset, Group)
Flip / Mirror	Off / On, Hallway view : 90°/270°
Video & Audio Analytics	Tampering, Loitering, Directional detection, Defocus detection, Fog detection, Virtual line, Enter / Exit, (Dis)Appear, Audio detection, Face detection, Motion detection, Digital auto tracking, Sound classification
Alarm I/O	Input 1ea / Output 1ea
Alarm Triggers	Alarm input, Motion detection, Video & Audio analytics, Network disconnect
Alarm Events	File upload via FTP, E-mail, Notification via E-mail, Local storage (SD/SDHC/SDXC) or NAS recording at event triggers, External output, DPTZ preset
Pixel Counter	Support
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.265 / H.264 (MPEG-4 part 10/AVC) : Main / Baseline / High, MJPEG
Resolution	2560 x 1920, 2560 x 1440, 1920 x 1080, 1600 x 1200, 1280 x 1024, 1280 x 960, 1280 x 720, 1024 x 768, 800 x 600, 800 x 448, 720 x 576, 720 x 480, 640 x 480, 640 x 360, 320 x 240
Max. Framerate	H.265 / H.264 : Max. 30fps at all resolutions, MJPEG : Max. 30fps
Smart Codec	Manual mode (Area-based : 5ea)
WiseStream II	Support
Video Quality Adjustment	H.265 / H.264 : Target bitrate level control, MJPEG : Target bitrate level control
Bitrate Control Method	H.265 / H.264 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 10 profiles)
Audio In	Selectable (Mic in / Line in), Supply voltage : 2.5V DC (4mA), Input impedance : approx. 2K Ohm
Audio Out	Line out, Max output level : 1Vrms
Audio Compression Format	G.711 u-law/G.726 selectable, G.726 (ADPCM) 8KHz, G.711 8KHz G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps, AAC-LC : 48Kbps at 8/16/32/48KHz
Audio Communication	Bi-directional (2-way)
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP (UDP), RTP (TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3 (MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour
Security	HTTPS (SSL) login authentication, Digest login authentication
Streaming Method	Unicast / Multicast
Max. User Access	20 users at unicast mode
Edge Storage	SD/SDHC/SDXC 2slot (Up to 512GB) - Continuous recording (1st slot to 2nd slot)
Application Programming Interface	NAS (Network Attached Storage), Local PC for instant recording
Webpage Language	ONVIF profile S/G, SUNAPI (HTTP API), Wisenet Open Platform
Web Viewer	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek Supported OS : Windows 7, 8.1, 10, Mac OS X 10.10, 10.11, 10.12 Non-plugin Webviewer - Supported Browser : Google Chrome 54, MS Edge 38, Mozilla Firefox 49 (Window 64bit only), Apple Safari 9 * Mac OS X only Plug-in Webviewer - Supported Browser : MS Explore 11, Apple Safari 9 * Mac OS X only
Central Management Software	SmartViewer, SSM
ENVIRONMENTAL	
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
Vandal Resistance	IK08
ELECTRICAL	
Input Voltage / Current	12V DC ±10%, PoE (IEEE802.3af)
Power Consumption	Max. 9W (12VDC), Max. 10W (PoE)
MECHANICAL	
Color / Material	Ivory / Aluminum
Dimensions (WxH)	Ø140.8 x 113.0mm (Ø5.54" x 4.45")
Weight	732g (1.61lb)

* The latest product information / specification can be found at hanwha-security.eu
* Design and specifications are subject to change without notice.

XND-8020R/8030R/8040R

5M Network IR Dome Camera

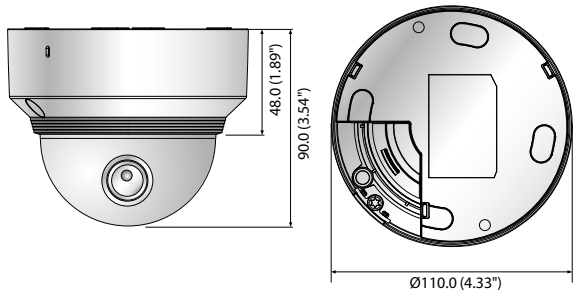


Key Features

- Max. 5megapixel (2560 x 1920) resolution
- Built-in 3.7mm fixed lens (XND-8020R)
4.6mm fixed lens (XND-8030R)
7mm fixed lens (XND-8040R)
- Max. 30fps@all resolutions (H.265/H.264)
- H.265, H.264, MJPEG codec supported, Multiple streaming
- Day & Night (ICR), WDR (120dB), Defog
- Loitering, Directional detection, Fog detection, Audio detection, Digital auto tracking, Sound classification, Heatmap, People counting, Queue management, Tampering
- Motion detection, Handover
- SD/SDHC/SDXC memory slot (Max. 512GB), PoE / 12V DC
- Hallway view, WiseStream II support
- IR viewable length 30m, IK08
- LDC support (Lens Distortion Correction)

Dimensions

Unit : mm (inch)



Accessories (Optional)



XND-8020R/8030R/8040R	
VIDEO	
Imaging Device	1/1.8" 6M CMOS
Total Pixels	3,096(H) x 2,094(V)
Effective Pixels	2,616(H) x 1,976(V)
Scanning System	Progressive Scan
Min. Illumination	Color : 0.16Lux (F1.6, 1/30sec), B/W : 0Lux (IR LED on)
S / N Ratio	50dB
Video Out	CVBS : 1.0Vpp / 75Ω composite, 720 x 480(N), 720 x 576(P), for installation USB : micro USB type B, 1280 x 720 for installation
LENS	
Focal Length (Zoom Ratio)	3.7mm fixed (XND-8020R), 4.6mm fixed (XND-8030R), 7mm fixed (XND-8040R)
Max. Aperture Ratio	F1.6
Angular Field of View	H: 97.5° / V: 71.9° / D: 126.2° (XND-8020R), H: 77.9° / V: 57.9° / D: 98.7° (XND-8030R), H: 50.7° / V: 37.8° / D: 63.8° (XND-8040R)
Min. Object Distance	0.4m (1.31ft)
Focus Control	Manual
Lens / Mount Type	Fixed / Board-in type
PAN / TILT / ROTATE	
Pan / Tilt / Rotate Range	0° ~ 354° / 0° ~ 67° / 0° ~ 355°
OPERATIONAL	
IR Viewable Length	30m (98.43ft)
Camera Title	Off / On (Displayed up to 85 characters) - W/W : English / Numeric / Special characters - China : English / Numeric / Special / Chinese characters - Common : Multi-line (Max. 5), Color (Grey / Green / Red / Blue / Black / White), Transparency, Auto scale by resolution
Day & Night	Auto (ICR) / Color / B/W / External / Schedule
Backlight Compensation	Off / BLC / HLC (Masking / Dimming), WDR
Wide Dynamic Range	120dB
Contrast Enhancement	SSDR (Off / On)
Digital Noise Reduction	SSNRV (2D+3D noise filter) (Off / On)
Digital Image Stabilization	Off / On
Defog	Off / Auto (Input from fog detection) / Manual
Motion Detection	Off / On (8ea, 8point polygonal zones), Handover
Privacy Masking	Off / On (32ea, Polygonal) - Color : Grey / Green / Red / Blue / Black / White, Mosaic
Gain Control	Off / Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor (Included mercury & Sodium)
Contrast	Level adjustment
LDC (Lens Distortion Correction)	Off / On (5 levels with min / max)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker (2 ~ 1/12,000sec)
Digital PTZ	24x, Digital PTZ (Preset, Group)
Flip / Mirror	Off / On, Hallway view : 90°/270°
Video & Audio Analytics	Tampering, Loitering, Directional detection, Defocus detection, Fog detection, Virtual line, Enter / Exit, (Dis)Appear, Audio detection, Face detection, Motion detection, Digital auto tracking, Sound classification, Heatmap, People counting, Queue management
Alarm I/O	Input 1ea / Output 1ea
Alarm Triggers	Alarm input, Motion detection, Video & Audio analytics, Network disconnect
Alarm Events	File upload via FTP, E-mail, Notification via E-mail, Local storage (SD/SDHC/SDXC) or NAS recording at event triggers, External output, DPTZ preset
Pixel Counter	Support
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.265 / H.264 (MPEG-4 part 10/AVC) : Main / Baseline / High, MJPEG
Resolution	2560 x 1920, 2560 x 1440, 1920 x 1080, 1600 x 1200, 1280 x 1024, 1280 x 960, 1280 x 720, 1024 x 768, 800 x 600, 800 x 448, 720 x 576, 720 x 480, 640 x 480, 640 x 360, 320 x 240
Max. Framerate	H.265 / H.264 : Max. 30fps at all resolutions, MJPEG : Max. 30fps
Smart Codec	Manual mode (Area-based : 5ea)
WiseStream II	Support
Video Quality Adjustment	H.265 / H.264 : Target bitrate level control, MJPEG : Target bitrate level control
Bitrate Control Method	H.265 / H.264 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 10 profiles)
Audio In	Selectable (Mic in / Line in), Max output level : 1Vrms Supply voltage : 2.5V DC (4mA), Input impedance : approx. 2K Ohm
Audio Out	Line out, Max output level : 1Vrms
Audio Compression Format	G.711 u-law/G.726 selectable, G.726 (ADPCM) 8KHz, G.711 8KHz G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps, AAC-LC : 48Kbps at 8/16/32/48KHz
Audio Communication	Bi-directional (2-way)
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP (UDP), RTP (TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3 (MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour
Security	HTTPS (SSL) login authentication, Digest login authentication
Streaming Method	Unicast / Multicast
Max. User Access	20 users at unicast mode
Edge Storage	SD/SDHC/SDXC 2slot (Up to 512GB) - Continuous recording (1st slot to 2nd slot)
Application Programming Interface	NAS (Network Attached Storage), Local PC for instant recording
Webpage Language	ONVIF profile S/G, SUNAPI (HTTP API), Wisenet Open Platform
Web Viewer	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek Supported OS : Windows 7, 8.1, 10, Mac OS X 10.10, 10.11, 10.12 Non-plugin Webviewer - Supported Browser : Google Chrome 54, MS Edge 38, Mozilla Firefox 49 (Window 64bit only), Apple Safari 9 * Mac OS X only Plug-in Webviewer - Supported Browser : MS Explore 11, Apple Safari 9 * Mac OS X only
Central Management Software	SmartViewer, SSM
ENVIRONMENTAL	
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
Vandal Resistance	IK08
ELECTRICAL	
Input Voltage / Current	12V DC ±10%, PoE (IEEE802.3af)
Power Consumption	Max. 8W (12VDC), Max. 9W (PoE)
MECHANICAL	
Color / Material	Ivory / Metal
Dimensions (WxH)	Ø110.0 x 90.0mm (Ø4.33" x 3.54")
Weight	380g (0.84lb)

* The latest product information / specification can be found at hanwha-security.eu
* Design and specifications are subject to change without notice.

XNV-8080R

5M Vandal-Resistant Network IR Dome Camera

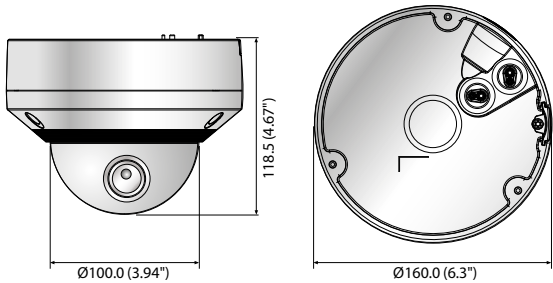


Key Features

- Max. 5megapixel (2560 x 1920) resolution
- 3.9 ~ 9.4mm (2.4x) motorized varifocal lens
- Max. 30fps@all resolutions (H.265/H.264)
- H.265, H.264, MJPEG codec supported, Multiple streaming
- Day & Night (ICR), WDR (120dB), Defog
- Loitering, Directional detection, Fog detection, Audio detection, Digital auto tracking, Sound classification, Tampering
- Motion detection, Handover
- SD/SDHC/SDXC memory slot (Max. 512GB)
- Hallway view, WiseStream II support
- IR viewable length 50m, IP67/IP66, NEMA 4X, IK10
- LDC support (Lens Distortion Correction)
- PoE / 24V AC, 12V DC, Bi-directional audio support

Dimensions

Unit : mm (inch)



Accessories (Optional)



XNV-8080R	
VIDEO	
Imaging Device	1/1.8" 6M CMOS
Total Pixels	3,096(H) x 2,094(V)
Effective Pixels	2,616(H) x 1,976(V)
Scanning System	Progressive Scan
Min. Illumination	Color : 0.07Lux (F1.3, 1/30sec), B/W : 0Lux (IR LED on)
S / N Ratio	50dB
Video Out	CVBS : 1.0Vpp / 75Ω composite, 720 x 480(N), 720 x 576(P), for installation USB : micro USB type B, 1280 x 720 for installation
LENS	
Focal Length (Zoom Ratio)	3.9 ~ 9.4mm (2.4x) motorized varifocal
Max. Aperture Ratio	F1.3
Angular Field of View	H : 92.1° ~ 38.7° / V : 67.2° ~ 29.0° / D : 119.9° ~ 48.6°
Min. Object Distance	0.5m (1.64ft)
Focus Control	Simple focus (Motorized V/F) / Manual, Remote control via network (Manual, Simple focus)
Lens / Mount Type	DC auto iris, P-Iris / Board-in type
PAN / TILT / ROTATE	
Pan / Tilt / Rotate Range	0° ~ 354° / 0° ~ 67° / 0° ~ 355°
OPERATIONAL	
IR Viewable Length	50m (164.04ft)
Camera Title	Off / On (Displayed up to 85 characters) - W/W : English / Numeric / Special characters - China : English / Numeric / Special / Chinese characters - Common : Multi-line (Max. 5), Color (Grey / Green / Red / Blue / Black / White), Transparency, Auto scale by resolution
Day & Night	Auto (ICR) / Color / B/W / External / Schedule
Backlight Compensation	Off / BLC / HLC (Masking / Dimming), WDR
Wide Dynamic Range	120dB
Contrast Enhancement	SSDR (Off / On)
Digital Noise Reduction	SSNRV (2D+3D noise filter) (Off / On)
Digital Image Stabilization	Off / On
Defog	Off / Auto (Input from fog detection) / Manual
Motion Detection	Off / On (8ea, 8point polygonal zones), Handover
Privacy Masking	Off / On (32ea, Polygonal) - Color : Grey / Green / Red / Blue / Black / White, Mosaic
Gain Control	Off / Low / Middle / High / Manual
White Balance	ATW / AWC / Manual / Indoor / Outdoor (Included mercury & Sodium)
Contrast	Level adjustment
LDC (Lens Distortion Correction)	Off / On (5 levels with min / max)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker (2 ~ 1/12,000sec)
Digital PTZ	24x, Digital PTZ (Preset, Group)
Flip / Mirror	Off / On, Hallway view : 90°/270°
Video & Audio Analytics	Tampering, Loitering, Directional detection, Defocus detection, Fog detection, Virtual line, Enter / Exit, (Dis)Appear, Audio detection, Face detection, Motion detection, Digital auto tracking, Sound classification
Alarm I/O	Input 1ea / Output 1ea
Alarm Triggers	Alarm input, Motion detection, Video & Audio analytics, Network disconnect
Alarm Events	File upload via FTP, E-mail, Notification via E-mail, Local storage (SD/SDHC/SDXC) or NAS recording at event triggers, External output, DPTZ preset
Pixel Counter	Support
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.265 / H.264 (MPEG-4 part 10/AVC) : Main / Baseline / High, MJPEG
Resolution	2560 x 1920, 2560 x 1440, 1920 x 1080, 1600 x 1200, 1280 x 1024, 1280 x 960, 1280 x 720, 1024 x 768, 800 x 600, 800 x 448, 720 x 576, 720 x 480, 640 x 480, 640 x 360, 320 x 240
Max. Framerate	H.265 / H.264 : Max. 30fps at all resolutions, MJPEG : Max. 30fps
Smart Codec	Manual mode (Area-based : 5ea)
WiseStream II	Support
Video Quality Adjustment	H.265 / H.264 : Target bitrate level control, MJPEG : Target bitrate level control
Bitrate Control Method	H.265 / H.264 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 10 profiles)
Audio In	Selectable (Mic in / Line in), Supply voltage : 2.5V DC (4mA), Input impedance : approx. 2K Ohm
Audio Out	Line out, Max output level : 1Vrms
Audio Compression Format	G.711 u-law/G.726 selectable, G.726 (ADPCM) 8KHz, G.711 8KHz
Audio Communication	G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps, AAC-LC : 48Kbps at 8/16/32/48KHz
IP	Bi-directional (2-way)
Protocol	IPv4, IPv6
Security	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour
Streaming Method	HTTPS(SSL) login authentication, Digest login authentication
Max. User Access	IP address filtering, User access log, 802.1X authentication (EAP-TLS, EAP-LEAP)
Edge Storage	Unicast / Multicast
Application Programming Interface	20 users at unicast mode
Webpage Language	SD/SDHC/SDXC 2slot (Up to 512GB) - Continuous recording (1st slot to 2nd slot) NAS (Network Attached Storage), Local PC for instant recording
Web Viewer	ONVIF profile S/G, SUNAPI (HTTP API), Wisenet Open Platform
Central Management Software	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek
ENVIRONMENTAL	Supported OS : Windows 7, 8.1, 10, Mac OS X 10.10, 10.11, 10.12
Operating Temperature / Humidity	Non-plugin Webviewer
Storage Temperature / Humidity	- Supported Browser : Google Chrome 54, MS Edge 38, Mozilla Firefox 49(Window 64bit only), Apple Safari 9 * Mac OS X only
Ingress Protection / Vandal Resistance	Plug-in Webviewer
ELECTRICAL	- Supported Browser : MS Explore 11, Apple Safari 9 * Mac OS X only
Input Voltage / Current	SmartViewer, SSM
Power Consumption	
MECHANICAL	
Color / Material	
Dimensions (WxH)	
Weight	

* The latest product information / specification can be found at hanwha-security.eu
* Design and specifications are subject to change without notice.

XNV-8020R/8030R/8040R

5M Vandal-Resistant Network IR Dome Camera

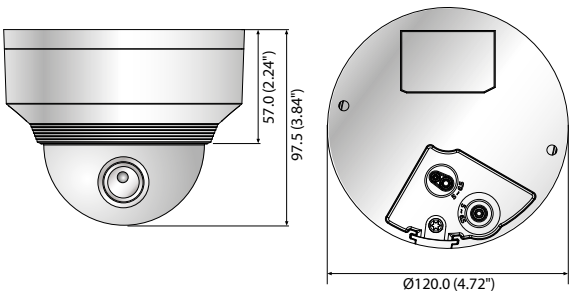


Key Features

- Max. 5megapixel (2560 x 1920) resolution
- Built-in 3.7mm fixed lens (XNV-8020R)
4.6mm fixed lens (XNV-8030R)
7mm fixed lens (XNV-8040R)
- Max. 30fps@all resolutions (H.265/H.264)
- H.265, H.264, MJPEG codec supported, Multiple streaming
- Day & Night (ICR), WDR (120dB), Defog
- Loitering, Directional detection, Fog detection, Audio detection, Digital auto tracking, Sound classification, Heatmap, People counting, Queue management, Tampering
- Motion detection, Handover
- SD/SDHC/SDXC memory slot (Max. 512GB), PoE / 12V DC
- Hallway view, WiseStream II support
- IR viewable length 30m, IP67/IP66, IK10
- LDC support (Lens Distortion Correction)

Dimensions

Unit : mm (inch)



Accessories (Optional)



XNV-8020R/8030R/8040R	
VIDEO	
Imaging Device	1/1.8" 6M CMOS
Total Pixels	3,096(H) x 2,094(V)
Effective Pixels	2,616(H) x 1,976(V)
Scanning System	Progressive Scan
Min. Illumination	Color : 0.16Lux (F1.6, 1/30sec), B/W : 0Lux (IR LED on)
S / N Ratio	50dB
Video Out	CVBS : 1.0Vpp / 75Ω composite, 720 x 480(N), 720 x 576(P), for installation USB : micro USB type B, 1280 x 720 for installation
LENS	
Focal Length (Zoom Ratio)	3.7mm fixed (XNV-8020R), 4.6mm fixed (XNV-8030R), 7mm fixed (XNV-8040R)
Max. Aperture Ratio	F1.6
Angular Field of View	H : 97.5° / V : 71.9° / D : 126.2° (XNV-8020R), H : 77.9° / V : 57.9° / D : 98.7° (XNV-8030R), H : 50.7° / V : 37.8° / D : 63.8° (XNV-8040R)
Min. Object Distance	0.4m (1.31ft)
Focus Control	Manual
Lens / Mount Type	Fixed / Board-in type
PAN / TILT / ROTATE	
Pan / Tilt / Rotate Range	0° ~ 354° / 0° ~ 67° / 0° ~ 355°
OPERATIONAL	
IR Viewable Length	30m (98.43ft)
Camera Title	Off / On (Displayed up to 85 characters) - W/W : English / Numeric / Special characters - China : English / Numeric / Special / Chinese characters - Common : Multi-line (Max. 5), Color (Grey / Green / Red / Blue / Black / White), Transparency, Auto scale by resolution
Day & Night	Auto (ICR) / Color / B/W / External / Schedule
Backlight Compensation	Off / BLC / HLC (Masking / Dimming), WDR
Wide Dynamic Range	120dB
Contrast Enhancement	SSDR (Off / On)
Digital Noise Reduction	SSNRV (2D+3D noise filter) (Off / On)
Digital Image Stabilization	Off / On
Defog	Off / Auto (Input from fog detection) / Manual
Motion Detection	Off / On (8ea, 8point polygonal zones), Handover
Privacy Masking	Off / On (32ea, Polygonal) - Color : Grey / Green / Red / Blue / Black / White, Mosaic
Gain Control	Off / Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor (Included mercury & Sodium)
Contrast	Level adjustment
LDC (Lens Distortion Correction)	Off / On (5 levels with min / max)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker (2 ~ 1/12,000sec)
Digital PTZ	24x, Digital PTZ (Preset, Group)
Flip / Mirror	Off / On, Hallway view : 90°/270°
Video & Audio Analytics	Tampering, Loitering, Directional detection, Defocus detection, Fog detection, Virtual line, Enter / Exit, (Dis)Appear, Audio detection, Face detection, Motion detection, Digital auto tracking, Sound classification, Heatmap, People counting, Queue management
Alarm I/O	Input 1ea / Output 1ea
Alarm Triggers	Alarm input, Motion detection, Video & Audio analytics, Network disconnect
Alarm Events	File upload via FTP, E-mail, Notification via E-mail, Local storage (SD/SDHC/SDXC) or NAS recording at event triggers, External output, DPTZ preset
Pixel Counter	Support
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.265 / H.264 (MPEG-4 part 10/AVC) : Main / Baseline / High, MJPEG
Resolution	2560 x 1920, 2560 x 1440, 1920 x 1080, 1600 x 1200, 1280 x 1024, 1280 x 960, 1280 x 720, 1024 x 768, 800 x 600, 800 x 448, 720 x 576, 720 x 480, 640 x 480, 640 x 360, 320 x 240
Max. Framerate	H.265 / H.264 : Max. 30fps at all resolutions, MJPEG : Max. 30fps
Smart Codec	Manual mode (Area-based : 5ea)
WiseStream II	Support
Video Quality Adjustment	H.265 / H.264 : Target bitrate level control, MJPEG : Target bitrate level control
Bitrate Control Method	H.265 / H.264 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 10 profiles)
Audio In	Selectable (Mic in / Line in), Supply voltage : 2.5V DC (4mA), Input impedance : approx. 2K Ohm
Audio Out	Line out, Max output level : 1Vrms
Audio Compression Format	G.711 u-law/G.726 selectable, G.726 (ADPCM) 8KHz, G.711 8KHz
Audio Communication	G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps, AAC-LC : 48Kbps at 8/16/32/48KHz
IP	Bi-directional (2-way)
Protocol	IPv4, IPv6
Security	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour
Streaming Method	HTTPS(SSL) login authentication, Digest login authentication
Max. User Access	IP address filtering, User access log, 802.1X authentication (EAP-TLS, EAP-LEAP)
Edge Storage	Unicast / Multicast
Application Programming Interface	20 users at unicast mode
Webpage Language	SD/SDHC/SDXC 2slot (Up to 512GB) - Continuous recording (1st slot to 2nd slot) NAS (Network Attached Storage), Local PC for instant recording
Web Viewer	ONVIF profile S/G, SUNAPI (HTTP API), Wisenet Open Platform
Central Management Software	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek
ENVIRONMENTAL	Supported OS : Windows 7, 8.1, 10, Mac OS X 10.10, 10.11, 10.12
Operating Temperature / Humidity	Non-plugin Webviewer
Storage Temperature / Humidity	- Supported Browser : Google Chrome 54, MS Edge 38, Mozilla Firefox 49(Window 64bit only), Apple Safari 9 * Mac OS X only
Ingress Protection / Vandal Resistance	Plug-in Webviewer
ELECTRICAL	- Supported Browser : MS Explore 11, Apple Safari 9 * Mac OS X only
Input Voltage / Current	SmartViewer, SSM
Power Consumption	
MECHANICAL	
Color / Material	
Dimensions (WxH)	
Weight	

* The latest product information / specification can be found at hanwha-security.eu
* Design and specifications are subject to change without notice.

XNB-6000

2M Network Camera



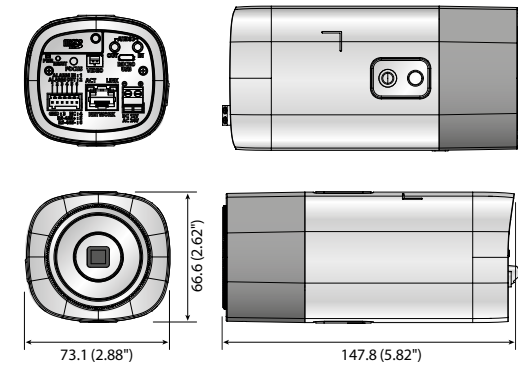
* Lens not included

Key Features

- Max. 2megapixel (1920 x 1080) resolution
- 0.01Lux@F1.2 (Color), 0.001Lux@F1.2 (B/W)
- Max. 60fps@all resolutions (H.265/H.264)
- H.265, H.264, MJPEG codec supported, Multiple streaming
- Day & Night (ICR), WDR (150dB), P-Iris, Defog
- Digital image stabilization with built-in Gyro sensor
- Loitering, Directional detection, Fog detection, Audio detection, Digital auto tracking, Sound classification, Tampering
- Motion detection, Handover
- SD/SDHC/SDXC memory slot (Max. 512GB)
- Hallway view, WiseStream II support
- LDC support (Lens Distortion Correction)
- PoE / 24V AC, 12V DC, Bi-directional audio support

Dimensions

Unit : mm (inch)



Accessories (Optional)



XNB-6000	
VIDEO	
Imaging Device	1/2.8" 2M CMOS
Total Pixels	1,945(H) x 1,109(V) 2.16M
Effective Pixels	1,945(H) x 1,097(V) 2.13M
Scanning System	Progressive Scan
Min. Illumination	Color : 0.01Lux (F1.2, 1/30sec), B/W : 0.001Lux (F1.2, 1/30sec)
S / N Ratio	50dB
Video Out	CVBS : 1.0Vpp / 75Ω composite, 720 x 480(N), 720 x 576(P), for installation USB : micro USB type B, 1280 x 720 for installation
LENS	
Focus Control	Simple focus / Manual, Remote control via network, Button control (Manual, Simple focus)
Lens Type	Manual / DC auto iris, P-Iris
Mount Type	C / CS
OPERATIONAL	
Camera Title	
Off / On (Displayed up to 85 characters)	
- W/W : English / Numeric / Special characters	
- China : English / Numeric / Special / Chinese characters	
- Common : Multi-line (Max. 5), Color (Grey / Green / Red / Blue / Black / White), Transparency, Auto scale by resolution	
Day & Night	Auto (ICR) / Color / B/W / External / Schedule
Backlight Compensation	Off / BLC / HLC (Masking / Dimming), WDR
Wide Dynamic Range	150dB
Contrast Enhancement	SSDR (Off / On)
Digital Noise Reduction	SSNRV (2D+3D noise filter) (Off / On)
Digital Image Stabilization	Off / On (Built-in Gyro sensor)
Defog	Off / Auto (Input from fog detection) / Manual
Motion Detection	Off / On (8ea, 8point polygonal zones), Handover
Privacy Masking	Off / On (32ea, Polygonal) - Color : Grey / Green / Red / Blue / Black / White, Mosaic
Gain Control	Off / Low / Middle / High / Manual
White Balance	ATW / AWC / Manual / Indoor / Outdoor (Included mercury & Sodium)
Contrast	Level adjustment
LDC (Lens Distortion Correction)	Off / On (5 levels with min / max)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker (2 ~ 1/12,000sec)
Digital PTZ	24x, Digital PTZ (Preset, Group)
Flip / Mirror	Off / On, Hallway view : 90°/270°
Video & Audio Analytics	
Tampering, Loitering, Directional detection, Defocus detection, Fog detection, Virtual line, Enter / Exit, (Dis)Appear, Audio detection, Face detection, Motion detection, Digital auto tracking, Sound classification	
Input 1ea / Output 1ea	
Alarm I/O	RS-485
Remote Control Interface	
RS-485 Protocol	Samsung-T/E, Pelco-P/D, Sungjin, Panasonic, Honeywell, AD, Vicon, GE, Bosch
Alarm Triggers	Alarm input, Motion detection, Video & Audio analytics, Network disconnect
Alarm Events	File upload via FTP, E-mail, Notification via E-mail, Local storage (SD/SDHC/SDXC) or NAS recording at event triggers, External output, DPTZ preset
Fan / Heater	Off / On / Auto / Schedule via web viewer
Pixel Counter	Support
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.265 / H.264 (MPEG-4 part 10/AVC) : Main / Baseline / High, MJPEG
Resolution	1920 x 1080, 1280 x 1024, 1280 x 960, 1280 x 720, 1024 x 768, 800 x 600, 800 x 448, 720 x 576, 720 x 480, 640 x 480, 640 x 360, 320 x 240
Max. Framerate	H.265 / H.264 : Max. 60fps at all resolutions, MJPEG : Max. 30fps
Smart Codec	Manual mode (Area-based : Sea)
WiseStream II	Support
Video Quality Adjustment	H.265 / H.264 : Target bitrate level control, MJPEG : Target bitrate level control
Bitrate Control Method	H.265 / H.264 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 10 profiles)
Audio In	Selectable (Mic in / Line in), Max output level : 1Vrms
Audio Out	Supply voltage : 2.5V DC (4mA), Input impedance : approx. 2K Ohm
Audio Compression Format	G.711 u-law/G.726 selectable, G.726 (ADPCM) 8KHz, G.711 8KHz
Audio Communication	G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps, AAC-LC : 48Kbps at 8/16/32/48KHz
IP	Bi-directional (2-way)
Protocol	IPv4, IPv6
Security	TCP/IP, UDP/IP, RTP (UDP), RTP (TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour
Streaming Method	HTTP(S) (SSL) login authentication, Digest login authentication
Max. User Access	IP address filtering, User access log, 802.1X authentication (EAP-TLS, EAP-LEAP)
Edge Storage	Unicast / Multicast
Application Programming Interface	20 users at unicast mode
Webpage Language	SD/SDHC/SDXC 2slot (Up to 512GB) - Continuous recording (1st slot to 2nd slot)
Web Viewer	NAS (Network Attached Storage), Local PC for instant recording
	ONVIF profile S/G, SUNAPI (HTTP API), Wisenet Open Platform
English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek	
Supported OS : Windows 7, 8.1, 10, Mac OS X 10.10, 10.11, 10.12	
Non-plugin Webviewer	
- Supported Browser : Google Chrome 54, MS Edge 38, Mozilla Firefox(49Window 64bit only), Apple Safari 9 * Mac OS X only	
Plug-in Webviewer	
- Supported Browser : MS Explore 11, Apple Safari 9 * Mac OS X only	
SmartViewer, SSM	
Central Management Software	
ENVIRONMENTAL	
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
ELECTRICAL	
Input Voltage / Current	24V AC ±10%, 12V DC ±10%, PoE (IEEE802.3af)
Power Consumption	Max. 6.5W (12VDC), Max. 7.5W (PoE), Max. 8W (24VAC)
MECHANICAL	
Color / Material	Black, Ivory / Plastic
Dimensions (WxHxD)	73.1 x 66.6 x 147.8mm (2.88" x 2.62" x 5.82")
Weight	420g (0.93lb)

* The latest product information / specification can be found at hanwha-security.eu
* Design and specifications are subject to change without notice.

XNO-6080R

2M Network IR Bullet Camera

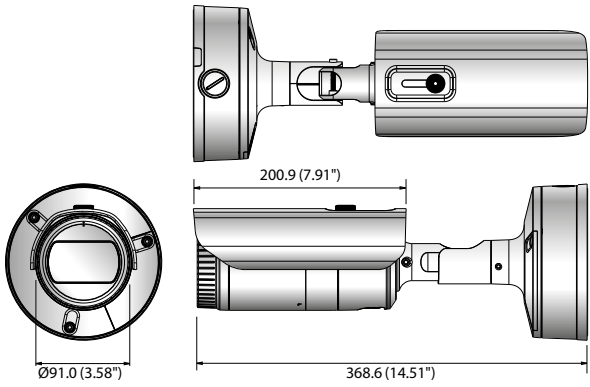


Key Features

- Max. 2megapixel (1920 x 1080) resolution
- 2.8 ~ 12mm (4.3x) motorized varifocal lens
- Max. 60fps@all resolutions (H.265/H.264)
- H.265, H.264, MJPEG codec supported, Multiple streaming
- Day & Night (ICR), WDR (150dB), Defog
- Loitering, Directional detection, Fog detection, Audio detection, Digital auto tracking, Sound classification, Tampering
- Motion detection, Handover
- SD/SDHC/SDXC memory slot (Max. 512GB)
- Hallway view, WiseStream II support
- IR viewable length 50m, IP67/IP66, NEMA 4X, IK10
- LDC support (Lens Distortion Correction)
- PoE / 24V AC, 12V DC, Bi-directional audio support

Dimensions

Unit : mm (inch)



Accessories (Optional)



XNO-6080R	
VIDEO	
Imaging Device	1/2.8" 2M CMOS
Total Pixels	1,945(H) x 1,109(V) 2.16M
Effective Pixels	1,945(H) x 1,097(V) 2.13M
Scanning System	Progressive Scan
Min. Illumination	Color : 0.015Lux (F1.4, 1/30sec), B/W : 0Lux (IR LED on)
S / N Ratio	50dB
Video Out	CVBS : 1.0Vpp / 75Ω composite, 720 x 480(N), 720 x 576(P), for installation USB : micro USB type B, 1280 x 720 for installation
LENS	
Focal Length (Zoom Ratio)	2.8 ~ 12mm (4.3x) motorized varifocal
Max. Aperture Ratio	F1.4(Wide) ~ F3.6(Tele)
Angular Field of View	H : 119.5° ~ 27.9° / V : 62.8° ~ 15.7° / D : 142.1° ~ 32.0°
Min. Object Distance	0.5m (1.64ft)
Focus Control	Simple focus (Motorized V/F) / Manual, Remote control via network (Manual, Simple focus)
Lens / Mount Type	DC auto iris, P-Iris / Board-in type
OPERATIONAL	
IR Viewable Length	50m (164.04ft)
Off / On (Displayed up to 85 characters)	
- W/W : English / Numeric / Special characters	
- China : English / Numeric / Special / Chinese characters	
- Common : Multi-line (Max. 5), Color (Grey / Green / Red / Blue / Black / White), Transparency, Auto scale by resolution	
Day & Night	Auto (ICR) / Color / B/W / External / Schedule
Backlight Compensation	Off / BLC / HLC (Masking / Dimming), WDR
Wide Dynamic Range	150dB
Contrast Enhancement	SSDR (Off / On)
Digital Noise Reduction	SSNRV (2D+3D noise filter) (Off / On)
Digital Image Stabilization	Off / On
Defog	Off / Auto (Input from fog detection) / Manual
Motion Detection	Off / On (8ea, 8point polygonal zones), Handover
Privacy Masking	Off / On (32ea, Polygonal) - Color : Grey / Green / Red / Blue / Black / White, Mosaic
Gain Control	Off / Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor (Included mercury & Sodium)
Contrast	Level adjustment
LDC (Lens Distortion Correction)	Off / On (5 levels with min / max)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker (2 ~ 1/12,000sec)
Digital PTZ	24x, Digital PTZ (Preset, Group)
Flip / Mirror	Off / On, Hallway view : 90°/270°
Video & Audio Analytics	
Tampering, Loitering, Directional detection, Defocus detection, Fog detection, Virtual line, Enter / Exit, (Dis)Appear, Audio detection, Face detection, Motion detection, Digital auto tracking, Sound classification	
Input 1ea / Output 1ea	
Alarm I/O	Alarm input, Motion detection, Video & Audio analytics, Network disconnect
Alarm Triggers	File upload via FTP, E-mail, Notification via E-mail, Local storage (SD/SDHC/SDXC) or NAS recording at event triggers, External output, DPTZ preset
Alarm Events	Support
Pixel Counter	
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.265 / H.264 (MPEG-4 part 10/AVC) : Main / Baseline / High, MJPEG
Resolution	1920 x 1080, 1280 x 1024, 1280 x 960, 1280 x 720, 1024 x 768, 800 x 600, 800 x 448, 720 x 576, 720 x 480, 640 x 480, 640 x 360, 320 x 240
Max. Framerate	H.265 / H.264 : Max. 60fps at all resolutions, MJPEG : Max. 30fps
Smart Codec	Manual mode (Area-based : Sea)
WiseStream II	Support
Video Quality Adjustment	H.265 / H.264 : Target bitrate level control, MJPEG : Target bitrate level control
Bitrate Control Method	H.265 / H.264 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 10 profiles)
Audio In	Selectable (Mic in / Line in), Supply voltage : 2.5V DC (4mA), Input impedance : approx. 2K Ohm
Audio Out	Line out, Max output level : 1Vrms
Audio Compression Format	G.711 u-law/G.726 selectable, G.726 (ADPCM) 8KHz, G.711 8KHz
Audio Communication	G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps, AAC-LC : 48Kbps at 8/16/32/48KHz
IP	Bi-directional (2-way)
Protocol	IPv4, IPv6
Security	TCP/IP, UDP/IP, RTP (UDP), RTP (TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour
Streaming Method	HTTP(S) (SSL) login authentication, Digest login authentication
Max. User Access	IP address filtering, User access log, 802.1X authentication (EAP-TLS, EAP-LEAP)
Edge Storage	Unicast / Multicast
Application Programming Interface	20 users at unicast mode
Webpage Language	SD/SDHC/SDXC 2slot (Up to 512GB) - Continuous recording (1st slot to 2nd slot)
Web Viewer	NAS (Network Attached Storage), Local PC for instant recording
	ONVIF profile S/G, SUNAPI (HTTP API), Wisenet Open Platform
English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek	
Supported OS : Windows 7, 8.1, 10, Mac OS X 10.10, 10.11, 10.12	
Non-plugin Webviewer	
- Supported Browser : Google Chrome 54, MS Edge 38, Mozilla Firefox 49(Window 64bit only), Apple Safari 9 * Mac OS X only	
Plug-in Webviewer	
- Supported Browser : MS Explore 11, Apple Safari 9 * Mac OS X only	
SmartViewer, SSM	
Central Management Software	
ENVIRONMENTAL	
Operating Temperature / Humidity	-40°C ~ +55°C (-40°F ~ +131°F) / Less than 90% RH
Storage Temperature / Humidity	-50°C ~ +60°C (-58°F ~ +140°F) / Less than 90% RH
Ingress Protection / Vandal Resistance	IP67, IP66, NEMA 4X / IK10
ELECTRICAL	
Input Voltage / Current	24V AC ±10%, 12V DC ±10%, PoE (IEEE802.3af)
Power Consumption	Max. 12W (12VDC), Max. 12.95W (PoE), Max. 15W (24VAC)
MECHANICAL	
Color / Material	Dark gray / Aluminum
Dimensions (WxH)	Ø91.0 x 368.6mm (Ø3.58" x 14.51") (Without sunshield)
Weight	2.18Kg (4.81lb)

* The latest product information / specification can be found at hanwha-security.eu
* Design and specifications are subject to change without notice.

XNO-6010R/6020R

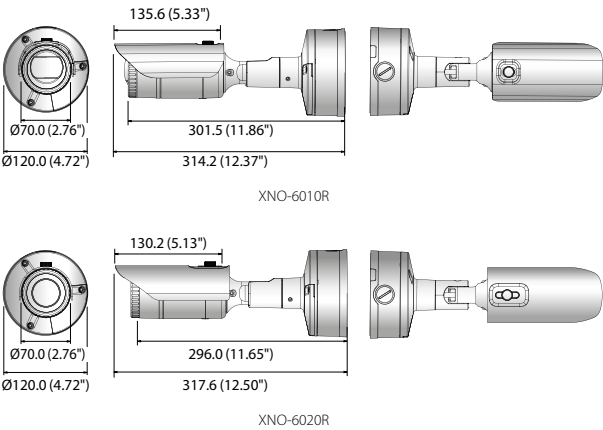
2M Network IR Bullet Camera



Key Features

- Max. 2megapixel (1920 x 1080) resolution
- Built-in 2.4mm fixed lens (XNO-6010R)
4mm fixed lens (XNO-6020R)
- Max. 60fps@all resolutions (H.265/H.264)
- H.265, H.264, MJPEG codec supported, Multiple streaming
- Day & Night (ICR), WDR (150dB), Defog
- Loitering, Directional detection, Fog detection, Audio detection, Digital auto tracking, Sound classification, Heatmap, People counting, Queue management, Tampering
- Motion detection, Handover
- SD/SDHC/SDXC memory slot (Max. 512GB), PoE / 12V DC
- Hallway view, WiseStream II support
- 15m (XNO-6010R) / 30m (XNO-6020R), IP67/IP66, NEMA 4X, IK10
- LDC support (Lens Distortion Correction)

Dimensions



Accessories (Optional)



XNO-6010R/6020R	
VIDEO	
Imaging Device	1/2.8" 2M CMOS
Total Pixels	1,945(H) x 1,109(V) 2.16M
Effective Pixels	1,945(H) x 1,097(V) 2.13M
Scanning System	Progressive Scan
Min. Illumination	Color : 0.055Lux (F2.0, 1/30sec), B/W : 0Lux (IR LED on) (XNO-6010R) Color : 0.015Lux (F1.4, 1/30sec), B/W : 0Lux (IR LED on) (XNO-6020R)
S / N Ratio	50dB
Video Out	CVBS : 1.0Vpp / 75Ω composite, 720 x 480(N), 720 x 576(P), for installation USB : micro USB type B, 1280 x 720 for installation
LENS	
Focal Length (Zoom Ratio)	2.4mm fixed (XNO-6010R), 4mm fixed (XNO-6020R)
Max. Aperture Ratio	F2.0 (XNO-6010R), F1.4 (XNO-6020R)
Angular Field of View	H : 139.0° / V : 73.0° / D : 167.0° (XNO-6010R), H : 88.6° / V : 47.5° / D : 104.8° (XNO-6020R)
Min. Object Distance	0.4m (1.31ft)
Focus Control	Manual
Lens / Mount Type	Fixed / Board-in type
OPERATIONAL	
IR Viewable Length	20m(65.61ft) (XNO-6010R) / 30m(98.43ft) (XNO-6020R) Off / On (Displayed up to 85 characters) - W/W : English / Numeric / Special characters - China : English / Numeric / Special / Chinese characters - Common : Multi-line (Max. 5), Color (Grey / Green / Red / Blue / Black / White), Transparency, Auto scale by resolution
Camera Title	
Day & Night	Auto (ICR) / Color / B/W / External / Schedule
Backlight Compensation	Off / BLC / HLC (Masking / Dimming), WDR
Wide Dynamic Range	150dB
Contrast Enhancement	SSDR (Off / On)
Digital Noise Reduction	SSNRV (2D+3D noise filter) (Off / On)
Digital Image Stabilization	Off / On
Defog	Off / Auto (Input from fog detection) / Manual
Motion Detection	Off / On (8ea, 8point polygonal zones), Handover
Privacy Masking	Off / On (32ea, Polygonal) - Color : Grey / Green / Red / Blue / Black / White, Mosaic
Gain Control	Off / Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor (Included mercury & Sodium)
Contrast	Level adjustment
LDC (Lens Distortion Correction)	Off / On (5 levels with min / max)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker (2 ~ 1/12,000sec)
Digital PTZ	24x, Digital PTZ (Preset, Group)
Flip / Mirror	Off / On, Hallway view : 90°/270° Tampering, Loitering, Directional detection, Defocus detection, Fog detection, Virtual line, Enter / Exit, (Dis)Appear, Audio detection, Face detection, Motion detection, Digital auto tracking, Sound classification, Heatmap, People counting, Queue management
Video & Audio Analytics	
Alarm I/O	Input 1ea / Output 1ea
Alarm Triggers	Alarm input, Motion detection, Video & Audio analytics, Network disconnect
Alarm Events	File upload via FTP, E-mail, Notification via E-mail, Local storage (SD/SDHC/SDXC) or NAS recording at event triggers, External output, DPTZ preset
Pixel Counter	Support
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.265 / H.264 (MPEG-4 part 10/AVC) : Main / Baseline / High, MJPEG
Resolution	1920 x 1080, 1280 x 1024, 1280 x 960, 1280 x 720, 1024 x 768, 800 x 600, 800 x 448, 720 x 576, 720 x 480, 640 x 480, 640 x 360, 320 x 240
Max. Framerate	H.265 / H.264 : Max. 60fps at all resolutions, MJPEG : Max. 30fps
Smart Codec	Manual mode (Area-based : 5ea)
WiseStream II	Support
Video Quality Adjustment	H.265 / H.264 : Target bitrate level control, MJPEG : Target bitrate level control
Bitrate Control Method	H.265 / H.264 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 10 profiles)
Audio In	Selectable (Mic in / Line in), Max output level : 1Vrms
Audio Out	Supply voltage : 2.5V DC (4mA), Input impedance : approx. 2K Ohm
Audio Compression Format	Line out, Max output level : 1Vrms
Audio Communication	G.711 u-law/G.726 selectable, G.726 (ADPCM) 8KHz, G.711 8KHz
IP	G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps, AAC-LC : 48Kbps at 8/16/32/48KHz
Protocol	Bi-directional (2-way) IPv4, IPv6 TCP/IP, UDP/IP, RTP (UDP), RTP (TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3 (MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour
Security	HTTP(S) login authentication, Digest login authentication
Streaming Method	IP address filtering, User access log, 802.1X authentication (EAP-TLS, EAP-LEAP)
Max. User Access	Unicast / Multicast
Edge Storage	20 users at unicast mode
Application Programming Interface	SD/SDHC/SDXC 2slot (Up to 512GB) - Continuous recording (1st slot to 2nd slot) NAS (Network Attached Storage), Local PC for instant recording
Webpage Language	ONVIF profile S/G, SUNAPI (HTTP API), Wisenet Open Platform
Web Viewer	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek Supported OS : Windows 7, 8.1, 10, Mac OS X 10.10, 10.11, 10.12 Non-plugin Webviewer - Supported Browser : Google Chrome 54, MS Edge 38, Mozilla Firefox 49(Window 64bit only), Apple Safari 9 * Mac OS X only Plug-in Webviewer - Supported Browser : MS Explore 11, Apple Safari 9 * Mac OS X only
Central Management Software	SmartViewer, SSM
ENVIRONMENTAL	
Operating Temperature / Humidity	-30°C ~ +55°C (-22°F ~ +131°F) / Less than 90% RH
Storage Temperature / Humidity	* Start up should be done at above -20°C (-4°F)
Ingress Protection / Vandal Resistance	-50°C ~ +60°C (-58°F ~ +140°F) / Less than 90% RH
ELECTRICAL	
Input Voltage / Current	IP67, IP66, NEMA 4X / IK10
Power Consumption	
MECHANICAL	
Color / Material	12V DC ±10%, PoE (IEEE802.3af) Max. 8.8W (12VDC), Max. 9.7W (PoE)
Dimensions (WxH)	Dark gray / Aluminum
Weight	Ø70 x 301.5mm (Ø2.76" x 11.87") XNO-6010R Ø70x296mm (Ø2.76" x 11.65") XNO-6020R (Without sunshield) 1.22kg (2.69lb)

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* Design and specifications are subject to change without notice.

XND-6080

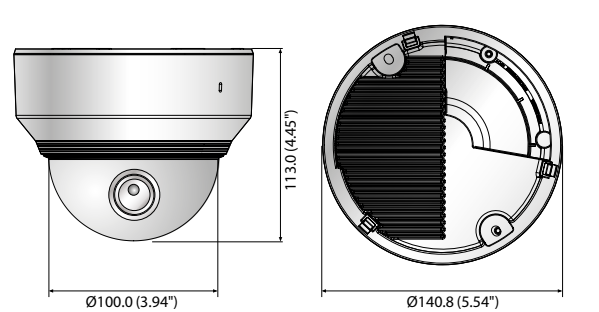
2M Network Dome Camera



Key Features

- Max. 2megapixel (1920 x 1080) resolution
- 2.8 ~ 12mm (4.3x) motorized varifocal lens
- Max. 60fps@all resolutions (H.265/H.264)
- H.265, H.264, MJPEG codec supported, Multiple streaming
- Day & Night (ICR), WDR (150dB), Defog
- Loitering, Directional detection, Fog detection, Audio detection, Digital auto tracking, Sound classification, Tampering
- Motion detection, Handover
- SD/SDHC/SDXC memory slot (Max. 512GB)
- Hallway view, WiseStream II support, IK08
- LDC support (Lens Distortion Correction)
- PoE / 12V DC, Bi-directional audio support

Dimensions



Accessories (Optional)



XND-6080	
VIDEO	
Imaging Device	1/2.8" 2M CMOS
Total Pixels	1,945(H) x 1,109(V) 2.16M
Effective Pixels	1,945(H) x 1,097(V) 2.13M
Scanning System	Progressive Scan
Min. Illumination	Color : 0.015Lux (F1.4, 1/30sec), B/W : 0.0015Lux (F1.4, 1/30sec)
S / N Ratio	50dB
Video Out	CVBS : 1.0Vpp / 75Ω composite, 720 x 480(N), 720 x 576(P), for installation USB : micro USB type B, 1280 x 720 for installation
LENS	
Focal Length (Zoom Ratio)	2.8 ~ 12mm (4.3x) motorized varifocal
Max. Aperture Ratio	F1.4(Wide) ~ F3.6(Tele)
Angular Field of View	H : 119.5° ~ 27.9° / V : 62.8° ~ 15.7° / D : 142.1° ~ 32.0°
Min. Object Distance	0.5m (1.64ft)
Focus Control	Simple focus (Motorized V/F) / Manual, Remote control via network (Manual, Simple focus)
Lens / Mount Type	DC auto iris, P-Iris / Board-in type
PAN / TILT / ROTATE	
Pan / Tilt / Rotate Range	0° ~ 354° / 0° ~ 67° / 0° ~ 355°
OPERATIONAL	
Camera Title	Off / On (Displayed up to 85 characters) - W/W : English / Numeric / Special characters - China : English / Numeric / Special / Chinese characters - Common : Multi-line (Max. 5), Color (Grey / Green / Red / Blue / Black / White), Transparency, Auto scale by resolution
Day & Night	Auto (ICR) / Color / B/W / External / Schedule
Backlight Compensation	Off / BLC / HLC (Masking / Dimming), WDR
Wide Dynamic Range	150dB
Contrast Enhancement	SSDR (Off / On)
Digital Noise Reduction	SSNRV (2D+3D noise filter) (Off / On)
Digital Image Stabilization	Off / On
Defog	Off / Auto (Input from fog detection) / Manual
Motion Detection	Off / On (8ea, 8point polygonal zones), Handover
Privacy Masking	Off / On (32ea, Polygonal) - Color : Grey / Green / Red / Blue / Black / White, Mosaic
Gain Control	Off / Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor (Included mercury & Sodium)
Contrast	Level adjustment
LDC (Lens Distortion Correction)	Off / On (5 levels with min / max)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker (2 ~ 1/12,000sec)
Digital PTZ	24x, Digital PTZ (Preset, Group)
Flip / Mirror	Off / On, Hallway view : 90°/270° Tampering, Loitering, Directional detection, Defocus detection, Fog detection, Virtual line, Enter / Exit, (Dis)Appear, Audio detection, Face detection, Motion detection, Digital auto tracking, Sound classification
Video & Audio Analytics	
Alarm I/O	Input 1ea / Output 1ea
Alarm Triggers	Alarm input, Motion detection, Video & Audio analytics, Network disconnect
Alarm Events	File upload via FTP, E-mail, Notification via E-mail, Local storage (SD/SDHC/SDXC) or NAS recording at event triggers, External output, DPTZ preset
Pixel Counter	Support
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.265 / H.264 (MPEG-4 part 10/AVC) : Main / Baseline / High, MJPEG
Resolution	1920 x 1080, 1280 x 1024, 1280 x 960, 1280 x 720, 1024 x 768, 800 x 600, 800 x 448, 720 x 576, 720 x 480, 640 x 480, 640 x 360, 320 x 240
Max. Framerate	H.265 / H.264 : Max. 60fps at all resolutions, MJPEG : Max. 30fps
Smart Codec	Manual mode (Area-based : 5ea)
WiseStream II	Support
Video Quality Adjustment	H.265 / H.264 : Target bitrate level control, MJPEG : Target bitrate level control
Bitrate Control Method	H.265 / H.264 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 10 profiles)
Audio In	Selectable (Mic in / Line in), Max output level : 1Vrms
Audio Out	Supply voltage : 2.5V DC (4mA), Input impedance : approx. 2K Ohm
Audio Compression Format	Line out, Max output level : 1Vrms
Audio Communication	G.711 u-law/G.726 selectable, G.726 (ADPCM) 8KHz, G.711 8KHz
IP	G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps, AAC-LC : 48Kbps at 8/16/32/48KHz
Protocol	Bi-directional (2-way) IPv4, IPv6 TCP/IP, UDP/IP, RTP (UDP), RTP (TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3 (MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour
Security	HTTP(S) login authentication, Digest login authentication
Streaming Method	IP address filtering, User access log, 802.1X authentication (EAP-TLS, EAP-LEAP)
Max. User Access	Unicast / Multicast
Edge Storage	20 users at unicast mode
Application Programming Interface	SD/SDHC/SDXC 2slot (Up to 512GB) - Continuous recording (1st slot to 2nd slot) NAS (Network Attached Storage), Local PC for instant recording
Webpage Language	ONVIF profile S/G, SUNAPI (HTTP API), Wisenet Open Platform
Web Viewer	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek Supported OS : Windows 7, 8.1, 10, Mac OS X 10.10, 10.11, 10.12 Non-plugin Webviewer - Supported Browser : Google Chrome 54, MS Edge 38, Mozilla Firefox 49(Window 64bit only), Apple Safari 9 * Mac OS X only Plug-in Webviewer - Supported Browser : MS Explore 11, Apple Safari 9 * Mac OS X only
Central Management Software	SmartViewer, SSM
ENVIRONMENTAL	
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
Vandal Resistance	IK08
ELECTRICAL	
Input Voltage / Current	12V DC ±10%, PoE (IEEE802.3af)
Power Consumption	Max. 6W (12VDC), Max. 6.5W (PoE)
MECHANICAL	
Color / Material	Ivory / Plastic
Dimensions (WxH)	Ø140.8 x 113.0mm (Ø5.54" x 4.45")
Weight	610g (1.34lb)

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* Design and specifications are subject to change without notice.

XND-6080R

2M Network IR Dome Camera

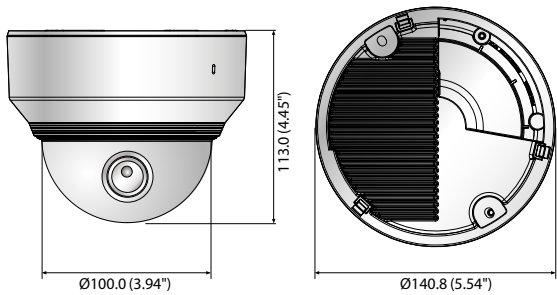


Key Features

- Max. 2megapixel (1920 x 1080) resolution
- 2.8 ~ 12mm (4.3x) motorized varifocal lens
- Max. 60fps@all resolutions (H.265/H.264)
- H.265, H.264, MJPEG codec supported, Multiple streaming
- Day & Night (ICR), WDR (150dB), Defog
- Loitering, Directional detection, Fog detection, Audio detection, Digital auto tracking, Sound classification, Tampering
- Motion detection, Handover
- SD/SDHC/SDXC memory slot (Max. 512GB)
- Hallway view, WiseStream II support
- IR viewable length 30m, IK08
- LDC support (Lens Distortion Correction)
- PoE / 12V DC, Bi-directional audio support

Dimensions

Unit : mm (inch)



Accessories (Optional)



XND-6080R	
VIDEO	
Imaging Device	1/2.8" 2M CMOS
Total Pixels	1,945(H) x 1,109(V) 2.16M
Effective Pixels	1,945(H) x 1,097(V) 2.13M
Scanning System	Progressive Scan
Min. Illumination	Color : 0.015Lux (F1.4, 1/30sec), B/W : 0Lux (IR LED on)
S / N Ratio	50dB
Video Out	CVBS : 1.0Vpp / 75Ω composite, 720 x 480(N), 720 x 576(P), for installation USB : micro USB type B, 1280 x 720 for installation
LENS	
Focal Length (Zoom Ratio)	2.8 ~ 12mm (4.3x) motorized varifocal
Max. Aperture Ratio	F1.4(Wide) ~ F3.6(Tele)
Angular Field of View	H : 119.5° ~ 27.9° / V : 62.8° ~ 15.7° / D : 142.1° ~ 32.0°
Min. Object Distance	0.5m (1.64ft)
Focus Control	Simple focus (Motorized V/F) / Manual, Remote control via network (Manual, Simple focus)
Lens / Mount Type	DC auto iris, P-Iris / Board-in type
PAN / TILT / ROTATE	
Pan / Tilt / Rotate Range	0° ~ 354° / 0° ~ 67° / 0° ~ 355°
OPERATIONAL	
IR Viewable Length	30m (98.4ft)
	Off / On (Displayed up to 85 characters)
Camera Title	- W/W : English / Numeric / Special characters - China : English / Numeric / Special / Chinese characters - Common : Multi-line (Max. 5), Color (Grey / Green / Red / Blue / Black / White), Transparency, Auto scale by resolution
Day & Night	Auto (ICR) / Color / B/W / External / Schedule
Backlight Compensation	Off / BLC / HLC (Masking / Dimming), WDR
Wide Dynamic Range	150dB
Contrast Enhancement	SSDR (Off / On)
Digital Noise Reduction	SSNRV (2D+3D noise filter) (Off / On)
Digital Image Stabilization	Off / On
Defog	Off / Auto (Input from fog detection) / Manual
Motion Detection	Off / On (8ea, 8point polygonal zones), Handover
Privacy Masking	Off / On (32ea, Polygonal) - Color : Grey / Green / Red / Blue / Black / White, Mosaic
Gain Control	Off / Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor (Included mercury & Sodium)
Contrast	Level adjustment
LDC (Lens Distortion Correction)	Off / On (5 levels with min / max)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker (2 ~ 1/12,000sec)
Digital PTZ	24x, Digital PTZ (Preset, Group)
Flip / Mirror	Off / On, Hallway view : 90°/270°
Video & Audio Analytics	
Alarm I/O	Input 1ea / Output 1ea
Alarm Triggers	Alarm input, Motion detection, Video & Audio analytics, Network disconnect
Alarm Events	File upload via FTP, E-mail, Notification via E-mail, Local storage (SD/SDHC/SDXC) or NAS recording at event triggers, External output, DPTZ preset
Pixel Counter	Support
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.265 / H.264 (MPEG-4 part 10/AVC) : Main / Baseline / High, MJPEG
Resolution	1920 x 1080, 1280 x 1024, 1280 x 960, 1280 x 720, 1024 x 768, 800 x 600, 800 x 448, 720 x 576, 720 x 480, 640 x 480, 640 x 360, 320 x 240
Max. Framerate	H.265 / H.264 : Max. 60fps at all resolutions, MJPEG : Max. 30fps
Smart Codec	Manual mode (Area-based : 5ea)
WiseStream II	Support
Video Quality Adjustment	H.265 / H.264 : Target bitrate level control, MJPEG : Target bitrate level control
Bitrate Control Method	H.265 / H.264 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 10 profiles)
Audio In	Selectable (Mic in / Line in), Max output level : 1Vrms
Audio Out	Supply voltage : 2.5V DC (4mA), Input impedance : approx. 2K Ohm
Audio Compression Format	Line out, Max output level : 1Vrms
Audio Communication	G.711 u-law/G.726 selectable, G.726 (ADPCM) 8KHz, G.711 8KHz
IP	G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps, AAC-LC : 48Kbps at 8/16/32/48KHz
Protocol	Bi-directional (2-way)
Security	IPV4, IPV6
Streaming Method	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour
Max. User Access	HTTP(S) login authentication, Digest login authentication
Edge Storage	IP address filtering, User access log, 802.1X authentication (EAP-TLS, EAP-LEAP)
Application Programming Interface	Unicast / Multicast
Webpage Language	20 users at unicast mode
Web Viewer	SD/SDHC/SDXC 2slot (Up to 512GB) - Continuous recording (1st slot to 2nd slot) NAS (Network Attached Storage), Local PC for instant recording
Central Management Software	ONVIF profile S/G, SUNAPI (HTTP API), Wisenet Open Platform
ENVIRONMENTAL	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek
Operating Temperature / Humidity	Supported OS : Windows 7, 8.1, 10, Mac OS X 10.10, 10.11, 10.12
Storage Temperature / Humidity	Non-plugin Webviewer
Vandal Resistance	- Supported Browser : Google Chrome 54, MS Edge 38, Mozilla Firefox 49(Window 64bit only), Apple Safari 9 * Mac OS X only
ELECTRICAL	Plug-in Webviewer
Input Voltage / Current	- Supported Browser : MS Explore 11, Apple Safari 9 * Mac OS X only
Power Consumption	SmartViewer, SSM
MECHANICAL	
Color / Material	ENVIRONMENTAL
Dimensions (WxH)	Operating Temperature / Humidity
Weight	Storage Temperature / Humidity

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* Design and specifications are subject to change without notice.

XND-6080RV

2M Network IR Dome Camera

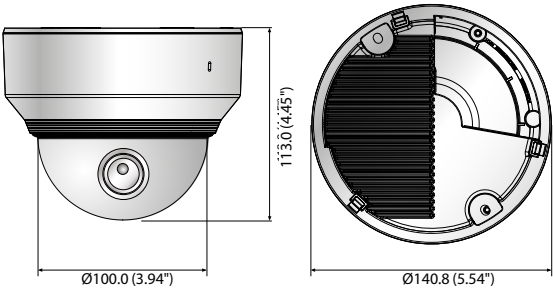


Key Features

- Max. 2megapixel (1920 x 1080) resolution
- 2.8 ~ 12mm (4.3x) motorized varifocal lens
- Max. 60fps@all resolutions (H.265/H.264)
- H.265, H.264, MJPEG codec supported, Multiple streaming
- Day & Night (ICR), WDR (150dB), Defog
- Loitering, Directional detection, Fog detection, Audio detection, Digital auto tracking, Sound classification, Tampering
- Motion detection, Handover
- SD/SDHC/SDXC memory slot (Max. 512GB)
- Hallway view, WiseStream II support
- IR viewable length 30m, IK08
- LDC support (Lens Distortion Correction)
- PoE / 12V DC, Bi-directional audio support

Dimensions

Unit : mm (inch)



Accessories (Optional)



XND-6080RV	
VIDEO	
Imaging Device	1/2.8" 2M CMOS
Total Pixels	1,945(H) x 1,109(V) 2.16M
Effective Pixels	1,945(H) x 1,097(V) 2.13M
Scanning System	Progressive Scan
Min. Illumination	Color : 0.015Lux (F1.4, 1/30sec), B/W : 0Lux (IR LED on)
S / N Ratio	50dB
Video Out	CVBS : 1.0Vpp / 75Ω composite, 720 x 480(N), 720 x 576(P), for installation USB : micro USB type B, 1280 x 720 for installation
LENS	
Focal Length (Zoom Ratio)	2.8 ~ 12mm (4.3x) motorized varifocal
Max. Aperture Ratio	F1.4(Wide) ~ F3.6(Tele)
Angular Field of View	H : 119.5° ~ 27.9° / V : 62.8° ~ 15.7° / D : 142.1° ~ 32.0°
Min. Object Distance	0.5m (1.64ft)
Focus Control	Simple focus (Motorized V/F) / Manual, Remote control via network (Manual, Simple focus)
Lens / Mount Type	DC auto iris, P-Iris / Board-in type
PAN / TILT / ROTATE	
Pan / Tilt / Rotate Range	0° ~ 354° / 0° ~ 67° / 0° ~ 355°
OPERATIONAL	
IR Viewable Length	30m (98.4ft)
	Off / On (Displayed up to 85 characters)
Camera Title	- W/W : English / Numeric / Special characters - China : English / Numeric / Special / Chinese characters - Common : Multi-line (Max. 5), Color (Grey / Green / Red / Blue / Black / White), Transparency, Auto scale by resolution
Day & Night	Auto (ICR) / Color / B/W / External / Schedule
Backlight Compensation	Off / BLC / HLC (Masking / Dimming), WDR
Wide Dynamic Range	150dB
Contrast Enhancement	SSDR (Off / On)
Digital Noise Reduction	SSNRV (2D+3D noise filter) (Off / On)
Digital Image Stabilization	Off / On
Defog	Off / Auto (Input from fog detection) / Manual
Motion Detection	Off / On (8ea, 8point polygonal zones), Handover
Privacy Masking	Off / On (32ea, Polygonal) - Color : Grey / Green / Red / Blue / Black / White, Mosaic
Gain Control	Off / Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor (Included mercury & Sodium)
Contrast	Level adjustment
LDC (Lens Distortion Correction)	Off / On (5 levels with min / max)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker (2 ~ 1/12,000sec)
Digital PTZ	24x, Digital PTZ (Preset, Group)
Flip / Mirror	Off / On, Hallway view : 90°/270°
Video & Audio Analytics	
Alarm I/O	Tampering, Loitering, Directional detection, Defocus detection, Fog detection, Virtual line, Enter / Exit, (Dis)Appear, Audio detection, Face detection, Motion detection, Digital auto tracking, Sound classification
Alarm Triggers	Input 1ea / Output 1ea
Alarm Events	Alarm input, Motion detection, Video & Audio analytics, Network disconnect
Pixel Counter	File upload via FTP, E-mail, Notification via E-mail, Local storage (SD/SDHC/SDXC) or NAS recording at event triggers, External output, DPTZ preset
NETWORK	Support
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.265 / H.264 (MPEG-4 part 10/AVC) : Main / Baseline / High, MJPEG
Resolution	1920 x 1080, 1280 x 1024, 1280 x 960, 1280 x 720, 1024 x 768, 800 x 600, 800 x 448, 720 x 576, 720 x 480, 640 x 480, 640 x 360, 320 x 240
Max. Framerate	H.265 / H.264 : Max. 60fps at all resolutions, MJPEG : Max. 30fps
Smart Codec	Manual mode (Area-based : 5ea)
WiseStream II	Support
Video Quality Adjustment	H.265 / H.264 : Target bitrate level control, MJPEG : Target bitrate level control
Bitrate Control Method	H.265 / H.264 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 10 profiles)
Audio In	Selectable (Mic in / Line in), Max output level : 1Vrms
Audio Out	Supply voltage : 2.5V DC (4mA), Input impedance : approx. 2K Ohm
Audio Compression Format	Line out, Max output level : 1Vrms
Audio Communication	G.711 u-law/G.726 selectable, G.726 (ADPCM) 8KHz, G.711 8KHz
IP	G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps, AAC-LC : 48Kbps at 8/16/32/48KHz
Protocol	Bi-directional (2-way)
Security	IPV4, IPV6
Streaming Method	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour
Max. User Access	HTTP(S) login authentication, Digest login authentication
Edge Storage	IP address filtering, User access log, 802.1X authentication (EAP-TLS, EAP-LEAP)
Application Programming Interface	Unicast / Multicast
Webpage Language	20 users at unicast mode
Web Viewer	SD/SDHC/SDXC 2slot (Up to 512GB) - Continuous recording (1st slot to 2nd slot) NAS (Network Attached Storage), Local PC for instant recording
Central Management Software	ONVIF profile S/G, SUNAPI (HTTP API), Wisenet Open Platform
ENVIRONMENTAL	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek
Operating Temperature / Humidity	Supported OS : Windows 7, 8.1, 10, Mac OS X 10.10, 10.11, 10.12
Storage Temperature / Humidity	Non-plugin Webviewer
Vandal Resistance	- Supported Browser : Google Chrome 54, MS Edge 38, Mozilla Firefox 49(Window 64bit only), Apple Safari 9 * Mac OS X only
ELECTRICAL	Plug-in Webviewer
Input Voltage / Current	- Supported Browser : MS Explore 11, Apple Safari 9 * Mac OS X only
Power Consumption	SmartViewer, SSM
MECHANICAL	
Color / Material	ENVIRONMENTAL
Dimensions (WxH)	Operating Temperature / Humidity
Weight	Storage Temperature / Humidity

* The latest product information / specification can be found at hanwha-security.eu
* Design and specifications are subject to change without notice.

XND-6080V

2M Network Dome Camera

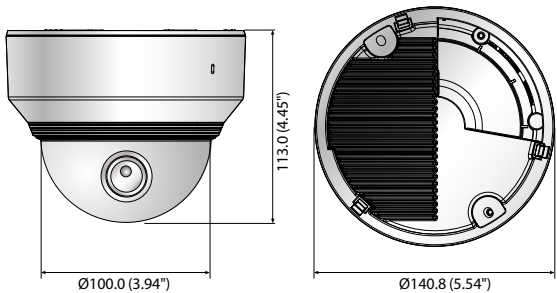


Key Features

- Max. 2megapixel (1920 x 1080) resolution
- 2.8 ~ 12mm (4.3x) motorized varifocal lens
- Max. 60fps@all resolutions (H.265/H.264)
- H.265, H.264, MJPEG codec supported, Multiple streaming
- Day & Night (ICR), WDR (150dB), Defog
- Loitering, Directional detection, Fog detection, Audio detection, Digital auto tracking, Sound classification, Tampering
- Motion detection, Handover
- SD/SDHC/SDXC memory slot (Max. 512GB)
- Hallway view, WiseStream II support, IK08
- LDC support (Lens Distortion Correction)
- PoE / 12V DC, Bi-directional audio support

Dimensions

Unit : mm (inch)



Accessories (Optional)



XND-6080V	
VIDEO	
Imaging Device	1/2.8" 2M CMOS
Total Pixels	1,945(H) x 1,109(V) 2.16M
Effective Pixels	1,945(H) x 1,097(V) 2.13M
Scanning System	Progressive Scan
Min. Illumination	Color : 0.015Lux (F1.4, 1/30sec), B/W : 0.0015Lux (F1.4, 1/30sec)
S / N Ratio	50dB
Video Out	CVBS : 1.0Vpp / 75Ω composite, 720 x 480(N), 720 x 576(P), for installation USB : micro USB type B, 1280 x 720 for installation
LENS	
Focal Length (Zoom Ratio)	2.8 ~ 12mm (4.3x) motorized varifocal
Max. Aperture Ratio	F1.4(Wide) ~ F3.6(Tele)
Angular Field of View	H : 119.5° ~ 27.9° / V : 62.8° ~ 15.7° / D : 142.1° ~ 32.0°
Min. Object Distance	0.5m (1.64ft)
Focus Control	Simple focus (Motorized V/F) / Manual, Remote control via network (Manual, Simple focus)
Lens / Mount Type	DC auto iris, P-Iris / Board-in type
PAN / TILT / ROTATE	
Pan / Tilt / Rotate Range	0° ~ 354° / 0° ~ 67° / 0° ~ 355°
OPERATIONAL	
Camera Title	
Off / On (Displayed up to 85 characters) - W/W : English / Numeric / Special characters - China : English / Numeric / Special / Chinese characters - Common : Multi-line (Max. 5), Color (Grey / Green / Red / Blue / Black / White), Transparency, Auto scale by resolution	
Day & Night	Auto (ICR) / Color / B/W / External / Schedule
Backlight Compensation	Off / BLC / HLC (Masking / Dimming), WDR
Wide Dynamic Range	150dB
Contrast Enhancement	SSDR (Off / On)
Digital Noise Reduction	SSNRV (2D+3D noise filter) (Off / On)
Digital Image Stabilization	Off / On
Defog	Off / Auto (Input from fog detection) / Manual
Motion Detection	Off / On (8ea, 8point polygonal zones), Handover
Privacy Masking	Off / On (32ea, Polygonal) - Color : Grey / Green / Red / Blue / Black / White, Mosaic
Gain Control	Off / Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor (Included mercury & Sodium)
Contrast	Level adjustment
LDC (Lens Distortion Correction)	Off / On (5 levels with min / max)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker (2 ~ 1/12,000sec)
Digital PTZ	24x, Digital PTZ (Preset, Group)
Flip / Mirror	Off / On, Hallway view : 90°/270° Tampering, Loitering, Directional detection, Defocus detection, Fog detection, Virtual line, Enter / Exit, (Dis)Appear, Audio detection, Face detection, Motion detection, Digital auto tracking, Sound classification
Video & Audio Analytics	
Alarm I/O	Input 1ea / Output 1ea
Alarm Triggers	Alarm input, Motion detection, Video & Audio analytics, Network disconnect
Alarm Events	File upload via FTP, E-mail, Notification via E-mail, Local storage (SD/SDHC/SDXC) or NAS recording at event triggers, External output, DPTZ preset
Pixel Counter	Support
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.265 / H.264 (MPEG-4 part 10/AVC) : Main / Baseline / High, MJPEG 1920 x 1080, 1280 x 1024, 1280 x 960, 1280 x 720, 1024 x 768, 800 x 600, 800 x 448, 720 x 576, 720 x 480, 640 x 480, 640 x 360, 320 x 240
Resolution	H.265 / H.264 : Max. 60fps at all resolutions, MJPEG : Max. 30fps
Max. Framerate	H.265 / H.264 : Max. 60fps at all resolutions, MJPEG : Max. 30fps
Smart Codec	Manual mode (Area-based : 5ea)
WiseStream II	Support
Video Quality Adjustment	H.265 / H.264 : Target bitrate level control, MJPEG : Target bitrate level control
Bitrate Control Method	H.265 / H.264 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 10 profiles)
Audio In	Selectable (Mic in / Line in), Max output level : 1Vrms Supply voltage : 2.5V DC (4mA), Input impedance : approx. 2K Ohm
Audio Out	Line out, Max output level : 1Vrms
Audio Compression Format	G.711 u-law/G.726 selectable, G.726 (ADPCM) 8KHz, G.711 8KHz G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps, AAC-LC : 48Kbps at 8/16/32/48KHz
Audio Communication	Bi-directional (2-way)
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour HTTPS(SSL) login authentication, Digest login authentication
Security	IP address filtering, User access log, 802.1X authentication (EAP-TLS, EAP-LEAP)
Streaming Method	Unicast / Multicast
Max. User Access	20 users at unicast mode
Edge Storage	SD/SDHC/SDXC 2slot (Up to 512GB) - Continuous recording (1st slot to 2nd slot) NAS (Network Attached Storage), Local PC for instant recording
Application Programming Interface	ONVIF profile S/G, SUNAPI (HTTP API), Wisenet Open Platform
Webpage Language	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek Supported OS : Windows 7, 8.1, 10, Mac OS X 10.10, 10.11, 10.12 Non-plugin Webviewer - Supported Browser : Google Chrome 54, MS Edge 38, Mozilla Firefox 49(Window 64bit only), Apple Safari 9 * Mac OS X only
Web Viewer	Plug-in Webviewer - Supported Browser : MS Explore 11, Apple Safari 9 * Mac OS X only
Central Management Software	
SmartViewer, SSM	
ENVIRONMENTAL	
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
Vandal Resistance	IK08
ELECTRICAL	
Input Voltage / Current	12V DC ±10%, PoE (IEEE802.3af)
Power Consumption	Max. 6W (12VDC), Max. 6.5W (PoE)
MECHANICAL	
Color / Material	Ivory / Aluminum
Dimensions (WxH)	Ø140.8 x 113.0mm (Ø5.54" x 4.45")
Weight	714g (1.57lb)

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* Design and specifications are subject to change without notice.

XND-6010

2M Network Dome Camera

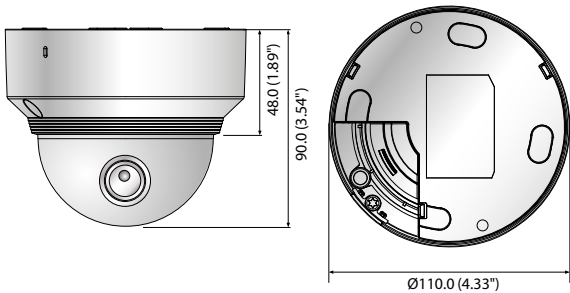


Key Features

- Max. 2megapixel (1920 x 1080) resolution
- Built-in 2.4mm fixed lens
- Max. 60fps@all resolutions (H.265/H.264)
- H.265, H.264, MJPEG codec supported, Multiple streaming
- Day & Night (ICR), WDR (150dB), Defog
- Loitering, Directional detection, Fog detection, Audio detection, Digital auto tracking, Sound classification, Heatmap, People counting, Queue management, Tampering
- Motion detection, Handover
- SD/SDHC/SDXC memory slot (Max. 512GB), PoE / 12V DC
- Hallway view, WiseStream II support, IK08
- LDC support (Lens Distortion Correction)

Dimensions

Unit : mm (inch)



Accessories (Optional)



XND-6010	
VIDEO	
Imaging Device	1/2.8" 2M CMOS
Total Pixels	1,945(H) x 1,109(V) 2.16M
Effective Pixels	1,945(H) x 1,097(V) 2.13M
Scanning System	Progressive Scan
Min. Illumination	Color : 0.055Lux (F2.0, 1/30sec), B/W : 0.0055Lux (F2.0, 1/30sec)
S / N Ratio	50dB
Video Out	CVBS : 1.0Vpp / 75Ω composite, 720 x 480(N), 720 x 576(P), for installation USB : micro USB type B, 1280 x 720 for installation
LENS	
Focal Length (Zoom Ratio)	2.4mm fixed
Max. Aperture Ratio	F2.0
Angular Field of View	H : 139.0° / V : 73.0° / D : 167.0°
Min. Object Distance	0.4m (1.31ft)
Focus Control	Manual
Lens / Mount Type	Fixed / Board-in type
PAN / TILT / ROTATE	
Pan / Tilt / Rotate Range	0° ~ 354° / 0° ~ 67° / 0° ~ 355°
OPERATIONAL	
Camera Title	
Off / On (Displayed up to 85 characters) - W/W : English / Numeric / Special characters - China : English / Numeric / Special / Chinese characters - Common : Multi-line (Max. 5), Color (Grey / Green / Red / Blue / Black / White), Transparency, Auto scale by resolution	
Day & Night	Auto (ICR) / Color / B/W / External / Schedule
Backlight Compensation	Off / BLC / HLC (Masking / Dimming), WDR
Wide Dynamic Range	150dB
Contrast Enhancement	SSDR (Off / On)
Digital Noise Reduction	SSNRV (2D+3D noise filter) (Off / On)
Digital Image Stabilization	Off / On
Defog	Off / Auto (Input from fog detection) / Manual
Motion Detection	Off / On (8ea, 8point polygonal zones), Handover
Privacy Masking	Off / On (32ea, Polygonal) - Color : Grey / Green / Red / Blue / Black / White, Mosaic
Gain Control	Off / Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor (Included mercury & Sodium)
Contrast	Level adjustment
LDC (Lens Distortion Correction)	Off / On (5 levels with min / max)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker (2 ~ 1/12,000sec)
Digital PTZ	24x, Digital PTZ (Preset, Group)
Flip / Mirror	Off / On, Hallway view : 90°/270° Tampering, Loitering, Directional detection, Defocus detection, Fog detection, Virtual line, Enter / Exit, (Dis)Appear, Audio detection, Face detection, Motion detection, Digital auto tracking, Sound classification, Heatmap, People counting, Queue management
Video & Audio Analytics	
Alarm I/O	Input 1ea / Output 1ea
Alarm Triggers	Alarm input, Motion detection, Video & Audio analytics, Network disconnect
Alarm Events	File upload via FTP, E-mail, Notification via E-mail, Local storage (SD/SDHC/SDXC) or NAS recording at event triggers, External output, DPTZ preset
Pixel Counter	Support
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.265 / H.264 (MPEG-4 part 10/AVC) : Main / Baseline / High, MJPEG 1920 x 1080, 1280 x 1024, 1280 x 960, 1280 x 720, 1024 x 768, 800 x 600, 800 x 448, 720 x 576, 720 x 480, 640 x 360, 320 x 240
Resolution	H.265 / H.264 : Max. 60fps at all resolutions, MJPEG : Max. 30fps
Max. Framerate	H.265 / H.264 : Max. 60fps at all resolutions, MJPEG : Max. 30fps
Smart Codec	Manual mode (Area-based : 5ea)
WiseStream II	Support
Video Quality Adjustment	H.265 / H.264 : Target bitrate level control, MJPEG : Target bitrate level control
Bitrate Control Method	H.265 / H.264 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 10 profiles)
Audio In	Selectable (Mic in / Line in), Max output level : 1Vrms Supply voltage : 2.5V DC (4mA), Input impedance : approx. 2K Ohm
Audio Out	Line out, Max output level : 1Vrms
Audio Compression Format	G.711 u-law/G.726 selectable, G.726 (ADPCM) 8KHz, G.711 8KHz G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps, AAC-LC : 48Kbps at 8/16/32/48KHz
Audio Communication	Bi-directional (2-way)
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour HTTPS(SSL) login authentication, Digest login authentication
Security	IP address filtering, User access log, 802.1X authentication (EAP-TLS, EAP-LEAP)
Streaming Method	Unicast / Multicast
Max. User Access	20 users at unicast mode
Edge Storage	SD/SDHC/SDXC 2slot (Up to 512GB) - Continuous recording (1st slot to 2nd slot) NAS (Network Attached Storage), Local PC for instant recording
Application Programming Interface	ONVIF profile S/G, SUNAPI (HTTP API), Wisenet Open Platform
Webpage Language	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek Supported OS : Windows 7, 8.1, 10, Mac OS X 10.10, 10.11, 10.12 Non-plugin Webviewer - Supported Browser : Google Chrome 54, MS Edge 38, Mozilla Firefox 49(Window 64bit only), Apple Safari 9 * Mac OS X only
Web Viewer	Plug-in Webviewer - Supported Browser : MS Explore 11, Apple Safari 9 * Mac OS X only
Central Management Software	
SmartViewer, SSM	
ENVIRONMENTAL	
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
Vandal Resistance	IK08
ELECTRICAL	
Input Voltage / Current	12V DC ±10%, PoE (IEEE802.3af)
Power Consumption	Max. 5.5W (12VDC), Max. 6W (PoE)
MECHANICAL	
Color / Material	Ivory / Metal
Dimensions (WxH)	Ø110.0 x 90.0mm (Ø4.33" x 3.54")
Weight	365g (0.80lb)

* The latest product information / specification can be found at hanwha-security.eu
* Design and specifications are subject to change without notice.

XNV-6080

2M Vandal-Resistant Network Dome Camera

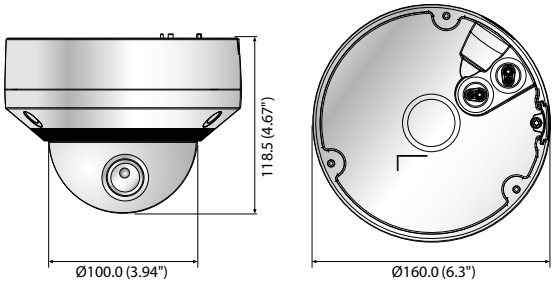


Key Features

- Max. 2megapixel (1920 x 1080) resolution
- 2.8 ~ 12mm (4.3x) motorized varifocal lens
- Max. 60fps@all resolutions (H.265/H.264)
- H.265, H.264, MJPEG codec supported, Multiple streaming
- Day & Night (ICR), WDR (150dB), Defog
- Loitering, Directional detection, Fog detection, Audio detection, Digital auto tracking, Sound classification, Tampering
- Motion detection, Handover
- SD/SDHC/SDXC memory slot (Max. 512GB)
- Hallway view, WiseStream II support, IP67/IP66, NEMA 4X, IK10
- LDC support (Lens Distortion Correction)
- PoE / 24V AC, 12V DC, Bi-directional audio support

Dimensions

Unit: mm (inch)



Accessories (Optional)



XNV-6080	
VIDEO	
Imaging Device	1/2.8" 2M CMOS
Total Pixels	1,945(H) x 1,109(V) 2.16M
Effective Pixels	1,945(H) x 1,097(V) 2.13M
Scanning System	Progressive Scan
Min. Illumination	Color : 0.015Lux (F1.4, 1/30sec), B/W : 0.0015Lux (F1.4, 1/30sec)
S / N Ratio	50dB
Video Out	CVBS : 1.0Vpp / 75Ω composite, 720 x 480(N), 720 x 576(P), for installation USB : micro USB type B, 1280 x 720 for installation
LENS	
Focal Length (Zoom Ratio)	2.8 ~ 12mm (4.3x) motorized varifocal
Max. Aperture Ratio	F1.4(Wide) ~ F3.6(Tele)
Angular Field of View	H : 119.5° ~ 27.9° / V : 62.8° ~ 15.7° / D : 142.1° ~ 32.0°
Min. Object Distance	0.5m (1.64ft)
Focus Control	Simple focus (Motorized V/F) / Manual, Remote control via network (Manual, Simple focus)
Lens / Mount Type	DC auto iris, P-Iris / Board-in type
PAN / TILT / ROTATE	
Pan / Tilt / Rotate Range	0° ~ 354° / 0° ~ 67° / 0° ~ 355°
OPERATIONAL	
Camera Title	
Day & Night	
Backlight Compensation	
Wide Dynamic Range	
Contrast Enhancement	
Digital Noise Reduction	
Digital Image Stabilization	
Defog	
Motion Detection	
Privacy Masking	
Gain Control	
White Balance	
Contrast	
LDC (Lens Distortion Correction)	
Electronic Shutter Speed	
Digital PTZ	
Flip / Mirror	
Video & Audio Analytics	
Alarm I/O	
Alarm Triggers	
Alarm Events	
Pixel Counter	
NETWORK	
Ethernet	
Video Compression Format	
Resolution	
Max. Framerate	
Smart Codec	
WiseStream II	
Video Quality Adjustment	
Bitrate Control Method	
Streaming Capability	
Audio In	
Audio Out	
Audio Compression Format	
Audio Communication	
IP	
Protocol	
Security	
Streaming Method	
Max. User Access	
Edge Storage	
Application Programming Interface	
Webpage Language	
Web Viewer	
Central Management Software	
ENVIRONMENTAL	
Operating Temperature / Humidity	
Storage Temperature / Humidity	
Ingress Protection / Vandal Resistance	
ELECTRICAL	
Input Voltage / Current	
Power Consumption	
MECHANICAL	
Color / Material	
Dimensions (WxH)	
Weight	

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* Design and specifications are subject to change without notice.

XNV-6080R

2M Vandal-Resistant Network IR Dome Camera

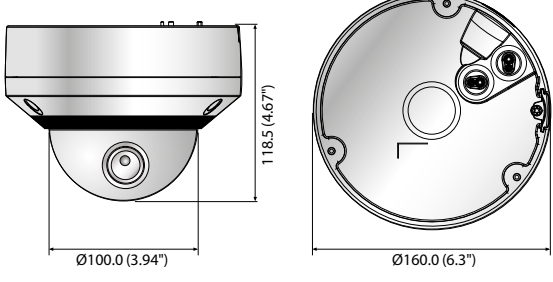


Key Features

- Max. 2megapixel (1920 x 1080) resolution
- 2.8 ~ 12mm (4.3x) motorized varifocal lens
- Max. 60fps@all resolutions (H.265/H.264)
- H.265, H.264, MJPEG codec supported, Multiple streaming
- Day & Night (ICR), WDR (150dB), Defog
- Loitering, Directional detection, Fog detection, Audio detection, Digital auto tracking, Sound classification, Tampering
- Motion detection, Handover
- SD/SDHC/SDXC memory slot (Max. 512GB)
- Hallway view, WiseStream II support
- IR viewable length 50m, IP67/IP66, NEMA 4X, IK10
- LDC support (Lens Distortion Correction)
- PoE / 24V AC, 12V DC, Bi-directional audio support

Dimensions

Unit : mm (inch)



Accessories (Optional)



XNV-6080R	
VIDEO	
Imaging Device	1/2.8" 2M CMOS
Total Pixels	1,945(H) x 1,109(V) 2.16M
Effective Pixels	1,945(H) x 1,097(V) 2.13M
Scanning System	Progressive Scan
Min. Illumination	Color : 0.015Lux (F1.4, 1/30sec), B/W : 0Lux (IR LED on)
S / N Ratio	50dB
Video Out	CVBS : 1.0Vpp / 75Ω composite, 720 x 480(N), 720 x 576(P), for installation USB : micro USB type B, 1280 x 720 for installation
LENS	
Focal Length (Zoom Ratio)	2.8 ~ 12mm (4.3x) motorized varifocal
Max. Aperture Ratio	F1.4(Wide) ~ F3.6(Tele)
Angular Field of View	H : 119.5° ~ 27.9° / V : 62.8° ~ 15.7° / D : 142.1° ~ 32.0°
Min. Object Distance	0.5m (1.64ft)
Focus Control	Simple focus (Motorized V/F) / Manual, Remote control via network (Manual, Simple focus)
Lens / Mount Type	DC auto iris, P-Iris / Board-in type
PAN / TILT / ROTATE	
Pan / Tilt / Rotate Range	0° ~ 354° / 0° ~ 67° / 0° ~ 355°
OPERATIONAL	
IR Viewable Length	
Camera Title	
Day & Night	
Backlight Compensation	
Wide Dynamic Range	
Contrast Enhancement	
Digital Noise Reduction	
Digital Image Stabilization	
Defog	
Motion Detection	
Privacy Masking	
Gain Control	
White Balance	
Contrast	
LDC (Lens Distortion Correction)	
Electronic Shutter Speed	
Digital PTZ	
Flip / Mirror	
Video & Audio Analytics	
Alarm I/O	
Alarm Triggers	
Alarm Events	
Pixel Counter	
NETWORK	
Ethernet	
Video Compression Format	
Resolution	
Max. Framerate	
Smart Codec	
WiseStream II	
Video Quality Adjustment	
Bitrate Control Method	
Streaming Capability	
Audio In	
Audio Out	
Audio Compression Format	
Audio Communication	
IP	
Protocol	
Security	
Streaming Method	
Max. User Access	
Edge Storage	
Application Programming Interface	
Webpage Language	
Web Viewer	
Central Management Software	
ENVIRONMENTAL	
Operating Temperature / Humidity	
Storage Temperature / Humidity	
Ingress Protection / Vandal Resistance	
ELECTRICAL	
Input Voltage / Current	
Power Consumption	
MECHANICAL	
Color / Material	
Dimensions (WxH)	
Weight	

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* Design and specifications are subject to change without notice.

XNV-6010

2M Vandal-Resistant Network Dome Camera

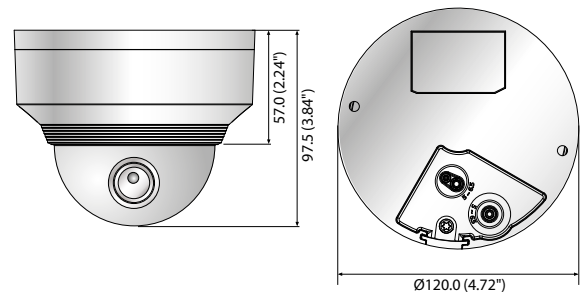


Key Features

- Max. 2megapixel (1920 x 1080) resolution
- Built-in 2.4mm fixed lens
- Max. 60fps@all resolutions (H.265/H.264)
- H.265, H.264, MJPEG codec supported, Multiple streaming
- Day & Night (ICR), WDR (150dB), Defog
- Loitering, Directional detection, Fog detection, Audio detection, Digital auto tracking, Sound classification, Heatmap, People counting, Queue management, Tampering
- Motion detection, Handover
- SD/SDHC/SDXC memory slot (Max. 512GB), PoE / 12V DC
- Hallway view, WiseStream II support, IP67/IP66, IK10
- LDC support (Lens Distortion Correction)

Dimensions

Unit: mm (inch)



Accessories (Optional)



XNV-6010	
VIDEO	
Imaging Device	1/2.8" 2M CMOS
Total Pixels	1,945(H) x 1,109(V) 2.16M
Effective Pixels	1,945(H) x 1,097(V) 2.13M
Scanning System	Progressive Scan
Min. Illumination	Color : 0.055Lux (F2.0, 1/30sec), B/W : 0.0055Lux (F2.0, 1/30sec)
S / N Ratio	50dB
Video Out	CVBS : 1.0 Vpp / 75Ω composite, 720 x 480(N), 720 x 576(P), for installation USB : micro USB type B, 1280 x 720 for installation
LENS	
Focal Length (Zoom Ratio)	2.4mm fixed
Max. Aperture Ratio	F2.0
Angular Field of View	H: 139.0° / V: 73.0° / D: 167.0°
Min. Object Distance	0.4m (1.31ft)
Focus Control	Manual
Lens / Mount Type	Fixed / Board-in type
PAN / TILT / ROTATE	
Pan / Tilt / Rotate Range	0° ~ 354° / 0° ~ 67° / 0° ~ 355°
OPERATIONAL	
Camera Title	
Off / On (Displayed up to 85 characters) - W/W : English / Numeric / Special characters - China : English / Numeric / Special / Chinese characters - Common : Multi-line (Max. 5), Color (Grey / Green / Red / Blue / Black / White), Transparency, Auto scale by resolution	
Day & Night	Auto (ICR) / Color / B/W / External / Schedule
Backlight Compensation	Off / BLC / HLC (Masking / Dimming), WDR
Wide Dynamic Range	150dB
Contrast Enhancement	SSDR (Off / On)
Digital Noise Reduction	SSNRV (2D+3D noise filter) (Off / On)
Digital Image Stabilization	Off / On
Defog	Off / Auto (Input from fog detection) / Manual
Motion Detection	Off / On (8ea, 8point polygonal zones), Handover
Privacy Masking	Off / On (32ea, Polygonal) - Color : Grey / Green / Red / Blue / Black / White, Mosaic
Gain Control	Off / Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor (Included mercury & Sodium)
Contrast	Level adjustment
LDC (Lens Distortion Correction)	Off / On (5 levels with min / max)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker (2 ~ 1/12,000sec)
Digital PTZ	24x, Digital PTZ (Preset, Group)
Flip / Mirror	Off / On, Hallway view : 90°/270°
Video & Audio Analytics	Tampering, Loitering, Directional detection, Defocus detection, Fog detection, Virtual line, Enter / Exit, (Dis)Appear, Audio detection, Face detection, Motion detection, Digital auto tracking, Sound classification, Heatmap, People counting, Queue management
Alarm I/O	Input 1ea / Output 1ea
Alarm Triggers	Alarm input, Motion detection, Video & Audio analytics, Network disconnect
Alarm Events	File upload via FTP, E-mail, Notification via E-mail, Local storage (SD/SDHC/SDXC) or NAS recording at event triggers, External output, DPTZ preset
Pixel Counter	Support
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.265 / H.264 (MPEG-4 part 10/AVC) : Main / Baseline / High, MJPEG
Resolution	1920 x 1080, 1280 x 1024, 1280 x 960, 1280 x 720, 1024 x 768, 800 x 600, 800 x 448, 720 x 576, 720 x 480, 640 x 480, 640 x 360, 320 x 240
Max. Framerate	H.265 / H.264 : Max. 60fps at all resolutions, MJPEG : Max. 30fps
Smart Codec	Manual mode (Area-based : 5ea)
WiseStream II	Support
Video Quality Adjustment	H.265 / H.264 : Target bitrate level control, MJPEG : Target bitrate level control
Bitrate Control Method	H.265 / H.264 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 10 profiles)
Audio In	Selectable (Mic in / Line in), Supply voltage : 2.5V DC (4mA), Input impedance : approx. 2K Ohm
Audio Out	Line out, Max output level : 1Vrms
Audio Compression Format	G.711 u-law/G.726 selectable, G.726 (ADPCM) 8KHz, G.711 8KHz G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps, AAC-LC : 48Kbps at 8/16/32/48KHz
Audio Communication	Bi-directional (2-way)
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP (UDP), RTP (TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour
Security	HTTPS(SSL) login authentication, Digest login authentication IP address filtering, User access log, 802.1X authentication (EAP-TLS, EAP-LEAP)
Streaming Method	Unicast / Multicast
Max. User Access	20 users at unicast mode
Edge Storage	SD/SDHC/SDXC 2slot (Up to 512GB) - Continuous recording (1st slot to 2nd slot) NAS (Network Attached Storage), Local PC for instant recording
Application Programming Interface	ONVIF profile S/G, SUNAPI (HTTP API), Wisenet Open Platform
Webpage Language	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek Supported OS : Windows 7, 8.1, 10, Mac OS X 10.10, 10.11, 10.12 Non-plugin Webviewer - Supported Browser : Google Chrome 54, MS Edge 38, Mozilla Firefox 49(Window 64bit only), Apple Safari 9 * Mac OS X only
Web Viewer	Plug-in Webviewer - Supported Browser : MS Explore 11, Apple Safari 9 * Mac OS X only SmartViewer, SSM
Central Management Software	
ENVIRONMENTAL	
Operating Temperature / Humidity	-30°C ~ +55°C (-22°F ~ +131°F) / Less than 90% RH * Start up should be done at above -20°C (-4°F)
Storage Temperature / Humidity	-50°C ~ +60°C (-58°F ~ +140°F) / Less than 90% RH
Ingress Protection / Vandal Resistance	IP67, IP66 / IK10
ELECTRICAL	
Input Voltage / Current	12V DC ±10%, PoE (IEEE802.3af)
Power Consumption	Max. 5.5W (12VDC), Max. 6W (PoE)
MECHANICAL	
Color / Material	Ivory / Metal
Dimensions (WxH)	Ø120.0 x 97.5mm (Ø4.72" x 3.84")
Weight	625g (1.38lb)

* The latest product information / specification can be found at hanwha-security.eu
* Design and specifications are subject to change without notice.



WISeNET X series eXtreme performance

- 2X faster video processing for a supercharged performance
- 3X more memory so bring on enhanced video and audio analytics
- eXtra storage with half a terabyte on-board to pack it all in
- eXceptional WDR (150db) you'll be amazed by the world's best
- eXclusive compression improving your bandwidth up to 99%

Comparison Chart

					
	WISENET X series XNB-8000	WISENET X series XNB-6000	WISENET X series XNO-8080R	WISENET X series XNO-8020R/8030R/8040R	
VIDEO	Resolution	5MP	2MP	5MP	5MP
	Imaging Device	1/1.8" 6M CMOS	1/2.8" 2M CMOS	1/1.8" 6M CMOS	1/1.8" 6M CMOS
	Video Compression Format	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG
	Resolution / Max. Frame Rate	5M / 30fps	2M / 60fps	5M / 30fps	5M / 30fps
	Streaming Capacity	Multiple (Up to 10 profiles)	Multiple (Up to 10 profiles)	Multiple (Up to 10 profiles)	Multiple (Up to 10 profiles)
	Max. User Access	20 (Unicast)	20 (Unicast)	20 (Unicast)	20 (Unicast)
	Min. Illumination	Color : 0.9Lux B/W : 0.009Lux	Color : 0.01Lux B/W : 0.001Lux	Color : 0.9Lux B/W : 0Lux (IR LED on)	Color : 0.16Lux B/W : 0Lux (IR LED on)
	Video Output	CVBS 1.0Vpp, micro USB type B	CVBS 1.0Vpp, micro USB type B	CVBS 1.0Vpp, micro USB type B	CVBS 1.0Vpp, micro USB type B
Lens	-	-	3.7 ~ 9.4mm (2.5x) Motorized V/F (F1.2)	3.7mm fixed (F1.6) (XNO-8020R) 4.6mm fixed (F1.6) (XNO-8030R) 7mm fixed (F1.6) (XNO-8040R)	
Angular Field of View	-	-	H : 100.2° ~ 38.7° / V : 72.7° ~ 29.0° / D : 132.0° ~ 48.6°	H : 97.5° / V : 71.9° / D : 126.2° (XNO-8020R) H : 77.9° / V : 57.9° / D : 98.7° (XNO-8030R) H : 50.7° / V : 37.8° / D : 63.8° (XNO-8040R)	
Focus Control	Simple focus / Manual	Simple focus / Manual	Simple focus (Motorized V/F) / Manual	-	
OPERATIONAL	IR Viewable Length	-	-	50m (164.04ft)	30m (98.43ft)
	Pan / Tilt / Rotate	-	-	-	-
	Day & Night	True (ICR)	True (ICR)	True (ICR)	True (ICR)
	Backlight Compensation	WDR (120dB)	WDR (150dB)	WDR (120dB)	WDR (120dB)
	Digital Noise Reduction	SSNRV (2D+3D noise filter)	SSNRV (2D+3D noise filter)	SSNRV (2D+3D noise filter)	SSNRV (2D+3D noise filter)
	Digital Image Stabilization	Support	Support	Support	Support
	Video & Audio Analytics	Tampering, Loitering, Directional detection, Defocus detection, Fog detection, Virtual line, Enter / Exit, (Dis)Appear, Audio detection, Motion detection, Face detection, Digital auto tracking, Sound classification	Tampering, Loitering, Directional detection, Defocus detection, Fog detection, Virtual line, Enter / Exit, (Dis)Appear, Audio detection, Motion detection, Face detection, Digital auto tracking, Sound classification	Tampering, Loitering, Directional detection, Defocus detection, Fog detection, Virtual line, Enter / Exit, (Dis)Appear, Audio detection, Motion detection, Face detection, Digital auto tracking, Sound classification	Tampering, Loitering, Directional detection, Defocus detection, Fog detection, Virtual line, Enter / Exit, (Dis)Appear, Audio detection, Motion detection, Face detection, Digital auto tracking, Sound classification, Heatmap, People counting, Queue management
FEATURES	Protocol	ONVIF profile S & G, SUNAPI	ONVIF profile S & G, SUNAPI	ONVIF profile S & G, SUNAPI	ONVIF profile S & G, SUNAPI
	Alarm I/O	1 / 1	1 / 1	1 / 1	1 / 1
	Audio	Bi-directional	Bi-directional	Bi-directional	Bi-directional
	Edge Storage	SD/SDHC/SDXC, NAS, Local PC	SD/SDHC/SDXC, NAS, Local PC	SD/SDHC/SDXC, NAS, Local PC	SD/SDHC/SDXC, NAS, Local PC
	Environment Protection	-	-	IP67, IP66, NEMA 4X, IK10	IP67, IP66, NEMA 4X, IK10
	Operating Temperature	-10°C ~ +55°C (+14°F ~ +131°F)	-10°C ~ +55°C (+14°F ~ +131°F)	-40°C ~ +55°C (-40°F ~ +131°F) *Start up above -20°C (-4°F)	-30°C ~ +55°C (-22°F ~ +131°F) *Start up above -20°C (-4°F)
	Power	AC 24V (Max. 8.5W) DC 12V (Max. 7.5W) PoE (Max. 8.5W)	AC 24V (Max. 8W) DC 12V (Max. 6.5W) PoE (Max. 7.5W)	AC 24V (Max. 14.5W) DC 12V (Max. 12.5W) PoE (Max. 12.95W)	DC 12V (Max. 9.3W) PoE (Max. 10.3W)
	Dimensions (WxHxD) / Weight	73.1 x 66.6 x 147.8mm (2.88" x 2.62" x 5.82") 420g (0.93lb)	73.1 x 66.6 x 147.8mm (2.88" x 2.62" x 5.82") 420g (0.93lb)	Ø91.0 x 368.6mm (Ø3.58" x 14.51") (Without sunshield) 2.18Kg (4.81lb)	Ø120.0 x 296.0mm (Ø4.72" x 11.65") (Without sunshield) 1.22Kg (2.69lb)
Additional Features	DIS with Gyro sensor, Handover, WiseStreamII, Advanced video analytics, Sound classification (Explosion, Gunshot, Glass crash, Scream etc), Hallway view	DIS with Gyro sensor, Handover, WiseStreamII, Advanced video analytics, Sound classification (Explosion, Gunshot, Glass crash, Scream etc), Hallway view	Handover, WiseStreamII, Advanced video analytics, Sound classification (Explosion, Gunshot, Glass crash, Scream etc), Hallway view	Handover, WiseStreamII, Advanced video analytics, Sound classification (Explosion, Gunshot, Glass crash, Scream etc), Hallway view	

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WISENET Xseries XNO-6080R	WISENET Xseries XNO-6010R/6020R	WISENET Xseries XND-8080R	WISENET Xseries XND-8080RV	WISENET Xseries XND-8020R/8030R/8040R	WISENET Xseries XND-6080
2MP	2MP	5MP	5MP	5MP	2MP
1/2.8" 2M CMOS	1/2.8" 2M CMOS	1/1.8" 6M CMOS	1/1.8" 6M CMOS	1/1.8" 6M CMOS	1/2.8" 2M CMOS
H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG
2M / 60fps	2M / 60fps	5M / 30fps	5M / 30fps	5M / 30fps	2M / 60fps
Multiple (Up to 10 profiles)	Multiple (Up to 10 profiles)	Multiple (Up to 10 profiles)	Multiple (Up to 10 profiles)	Multiple (Up to 10 profiles)	Multiple (Up to 10 profiles)
20 (Unicast)	20 (Unicast)	20 (Unicast)	20 (Unicast)	20 (Unicast)	20 (Unicast)
Color : 0.015Lux B/W : 0Lux (IR LED on)	Color : 0.055Lux (XNO-6010R), 0.015Lux (XNO-6020R) B/W : 0Lux (IR LED on)	Color : 0.9Lux B/W : 0Lux (IR LED on)	Color : 0.9Lux B/W : 0Lux (IR LED on)	Color : 0.16Lux B/W : 0Lux (IR LED on)	Color : 0.015Lux B/W : 0.0015Lux
CVBS 1.0Vpp, micro USB type B	CVBS 1.0Vpp, micro USB type B	CVBS 1.0Vpp, micro USB type B	CVBS 1.0Vpp, micro USB type B	CVBS 1.0Vpp, micro USB type B	CVBS 1.0Vpp, micro USB type B
2.8 ~ 12mm (4.3x) Motorized V/F (F1.4)	2.4mm fixed (F2.0) (XNO-6010R) 4mm fixed (F1.4) (XNO-6020R)	3.9 ~ 9.4mm (2.4x) Motorized V/F (F1.3)	3.9 ~ 9.4mm (2.4x) Motorized V/F (F1.3)	3.7mm fixed (F1.6) (XND-8020R) 4.6mm fixed (F1.6) (XND-8030R) 7mm fixed (F1.6) (XND-8040R)	2.8 ~ 12mm (4.3x) Motorized V/F (F1.4)
H : 119.5° ~ 27.9° / V : 62.8° ~ 15.7° / D : 142.1° ~ 32.0°	H : 139.0° / V : 73.0° / D : 167.0° (XNO-6010R) H : 88.6° / V : 47.5° / D : 104.8° (XNO-6020R)	H : 92.1° ~ 38.7° / V : 67.2° ~ 29.0° / D : 119.9° ~ 48.6°	H : 92.1° ~ 38.7° / V : 67.2° ~ 29.0° / D : 119.9° ~ 48.6°	H : 97.5° / V : 71.9° / D : 126.2° (XND-8020R) H : 77.9° / V : 57.9° / D : 98.7° (XND-8030R) H : 50.7° / V : 37.8° / D : 63.8° (XND-8040R)	H : 119.5° ~ 27.9° / V : 62.8° ~ 15.7° / D : 142.1° ~ 32.0°
Simple focus (Motorized V/F) / Manual	-	Simple focus (Motorized V/F) / Manual	Simple focus (Motorized V/F) / Manual	-	Simple focus (Motorized V/F) / Manual
50m (164.04ft)	20m(65.61ft) (XNO-6010R) / 30m(98.43ft) (XNO-6020R)	30m (98.43ft)	30m (98.43ft)	30m (98.43ft)	-
-	-	0° ~ 354° / 0° ~ 67° / 0° ~ 355°	0° ~ 354° / 0° ~ 67° / 0° ~ 355°	0° ~ 354° / 0° ~ 67° / 0° ~ 355°	0° ~ 354° / 0° ~ 67° / 0° ~ 355°
True (ICR)	True (ICR)	True (ICR)	True (ICR)	True (ICR)	True (ICR)
WDR (150dB)	WDR (150dB)	WDR (120dB)	WDR (120dB)	WDR (120dB)	WDR (150dB)
SSNRV (2D+3D noise filter)	SSNRV (2D+3D noise filter)	SSNRV (2D+3D noise filter)	SSNRV (2D+3D noise filter)	SSNRV (2D+3D noise filter)	SSNRV (2D+3D noise filter)
Support	Support	Support	Support	Support	Support
Tampering, Loitering, Directional detection, Defocus detection, Fog detection, Virtual line, Enter / Exit, (Dis)Appear, Audio detection, Motion detection, Face detection, Digital auto tracking, Sound classification	Tampering, Loitering, Directional detection, Defocus detection, Fog detection, Virtual line, Enter / Exit, (Dis)Appear, Audio detection, Motion detection, Face detection, Digital auto tracking, Sound classification, Heatmap, People counting, Queue management	Tampering, Loitering, Directional detection, Defocus detection, Fog detection, Virtual line, Enter / Exit, (Dis)Appear, Audio detection, Motion detection, Face detection, Digital auto tracking, Sound classification	Tampering, Loitering, Directional detection, Defocus detection, Fog detection, Virtual line, Enter / Exit, (Dis)Appear, Audio detection, Motion detection, Face detection, Digital auto tracking, Sound classification	Tampering, Loitering, Directional detection, Defocus detection, Fog detection, Virtual line, Enter / Exit, (Dis)Appear, Audio detection, Motion detection, Face detection, Digital auto tracking, Sound classification, Heatmap, People counting, Queue management	Tampering, Loitering, Directional detection, Defocus detection, Fog detection, Virtual line, Enter / Exit, (Dis)Appear, Audio detection, Motion detection, Face detection, Digital auto tracking, Sound classification
ONVIF profile S & G, SUNAPI	ONVIF profile S & G, SUNAPI	ONVIF profile S & G, SUNAPI	ONVIF profile S & G, SUNAPI	ONVIF profile S & G, SUNAPI	ONVIF profile S & G, SUNAPI
1 / 1	1 / 1	1 / 1	1 / 1	1 / 1	1 / 1
Bi-directional	Bi-directional	Bi-directional	Bi-directional	Bi-directional	Bi-directional
SD/SDHC/SDXC, NAS, Local PC	SD/SDHC/SDXC, NAS, Local PC	SD/SDHC/SDXC, NAS, Local PC	SD/SDHC/SDXC, NAS, Local PC	SD/SDHC/SDXC, NAS, Local PC	SD/SDHC/SDXC, NAS, Local PC
IP67, IP66, NEMA 4X, IK10	IP67, IP66, NEMA 4X, IK10	IK08	IK08	IK08	IK08
-40°C ~ +55°C (-40°F ~ +131°F)	-30°C ~ +55°C (-22°F ~ +131°F) *Start up above -20°C (-4°F)	-10°C ~ +55°C (+14°F ~ +131°F)	-10°C ~ +55°C (+14°F ~ +131°F)	-10°C ~ +55°C (+14°F ~ +131°F)	-10°C ~ +55°C (+14°F ~ +131°F)
AC 24V (Max. 15W) DC 12V (Max. 12W) PoE (Max. 12.95W)	DC 12V (Max. 8.8W) PoE (Max. 9.7W)	DC 12V (Max. 9W) PoE (Max. 10W)	DC 12V (Max. 9W) PoE (Max. 10W)	DC 12V (Max. 8W) PoE (Max. 9W)	DC 12V (Max. 6W) PoE (Max. 6.5W)
Ø91.0 x 368.6mm (Ø3.58" x 14.51") (Without sunshield) 2.18Kg (4.81lb)	Ø70x301.5mm(Ø2.76"x11.87")XNO-6010R Ø70x296mm(Ø2.76"x11.65")XNO-6020R (Withoutsunshield) 1.22Kg (2.69lb)	Ø140.8 x 113.0mm (Ø5.54" x 4.45") 628g (1.39lb)	Ø140.8 x 113.0mm (Ø5.54" x 4.45") 732g (1.61lb)	Ø110.0 x 90.0mm (Ø4.33" x 3.54") 380g (0.84lb)	Ø140.8 x 113.0mm (Ø5.54" x 4.45") 610g (1.34lb)
Handover, WiseStreamII, Advanced video analytics, Sound classification (Explosion, Gunshot, Glass crash, Scream etc), Hallway view	Handover, WiseStreamII, Advanced video analytics, Sound classification (Explosion, Gunshot, Glass crash, Scream etc), Hallway view	Handover, WiseStreamII, Advanced video analytics, Sound classification (Explosion, Gunshot, Glass crash, Scream etc), Hallway view	Handover, WiseStreamII, Advanced video analytics, Sound classification (Explosion, Gunshot, Glass crash, Scream etc), Hallway view	Handover, WiseStreamII, Advanced video analytics, Sound classification (Explosion, Gunshot, Glass crash, Scream etc), Hallway view	Handover, WiseStreamII, Advanced video analytics, Sound classification (Explosion, Gunshot, Glass crash, Scream etc), Hallway view

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Comparison Chart

							
Wisenet X series XND-6080R		Wisenet X series XND-6080V		Wisenet X series XND-6080RV		Wisenet X series XND-6010	
Resolution		2MP		2MP		2MP	
VIDEO	Imaging Device	1/2.8" 2M CMOS		1/2.8" 2M CMOS		1/2.8" 2M CMOS	
	Video Compression Format	H.265, H.264, MJPEG		H.265, H.264, MJPEG		H.265, H.264, MJPEG	
	Resolution / Max. Frame Rate	5M / 30fps		2M / 60fps		5M / 30fps	
	Streaming Capacity	Multiple (Up to 10 profiles)		Multiple (Up to 10 profiles)		Multiple (Up to 10 profiles)	
	Max. User Access	20 (Unicast)		20 (Unicast)		20 (Unicast)	
	Min. Illumination	Color : 0.015Lux B/W : 0Lux (IR LED on)		Color : 0.015Lux B/W : 0.0015Lux		Color : 0.015Lux B/W : 0Lux (IR LED on)	
	Video Output	CVBS 1.0Vpp, micro USB type B		CVBS 1.0Vpp, micro USB type B		CVBS 1.0Vpp, micro USB type B	
	Lens	2.8 ~ 12mm (4.3x) Motorized V/F (F1.4)		2.8 ~ 12mm (4.3x) Motorized V/F (F1.4)		2.8 ~ 12mm (4.3x) Motorized V/F (F1.4)	
	Angular Field of View	H : 119.5° ~ 27.9° / V : 62.8° ~ 15.7° / D : 142.1° ~ 32.0°		H : 119.5° ~ 27.9° / V : 62.8° ~ 15.7° / D : 142.1° ~ 32.0°		H : 119.5° ~ 27.9° / V : 62.8° ~ 15.7° / D : 142.1° ~ 32.0°	
	Focus Control	Simple focus (Motorized V/F) / Manual		Simple focus (Motorized V/F) / Manual		Simple focus (Motorized V/F) / Manual	
OPERATIONAL	IR Viewable Length	30m (98.43ft)		-		30m (98.43ft)	
	Pan / Tilt / Rotate	0° ~ 354° / 0° ~ 67° / 0° ~ 355°		0° ~ 354° / 0° ~ 67° / 0° ~ 355°		0° ~ 354° / 0° ~ 67° / 0° ~ 355°	
	Day & Night	True (ICR)		True (ICR)		True (ICR)	
	Backlight Compensation	WDR (150dB)		WDR (150dB)		WDR (150dB)	
	Digital Noise Reduction	SSNRV (2D+3D noise filter)		SSNRV (2D+3D noise filter)		SSNRV (2D+3D noise filter)	
	Digital Image Stabilization	Support		Support		Support	
	Intelligent Video Analytics	Tampering, Loitering, Directional detection, Defocus detection, Fog detection, Virtual line, Enter / Exit, (Dis)Appear, Audio detection, Motion detection, Face detection, Digital auto tracking, Sound classification		Tampering, Loitering, Directional detection, Defocus detection, Fog detection, Virtual line, Enter / Exit, (Dis)Appear, Audio detection, Motion detection, Face detection, Digital auto tracking, Sound classification		Tampering, Loitering, Directional detection, Defocus detection, Fog detection, Virtual line, Enter / Exit, (Dis)Appear, Audio detection, Motion detection, Face detection, Digital auto tracking, Sound classification, Heatmap, People counting, Queue management	
	Protocol	ONVIF profile S & G, SUNAPI		ONVIF profile S & G, SUNAPI		ONVIF profile S & G, SUNAPI	
	Alarm I / O	1 / 1		1 / 1		1 / 1	
	Audio	Bi-directional		Bi-directional		Bi-directional	
FEATURES	Edge Storage	SD/SDHC/SDXC, NAS, Local PC		SD/SDHC/SDXC, NAS, Local PC		SD/SDHC/SDXC, NAS, Local PC	
	Environment Protection	IK08		IK08		IK08	
	Operating Temperature	-10°C ~ +55°C (+14°F ~ +131°F)		-10°C ~ +55°C (+14°F ~ +131°F)		-10°C ~ +55°C (+14°F ~ +131°F)	
	Power	DC 12V (Max. 9W) PoE (Max. 10W)		DC 12V (Max. 6W) PoE (Max. 6.5W)		DC 12V (Max. 9W) PoE (Max. 10W)	
	Dimensions (WxHxD) / Weight	Ø140.8 x 113.0mm (Ø5.54" x 4.45") 610g (1.34lb)		Ø140.8 x 113.0mm (Ø5.54" x 4.45") 714g (1.57lb)		Ø140.8 x 113.0mm (Ø5.54" x 4.45") 724g (1.60lb)	
	Additional Features	Handover, WiseStreamII, Advanced video analytics, Sound classification (Explosion, Gunshot, Glass crash, Scream etc), Hallway view		Handover, WiseStreamII, Advanced video analytics, Sound classification (Explosion, Gunshot, Glass crash, Scream etc), Hallway view		Handover, WiseStreamII, Advanced video analytics, Sound classification (Explosion, Gunshot, Glass crash, Scream etc), Hallway view	
	Protocol	ONVIF profile S & G, SUNAPI		ONVIF profile S & G, SUNAPI		ONVIF profile S & G, SUNAPI	
	Alarm I / O	1 / 1		1 / 1		1 / 1	
	Audio	Bi-directional		Bi-directional		Bi-directional	
	Edge Storage	SD/SDHC/SDXC, NAS, Local PC		SD/SDHC/SDXC, NAS, Local PC		SD/SDHC/SDXC, NAS, Local PC	
	Environment Protection	IK08		IK08		IK08	
	Operating Temperature	-10°C ~ +55°C (+14°F ~ +131°F)		-10°C ~ +55°C (+14°F ~ +131°F)		-10°C ~ +55°C (+14°F ~ +131°F)	
	Power	DC 12V (Max. 9W) PoE (Max. 10W)		DC 12V (Max. 6W) PoE (Max. 6.5W)		DC 12V (Max. 9W) PoE (Max. 10W)	
	Dimensions (WxHxD) / Weight	Ø140.8 x 113.0mm (Ø5.54" x 4.45") 610g (1.34lb)		Ø140.8 x 113.0mm (Ø5.54" x 4.45") 714g (1.57lb)		Ø140.8 x 113.0mm (Ø5.54" x 4.45") 724g (1.60lb)	
	Additional Features	Handover, WiseStreamII, Advanced video analytics, Sound classification (Explosion, Gunshot, Glass crash, Scream etc), Hallway view		Handover, WiseStreamII, Advanced video analytics, Sound classification (Explosion, Gunshot, Glass crash, Scream etc), Hallway view		Handover, WiseStreamII, Advanced video analytics, Sound classification (Explosion, Gunshot, Glass crash, Scream etc), Hallway view	

※ Design and specifications are subject to change without notice.

				
WISENET X series XNV-8080R	WISENET X series XNV-8020R/8030R/8040R	WISENET X series XNV-6080	WISENET X series XNV-6080R	WISENET X series XNV-6010
5MP	5MP	2MP	2MP	2MP
1/1.8" 6M CMOS	1/1.8" 6M CMOS	1/2.8" 2M CMOS	1/2.8" 2M CMOS	1/2.8" 2M CMOS
H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG
5M / 30fps	5M / 30fps	2M / 60fps	2M / 60fps	2M / 60fps
Multiple (Up to 10 profiles)	Multiple (Up to 10 profiles)	Multiple (Up to 10 profiles)	Multiple (Up to 10 profiles)	Multiple (Up to 10 profiles)
20 (Unicast)	20 (Unicast)	20 (Unicast)	20 (Unicast)	20 (Unicast)
Color : 0.9Lux B/W : 0Lux (IR LED on)	Color : 0.16Lux B/W : 0Lux (IR LED on)	Color : 0.015Lux B/W : 0.0015Lux	Color : 0.015Lux B/W : 0Lux (IR LED on)	Color : 0.055Lux (XNV-6010), 0.02Lux (XNV-6020) B/W : 0.0055Lux (XNV-6010), 0.002Lux (XNV-6020)
CVBS 1.0Vpp, micro USB type B	CVBS 1.0Vpp, micro USB type B	CVBS 1.0Vpp, micro USB type B	CVBS 1.0Vpp, micro USB type B	CVBS 1.0Vpp, micro USB type B
3.9 ~ 9.4mm (2.4x) Motorized V/F (F1.3)	3.7mm fixed (F1.6) (XNV-8020R) 4.6mm fixed (F1.6) (XNV-8030R) 7mm fixed (F1.6) (XNV-8040R)	2.8 ~ 12mm (4.3x) Motorized V/F (F1.4)	2.8 ~ 12mm (4.3x) Motorized V/F (F1.4)	2.4mm fixed (F2.0) (XNV-6010) 4mm fixed (F1.2) (XNV-6020)
H : 92.1° ~ 38.7° / V : 67.2° ~ 29.0° / D : 119.9° ~ 48.6°	H : 97.5° / V : 71.9° / D : 126.2° (XNV-8020R) H : 77.9° / V : 57.9° / D : 98.7° (XNV-8030R) H : 50.7° / V : 37.8° / D : 63.8° (XNV-8040R)	H : 119.5° ~ 27.9° / V : 62.8° ~ 15.7° / D : 142.1° ~ 32.0°	H : 119.5° ~ 27.9° / V : 62.8° ~ 15.7° / D : 142.1° ~ 32.0°	H : 139.0° / V : 73.0° / D : 167.0° (XNV-6010) H : 88.6° / V : 47.5° / D : 104.8° (XNV-6020)
Simple focus (Motorized V/F) / Manual	-	Simple focus (Motorized V/F) / Manual	Simple focus (Motorized V/F) / Manual	-
50m (164.04ft)	30m (98.43ft)	-	50m (164.04ft)	30m (98.43ft)
0° ~ 354° / 0° ~ 67° / 0° ~ 355°	0° ~ 354° / 0° ~ 67° / 0° ~ 355°	0° ~ 354° / 0° ~ 67° / 0° ~ 355°	0° ~ 354° / 0° ~ 67° / 0° ~ 355°	0° ~ 354° / 0° ~ 67° / 0° ~ 355°
True (ICR)	True (ICR)	True (ICR)	True (ICR)	True (ICR)
WDR (120dB)	WDR (120dB)	WDR (150dB)	WDR (150dB)	WDR (150dB)
SSNRV (2D+3D noise filter)	SSNRV (2D+3D noise filter)	SSNRV (2D+3D noise filter)	SSNRV (2D+3D noise filter)	SSNRV (2D+3D noise filter)
Support	Support	Support	Support	Support
Tampering, Loitering, Directional detection, Defocus detection, Fog detection, Virtual line, Enter / Exit, (Dis)Appear, Audio detection, Motion detection, Face detection, Digital auto tracking, Sound classification	Tampering, Loitering, Directional detection, Defocus detection, Fog detection, Virtual line, Enter / Exit, (Dis)Appear, Audio detection, Motion detection, Face detection, Digital auto tracking, Sound classification, Heatmap, People counting, Queue management	Tampering, Loitering, Directional detection, Defocus detection, Fog detection, Virtual line, Enter / Exit, (Dis)Appear, Audio detection, Motion detection, Face detection, Digital auto tracking, Sound classification	Tampering, Loitering, Directional detection, Defocus detection, Fog detection, Virtual line, Enter / Exit, (Dis)Appear, Audio detection, Motion detection, Face detection, Digital auto tracking, Sound classification	Tampering, Loitering, Directional detection, Defocus detection, Fog detection, Virtual line, Enter / Exit, (Dis)Appear, Audio detection, Motion detection, Face detection, Digital auto tracking, Sound classification, Heatmap, People counting, Queue management
ONVIF profile S & G, SUNAPI	ONVIF profile S & G, SUNAPI	ONVIF profile S & G, SUNAPI	ONVIF profile S & G, SUNAPI	ONVIF profile S & G, SUNAPI
1 / 1	1 / 1	1 / 1	1 / 1	1 / 1
Bi-directional	Bi-directional	Bi-directional	Bi-directional	Bi-directional
SD/SDHC/SDXC, NAS, Local PC	SD/SDHC/SDXC, NAS, Local PC	SD/SDHC/SDXC, NAS, Local PC	SD/SDHC/SDXC, NAS, Local PC	SD/SDHC/SDXC, NAS, Local PC
IP67, IP66, NEMA 4X, IK10	IP67, IP66, IK10	IP67, IP66, NEMA 4X, IK10	IP67, IP66, NEMA 4X, IK10	IP67, IP66, NEMA 4X, IK10
-40°C ~ +55°C (-40°F ~ +131°F)	-30°C ~ +55°C (-22°F ~ +131°F) *Start up above -20°C (-4°F)	-40°C ~ +55°C (-40°F ~ +131°F)	-40°C ~ +55°C (-40°F ~ +131°F)	-30°C ~ +55°C (-22°F ~ +131°F) *Start up above -20°C (-4°F)
AC 24V (Max. 14W) DC 12V (Max. 11.5W) PoE (Max. 12.95W)	DC 12V (Max. 8W) PoE (Max. 9W)	AC 24V (Max. 8.2W) DC 12V (Max. 7W) PoE (Max. 7.8W)	AC 24V (Max. 14W) DC 12V (Max. 11.5W) PoE (Max. 12.95W)	DC 12V (Max. 5.5W) PoE (Max. 6W)
Ø160.0 x 118.5mm (Ø6.3" x 4.67") 1.01Kg (2.23lb)	Ø120.0 x 97.5mm (Ø4.72" x 3.84") 615g (1.34lb)	Ø160.0 x 118.5mm (Ø6.3" x 4.67") 985g (2.17lb)	Ø160.0 x 118.5mm (Ø6.3" x 4.67") 995g (2.19lb)	Ø120.0 x 97.5mm (Ø4.72" x 3.84") 625g (1.38lb)
Handover, WiseStreamII, Advanced video analytics, Sound classification (Explosion, Gunshot, Glass crash, Scream etc), Hallway view	Handover, WiseStreamII, Advanced video analytics, Sound classification (Explosion, Gunshot, Glass crash, Scream etc), Hallway view	Handover, WiseStreamII, Advanced video analytics, Sound classification (Explosion, Gunshot, Glass crash, Scream etc), Hallway view	Handover, WiseStreamII, Advanced video analytics, Sound classification (Explosion, Gunshot, Glass crash, Scream etc), Hallway view	Handover, WiseStreamII, Advanced video analytics, Sound classification (Explosion, Gunshot, Glass crash, Scream etc), Hallway view



Notes

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Notes

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