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M.H-1701

WISENET X series
defines the new standard

THE MOST POWERFUL CHIPSET Wisenet 5



WISENET X series



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.

MAKE IT CLEAR



Wisenet X series,
a technology that produces exceptional
image quality even with backlight

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



The World's best WDR 150dB

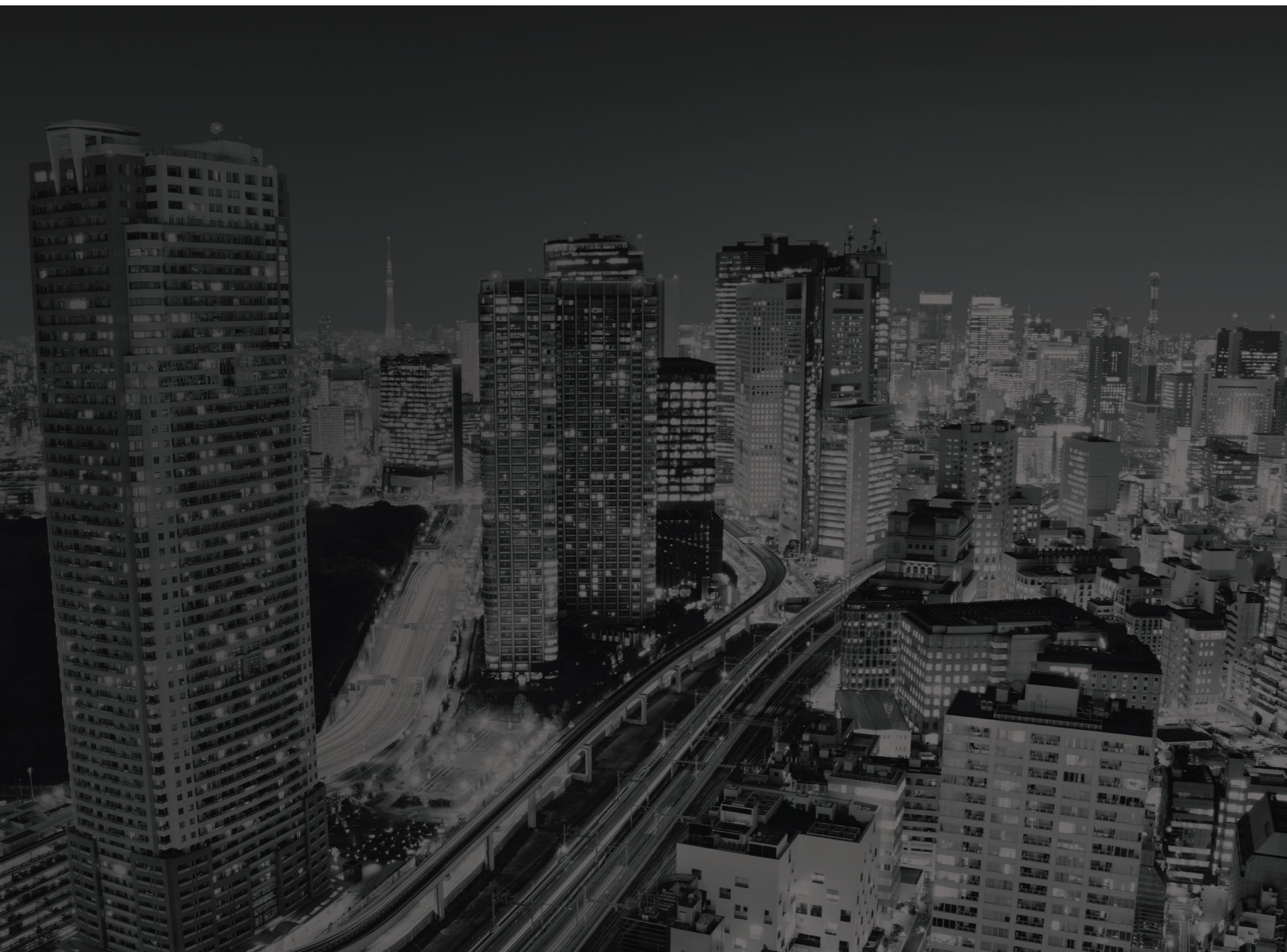
An existing WDR image is captured by composing 2 frames with different exposures, but the Wisenet X series with **150dB** WDR uses 4 frames to create a more natural image. New technology has been developed to remove movement, a critical weakness of existing WDR, and provides clear and vivid images.



※Wisenet X series 5M cameras support 120dB.

SEE THE UNSEEN

Wisenet X series, the power that suppresses darkness



Experience the outstandingly clear images of Wisenet X series that achieves excellence in dark environment.

Monitor color images, even in low-light environments

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



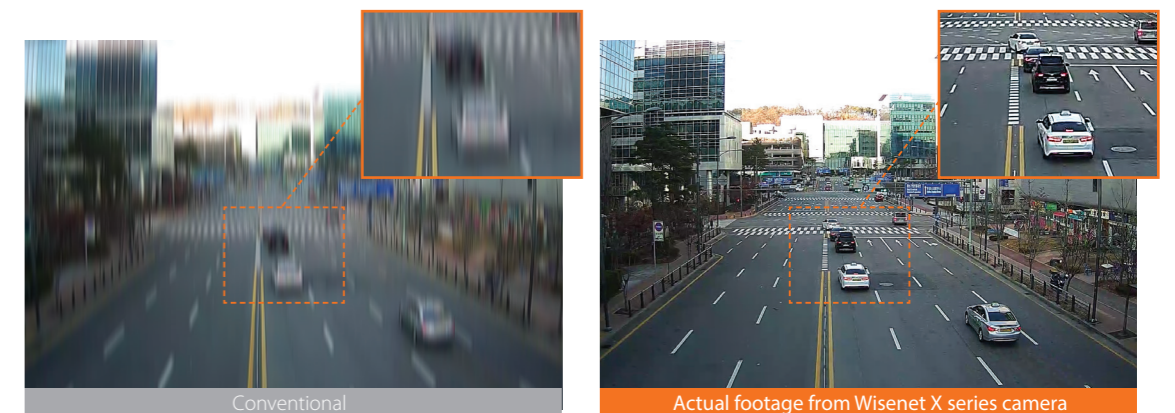
DON'T MISS A MOMENT



You can count on Wisenet X series to capture important moments.

More accurate stabilization using gyro sensors

Gyro sensors have been added to the technology used in existing cameras for more accurate stabilization. Stabilization comes into effect when a camera is disturbed by wind or vibrations, resulting in more stable images.



※XNB-8000/6000 supported

ADVANCED COMPRESSION

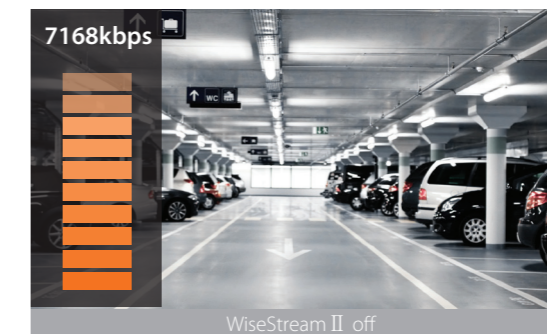
WiseStream II - the Wise Choice



Reduce storage space with the advanced compression technology, WiseStream II .

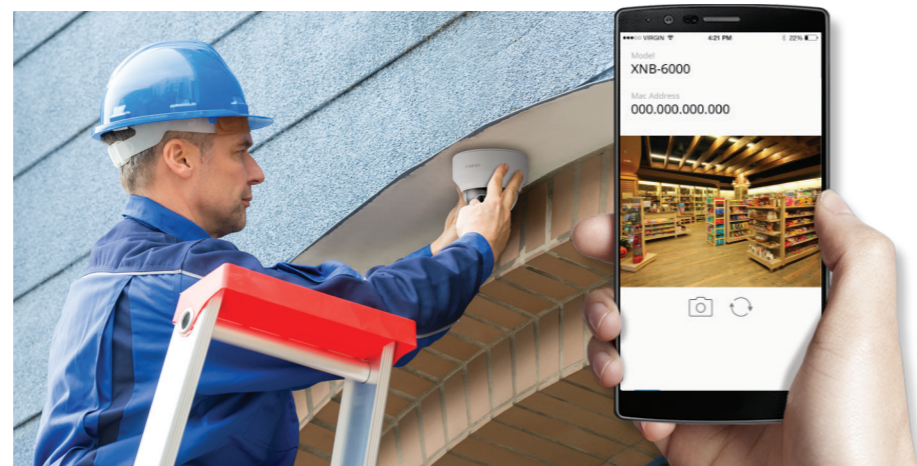
Reduce data by up to 99% using WiseStream II

Using WiseStream II , Hanwha Techwin's original video compression technology, the Wisenet X series reduces data by up to 99% compared to the previous version of Wise Stream when combined with H.265 compression. The costs of configuring and maintaining the system are also greatly reduced, while still maintaining the same pixels and high quality.







More convenient installation with USB

Wisenet X series can connect cameras and mobile devices through USB and Wi-Fi. View angles can be checked immediately after installation using a smartphone. No additional devices are required. You can save time and money.



Enhanced Video Analytics and Sound Classification

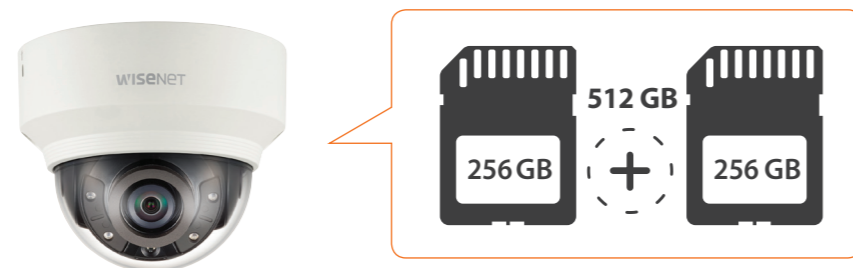
Wisenet X series comes with a variety of exclusive new Video and Audio Analytics, providing enhanced monitoring solutions and market intelligence.

Behavior Analytics	Appear, Disappear, Loitering
Passing	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 map, People counting, Queue management
Audio Analytics Sound classification	Explosion  Broken glass  Gun shot  Scream 

※ bold: new added

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. Obviously this allows to record more video footage than single SD slot.



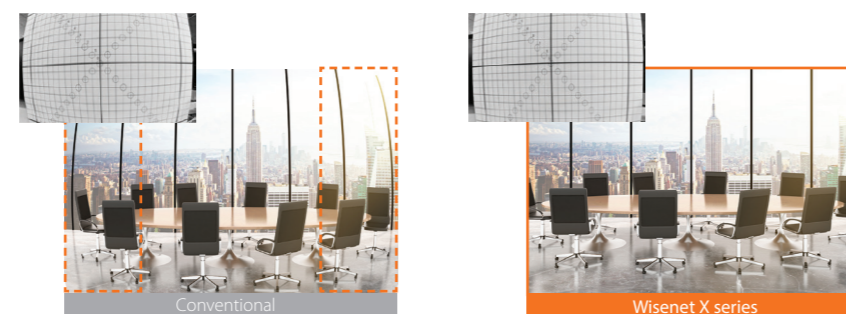
Fog Detection

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



Minimize Lens Distortion

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



Handover to PTZ

The handover feature allows a PTZ camera* to receive an alarm(motion detection) from Wisenet X series camera 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





Wisenet X
XNB-8000



Wisenet X
XNB-6000



Wisenet X
XNO-8080R



Wisenet X
XNO-8020R/8030R/8040R



Wisenet X
XNO-6080R



Wisenet X
XNO-6010R/6020R



Wisenet X
XND-8080R



Wisenet X
XND-8080RV



Wisenet X
XND-8020R/8030R/8040R



Wisenet X
XND-6080

Resolution	5MP	2MP	5MP	5MP
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 : 0.2Lux 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	-
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
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. 8.8W) PoE (Max. 9.8W)
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) 1.3kg (2.87lb)
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

※ Design and specifications are subject to change without notice.

Resolution	2MP	2MP	5MP	5MP	5MP	2MP
Resolution	2MP	2MP	5MP	5MP	5MP	2MP
Imaging Device	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
Video Compression Format	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
Resolution / Max. Frame Rate	2M / 60fps	2M / 60fps	5M / 30fps	5M / 30fps	5M / 30fps	2M / 60fps
Streaming Capacity	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)
Max. User Access	20 (Unicast)	20 (Unicast)	20 (Unicast)	20 (Unicast)	20 (Unicast)	20 (Unicast)
Min. Illumination	Color : 0.015Lux B/W : 0Lux (IR LED on)	Color : 0.055Lux (XNO-6010R), 0.01Lux (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 : 0.2Lux B/W : 0Lux (IR LED on)	Color : 0.015Lux B/W : 0.0015Lux
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	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)	2.4mm fixed (F2.0) (XNO-6010R) 4mm fixed (F1.2) (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)
Angular Field of View	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°
Focus Control	Simple focus (Motorized V/F) / Manual	-	Simple focus (Motorized V/F) / Manual	Simple focus (Motorized V/F) / Manual	-	Simple focus (Motorized V/F) / Manual
IR Viewable Length	50m (164.04ft)	30m (98.43ft)	30m (98.43ft)	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°	0° ~ 354° / 0° ~ 67° / 0° ~ 355°
Day & Night	True (ICR)	True (ICR)	True (ICR)	True (ICR)	True (ICR)	True (ICR)
Backlight Compensation	WDR (120dB)	WDR (150dB)	WDR (120dB)	WDR (120dB)	WDR (120dB)	WDR (150dB)
Digital Noise Reduction	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)
Digital Image Stabilization	Support	Support	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, 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
Protocol	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
Alarm I/O	1 / 1	1 / 1	1 / 1	1 / 1	1 / 1	1 / 1
Audio	Bi-directional	Bi-directional	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	SD/SDHC/SDXC, NAS, Local PC	SD/SDHC/SDXC, NAS, Local PC
Environment Protection	IP67, IP66, NEMA 4X, IK10	IP67, IP66, NEMA 4X, IK10	IK08	IK08	IK08	IK08
Operating Temperature	-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)
Power	AC 24V (Max. 15W) DC 12V (Max. 12W) PoE (Max. 12.95W)	DC 12V (Max. 7.8W) PoE (Max. 8.8W)	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)
Dimensions (WxHxD) / Weight	Ø91.0 x 368.6mm (Ø3.58" x 14.51") (Without sunshield) 2.18kg (4.81lb)	Ø70.0 x 296.0mm (Ø2.76" x 11.65") (Without sunshield) 1.3kg (2.87lb)	Ø140.8 x 113.0mm (Ø5.54" x 4.45") 626g (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") 365g (0.80lb)	Ø140.8 x 113.0mm (Ø5.54" x 4.45") 610g (1.34lb)
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	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.

XNO-6010R/6020R

2M Network IR Bullet Camera

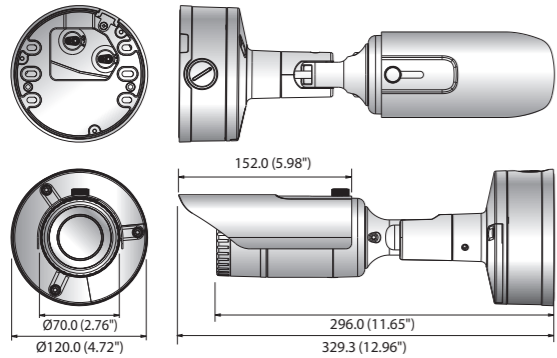


Key Features

- 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, WiseStreamII support
- IR viewable length 30m, IP67/IP66, NEMA 4X, IK10
- LDC support (Lens Distortion Correction)

Dimensions

Unit : mm (inch)



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 : 0.01Lux (F1.2, 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), F1.2 (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	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	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)
WiseStreamII	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) - Motion images recorded in the SD/SDHC/SDXC memory card can be downloaded. 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 SmartViewer, SSM
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. 7.8W (12VDC), Max. 8.6W (PoE)
MECHANICAL	
Color / Material	Dark gray / Aluminum
Dimensions (WxH)	Ø120.0 x 296.0mm (Ø4.72" x 11.65") (Without sunshield)
Weight	1.3Kg (2.87lb)

* Design and specifications are subject to change without notice.

XND-6080

2M Network Dome Camera

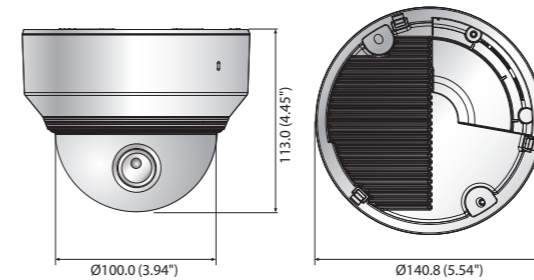


Key Features

- 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, WiseStreamII support, IK08
- LDC support (Lens Distortion Correction)
- PoE / 12V DC, Bi-directional audio support

Dimensions

Unit : mm (inch)



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°
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	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)
WiseStreamII	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) - Motion images recorded in the SD/SDHC/SDXC memory card can be downloaded. 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 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)

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

XNV-6010/6020

2M Vandal-Resistant Network Dome Camera

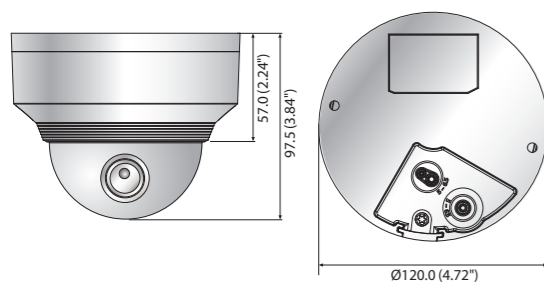


Key Features

- Max. 2megapixel (1920 x 1080) resolution
- Built-in 2.4mm fixed lens (XNV-6010)
4mm fixed lens (XNV-6020)
- 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, WiseStreamII support, IP67/IP66, IK10
- LDC support (Lens Distortion Correction)

Dimensions

Unit : mm (inch)



XNV-6010/6020	
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) (XNV-6010) Color : 0.02Lux (F1.2, 1/30sec), B/W : 0.002Lux (F1.2, 1/30sec) (XNV-6020)
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 (XNV-6010), 4mm fixed (XNV-6020)
Max. Aperture Ratio	F2.0 (XNV-6010), F1.2 (XNV-6020)
Angular Field of View	H : 139.0° / V : 73.0° / D : 167.0° (XNV-6010), H : 88.6° / V : 47.5° / D : 104.8° (XNV-6020)
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 (Pre-set, 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
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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)
WiseStreamII	Support
Video Quality Adjustment	H.265 / H.264 : Target bitrate level control, MJPEG : Target bitrate level control
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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) - Motion images recorded in the SD/SDHC/SDXC memory card can be downloaded. 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	SmartViewer, SSM
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)

* Design and specifications are subject to change without notice.

WISENET X series
defines the new standard