

OLIO 2024 H2 PRODU
H2 **PRODUCT** PORTFO
RODUCT **PORTFOLIO**



Hanwha Group

Hanwha will continue to embrace bold challenges for a sustainable tomorrow.

Founded in 1952, Hanwha continues to grow by quickly anticipating and responding to rapidly changing business environments with a balanced business portfolio that includes aerospace, energy & materials, finance and retail & services. As of 2022, we are the seventh largest business enterprise in South Korea and a Fortune Global 500 company. Hanwha has become a global leader in a number of industries due to its culture of innovation, focused on breakthrough technologies, and sound financial structures.

Sales
2022

65.3 USD
Billions

Years of History
Founded in 1952

71

Domestic affiliates
As of end of June 2022

91

Business Enterprise in
South Korea

Total asset basis, as of end of 2022

TOP 7

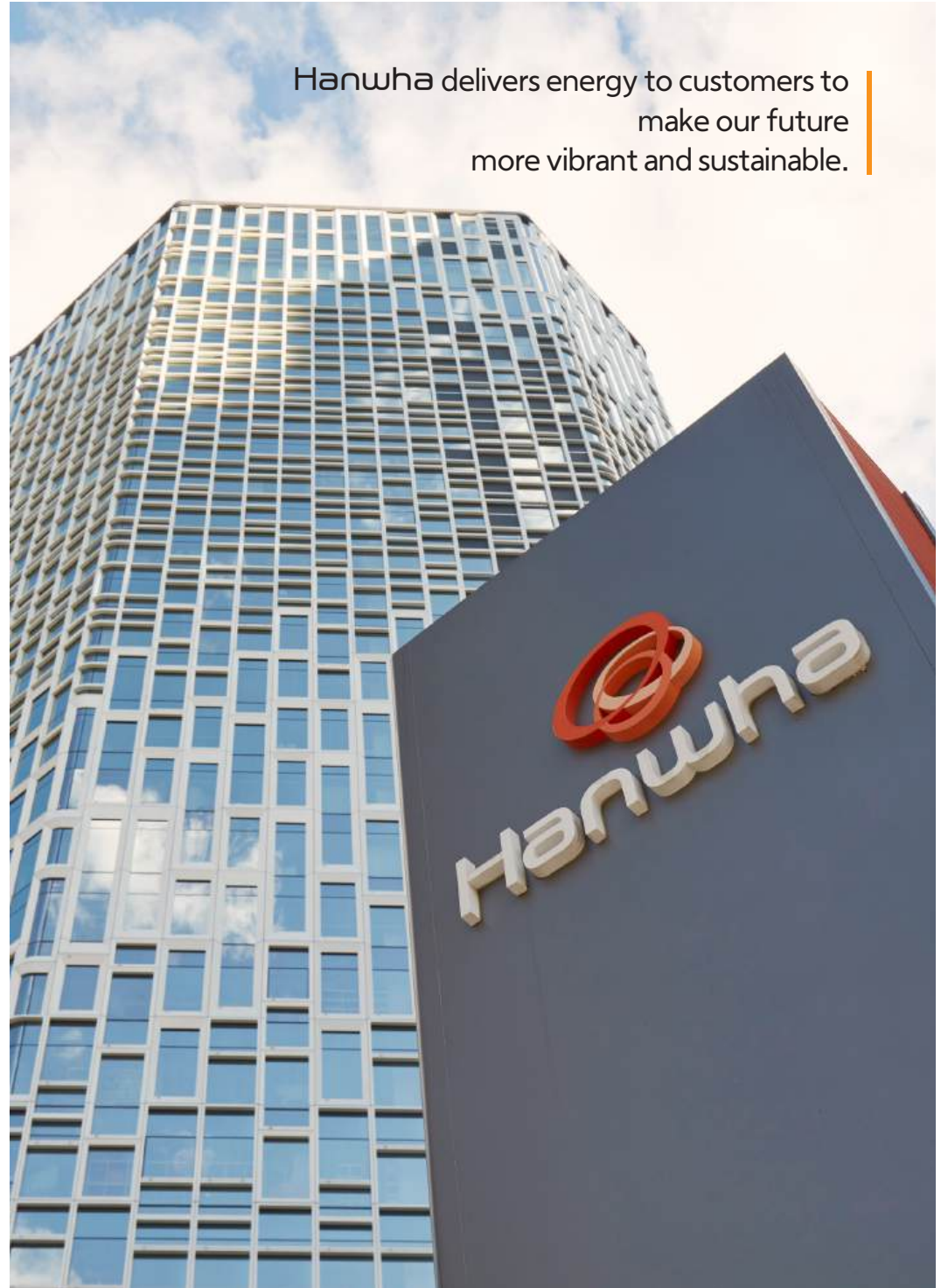
Ranking on Fortune
Global 500 in 2023

296

Global Networks
As of end of 2022

710

Hanwha delivers energy to customers to
make our future
more vibrant and sustainable.



History

-
- 2024** – Joined 'UN Global Compact(UNGC)'
Launched Industry's First Dual Sensor BCR Camera
 - 2023** – Changed company name to 'Hanwha Vision' Announced focus on becoming a vision solution provider
 - 2022** – Launched IP audio system
 - 2021** – Launched the X AI camera series
– Launched AI NVR and AI integrated solution
– Developed AI-based infectious disease response solutions
 - 2020** – 30th anniversary of the video security business
– Launched the P AI camera series
– Launched Wisenet 7 SoC, a camera series with Wisenet 7 SoC acquired UL CAP (UL Cybersecurity Assurance Program)
 - 2019** – UK Government official cybersecurity certification
– Acquired 'Secure by Default'
– Launched the world's first 55x IR PTZ camera
 - 2018** – Established Hanwha Techwin Vietnam manufacturing orporation
 - 2017** – Wisenet 5 SoC and X camera series launched
Acquired CES, a UK Government cyber security certification
 - 2016** – Establishment of Hanwha Techwin Middle East FZE
 - 2015** – Launched Hanwha Techwin
 - 2013** – Wisenet 3 SoC and camera series with Wisenet 3 SoC are launched
 - 2012** – Launched the world's first 37x IR PTZ camera
 - 2009** – Establishment of Hanwha Techwin Tianjin and Shanghai
 - 2008** – Launched the world's first 37x PTZ camera
 - 2005** – Developed advanced intruder automatic location tracking system
 - 2004** – Developed Winner 3 Analog ISP chip
 - 2001** – Establishment of Hanwha Techwin Europe
 - 1997** – Launched the world's best ultra-low illumination video surveillance camera
 - 1993** – Developed Korea's first Auto Iris lens for CCTV
 - 1990** – Started video surveillance business, establishment of Hanwha Techwin America

Hanwha Vision

'Hanwha Vision' will become your vision partner who realizes a sustainable future and provides new values.

Over the past 30 years, we have established ourselves as a global video security specialist based on world-class optical design, manufacturing, and image processing technology.

We have been ensuring safety and security around the world and across society with products and solutions with outstanding performance, high reliability, and industry-leading cybersecurity policies.

Our growth and innovation started with our customers' needs. This began with their desire to improve safety and security, now evolving to answer wider business opportunities and challenges. Ultimately, all our solutions enable our customers to reach their goals.

Our investment in innovation and continually pushing the boundaries of what's possible in video is core to our competitiveness, ensuring our steady success in vision solutions.





CORE COMPETENCIES

Strengthening our technological competitiveness based on vision technology, AI and cybersecurity.

Hanwha Vision has core competitiveness in vision technology based on optical and image processing technology accumulated over 30 years. As image processing technology through AI has become popular, currently, what matters more is how to process information to create valuable information. In response, Hanwha Vision plans to provide valuable information in various fields through technology conversion and expansion through AI capabilities and a cloud platform.

Also, we will continue to enhance our competitiveness in cybersecurity.



Vision technology

Hanwha Vision provides high-quality image and vision information through world-class optical and image processing technology.



AI-based intelligent analysis

Hanwha Vision offers AI-based intelligent solutions through self-developed analytics algorithms while providing optimized information to customers by efficiently analyzing vast amounts of data.



Cybersecurity

Hanwha Vision conducts regular security management under the leadership of S-CERT (a dedicated security emergency response team). Hanwha Vision has been selected as an international CVE program CNA organization to manage program vulnerabilities. In addition, we have obtained numerous cybersecurity certifications from renowned global certification such as UL CAP, FIPS, TTA and more.

R&D POWER

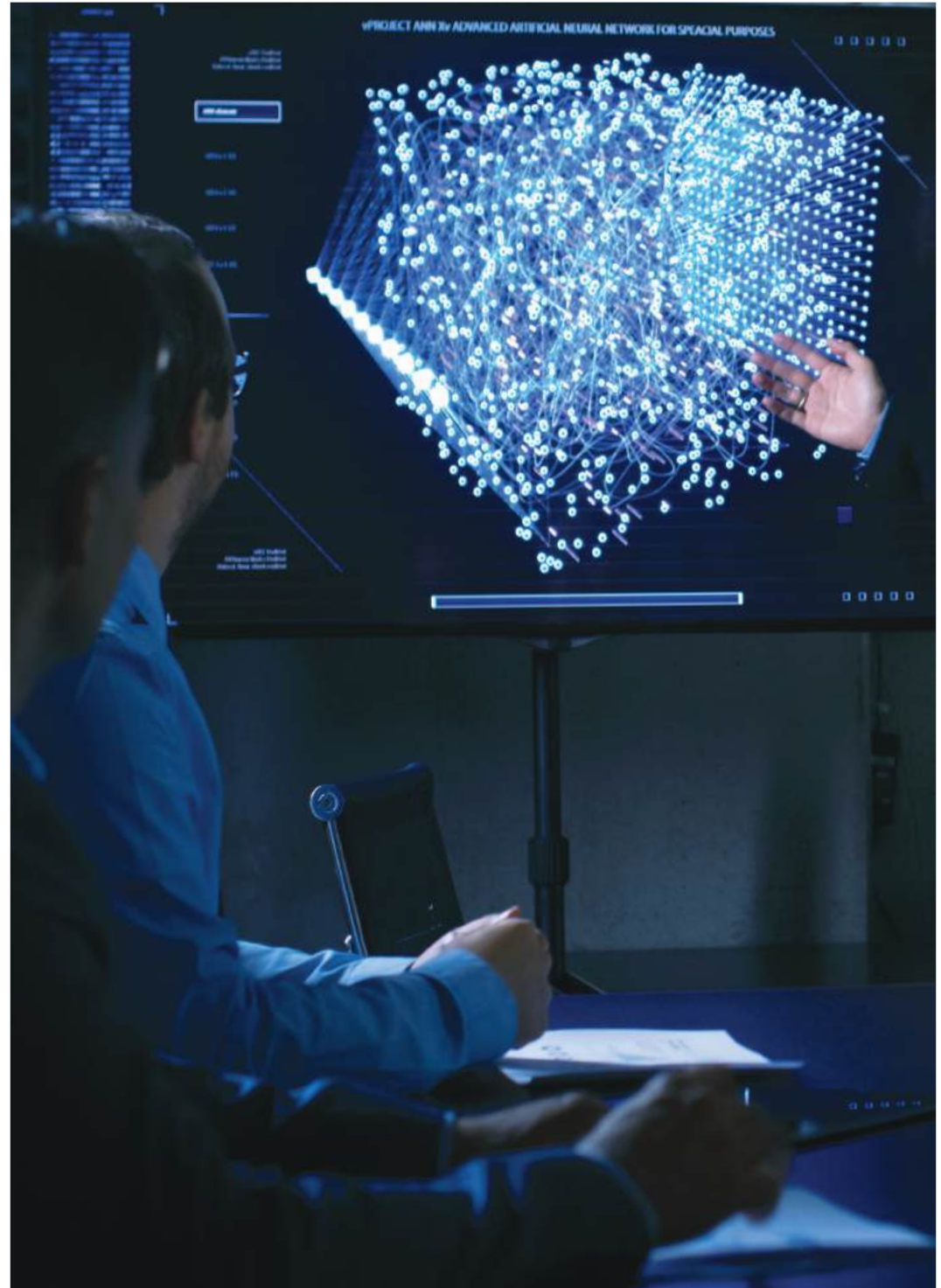
Hanwha Vision continues to accelerate research and development efforts to sustain its competitive edge.

The R&D headquarters, located in Pangyo Techno Valley, Gyeonggi-do, is the central hub of Hanwha Vision's global R&D. Here, we develop and test various vision technology solutions before introducing them commercially.

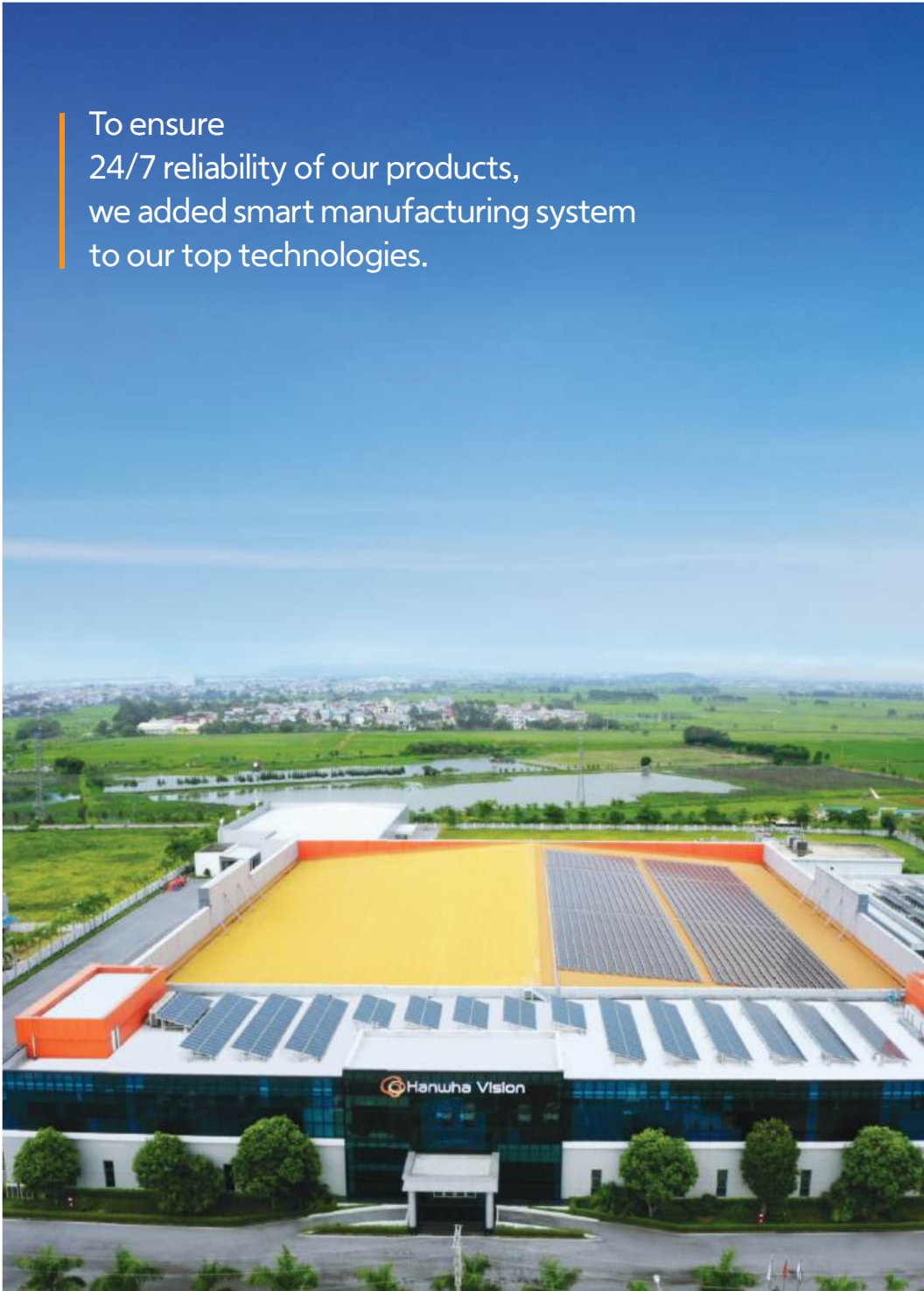
In 2022, Hanwha Vision established an Innovation Center in the US, with the goal of developing key innovations for the future, such as AI and cloud. Eventually we see these becoming Hanwha Vision's core strengths.

Alongside these efforts, we have established a global AI R&D organization across our headquarters, the US R&D Center, and our AI data lab. This secures our AI full stack capabilities, from AI strategy to data processing, commercialization, and future development.

This accelerates our R&D to give Hanwha Vision sustainable competitiveness in an ever-changing market.



To ensure
24/7 reliability of our products,
we added smart manufacturing system
to our top technologies.



HIGH-TECH POWERED IN VIETNAM

Hanwha Vision's manufacturing subsidiary in Vietnam (HVV) has been in operation since 2018 in order to expand its global production capability as well as to strengthen cost competitiveness. Through automation and smart systems, Hanwha Vision has built sophisticated and fast-moving manufacturing lines producing all its product line-ups including cameras and storage devices. All products produced in HVV go through a reliable manufacturing and quality assurance process and sold globally.

END-TO-END CYBERSECURITY

Hanwha Vision offers cybersecurity with the industry's highest levels of cybersecurity policy with secure boot/OS/storage, a signed firmware/open platform app, secure JTAG and more.

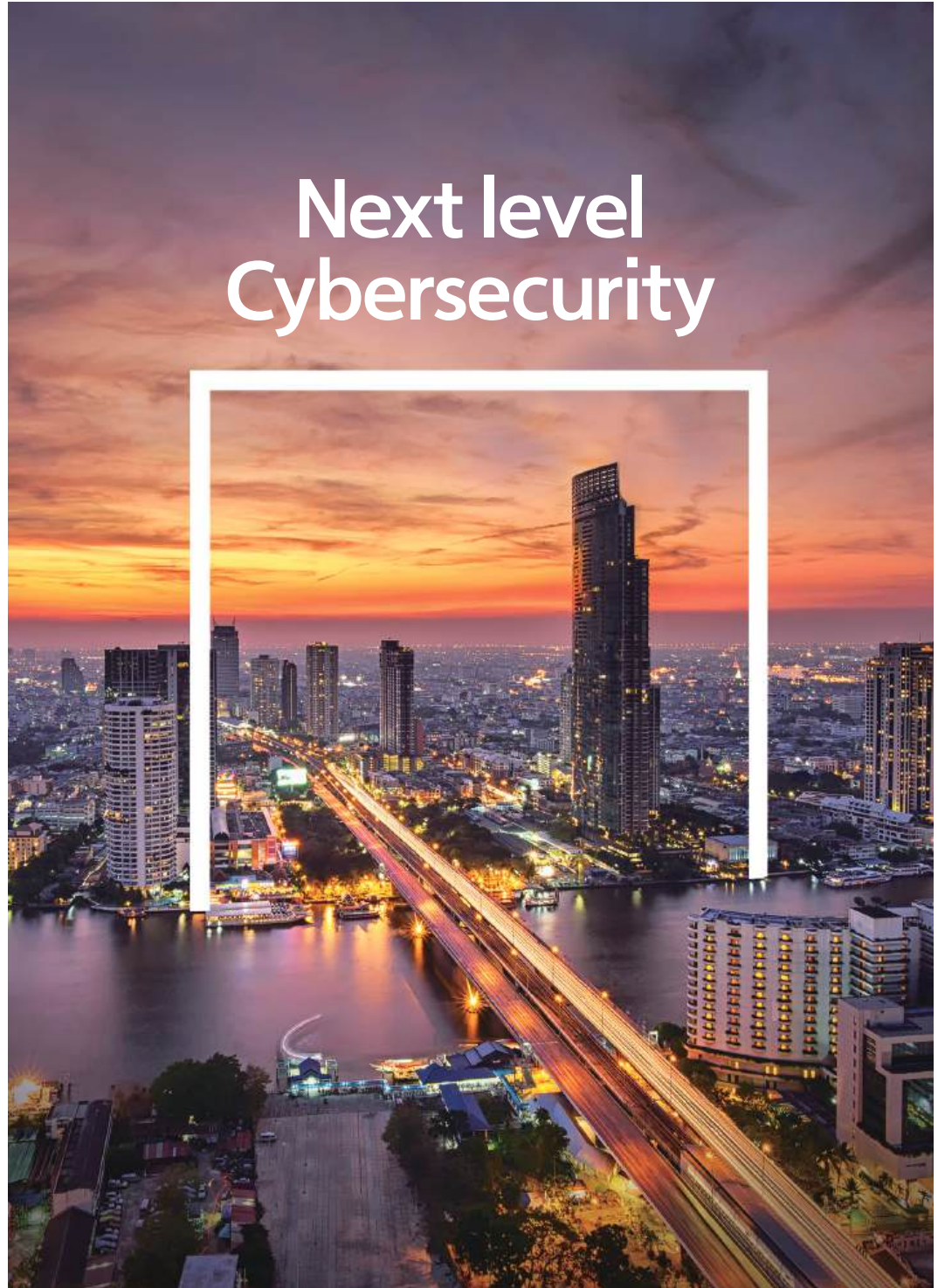
Hanwha Vision established its own device certificate issuing system to embed certificates into the product not only in the development progress but also in the manufacturing progress.

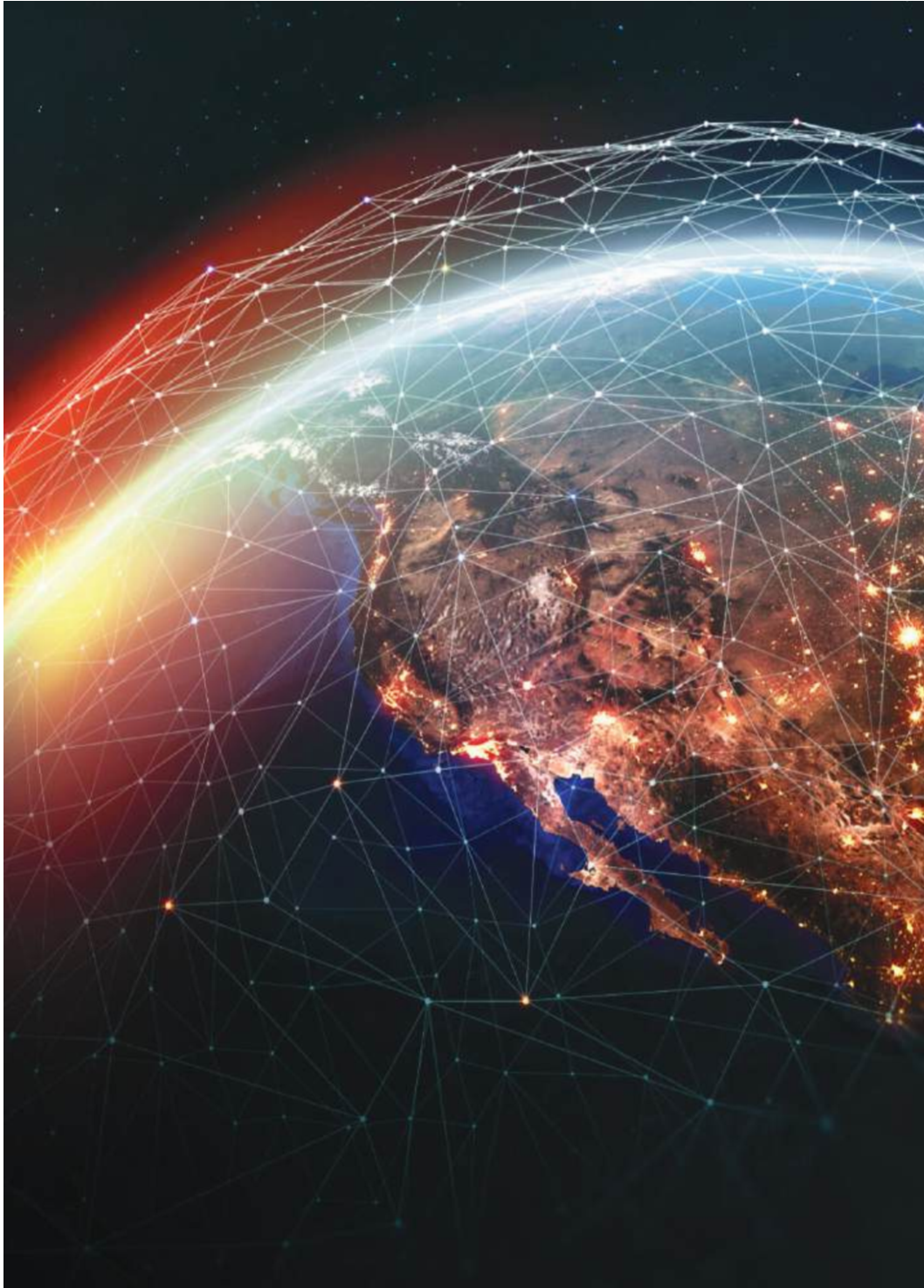


- Hanwha Vision Private Device Certification Root CA
- UL CAP, TPM 2.0 (FIPS 140-2)
- Secure Boot, Secure Storage, Secure OS
- Secure Open Platform
- S-CERT : Security Computer Emergency Response Team
Please contact S-CERT by e-mail (secure.cctv@hanwha.com)

※ Please ask your local representative for UL CAP, TPM 2.0 applied products

Next level Cybersecurity





GLOBAL NETWORK

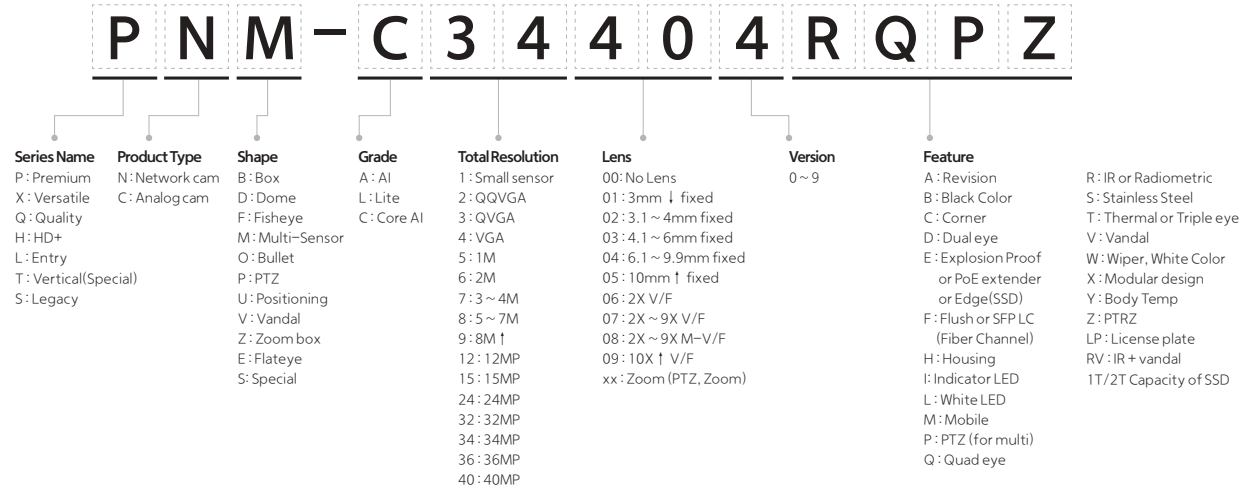
Hanwha Vision has a close relationship with customers and partners around the world across R&D, manufacturing and sales.

- Hanwha Vision R&D Center (HQ, South Korea)
- 5 Global Subsidiaries (including Vietnam Manufacturing)
- 11 Branch Offices
- 1 Innovation Center

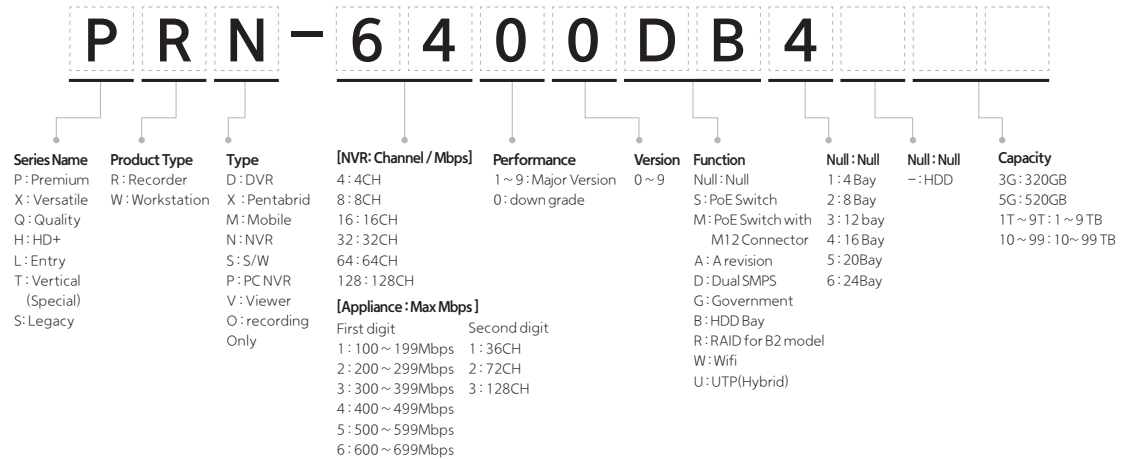


PRODUCT NAMING RULE

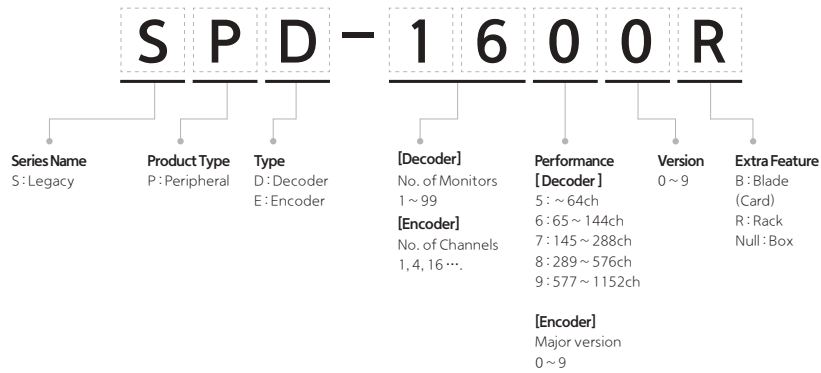
Camera



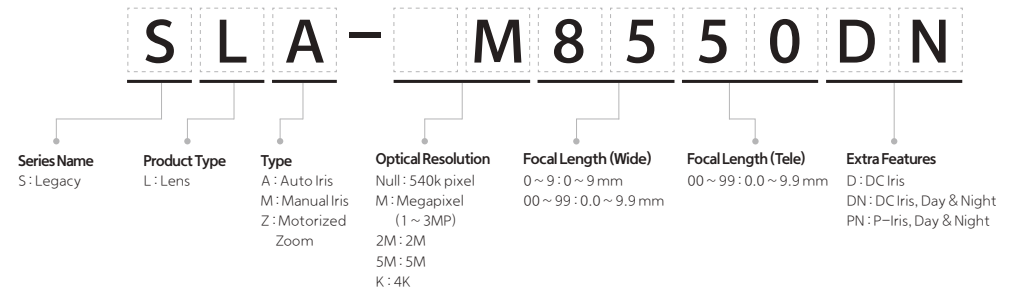
Recorder



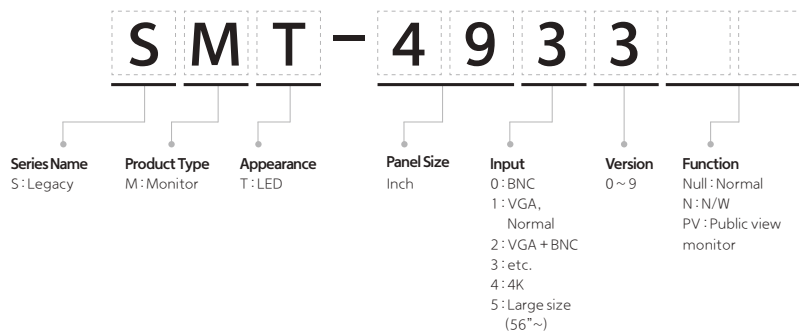
Decoder/Encoder



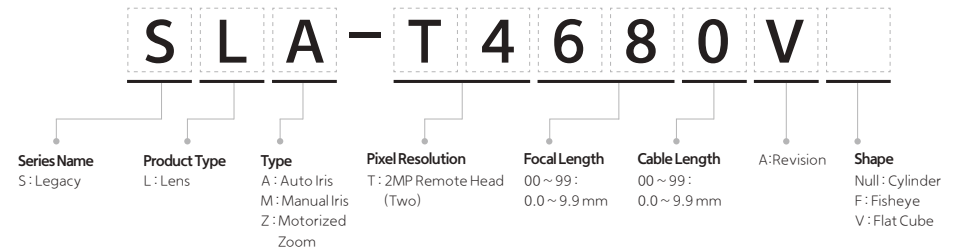
Lens : CS Mount



Monitor



Lens : Remote Head



NETWORK

Camera

AI Cameras

X series

P series

Q series

T series

L series

NVR

Encoder / Decoder

VMS

Access Control

IP Audio Management System

ANALOG

Camera

DVR

PERIPHERAL

Monitor

Controller

Lens

INSTALLATION SOLUTION

Toolbox Plus

LINE UP 2024 H2 LINE
E UP 2024 H2 LINE UP



Imaging Device	1/1.8" progressive CMOS				
Resolution / Max. Frame Rate	8MP / 30fps				
Min. Illumination	Color: 0.04Lux(F1.3, 1/30sec, 30IRE) BW: 0.004Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.04Lux(F1.3, 1/30sec, 30IRE) BW: 0.004Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.03Lux(F1.3, 1/30sec, 30IRE) BW: 0.003Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.04Lux(F1.3, 1/30sec, 30IRE) BW: 0.004Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.03Lux(F1.2, 1/30sec, 30IRE) BW: 0.003Lux(F1.2, 1/30sec, 30IRE)
Video Out	CVBS: 1.0 Vp-p / 75Ω composite, 720x480(N), 720x576(P) for installation USB: Micro USB Type B, 1280x720 for installation	CVBS: 1.0 Vp-p / 75Ω composite, 720x480(N), 720x576(P) for installation USB: Micro USB Type B, 1280x720 for installation	-	CVBS: 1.0 Vp-p / 75Ω composite, 720x480(N), 720x576(P) for installation USB: Micro USB Type B, 1280x720 for installation	CVBS: 1.0 Vp-p / 75Ω composite, 720x480(N), 720x576(P) for installation USB: Micro USB Type B, 1280x720 for installation
Focal Length (Zoom Ratio)	4.4~9.3mm(2.1x) motorized varifocal				-
Angular Field of View	H: 112.1° (Wide) ~ 47.5° (Tele) V: 58° (Wide) ~ 26.6° (Tele) D: 137.5° (Wide) ~ 54.6° (Tele)	H: 112.1° (Wide) ~ 47.5° (Tele) V: 58° (Wide) ~ 26.6° (Tele) D: 137.5° (Wide) ~ 54.6° (Tele)	H: 113° (Wide) ~ 47° (Tele) V: 58° (Wide) ~ 26° (Tele) D: 138° (Wide) ~ 54° (Tele)	H: 112.1° (Wide) ~ 47.5° (Tele) V: 58° (Wide) ~ 26.6° (Tele) D: 137.5° (Wide) ~ 54.6° (Tele)	-
Pan / Tilt / Rotate Range	0°~360° / 0°~90° / 0°~360°	0°~360° / 0°~85° / 0°~355°	Remote adjustment(Max. 200cycles) 0°~350° / 0°~85° / 0°~340°	0°~360° / 0°~85° / 0°~355°	-
IR Viewable Length	WiseIR 50m (164.04ft)	WiseIR 50m (164.04ft)	15m (49.21ft) 30m (98.43ft) based on scene	WiseIR 50m (164.04ft)	-
Day & Night	Auto (ICR)				
Wide Dynamic Range	extremeWDR (120dB)				
Digital Noise Reduction	WiseNR II (Based on AI engine), SSNR V				
Digital Image Stabilization	Support (built-in gyro sensor)				
Analytics	<p>Classified object type: Person/Face/Vehicle/License plate Attributes: Vehicle (Type:car/bus/truck/motorcycle/bicycle) Support DetectionShot Analytics events based on AI engine: Object detection, Virtual line (Crossing/Direction), Virtual area (Loitering/Intrusion/Enter/Exit), Motion Detection Analytics events: Defocus detection, Motion detection, Tampering, Fog detection, Audio detection, Sound classification, Shock detection, Virtual area (Appear/Disappear)</p>				
Business Intelligence	Based on AI engine: People/Vehicle counting, Queue management, Heatmap	Based on AI engine: People/Vehicle counting, Queue management, Heatmap	Based on AI engine: People/Vehicle counting	Based on AI engine: People/Vehicle counting, Queue management, Heatmap	Based on AI engine: People/Vehicle counting, Queue management, Heatmap
Alarm I/O	2 configurable I/O ports, DC 12V output (Max. 50mA)	2 configurable I/O ports, DC 12V output (Max. 50mA)	-	2 configurable I/O ports, DC 12V output (Max. 50mA)	2 configurable I/O ports
Audio I/O	Selectable (mic in/line in) / Line out	Selectable (mic in/line in) / Line out	-	Selectable (mic in/line in/built-in mic) / Line out	Selectable (mic in/line in/built-in mic) / Line out
Video Compression	H.265 / H.264, MJPEG				
WiseStream	Manual(Sea area), WiseStream III (Based on AI engine)				
Streaming	Up to 10 profiles, 3 virtual channel support				
Edge Storage	micro SD/SDHC/SDXC 2slot Max. 1TB (512GB * 2)				
Application Programming Interface	ONVIF Profile S/G/T/M, SUNAPI(HTTP API) Hanwha Vision Open Platform				
Operating Temperature / Humidity	-50°C~+55°C(-58°F~+131°F) +74°C(+165°F)(Max) based on NEMA-TS 2(2.2.7) * Start up should be done at above -30°C 0~100% RH(condensing) Humidity control with AIR vent	-50°C~+55°C(-58°F~+131°F) * Start up should be done at above -30°C 0~100% RH(condensing) Humidity control with AIR vent	-50°C~+55°C(-58°F~+131°F) * Start up should be done at above -30°C 0~100%RH(condensing) Humidity control with AIR vent	-25°C~+50°C(-13°F~+122°F) / 0~100% RH(condensing) Humidity control with AIR vent	-10°C~+55°C(-14°F~+131°F) / 0~95% RH(non-condensing)
Certification	IP66, IP67, NEMA4X, IK10	IP66, IP67, IP6K9K, NEMA4X, IK10+	IP66, IP67, IP6K9K, NEMA4X, IK10+	IP52, IK10	-
Power Consumption	PoE+: Max 22.5W, typical 17.9W 12VDC: Max 20W, typical 15.6W Power redundancy failover	PoE+: Max 22.5W, typical 17.9W 12VDC: Max 20W, typical 15.6W Power redundancy failover	PoE+: Max 22.5W, typical 12.1W	PoE+: Max 22.5W, typical 17.9W 12VDC: Max 20W, typical 15.6W Power redundancy failover	PoE: Max 12.95W, typical 9.8W 12VDC: Max 19W, typical 9.5W
Product Dimensions / Weight	ø93.4x298.4mm(ø 3.68x11.75"), 2200g(4.85 lb)	ø 180x125mm(ø 7.09x4.92"), 1900g(4.19 lb)	ø 180x135mm(ø 7.09x5.31"), 2000g(4.41 lb)	ø 160x125mm(ø 6.30x4.92"), 1600g(3.53 lb)	81(W)x67(H)x165(D)mm(3.19x2.64x6.48"), 880g(1.94 lb)

NETWORK

ANALOG

PERIPHERAL

INSTALLATION SOLUTION



X Plus
XNV-8093R
6MP AI IR Vandal Dome Camera



X Plus
XND-8093RV
6MP AI IR Dome Camera



X Plus
XNO-8083R
6MP AI IR Bullet Camera



X Plus
XNV-8083R
6MP AI IR Vandal Dome Camera



X Plus
XNV-8083RZ
6MP AI IR Vandal Dome Camera

Imaging Device	1/1.8" progressive CMOS				
Resolution / Max. Frame Rate	6MP/30fps				
Min. Illumination	Color: 0.06Lux(F1.7, 1/30sec, 30IRE) BW: 0.006Lux(F1.7, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.06Lux(F1.7, 1/30sec, 30IRE) BW: 0.006Lux(F1.7, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.04Lux(F1.3, 1/30sec, 30IRE) BW: 0.004Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.04Lux(F1.3, 1/30sec, 30IRE) BW: 0.004Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.03Lux(F1.3, 1/30sec, 30IRE) BW: 0.003Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)
Video Out	CVBS: 1.0 Vp-p / 75Ω composite, 720x480(N), 720x576(P) for installation USB: Micro USB Type B, 1280x720 for installation				-
Focal Length (Zoom Ratio)	10.9~29mm(2.7x) motorized varifocal	10.9~29mm(2.7x) motorized varifocal	4.4~9.3mm(2.1x) motorized varifocal	4.4~9.3mm(2.1x) motorized varifocal	4.4~9.3mm(2.1x) motorized varifocal
Angular Field of View	H: 42° (Wide) ~ 15° (Tele) V: 22.8° (Wide) ~ 8.4° (Tele) D: 48.7° (Wide) ~ 17.1° (Tele)	H: 42° (Wide) ~ 15° (Tele) V: 22.8° (Wide) ~ 8.4° (Tele) D: 48.7° (Wide) ~ 17.1° (Tele)	H: 112.1° (Wide) ~ 47.5° (Tele) V: 58° (Wide) ~ 26.6° (Tele) D: 137.5° (Wide) ~ 54.6° (Tele)	H: 112.1° (Wide) ~ 47.5° (Tele) V: 58° (Wide) ~ 26.6° (Tele) D: 137.5° (Wide) ~ 54.6° (Tele)	H: 113° (Wide) ~ 47° (Tele) V: 58° (Wide) ~ 26° (Tele) D: 138° (Wide) ~ 54° (Tele)
Pan / Tilt / Rotate Range	0°~360° / 0°~85° / 0°~355°	0°~360° / 0°~85° / 0°~355°	0°~360° / 0°~90° / 0°~360°	0°~360° / 0°~85° / 0°~355°	Remote adjustment(Max. 200cycles) 0°~350° / 0°~85° / 0°~340°
IR Viewable Length	WiseIR 70m (229.66ft)	WiseIR 70m (229.66ft)	WiseIR 50m (164.04ft)	WiseIR 50m (164.04ft)	15m (49.21ft), 30m (98.43ft) based on scene
Day & Night	Auto (ICR)				
Wide Dynamic Range	extremeWDR (120dB)				
Digital Noise Reduction	WiseNR II (Based on AI engine), SSNR V				
Digital Image Stabilization	Support (built-in gyro sensor)				
Analytics	<p>Classified object type: Person/Face/Vehicle/License plate Attributes: Vehicle (Type: car/bus/truck/motorcycle/bicycle) Support DetectionShot Analytics events based on AI engine: Object detection, Virtual line (Crossing/Direction), Virtual area (Loitering/Intrusion/Enter/Exit), Motion Detection Analytics events: Defocus detection, Motion detection, Tampering, Fog detection, Audio detection, Sound classification, Shock detection, Virtual area (Appear/Disappear)</p>				
Business Intelligence	Based on AI engine: People/Vehicle counting, Queue management, Heatmap				Based on AI engine: People/Vehicle counting
Alarm I/O	2 configurable I/O ports, DC 12V output (Max. 50mA)				-
Audio I/O	Selectable (mic in/line in) / Line out	Selectable (mic in/line in/built-in mic) / Line out	Selectable (mic in/line in) / Line out	Selectable (mic in/line in) / Line out	-
Video Compression	H.265 / H.264, MJPEG				
WiseStream	Manual(5ea area), WiseStream III (Based on AI engine)				
Streaming	Up to 10 profiles, 3 virtual channel support				
Edge Storage	micro SD/SDHC/SDXC 2slot Max. 1TB (512GB * 2)				
Application Programming Interface	ONVIF Profile S/G/T/M, SUNAPI(HTTP API) Hanuha Vision Open Platform				
Operating Temperature / Humidity	-50°C~+55°C(-58°F~+131°F) * Start up should be done at above -30°C 0~100% RH(condensing) Humidity control with AIR vent	-25°C~+50°C(-13°F~+122°F) / 0~100% RH(condensing) Humidity control with AIR vent	-50°C~+55°C(-58°F~+131°F) +74°C(+165°F)(Max) based on NEMA-TS 2(2.2.7) * Start up should be done at above -30°C 0~100% RH(condensing) Humidity control with AIR vent	-50°C~+55°C(-58°F~+131°F) * Start up should be done at above -30°C 0~100% RH(condensing) Humidity control with AIR vent	-50°C~+55°C(-58°F~+131°F) * Start up should be done at above -30°C 0~100% RH(condensing) Humidity control with AIR vent
Certification	IP66, IP67, IP6K9K, NEMA4X, IK 10+	IP52, IK 10	IP66, IP67, NEMA4X, IK 10	IP66, IP67, IP6K9K, NEMA4X, IK 10+	IP66, IP67, IP6K9K, NEMA4X, IK 10+
Power Consumption	PoE+: Max 22.5W, typical 17.9W 12VDC: Max 20W, typical 15.6W Power redundancy failover	PoE+: Max 22.5W, typical 17.9W 12VDC: Max 20W, typical 15.6W Power redundancy failover	PoE+: Max 22.5W, typical 17.9W 12VDC: Max 20W, typical 15.6W Power redundancy failover	PoE+: Max 22.5W, typical 17.9W 12VDC: Max 20W, typical 15.6W Power redundancy failover	PoE+: Max 22.5W, typical 12.1W
Product Dimensions / Weight	ø 180x125mm(ø 7.09x4.92"), 1900g(4.19 lb)	ø 160x125mm(ø 6.30x4.92"), 1600g(3.53 lb)	ø 93.4x298.4mm(ø 3.68x11.75"), 2200g(4.85 lb)	ø 180x125mm(ø 7.09x4.92"), 1900g(4.19 lb)	ø 180x135mm(ø 7.09x5.31"), 2000g(4.41 lb)

X Plus



XNV-8083Z
6MP AI Vandal Dome Camera

X Plus



XND-8083RV
6MP AI IR Dome Camera

X Plus



XNB-8003
6MP AI Box Camera

X Plus



XNO-6123R
2MP AI IR Bullet Camera

X Plus



XNO-6083R
2MP AI IR Bullet Camera

Imaging Device	1/1.8" progressive CMOS	1/1.8" progressive CMOS	1/1.8" progressive CMOS	1/2.8" progressive CMOS	1/2.8" progressive CMOS
Resolution / Max. Frame Rate	6MP/30fps	6MP/30fps	6MP/30fps	2MP / 120fps	2MP/120fps
Min. Illumination	Color: 0.03Lux(F1.3, 1/30sec, 30IRE) BW: 0.003Lux(F1.3, 1/30sec, 30IRE)	Color: 0.04Lux(F1.3, 1/30sec, 30IRE) BW: 0.004Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.03Lux(F1.2, 1/30sec, 30IRE) BW: 0.003Lux(F1.2, 1/30sec, 30IRE)	Color: 0.03Lux(F1.6, 1/30sec, 30IRE) BW: 0.003Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps	Color: 0.01Lux(F1.4, 1/30sec, 30IRE) BW: 0.001Lux(F1.4, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps
Video Out	CVBS: 1.0 Vp-p / 75 Ω composite, 720x480(N), 720x576(P) for installation / USB: Micro USB Type B, 1280x720 for installation				
Focal Length (Zoom Ratio)	4.4~9.3mm(2.1x) motorized varifocal	4.4~9.3mm(2.1x) motorized varifocal	-	5.2~62.4mm(12x) zoom (digital 32x, total 384x zoom)	2.8~12mm(4.3x) motorized varifocal
Angular Field of View	H: 113°(Wide)~47°(Tele) V: 58°(Wide)~26°(Tele) D: 138°(Wide)~54°(Tele)	H: 112.1°(Wide)~47.5°(Tele) V: 58°(Wide)~26.6°(Tele) D: 137.5°(Wide)~54.6°(Tele)	-	H: 55°(Wide)~5°(Tele) V: 35°(Wide)~3°(Tele) D: 62°(Wide)~6°(Tele)	H: 119.5°(Wide)~27.9°(Tele) V: 62.8°(Wide)~15.7°(Tele) D: 142.1°(Wide)~32°(Tele)
Pan / Tilt / Rotate	0°~350° / 0°~85° / 0°~340°	0°~360°~45°~85° / 0°~355°	-	-	-
IR Viewable Length	-	WiselR 50m (164.04ft)	-	WiselR 90m (295.28ft)	WiselR 50m (164.04ft)
Day & Night	Auto(ICR)				
Wide Dynamic Range	extremeWDR (120dB)	extremeWDR (120dB)	extremeWDR (120dB)	extremeWDR (150dB)	extremeWDR (150dB)
Digital Noise Reduction	WiseNR II (Based on AI engine), SSNR V				
Digital Image Stabilization	Support(built-in gyro sensor)				
Analytics	<p>Classified object type: Person/Face/ Vehicle(Type: car/bus/truck/motorcycle/ bicycle)/License plate</p> <p>Attributes: Vehicle(Type: car/bus/truck/ motorcycle/bicycle)</p> <p>Support DetectionShot</p> <p>Analytics events based on AI engine - Object detection, Virtual line(Crossing/ Direction), Virtual area(Loitering/Intrusion/ Enter/Exit), Motion detection</p> <p>Analytics events - Defocus detection, Tampering, Fog detection, Virtual area(Appear/Disappear) * Audio detection, Sound classification (with NWI/O box SPM-4210)</p>	<p>Classified object type: Person/Face/Vehicle/License plate</p> <p>Attributes: Vehicle (Type:car/bus/truck/motorcycle/bicycle)</p> <p>Support DetectionShot</p> <p>Analytics events based on AI engine: Object detection, Virtual line (Crossing/Direction), Virtual area (Loitering/Intrusion/Enter/Exit), Motion Detection</p> <p>Analytics events: Defocus detection, Motion detection, Tampering, Fog detection, Audio detection, Sound classification, Shock detection, Virtual area (Appear/Disappear)</p>	<p>Classified object type: Person/Face/Vehicle/License plate</p> <p>Attributes: Vehicle (Type:car/bus/truck/motorcycle/bicycle)</p> <p>Support DetectionShot</p> <p>Analytics events based on AI engine: Object detection, Virtual line (Crossing/Direction), Virtual area (Loitering/Intrusion/Enter/Exit), Motion Detection</p> <p>Analytics events: Defocus detection, Motion detection, Tampering, Fog detection, Audio detection, Sound classification, Shock detection, Virtual area (Appear/Disappear)</p>	<p>Classified object type: Person/Face/Vehicle/License plate</p> <p>Attributes: Vehicle (Type:car/bus/truck/motorcycle/bicycle)</p> <p>Support DetectionShot</p> <p>Analytics events based on AI engine: Object detection, Virtual line (Crossing/Direction), Virtual area (Loitering/Intrusion/Enter/Exit), Motion Detection</p> <p>Analytics events: Defocus detection, Motion detection, Tampering, Fog detection, Audio detection, Sound classification, Shock detection, Virtual area (Appear/Disappear)</p>	<p>Classified object type: Person/Face/Vehicle/License plate</p> <p>Attributes: Vehicle (Type:car/bus/truck/motorcycle/bicycle)</p> <p>Support DetectionShot</p> <p>Analytics events based on AI engine: Object detection, Virtual line (Crossing/Direction), Virtual area (Loitering/Intrusion/Enter/Exit), Motion Detection</p> <p>Analytics events: Defocus detection, Motion detection, Tampering, Fog detection, Audio detection, Sound classification, Shock detection, Virtual area (Appear/Disappear)</p>
Business Intelligence	Based on AI engine: People/Vehicle counting	Based on AI engine: People/Vehicle counting, Queue management, Heatmap	Based on AI engine: People/Vehicle counting, Queue management, Heatmap	-	Based on AI engine: People/Vehicle counting, Queue management, Heatmap
Alarm I/O	-	2 configurable I/O ports, DC 12V output (Max. 50mA)	2 configurable I/O ports	2 configurable I/O ports, DC 12V output (Max. 50mA)	2 configurable I/O ports, DC 12V output (Max. 50mA)
Audio I/O	-	Selectable (mic in/line in/built-in mic) / Line out	Selectable (mic in/line in/built-in mic) / Line out	Selectable (mic in/line in) / Line out	Selectable (mic in/line in) / Line out
Video Compression	H.265/H.264, MJPEG				
WiseStream	Manual(5ea area), WiseStream III (Based on AI engine)				
Streaming	Up to 10 profiles, 3 virtual channel support	Up to 10 profiles, 3 virtual channel support	Up to 10 profiles, 3 virtual channel support	Up to 10 profiles	Up to 10 profiles, 3 virtual channel support
Edge Storage	Micro SD/SDHC/SDXC 2slot Max. 1TB (512GB * 2)				
Application Programming Interface	ONVIF Profile S/G/T/M, SUNAPI(HTTP API), Hanuwa Vision Open Platform				
Operating Temperature / Humidity	-50°C~-+55°C(-58°F~+131°F) * Start up should be done at above -30°C 0~100%RH(condensing) Humidity control with AIR vent	-25°C~+50°C(-13°F~+122°F) / 0~100% RH(condensing) Humidity control with AIR vent	-10°C~+55°C(-14°F~+131°F) / 0~95% RH(non-condensing)	-40°C~+60°C(-40°F~+140°F) * Start up should be done at above -30°C 0~100% RH(condensing) Humidity control with AIR Vent	-50°C~+55°C(-58°F~+131°F)+74°C(+165°F) (Max) based on NEMA-TS 2(2.2.7) * Start up should be done at above -30°C 0~100% RH(condensing) Humidity control with AIR vent
Certification	IP66, IP67, IP6K9K, NEMA4X, IK 10+	IP52, IK 10	-	IP66, IP67, IK 10, NEMA4X, NEMA-TS 2 (2.2.8, 2.2.9)	IP66, IP67, NEMA4X, IK 10
Power Consumption	PoE+: Max 17.0W, typical 12.1W	PoE+: Max 22.5W, typical 17.9W 12VDC: Max 20W, typical 15.6W Power redundancy failover	PoE: Max 12.95W, typical 9.8W 12VDC: Max 19W, typical 9.5W	PoE+: Max 19.5W, typical 15.5W 12VDC: Max 16.5W, typical 13.1W Power redundancy failover	PoE+: Max 22.5W, typical 17.9W 12VDC: Max 20W, typical 15.6W Power redundancy failover
Product Dimensions / Weight	ø 180x135mm(ø 7.09x5.31"), 2000g(4.41 lb)	ø 160x125mm(ø 6.30x4.92"), 1600g(3.53 lb)	81(W)x67(H)x165(D)mm(3.19x2.64x6.48"), 880g(1.94 lb)	ø 93.4x298.4mm(ø 3.68x11.75"), 2300g(5.07 lb)	ø 93.4x298.4mm(ø 3.68x11.75"), 2200g(4.85 lb)

NETWORK

ANALOG

PERIPHERAL

INSTALLATION SOLUTION

X Plus



XNV-6123R
2MP AI IR Vandal Dome Camera

X Plus



XNV-6083RZ
2MP AI IR Vandal Dome Camera

X Plus



XNV-6083R
2MP AI IR Vandal Dome Camera

X Plus



XNV-6083Z
2MP AI Vandal Dome Camera

X Plus



XND-6083RV
2MP AI IR Dome Camera

Imaging Device	1/2.8" progressive CMOS				
Resolution / Max. Frame Rate	2MP / 120fps				
Min. Illumination	Color: 0.03Lux(F1.6, 1/30sec, 30IRE) BW: 0.003Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps	Color: 0.03Lux(F1.3, 1/30sec, 30IRE) BW: 0.003Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.01Lux(F1.4, 1/30sec, 30IRE) BW: 0.001Lux(F1.4, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps	Color: 0.01Lux(F1.4, 1/30sec, 30IRE) BW: 0.001Lux(F1.4, 1/30sec, 30IRE), 30/25fps	Color: 0.01Lux(F1.4, 1/30sec, 30IRE) BW: 0.001Lux(F1.4, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps
Video Out	CVBS: 1.0Vp-p / 75Ω composite, 720x480(N), 720x576(P) for installation USB: Micro USB Type B, 1280x720 for installation	-	CVBS: 1.0Vp-p / 75Ω composite, 720x480(N), 720x576(P) for installation USB: Micro USB Type B, 1280x720 for installation	-	CVBS: 1.0Vp-p / 75Ω composite, 720x480(N), 720x576(P) for installation USB: Micro USB Type B, 1280x720 for installation
Focal Length (Zoom Ratio)	5.2~62.4mm(12x) zoom (digital 32x, total 384x zoom)	4.4~9.3mm(2.1x) motorized varifocal	2.8~12mm(4.3x) motorized varifocal	2.8~12mm(4.3x) motorized varifocal	2.8~12mm(4.3x) motorized varifocal
Angular Field of View	H: 55° (Wide) ~ 5° (Tele) V: 33° (Wide) ~ 3° (Tele) D: 62° (Wide) ~ 6° (Tele)	H: 113° (Wide) ~ 47° (Tele) V: 58° (Wide) ~ 26° (Tele) D: 138° (Wide) ~ 54° (Tele)	H: 120° (Wide) ~ 27° (Tele) V: 63° (Wide) ~ 15° (Tele) D: 143° (Wide) ~ 32° (Tele)	H: 120° (Wide) ~ 27° (Tele) V: 63° (Wide) ~ 15° (Tele) D: 143° (Wide) ~ 32° (Tele)	H: 120° (Wide) ~ 27° (Tele) V: 63° (Wide) ~ 15° (Tele) D: 143° (Wide) ~ 32° (Tele)
Pan / Tilt / Rotate	0°~360° / -45°~80° / 0°~355°	0°~350° / 0°~85° / 0°~340°	0°~360° / -45°~80° / 0°~355°	0°~350° / 0°~85° / 0°~340°	0°~360° / -45°~85° / 0°~355°
IR Viewable Length	WisIR 90m (295.28ft)	15m(42.91ft)	WisIR 50m (164.04ft)	-	WisIR 50m (164.04ft)
Day & Night	Auto (ICR)				
Wide Dynamic Range	extremeWDR(150dB)				
Digital Noise Reduction	WiseNR II (Based on AI engine), SSNR V	WiseNR II (Based on AI engine), SSNR V	WiseNR II (Based on AI engine), SSNR V	WiseNR II (Based on AI engine), SSNR V	WiseNR II (Based on AI engine), SSNR V
Digital Image Stabilization	Support (built-in gyro sensor)	Support	Support (built-in gyro sensor)	Support	Support (built-in gyro sensor)
Analytics	<p>Classified object type: Person/Face/Vehicle/License plate Attributes: Vehicle (Type:car/bus/truck/motorcycle/bicycle) Support DetectionShot Analytics events based on AI engine: Object detection, Virtual line (Crossing/Direction), Virtual area (Loitering/Intrusion/Enter/Exit), Motion Detection Analytics events: Defocus detection, Motion detection, Tampering, Fog detection, Audio detection, Sound classification, Shock detection, Virtual area (Appear/Disappear)</p>				
Business Intelligence	-	Based on AI engine: People/Vehicle counting	Based on AI engine: People/Vehicle counting, Queue management, Heatmap	Based on AI engine: People/Vehicle counting	Based on AI engine: People/Vehicle counting, Queue management, Heatmap
Alarm I/O	2 configurable I/O ports, DC 12V output (Max. 50mA)	-	2 configurable I/O ports, DC 12V output (Max. 50mA)	-	2 configurable I/O ports, DC 12V output (Max. 50mA)
Audio I/O	Selectable (mic in/line in) / Line out	-	Selectable (mic in/line in) / Line out	-	Selectable (mic in/line in/built-in mic) / Line out
Video Compression	H.265 / H.264, MJPEG				
WiseStream	Manual(5ea area), WiseStream III (Based on AI engine)				
Streaming	Up to 10 profiles	Up to 10 profiles	Up to 10 profiles, 3 virtual channel support	Up to 10 profiles	Up to 10 profiles, 3 virtual channel support
Edge Storage	micro SD/SDHC/SDXC 2slot Max. 1TB (512GB * 2)				
Application Programming Interface	ONVIF Profile S/G/T/M, SUNAPI(HTTP API) Hanwha Vision Open Platform				
Operating Temperature / Humidity	-40°C~-60°C(-40°F~-140°F) * Start up should be done at above -30°C 0~100%RH(condensing) Humidity control with AIR vent	-50°C~+55°C(-58°F~+131°F) * Start up should be done at above -30°C 0~100%RH(condensing) Humidity control with AIR vent	-50°C~+55°C(-58°F~+131°F) * Start up should be done at above -30°C 0~100%RH(condensing) Humidity control with AIR vent	-50°C~+55°C(-58°F~+131°F) * Start up should be done at above -30°C 0~100%RH(condensing) Humidity control with AIR vent	-25°C~+50°C(-13°F~+122°F) / 0~100% RH(condensing) Humidity control with AIR vent
Certification	IP66, IP67, IP6K9K, NEMA4X, NEMA-TS 2 (2.2.8, 2.2.9), IK10+	IP66, IP67, IP6K9K, NEMA4X, IK10+	IP66, IP67, IP6K9K, NEMA4X, IK10+	IP66, IP67, IP6K9K, NEMA4X, IK10+	IP52, IK10
Power Consumption	PoE+: Max 19.5W, typical 15.5W 12VDC: Max 16.5W, typical 13.1W Power redundancy failover	PoE+: Max 22.5W, typical 11.0W	PoE+: Max 22.5W, typical 11.0W	PoE+: Max 17.0W, typical 11.0W	PoE+: Max 17.0W, typical 11.0W
Product Dimensions / Weight	ø 180x138mm(ø 7.09x5.43"), 2130g(4.70 lb)	ø 180x135mm(ø 7.09x5.31"), 2000g(4.41 lb)	ø 180x125mm(ø 7.09x4.92"), 1900g(4.19 lb)	ø 180x135mm(ø 7.09x5.31"), 2000g(4.41 lb)	ø 160x125mm(ø 6.30x4.92"), 1600g(3.53 lb)

X Plus



XNB-6003
2MP AI Box Camera

X Core



XNO-C9083R
8MP AI IR Bullet Camera

X Core



XNV-C9083R
8MP AI IR Vandal Dome Camera

X Core



XND-C9083RV
8MP AI IR Dome Camera

X Core



XNO-C8083R
6MP AI IR Bullet Camera

Imaging Device	1/2.8" progressive CMOS	1/1.8" progressive CMOS	1/1.8" progressive CMOS	1/1.8" progressive CMOS	1/1.8" progressive CMOS
Resolution / Max. Frame Rate	2MP / 120fps	8MP / 30fps	8MP / 30fps	8MP / 30fps	6MP / 30fps
Min. Illumination	Color: 0.007Lux(F1.2, 1/30sec, 30IRE) BW: 0.0007Lux(F1.2, 1/30sec, 30IRE), 30/25fps	Color: 0.04Lux(F1.3, 1/30sec, 30IRE) BW: 0.004Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.04Lux(F1.3, 1/30sec, 30IRE) BW: 0.004Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.04Lux(F1.3, 1/30sec, 30IRE) BW: 0.004Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.04Lux(F1.3, 1/30sec, 30IRE) BW: 0.004Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)
Video Out	CVBS: 1.0Vp-p / 75Ω composite, 720x480(N), 720x576(P) for installation USB: Micro USB Type B, 1280x720 for installation	USB: Micro USB Type B, 1280x720 for installation	USB: Micro USB Type B, 1280x720 for installation	USB: Micro USB Type B, 1280x720 for installation	USB: Micro USB Type B, 1280x720 for installation
Focal Length (Zoom Ratio)	-	4.4~9.3mm(2.1x) motorized varifocal	4.4~9.3mm(2.1x) motorized varifocal	4.4~9.3mm(2.1x) motorized varifocal	4.4~9.3mm(2.1x) motorized varifocal
Angular Field of View	-	H: 113°(Wide)~47°(Tele) V: 58°(Wide)~26°(Tele) D: 138°(Wide)~54°(Tele)	H: 113°(Wide)~47°(Tele) V: 58°(Wide)~26°(Tele) D: 138°(Wide)~54°(Tele)	H: 113°(Wide)~47°(Tele) V: 58°(Wide)~26°(Tele) D: 138°(Wide)~54°(Tele)	H: 113°(Wide)~47°(Tele) V: 58°(Wide)~26°(Tele) D: 138°(Wide)~54°(Tele)
Pan / Tilt / Rotate	-	-	0° ~ 360° / -45° ~ 75° / 0° ~ 355°	0° ~ 360° / -45° ~ 75° / 0° ~ 355°	-
IR Viewable Length	-	WiseIR 40m (131.23ft)	WiseIR 40m (131.23ft)	WiseIR 40m (131.23ft)	WiseIR 40m (131.23ft)
Day & Night	Auto (ICR)				
Wide Dynamic Range	extremeWDR(120dB)				
Digital Noise Reduction	WiseNR II (Based on AI engine), SSNR V				
Digital Image Stabilization	Support (built-in gyro sensor)				
Analytics	<p>Classified object type: Person/Face/Vehicle/License plate Attributes: Vehicle (Type: car/bus/truck/motorcycle/bicycle) Support DetectionShot Analytics events based on AI engine: Object detection, Virtual line (Crossing/Direction), Virtual area (Loitering/Intrusion/Enter/Exit), Motion Detection Analytics events: Defocus detection, Motion detection, Tampering, Fog detection, Audio detection, Sound classification, Shock detection, Virtual area (Appear/Disappear)</p>				
Business Intelligence	Based on AI engine: People/Vehicle counting, Queue management, Heatmap				
Alarm I/O	2 configurable I/O ports				
Audio I/O	Selectable (mic in/line in/built-in mic) / Line out				
Video Compression	H.265 / H.264, MJPEG				
WiseStream	Manual(Sea area), WiseStream III (Based on AI engine)				
Streaming	Up to 10 profiles, 3 virtual channel support				
Edge Storage	micro SD/SDHC/SDXC 2slot Max. 1TB (512GB * 2)				
Application Programming Interface	ONVIF Profile S/G/T/M, SUNAPI(HTTP API) Hanwha Vision OpenPlatform				
Operating Temperature / Humidit	-10°C~-55°C(-14°F~+131°F) / 0~95% RH(non-condensing)	-40°C~+55°C(-40°F~+131°F) * Start up should be done at above -20°C 0~100%RH(condensing) Humidity control with AIR vent	-40°C~+55°C(-40°F~+131°F) * Start up should be done at above -20°C 0~100%RH(condensing) Humidity control with AIR vent	-10°C~+50°C(14°F~+122°F) / 0~100% RH(condensing) Humidity control with AIR vent	-40°C~+55°C(-40°F~+131°F) * Start up should be done at above -20°C 0~100%RH(condensing) Humidity control with AIR vent
Certification	-	IP66, IP67, NEMA4X, IK10	IP66, IP67, NEMA4X, IK10	IP52, IK08	IP66, IP67, NEMA4X, IK10
Power Consumption	PoE: Max 12.95W, typical 9.8W 12VDC: Max 19W, typical 9.5W	PoE: Max 12.95W, typical 11.2W 12VDC: Max 13.2W, typical 10.8W	PoE: Max 12.95W, typical 11.2W 12VDC: Max 13.2W, typical 10.8W	PoE: Max 12.95W, typical 11.2W 12VDC: Max 13.2W, typical 10.8W	PoE: Max 12.95W, typical 11.2W 12VDC: Max 13.2W, typical 10.8W
Product Dimensions / Weight	81(W)x67(H)x165(D)mm(3.19x2.64x6.48"), 880g(1.94lb)	ø 93.4x276.6mm(ø 3.68x10.89"), 1640g(3.62lb)	ø 160x118mm(ø 6.30x4.65"), 1450g(3.20lb)	ø 160x118mm(ø 6.30x4.65"), 1350g(2.98lb)	ø 93.4x276.6mm(ø 3.68x10.89"), 1640g(3.62lb)

NETWORK

ANALOG

PERIPHERAL

INSTALLATION SOLUTION

X Core



XNV-C8083R
6MP AI IR Vandal Dome Camera

X Core



XND-C8083RV
6MP AI Dome Camera

X Core



XNO-C7083R
4MP AI IR Bullet Camera

X Core



XNV-C7083R
4MP AI IR Vandal Dome Camera

X Core



XND-C7083RV
4MP AI IR Dome Camera

Imaging Device	1/1.8" progressive CMOS	1/1.8" progressive CMOS	1/2.8" progressive CMOS	1/2.8" progressive CMOS	1/2.8" progressive CMOS
Resolution / Max. Frame Rate	6MP / 30fps	6MP / 30fps	4MP / 60fps	4MP / 60fps	4MP / 60fps
Min. Illumination	Color: 0.04Lux(F1.3, 1/30sec, 30IRE) BW: 0.004Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.04Lux(F1.3, 1/30sec, 30IRE) BW: 0.004Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.038Lux(F1.4, 1/30sec, 30IRE) BW: 0.0038Lux(F1.4, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps	Color: 0.038Lux(F1.4, 1/30sec, 30IRE) BW: 0.0038Lux(F1.4, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps	Color: 0.038Lux(F1.4, 1/30sec, 30IRE) BW: 0.0038Lux(F1.4, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps
Video Out	USB: Micro USB Type B, 1280x720 for installation				
Focal Length (Zoom Ratio)	4.4~9.3mm(2.1x) motorized varifocal	4.4~9.3mm(2.1x) motorized varifocal	2.8~10mm(3.6x) motorized varifocal	2.8~10mm(3.6x) motorized varifocal	2.8~10mm(3.6x) motorized varifocal
Angular Field of View	H: 113° (Wide)~47° (Tele) V: 58° (Wide)~26° (Tele) D: 138° (Wide)~54° (Tele)	H: 113° (Wide)~47° (Tele) V: 58° (Wide)~26° (Tele) D: 138° (Wide)~54° (Tele)	H: 110° (Wide)~30° (Tele) V: 61° (Wide)~17° (Tele) D: 132° (Wide)~35° (Tele)	H: 110° (Wide)~30° (Tele) V: 61° (Wide)~17° (Tele) D: 132° (Wide)~35° (Tele)	H: 110° (Wide)~30° (Tele) V: 61° (Wide)~17° (Tele) D: 132° (Wide)~35° (Tele)
Pan / Tilt / Rotate	0° ~ 360° / -45° ~ 75° / 0° ~ 355°	0° ~ 360° / -45° ~ 75° / 0° ~ 355°	-	0° ~ 360° / -45° ~ 75° / 0° ~ 355°	0° ~ 360° / -45° ~ 75° / 0° ~ 355°
IR Viewable Length	WisIR 40m (131.23ft)				
Day & Night	Auto (ICR)				
Wide Dynamic Range	extremeWDR (120dB)				
Digital Noise Reduction	WiseNR II (Based on AI engine), SSNR V				
Digital Image Stabilization	Support (built-in gyro sensor)				
Analytics	<p>Classified object type: Person/Face/Vehicle/License plate Attributes: Vehicle (Type:car/bus/truck/motorcycle/bicycle) Support DetectionShot Analytics events based on AI engine: Object detection, Virtual line (Crossing/Direction), Virtual area (Loitering/Intrusion/Enter/Exit), Motion Detection Analytics events: Defocus detection, Motion detection, Tampering, Fog detection, Audio detection, Sound classification, Shock detection, Virtual area (Appear/Disappear)</p>				
Business Intelligence	Based on AI engine: People/Vehicle counting, Queue management, Heatmap				
Alarm I/O	2 configurable I/O ports				
Audio I/O	Selectable (mic in/line in) / Line out				
Video Compression	H.265 / H.264, MJPEG				
WiseStream	Manual(5ea area), WiseStream III(Based on AI engine)				
Streaming	Up to 10 profiles, 3 virtual channel support				
Edge Storage	micro SD/SDHC/SDXC 1slot 512GB				
Application Programming Interface	ONVIF Profile S/G/T/M, SUNAPI(HTTP API) Hanwha Vision Open Platform				
Operating Temperature / Humidity	-40°C~+55°C(-40°F~+131°F) * Start up should be done at above -20°C 0~100%RH(condensing) Humidity control with AIR vent	-10°C~+50°C(14°F~+122°F) / 0~100%RH(condensing) Humidity control with AIR vent	-40°C~+55°C(-40°F~+131°F) * Start up should be done at above -20°C 0~100%RH(condensing) Humidity control with AIR vent	-40°C~+55°C(-40°F~+131°F) * Start up should be done at above -20°C 0~100%RH(condensing) Humidity control with AIR vent	-10°C~+50°C(14°F~+122°F) / 0~100%RH(condensing) Humidity control with AIR vent
Certification	IP66, IP67, NEMA4X, IK10	IP52, IK08	IP66, IP67, NEMA4X, IK10	IP66, IP67, NEMA4X, IK10	IP52, IK08
Power Consumption	PoE: Max 12.95W, typical 11.2W 12VDC: Max 13.2W, typical 10.8W	PoE: Max 12.95W, typical 11.2W 12VDC: Max 13.2W, typical 10.8W	PoE: Max 12.95W, typical 10.8W 12VDC: Max 12.5W, typical 10W	PoE: Max 12.95W, typical 10.8W 12VDC: Max 12.5W, typical 10W	PoE: Max 12.95W, typical 10.8W 12VDC: Max 12.5W, typical 10W
Product Dimensions / Weight	ø 160x118mm(ø 6.30x4.65"), 1450g(3.20 lb)	ø 160x118mm(ø 6.30x4.65"), 1350g(2.98 lb)	ø 93.4x276.6mm(ø 3.68x10.89"), 1640g(3.62 lb)	ø 160x118mm(ø 6.30x4.65"), 1450g(3.20 lb)	ø 160x118mm(ø 6.30x4.65"), 1350g(2.98 lb)

X Core



XNO-C6083R
2MP AI IR Bullet Camera

X Core



XNV-C6083R
2MP AI IR Vandal Dome Camera

X Core



XND-C6083RV
2MP AI Dome Camera

X Plus



XNF-9013RV
12MP AI Fisheye Camera

Imaging Device	1/2.8" progressive CMOS		1/2.8" progressive CMOS		1/2.8" progressive CMOS		1/2.3" 12MP CMOS	
Resolution / Max. Frame Rate	2MP / 60fps		2MP / 60fps		2MP / 60fps		3008 x 3008 / 30fps	
Min. Illumination	Color: 0.01Lux(F1.4, 1/30sec, 30IRE) B/W: 0.001Lux(F1.4, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps		Color: 0.01Lux(F1.4, 1/30sec, 30IRE) B/W: 0.001Lux(F1.4, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps		Color: 0.01Lux(F1.4, 1/30sec, 30IRE) BW: 0.001Lux(F1.4, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps		Color: 0.39 Lux (F2.2, 1/30sec), BW: 0Lux(IR LED on)	
Video Out	USB: Micro USB Type B, 1280x720 for installation						CVBS: 1.0 Vp-p / 75Ω composite, 720x480(N), 720x576(P), for Installation USB: Micro USB Type B, 1280x720 for installation	
Focal Length (Zoom Ratio)	2.8~12mm(4.3x) motorized varifocal						1.08mm fixed focal	
Angular Field of View	H: 120°(Wide)~27°(Tele) V: 63°(Wide)~15°(Tele) D: 143°(Wide)~32°(Tele)		H: 120°(Wide)~27°(Tele) V: 63°(Wide)~15°(Tele) D: 143°(Wide)~32°(Tele)		H: 120°(Wide)~27°(Tele) V: 63°(Wide)~15°(Tele) D: 143°(Wide)~32°(Tele)		H: 187° / V: 187° / D: 187°	
Pan / Tilt / Rotate	-		0° ~ 360° / -45° ~ 75° / 0° ~ 355°		0° ~ 360° / -45° ~ 75° / 0° ~ 355°		Lens Rotation	
IR Viewable Length	WiseIR 40m (131.23ft)		WiseIR 40m (131.23ft)		WiseIR 40m (131.23ft)		WiseIR, PoE: 8m(26.25ft), PoE+: 13m(42.65ft)	
Day & Night	Auto (ICR)							
Wide Dynamic Range	extremeWDR (150dB)		extremeWDR (150dB)		extremeWDR (150dB)		extremeWDR (120dB)	
Digital Noise Reduction	WiseNR II (Based on AI engine), SSNR V							
Digital Image Stabilization	Support (built-in gyro sensor)		Support (built-in gyro sensor)		Support (built-in gyro sensor)		-	
Analytics	Classified object type: Person/Face/Vehicle/License plate Attributes: Vehicle (Type:car/bus/truck/motorcycle/bicycle) Support DetectionShot Analytics events based on AI engine: Object detection, Virtual line (Crossing/Direction), Virtual area (Loitering/Intrusion/Enter/Exit), Motion Detection Analytics events: Defocus detection, Motion detection, Tampering, Fog detection, Audio detection, Sound classification, Shock detection, Virtual area (Appear/Disappear)						Classified object type: Person/Face/Vehicle/License plate Support DetectionShot Analytics events based on AI engine: Object detection, Virtual line (Crossing/Direction), Virtual area (Loitering/Intrusion/Enter/Exit) Analytics events: Defocus detection, Motion detection, Tampering, Fog detection, Audio detection, Sound classification, Shock detection, Virtual area (Appear/Disappear)	
Business Intelligence	Based on AI engine: People/Vehicle counting, Queue management, Heatmap							
Alarm I/O	2 configurable I/O ports							
Audio I/O	Selectable (mic in/line in) / Line out							
Video Compression	H.265 / H.264, MJPEG							
WiseStream	Manual(Sea area), WiseStream III(Based on AI engine)							
Streaming	Up to 10 profiles, 3 virtual channel support		Up to 10 profiles, 3 virtual channel support		Up to 10 profiles, 3 virtual channel support		Up to 10 profiles, 5 virtual channel support	
Edge Storage	micro SD/SDHC/SDXC 1slot 512GB		micro SD/SDHC/SDXC 1slot 512GB		micro SD/SDHC/SDXC 1slot 512GB		micro SD/SDHC/SDXC 2slots 1TB (512GBx2)	
Application Programming Interface	ONVIF Profile S/G/T/M, SUNAPI(HTTP API) Hanwha Vision Open Platform							
Operating Temperature / Humidity	-40°C~+55°C(-40°F~+131°F) * Start up should be done at above -20°C 0~100%RH(condensing) Humidity control with AIR vent		-40°C~+55°C(-40°F~+131°F) * Start up should be done at above -20°C 0~100%RH(condensing) Humidity control with AIR vent		-10°C~+50°C(14°F~+122°F) / 0~100% RH(condensing) Humidity control with AIR vent		-40°C ~ +60°C (-40°F ~ +140°F) / Less than 95% RH POE+ Mode 55°C (Hysteresis 5°C) WiseIR 8m(26.25ft)	
Certification	IP66, IP67, NEMA4X, IK10		IP66, IP67, NEMA4X, IK10		IP52, IK08		IP66, IK10, NEMA4X	
Power Consumption	PoE: Max 12.95W, typical 10.8W 12VDC: Max 12.5W, typical 10W		PoE: Max 12.95W, typical 10.8W 12VDC: Max 12.5W, typical 10W		PoE: Max 12.95W, typical 10.8W 12VDC: Max 12.5W, typical 10W		PoE: Max 12.95W, typical 9.4W, 12VDC: Max 12.9W, typical 9.0W / PoE+: Max 23.0W, typical 9.4W, 12VDC: Max 22.0W, typical 9.0W	
Product Dimensions / Weight	ø93.4x276.6mm(ø 3.68x10.89"), 1640g(3.62 lb)		ø 160x118mm(ø 6.30x4.65"), 1450g(3.20 lb)		ø 160x118mm(ø 6.30x4.65"), 1350g(2.98 lb)		Ø 160x72mm(6.23x2.84"), 1,170g (2.58lb)	

NETWORK

ANALOG

PERIPHERAL

INSTALLATION SOLUTION

AI Focus PTZ



XNP-C9310R
8MP 31x AI + IR PTZ Camera

AI PTZ Plus



XNP-C9303RW
8MP 30x AI + Wiper + IR PTZ Camera

AI PTZ Plus



XNP-C9253R
8MP 25x AI + IR PTZ Camera

AI PTZ Plus



XNP-C9253
8MP 25x AI PTZ Camera

AI PTZ Plus



XNP-C8303RW
6MP 30x AI + Wiper + IR PTZ Camera

Imaging Device	1/1.8" CMOS	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS
Resolution / Max. Frame Rate	8MP / 30fps	8MP / 30fps	8MP / 30fps	8MP / 30fps	6MP / 30fps
Min. Illumination	Color: 0.06 Lux(F1.36, 1/30sec, 30 IRE) BW: 0.006 Lux(F1.36, IR LED Off), 0Lux (IR LED On)	Color: 0.1Lux(F1.6, 1/30sec) BW: 0Lux(IR LED On)	Color: 0.1Lux(F1.6, 1/30sec) BW: 0Lux(IR LED On)	Color: 0.1Lux(F1.6, 1/30sec) BW: 0.01Lux(F1.6, 1/30sec)	Color: 0.1Lux(F1.6, 1/30sec) BW: 0Lux(IR LED On)
Video Out	-	-	-	-	-
Focal Length (Zoom Ratio)	6.91 ~ 214.7mm(31x) zoom (digital 32x, total 992x zoom) Support Quick zoom	5~150mm(30x) zoom (digital 32x, total 960x zoom)	5~125mm(25x) zoom (digital 32x, total 800x zoom)	5~125mm(25x) zoom (digital 32x, total 800x zoom)	5~150mm(30x) zoom (digital 32x, total 960x zoom)
Angular Field of View	H : 60.6° (Wide) ~ 2.59° (Tele) V : 35.1° (Wide) ~ 1.45° (Tele) D : 68.8° (Wide) ~ 2.97° (Tele)	H: 57.42° (Wide)~2.19° (Tele) V: 33.54° (Wide)~1.25° (Tele)	H: 57.42° (Wide)~2.71° (Tele) V: 33.54° (Wide)~1.55° (Tele)	H: 57.42° (Wide)~2.71° (Tele) V: 33.54° (Wide)~1.55° (Tele)	H: 57.42° (Wide)~2.19° (Tele) V: 33.54° (Wide)~1.25° (Tele)
Pan / Tilt / Rotate	360° Endless / -20° ~90°				
IR Viewable Length	WiseIR 250m(820ft)	WiseIR 200m (656.17ft)	WiseIR 200m(656.17ft)	-	WiseIR 200m(656.17ft)
Day & Night	Auto (ICR)/Color/BW/Schedule				
Wide Dynamic Range	extremeWDR(120dB)				
Digital Noise Reduction	WiseNR II(Based on AI engine), SSNRV				
Digital Image Stabilization	Support(built-in gyro sensor)				
Analytics	<p>Classified object type : Person/Face/Vehicle/License plate Attributes : Vehicle(Type:car/bus/truck/motorcycle/bicycle) Support DetectionShot Analytics events based on AI engine : Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit), Motion detection Analytics events : Tampering, Fog detection, Audio detection, Sound classification(with NW I/O Box : SPM-4210), Shock detection, Virtual area(Appear/Disappear)</p>				
Business Intelligence	-				
Alarm I/O	Compatible with NW I/O Box (Optional: SPM-4210)				
Audio I/O	Compatible with NW I/O Box (Optional: SPM-4210)				
Video Compression	H.265/H.264, MJPEG				
WiseStream	Manual(Sea area), WiseStream III (Based on AI engine)				
Streaming	Up to 10 profiles				
Edge Storage	Micro SD/SDHC/SDXC 2slots 1TB(512GBx2)				
Application Programming Interface	ONVIF Profile S/G/T/M SUNAPI(HTTP API) Hanwha Vision Open Platform				
Operating Temperature / Humidity	-50°C~+55°C(-58°F~+131°F)/ +74°C(165°F)(Max) based on NEMA TS-2(2.2.7) * Start up should be done at above -30°C 0~100%RH(Condensing) Humidity control with AIR vent	-40°C~+55°C(-58°F~+131°F)/ +74°C(165°F)(Max) based on NEMA TS-2(2.2.7) * Start up should be done at above -30°C 0~100%RH(Condensing) Humidity control with AIR vent			
Certification	IP66/IP67, IK10, NEMA4X Safety(UL, KC-SDOC), EMC(FCC, CE, VCCI, RCM, KC) NEMA-TS 2(2.2.7, 2.2.8, 2.2.9)	IP66, IK10, NEMA4X, NEMA-TS 2(2.2.7, 2.2.8, 2.2.9)			
Power Consumption	Typical 23W, Max 62W	Typical 26W, Max 46W	Typical 24W, Max 40W	Typical 24W, Max 25.5W	Typical 26W, Max 46W
Product Dimensions / Weight	ø 188x264.9mm(ø 7.40x10.47") / 4400g (9.70lb)	ø 184.9x318.8mm(7.28x12.55") / 5600g (12.34lb)	ø 158x293.3mm(6.22x11.55") / 3200g(7.05lb)	ø 158x293.3mm(6.22x11.55") / 3200g(7.05lb)	ø 184.9x318.8mm(7.28x12.55") / 5600g (12.34lb)
Additional Features	Upgraded preset accuracy, Object auto tracking, Target lock tracking, Quick zoom, Focus scan, Wise focus	Upgraded preset accuracy, Object auto tracking, Target lock tracking	Upgraded preset accuracy, Object auto tracking, Target lock tracking	Upgraded preset accuracy, Object auto tracking, Target lock tracking	Upgraded preset accuracy, Object auto tracking, Target lock tracking

AI PTZ Plus

XNP-C8253R
 6MP 25x AI IR PTZ Camera

AI PTZ Plus

XNP-C8253
 6MP 25x AI PTZ Camera

AI Focus PTZ

XNP-C7310R
 4MP 31x AI IR PTZ Camera

AI PTZ Plus

XNP-C6403RW
 2MP 40x AI Wiper IR PTZ Camera

AI PTZ Plus

XNP-C6403R
 2MP 40x AI IR PTZ Camera

AI PTZ Plus

XNP-C6403
 2MP 40x AI PTZ Camera

Imaging Device	1/2.8" CMOS	1/2.8" CMOS	1/1.8" CMOS	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS
Resolution / Max. Frame Rate	6MP / 30fps	6MP / 30fps	4MP / 60fps	2MP / 60fps	2MP / 60fps	2MP / 60fps
Min. Illumination	Color: 0.1Lux(F1.6, 1/30sec) BW: 0Lux(IR LED On)	Color: 0.1Lux(F1.6, 1/30sec) BW: 0.01Lux(F1.6, 1/30sec)	Color: 0.04Lux (F1.36, 1/30sec, 30IRE) BW: 0.004Lux(F1.36, IR LED Off), 0Lux (IR LED On)	Color: 0.05Lux(F1.6, 1/30sec) BW: 0Lux(IR LED On)	Color: 0.05Lux(F1.6, 1/30sec) BW: 0Lux(IR LED On)	Color: 0.05Lux(F1.6, 1/30sec) BW: 0.005Lux(F1.6, 1/30sec)
Video Out	-	-	-	-	-	-
Focal Length (Zoom Ratio)	5~125mm(25x) zoom (digital 32x, total 800x zoom)	5~125mm(25x) zoom (digital 32x, total 800x zoom)	6.91 ~ 214.7mm(31x) zoom (digital 32x, total 992x zoom) Support Quick zoom	4.25~170mm(40x) zoom (digital 32x, total 1280x zoom)	4.25~170mm(40x) zoom (digital 32x, total 1280x zoom)	4.25~170mm(40x) zoom (digital 32x, total 1280x zoom)
Angular Field of View	H: 57.42° (Wide)~2.71° (Tele) V: 33.54° (Wide)~1.55° (Tele)	H: 57.42° (Wide)~2.71° (Tele) V: 33.54° (Wide)~1.55° (Tele)	H: 59.4° (Wide)~2.54° (Tele) V: 35.8° (Wide)~1.49° (Tele)	H: 65.66° (Wide)~1.88° (Tele) V: 39.4° (Wide)~1.09° (Tele)	H: 65.66° (Wide)~1.88° (Tele) V: 39.4° (Wide)~1.09° (Tele)	H: 65.66° (Wide)~1.88° (Tele) V: 39.4° (Wide)~1.09° (Tele)"
Pan / Tilt / Rotate	360° Endless / -20° ~90°					
IR Viewable Length	WiseIR 200m(656.17ft)	-	WiseIR 300m(984ft)	WiseIR 200m (656.17ft)	WiseIR 200m (656.17ft)	-
Day & Night	Auto (ICR)/Color/BW/Schedule					
Wide Dynamic Range	extremeWDR (120dB)	extremeWDR (120dB)	extremeWDR (120dB)	extremeWDR (150dB)	extremeWDR (150dB)	extremeWDR (150dB)
Digital Noise Reduction	WiseNR II (Based on AI engine), SSNR V					
Digital Image Stabilization	Support (built-in gyro sensor)					
Analytics	Classified object type: Person/Face/Vehicle/License plate Attributes: Vehicle(Type:car/bus/truck/motorcycle/bicycle) Support Detection Shot Analytics events based on AI engine: Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit), Motion detection Analytics events: Tampering, Fog detection, Audio detection, Sound classification(with NW I/O Box : SPM-4210), Shock detection, Virtual area(Appear/Disappear)					
Business Intelligence	-					
Alarm I/O	Compatible with NW I/O Box (Optional: SPM-4210)					
Audio I/O	Compatible with NW I/O Box (Optional: SPM-4210)					
Video Compression	H.265/H.264, MJPEG					
WiseStream	Manual(5ea area), WiseStream III (Based on AI engine)					
Streaming	Up to 10 profiles					
Edge Storage	Micro SD/SDHC/SDXC 2slots 1TB(512GBx2)					
Application Programming Interface	ONVIF Profile S/G/T/M, SUNAPI(HTTP API) Hanuwa Vision Open Platform					
Operating Temperature / Humidity	-40°C~+55°C(-40°F~+131°F) / +74° C(+165° F) (MAX) based on NEMA-TS 2(2.2.7) * Start up should be done at above -30°C 0~100%RH(Condensing) Humidity control with AIR vent	-40°C~+55°C(-40°F~+131°F)/ +74°C(165°F)(MAX) based on NEMA TS-2(2.2.7) * Start up should be done at above -30°C 0~100%RH(Condensing) Humidity control with AIR vent	-50°C~+55°C(-58°F~+131°F) / +74°C(+165°F) (MAX) based on NEMA-TS 2(2.2.7) * Start up should be done at a bove -30°C 0~100%RH(Condensing) Humidity control with AIR vent	-40°C~+55°C(-40°F~+131°F) +74°C(+165°F) (MAX) based on NEMA-TS 2(2.2.7) * Start up should be done at above -30°C 0~100%RH(Condensing) Humidity control with AIR vent	-40°C~+50°C(-40°F~+122°F) / +74°C(+165°F) (MAX) based on NEMA-TS 2(2.2.7) * Start up should be done at above -30°C 0~100%RH(Condensing) Humidity control with AIR vent	-40°C~+50°C(-40°F~+122°F) / +74° C(+165° F) (MAX) based on NEMA-TS 2(2.2.7) * Start up should be done at above -30° C Humidity control with AIR vent
Certification	IP66, IK10, NEMA4X, NEMA-TS 2(2.2.7, 2.2.8, 2.2.9)	IP66, IK10, NEMA4X, NEMA-TS 2(2.2.7, 2.2.8, 2.2.9)	IP66/67, IK10, NEMA4X, NEMA-TS 2(2.2.7, 2.2.8, 2.2.9)	IP66, IK10, NEMA4X, NEMA-TS 2(2.2.7, 2.2.8, 2.2.9)	IP66, IK10, NEMA4X, NEMA-TS 2(2.2.7, 2.2.8, 2.2.9)	IP66, IK10, NEMA4X, NEMA-TS 2(2.2.7, 2.2.8, 2.2.9)
Power Consumption	Typical 24W, Max 40W	Typical 24W, Max 25.5W	HPoE: Max 62W, typical 23W	Typical 26W, Max 46W	Typical 24W, Max 40W	Typical 24W, Max 25.5W
Product Dimensions / Weight	ø 158x293.3mm(6.22x11.55") / 3200g(7.05lb)	ø 158x293.3mm(6.22x11.55") / 3200g(7.05lb)	ø 188x264.9mm(ø 7.40x10.47") / 4400g (9.70lb)	ø 184.9x318.8mm(7.28x12.55") / 5600g (12.34lb)	ø 158x293.3mm(6.22x11.55") / 3200g(7.05lb)	ø 158x293.3mm(6.22x11.55") / 3,200g(7.05lb)
Additional Features	Upgraded preset accuracy, Object auto tracking, Target lock tracking	Upgraded preset accuracy, Object auto tracking, Target lock tracking	Upgraded preset accuracy, Object auto tracking, Target lock tracking, Quick zoom, Focus scan, Wise focus	Upgraded preset accuracy, Object auto tracking, Target lock tracking	Upgraded preset accuracy, Object auto tracking, Target lock tracking	Upgraded preset accuracy, Object auto tracking, Target lock tracking



PNO-A9311R
8MP AI IR Bullet Camera



PNO-A9081R
8MP AI IR Bullet Camera



PNV-A9081R
8MP AI IR Vandal Dome Camera



PND-A9081RV
8MP AI IR Dome Camera



PND-A9081RF
8MP AI IR Dome Camera



PNB-A9001
8MP AI Box Camera

Imaging Device	1/1.8" CMOS					
Resolution / Max. Frame Rate	4K / 30fps		8MP / 30fps			
Min. Illumination	Color: 0.075Lux(F1.36, 1/30sec, 30IRE) BW: 0.0075Lux(F1.36, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.05Lux(F1.6, 1/30sec) BW: 0.005Lux(F1.6, 1/30sec), 0Lux(IR LED on)	Color: 0.05Lux(F1.6, 1/30sec) BW: 0.005Lux(F1.6, 1/30sec), 0Lux(IR LED on)	Color: 0.05Lux(F1.6, 1/30sec) BW: 0.005Lux(F1.6, 1/30sec), 0Lux(IR LED on)	Color: 0.05Lux(F1.6, 1/30sec) BW: 0.005Lux(F1.6, 1/30sec), 0Lux(IR LED on)	Color: 0.03Lux(F1.2, 1/30sec) B/W: 0.003Lux(F1.2, 1/30sec)
Video Out	CVBS: 1.0 Vp-p / 75Ω composite, 720x480(N), 720x576(P) for installation USB: Micro USB Type B, 1280x720 for installation					
Focal Length (Zoom Ratio)	6.91~214.7mm (31x) motorized varifocal		4.5~10mm(2.2x) motorized varifocal			-
Angular Field of View	H: 60.92° (Wide)~2.2° (Tele) V: 35.26° (Wide)~1.24° (Tele) D: 69.18° (Wide)~2.52° (Tele)	H: 101.4°(Wide)~45.5°(Tele) V: 53.6°(Wide)~25.5°(Tele) D: 120.7°(Wide)~52.3°(Tele)	H: 101.4°(Wide)~45.5°(Tele) V: 53.6°(Wide)~25.5°(Tele) D: 120.7°(Wide)~52.3°(Tele)	H: 101.4°(Wide)~45.5°(Tele) V: 53.6°(Wide)~25.5°(Tele) D: 120.7°(Wide)~52.3°(Tele)	H: 101.4°(Wide)~45.5°(Tele) V: 53.6°(Wide)~25.5°(Tele) D: 120.7°(Wide)~52.3°(Tele)	-
Pan / Tilt / Rotate	-	-	0°~360° / -45°~85° / 0°~355°	0°~360° / -45°~85° / 0°~355°	0°~360° / -45°~85° / 0°~355°	-
IR Viewable Length	WiseIR 70m(229.66ft)		WiseIR 30m(98.42ft)			
Day & Night	Auto(ICR)					
Wide Dynamic Range	120dB					
Digital Noise Reduction	WiseNR II (Based on AI engine), SSNR V					
Digital Image Stabilization	Support (built-in gyro sensor)					
Analytics	<p>Classified object type: Person/Face/Vehicle/License plate Attributes: Person(Gender, Color and Bag), Face(Age, Gender, Mask and Glasses), Vehicle(Type: car/bus/truck/motorcycle/bicycle and Color) Support BestShot per object Analytics events based on AI engine - Object detection, Virtual line*(Crossing/Direction), Virtual area*(Loitering/Intrusion/Enter/Exit), Face mask detection, Social distancing detection, Slip&Fall detection Analytics events - Defocus detection, Motion detection, Tampering, Audio detection, Sound classification, Shock detection, Virtual area(Appear/Disappear) Support WiseDetector for Adding custom objects *Some of the video analytics only works with people and vehicle detection</p>					
Business Intelligence	People/Vehicle/Crowd counting, Queue management, Heatmap based on AI engine					
Alarm I/O	2 configurable I/O ports, DC 12V output(Max. 50mA)					
Audio I/O	Selectable(mic in/line in) / line out	Selectable (mic in/line in) / line out	Selectable (mic in/line in) / line out	Selectable (mic in/line in/ built-in mic) / line out	Selectable (mic in/line in) / line out	Selectable (mic in/line in/ built-in mic) / line out
Video Compression	H.265/H.264: Main/High, MJPEG					
WiseStream	Manual(5ea area), WiseStream II, WiseStream III (using AI engine)					
Streaming	Unicast(6 users) / Multicast Multiple streaming(Up to 6 profiles)					
Edge Storage	Micro SD/SDHC/SDXC 2slot Max. 512GB(256GBx2)		Micro SD/SDHC/SDXC 2slots 512GB			
Application Programming Interface	ONVIF Profile S/G/T/M, SUNAPI(HTTP API) Hanwha Vision Open Platform - Wise AI application included(Analytic based on AI, Business intelligence)					
Operating Temperature / Humidity	-40°C~+55°C(-40°F~+131°F) / 0~100% RH(condensing), Humidity control /with AIR vent * Start up should be done at above -30°C	-50°C ~ +55°C(-58°F ~ +131°F) / Less than 90% RH * Start up should be done at above -30°C	-50°C ~ +55°C(-58°F ~ +131°F) / Less than 90% RH * Start up should be done at above -30°C	-25°C ~ +50°C (-13°F ~ +122°F) / Less than 90% RH	-25°C ~ +50°C (-13°F ~ +122°F) / Less than 90% RH	-10°C ~ +55°C(+14°F ~ +131°F) / Less than 90% RH
Certification	IP66/IP67, IK10, NEMA4X	IP66/IP67, IK10, NEMA4X	IP66/IP67/IP6K9K, IK10+, NEMA4X	IP52, IK10	IP52, IK10, Plenum rate	-
Power Consumption	PoE+: Max 25.5W, typical 14.0W 12VDC: Max 24.0W, typical 12.7W	PoE+: Max 20.0W, typical 17.00W 12VDC: Max 18.00W, typical 16.00W	PoE+: Max 20.00W, typical 17.00W 12VDC: Max 18.70W, typical 15.00W	PoE+: Max 20.00W, typical 16.00W 12VDC: Max 17.70W, typical 14.00W	PoE+: Max 20.00W, typical 16.00W 12VDC: Max 17.70W, typical 14.00W	PoE+: Max 16.50W, typical 12.50W 12VDC: Max 13.50W, typical 10.80W
Product Dimensions / Weight	Ø136.2x358.7mm(Ø 5.36x14.12") (Without sunshield), 3200g(7.05lb) * backbox: Ø 160mm(Ø 6.30")	Ø91.0x368.6mm (3.58" x 14.51") (Without sunshield), 2.48Kg (5.47lb)	Ø180x125mm(7.09x4.92"), 1.90Kg (4.19lb)	Ø160x125mm(6.30x4.92"), 1.60Kg (3.53lb)	Ø205x163mm(8.07x4.92"), 1.95Kg (4.30lb)	81x67x165mm(3.19x2.64x6.48"), 0.88kg(1.94lb)



PNO-A6081R
2MP AI IR Bullet Camera



PNV-A6081R
2MP AI IR Vandal Dome Camera



PND-A6081RV
2MP AI IR Dome Camera



PND-A6081RF
2MP AI IR Dome Camera



PNB-A6001
2MP AI Box Camera

Imaging Device	1/2" CMOS	1/2" CMOS	1/2" CMOS	1/2" CMOS	1/2" CMOS
Resolution / Max. Frame Rate	2MP / 120fps	2MP / 120fps	2MP / 120fps	2MP / 120fps	2MP / 120fps
Min. Illumination	Color: 0.007Lux(F1.3, 1/30sec, 30IRE) B/W: 0.0007Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps	Color: 0.007Lux(F1.3, 1/30sec, 30IRE) B/W: 0.0007Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps	Color: 0.007Lux(F1.3, 1/30sec, 30IRE) B/W: 0.0007Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps	Color: 0.007Lux(F1.3, 1/30sec, 30IRE) B/W: 0.0007Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps	Color: 0.006Lux(F1.2, 1/30sec, 30IRE) B/W: 0.0006Lux(F1.2, 1/30sec, 30IRE), 30/25fps
Video Out	CVBS: 1.0 Vp-p / 75Ω composite, 720x480(N), 720x576(P) for installation USB: Micro USB Type B, 1280x720 for installation	CVBS: 1.0 Vp-p / 75Ω composite, 720x480(N), 720x576(P) for installation USB: Micro USB Type B, 1280x720 for installation	CVBS: 1.0 Vp-p / 75Ω composite, 720x480(N), 720x576(P) for installation USB: Micro USB Type B, 1280x720 for installation	CVBS: 1.0 Vp-p / 75Ω composite, 720x480(N), 720x576(P) for installation USB: Micro USB Type B, 1280x720 for installation	CVBS: 1.0 Vp-p / 75Ω composite, 720x480(N), 720x576(P) for installation USB: Micro USB Type B, 1280x720 for installation
Focal Length (Zoom Ratio)	4.38~9.33mm(2.13x) motorized varifocal				-
Angular Field of View	H:103.1°(Wide)~44.5°(Tele) / V:54.2°(Wide)~24.9°(Tele) / D:124°(Wide)~51.1°(Tele)	H:103.1°(Wide)~44.5°(Tele) / V:54.2°(Wide)~24.9°(Tele) / D:124°(Wide)~51.1°(Tele)	H:103.1°(Wide)~44.5°(Tele) / V:54.2°(Wide)~24.9°(Tele) / D:124°(Wide)~51.1°(Tele)	H:103.1°(Wide)~44.5°(Tele) / V:54.2°(Wide)~24.9°(Tele) / D:124°(Wide)~51.1°(Tele)	-
Pan / Tilt / Rotate	-	0° ~360° / -45°~85° / 0° ~355°	0° ~360° / -45°~85° / 0° ~355°	0° ~360° / -45°~85° / 0° ~355°	-
IR Viewable Length	WiseIR 40m(131.23ft)	WiseIR 40m(131.23ft)	WiseIR 40m(131.23ft)	WiseIR 40m(131.23ft)	-
Day & Night	Auto (ICR)	Auto (ICR)	Auto (ICR)	Auto (ICR)	Auto (ICR)
Wide Dynamic Range	120dB	120dB	120dB	120dB	120dB
Digital Noise Reduction	WiseNR II (Based on AI engine), SSNR V				
Digital Image Stabilization	Support (built-in gyro sensor)	Support (built-in gyro sensor)	Support (built-in gyro sensor)	Support (built-in gyro sensor)	Support (built-in gyro sensor)
Analytics	<p>Classified object type: Person/Face/Vehicle/License plate</p> <p>Attributes: Person(Gender, Color and Bag), Face(Age, Gender, Mask and Glasses), Vehicle(Type: car/bus/truck/motorcycle/bicycle and Color)</p> <p>Support BestShot per object</p> <p>Analytics events based on AI engine</p> <p>- Object detection, Virtual line*(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit), Face mask detection, Social distancing detection, Slip&Fall detection</p> <p>Analytics events - Defocus detection, Motion detection, Tampering, Audio detection, Sound classification, Shock detection, Virtual area(Appear/Disappear) Support WiseDetector for Adding custom objects</p>				
Business Intelligence	People/Vehicle/Crowd counting, Queue management, Heatmap based on AI engine				
Alarm I/O	2 configurable I/O ports, DC 12V output(Max. 50mA)				
Audio I/O	Line in / Line out	Line in / Line out	Line in / Line out	Line in / Line out	Line in / Line out
Video Compression	Selectable (mic in/line in) / line out	Selectable (mic in/line in) / line out	Selectable (mic in/line in/built-in mic) / line out	Selectable (mic in/line in) / line out	Selectable (mic in/line in/built-in mic) / line out
WiseStream	Manual(Sea area), WiseStream II, WiseStream III (using AI engine)				
Streaming	Unicast(6 users) / Multicast Multiple streaming(Up to 6 profiles)				
Edge Storage	Micro SD/SDHC/SDXC 2slots 512GB				
Application Programming Interface	<p>ONVIF Profile S/G/T/M, SUNAPI(HTTP API)</p> <p>Hanwha Vision Open Platform</p> <p>- WiseAI application included(Analytic based on AI, Business intelligence)</p>				
Operating Temperature / Humidity	-50°C ~ +55°C(-58°F ~ +131°F) / Less than 90% RH * Start up should be done at above -30°C	-50°C ~ +55°C(-58°F ~ +131°F) / Less than 90% RH * Start up should be done at above -30°C	-25°C ~ +50°C (-13°F ~ +122°F) / Less than 90% RH	-25°C ~ +50°C (-13°F ~ +122°F) / Less than 90% RH	-10°C ~ +55°C(+14°F ~ +131°F) / Less than 90% RH
Certification	IP66, IP67, IK10, NEMA4X	IP66, IP67, IP6K9K, IK10+, NEMA4X	IP52, IK10	IP52, IK10, Plenum rate	-
Power Consumption	PoE+: Max 19.50W, typical 16.00W 12VDC: Max 17.00W, typical 13.50W	PoE+: Max 19.50W, typical 16.00W 12VDC: Max 17.00W, typical 13.50W	PoE+: Max 19.50W, typical 16.00W 12VDC: Max 17.00W, typical 13.50W	PoE+: Max 19.50W, typical 16.00W 12VDC: Max 17.00W, typical 13.50W	PoE+: Max 17.5W, Typ 13.7W 12VDC: Max 14W, Typ 10.6W
Product Dimensions / Weight	Ø91.0x368.6mm (3.58" x 14.51") (Without sunshield), 2.48Kg (5.47lb)	Ø180x125mm(7.09x4.92"), 1.90Kg (4.19lb)	Ø160x125mm(6.30x4.92"), 1.60Kg (3.53lb)	Ø205x163mm(8.07x4.92"), 1.95Kg(4.30lb)	81x67x165mm(3.19x2.64x6.48"), 0.88kg(1.94lb)

NETWORK

ANALOG

PERIPHERAL

INSTALLATION SOLUTION



PNM-C34404RQPZ
8MP 4CH PTRZ + 2MP 40x PTZ AI Camera



PNM-C16083RVQ
4MP x 4CH AI Multi-directional Camera



PNM-C32083RVQ
8MP x 4CH AI Multi-directional Camera

Imaging Device	1/2.8" CMOS x 4CH	1/2.8" CMOS x 1CHPTZ	1/2.8" CMOS x 4CH	1/2.8" CMOS x 4CH
Resolution / Max. Frame Rate	8MP/20fps	2MP / 60fps	4MP / 30fps	[AI On] 8MP Max. 15fps [AI Off] 8MP Max. 20fps
Min. Illumination	Color: 0.1Lux(F1.5, 1/30sec, 30IRE) BW: 0.01Lux(F1.5, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.05Lux(F1.6, 1/30sec, 30IRE) BW: 0.005Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.075Lux(F1.5, 1/30sec, 30IRE) BW: 0.0075Lux(F1.5, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.1Lux(F1.5, 1/30sec, 30IRE) BW: 0.01Lux(F1.5, 1/30sec, 30IRE), 0Lux(IR LED on)
Video Out	-		USB: Micro USB Type B, 1280x720 for installation	USB: Micro USB Type B, 1280x720 for installation
Focal Length (Zoom Ratio)	3.3~5.7mm(1.7x) motorized varifocal	4.25~170mm(40x) zoom(digital 32x, total 1280x zoom)	3.3~5.7mm(1.7x) motorized varifocal	3.3~5.7mm(1.7x) motorized varifocal
Angular Field of View	H: 109°(Wide)~56°(Tele) V: 55°(Wide)~31°(Tele) D: 136°(Wide)~65°(Tele)	H: 65.66°(Wide)~1.88°(Tele) V: 39.40°(Wide)~1.09°(Tele)	H: 99.8°(Wide)~53.0°(Tele) V: 53.8°(Wide)~30.7°(Tele) D: 124.3°(Wide)~61.8°(Tele)	H: 108.3°(Wide)~56.4°(Tele) V: 54.7°(Wide)~31.2°(Tele) D: 135.5°(Wide)~65.2°(Tele)
Pan / Tilt / Rotate	0°~360° / 9°~65° / 0°~90° * Tilt angle with Shield IR: 40°~65°	0°~360° / -20°~90°	0~360° / 0~73° / 0~90°	0~360° / 0~73° / 0~90°
IR Viewable Length	20m (65.62ft)	WiselR 200m (656.17ft)	WiselR 15m(49.21ft)	WiselR 15m(49.21ft)
Day & Night	Auto (ICR)		Auto(ICR)	Auto (ICR)
Wide Dynamic Range	120dB	extremeWDR (150dB)	120dB	120dB
Digital Noise Reduction	WiseNR II (Based on AI engine), SSNR V		WiseNR II (Based on AI engine), SSNR V	WiseNR II (Based on AI engine), SSNR V
Digital Image Stabilization	-	Support	-	-
Analytics	Classified object type: Person/Face/Vehicle/License plate Attributes: Vehicle (Type: car/bus/truck/motorcycle/bicycle) Support BestShot Analytics events based on AI engine :Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit) Analytics events : Defocus detection, Motion detection, Tampering, Virtual area(Appear/Disappear)	Analytics events: Motion detection, Fog detection, Tampering, Virtual area(Loitering/Intrusion/Enter/Exit/Appear/Disappear), Virtual line(Crossing/Direction) Support Audio detection, Sound classification via optional I/O box(SPM-4210)	Classified object type: Person/Face/Vehicle/License plate Attributes: Vehicle (Type: car/bus/truck/motorcycle/bicycle) Support BestShot Analytics events based on AI engine - Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit) Analytics events - Defocus detection, Motion detection, Tampering, Audio detection, Sound classification, Virtual area(Appear/Disappear)	
Business Intelligence	-	-	-	-
Alarm I/O	-	-	2 configurable I/O ports * Support extra alarm I/O via optional SPM-4210 I/O box	2 configurable I/O ports * Support extra alarm I/O via optional SPM-4210 I/O box
Audio I/O	-	-	Selectable(mic in/line in) / -	Selectable(mic in/line in) / -
Video Compression	H.265/H.264, MJPEG	H.265/H.264, MJPEG	H.265/H.264, MJPEG	H.265/H.264, MJPEG
WiseStream	Manual(Sea area), WiseStream II, WiseStream III (Based on AI engine)		Manual(Sea area), WiseStream II, WiseStream III (Based on AI engine)	Manual(Sea area), WiseStream II, WiseStream III (Based on AI engine)
Streaming	Unicast(10 users) / Multicast Multiple streaming (Up to 3 profiles)	Unicast(20 users) / Multicast Multiple streaming (Up to 10 profiles)	Unicast(10 users) / Multicast Multiple streaming(Up to 3 profiles per channel)	Unicast(10 users) / Multicast Multiple streaming(Up to 3 profiles per channel)
Edge Storage	Micro SD/SDHC/SDXC 2slot 1TB(512GBx2)		Micro SD/SDHC/SDXC 2slot Max. 2TB(1TBx2)	Micro SD/SDHC/SDXC 2slot Max. 2TB(1TBx2)
Application Programming Interface	ONVIF Profile S/T, SUNAPI (HTTP API) Hanwha Vision Open Platform		ONVIF Profile S/T/M, SUNAPI(HTTP API) Hanwha Vision Open Platform	ONVIF Profile S/T/M, SUNAPI(HTTP API) Wisenet open platform
Operating Temperature / Humidity	-40°C~+50°C(-40°F~+122°F) +74°C(+165°F)(MAX) based on NEMA-TS 2(2.2.7) * Start up should be done at above -30°C 0~95% RH(non-condensing)		-40°C~+55°C(-40°F~+131°F) * Start up should be done at above -35°C 0~95% RH(non-condensing) Humidity control with AIR vent	-40°C~+55°C(-40°F~+131°F) * Start up should be done at above -35°C 0~95% RH(non-condensing) Humidity control with AIR vent
Certification	IP66, IK10, NEMA4X		IP66, IK10, NEMA4X	IP66, IK10, NEMA4X
Power Consumption	HPoE: Max 64.00W, typical 45.00W		PoE+: Max 25.5W, typical 22.0W PoE++: Max 33.0W, typical 22.0W	PoE+: Max 25.5W, typical 22.0W PoE++: Max 33.0W, typical 22.0W
Product Dimensions / Weight	ø 140x110.2mm(ø 5.51x4.34"), 875g(1.93 lb)		ø 250x114.2mm(ø 9.84x4.50"), 2730g(6.02 lb)	ø 250x114.2mm(ø 9.84x4.50"), 2820g(6.22 lb)



PNM-C16013RVQ
4MP x 4CH AI Multi-directional Camera



PNM-C12083RVD
6MP x 2CH AI Multi-directional Camera



PNM-C7083RVD
2MP x 2CH AI Multi-directional Camera



PNM-C9022RV
8MP AI Panoramic Camera

Imaging Device	1/2.8" CMOS x 4CH	1/2.8" CMOS x 2CH	1/2.8" CMOS x 2CH	1/2.8" CMOS x 4CH
Resolution / Max. Frame Rate	4MP/15fps	6MP / 15fps	2MP / 30fps	2MP / 20fps x 4CH
Min. Illumination	Color: 0.05Lux(F1.2, 1/30sec, 30IRE) BW: 0.005Lux(F1.2, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.16lux(F1.67, 1/30sec, 30IRE) BW: 0.016lux(F1.67, 1/30sec, 30IRE), 0lux(IR LED on)	Color: 0.035lux(F2.2, 1/30sec, 30IRE) BW: 0.0035lux(F2.2, 1/30sec, 30IRE), 0lux(IR LED on)	Color: 0.1Lux(F2.0, 1/30sec) BW: 0.01Lux(F2.0, 1/30sec), 0Lux(IR LED on)
Video Out	USB: Micro USB Type B, 2592x1520 for installation	USB: micro USB Type B, 1280x720 for installation	USB: micro USB Type B, 1280x720 for installation	USB: Micro USB Type B, 1280x720 for installation
Focal Length (Zoom Ratio)	3.19mm fixed focal	3.54~6.69mm(1.9x) motorized varifocal	3~6mm(2x) motorized varifocal	2.8mm fixed focal(x4)
Angular Field of View	H: 97° / V: 54° / D: 116°	H: 96° (Wide) ~ 47° (Tele) V: 51° (Wide) ~ 26° (Tele) D: 113° (Wide) ~ 54° (Tele)	H: 107° (Wide) ~ 56° (Tele) V: 57° (Wide) ~ 31° (Tele) D: 126° (Wide) ~ 64° (Tele)	H: 209° / V: 60°
Pan / Tilt / Rotate	0~360° (100° per CH) / 0~75° / 0~90°	0° ~ 355° / 0° ~ 78° / 0° ~ 180°	0° ~ 355° / 0° ~ 78° / 0° ~ 180°	0° ~ 360° / 0° ~ 65° / -
IR Viewable Length	20m(65.62ft)	25m (82ft)	25m (82ft)	20m (65.62ft)
Day & Night	Auto (ICR)	Auto (ICR)	Auto (ICR)	Auto (ICR)
Wide Dynamic Range	120dB	extremeWDR (120dB)	extremeWDR (120dB)	extremeWDR (120dB)
Digital Noise Reduction	WiseNR II (Based on AI engine), SSNR V	WiseNR II (Based on AI engine), SSNR V	WiseNR II (Based on AI engine), SSNR V	WiseNR II (Based on AI engine), SSNR V
Digital Image Stabilization	-			
Analytics	<p>Classified object type: Person/Face/Vehicle/License plate</p> <p>Attributes: Vehicle (Type: Car/Bus/Truck/Motorcycle/Bicycle)</p> <p>Support Detection shot</p> <p>Analytics events based on AI engine - Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit)</p> <p>Analytics events - Motion detection, Tampering, Virtual area(Appear/Disappear) Audio detection, Sound classification (with NW I/O box SPM-4210)</p>	<p>Classified object type: Person/Face/Vehicle/License plate</p> <p>Attributes: Vehicle(Type: car/bus/truck/motorcycle/bicycle)</p> <p>Support BestShot</p> <p>Analytics events based on AI engine - Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit)</p> <p>Analytics events - Defocus detection, Motion detection, Tampering, Audio detection, Sound classification, Virtual area(Appear/Disappear)</p>		
Business Intelligence	-			
Alarm I/O	2 configurable I/O ports * Support extra alarm I/O via optional SPM-4210I/O box	Support Alarm via optional SPM-4210I/O box	Support Alarm via optional SPM-4210I/O box	2 configurable I/O ports
Audio I/O	Selectable(mic in/line in) / -	Audio in/out via optional SPM-4210I/O box	Audio in/out via optional SPM-4210I/O box	Selectable (mic in/line in) / Line out
Video Compression	H.265 / H.264, MJPEG			
WiseStream	Manual(5ea area), WiseStream II, WiseStream III (Based on AI engine)	WiseStream II, WiseStream III (Based on AI engine)	Manual(5ea area), WiseStream II, WiseStream III (Based on AI engine)	Manual(5ea area), WiseStream II, WiseStream III (Based on AI engine)
Streaming	Up to 4 profiles per channel	Unicast (10 users) / Multicast 5 profiles per channel	Unicast (10 users) / Multicast 5 profiles per channel	Unicast(20 users) / Multicast Multiple streaming (Up to 3 profiles, 2 virtual channel support)
Edge Storage	Micro SD/SDHC/SDXC 2slot Max. 1TB(512GBx2)	micro SD/SDHC/SDXC 1slot Max. 512GB	micro SD/SDHC/SDXC 1slot Max. 512GB	micro SD/SDHC/SDXC 2slot Max. 1TB(512GB*2)
Application Programming Interface	ONVIF Profile S/T/M, SUNAPI(HTTP API) Hanuha Vision Open Platform	ONVIF Profile S/T, SUNAPI(HTTP API) Open platform	ONVIF Profile S/T, SUNAPI(HTTP API) Open platform	ONVIF Profile S/G/T/M, SUNAPI(HTTP API) Hanuha Vision Open Platform
Operating Temperature / Humidity	-40°C~+55°C(-40°F~+131°F) * Start up should be done at above -35°C 0~95% RH(non-condensing) Humidity control with AIR vent	-40°C~+55°C(-40°F~+131°F) / Less than 95% RH(Non-condensing)	-40°C~+55°C(-40°F~+131°F) / Less than 95% RH(Non-condensing)	-40°C~+55°C(-40°F~+131°F) / 0~95% RH(non-condensing)
Certification	IP66, NEMA4X, IK09	IP66, IP67, NEMA4X, IK10	IP66, IP67, NEMA4X, IK10	IP66, IK10, NEMA4X
Power Consumption	-	PoE+: Max 21W, typical 16.5W	PoE+: Max 20W, typical 15.5W	PoE+: Max 24.5W, typical 11.3W 12VDC: Max 22.0W, typical 10.4W Power redundancy failover
Product Dimensions / Weight	ø 200x80mm(ø 7.87x3.15"), 1380g(3.04lb)	215(W)x135(D)x93.2(H)mm(8.46"x5.31"x3.67"), 1330g	215(W)x135(D)x93.2(H)mm(8.46"x5.31"x3.67"), 1330g	ø 253x170mm(9.96"x6.69"), 2900g(6.39lb)



QNE-C9013RL
8MP AI Dual Light Flateye Camera



QNE-C8013RL
5MP AI Dual Light Flateye Camera



QNO-C9083R
8MP IR Bullet Camera



QNO-C8083R
5MP IR Bullet Camera



QNO-C6083R
2MP IR Bullet Camera

Imaging Device	1/2.8" CMOS				
Resolution / Max. Frame Rate	8MP / 30fps	5MP/30fps	8MP/30fps	5MP/30fps	2MP/30fps
Min. Illumination	Color: 0.034Lux (F1.6, 1/30sec) BW: 0.0034Lux (F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.022Lux (F1.2, 1/30sec) BW: 0.0022Lux (F1.2, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.06Lux(F1.6, 1/30sec, 30IRE) BW: 0.006Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.07Lux(F1.6, 1/30sec, 30IRE) BW: 0.007Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.04Lux (F1.6, 1/30sec) BW: 0.004Lux (F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)
Video Out	-	-	USB: Micro USB Type B, 1280x720 for installation	USB: Micro USB Type B, 1280x720 for installation	USB: Micro USB Type B, 1280x720 for installation
Focal Length (Zoom Ratio)	3.0mm fixed focal	3.0mm fixed focal	3.2~10.2mm(3.2x) motorized varifocal	3.2~10.2mm(3.2x) motorized varifocal	3.2~10.2mm(3.2x) motorized varifocal
Angular Field of View	H: 108° / V: 59° / D: 127°	H: 97° / V: 53° / D: 113°	H: 104°(Wide)~31°(Tele) V: 55°(Wide)~17°(Tele) D: 124°(Wide)~35°(Tele)	H: 95°(Wide)~29°(Tele) V: 69°(Wide)~21°(Tele) D: 126°(Wide)~36°(Tele)	H: 102.0°(Wide)~32.2°(Tele) V: 54.2°(Wide)~18.3°(Tele) D: 119.0°(Wide)~36.7°(Tele)
Pan / Tilt / Rotate	0°~350° / 0°~75° / 0°~360°	0°~350° / 0°~75° / 0°~360°	0°~360° / 0°~100° / 0°~360°	0°~360° / 0°~100° / 0°~360°	0°~360° / 0°~100° / 0°~360°
IR Viewable Length	White LED : 30m(98.42ft) IR : 30m(98.42ft)	White LED : 30m(98.42ft) IR : 30m(98.42ft)	30m(98.42ft)	30m(98.42ft)	40m(131.23ft)
Day & Night	Auto(ICR)				
Wide Dynamic Range	120dB	120dB	120dB	120dB	120dB
Digital Noise Reduction	SSNR V , WiseNR II (Based on AI engine)	SSNR V , WiseNR II (Based on AI engine)	SSNR V , WiseNR II (Based on AI engine)	SSNR V , WiseNR II (Based on AI engine)	SSNR V , WiseNR II (Based on AI engine)
Digital Image Stabilization	-	-	-	-	-
Analytics	<p>Classified object type: Person/Vehicle Attributes: Person, Vehicle(Type:car/bus/truck/motorcycle/bicycle) Support DetectionShot Analytics events based on AI engine - Motion detection*, Object detection, Virtual line*(Crossing/Direction), Virtual area*(Loitering/Intrusion/Enter/Exit) Analytics events - Defocus detection, Tampering, Virtual area(Appear/Disappear) * Some of the video analytics only works with people and vehicle detection</p>				
Business Intelligence	Based on AI engine: People counting, Vehicle counting, Queue management, Heatmap				
Alarm I/O	-	-	Input 1ea / Output 1ea	Input 1ea / Output 1ea	Input 1ea / Output 1ea
Audio I/O	-	-	Selectable(mic in/line in) / Line out	Selectable(mic in/line in) / Line out	Selectable(mic in/line in) / Line out
Video Compression	H.265/H.264: Main/High, MJPEG	H.265/H.264: Main/High, MJPEG	H.265/H.264: Main/High, MJPEG	H.265/H.264: Main/High, MJPEG	H.265/H.264: Main/High, MJPEG
WiseStream	Manual(5ea area), WiseStream III (Based on AI engine)				
Streaming	Unicast(20 users) / Multicast Multiple streaming(Up to 5 profiles)				
Edge Storage	Micro SD/SDHC/SDXC 1slot 256GB	Micro SD/SDHC/SDXC 1slot 256GB	Micro SD/SDHC/SDXC 1slot 256GB	Micro SD/SDHC/SDXC 1slot 256GB	Micro SD/SDHC/SDXC 1slot 256GB
Application Programming Interface	ONVIF Profile S/G/T/M, SUNAPI(HTTP API), Hanwha Vision Open Platform				
Operating Temperature / Humidity	-40°C~+60°C(-40°F~+140°F) / 0~95% RH * Start up should be done at above -30°C Humidity control with AIR vent	-40°C~+60°C(-40°F~+140°F) / 0~95% RH * Start up should be done at above -30°C Humidity control with AIR vent	-30°C~+55°C(-22°F~+131°F) / 0~95% RH(non-condensing) * Start up should be done at above -30°C Humidity control with AIR vent	-30°C~+55°C(-22°F~+131°F) / 0~95% RH(non-condensing) * Start up should be done at above -30°C Humidity control with AIR vent	-40°C~+55°C(-40°F~+131°F) / 0~95% RH(non-condensing) Humidity control with AIR vent
Certification	IP66/IP67, IK10	IP66/IP67, IK10	IP66, IK10	IP66, IK10	IP66, IK10
Power Consumption	PoE: Max 10.0W, typical 4.5W	PoE: Max 10.0W, typical 4.5W	PoE: Max 12W, typical 5.3W	PoE: Max 12W, typical 5.3W	PoE: Max 8.9W, typical 3.7W
Product Dimensions / Weight	ø 140.0x99.6mm(ø 5.51x3.92"), 790g(1.74 lb)	ø 140.0x99.6mm(ø 5.51x3.92"), 790g(1.74 lb)	ø 93.4x245.8mm(ø 3.68x9.68"), 930g(2.05 lb)	ø 93.4x245.8mm(ø 3.68x9.68"), 930g(2.05 lb)	ø 93.4x245.8mm(ø 3.68x9.68"), 930g(2.05 lb)



QNV-C9083R
8MP IR Vandal Dome Camera



QNV-C8083R
5MP IR Vandal Dome Camera



QNV-C6083R
2MP IR Vandal Dome Camera



QNV-C9011R
8MP IR Vandal Dome Camera

Imaging Device	1/2.8" CMOS			
Resolution / Max. Frame Rate	8MP/30fps	5MP / 30fps	2MP / 30fps	8MP / 30fps
Min. Illumination	Color: 0.06Lux(F1.6, 1/30sec, 30IRE) BW: 0.006Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.07Lux(F1.6, 1/30sec, 30IRE) BW: 0.007Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.04Lux(F1.6, 1/30sec) BW: 0.004Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.03Lux(F1.6, 1/30sec, 30IRE) BW: 0.003Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)
Video Out	USB: Micro USB Type B, 1280x720 for installation	USB: Micro USB Type B, 1280x720 for installation	USB: Micro USB Type B, 1280x720 for installation HDMI: 1080p@30/25fps (60/50Hz) * HDMI out is supported through an optional cable(SPP-C1900)	USB: Micro USB Type B, 1280x720 for installation
Focal Length (Zoom Ratio)	3.2~10.2mm(3.2x) motorized varifocal	3.2~10.2mm(3.2x) motorized varifocal	3.2~10.2mm(3.2x) motorized varifocal	3.0mm fixed focal
Angular Field of View	H: 104°(Wide)~31°(Tele) V: 55°(Wide)~17°(Tele) D: 124°(Wide)~35°(Tele)	H: 95°(Wide)~29°(Tele) V: 69°(Wide)~21°(Tele) D: 126°(Wide)~36°(Tele)	H: 102.0°(Wide)~32.2°(Tele) V: 54.2°(Wide)~18.3°(Tele) D: 119.0°(Wide)~36.7°(Tele)	H: 108° / V: 59° / D: 127°
Pan / Tilt / Rotate	0°~350° / -35°~70° / 0°~355°	0°~350° / -35°~70° / 0°~355°	0°~350° / -35°~70° / 0°~355°	0°~350° / -35°~70° / 0°~355°
IR Viewable Length	30m(98.42ft)	30m(98.42ft)	40m(131.23ft)	20m(65.62ft)
Day & Night	Auto (ICR)			
Wide Dynamic Range	120db			
Digital Noise Reduction	SSNR V, WiseNR II (Based on AI engine)			
Digital Image Stabilization	-			
Analytics	<p>Classified object type: Person/Vehicle Attributes: Person, Vehicle(Type:car/bus/truck/motorcycle/bicycle) Support DetectionShot Analytics events based on AI engine - Motion detection*, Object detection, Virtual line*(Crossing/Direction), Virtual area*(Loitering/Intrusion/Enter/Exit) Analytics events - Defocus detection, Tampering, Virtual area(Appear/Disappear) * Some of the video analytics only works with people and vehicle detection</p>			
Business Intelligence	Based on AI engine: People counting, Vehicle counting, Queue management, Heatmap			
Alarm I/O	Input 1ea / Output 1ea * Alarm I/O is supported through an optional cable(SPP-C7400)			-
Audio I/O	Selectable(mic in/line in) / Line out	Selectable(mic in/line in) / Line out	Selectable(mic in/line in) / Line out	-
Video Compression	H.265/H.264: Main/High, MJPEG	H.265/H.264: Main/High, MJPEG	H.265/H.264: Main/High, MJPEG	H.265/H.264: Main/High, MJPEG
WiseStream	Manual(5ea area), WiseStream III (Based on AI engine)	Manual(5ea area), WiseStream III (Based on AI engine)	Manual(5ea area), WiseStream III	Manual(5ea area), WiseStream III (Based on AI engine)
Streaming	Unicast(20 users) / Multicast Multiple streaming(Up to 5 profiles)			
Edge Storage	Micro SD/SDHC/SDXC 1slot 256GB	Micro SD/SDHC/SDXC 1slot 256GB	Micro SD/SDHC/SDXC 1slot 256GB	Micro SD/SDHC/SDXC 1slot 256GB
Application Programming Interface	ONVIF Profile S/G/T/M, SUNAPI(HTTP API) Hanwha Vision Open Platform			
Operating Temperature / Humidity	-30°C~+55°C(-22°F~+131°F) / 0~95% RH(non-condensing) * Start up should be done at above -30°C Humidity control with AIR vent	-30°C~+55°C(-22°F~+131°F) / 0~95% RH(non-condensing) * Start up should be done at above -30°C Humidity control with AIR vent	-40°C~+55°C(-40°F~+131°F) / 0~95% RH(non-condensing) Humidity control with AIR vent	-40°C~+55°C(-40°F~+131°F) / 0~95% RH * Start up should be done at above -30°C Humidity control with AIR vent vapor control
Certification	IP66, IK10	IP66, IK10	IP66, IK10	IP66, IK10, NEMA4X
Power Consumption	PoE: Max 12.95W, typical 5.3W	PoE: Max 12.95W, typical 5.3W	PoE: Max 9.8W, typical 4.0W	PoE: Max 8.5W, typical 4.9W
Product Dimensions / Weight	φ 140x110.2mm(φ 5.51x4.34"), 875g(1.93lb)	φ 140x110.2mm(φ 5.51x4.34"), 875g(1.93lb)	φ 140x110.2mm(φ 5.51x4.34"), 850g(1.87lb)	φ 110x77mm(φ 4.33x3.03"), 522g(1.15lb)



QNV-C8011R
5MP IR Vandal Dome Camera



QNV-C8012
5MP Vandal Dome Camera



TNO-C8083E
5MP AI Explosion-proof bullet camera

Imaging Device	1/2.8" CMOS	1/2.8" CMOS	1/2.8" 5MP CMOS
Resolution / Max. Frame Rate	5MP / 30fps	5MP / 30fps	5MP / 30fps
Min. Illumination	Color: 0.03Lux(F1.6, 1/30sec, 30IRE) BW: 0.003Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.05Lux(F2.0, 1/30sec, 30IRE) BW: 0.005Lux(F2.0, 1/30sec, 30IRE)	Color: 0.07Lux(F1.6, 1/30sec, 30IRE) BW: 0.007Lux(F1.6, 1/30sec, 30IRE)
Video Out	USB: Micro USB Type B, 1280x720 for installation	USB: Micro USB Type B, 1280x720 for installation	-
Focal Length (Zoom Ratio)	3.0mm fixed focal	2.4mm fixed focal	3.2~10.2mm(3.2x) motorized varifocal
Angular Field of View	H: 100° / V: 73° / D: 129°	H: 123° / V: 91° / D: 159°	H: 95°(Wide)~29°(Tele) V: 69°(Wide)~21°(Tele) D: 126°(Wide)~36°(Tele)
Pan / Tilt / Rotate	0°~350° / -35°~70° / 0°~355°	0°~350° / -35°~70° / 0°~355°	-
IR Viewable Length	20m(65.62ft)	-	-
Day & Night		Auto(ICR)	
Wide Dynamic Range		120dB	
Digital Noise Reduction		SSNR V, WiseNR II (Based on AI engine)	
Digital Image Stabilization		-	-
Analytics	<p>Classified object type: Person/Vehicle Attributes: Person, Vehicle(Type:car/bus/truck/motorcycle/bicycle) Support DetectionShot Analytics events based on AI engine - Motion detection*, Object detection, Virtual line*(Crossing/Direction), Virtual area*(Loitering/Intrusion/Enter/Exit) Analytics events - Defocus detection, Tampering, Virtual area(Appear/Disappear) * Some of the video analytics only works with people and vehicle detection</p>		
Business Intelligence	Based on AI engine: People counting, Vehicle counting, Queue management, Heatmap		
Alarm I/O	-	-	-
Audio I/O	-	-	-
Video Compression	H.265/H.264: Main/High, MJPEG	H.265/H.264: Main/High, MJPEG	H.265/H.264: Main/Baseline/High, MJPEG
WiseStream	Manual(Sea area), WiseStream III (Based on AI engine)	Manual(Sea area), WiseStream III (Based on AI engine)	Manual(Sea area), WiseStream III (Based on AI engine)
Streaming	Unicast(20 users) / Multicast Multiple streaming(Up to 5 profiles)	Unicast(20 users) / Multicast Multiple streaming(Up to 5 profiles)	Unicast(20 users) / Multicast Multiple streaming(Up to 5 profiles)
Edge Storage	Micro SD/SDHC/SDXC 1 slot 256GB	Micro SD/SDHC/SDXC 1 slot 256GB	-
Application Programming Interface	ONVIF Profile S/G/T/M, SUNAPI(HTTP API) Hanwha Vision Open Platform		ONVIF Profile S/T/M SUNAPI(HTTP API)
Operating Temperature / Humidity	-40°C~+55°C(-40°F~+131°F) / 0~95% RH * Start up should be done at above -30°C Humidity control /w Air vapor control	-40°C~+55°C(-40°F~+131°F) / 0~95% RH * Start up should be done at above -30°C Humidity control /w Air vapor control	-30°C~+55°C(-22°F ~ +131°F) / 0~95% RH(non-condensing) * Start up should be done at above -30°C
Certification	IP66, IK 10, NEMA4X	IP66, IK 10, NEMA4X	CE, KC, IP66, IK 10, ATEX, II 2 G Ex db IIC T6 Gb II 2 D Ex tb IIIC T80°C Db IECEX, Ex db IIC T6 Gb, Ex tb IIIC T80°C Db, JPEX, KCS
Power Consumption	PoE: Max 7W, typical 4.9W	PoE: Max 7W, typical 4.9W	PoE: Max 9.50W, typical 5.30W
Product Dimensions / Weight	ø 110x77mm(ø 4.33x3.03"), 522g(1.15lb)	ø 110x77mm(ø 4.33x3.03"), 522g(1.15lb)	ø 110.5 x 316.2mm(ø 4.35x12.44"), 4770g(10.51 lb)



TNO-C3032TRA



TNO-C3022TRA



TNO-C3012TRA



TNO-C3030TRA



TNO-C3020TRA



TNO-C3010TRA

QVGA Radiometric AI Thermal Camera

Imaging Device	Uncooled micro bolometer (Spectral range: 8~14 μ m)					
Resolution	768x576, 384x288(original)					
Max. Frame Rate	8fps			30fps		
NETD	< 30mK					
Pixel pitch	17 μ m					
Focal Length	9.7mm fixed focal	6.6mm fixed focal	4.4mm fixed focal	9.7mm fixed focal	6.6mm fixed focal	4.4mm fixed focal
Angular Field of View	H: 37.9° / V: 28.7° / D: 46.7° (iFoV: 1.8 mRad)	H: 60° / V: 43.8° / D: 77.8° (iFoV: 2.6 mRad)	H: 90° / V: 65.3° / D: 118.6° (iFoV: 3.9 mRad)	H: 37.9° / V: 28.7° / D: 46.7° (iFoV: 1.8 mRad)	H: 60° / V: 43.8° / D: 77.8° (iFoV: 2.6 mRad)	H: 90° / V: 65.3° / D: 118.6° (iFoV: 3.9 mRad)
Min. Object Distance	2.8m	1.4m	0.6m	2.8m	1.4m	0.6m
Video out	USB: Micro USB Type B, 768x576 for installation					
Analytics	<p>Classified object type: Person/Vehicle Support BestShot Analytics events based on AI engine - WiseMD, Object detection, Virtual line*(Crossing/Direction), Virtual area*(Loitering/Intrusion/Enter/Exit) Analytics events - Motion detection, Tampering, Audio detection, Sound classification, Shock detection, Virtual area(Appear/Disappear) * Some of the video analytics only works with people and vehicle detection</p>					
Alarm I/O	2 configurable I/O ports					
Audio I/O	Selectable(mic in/line in) Line out					
Temperature Detect Range	-40°C~-550°C(-40°F~1,022°F)					
Temperature Accuracy	below 150°C: up to $\pm 2^\circ\text{C}$ Above 150°C: up to $\pm 15\%$ * based on measurements in a room temperature environment. Auto Temperature mode					
Temperature Detection	10 Polygonal ROI zones, whole FoV area					
Additional	Hybrid palettes, Spot temperature reading (ROI condition monitoring: Above/ Below/ Increase/ Decrease)					
WiseStream	Manual(5ea area), WiseStream II, WiseStream III (Based on AI engine)					
Streaming	Unicast(20 users) / Multicast Multiple streaming(Up to 10 profiles)					
Edge Storage	Micro SD/SDHC/SDXC 1slot Max. 1TB					
Application Programming Interface	ONVIF Profile S/G/T/M, SUNAPI(HTTP API) Hanwha Vision Open Platform					
Memory	2GB RAM, 512MB Flash					
Operating Temperature	-40°C~+60°C(-40°F~+140°F) / 0~95% RH(non-condensing)					
Certification	IP66, IK10, NEMA4X					
Power Consumption	PoE: Max 10.8W, typical 9W 12VDC: Max 9.4W, typical 7.7W					
Dimensions (WxHxD) / Weight	$\phi 93.8 \times 233.5\text{mm}$ ($\phi 3.69 \times 9.19"$), 1700g(3.75 lb)					



TNM-C4960TD

Bi-spectrum AI Thermal Camera



TNM-C4950TD

Bi-spectrum AI Thermal Camera

	Thermal	Visible	Thermal	Visible
Imaging Device	Uncooled micro bolometer (Spectral range: 8~14μm, 12μm, <60mK)	1/1.8" CMOS	Uncooled micro bolometer (Spectral range: 8~14μm, 12μm, <60mK)	1/1.8" CMOS
Resolution / Max. Frame Rate	640x480 / 30fps	3840x2160 / 30fps	640x480 / 30fps	3840x2160 / 30fps
Min. Illumination	-	Color: 0.06Lux(F1.7, 1/30sec) BW: 0.005Lux(F1.7, 1/30sec)	-	Color: 0.06Lux(F1.7, 1/30sec) BW: 0.005Lux(F1.7, 1/30sec)
Video Out	USB: Micro USB Type B, 1280x720 for installation		USB: Micro USB Type B, 1280x720 for installation	
Focal Length (Zoom Ratio)	25mm fixed focal	10.9~29mm(2.6x) motorized varifocal	13.5mm fixed focal	10.9~29mm(2.6x) motorized varifocal
Angular Field of View	H: 17.4°, V: 13.1°, D: 21.6° (iFoV: 0.48 mRad)	H: 42.0°(Wide)~15.0°(Tele) / V: 22.8°(Wide)~8.4°(Tele) / D: 48.7°(Wide)~17.1°(Tele)	H: 31.9° V: 24.2°, D: 39.5° (iFoV: 0.89 mRad)	H: 42.0°(Wide)~15.0°(Tele) / V: 22.8°(Wide)~8.4°(Tele) / D: 48.7°(Wide)~17.1°(Tele)
Pan / Tilt / Rotate	-170°~+170° / -40°~50° / -		-170°~+170° / -40°~50° / -	
IR Viewable Length	-		-	
Day & Night	-	Auto(ICR)	-	Auto(ICR)
Wide Dynamic Range	-	WDR(120dB)	-	WDR(120dB)
Digital Noise Reduction	-	SSNR V, WiseNR II	-	SSNR V, WiseNR II
Digital Image Stabilization	-	Support(built-in gyro sensor)	-	Support(built-in gyro sensor)
Analytics	<p>Analytics events based on AI engine: Object detection (Person/Vehicle), Bestshot, IVA (Virtual line/Area, Enter/Exit, Loitering, direction, intrusion), Stopped vehicle, Traffic jam</p> <p>Analytics events: Motion detection</p>	<p>Analytics events based on AI engine - Object detection(Person, face, Vehicle(car/bus/truck/motorcycle/bicycle), License plate), Bestshot, Virtual line*(Crossing/Direction), Virtual area*(Loitering/Intrusion/Enter/Exit), Stopped vehicle, Traffic jam</p> <p>Analytics events: Defocus detection, Motion detection, Tampering, Audio detection, Sound classification, Shock detection, Virtual area(Appear/Disappear) * Some of the video analytics only works with people and vehicle detection</p>	<p>Analytics events based on AI engine: Object detection (Person/Vehicle), Bestshot, IVA (Virtual line/Area, Enter/Exit, Loitering, direction, intrusion), Stopped vehicle, Traffic jam</p> <p>Analytics events: Motion detection</p>	<p>Analytics events based on AI engine - Object detection(Person, face, Vehicle(car/bus/truck/motorcycle/bicycle), License plate), Bestshot, Virtual line*(Crossing/Direction), Virtual area*(Loitering/Intrusion/Enter/Exit), Stopped vehicle, Traffic jam</p> <p>Analytics events: Defocus detection, Motion detection, Tampering, Audio detection, Sound classification, Shock detection, Virtual area(Appear/Disappear) * Some of the video analytics only works with people and vehicle detection</p>
Business Intelligence	Vehicle counting		Vehicle counting	
Alarm I/O	4 configurable I/O ports		4 configurable I/O ports	
Audio I/O	Selectable(mic in/line in) Supply voltage: 2.5VDC(4mA), Input impedance: 2K Ohm Line out, Max.output level: 1 Vrms		Selectable(mic in/line in) Supply voltage: 2.5VDC(4mA), Input impedance: 2K Ohm Line out, Max.output level: 1 Vrms	
Video Compression	H.265/H.264: Main/High, MJPEG		H.265/H.264: Main/High, MJPEG	
WiseStream	WiseStream II	Manual(5ea area), WiseStream III	WiseStream II	Manual(5ea area), WiseStream III
Streaming	Unicast(6 users) / Multicast Multiple streaming(Up to 3 profiles)		Unicast(6 users) / Multicast Multiple streaming(Up to 3 profiles)	
Edge Storage	Micro SD/SDHC/SDXC 2slots 512GB		micro SD/SDHC/SDXC 2slots 512GB	
Application Programming Interface	ONVIF Profile S/T, SUNAPI(HTTP API) Hanwha Vision Open Platform (visible channel only)			
Operating Temperature / Humidity	-40°C~+60°C(-58°F~+140°F) * Start up should be done at above -30°C less than 95% RH(non-condensing)		-40°C~+60°C(-58°F~+140°F) * Start up should be done at above -30°C less than 95% RH(non-condensing)	
Certification	IP66/IP67, IK10, NEMA4X, NEMA TS 2(2.2.8, 2.2.9)		IP66/IP67, IK10, NEMA4X, NEMA TS 2(2.2.8, 2.2.9)	
Power Consumption	PoE+: Max 23.5W, Typ 16.0W 12VDC: Max 19.5W, Typ 14.0W		PoE+: Max 23.5W, Typ 16.0W 12VDC: Max 19.5W, Typ 14.0W	
Product Dimensions / Weight	353.4(W)x287.5(H)x191.2(D)mm(13.92x11.32x7.53")/ 4.53kg(9.99lb)		353.4(W)x287.5(H)x191.2(D)mm(13.92x11.32x7.53")/ 4.53kg(9.99lb)	



TNM-C4940TD
Bi-spectrum AI Thermal Camera



TNM-C4942TDR
Radiometric Bi-spectrum AI Thermal Camera

	Thermal	Visible	Thermal	Visible
Imaging Device	Uncooled micro bolometer (Spectral range: 8~14μm, 12μm, <60mK)	1/1.8" CMOS	Uncooled micro bolometer (Spectral range: 8~14μm, 12μm, <60mK)	1/1.8" CMOS
Resolution / Max. Frame Rate	640x480 / 30fps	3840x2160 / 30fps	640x480 / 8fps	3840x2160 / 30fps
Min. Illumination	-	Color: 0.06Lux(F1.3, 1/30sec) BW: 0.004Lux(F1.3, 1/30sec), 0Lux(IR LED on)	-	Color: 0.06Lux(F1.3, 1/30sec) BW: 0.004Lux(F1.3, 1/30sec), 0Lux(IR LED on)
Video Out	USB: Micro USB Type B, 1280x720 for installation		USB: Micro USB Type B, 1280x720 for installation	
Focal Length (Zoom Ratio)	9.1mm fixed focal	4.4~9.3mm(2.2x) motorized varifocal	9.1mm fixed focal	4.4~9.3mm(2.2x) motorized varifocal
Angular Field of View	H: 50.0° / V: 37.0° / D: 63.8° (iFoV: 1.319 mRad)	H: 112.1°(Wide) ~ 47.5°(Tele) / V: 58.0°(Wide) ~ 26.6°(Tele) / D: 137.5°(Wide) ~ 54.6°(Tele)	H: 50.0° / V: 37.0° / D: 63.8° (iFoV: 1.319 mRad)	H: 112.1°(Wide) ~ 47.5°(Tele) / V: 58.0°(Wide) ~ 26.6°(Tele) / D: 137.5°(Wide) ~ 54.6°(Tele)
Pan / Tilt / Rotate	-170° ~ +170° / -40° ~ 50° / -			
IR Viewable Length	-	30m (98.42ft)	-	30m (98.42ft)
Day & Night	-	Auto(ICR)	-	Auto(ICR)
Wide Dynamic Range	-	WDR(120dB)	-	WDR(120dB)
Digital Noise Reduction	-	SSNR V, WiseNR II	-	SSNR V, WiseNR II
Digital Image Stabilization	-	Support(built-in gyro sensor)	-	Support(built-in gyro sensor)
Analytics	<p>Analytics events based on AI engine: Object detection(Person/Vehicle), Bestshot, IVA (Virtual line/Area, Enter/Exit, Loitering, direction, intrusion), Stopped vehicle, Traffic jam</p> <p>Analytics events: Motion detection</p>	<p>Analytics events based on AI engine: Object detection(Person, face, Vehicle (car/bus/truck/motorcycle/bicycle), License plate), Bestshot, Virtual line*(Crossing/Direction), Virtual area*(Loitering/Intrusion/Enter/Exit), Stopped vehicle, Traffic jam</p> <p>Analytics events: Defocus detection, Motion detection, Tampering, Audio detection, Sound classification, Shock detection, Virtual area(Appear/Disappear)</p> <p>* Some of the video analytics only works with people and vehicle detection</p>	<p>Classified object type: Person/Vehicle Support BestShot</p> <p>Analytics events based on AI engine: Object detection, Virtual line(Crossing/Direction), Virtual area*(Loitering/Intrusion/Enter/Exit)</p> <p>Analytics events: Motion detection, Temperature detection</p>	<p>Classified object type: Person/Face/Vehicle/License plate Attributes: Vehicle (Type:car/bus/truck/motorcycle/bicycle) Support BestShot</p> <p>Analytics events based on AI engine: Object detection, Virtual line(Crossing/Direction), Virtual area*(Loitering/Intrusion/Enter/Exit)</p> <p>Analytics events: Defocus detection, Motion detection, Tampering, Audio detection, Sound classification, Shock detection, Virtual area(Appear/Disappear)</p> <p>* Some of the video analytics only works with people and vehicle detection</p>
Business Intelligence	Vehicle counting		-	
Alarm I/O	4 configurable I/O ports		4 configurable I/O ports	
Audio I/O	Selectable(mic in/line in) Supply voltage: 2.5VDC(4mA), Input impedance: 2K Ohm Line out, Max.output level: 1Vrms		Selectable(mic in/line in) Line out Supply voltage: 2.5VDC(4mA), Input impedance: 2K Ohm Line out, Max.output level: 1Vrms	
Video Compression	H.265/H.264: Main/High, MJPEG		H.265/H.264: Main/High, MJPEG	
WiseStream	WiseStream II	Manual(5ea area), WiseStream III	WiseStream II	Manual(5ea area), WiseStream III
Streaming	Unicast(6 users) / Multicast Multiple streaming(Up to 3 profiles)		Unicast(6 users) / Multicast Multiple streaming(Up to 3 profiles)	
Edge Storage	Micro SD/SDHC/SDXC 2slots 512GB		Micro SD/SDHC/SDXC 2slots 512GB	
Application Programming Interface	ONVIF Profile S/T, SUNAPI(HTTP API) Hanwha Vision Open Platform (visible channel only)			
Operating Temperature / Humidity	-40°C~+60°C(-58°F~+140°F) * Start up should be done at above -30°C less than 95% RH(non-condensing)		-40°C~+60°C(-58°F~+140°F) * Start up should be done at above -30°C less than 95% RH(non-condensing)	
Certification	IP66/IP67, IK10, NEMA4X, NEMA TS 2(2.2.8, 2.2.9)		IP66/IP67, IK10, NEMA4X, NEMA TS 2(2.2.8, 2.2.9)	
Power Consumption	PoE+: Max 25.5W, Typ 16.0W 12VDC: Max 21.5W, Typ 14.0W		PoE+: Max 25.5W, Typ 16.0W 12VDC: Max 21.5W, Typ 14.0W	
Product Dimensions / Weight	353.4(W)x287.5(H)x191.2(D)mm(13.92x11.32x7.53")/ 4.53kg(9.99lb)		353.4(W)x287.5(H)x191.2(D)mm(13.92x11.32x7.53")/ 4.53kg(9.99lb)	



TNM-C4940TDR

Radiometric Bi-spectrum AI Thermal Camera



TNM-C3622TDR

Radiometric Bi-spectrum AI Thermal Camera

	Thermal	Visible	Thermal	Visible
Imaging Device	Uncooled micro bolometer (Spectral range: 8~14μm, 12μm, <60mK)		Uncooled micro bolometer (Spectral range: 8~14μm, 12μm, <50mK)	
Resolution / Max. Frame Rate	640x480 / 30fps		320x240 / 8fps	
Min. Illumination	-		-	
Video Out	USB: Micro USB Type B, 1280x720 for installation		CVBS: 1.0 Vp-p / 75Ω composite, 720x480(N), 720x576(P) for installation USB: Micro USB Type B, 1280x720 for installation	
Focal Length (Zoom Ratio)	9.1mm fixed focal		4.7mm fixed focal	
Angular Field of View	H: 50.0° / V: 37.0° / D: 63.8° (iFoV: 1.319 mRad)		H: 50.0° / V: 36.4° / D: 65.3° (iFoV: 2.553 mRad)	
Pan / Tilt / Rotate	-170°~+170° / -40°~50° / -		-	
IR Viewable Length	-		-	
Day & Night	-		Auto(ICR)	
Wide Dynamic Range	-		WDR(120dB)	
Digital Noise Reduction	-		SSNR V, WiseNR II	
Digital Image Stabilization	-		Support(built-in gyro sensor)	
Analytics	Classified object type: Person/Vehicle Support BestShot Analytics events based on AI engine: Object detection, Virtual line(Crossing/Direction), Virtual area*(Loitering/Intrusion/Enter/Exit) Analytics events Motion detection, Temperature detection		Classified object type: Person/Face/Vehicle/License plate Attributes: Vehicle(Type:car/bus/truck/motorcycle/bicycle) Support BestShot Analytics events based on AI engine: Object detection, Virtual line(Crossing/Direction), Virtual area*(Loitering/Intrusion/Enter/Exit) Analytics events: Defocus detection, Motion detection, Tampering, Audio detection, Sound classification, Shock detection, Virtual area(Appear/Disappear) * Some of the video analytics only works with people and vehicle detection	
Business Intelligence	-		-	
Alarm I/O	4 configurable I/O ports		Input 1 ea / Output 2 ea	
Audio I/O	Selectable (mic in/line in) / Line out		Selectable (mic in/line in) / Line out	
Video Compression	H.265/H.264: Main/High, MJPEG		H.265/H.264: Main/Baseline/High, MJPEG	
WiseStream	WiseStream II		WiseStream II	
Streaming	Unicast(6 users) / Multicast Multiple streaming(Up to 3 profiles)		Unicast(20 users) / Multicast Multiple streaming(Up to 6 profiles)	
Edge Storage	Micro SD/SDHC/SDXC 2 slots 512GB		Micro SD/SDHC/SDXC 1 slot 256GB	
Application Programming Interface	ONVIF Profile S/T SUNAPI(HTTP API) Hanwha Vision Open Platform (visible channel only)		ONVIF Profile S/T/M SUNAPI(HTTP API)	
Operating Temperature / Humidity	-40°C~+60°C(-58°F~+140°F) * Start up should be done at above -30°C 0~95% RH(non-condensing)		-10°C~+55°C(+14°F~+131°F) / Less than 95% RH	
Certification	IP66/IP67, IK10, NEMA4X, NEMA TS 2(2.2.8, 2.2.9)		-	
Power Consumption	PoE+: Max 25.5W, Typ 16.0W / 12VDC: Max 21.5W, Typ 14.0W		PoE+: Max. 17.0W, typical 12.5W / 12VDC: Max. 14.5W, typical 11.0W	
Product Dimensions / Weight	353.4(W)x287.5(H)x191.2(D)mm(13.92x11.32x7.53"), 4.53kg(9.99lb)		135(W)x75(H)x188.5(D)mm, (5.31x2.95x7.42"), 1.7kg(3.77lb)	



TNM-C3620TDR
Radiometric Bi-spectrum AI Thermal Camera



TNB-9000
8K Box Camera



TNV-C7013RC
AI Corner Mount Camera



TNV-C8011RW
AI Wall Mount Camera

	Thermal	Visible			
Imaging Device	Uncooled micro bolometer (Spectral range: 8~14μm, 12μm, <50mK)	1/2.8" 2MP CMOS	43.3mm Full-frame CMOS	1/1.8" progressive CMOS	1/2.8" progressive 5MP CMOS
Resolution / Max. Frame Rate	320x240 / 30fps	1920x1080 / 30fps	8K / 15fps, 24MP / 20fps, 15MP / 30fps, 4K / 60fps	3MP / 30fps	5MP / 30fps
Min. Illumination	-	Color: 0.05 lux(F1.6, 1/30sec) B/W: 0.005 lux(F1.6, 1/30sec)	Color: 0.015Lux(F1.4) BW: 0.0015Lux(F1.4)	Color: 0.04Lux(F2.0, 1/30sec, 30IRE) BW: 0.04Lux(F2.0, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.038Lux(F1.6, 1/30sec, 30IRE) BW: 0.0038Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)
Video Out	CVBS: 1.0 Vp-p / 75Ω composite, 720x480(N), 720x576(P) for installation USB: Micro USB Type B, 1280x720 for installation		HDMI	-	USB: Micro USB Type B, 1280x720 for installation
Focal Length (Zoom Ratio)	4.7mm fixed focal	4mm fixed focal	-	2.39mm fixed focal	1.6mm fixed focal
Angular Field of View	H: 50.0° / V: 36.4° / D: 65.3° (iFoV: 2.553 mRad)	H: 87.6° / V: 46.4° / D: 104.5°	Canon 24mm, H: 57.4°, Canon 35mm, H: 42.6° Canon 50mm, H: 30.9°, Canon 85mm, H: 19.1° Canon 100mm, H: 16.0°, Canon 70-200mm, H: 22.8° ~ 8.0°	H: 128° / V: 100°	H: 175° / V: 125° / D: 175°
IR Viewable Length	-		-	WiseIR 15m (49.21ft), invisible 940mm wavelength	15m (49.21ft)
Day & Night	-	Auto(ICR)	Auto (ICR)	Auto (ICR)	Auto(ICR)
Wide Dynamic Range	-	extremeWDR (150dB)	-	extremeWDR (120dB)	120dB
Digital Noise Reduction	-	SSNR V	SSNR V	SSNR V, WiseNR II (Based on AI engine)	SSNR V, WiseNR II (Based on AI engine)
Digital Image Stabilization	-	Support (built-in gyro sensor)	-	Support	-
Analytics	Directional detection, Motion detection, Enter/Exit, Virtual line, Temperature detection	Directional detection, Motion detection, Enter/ Exit, Tampering, Virtual line, Audio detection AI based Object detection (person/face, visible channel only)	Intelligent analytics, Audio detection, Sound classification	Classified object type : Person/Face/Vehicle/ License plate Support DetectionShot Analytics events based on AI engine : Object detection, Virtual line (Crossing/Direction), Virtual area (Loitering/Intrusion/Enter/Exit) Analytics events : Defocus detection, Motion detection, Tampering, Audio detection, Sound classification, Virtual area (Appear/Disappear), Clothes color detection (Orange/Black/Red, @400lux)	Classified object type : Person/Face/ Vehicle Attributes: Vehicle (Type: car/bus/truck/ motorcycle/bicycle) Support DetectionShot Analytics events based on AI engine - Motion detection*, Object detection, Virtual line* (Crossing/Direction), Virtual area* (Loitering/Intrusion/Enter/Exit) Analytics events - Defocus detection, Tampering, Shock detection, Virtual area (Appear/Disappear) * Some of the video analytics only works with people and vehicle detection
Business Intelligence	-		-	-	Based on AI engine: People counting, Vehicle counting, Queue management, Heatmap
Alarm I/O	1/2		1/1	2 configurable I/O ports * Support Alarm via optional SPM-4210 I/O box	-
Audio I/O	Selectable (mic in/line in) / Line out		Selectable (mic in/line in) / Line out	Selectable (mic in/line in) / Line out	Built-in mic only / -
Video Compression	H.265/H.264: Main/Baseline/High, MJPEG		H.265, H.264, MJPEG	H.265/H.264, MJPEG	H.265/H.264: Main/High, MJPEG
WiseStream	WiseStream II	Manual (Sea area), WiseStream II	WiseStream II	Manual (Sea area), WiseStream II, WiseStream III (Based on AI engine)	Manual (Sea area), WiseStream III (Based on AI engine)
Streaming	Unicast (20 users) / Multicast Multiple streaming (Up to 6 profiles)		Up to 3 Profiles	Up to 10 profiles, 3 virtual channel support	Unicast (20 users) / Multicast Multiple streaming (Up to 5 profiles)
Edge Storage	Micro SD/SDHC/SDXC 1 slot 256GB		micro SD/SDHC/SDXC	Micro SD/SDHC/SDXC 1 slot 1 TB	Micro SD/SDHC/SDXC 1 slot 256GB
Application Programming Interface	ONVIF Profile S/T/M SUNAPI (HTTP API)		ONVIF Profile S/G/T SUNAPI	ONVIF Profile S/T, SUNAPI (HTTP API) Hanuha Vision Open Platform	ONVIF Profile S/G/T/M SUNAPI (HTTP API)
Operating Temperature / Humidity	-10°C ~ +55°C (+14°F ~ +131°F) / Less than 95% RH		0°C ~ +45°C (32°F ~ +122°F)	-10°C ~ +55°C (14°F ~ +131°F) 0~95% RH (non- condensing) Humidity control with AIR vent	-30°C ~ +55°C (-22°F ~ +131°F) / Less than 95% RH
Certification	-		EMC	IP66, IP6K9K, IK10+	IP66, IK10
Power Consumption	PoE+: Max. 17.0W, typical 12.5W 12VDC: Max. 14.5W, typical 11.0W		PoE: Max 30W, typical 20W 12VDC: Max 26W, typical 18W	PoE: Max 12.95W, typical 9.7W DC: Max 12.7W, typical 9.0W	Max 11.5W / Typ 4.8W
Product Dimensions / Weight	135(W)x75(H)x188.5(D)mm, (5.31x2.95x7.42"), 1.7kg(3.77lb)		120x118.5x179mm, 2.2kg (4.85 lb)	198.3(W)x104.8(H)x198.6(D)mm (7.87"x4.13"x7.82"), 1.935kg (4.27lb)	80(W)x167(H)x57(D)mm(3.15x6.56x2.24"), 600g(1.32lb)

NETWORK

ANALOG

PERIPHERAL

INSTALLATION SOLUTION



PNO-A9311RLP
8MP 31x AI LPR IR Bullet Camera



PNO-A9081RLP
8MP AI LPR IR Bullet Camera



PNV-A9081RLP
8MP AI LPR IR Vandal Dome Camera



PNB-A9001LP
8MP AI LPR Box Camera



TNO-7180RLP
3MP AI LPR Box Camera

Imaging Device	1/1.8" CMOS	1/1.8" CMOS	1/1.8" CMOS	1/1.8" CMOS	1/1.8" CMOS, Global Shutter
Resolution / Max. Frame Rate	8MP / 30fps	8MP / 30fps	8MP / 30fps	8MP / 30fps	3MP / 55fps
Min. Illumination	Color: 0.075Lux(F1.36, 1/30sec, 30IRE) BW: 0.0075Lux(F1.36, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.05Lux(F1.6, 1/30sec) BW: 0Lux(IR LED on)	Color: 0.05Lux(F1.6, 1/30sec) BW: 0.005Lux(F1.6, 1/30sec), 0Lux(IR LED on)	Color: 0.03Lux(F1.2, 1/30sec) B/W: 0.003Lux(F1.2, 1/30sec)	Color 0.1 Lux (1/30sec, gain 48dB)
Video Out	CVBS: 1.0 Vp-p, Micro USB Type B	CVBS: 1.0 Vp-p, Micro USB Type B	CVBS: 1.0 Vp-p, Micro USB Type B	CVBS: 1.0 Vp-p, Micro USB Type B	CVBS: 1.0 Vp-p, Micro USB Type B
Focal Length (Zoom Ratio)	6.91~214.7mm (31x) motorized varifocal	4.5~10mm(2.2x) motorized varifocal	4.5~10mm (2.2x) motorized varifocal	-	6.8~120mm(18x) motorized varifocal
Angular Field of View	H: 60.92°(Wide)~2.2°(Tele) V: 35.26°(Wide)~1.24°(Tele) D: 69.18°(Wide)~2.52°(Tele)	H: 101.4°(Wide)~45.5°(Tele) V: 53.6°(Wide)~25.5°(Tele) D: 120.7°(Wide)~52.3°(Tele)	H: 101.4°(Wide)~45.5°(Tele) V: 53.6°(Wide)~25.5°(Tele) D: 120.7°(Wide)~52.3°(Tele)	-	H: 54.5° (Wide)~3.4° (Tele) V: 42.3° (Wide)~2.5° (Tele)
Pan / Tilt / Rotate	-	-	0°~360° / -45°~85° / 0°~355°	-	-
IR Viewable Length	WiseIR 70m(229.66ft)	30m(98.42ft)	30m(98.42ft)	-	WiseIR 50m (164ft)
Day & Night	Auto(ICR)	Auto(ICR)	Auto(ICR)	Auto(ICR)	Auto (ICR)
Wide Dynamic Range	120dB	-	-	-	-
Digital Noise Reduction	SSNR V	SSNR V	SSNR V	SSNR V	SSNR V
Digital Image Stabilization	Support (built-in gyro sensor)	Support (built-in gyro sensor)	-	-	-
Analytics	Defocus detection, Tampering, Audio detection, Sound classification, Shock detection	Defocus detection, Tampering, Audio detection, Sound classification, Shock detection	Defocus detection, Tampering, Audio detection, Sound classification, Shock detection	Defocus detection, Tampering, Audio detection, Sound classification, Shock detection	Motion detection, Tampering, Virtual line(Crossing/Direction), Virtual Area(Loitering/Intrusion/Enter/Exit, Appear/Disappear)
Business Intelligence	-	-	-	-	-
Alarm I/O	2 configurable I/O ports, DC 12V output (Max. 50mA)	1/1	1/1	1/1	4 configurable I/O ports
Audio I/O	Selectable(mic in/line in) / Line out	Selectable (mic in/line in/built-in mic) / Line out	Selectable(mic in/line in/built-in mic) / Line out	Selectable(mic in/line in/built-in mic) / Line out	Selectable(mic in/line in) / Line out
Video Compression	H.265/H.264: Main/High, MJPEG	H.265 / H.264, MJPEG	H.265/H.264, MJPEG	H.265/H.264: Main/High, MJPEG	H.265 / H.264, MJPEG
WiseStream	Manual(5ea area), WiseStream II	WiseStream II	WiseStream II	WiseStream II	WiseStream II
Streaming	Up to 6 profiles	Up to 3 profiles	Up to 3 profiles	Up to 3 profiles	Up to 10 Profiles
Edge Storage	Pre-installed with 32GB Micro SD to support 10,000 LPR images	Pre-installed with 32GB Micro SD to support 10,000 LPR images	Pre-installed with 32GB Micro SD to support 10,000 LPR images	Pre-installed with 32GB Micro SD to support 10,000 LPR images	Pre-installed with 32GB Micro SD to support 10,000 LPR images
Application Programming Interface	ONVIF Profile S/G/T/M SUNAPI(HTTP API)	ONVIF Profile S/G/T SUNAPI(HTTP API)	ONVIF Profile S/G/T SUNAPI(HTTP API)	ONVIF Profile S/G/T SUNAPI(HTTP API)	ONVIF Profile S/G/T SUNAPI(HTTP API)
Operating Temperature / Humidity	-40°C ~ +55°C(-40°F ~ +131°F) / Less than 90% RH * Start up should be done at above -30°C	-40°C ~ +55°C(-40°F ~ +131°F) / Less than 90% RH * Start up should be done at above -30°C	-40°C ~ +55°C(-40°F ~ +131°F) / Less than 90% RH * Start up should be done at above -30°C	-10°C ~ +55°C(+14°F ~ +131°F) / Less than 90% RH	-40°C ~ +55°C(-40°F ~ +131°F) / Less than 95% RH(Noncondensing)
Certification	IP66/IP67, IK10, NEMA4X	IP66/IP67, IK10, NEMA4X	IP66/IP67/IP6K9K, IK10+, NEMA4X	-	IP66, IK10, NEMA 4X, NEMA TS 2(2.2.8, 2.2.9)
Power Consumption	PoE+: Max 25.5W, typical 14.0W 12VDC: Max 24.0W, typical 12.7.W	PoE+: Max 20.0W, typical 17.00W 12VDC: Max 18.00W, typical 16.00W	PoE+: Max 20.00W, typical 17.00W 12VDC: Max 18.70W, typical 15.00W	PoE+: Max 16.50W, typical 12.50W 12VDC: Max 13.50W, typical 10.80W	PoE: Max 50W, Typical 27W 12VDC: Max 47.5W, Typical 25W
Product Dimensions / Weight	Ø 136.2x358.7mm (Ø 5.36x14.12") (Without sunshield), 3200g(7.05lb) * backbox: Ø 160mm(Ø 6.30")	Ø 91.0x368.6mm (3.58" x 14.51") (Without sunshield), 2.48Kg (5.47lb)	Ø 180x125mm(7.09x4.92"), 1.90Kg (4.19lb)	81x67x165mm(3.19x2.64x6.48"), 0.88kg(1.94lb)	186.9(W) x259.3(H) x 293.7(D) (mm) / 4.8kg (10.5 lb)

SolidEDGE



PNV-A6081R-E1T
2MP Camera with 1TB Rugged SSD

SolidEDGE



PNV-A6081R-E2T
2MP Camera with 2TB Rugged SSD



TNS-9050IBC
Barcode Reader Camera

Imaging Device	1/2" CMOS	1/2" CMOS	Global Shutter Mono 1" CMOS / Global Shutter Color 1" CMOS
Resolution / Max. Frame Rate	2MP/120fps	2MP/120fps	Mono: Max 4096x2160, Max 20fps Color: Max 4096x2160, Max 20fps
Min. Illumination	Color: 0.007Lux(F1.3, 1/30sec, 30IRE) BW: 0.0007Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps	Color: 0.007Lux(F1.3, 1/30sec, 30IRE) BW: 0.0007Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps	-
Video Out	CVBS: 1.0 Vp-p / 75Ω composite, 720x480(N), 720x576(P) for installation	CVBS: 1.0 Vp-p / 75Ω composite, 720x480(N), 720x576(P) for installation	-
Focal Length (Zoom Ratio)	4.38~9.33mm(2.13x) motorized varifocal	4.38~9.33mm(2.13x) motorized varifocal	25mm
Angular Field of View	H: 104°(Wide)~44°(Tele) V: 55°(Wide)~24°(Tele) D: 124°(Wide)~51°(Tele)	H: 104°(Wide)~44°(Tele) V: 55°(Wide)~24°(Tele) D: 124°(Wide)~51°(Tele)	Mono: H30.4° / V16.6° / D34.2° Color: H30.4° / V16.6° / D34.2°
Pan / Tilt / Rotate Range	0°~360° / 0°~85° / 0°~355°	0°~360° / 0°~85° / 0°~355°	-
IR Viewable Length	40m(131.23ft)	40m(131.23ft)	-
Day & Night	Auto(ICR)	Auto(ICR)	-
Wide Dynamic Range	120dB	120dB	-
Digital Noise Reduction	WiseNR II (Based on AI engine), SSNR V	WiseNR II (Based on AI engine), SSNR V	SSNR V
Digital Image Stabilization	-	-	-
Analytics	<p>Classified object type: Person/Face/Vehicle/License plate Attributes: Person(Gender, Color and Bag), Face(Age, Gender, Mask and Glasses), Vehicle(Type: car/bus/truck/motorcycle/bicycle and Color) Support BestShot per object Analytics events based on AI engine - Object detection, Virtual line*(Crossing/Direction), Virtual area *(Loitering/Intrusion/Enter/Exit), Face mask detection, Social distancing detection Analytics events - Defocus detection, Motion detection, Tampering, Audio detection, Sound classification, Shock detection, Virtual area(Appear/Disappear) *Some of the video analytics only works with people and vehicle detection</p>		<p>AI barcode location search - Track barcodes on high speed conveyor belt moving at 2m/s(6.5ft/s) - 1D: Code 128/Code 39/Code 93/EAN/UPC/Codabar/ITF(Interleaved 2 of 5) 2D: Q4.2024</p>
Business Intelligence	-	-	-
Alarm I/O	Input 1ea / Output 1ea	Input 1ea / Output 1ea	-
Audio I/O	Selectable(mic in/line in) / Line out	Selectable(mic in/line in) / Line out	-
Video Compression	H.265/H.264: Main/High, MJPEG	H.265/H.264: Main/High, MJPEG	H.265/H.264: Main/High, MJPEG
WiseStream	Manual(Sea area), WiseStream III	Manual(Sea area), WiseStream III	-
Streaming	Unicast(6 users) / Multicast Multiple streaming(Up to 5 profiles)	Unicast(6 users) / Multicast Multiple streaming(Up to 5 profiles)	Unicast(6 users) / Multicast Mono: (1) 4096x2160 @ 15/18/20fps all codec Color: (1) 4096x2160 @ 15/18/20fps all codec (2) 640x360 @ 15/18/20fps all codec
Edge Storage	1TB SSD included(WAVE pre-installed) Possible to register the maximum number of camera - up to 6 camera(Host + 5 camera) - Total bandwidth: up to 33Mbps * Cannot support the camera when host camera use AI mode	2TB SSD included(WAVE pre-installed) Possible to register the maximum number of camera - up to 6 camera(Host + 5 camera) - Total bandwidth: up to 33Mbps * Cannot support the camera when host camera use AI mode	-
Application Programming Interface	ONVIF Profile S/T/M, SUNAPI(HTTP API)	ONVIF Profile S/T/M, SUNAPI(HTTP API)	SUNAPI(HTTP API), Wisenet Open Platform
Operating Temperature / Humidity	-30°C~+55°C(-22°F~+131°F) / 0~95%RH(non-condensing) * Start up should be done at above -20°C Humidity control with AIR Vent		-40°C~+55°C(-40°F~+131°F) / 0~95% RH * Start up should be done at above -30°C NEMA TS-2: 74°C / 0~95% RH
Certification	IP66/IP67/IP6K9K, NEMA4X, IK10	IP66/IP67/IP6K9K, NEMA4X, IK10	IP67, IP66, IK10(Exclude Window), NAME 4X, EN 60068-2-6(Vibration Resistance), EN60068-2-27(Shock Resistance)
Power Consumption	PoE+: Max 19.2W, typical 14.4W / 12VDC: Max 17.5W, typical 12.7W Power redundancy failover	PoE+: Max 19.2W, typical 14.4W / 12VDC: Max 17.5W, typical 12.7W Power redundancy failover	Max 28.6W, Typical 13.7W * Max: LED On Typical: LED Off
Product Dimensions / Weight	∅ 180x130mm(∅ 7.09x5.12"), 1900g(4.19 lb)	∅ 180x130mm(∅ 7.09x5.12"), 1900g(4.19 lb)	Camera: 218x104.1x127.1mm, 1897g LED: 255.8x73.8x49.8mm, 996g Total: 255.8x181x127.1mm, 3438g(with install bracket)



XNO-9082R
8MP IR Bullet Camera



XNV-9082R
8MP IR Vandal Dome Camera



XND-9082RF
8MP IR Dome Camera



XND-9082RV
8MP IR Dome Camera



XNB-9002
8MP Box Camera

Imaging Device	1/2.8" CMOS				
Resolution / Max. Frame Rate	4K / 30fps				
Min. Illumination	Color: 0.05Lux(F1.2, 1/30sec, 30IRE) BW: 0.005Lux(F1.2, 1/30sec, 30IRE), 0Lux(IR LED on)				Color: 0.05Lux(F1.2, 1/30sec, 30IRE) BW: 0.005Lux(F1.2, 1/30sec, 30IRE)
Video Out	CVBS: 1.0 Vp-p / 75 Ω composite, 720x480(N), 720x576(P) for installation USB: Micro USB Type B, 1280x720 for installation				
Focal Length (Zoom Ratio)	2.8~8.4mm(3x) motorized varifocal	2.8~8.4mm(3x) motorized varifocal	2.8~8.4mm(3x) motorized varifocal	2.8~8.4mm(3x) motorized varifocal	-
Angular Field of View	H: 114°(Wide)~40°(Tele) V: 62°(Wide)~22°(Tele) D: 133°(Wide)~46°(Tele)	H: 114°(Wide)~40°(Tele) V: 62°(Wide)~22°(Tele) D: 133°(Wide)~46°(Tele)	H: 114°(Wide)~40°(Tele) V: 62°(Wide)~22°(Tele) D: 133°(Wide)~46°(Tele)	H: 114°(Wide)~40°(Tele) V: 62°(Wide)~22°(Tele) D: 133°(Wide)~46°(Tele)	-
Pan / Tilt / Rotate Range	0°~360° / 0°~100° / 0°~360°	0°~360° / 0°~85° / 0°~355°	0°~360° / 0°~85° / 0°~355°	0°~360° / 0°~85° / 0°~355°	-
IR Viewable Length	WiseIR 40m(131.23ft)	WiseIR 40m(131.23ft)	WiseIR 40m(131.23ft)	WiseIR 40m(131.23ft)	-
Day & Night	Auto(ICR)	Auto(ICR)	Auto(ICR)	Auto(ICR)	Auto(ICR)
Wide Dynamic Range	extremeWDR(120dB)	extremeWDR(120dB)	extremeWDR(120dB)	extremeWDR(120dB)	extremeWDR(120dB)
Digital Noise Reduction	SSNR V	SSNR V	SSNR V	SSNR V	SSNR V
Digital Image Stabilization	Support(built-in gyro sensor)	Support(built-in gyro sensor)	Support(built-in gyro sensor)	Support(built-in gyro sensor)	Support(built-in gyro sensor)
Analytics	Analytics events - Defocus detection, Directional detection, Motion detection, Digital auto tracking, Appear/Disappear, Enter/Exit, Loitering, Tampering, Fog detection, Virtual line, Audio detection, Sound classification, Shock detection, Face/upper body detection				
Business Intelligence	People counting, Queue management, Heatmap				
Alarm I/O	2 configurable I/O ports	2 configurable I/O ports	2 configurable I/O ports	2 configurable I/O ports	2 configurable I/O ports
Audio I/O	Selectable(mic in/line in) / Line out	Selectable(mic in/line in) / Line out	Selectable(mic in/line in) / Line out	Selectable(mic in/line in/built-in mic) / Line out	Selectable(mic in/line in/built-in mic) / Line out
Video Compression	H.265/H.264: Main/Baseline/High, MJPEG	H.265/H.264: Main/Baseline/High, MJPEG	H.265/H.264: Main/Baseline/High, MJPEG	H.265/H.264: Main/Baseline/High, MJPEG	H.265/H.264: Main/Baseline/High, MJPEG
WiseStream	Manual(5ea area), WiseStream II	Manual(5ea area), WiseStream II	Manual(5ea area), WiseStream II	Manual(5ea area), WiseStream II	Manual(5ea area), WiseStream II
Streaming	Unicast(20 users) / Multicast Multiple streaming(Up to 10 profiles, 3 virtual channel support)				
Edge Storage	Micro SD/SDHC/SDXC 2slot Max. 1TB(512GBx2)				
Application Programming Interface	ONVIF Profile S/T, SUNAPI(HTTP API) Hanwha Vision Open Platform				
Operating Temperature / Humidity	-50°C~+60°C(-58°F~+140°F) / 0~95% RH(non-condensing) * Start up should be done at above -30°C	-50°C~+60°C(-58°F~+140°F) / 0~95% RH(non-condensing) * Start up should be done at above -30°C	-25°C~+60°C(-13°F~+140°F) / 0~95% RH(non-condensing)	-25°C~+60°C(-13°F~+140°F) / 0~95% RH(non-condensing)	-10°C~+55°C(+14°F~+131°F) / 0~95% RH(non-condensing)
Certification	IP66/IP67, NEMA4X, IK10	IP66/IP67/IP6K9K, IK10+, NEMA4X	IP52, Plenum rated, IK10	IP52, IK10	-
Power Consumption	PoE: Max 12.95W, typical 10.5W 12VDC: Max 12.5W, typical 9.4W 24VAC: Max 14.5W, typical 11.2W Power redundancy failover	PoE: Max 12.95W, typical 10.7W 12VDC: Max 11.5W, typical 9.0W 24VAC: Max 13.5W, typical 11.0W Power redundancy failover	PoE: Max 12.95W, typical 10.7W 12VDC: Max 11.5W, typical 9.0W Power redundancy failover	PoE: Max 12.95W, typical 10.7W 12VDC: Max 11.5W, typical 9.0W Power redundancy failover	PoE: Max 12.95W, typical 8.2W 12VDC: Max 11.5W, typical 7.5W 24VAC: Max 13.5W, typical 8.9W Power redundancy failover
Product Dimensions / Weight	φ91x368.6mm(φ3.85x14.51"), 2200g(4.85 lb)	φ180x125mm(φ7.09x4.92"), 1900g(4.19 lb)	φ205x163mm(φ8.07x6.42"), 1950g(4.29 lb)	φ160x125mm(φ6.30x4.92"), 1600g(3.53 lb)	81(W)x67(H)x165(D)mm(3.19x2.64x6.48"), 880g(1.94 lb)
Additional Features	UL CAP, Secure by Default				



XNO-8082R
6MP IR Bullet Camera



XNV-8082R
6MP IR Vandal Dome Camera



XND-8082RF
6MP IR Dome Camera



XND-8082RV
6MP IR Dome Camera



XNB-8002
6MP Box Camera

Imaging Device	1/2.8" CMOS				
Resolution / Max. Frame Rate	6MP / 30fps				
Min. Illumination	Color: 0.05Lux(F1.2, 1/30sec, 30IRE) BW: 0.005Lux(F1.2, 1/30sec, 30IRE), 0Lux(IR LED on)				Color: 0.05Lux(F1.2, 1/30sec, 30IRE) BW: 0.005Lux(F1.2, 1/30sec, 30IRE)
Video Out	CVBS: 1.0 Vp-p / 75 Ω composite, 720x480(N), 720x576(P) for installation USB: Micro USB Type B, 1280x720 for installation				
Focal Length (Zoom Ratio)	2.8~8.4mm(3x) motorized varifocal	2.8~8.4mm(3x) motorized varifocal	2.8~8.4mm(3x) motorized varifocal	2.8~8.4mm(3x) motorized varifocal	-
Angular Field of View	H: 114°(Wide)~40°(Tele) V: 62°(Wide)~22°(Tele) D: 133°(Wide)~46°(Tele)	H: 114°(Wide)~40°(Tele) V: 62°(Wide)~22°(Tele) D: 133°(Wide)~46°(Tele)	H: 114°(Wide)~40°(Tele) V: 62°(Wide)~22°(Tele) D: 133°(Wide)~46°(Tele)	H: 114°(Wide)~40°(Tele) V: 62°(Wide)~22°(Tele) D: 133°(Wide)~46°(Tele)	-
Pan / Tilt / Rotate Range	0°~360° / 0°~100° / 0°~360°	0°~360° / 0°~85° / 0°~355°	0°~360° / 0°~85° / 0°~355°	0°~360° / 0°~85° / 0°~355°	-
IR Viewable Length	WiseIR 40m(131.23ft)	WiseIR 40m(131.23ft)	WiseIR 40m(131.23ft)	WiseIR 40m(131.23ft)	-
Day & Night	Auto(ICR)	Auto(ICR)	Auto(ICR)	Auto(ICR)	Auto(ICR)
Wide Dynamic Range	extremeWDR(120dB)	extremeWDR(120dB)	extremeWDR(120dB)	extremeWDR(120dB)	extremeWDR(120dB)
Digital Noise Reduction	SSNR V	SSNR V	SSNR V	SSNR V	SSNR V
Digital Image Stabilization	Support(built-in gyro sensor)	Support(built-in gyro sensor)	Support(built-in gyro sensor)	Support(built-in gyro sensor)	Support(built-in gyro sensor)
Analytics	Analytics events - Defocus detection, Directional detection, Motion detection, Digital auto tracking, Appear/Disappear, Enter/Exit, Loitering, Tampering, Fog detection, Virtual line, Audio detection, Sound classification, Shock detection, Face/upper body detection				
Business Intelligence	People counting, Queue management, Heatmap				
Alarm I/O	2 configurable I/O ports	2 configurable I/O ports	2 configurable I/O ports	2 configurable I/O ports	2 configurable I/O ports
Audio I/O	Selectable(mic in/line in) / Line out	Selectable(mic in/line in) / Line out	Selectable(mic in/line in) / Line out	Selectable(mic in/line in/built-in mic) / Line out	Selectable(mic in/line in/built-in mic) / Line out
Video Compression	H.265/H.264: Main/Baseline/High, MJPEG	H.265/H.264: Main/Baseline/High, MJPEG	H.265/H.264: Main/Baseline/High, MJPEG	H.265/H.264: Main/Baseline/High, MJPEG	H.265/H.264: Main/Baseline/High, MJPEG
WiseStream	Manual(5ea area), WiseStream II	Manual(5ea area), WiseStream II	Manual(5ea area), WiseStream II	Manual(5ea area), WiseStream II	Manual(5ea area), WiseStream II
Streaming	Unicast(20 users) / Multicast Multiple streaming(Up to 10 profiles, 3 virtual channel support)				
Edge Storage	Micro SD/SDHC/SDXC 2slot Max. 1TB(512GBx2)				
Application Programming Interface	ONVIF Profile S/T, SUNAPI(HTTP API) Hanwha Vision Open Platform				
Operating Temperature / Humidity	-50°C~+60°C(-58°F~+140°F) / 0~95% RH(non-condensing) * Start up should be done at above -30°C	-50°C~+60°C(-58°F~+140°F) / 0~95% RH(non-condensing) * Start up should be done at above -30°C	-25°C~+60°C(-13°F~+140°F) / 0~95% RH(non-condensing)	-25°C~+60°C(-13°F~+140°F) / 0~95% RH(non-condensing)	-10°C~+55°C(+14°F~+131°F) / 0~95% RH(non-condensing)
Certification	IP66/IP67, NEMA4X, IK10	IP66/IP67/IP6K9K, IK10+, NEMA4X	IP52, Plenum rated, IK10	IP52, IK10	-
Power Consumption	PoE: Max 12.95W, typical 10.5W 12VDC: Max 12.5W, typical 9.4W 24VAC: Max 14.5W, typical 11.2W Power redundancy failover	PoE: Max 12.95W, typical 10.7W 12VDC: Max 11.5W, typical 9.0W 24VAC: Max 13.5W, typical 11.0W Power redundancy failover	PoE: Max 12.95W, typical 10.7W 12VDC: Max 11.5W, typical 9.0W Power redundancy failover	PoE: Max 12.95W, typical 10.7W 12VDC: Max 11.5W, typical 9.0W Power redundancy failover	PoE: Max 12.95W, typical 8.2W 12VDC: Max 11.5W, typical 7.5W 24VAC: Max 13.5W, typical 8.9W Power redundancy failover
Product Dimensions / Weight	φ91x368.6mm(φ3.85x14.51"), 2200g(4.85 lb)	φ180x125mm(φ7.09x4.92"), 1900g(4.19 lb)	φ205x163mm(φ8.07x6.42"), 1950g(4.29 lb)	φ160x125mm(φ6.30x4.92"), 1600g(3.53 lb)	81(W)x67(H)x165(D)mm(3.19x2.64x6.48"), 880g(1.94 lb)
Additional Features	UL CAP, Secure by Default				



XND-8081VZ
SMP Dome Camera



XND-8081FZ
SMP Flush Mount Dome Camera



XND-8081RV
SMP IR Dome Camera



XND-8081RF
SMP IR Flush Mount Dome Camera



XNV-8081Z
SMP Vandal Dome Camera

Imaging Device	1/1.8" CMOS				
Resolution / Max. Frame Rate	5MP / 30fps				
Min. Illumination	Color : 0.07Lux (F1.2) B/W : 0.007Lux (F1.2)	Color : 0.07Lux (F1.2) B/W : 0.007Lux (F1.2)	Color : 0.07Lux (F1.3) B/W : 0Lux (IR LED on)	Color : 0.07Lux (F1.3) B/W : 0Lux (IR LED on)	Color : 0.07Lux (F1.2) B/W : 0.007Lux (F1.2)
Video Out	Micro USB Type B	Micro USB Type B	CVBS 1.0 Vp-p, Micro USB Type B	CVBS 1.0 Vp-p, Micro USB Type B	Micro USB Type B
Focal Length (Zoom Ratio)	3.6 ~ 9.4mm (2.6x) motorized varifocal	3.6 ~ 9.4mm (2.6x) motorized varifocal	3.9 ~ 9.4mm (2.4x) motorized varifocal	3.9 ~ 9.4mm (2.4x) motorized varifocal	3.6 ~ 9.4mm (2.6x) motorized varifocal
Angular Field of View	H : 102.5° (Wide) ~ 38.7° (Tele) V : 74.2° (Wide) ~ 29° (Tele) D : 135.5° (Wide) ~ 48.6° (Tele)	H : 102.5° (Wide) ~ 38.7° (Tele) V : 74.2° (Wide) ~ 29° (Tele) D : 135.5° (Wide) ~ 48.6° (Tele)	H : 92.1° (Wide) ~ 38.7° (Tele) V : 67.2° (Wide) ~ 29° (Tele) D : 119.9° (Wide) ~ 48.6° (Tele)	H : 92.1° (Wide) ~ 38.7° (Tele) V : 67.2° (Wide) ~ 29° (Tele) D : 119.9° (Wide) ~ 48.6° (Tele)	H : 102.5° (Wide) ~ 38.7° (Tele) V : 74.2° (Wide) ~ 29° (Tele) D : 135.5° (Wide) ~ 48.6° (Tele)
Pan / Tilt / Rotate Range	± 175° / 0 ~ 85° / ± 175° (Remote)	± 175° / 0 ~ 85° / ± 175° (Remote)	0° ~ 360° / -45° ~ 85° / 0° ~ 355°	0° ~ 360° / -45° ~ 85° / 0° ~ 355°	± 175° / 0 ~ 85° / ± 175° (Remote)
IR Viewable Length	-	-	50m (164.04ft)	50m (164.04ft)	-
Day & Night	Auto (ICR)				
Wide Dynamic Range	120dB				
Digital Noise Reduction	SSNR V				
Digital Image Stabilization	Support (Built-in Gyro sensor)				
Analytics	Intelligent analytics, Audio detection, Sound classification, Audio Playback, Shock detection				
Business Intelligence	-				
Alarm I/O	1 / 1				
Audio I/O	Selectable (mic in/line in), Built-in mic / Line out	Selectable (mic in/line in) / Line out	Selectable (mic in/line in), Built-in mic / Line out	Selectable (mic in/line in) / Line out	Selectable (mic in/line in) / Line out
Video Compression	H.265 / H.264, MJPEG				
WiseStream	WiseStream II				
Streaming	Up to 10 Profiles				
Edge Storage	micro SD/SDHC/SDXC				
Application Programming Interface	ONVIF Profile S/T, SUNAPI Hanwha Vision Open Platform				
Operating Temperature / Humidity	-25°C ~ +60°C (-13°F ~ +140°F)	-25°C ~ +60°C (-13°F ~ +140°F)	-25°C ~ +60°C (-13°F ~ +140°F) / 0~90% RH	-25°C ~ +60°C (-13°F ~ +140°F)	-50°C ~ +60°C (-58°F ~ +140°F) * Start up above -35°C (-31°F)
Certification	IP52, IK10	IP52, Plenum rate	IP52, IK10	IP52, Plenum rate	IP67, IP66, IP6K9K, IK10+, NEMA4X
Power Consumption	PoE : Max 11W 12VDC : Max 9W	PoE : Max 11W 12VDC : Max 9W	PoE : Max 12.95W 12VDC : Max 11.7W	PoE : Max 12.95W 12VDC : Max 11.7W	PoE : Max 12.3W 12VDC : Max 10W 24VAC : Max 12.3W
Product Dimensions / Weight	Ø 160 x 125mm (Ø6.3" x 4.92") 1.45kg (3.20lb)	Ø 205 x 155mm (Ø8.07" x 6.1") 1.85kg (4.08lb)	Ø 160 x 125mm (Ø6.3" x 4.92") 1.45kg (3.20lb)	Ø 205 x 155mm (Ø8.07" x 6.1") 1.8kg (3.97lb)	Ø 180 x 125mm (Ø7.1" x 4.9") 1.75kg (3.86lb)
Additional Features	Modular structure, Motorized PTRZ, Anti dust	Modular structure, Motorized PTRZ, Anti dust	Modular structure, Anti dust	Modular structure, Anti dust	Modular structure, Motorized PTRZ



XNV-8081R
5MP IR Vandal Dome Camera



XND-6081V
2MP Dome Camera



XND-6081F
2MP Flush Mount Dome Camera



XND-6081VZ
2MP Dome Camera



XND-6081FZ
2MP Flush Mount Dome Camera

Imaging Device	1/1.8" CMOS	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS
Resolution / Max. Frame Rate	5MP / 30fps	2MP / 60fps	2MP / 60fps	2MP / 60fps	2MP / 60fps
Min. Illumination	Color: 0.07Lux (F1.3) BW: 0Lux (IR LED)	Color: 0.015Lux (F1.4) B/W: 0.0015Lux (F1.4)	Color: 0.015Lux (F1.4) B/W: 0.0015Lux (F1.4)	Color: 0.015Lux (F1.4) B/W: 0.0015Lux (F1.4)	Color: 0.015Lux (F1.4) B/W: 0.0015Lux (F1.4)
Video Out	CVBS 1.0Vp-p, Micro USB type B	CVBS 1.0Vp-p, Micro USB type B	CVBS 1.0Vp-p, Micro USB type B	Micro USB type B	Micro USB type B
Focal Length (Zoom Ratio)	3.9 ~ 9.4mm (2.4x) motorized varifocal	2.8 ~ 12mm (4.3x) motorized varifocal	2.8 ~ 12mm (4.3x) motorized varifocal	2.8 ~ 12mm (4.3x) motorized varifocal	2.8 ~ 12mm (4.3x) motorized varifocal
Angular Field of View	H: 92.1°(Wide) ~ 38.7°(Tele) V: 67.2°(Wide) ~ 29°(Tele) D: 119.9°(Wide) ~ 48.6°(Tele)	H: 119.5°(Wide) ~ 27.9°(Tele) V: 62.8°(Wide) ~ 15.7°(Tele) D: 142.1°(Wide) ~ 32°(Tele)	H: 119.5°(Wide) ~ 27.9°(Tele) V: 62.8°(Wide) ~ 15.7°(Tele) D: 142.1°(Wide) ~ 32°(Tele)	H: 119.5°(Wide) ~ 27.9°(Tele) V: 62.8°(Wide) ~ 15.7°(Tele) D: 142.1°(Wide) ~ 32°(Tele)	H: 119.5°(Wide) ~ 27.9°(Tele) V: 62.8°(Wide) ~ 15.7°(Tele) D: 142.1°(Wide) ~ 32°(Tele)
Pan / Tilt / Rotate Range	0° ~ 360° / -45° ~ 85° / 0° ~ 355°	0° ~ 360° / -45° ~ 85° / 0° ~ 355°	0° ~ 360° / -45° ~ 85° / 0° ~ 355°	± 175° / 0 ~ 85° / ± 175° (Remote)	± 175° / 0 ~ 85° / ± 175° (Remote)
IR Viewable Length	50m (164.04ft)	-	-	-	-
Day & Night	Auto (ICR)				
Wide Dynamic Range	120dB	150dB	150dB	150dB	150dB
Digital Noise Reduction	SSNR V				
Digital Image Stabilization	Support (Built-in Gyro sensor)	Support (Built-in Gyro sensor)	Support (Built-in Gyro sensor)	Support (Built-in Gyro sensor)	Support
Analytics	Intelligent analytics, Audio detection, Sound classification, Audio Playback, Shock detection				
Business Intelligence	-				
Alarm I/O	1 / 1				
Audio I/O	Selectable (mic in/line in) / Line out	Selectable (mic in/line in), Built-in mic / Line out	Selectable (mic in/line in) / Line out	Selectable (mic in/line in), Built-in mic / Line out	Selectable (mic in/line in) / Line out
Video Compression	H.265 / H.264, MJPEG				
WiseStream	WiseStream II				
Streaming	Up to 10 Profiles				
Edge Storage	micro SD/SDHC/SDXC				
Application Programming Interface	ONVIF Profile S/T, SUNAPI Hanwha Vision Open Platform				
Operating Temperature / Humidity	-50°C ~ +60°C (-58°F ~ +140°F) * Start up above -35°C (-31°F)	-25°C ~ +60°C (-13°F ~ +140°F)	-25°C ~ +60°C (-13°F ~ +140°F)	-25°C ~ +60°C (-13°F ~ +140°F)	-25°C ~ +60°C (-13°F ~ +140°F)
Certification	IP67, IP66, IP6K9K, IK10+, NEMA4X	IP52, IK10	IP52, Plenum rate	IP52, IK10	IP52, Plenum rate
Power Consumption	PoE: Max 12.95W 12VDC: Max 11.7W 24VAC: Max 14.9W	PoE: Max 7W 12VDC: Max 5.4W	PoE: Max 7W 12VDC: Max 5.4W	PoE: Max 10W 12VDC: Max 8.5W	PoE: Max 10W 12VDC: Max 8.5W
Product Dimensions / Weight	Ø 180 x 125mm (Ø7.1" x 4.9") 1.75kg (3.86lb)	Ø 160 x 125mm (Ø6.3" x 4.92") 1.45kg (3.2lb)	Ø 205 x 155mm (Ø8.07" x 6.1") 1.8kg (3.97lb)	Ø 160 x 125mm (Ø6.3" x 4.92") 1.45kg (3.2lb)	Ø 205 x 155mm (Ø8.07" x 6.1") 1.85kg (4.08lb)
Additional Features	Modular structure	Modular structure, Anti dust	Modular structure, Anti dust	Modular structure, Motorized PTRZ, Anti dust	Modular structure, Motorized PTRZ, Anti dust



XND-6081RV
2MP IR Dome Camera



XND-6081RF
2MP Flush Mount IR Dome Camera



XNV-6081Z
2MP Vandal Dome Camera



XNV-6081R
2MP IR Vandal Dome Camera

Imaging Device	1/2.8" CMOS			
Resolution / Max. Frame Rate	2MP / 60fps			
Min. Illumination	Color : 0.015 Lux (F1.4) B/W : 0Lux (IR LED on)	Color : 0.015 Lux (F1.4) B/W : 0Lux (IR LED on)	Color : 0.015 lux (F1.4) B/W : 0.0015 Lux (F1.4)	Color : 0.015Lux (F1.4) BW : 0Lux (IR LED)
Video Out	CVBS 1.0Vp-p, Micro USB type B	CVBS 1.0Vp-p, Micro USB type B	Micro USB type B	CVBS 1.0Vp-p, Micro USB type B
Focal Length (Zoom Ratio)	2.8 ~ 12mm (4.3x) motorized varifocal			
Angular Field of View	H : 119.5° (Wide) ~ 27.9° (Tele) V : 62.8° (Wide) ~ 15.7° (Tele) D : 142.1° (Wide) ~ 32° (Tele)			
Pan / Tilt / Rotate Range	0° ~ 360° / -45° ~ 85° / 0° ~ 355°	0° ~ 360° / -45° ~ 85° / 0° ~ 355	± 175° / 0° ~ 85° / ± 175° (Remote)	0° ~ 360° / -45° ~ 85° / 0° ~ 355
IR Viewable Length	50m (164.04ft)	50m (164.04ft)	-	50m (164.04ft)
Day & Night	Auto (ICR)			
Wide Dynamic Range	150dB			
Digital Noise Reduction	SSNR V			
Digital Image Stabilization	Support (Built-in Gyro sensor)			
Analytics	Intelligent analytics, Audio detection, Sound classification, Audio Playback, Shock detection			
Business Intelligence	-			
Alarm I/O	1 / 1			
Audio I/O	Selectable (mic in/line in), Built-in mic / Line out	Selectable (mic in/line in) / Line out	Selectable (mic in/line in) / Line out	Selectable (mic in/line in) / Line out
Video Compression	H.265 / H.264, MJPEG			
WiseStream	WiseStream II			
Streaming	Up to 10 Profiles			
Edge Storage	micro SD/SDHC/SDXC			
Application Programming Interface	ONVIF Profile S/T, SUNAPI Hanwha Vision Open Platform			
Operating Temperature / Humidity	-25°C ~ +60°C (-13°F ~ +140°F)	-25°C ~ +60°C (-13°F ~ +140°F)	-50°C ~ +60°C (-58°F ~ +140°F) * Start up above -35°C (-31°F)	-50°C ~ +60°C (-58°F ~ +140°F) * Start up above -35°C (-31°F)
Certification	IP52, IK10	IP52, Plenum rate	IP67, IP66, IP6K9K, IK10+, NEMA4X	IP67, IP66, IP6K9K, IK10+, NEMA4X
Power Consumption	PoE : Max 12.95W 12VDC : Max 10.8W	PoE : Max 12.95W 12VDC : Max 10.8W	PoE : Max 11W 12VDC : Max 9.5W 24VAC : Max 11W	PoE : Max 12.95W 12VDC : Max 10.8W 24VAC : Max 13.3W
Product Dimensions / Weight	Ø 160 x 125mm (Ø 6.3" x 4.92") 1.45kg (3.21lb)	Ø 205 x 155mm (Ø 8.07" x 6.1") 1.8kg (3.97lb)	Ø 180 x 125mm (Ø 7.1" x 4.9") 1.75kg (3.86lb)	Ø 180 x 125mm (Ø 7.1" x 4.9") 1.75kg (3.86lb)
Additional Features	Modular design, Anti dust	Modular design, Anti dust	Modular structure, Motorized PTRZ	Modular structure



XNV-6081
2MP Vandal Dome Camera



XNB-8000
5MP Box Camera



XNO-8080R
5MP IR Bullet Camera



XNO-8020R/8030R/8040R
5MP IR Bullet Camera

Imaging Device	1/2.8" CMOS	1/1.8" CMOS	1/1.8" CMOS	1/1.8" CMOS
Resolution / Max. Frame Rate	2MP / 60fps	5MP / 30fps	5MP / 30fps	5MP / 30fps
Min. Illumination	Color : 0.015 Lux (F1.4) B/W : 0.0015 Lux (F1.4)	Color : 0.07Lux (F1.2) B/W : 0.007Lux (F1.2)	Color : 0.07Lux (F1.3) B/W : 0Lux (IR LED on)	Color : 0.16Lux ((F1.6) B/W : 0Lux (IR LED on)
Video Out	CVBS 1.0Vp-p, Micro USB type B	CVBS 1.0 Vp-p, Micro USB Type B	CVBS 1.0 Vp-p, Micro USB Type B	CVBS 1.0 Vp-p, Micro USB Type B
Focal Length (Zoom Ratio)	2.8 ~ 12mm (4.3x) motorized varifocal	-	3.7 ~ 9.4mm (2.5x) motorized varifocal	3.7mm fixed (XNO-8020R) 4.6mm fixed (XNO-8030R) 7.0mm fixed (XNO-8040R)
Angular Field of View	H : 119.5°(Wide) ~ 27.9°(Tele) V : 62.8°(Wide) ~ 15.7°(Tele) D : 142.1°(Wide) ~ 32°(Tele)	-	H : 100.2°(Wide) ~ 38.7°(Tele) V : 67.2°(Wide) ~ 29°(Tele) D : 119.9°(Wide) ~ 48.6°(Tele)	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)
Pan / Tilt / Rotate Range	0° ~ 360° / -45° ~ 85° / 0° ~ 355°	-	-	-
IR Viewable Length	-	-	50m (164.04ft)	30m (98.43ft)
Day & Night	Auto (ICR)			
Wide Dynamic Range	150dB	120dB	120dB	120dB
Digital Noise Reduction	SSNR V			
Digital Image Stabilization	Support (Built-in Gyro sensor)	Support (Built-in Gyro sensor)	Support	Support
Analytics	Intelligent analytics Audio detection Sound classification Audio Playback Shock detection	Intelligent analytics Audio detection Sound classification	Intelligent analytics Audio detection Sound classification	Intelligent analytics Audio detection Sound classification
Business Intelligence	-	-	-	People counting, Queue management, Heatmap
Alarm I/O	1 / 1			
Audio I/O	Selectable (mic in/line in) / Line out	Selectable (mic in/line in), Built-in mic / Line out	Selectable (mic in/line in) / Line out	Selectable (mic in/line in) / Line out
Video Compression	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG
WiseStream	WiseStream II			
Streaming	Up to 10 Profiles			
Edge Storage	micro SD/SDHC/SDXC			
Application Programming Interface	ONVIF Profile S/T, SUNAPI Hanwha Vision Open Platform			
Operating Temperature / Humidity	-50°C ~ +60°C (-58°F ~ +140°F) * Start up above -35°C (-31°F)	-10°C ~ +55°C (+14°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)
Certification	IP67, IP66, IP6K9K, IK 10+, NEMA4X	-	IP67, IP66, NEMA4X, IK 10	IP67, IP66, NEMA4X, IK 10
Power Consumption	PoE : Max 7W 12VDC : Max 5.4W 24VAC : Max 7.1W	PoE : Max 8.5W 12VDC : Max 7.5W 24VAC : Max 8.5W	PoE : Max 12.95W 12VDC : Max 12.5W 24VAC : Max 14.5W	PoE : Max 10.3W 12VDC : Max 9.3W
Product Dimensions / Weight	Ø 180 x 125mm (Ø 7.1" x 4.9") 1.45kg (3.20lb)	W 73.1 x H 66.6 x D 147.8mm (2.88" x 2.62" x 5.82") 420g (0.93lb)	Ø 91 x 368.6mm (Ø 6.3" x 4.67") 2.18kg (4.81lb)	Ø 70 x 296mm (Ø 2.76" x 11.65") 1.22kg (2.69lb)
Additional Features	Modular structure	Handover, Hallway View	Handover, Hallway View	Handover, Hallway View



XND-8080R/8080RV
SMP IR Dome Camera



XND-8020R/8030R/8040R
SMP IR Dome Camera



XND-8020F
SMP Flush Mount Dome Camera



XNV-8080R
SMP IR Vandal Dome Camera

Imaging Device	1/1.8" CMOS			
Resolution / Max. Frame Rate	H.265, H.264, MJPEG			
Min. Illumination	Color : 0.07Lux (F1.3) B/W : 0Lux (IR LED on)	Color : 0.16Lux (F1.6) B/W : 0Lux (IR LED on)	Color : 0.16Lux (F1.6) B/W : 0.16Lux (F1.6)	Color : 0.07Lux (F1.3) B/W : 0Lux (IR LED on)
Video Out	CVBS 1.0Vp-p, Micro USB type B	CVBS 1.0Vp-p, Micro USB type B	Micro USB type B	CVBS 1.0Vp-p, Micro USB type B
Focal Length (Zoom Ratio)	3.9 ~ 9.4mm (2.4x) motorized varifocal	3.7mm fixed (XND-8020R) 4.6mm fixed (XND-8030R) 7.0mm fixed (XND-8040R)	3.7mm fixed	3.9 ~ 9.4mm (2.4x) motorized varifocal
Angular Field of View	H: 92.1° (Wide) ~ 38.7° (Tele) V: 67.2° (Wide) ~ 29° (Tele) D: 119.9° (Wide) ~ 48.6° (Tele)	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: 97.5° / V: 71.9° / D: 126.2°	H: 92.1° (Wide) ~ 38.7° (Tele) V: 67.2° (Wide) ~ 29° (Tele) D: 119.9° (Wide) ~ 48.6° (Tele)
Pan / Tilt / Rotate Range	0° ~ 354° / 0° ~ 67° / 0° ~ 355°	0° ~ 354° / 0° ~ 67° / 0° ~ 355°	0° ~ 355° / 0° ~ 47° / 0° ~ 353°	0° ~ 354° / 0° ~ 67° / 0° ~ 355°
IR Viewable Length	30m (98.43ft)	30m (98.43ft)	-	50m (164.04ft)
Day & Night	Auto (ICR)	Auto (ICR)	Auto (Electrical)	Auto (ICR)
Wide Dynamic Range	120dB	120dB	-	120dB
Digital Noise Reduction	SSNR V			
Digital Image Stabilization	Support	Support (Built-in Gyro sensor)	Support	Support
Analytics	Intelligent analytics Audio detection Sound classification	Intelligent analytics Audio detection Sound classification	Intelligent analytics Audio detection Sound classification	Intelligent analytics Audio detection Sound classification
Business Intelligence	-	People counting, Queue management, Heatmap	People counting, Queue management, Heatmap	-
Alarm I/O	1 / 1	1 / 1	-	1 / 1
Audio I/O	Selectable (mic in/line in) / Line out	Selectable (mic in/line in), Built-in mic / Line out	Built-in mic / -	Selectable (mic in/line in) / Line out
Video Compression	H.265 / H.264, MJPEG			
WiseStream	WiseStream II			
Streaming	Up to 10 Profiles			
Edge Storage	micro SD/SDHC/SDXC			
Application Programming Interface	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform	ONVIF profile S/G, SUNAPI, Hanwha Vision Open Platform	ONVIF profile S/G, SUNAPI, Hanwha Vision Open Platform	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform
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)	-40°C ~ +55°C (-40°F ~ +131°F)
Certification	IK08	IK08	-	IP67, IP66, NEMA4X, IK10
Power Consumption	PoE: Max 10W 12VDC: Max 9W	PoE: Max 9W 12VDC: Max 8W	PoE: Max 4.7W	PoE: Max 12.95W 12VDC: Max 11.5W 24VAC: Max 14W
Operating Temperature / Humidity	Ø140.8 x 113mm (Ø5.54" x 4.45") 628g (1.38lb) (XND-8080R) 732g (1.61lb) (XND-8080RV)	Ø110 x 90mm (Ø4.33" x 3.54") 380g (0.84lb)	Ø98.9 x 129.1mm (Ø3.89" x 5.08") 275g (0.61lb)	Ø160 x 118.5mm (Ø6.3" x 4.67") 1.01kg (2.23lb)
Additional Features	Handover, Hallway View			



XNV-8080RSA
5MP Stainless IR Vandal Dome Camera



XNV-8020R/8030R/8040R
5MP IR Vandal Dome Camera



XNF-9010RV/9010RVM
12MP IR Fisheye Camera

Imaging Device	1/1.8" CMOS	1/1.8" CMOS	1/2.3" 12MP CMOS
Resolution / Max. Frame Rate	5MP / 30fps	5MP / 30fps	3008 x 3008 / 30fps
Min. Illumination	Color : 0.07Lux (F1.3) B/W : 0Lux (IR LED on)	Color : 0.16Lux (F1.6) B/W : 0Lux (IR LED on)	Color : 0.39Lux (F2.2) BW : 0Lux (IR LED on)
Video Out	CVBS 1.0 Vp-p, Micro USB type B		
Focal Length (Zoom Ratio)	3.9 ~ 9.4mm (2.4x) motorized varifocal	3.7mm fixed (XNV-8020R) 4.6mm fixed (XNV-8030R) 7.0mm fixed (XNV-8040R)	1.08mm fixed focal
Angular Field of View	H : 92.1° (Wide) ~ 38.7° (Tele) V : 67.2° (Wide) ~ 29° (Tele) D : 119.9° (Wide) ~ 48.6° (Tele)	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 : 187° / V : 187° / D : 187°
Pan / Tilt / Rotate Range	0° ~ 354° / 0° ~ 67° / 0° ~ 355°	0° ~ 354° / 0° ~ 67° / 0° ~ 355°	-
IR Viewable Length	50m (164.04ft)	30m (98.43ft)	10m (32.8ft), WiseIR
Day & Night	Auto (ICR)		
Wide Dynamic Range	120dB	120dB	extremeWDR (120dB)
Digital Noise Reduction	SSNR V		
Digital Image Stabilization	Support	Support (Built-in Gyro sensor)	-
Analytics	Intelligent analytics, Audio detection, Sound classification		
Business Intelligence	-	People counting, Queue management, Heatmap	People counting, Queue management, Heatmap
Alarm I/O	1 / 1	1 / 1	2 configured I / O
Audio I/O	Selectable (mic in/line in) / Line out	Selectable (mic in/line in) / Line out	Selectable (mic in/line in), Built-in mic / Line out
Video Compression	H.265 / H.264, MJPEG		
WiseStream	WiseStream II		
Streaming	Up to 10 Profiles		
Edge Storage	micro SD/SDHC/SDXC		
Application Programming Interface	ONVIF profile S/G, SUNAPI Hanwha Vision Open Platform	ONVIF profile S/G, SUNAPI Hanwha Vision Open Platform	ONVIF Profile S/G/T SUNAPI(HTTP API) Hanwha Vision Open Platform
Operating Temperature / Humidity	-40°C ~ +55°C (-40°F ~ +131°F)	-30°C ~ +55°C (-22°F ~ +131°F)	-40°C ~ +60°C (-40°F ~ +140°F) / 0 ~ 95% RH
Certification	IP66, NEMA4X, IP6K9K, IK10+	IP66, IP67, IK10	IP66, IK10, NEMA4X, EN50155 class T3 (XNF-9010RVM only)
Power Consumption	PoE : Max 12.95W 12VDC : Max 11.5W 24VAC : Max 14W	PoE : Max 9W 12VDC : Max 8W	PoE : Max 12.95W, typical 11W 12VDC : Max 11W, typical 9.1W
Product Dimensions / Weight	Ø 160 X 120.5mm (Ø 6.38" x 4.74") 2.8kg (6.17lb)	Ø 120 x 97.5mm (Ø 4.72" x 3.84") 615g (1.36lb)	Ø 160 x 72mm (Ø 6.38" x 2.83") 1.1kg (2.43lb)
Additional Features	Handover, Hallway View	Handover, Hallway View	Various mode support (Original, Double panorama, Single panorama, Quad view) M12 Connector (XNF-9010RVM)



XNF-9010RS
12MP IR Fisheye Camera



XNF-8010R/8010RV/8010RVM
6MP IR Fisheye Camera



XNB-6005
2MP Box Camera (extraLUX)



XNB-6000
2MP Box Camera

Imaging Device	1/2.3" 12MP CMOS	1/1.8" CMOS	1/2" CMOS	1/2.8" CMOS
Resolution / Max. Frame Rate	3008 x 3008 / 30fps	2048 x 2048 / 30fps	2MP / 60fps	2MP / 60fps
Min. Illumination	Color: 0.39 Lux (F2.2, 1/30sec) BW: 0Lux (IR LED on)	Color: 0.1Lux (F1.6) B/W: 0Lux (IR LED on)	Color: 0.006Lux (F1.2) B/W: 0.0006Lux (F1.2)	Color: 0.01Lux (F1.2) B/W: 0.001Lux (F1.2)
Video Out	CVBS: 1.0 Vp-p, Micro USB Type B			
Focal Length (Zoom Ratio)	1.08mm fixed focal	1.6mm fixed	-	-
Angular Field of View	H: 187° / V: 187° / D: 187°	H: 192° / V: 192° / D: 192°	-	-
Pan / Tilt / Rotate Range	-	-	-	-
IR Viewable Length	9m (29.53ft), WiselR	15m (49.21ft)	-	-
Day & Night	Auto (ICR)	Auto (ICR)	Auto (ICR)	Auto (ICR)
Wide Dynamic Range	extremeWDR (120dB)	120dB	150dB	150dB
Digital Noise Reduction	SSNR V	SSNR V	SSNR V	SSNR V
Digital Image Stabilization	-	-	Support (Built-in Gyro sensor)	Support (Built-in Gyro sensor)
Analytics	Intelligent analytics, Audio detection, Sound classification			
Business Intelligence	People counting, Queue management, Heatmap	People counting, Queue management, Heatmap	-	-
Alarm I/O	2 configured I/O	1 / 1	1 / 1	1 / 1
Audio I/O	Selectable (mic in/line in) / Line out	Selectable (mic in/line in), Built-in mic / Line out	Selectable (mic in/line in), Built-in mic / Line out	Selectable (mic in/line in), Built-in mic / Line out
Video Compression	H.265 / H.264, MJPEG			
WiseStream	WiseStream II			
Streaming	Up to 10 Profiles			
Edge Storage	micro SD/SDHC/SDXC			
Application Programming Interface	ONVIF Profile S/G/T SUNAPI(HTTP API) Hanwha Vision Open Platform	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform	ONVIF profile S/G, SUNAPI, Hanwha Vision Open Platform	ONVIF profile S/G, SUNAPI, Hanwha Vision Open Platform
Operating Temperature / Humidity	-40°C ~ +50°C (-40°F ~ +122°F) / 0~95%RH	-10°C ~ +55°C (+14°F ~ +131°F) (XNF-8010R) -40°C ~ +55°C (-40°F ~ +131°F) (XNF-8010RV/8010RVM)	-10°C ~ +55°C (+14°F ~ +131°F)	-10°C ~ +55°C (+14°F ~ +131°F)
Certification	IP66, IP67, IP6K9K, NEMA4X, IK10, IK10+ (it can resist impacts of 40 joules), NSF, ANSI Standard 169 - Special Purpose Food Equipment and Devices.	IP66, IK10 (XNF-8010RV/8010RVM)	-	-
Power Consumption	PoE: Max 12.95W, typical 11W 12VDC: Max 11W, typical 9.1W	PoE: Max 12W, 12VDC: Max 11W (XNF-8010R) PoE: Max 12.95W, 12VDC: Max 12W (XNF-8010RV/8010RVM)	PoE: Max. 8.5W 12VDC: Max 8W 24VAC: Max 9W	PoE: Max 7.5W 12VDC: Max 6.5W 24VAC: Max 8W
Product Dimensions / Weight	Ø 167.9 x 72.1mm (Ø66.1" x 28.38") 2.98kg (6.57lb)	Ø 146 x 54.8mm (Ø5.75" x 2.16") 730g (1.61lb) (XNF-8010R) Ø 146 x 65.8mm (Ø5.75" x 2.59") 785g (1.73lb) (XNF-8010RV) 790g (1.74lb) (XNF-8010RVM)	W 73.1 x H 66.6 x D 147.8mm (2.88" x 2.62" x 5.82") 420g (0.93lb)	W 73.1 x H 66.6 x D 147.8mm (2.88" x 2.62" x 5.82") 420g (0.93lb)
Additional Features	Various mode support (Original, Double panorama, Single panorama, Quad view)	M12 Connector (XNF-8010RVM), Built-in MIC, On board dewarpping	Handover, Hallway View	Handover, Hallway View



XNB-6001
2MP Remote Head Camera



SLA-T4680/T4680V
2MP lens for XNB-6001



SLA-T2480/T2480V
2MP lens for XNB-6001



SLA-T1080F
2MP lens for XNB-6001

Imaging Device	-	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS
Resolution / Max. Frame Rate	2MP / 60fps	-	-	-
Min. Illumination	-	Color : 0.06Lux (F2.5) B/W : 0.06Lux (F2.5)	Color : 0.45Lux (F2.0) B/W : 0.45Lux (F2.0)	Color : 0.03Lux (F1.6)
Video Out	CVBS 1.0Vp-p, Micro USB type B	-	-	-
Focal Length (Zoom Ratio)	-	4.6mm Pinhole	2.4mm fixed	1.6mm fisheye
Angular Field of View	-	H: 73° / V: 39° / D: 85°	H: 138° / V: 73° / D: 168°	H: 187° / V: 113.9°
Pan / Tilt / Rotate Range	-			
IR Viewable Length	-			
Day & Night	-	Auto (Electrical)	Auto (Electrical)	Auto (Electrical)
Wide Dynamic Range	120dB	-	-	-
Digital Noise Reduction	SSNR V	-	-	-
Digital Image Stabilization	Support	-	-	-
Analytics	Intelligent analytics Audio detection	-	-	-
Business Intelligence	People counting, Queue management, Heatmap	-	-	-
Alarm I/O	1 / 1	-	-	-
Audio I/O	Selectable (mic in/line in) / Line out	-	-	-
Video Compression	H.265 / H.264, MPEG	-	-	-
WiseStream	WiseStream II	-	-	-
Streaming	Up to 10 Profiles	-	-	-
Edge Storage	SD/SDHC/SDXC	-	-	-
Application Programming Interface	ONVIF profile S/G, SUNAPI, Hanwha Vision Open Platform	-	-	-
Operating Temperature / Humidity	-10°C ~ +55°C (+14°F ~ +131°F)			
Certification	-			
Power Consumption	PoE: Max 6W 12VDC: Max 6.5W	-	-	-
Product Dimensions / Weight	W 131.1 x H 28 x D 86mm (5.16" x 1.1" x 3.39") 245g (0.54lb)	Ø 24 x 42mm (Ø 0.94" x 1.65") (Lens) 8m (314.96") (Cable) 310g (0.68lb) (SLA-T4680) 30 x 20.2 x 45mm (1.18" x 0.8" x 1.77") (Lens) 8m (314.96") (Cable) 321g (0.71lb) (SLA-T4680V)	Ø 24 x 49.8mm (Ø 0.94" x 1.96") (Lens) 8m (314.96") (Cable) 318g (0.70lb) (SLA-T2480) 30 x 27.9 x 45mm (1.18" x 0.1" x 1.77") (Lens) 8m (314.96") (Cable) 328g (0.72lb) (SLA-T2480V)	Ø 35 x 68.9mm (Ø 1.38" x 2.71") (Lens) 8m (314.96") (Cable) 321g (0.71lb)
Additional Features	Handover, Hallway View	-	-	-



XNO-6120R
2MP IR Bullet Camera



XNO-6085R
2MP IR Bullet Camera (extraLUX)



XNO-6080R
2MP IR Bullet Camera



XNO-L6080R
2MP IR Bullet Camera



XNO-6010R/6020R
2MP IR Bullet Camera

Imaging Device	1/2.8" CMOS		1/2" CMOS		1/2.8" CMOS		1/2.8" CMOS	
Resolution / Max. Frame Rate	2MP / 60fps							
Min. Illumination	Color : 0.03Lux (F1.6) B/W : 0Lux (IR LED on)		Color : 0.004Lux (F0.94) B/W : 0Lux (IR LED on)		Color : 0.015Lux (F1.4) B/W : 0Lux (IR LED on)		Color : 0.03lux (F1.6) B/W : 0Lux (IR LED on)	
Video Out	CVBS 1.0Vp-p, Micro USB type B							
Focal Length (Zoom Ratio)	5.2 ~ 62.4mm (Optical 12x)		4.1 ~ 16.4mm (Optical 4x) motorized varifocal		2.8 ~ 12mm (4.3x) motorized varifocal		3.2 ~ 10mm (3.1x) motorized varifocal	
Angular Field of View	H: 54.58° (Wide) ~ 5.3° (Tele) V: 32.19° (Wide) ~ 3° (Tele) D: 61.4° (Wide) ~ 6.06° (Tele)		H: 100° (Wide) ~ 26.2° (Tele) V: 54° (Wide) ~ 14.8° (Tele) D: 116° (Wide) ~ 30° (Tele)		H: 119.5° (Wide) ~ 27.9° (Tele) V: 62.8° (Wide) ~ 15.7° (Tele) D: 142.1° (Wide) ~ 32° (Tele)		H: 109° (Wide) ~ 33.2° (Tele) V: 57.4° (Wide) ~ 18.7° (Tele) D: 132° (Wide) ~ 38° (Tele)	
Pan / Tilt / Rotate Range	-							
IR Viewable Length	70m (229.66ft)		70m (229.66ft)		50m (164.04ft)		30m (98.42ft)	
Day & Night	Auto (ICR)							
Wide Dynamic Range	150dB							
Digital Noise Reduction	SSNR V							
Digital Image Stabilization	Support		Support		Support		Support	
Analytics	Intelligent analytics Audio detection Sound classification		Intelligent analytics Audio detection Sound classification		Intelligent analytics Audio detection Sound classification		Intelligent analytics Audio detection Sound classification	
Business Intelligence	-		-		-		-	
Alarm I/O	1 / 1		1 / 1		1 / 1		-	
Audio I/O	Selectable (mic in/line in) / Line out		Selectable (mic in/line in) / Line out		Selectable (mic in/line in) / Line out		-	
Video Compression	H.265 / H.264, MJPEG							
WiseStream	WiseStream II							
Streaming	Up to 10 Profiles							
Edge Storage	micro SD/SDHC/SDXC							
Application Programming Interface	ONVIF profile S/G, SUNAPI, Wisenet open platform		ONVIF profile S/G, SUNAPI, Wisenet open platform		ONVIF profile S/G/T, SUNAPI, Wisenet open platform		ONVIF profile S/G, SUNAPI, Wisenet open platform	
Operating Temperature / Humidity	-40°C ~ +55°C (-40°F ~ +131°F) * Start up above -35°C (-31°F)		-40°C ~ +55°C (-40°F ~ +131°F) * Start up above -35°C (-31°F)		-40°C ~ +55°C (-40°F ~ +131°F)		-40°C ~ +55°C (-40°F ~ +131°F)	
Certification	IP67, IP66, NEMA 4X, IK10		IP67, IP66, NEMA 4X, IK10		IP67, IP66, NEMA 4X, IK10		IP66, IK10	
Power Consumption	PoE : Max 12.95W 12VDC : Max 12.5W 24VAC : Max 14.5W		PoE : Max 12.95W 12VDC : Max 11.5W 24VAC : Max 12.95W		PoE : Max 12.95W 12VDC : Max 12W 24VAC : Max 15W		PoE : Max. 11W	
Product Dimensions / Weight	Ø91 x 368.6mm (Ø3.58" x 14.51") 2.18kg (4.81lb)		Ø91 x 388.6mm (Ø3.58" x 15.3") 2.35kg (5.18lb)		Ø91 x 368.6mm (Ø3.58" x 14.51") 2.18kg (4.81lb)		Ø91 x 322.9mm (Ø3.58" x 12.71") 1.29kg (4.25lb)	
Additional Features	Handover, Hallway View							



XND-6085/6085V
2MP Dome Camera (extraLUX)



XND-6080/6080V
2MP Dome Camera



XND-6080R/6080RV
2MP IR Dome Camera



XND-L6080R/L6080RV
2MP IR Dome Camera



XND-L6080V
2MP Dome Camera

Imaging Device	1/2" CMOS	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS
Resolution / Max. Frame Rate	2MP / 60fps				
Min. Illumination	Color : 0.004Lux (F0.94) B/W : 0.0004Lux (F0.94)	Color : 0.015Lux (F1.4) B/W : 0.0015Lux (F1.4)	Color : 0.015Lux (F1.4) B/W : 0Lux (IR LED on)	Color : 0.03Lux (F1.6) B/W : 0Lux (IR LED on)	Color : 0.03Lux (F1.6) B/W : 0.01Lux (F1.6)
Video Out	CVBS 1.0Vp-p, Micro USB type B				
Focal Length (Zoom Ratio)	4.1~16.4mm (Optical 4x)	2.8~12mm (4.3x) motorized varifocal	2.8~12mm (4.3x) motorized varifocal	3.2~10mm (3.1x) motorized varifocal	3.2~10mm (3.1x) motorized varifocal
Angular Field of View	H: 100° (Wide) ~ 26.2° (Tele) V: 54° (Wide) ~ 14.8° (Tele) D: 116° (Wide) ~ 30° (Tele)	H: 119.5° (Wide) ~ 27.9° (Tele) V: 62.8° (Wide) ~ 15.7° (Tele) D: 142.1° (Wide) ~ 32° (Tele)	H: 119.5° (Wide) ~ 27.9° (Tele) V: 62.8° (Wide) ~ 15.7° (Tele) D: 142.1° (Wide) ~ 32° (Tele)	H: 109° (Wide) ~ 33.2° (Tele) V: 57.4° (Wide) ~ 18.7° (Tele) D: 132° (Wide) ~ 38° (Tele)	H: 109° (Wide) ~ 33.2° (Tele) V: 57.4° (Wide) ~ 18.7° (Tele) D: 132° (Wide) ~ 38° (Tele)
Pan / Tilt / Rotate Range	± 175° / ± 73° / ± 175°	0° ~ 354° / 0° ~ 67° / 0° ~ 355°	0° ~ 354° / 0° ~ 67° / 0° ~ 355°	0° ~ 354° / 0° ~ 67° / 0° ~ 355°	0° ~ 354° / 0° ~ 67° / 0° ~ 355°
IR Viewable Length	-	-	30m (98.43ft)	30m (98.42ft)	-
Day & Night	Auto (ICR)				
Wide Dynamic Range	-	150dB	150dB	120dB	120dB
Digital Noise Reduction	SSNR V				
Digital Image Stabilization	Support (Built-in Gyro sensor)	Support	Support	Support	Support
Analytics	Intelligent analytics Audio detection Sound classification	Intelligent analytics Audio detection Sound classification	Intelligent analytics Audio detection Sound classification	Intelligent analytics	Intelligent analytics
Business Intelligence	-				
Alarm I/O	1 / 1	1 / 1	1 / 1	-	-
Audio I/O	Selectable (mic in/line in) / Line out	Selectable (mic in/line in), Built-in mic / Line out	Selectable (mic in/line in), Built-in mic / Line out	-	-
Video Compression	H.265 / H.264, MJPEG				
WiseStream	WiseStream II				
Streaming	Up to 10 Profiles				
Edge Storage	SD/SDHC/SDXC	micro SD/SDHC/SDXC	micro SD/SDHC/SDXC	micro SD/SDHC/SDXC	micro SD/SDHC/SDXC
Application Programming Interface	ONVIF profile S/G, SUNAPI, Hanwha Vision Open Platform	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform	ONVIF profile S/G, SUNAPI, Hanwha Vision Open Platform	ONVIF profile S/G, SUNAPI, Hanwha Vision Open Platform
Operating Temperature / Humidity	-30°C ~ +55°C (-22°F ~ +131°F) * Start up above -10°C (+14°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)
Certification	IK08				
Power Consumption	PoE : Max 10.2W 12VDC : Max 8.6W	PoE : Max 6.5W 12VDC : Max 6W	PoE : Max 10W 12VDC : Max 9W	PoE : Max 8W	PoE : Max 6W
Product Dimensions / Weight	Ø 160 x 140mm (Ø 6.3" x 5.51") 1.1 kg (2.43lb) (XND-6085) 1.25 kg (2.76lb) (XND-6085V)	Ø 140.8 x 113mm (Ø 5.54" x 4.45") 610g (1.34lb) (XND-6080) 714g (1.57lb) (XND-6080V)	Ø 140.8 x 113mm (Ø 5.54" x 4.45") 624g (1.38lb) (XND-6080R) 724g (1.60lb) (XND-6080RV)	Ø 140.8 x 113mm (Ø 5.54" x 4.45") 580g (1.28lb) (XND-L6080R) 690g (1.52lb) (XND-L6080RV)	Ø 140.8 x 113mm (Ø 5.54" x 4.45") 675g (1.49lb)
Additional Features	Handover, Hallway View	Handover, Hallway View	Handover, Hallway View	Defog, Hallway View	Defog, Hallway View



XND-6020R
2MP IR Dome Camera



XND-6011F
2MP Flush Mount Dome Camera



XND-6010
2MP Dome Camera



XNV-6120/6120R
2MP Vandal / IR Vandal Dome Camera

Imaging Device	1/2.8" CMOS			
Resolution / Max. Frame Rate	2MP / 60fps			
Min. Illumination	Color : 0.015 Lux (F1.4) B/W : 0Lux (IR LED on)	Color : 0.055Lux (F2.0) B/W : 0.055Lux (F2.0)	Color : 0.055Lux (F2.0) B/W : 0.055Lux (F2.0)	Color : 0.03Lux (F1.6), B/W : 0.003Lux (F1.6) (XNV-6120) Color : 0.03Lux (F1.6), B/W : 0Lux (IR LED on) (XNV-6120R)
Video Out	CVBS 1.0Vp-p, Micro USB type B	Micro USB type B	CVBS 1.0Vp-p, Micro USB type B	CVBS 1.0Vp-p, Micro USB type B
Focal Length (Zoom Ratio)	4mm fixed	2.8mm fixed	2.4mm fixed	5.2~62.4mm (Optical 12x)
Angular Field of View	H : 88.6° / V : 47.5° / D : 104.8°	H : 112° / V : 62° / D : 130°	H : 139° / V : 73° / D : 167°	H : 54.58° (Wide) ~ 5.3° (Tele) V : 32.19° (Wide) ~ 3° (Tele) D : 61.4° (Wide) ~ 6.06° (Tele)
Pan / Tilt / Rotate Range	0° ~ 354° / 0° ~ 67° / 0° ~ 355°	0° ~ 355° / 0° ~ 47° / 0° ~ 353°	0° ~ 354° / 0° ~ 75° / 0° ~ 355°	0° ~ 354° / 0° ~ 75° / 0° ~ 355°
IR Viewable Length	30m (98.43ft)	-	-	70m (229.66ft) (XNV-6120R)
Day & Night	Auto (ICR)	Auto (Electrical)	Auto (ICR)	Auto (ICR)
Wide Dynamic Range	150dB	-	150dB	150dB
Digital Noise Reduction	SSNR V			
Digital Image Stabilization	Support	Support	Support	Support (Built-in Gyro sensor)
Analytics	Intelligent analytics, Audio detection, Sound classification			
Business Intelligence	People counting, Queue management, Heatmap	People counting, Queue management, Heatmap	People counting, Queue management, Heatmap	-
Alarm I/O	1 / 1	-	1 / 1	1 / 1
Audio I/O	Selectable (mic in/line in), Built-in mic / Line out	Built-in mic / -	Selectable (mic in/line in), Built-in mic / Line out	Selectable (mic in/line in) / Line out
Video Compression	H.265 / H.264, MJPEG			
WiseStream	WiseStream II			
Streaming	Up to 10 Profiles			
Edge Storage	SD/SDHC/SDXC	SD/SDHC/SDXC	micro SD/SDHC/SDXC	SD/SDHC/SDXC
Application Programming Interface	ONVIF profile S/G, SUNAPI, Hanwha Vision Open Platform	ONVIF profile S/G, SUNAPI, Hanwha Vision Open Platform	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform
Operating Temperature / Humidity	-10°C ~ +55°C (+14°F ~ +131°F)	-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 -35°C (-31°F)
Certification	IK08	-	IK08	IP67, IP66, NEMA 4X, IK10
Power Consumption	PoE : Max 9W 12VDC : Max 8W	PoE : Max 4.7W	PoE : Max 6.5W 12VDC : Max 6W	PoE : Max. 7.8W, 12V DC : Max 7W, 24V AC : Max. 8.2W (XNV-6120) PoE : Max. 12.95W, 12V DC : Max. 11.5W, 24V AC : Max. 14W (XNV-6120R)
Product Dimensions / Weight	Ø110 x 90mm (Ø4.33" x 3.54") 380g (0.84lb)	Ø98.9 x 129mm (Ø3.89" x 5.08") 275g (0.61lb)	Ø140.8 x 113mm (Ø5.54" x 4.45") 610g (1.34lb)	Ø160 x 128.5mm (Ø6.3" x 5.06") 985g (2.17lb) (XNV-6120) 995g (2.19lb) (XNV-6120R)
Additional Features	Handover, Hallway View			



XNV-6085
2MP Vandal Dome Camera (extraLUX)



XNV-6080
2MP Vandal Dome Camera



XNV-6080R
2MP IR Vandal Dome Camera



XNV-6080RSA
2MP Stainless IR Vandal Dome Camera



XNV-L6080
2MP Vandal Dome Camera

Imaging Device	1/2" CMOS	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS
Resolution / Max. Frame Rate	2MP / 60fps				
Min. Illumination	Color : 0.004Lux (F0.94) B/W : 0.0004Lux (F0.94)	Color : 0.015Lux (F1.4) B/W : 0.015Lux (F1.4)	Color : 0.015Lux (F1.4) B/W : 0Lux (IR LED on)	Color : 0.015Lux (F1.4) B/W : 0Lux (IR LED on)	Color : 0.03Lux (F1.6) B/W : 0.01Lux (F1.6)
Video Out	CVBS 1.0Vp-p, Micro USB type B				
Focal Length (Zoom Ratio)	4.1 ~ 16.4mm (Optical 4x)	2.8 ~ 12mm (4.3x) motorized varifocal	2.8 ~ 12mm (4.3x) motorized varifocal	2.8 ~ 12mm (4.3x) motorized varifocal	3.2 ~ 10mm (3.1x) motorized varifocal
Angular Field of View	H: 100° (Wide) ~ 26.2° (Tele) V: 54° (Wide) ~ 14.8° (Tele) D: 116° (Wide) ~ 30° (Tele)	H: 119.5° (Wide) ~ 27.9° (Tele) V: 62.8° (Wide) ~ 15.7° (Tele) D: 142.1° (Wide) ~ 32° (Tele)	H: 119.5° (Wide) ~ 27.9° (Tele) V: 62.8° (Wide) ~ 15.7° (Tele) D: 142.1° (Wide) ~ 32° (Tele)	H: 119.5° (Wide) ~ 27.9° (Tele) V: 62.8° (Wide) ~ 15.7° (Tele) D: 142.1° (Wide) ~ 32° (Tele)	H: 109° (Wide) ~ 33.2° (Tele) V: 57.4° (Wide) ~ 18.7° (Tele) D: 132° (Wide) ~ 38° (Tele)
Pan / Tilt / Rotate Range	± 175° / ± 73° / ± 175°	0° ~ 354° / 0° ~ 67° / 0° ~ 355°	0° ~ 354° / 0° ~ 67° / 0° ~ 355°	0° ~ 354° / 0° ~ 67° / 0° ~ 355°	0° ~ 354° / 0° ~ 67° / 0° ~ 355°
IR Viewable Length	-	-	50m (164.04ft)	50m (164.04ft)	-
Day & Night	Auto (ICR)				
Wide Dynamic Range	150dB	150dB	150dB	150dB	120dB
Digital Noise Reduction	SSNR V				
Digital Image Stabilization	Support (Built-in Gyro sensor)	Support	Support	Support	Support
Analytics	Intelligent analytics Audio detection Sound classification	Intelligent analytics Audio detection, Sound classification	Intelligent analytics Audio detection, Sound classification	Intelligent analytics Audio detection, Sound classification	Intelligent analytics
Business Intelligence	-				
Alarm I/O	1 / 1	1 / 1	1 / 1	1 / 1	-
Audio I/O	Selectable (mic in/line in) / Line out	Selectable (mic in/line in) / Line out	Selectable (mic in/line in) / Line out	Selectable (mic in/line in) / Line out	-
Video Compression	H.265 / H.264, MJPEG				
WiseStream	WiseStream II				
Streaming	Up to 10 Profiles				
Edge Storage	micro SD/SDHC/SDXC				
Application Programming Interface	ONVIF profile S/G, SUNAPI, Hanwha Vision Open Platform	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform	ONVIF profile S/G, SUNAPI, Hanwha Vision Open Platform	ONVIF profile S/G, SUNAPI, Hanwha Vision Open Platform
Operating Temperature / Humidity	-40°C ~ +55°C (-40°F ~ +131°F) * Start up above -35°C (-31°F)	-40°C ~ +55°C (-40°F ~ +131°F)	-40°C ~ +55°C (-40°F ~ +131°F)	-40°C ~ +55°C (-40°F ~ +131°F)	-40°C ~ +55°C (-40°F ~ +131°F)
Certification	IP67, IP66, NEMA 4X, IK10	IP67, IP66, NEMA 4X, IK10	IP67, IP66, NEMA 4X, IK10	IP66, NEMA 4X, IP6K9K, IK10+	IP66, IK10
Power Consumption	PoE : Max 12.1W 12VDC : Max 11.1W 24VAC : Max 13.5W	PoE : Max 7.8W 12VDC : Max 7W 24VAC : Max 8.2W	PoE : Max 12.95W 12VDC : Max 11.5W 24VAC : Max 14W	PoE : Max 12.95W 12VDC : Max 11.5W 24VAC : Max 14W	PoE : Max 8W
Product Dimensions / Weight	Ø 160 x 140mm (Ø6.3" x 5.51") 1.4kg (3.09lb)	Ø 160 x 118.5mm (Ø6.3" x 4.67") 985g (2.17lb)	Ø 160 x 118.5mm (Ø6.3" x 4.67") 995g (2.19lb)	Ø 160 x 120.5mm (Ø6.38" x 4.74") 2.8kg (6.17lb)	Ø 160 x 118.5mm (Ø6.3" x 4.67") 940g (2.1lb)
Additional Features	Handover, Hallway View				



XNV-L6080R
2MP IR Vandal Dome Camera



XNV-6022R/6022RM
2MP Mobile IR Flat Camera



XNV-6020R
2MP IR Vandal Dome Camera



XNV-6013M
2MP Mobile Camera



XNV-6012M/6012
2MP Mobile Flat Camera

Imaging Device	1/2.8" CMOS				
Resolution / Max. Frame Rate	2MP / 60fps				
Min. Illumination	Color : 0.03Lux (F1.6) B/W : 0Lux (IR LED on)	Color : 0.04Lux (F2.0) B/W : 0Lux (IR LED on)	Color : 0.015Lux (F1.4) B/W : 0Lux (IR LED on)	Color : 0.04Lux (F2.0) B/W : 0.04Lux (F2.0)	Color : 0.04Lux (F2.0) B/W : 0.04Lux (F2.0)
Video Out	CVBS 1.0Vp-p, Micro USB type B	Micro USB Type B	CVBS 1.0Vp-p, Micro USB type B	Micro USB Type B	Micro USB type B
Focal Length (Zoom Ratio)	3.2 ~ 10mm (3.1x) motorized varifocal	3.6mm fixed	4mm fixed	2.8mm fixed	2.4mm fixed
Angular Field of View	H: 109° (Wide) ~ 33.2° (Tele) V: 57.4° (Wide) ~ 18.7° (Tele) D: 132° (Wide) ~ 38° (Tele)	H: 94.8° / V: 49.3° / D: 114.3°	H: 88.6° / V: 47.5° / D: 104.8°	H: 107.4° / V: 62.2° / D: 122°	H: 135.4° / V: 71.2° / D: 161.6°
Pan / Tilt / Rotate Range	0° ~ 354° / 0° ~ 67° / 0° ~ 355°	±5° / 0° ~ 67° / ±90°	0° ~ 354° / 0° ~ 67° / 0° ~ 355°	±5° / ±10° / ±90°	±5° / 0° ~ 67° / ±90°
IR Viewable Length	30m (98.43ft)	15m (49.21ft)	30m (98.43ft)	-	-
Day & Night	Auto (ICR)	Auto (ICR)	Auto (ICR)	Auto (Electrical)	Auto (Electrical)
Wide Dynamic Range	120dB	150dB	150dB	150dB	150dB
Digital Noise Reduction	SSNR V				
Digital Image Stabilization	Support	Support (Built-in Gyro sensor)	Support	Support (Built-in Gyro sensor)	Support (Built-in Gyro sensor)
Analytics	Intelligent analytics	Intelligent analytics Audio detection Sound classification (w/ external MIC)	Intelligent analytics Audio detection Sound classification	Intelligent analytics Audio detection Sound classification	Intelligent analytics Audio detection Sound classification (w/ external MIC)
Business Intelligence	-	-	People counting, Queue management, Heatmap	-	-
Alarm I/O	-	-	1 / 1	-	-
Audio I/O	-	Selectable (mic in/line in), Built-in mic / Line out	Selectable (mic in/line in) / Line out	Selectable (mic in/line in) / Line out	Selectable (mic in/line in), Built-in mic / Line out
Video Compression	H.265 / H.264, MJPEG				
WiseStream	WiseStream II				
Streaming	Up to 5 Profiles	Up to 10 Profiles	Up to 10 Profiles	Up to 10 Profiles	Up to 10 Profiles
Edge Storage	micro SD/SDHC/SDXC				
Application Programming Interface	ONVIF profile S/G, SUNAPI, Hanwha Vision Open Platform				
Operating Temperature / Humidity	-40°C ~ +55°C (-40°F ~ +131°F)	-30°C ~ +55°C (-22°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)	-40°C ~ +60°C (-40°F ~ +140°F) * Start up above -30°C (-22°F)	-30°C ~ +55°C (-22°F ~ +131°F) * Start up above -20°C (-4°F)
Certification	IP66, IK10	IP66, IK10, NEMA4X	IP67, IP66, IK10	IP67, IP6K9K, IK10, NEMA4X	IP66, IK10, NEMA4X
Power Consumption	PoE : Max 11W	PoE : Max 6.7W	PoE : Max 9W 12V DC : Max 8W	PoE : Max 7.2W	PoE : Max 6.5W
Product Dimensions / Weight	Ø 160 x 118.5mm (Ø 6.3" x 4.67") 940g (2.07lb)	W 98.9 x H 52 x D 100mm (3.89" x 2.05" x 3.94") 295g (0.65lb)	Ø 120 x 97.5mm (Ø 4.72" x 3.84") 615g (1.36lb)	W 103.7 x H 72.3 x D 126.8mm (4.08" x 2.85" x 4.99") 478g (1.04lb)	W 98.9 x H 52 x D 100mm (3.89" x 2.05" x 3.94") 295g (0.65lb)
Additional Features	Handover, Hallway View	M12 Connector (XNV-6022RM) Handover, Hallway View	Handover, Hallway View	M12 Connector Handover, Hallway View	M12 Connector (XNV-6012M) Handover, Hallway View



XNV-6011
2MP Vandal Dome Camera



XNV-6010
2MP Vandal Dome Camera

PTZ PLUS



XNP-9300RW
8MP 30x Wiper IR PTZ Camera

PTZ PLUS



XNP-8300RW
6MP 30x Wiper IR PTZ Camera

PTZ PLUS



XNP-6400RW
2MP 40x Wiper IR PTZ Camera

Imaging Device	1/2.8" CMOS				
Resolution / Max. Frame Rate	2MP / 60fps	2MP / 60fps	4K / 30fps	6MP / 30fps	2MP / 60fps
Min. Illumination	Color : 0.055Lux (F2.0) B/W : 0.055Lux (F2.0)	Color : 0.055Lux (F2.0) B/W : 0.0055Lux (F2.0)	Color: 0.1Lux(F1.6, 1/30sec) BW: 0Lux(IR LED On)	Color: 0.1Lux(F1.6, 1/30sec) BW: 0Lux(IR LED On)	Color: 0.05Lux(F1.6, 1/30sec) BW: 0Lux(IR LED On)
Video Out	CVBS 1.0Vp-p, Micro USB type B	CVBS 1.0Vpp, Micro USB type B	-	-	-
Focal Length (Zoom Ratio)	2.8mm fixed	2.4mm fixed	5~150mm(30x) zoom (digital 32x, total 960x zoom)	5~150mm(30x) zoom (digital 32x, total 960x zoom)	4.25~170mm(40x) zoom (digital 32x, total 1280x zoom)
Angular Field of View	H: 112° / V: 62° / D: 130°	H: 139° / V: 73° / D: 167°	H: 57.42°(Wide)~2.19°(Tele) V: 33.54°(Wide)~1.25°(Tele)	H: 57.42°(Wide)~2.19°(Tele) V: 33.54°(Wide)~1.25°(Tele)	H: 65.66°(Wide)~1.88°(Tele) V: 39.40°(Wide)~1.09°(Tele)
Pan / Tilt / Rotate	0° ~ 353° / 0° ~ 59° / 0° ~ 353°	0° ~ 354° / 0° ~ 67° / 0° ~ 355°	360° Endless / 110° (-20° ~ 90°) / -	360° Endless / 110° (-20° ~ 90°) / -	360° Endless / 110° (-20° ~ 90°) / -
IR Viewable Length	-	-	200m(656.17ft), WiselR	200m(656.17ft), WiselR	200m(656.17ft), WiselR
Day & Night	Auto (Electrical)	Auto (ICR)	Auto(ICR)/Color/BW/Schedule	Auto(ICR)/Color/BW/Schedule	Auto(ICR)/Color/BW/Schedule
Wide Dynamic Range	150dB	150dB	Extreme WDR(120dB)	Extreme WDR(120dB)	Extreme WDR(150dB)
Digital Noise Reduction	SSNR V				
Digital Image Stabilization	Support	Support	Support (built-in gyro sensor)	Support (built-in gyro sensor)	Support (built-in gyro sensor)
Analytics	Intelligent analytics	Intelligent analytics Audio detection Sound classification	Directional detection, Fog detection, Face detection, Motion detection, Appear/Disappear, Enter/Exit, Loitering, Tampering, Virtual line, Shock detection * Audio detection, Sound classification(with NWI/O Box)		
Business Intelligence	People counting, Queue management, Heatmap	People counting, Queue management, Heatmap	-	-	-
Alarm I/O	-	1 / 1	Compatible with NWI/O Box (Optional: SPM-4210)		
Audio I/O	-	Selectable (mic in/line in) / Line out	Compatible with NWI/O Box (Optional: SPM-4210)		
Video Compression	H.265, H.264, MJPEG				
WiseStream	WiseStream II	WiseStream II	Manual(Sea area), WiseStream II	Manual(Sea area), WiseStream II	Manual(Sea area), WiseStream II
Streaming	Up to 10 Profiles				
Edge Storage	micro SD/SDHC/SDXC	micro SD/SDHC/SDXC	Micro SD/SDHC/SDXC 2slots 1TB(512GBx2)		
Application Programming Interface	ONVIF profile S/G, SUNAPI, Hanwha Vision Open Platform	ONVIF profile S/G, SUNAPI, Hanwha Vision Open Platform	ONVIF Profile S/G/T, SUNAPI(HTTP API) Hanwha Vision Open Platform		
Operating Temperature	-30°C ~ +55°C (-22°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)	-40°C ~ +55°C (-40°F ~ +131°F) / +74°C / +165°F (MAX) based on NEMA-TS 2(2.2.7) * Start up should be done at above -30°C 0~100%RH(Condensing) Humidity control with AIR vent		
Certification	IP66, IK10, NEMA4X	IP67, IP66, IK10	IP66, IK10, NEMA4X, NEMA-TS 2(2.2.7, 2.2.8, 2.2.9)		
Power Consumption	PoE: Max 6.5W	PoE: Max 6W / 12V DC: Max 5.5W	Typical 20W, Max 42W		
Dimensions (WxHxD) / Weight	Ø112.8x63.7mm (Ø4.44" x 2.51") 420g (0.93lb)	Ø120x97.5mm (Ø4.72" x 3.84") 625g (1.38lb)	ø 184.9x318.8mm(7.28x12.55") / 5400g(11.90lb)	ø 184.9x318.8mm(7.28x12.55") / 5400g(11.90lb)	ø 184.9x318.8mm(7.28x12.55") / 5400g(11.90lb)
Additional Features	Handover, Hallway View	Handover, Hallway View	Upgraded preset accuracy, built-in wiper, object auto tracking, Target lock tracking Included SFP slot in HPoE injector		

PTZ PLUS



XNP-9250R
8MP 25x IR PTZ Camera

PTZ PLUS



XNP-8250R
6MP 25x IR PTZ Camera

PTZ PLUS



XNP-6400R
2MP 40x IR PTZ Camera

PTZ PLUS



XNP-9250
8MP 25x PTZ Camera

PTZ PLUS



XNP-8250
6MP 25x PTZ Camera

PTZ PLUS



XNP-6400
2MP 40x PTZ Camera

Imaging Device	1/2.8" CMOS					
Resolution / Max. Frame Rate	4K / 30fps	6MP / 30fps	2MP / 60fps	4K / 30fps	6MP / 30fps	2MP / 60fps
Min. Illumination	Color: 0.1Lux(F1.6, 1/30sec) BW: 0Lux(IR LED On)	Color: 0.1Lux(F1.6, 1/30sec) BW: 0Lux(IR LED On)	Color: 0.05Lux(F1.6, 1/30sec) BW: 0Lux(IR LED On)	Color: 0.1Lux(F1.6, 1/30sec) BW: 0.01Lux(F1.6, 1/30sec)	Color: 0.1Lux(F1.6, 1/30sec) BW: 0.01Lux(F1.6, 1/30sec)	Color: 0.05Lux(F1.6, 1/30sec) BW: 0.005Lux(F1.6, 1/30sec)
Video Out	-					
Focal Length (Zoom Ratio)	5~125mm(25x) zoom (digital 32x, total 800x zoom)	5~125mm(25x) zoom (digital 32x, total 800x zoom)	4.25~170mm(40x) zoom (digital 32x, total 1280x zoom)	5~125mm(25x) zoom (digital 32x, total 800x zoom)	5~125mm(25x) zoom (digital 32x, total 800x zoom)	4.25~170mm(40x) zoom (digital 32x, total 1280x zoom)
Angular Field of View	H: 57.42°(Wide)~2.71°(Tele) V: 33.54°(Wide)~1.55°(Tele)	H: 57.42°(Wide)~2.71°(Tele) V: 33.54°(Wide)~1.55°(Tele)	H: 65.66°(Wide)~1.88°(Tele) V: 39.40°(Wide)~1.09°(Tele)	H: 57.42°(Wide)~2.71°(Tele) V: 33.54°(Wide)~1.55°(Tele)	H: 57.42°(Wide)~2.71°(Tele) V: 33.54°(Wide)~1.55°(Tele)	H: 65.66°(Wide)~1.88°(Tele) V: 39.40°(Wide)~1.09°(Tele)
Pan / Tilt / Rotate Range	360° Endless / 110°(-20°~90°) / -	360° Endless / 110°(-20°~90°) / -	360° Endless / 110°(-20°~90°) / -	360° Endless / 110°(-20°~90°) / -	360° Endless / 110°(-20°~90°) / -	360° Endless / 110°(-20°~90°) / -
IR Viewable Length	200m(656.17ft), WiselR	200m(656.17ft), WiselR	200m(656.17ft), WiselR	-	-	-
Day & Night	Auto(ICR)/Color/BW/Schedule	Auto(ICR)/Color/BW/Schedule	Auto(ICR)/Color/BW/Schedule	Auto(ICR)/Color/BW/Schedule	Auto(ICR)/Color/BW/Schedule	Auto(ICR)/Color/BW/Schedule
Wide Dynamic Range	Extreme WDR(120dB)	Extreme WDR(120dB)	Extreme WDR(150dB)	Extreme WDR(120dB)	Extreme WDR(120dB)	Extreme WDR(150dB)
Digital Noise Reduction	SSNR V					
Digital Image Stabilization	Support(built-in gyro sensor)	Support(built-in gyro sensor)	Support(built-in gyro sensor)	Support(built-in gyro sensor)	Support(built-in gyro sensor)	Support(built-in gyro sensor)
Analytics	Directional detection, Fog detection, Face detection, Motion detection, Appear/Disappear, Enter/Exit, Loitering, Tampering, Virtual line, Shock detection * Audio detection, Sound classification(with NW I/O Box)					
Business Intelligence	-					
Alarm I/O	Compatible with NW I/O Box (Optional: SPM-4210)					
Audio I/O	Compatible with NW I/O Box (Optional: SPM-4210)					
Video Compression	H.265/H.264: Main/Baseline/High, MJPEG					
WiseStream	Manual(Sea area), WiseStream II					
Streaming	Up to 10 profiles					
Edge Storage	Micro SD/SDHC/SDXC 2slot 1TB	Micro SD/SDHC/SDXC 2slot 1TB	Micro SD/SDHC/SDXC 2slot 1TB	Micro SD/SDHC/SDXC 2slot 1TB	Micro SD/SDHC/SDXC 2slot 1TB	Micro SD/SDHC/SDXC 2slot 1TB
Application Programming Interface	ONVIF Profile S/G/T, SUNAPI(HTTP API) Hanwha Vision Open Platform					
Operating Temperature / Humidity	-40°C~+55°C(-40°F~+131°F) / +74°C(+165°F)(MAX) based on NEMA-TS 2(2.2.7) * Start up should be done at above -30°C 0~100%RH(Condensing) Humidity control with AIR vent	-40°C~+50°C(-40°F~+122°F) / +74°C(+165°F)(MAX) based on NEMA-TS 2(2.2.7) * Start up should be done at above -30°C 0~100%RH(Condensing) Humidity control with AIR vent	-40°C~+55°C(-40°F~+131°F) / +74°C(+165°F)(MAX) based on NEMA-TS 2(2.2.7) * Start up should be done at above -30°C 0~100%RH(Condensing) Humidity control with AIR vent	-40°C~+55°C(-40°F~+131°F) / +74°C(+165°F)(MAX) based on NEMA-TS 2(2.2.7) * Start up should be done at above -30°C 0~100%RH(Condensing) Humidity control with AIR vent	-40°C~+55°C(-40°F~+131°F) / +74°C(+165°F)(MAX) based on NEMA-TS 2(2.2.7) * Start up should be done at above -30°C 0~100%RH(Condensing) Humidity control with AIR vent	-40°C~+50°C(-40°F~+122°F) / +74°C(+165°F)(MAX) based on NEMA-TS 2(2.2.7) * Start up should be done at above -30°C 0~100%RH(Condensing) Humidity control with AIR vent
Certification	IP66, IK10, NEMA4X, NEMA-TS 2(2.2.8, 2.2.9)					
Power Consumption	Typical 20W, Max 40W	Typical 20W, Max 40W	Typical 20W, Max 40W	Typical 20W, Max 25W	Typical 20W, Max 25W	Typical 20W, Max 25W
Product Dimensions / Weight	ø 158x293.3mm(6.22x11.55") / 3200g(7.05lb)	ø 158x293.3mm(6.22x11.55") / 3200g(7.05lb)	ø 158x293.3mm(6.22x11.55") / 3200g(7.05lb)	ø 158x293.3mm(6.22x11.55") / 3200g(7.05lb)	ø 158x293.3mm(6.22x11.55") / 3200g(7.05lb)	ø 158x293.3mm(6.22x11.55") / 3200g(7.05lb)
Additional Features	Upgraded preset accuracy, object auto tracking, Target lock tracking Included SFP slot in HPoE injector					



XNP-6550RH
2MP 55x IR PTZ Camera



XNP-6371RH
2MP 37x IR PTZ Camera



XNP-6120H
2MP 12x PTZ Camera



XNP-6040H
2MP 4.3x PTZ Camera



XNZ-6320A
2MP 32x Zoom Camera



XNZ-L6320A
2MP 32x Zoom Camera

Imaging Device	1/2.8" 2MP CMOS		1/2" 2MP CMOS		1/2.8" 2MP CMOS		1/2.8" 2MP CMOS	
Resolution / Max. Frame Rate	2MP / 60fps						2MP / 60fps	
Min. Illumination	Color: 0.02Lux (F1.6) B/W: 0Lux (IR LED on)		Color: 0.01Lux (F1.5, 1/30sec) B/W: 0Lux (IR LED)		Color: 0.03 Lux (1/30sec, F1.6, 30IRE) B/W: 0.003 Lux (1/30sec, F1.6, 30IRE)		Color: 0.015Lux (F1.4, 1/30sec) B/W: 0.0015Lux (F1.4, 1/30sec)	
Video Out	CVBS: 1.0 Vp-p / 75Ω composite, 720x480(N), 720x576(P) for installation				CVBS: 1.0 Vp-p / 75Ω composite, 720x480(N), 720x576(P) for installation USB: Micro USB Type B, 1280x720 for installation		CVBS 1.0 Vp-p, Micro USB Type B	
Focal Length (Zoom Ratio)	4.75~261.4mm(55x) zoom		6~222mm(37x) zoom		5.2~62.4mm(12x) zoom (digital 32x, total 512x zoom)		2.8~12mm(4.3x) zoom (digital 32x, total 137.6x zoom)	
Angular Field of View	H: 58.6°(Wide)~1.23°(Tele) V: 34.8°(Wide)~0.71°(Tele)		H: 59.3°(Wide)~1.90°(Tele) V: 35.8°(Wide)~1.1°(Tele)		H: 54.58°(Wide)~5.30°(Tele) V: 32.19°(Wide)~3.00°(Tele)		H: 119.5°(Wide)~27.9°(Tele) V: 62.8°(Wide)~15.7°(Tele) D: 142.1°(Wide)~32.0°(Tele)	
Pan / Tilt / Rotate Range	360° Endless / 95° (-5°~90°) / -		360° Endless / 190° (-5°~185°) / -		360° Endless / 190° (-5°~185°) / -		0°~355° / 0°~90°	
IR Viewable Length	500m(1,640.42ft)		350m(1,148.29ft)		-		-	
Day & Night	Auto(ICR)						Auto(ICR)	
Wide Dynamic Range	150dB						120dB	
Digital Noise Reduction	SSNR V							
Digital Image Stabilization	Support(built-in gyro sensor)							
Analytics	Defocus detection, Directional detection, Fog detection, Face detection, Motion detection, Appear/Disappear, Enter/Exit, Loitering, Tampering, Virtual line, Audio detection, Sound classification, Shock detection				Directional detection, Fog detection, Face detection, Motion detection, Appear/Disappear, Enter/Exit, Loitering, Tampering, Virtual line, Audio detection, Sound classification		Intelligent analytics, Audio detection, Sound classification, Shock detection	
Business Intelligence	-		-		-		-	
Alarm I/O	4/2		4/2		1/1		1/1	
Audio I/O	Selectable(mic in/line in), Supply voltage: 2.5VDC(4mA), Input impedance: 2K Ohm Line out, Max.output level: 1Vrms						Selectable (mic in/line in) / Line out	
Video Compression	H.265/H.264, MJPEG							
WiseStream	Manual(Sea area), WiseStream II							
Streaming	Up to 10 profiles						Up to 10 profiles	
Edge Storage	Micro SD/SDHC/SDXC 2slot 512GB		SD/SDHC/SDXC 1slot 256GB		Micro SD/SDHC/SDXC 2slot 512GB		Micro SD/SDHC/SDXC 2 slot 512GB	
Application Programming Interface	ONVIF Profile S/G/T, SUNAPI(HTTP API) Hanwha Vision Open Platform							
Operating Temperature / Humidity	24VAC: -50°C~+55°C (-58°F~+131°F), Less than 95% RH-Non-Condensing HPoE: -40°C~+55°C (-40°F~+131°F) / Less than 95% RH-Non-Condensing * Start up should be done at above -35°C FAN/Heater included		-50°C~+55°C(-58°F~+131°F)		-30°C~+55°C(-22°F~+131°F) / Less than 90% RH		-30°C~+55°C(-22°F~+131°F) / Less than 90% RH	
Certification	IP66, IK10		IP66, IK10		IP66, IK10		IP66, IK10	
Power Consumption	24VAC: Max. 92W (typical: 30W) HPoE: Max. 60W (typical: 30W)		24VAC: Max 90W		Max. 12W		DC12V: Max. 8.6W PoE: Max. 9.6W	
Product Dimensions / Weight	ø 236.9x407.7mm(9.33x16.05"), 7.1Kg(15.65lb)		ø 236.9x407.7mm(9.33x16.05"), 7.1Kg(15.65lb)		ø 168x161.5mm(6.61x6.36"), 1.9kg(4.19lb)		ø 136x106mm(5.35x4.17"), 780g(1.72lb)	
Additional Features	Defog, Auto tracking						Defog	



PNM-9031RV
15MP IR Panoramic Camera



PNM-9030V
15MP Panoramic Camera



PNM-9022V
8.3MP Panoramic Camera



PNM-9085RQZ1
5MP x 4CH IR PTRZ Multi-directional Camera



PNM-9084RQZ1
2MP x 4CH IR PTRZ Multi-directional Camera

Imaging Device	1/2.8" 5MP CMOS (x4)	1/2.8" 4CH	1/2.8" 4CH	1/1.8" 5MP CMOS x 4CH	1/2.8" CMOS x 4CH
Resolution / Max. Frame Rate	15MP / 20fps	15.5MP / 30fps	8.3MP / 30fps	8MP / 30fps	8MP / 60fps
Min. Illumination	Color: 0.1Lux(F1.6, 1/30sec) BW: 0Lux(IR LED on)	Color: 0.15Lux (F2.0) B/W: 0.01Lux (F2.0)	Color: 0.3Lux(F1.6) Color: 0.03Lux(F1.6)	Color: 0.11lux(F1.92, 30IRE) BW: 0Lux(IR LED on)	Color: 0.05Lux(F1.6, 30IRE) BW: 0Lux(IR LED on)
Video Out	Micro USB Type B	Micro USB Type B	Micro USB Type B	-	-
Focal Length (Zoom Ratio)	4.3mm Fixed	4mm fixed	2.8mm fixed focal	4.13~9.4mm(2.3x) motorized varifocal	3.2~10mm(3.1x) motorized varifocal
Angular Field of View	H: 196° / V: 64° (Min distance 5m) H: 197° / V: 64° (Max distance 100m)	[180° mode] H: 180° / V: 70° [220° mode] H: 220° / V: 52°	H: 209°, V: 83.3°	H: 87.58° (Wide)~37.34° (Tele) / V: 64.58° (Wide)~28.04° (Tele) / D: 112.46° (Wide)~46.85° (Tele)	H: 109.0° (Wide)~33.2° (Tele) V: 57.4° (Wide)~18.7° (Tele) D: 132.0° (Wide)~38.0° (Tele)
Pan / Tilt / Rotate Range	0~360° / 0~60° / -	0°~355° / 0°~60° / -	0°~355° / 0°~60° / -	Remote adjustment (Max. 200cycles) 0~360° / 35~80° / 0~90°	Remote adjustment (Max. 200cycles) 0~360° / 35~80° / 0~90°
IR Viewable Length	20m(65.62ft)	-	-	30m(98.43ft)	30m(98.43ft)
Day & Night	Auto(ICR)				
Wide Dynamic Range	120dB	120dB	extreme WDR(120dB)	120dB	120dB
Digital Noise Reduction	SSNR V				
Digital Image Stabilization	-	-	-	Support	Support
Analytics	Defocus detection, Motion detection, Appear/Disappear, Enter/Exit, Tampering, Virtual line, Audio detection	Intelligent analytics Audio detection Sound classification	Defocus detection, Motion detection, Appear/Disappear, Enter/Exit, Tampering, Virtual line, Audio detection	Defocus detection, Directional detection, Fog detection, Face detection, Motion detection, Appear/Disappear, Enter/Exit, Loitering, Tampering, Virtual line, Audio detection	Defocus detection, Directional detection, Fog detection, Face detection, Motion detection, Appear/Disappear, Enter/Exit, Loitering, Tampering, Virtual line, Audio detection
Business Intelligence	Heatmap	Heatmap	Heatmap	-	-
Alarm I/O	2 / 1	1 / 1	1 / 1	1 / 1	1 / 1
Audio I/O	Selectable (mic in/line in)	Line in / Line out	Selectable (mic in/line in) / Line out	Selectable (mic in/line in) / Line out	Selectable (mic in/line in) / Line out
Video Compression	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
WiseStream	WiseStream II	WiseStream II	WiseStream II	WiseStream II	WiseStream II
Streaming	Up to 3 profiles	Up to 5 or 3 profiles for each CH	Up to 10 profiles	Up to 10 profiles	Up to 10 profiles
Edge Storage	Micro SD/SDHC/SDXC 2slots 512GB (256GBx2)	Micro SD/SDHC/SDXC	Micro SD/SDHC/SDXC	Micro SD/SDHC/SDXC 4slot 256GB(each CH)	Micro SD/SDHC/SDXC 4slot 256GB(each CH)
Application Programming Interface	ONVIF Profile S/G/T, SUNAPI(HTTP API)	ONVIF profile S/G, SUNAPI	ONVIF Profile S/G/T, SUNAPI, Hanwha Vision Open Platform	ONVIF Profile S/T, SUNAPI(HTTP API) Hanwha Vision Open Platform	ONVIF Profile S/T, SUNAPI(HTTP API) Hanwha Vision Open Platform
Operating Temperature / Humidity	-40°C~+55°C(-40°F~+131°F) * Startup should be above -30°C Less than 95% RH(Non-condensing)	-40°C~+55°C (-40°F~+131°F) * Start up above -30°C (-22°F)	-40°C~+60°C(-40°F~+131°F) / Less than 95% RH(Non-condensing) * Maximum temperature: +60°C (intermittent)	-40°C~+55°C(-40°F~+131°F) / Less than 90% RH	-40°C~+55°C(-40°F~+131°F) / Less than 90% RH
Certification	IP66, IK 10, NEMA4X	IP66, IK 10	IP66, IK 10, NEMA4X	IP66, IK 10, NEMA4X	IP66, IK 10, NEMA4X
Power Consumption	PoE+: Max 23.5W, Typical 18.0W 12VDC: Max 20.5W, Typical 16.0W*	PoE+: Max 25.5W 12VDC: Max 21.0W	PoE+: Max 18W, Typical 10.4W	PoE: Max. 45W, Typical 33.7W 12VDC: Max. 42W, Typical 32W	PoE: Max. 42W, Typical 30W 12VDC: Max. 38W, Typical 28.2W
Product Dimensions / Weight	Ø253x170mm / 2.6Kg	Ø253 x H165mm (Ø9.96" x 6.5") 3.2Kg (7.1lb)	Ø253 x 165mm (Ø9.96" x 6.5") 3200g	Ø315x145.9mm(12.40"x5.74") / 5.2kg(11.5lb)	Ø315x145.9mm(12.40"x5.74") / 5.2kg(11.5lb)
Additional Features	-	Defog	4CH Stitching	Motorized PTRZ	Motorized PTRZ



PNM-9084QZ1
2MP x 4CH PTRZ Multi-directional Camera



PNM-8082VT
2MP x 3CH Multi-directional Camera



PNM-12082RVD
6MP x 2CH Multi-directional Camera



PNM-7082RVD
2MP x 2CH Multi-directional Camera

Imaging Device	1/2.8" CMOS x 4CH	1/2.8" CMOS 3CH	1/2.8" CMOS x 2CH	1/2.8" CMOS x 2CH
Resolution / Max. Frame Rate	8MP / 60fps	2MP / 30fps	6MP / 15fps	2MP / 30fps
Min. Illumination	Color: 0.04lux(F2.2, 1/30sec) BW: 0.004lux(F2.2, 1/30sec)	Color: 0.04lux(F2.2) BW: 0.004lux(F2.2)	Color: 0.16lux(F1.67, 1/30sec, 30IRE) BW: 0lux(IR LED on)	Color: 0.035lux(F2.2, 1/30sec, 30IRE) BW: 0lux(IR LED on)
Video Out	-	CVBS: 1.0 Vp-p	micro USB Type B	micro USB Type B
Focal Length (Zoom Ratio)	3~6mm(2x) motorized varifocal	3~6mm(2x) motorized varifocal	3.54~6.69mm(1.9x) motorized varifocal	3~6mm(2x) motorized varifocal
Angular Field of View	H: 107° (Wide)~56.3° (Tele) V: 57° (Wide)~31.5° (Tele) D: 126° (Wide)~64.3° (Tele)	H: 107° (Wide)~56.3° (Tele) V: 57° (Wide)~31.5° (Tele) D: 126° (Wide)~64.3° (Tele)	H: 96° (Wide)~47° (Tele) V: 51° (Wide)~26° (Tele) D: 113° (Wide)~54° (Tele)	H: 107° (Wide)~56° (Tele) V: 57° (Wide)~31° (Tele) D: 126° (Wide)~64° (Tele)
Pan / Tilt / Rotate Range	Remote adjustment (Max. 200cycles) 0~360° / 0~73° / 0~90°	0~360° / 0~73° / 0~90°	0~355° / 0~78° / 0~180°	0~355° / 0~78° / 0~180°
IR Viewable Length	-	-	25m(82ft)	25m(82ft)
Day & Night	Auto(ICR)	Auto(ICR)	Auto(ICR)	Auto(ICR)
Wide Dynamic Range	120dB	extremeWDR(150dB)	extremeWDR(120dB)	extremeWDR(150dB)
Digital Noise Reduction	SSNR V	SSNR V	WiseNR, SSNR V	WiseNR, SSNR V
Digital Image Stabilization	Support	Support	-	-
Analytics	Defocus detection, Directional detection, Fog detection, Face detection, Motion detection, Appear/Disappear, Enter/Exit, Loitering, Tampering, Virtual line, Audio detection	Defocus detection, Directional detection, Motion detection, Enter/Exit, Tampering, Virtual line detection	Analytics events* - Defocus detection, Motion detection, Tampering, Virtual line(Crossing/Direction), Virtual area(Loitering/Enter/Exit) * Support Audio detection, Sound classification via optional SPM-4210/O box	
Business Intelligence	-	-	-	-
Alarm I/O	1 / 1	-	-	-
Audio I/O	Selectable(mic in/line in) / Line out	-	-	-
Video Compression	H.265/H.264, MJPEG	H.265, H.264, MJPEG	H.265/H.264: Main/Baseline/High, MJPEG	H.265/H.264: Main/Baseline/High, MJPEG
WiseStream	WiseStream II	WiseStream II	WiseStream II	WiseStream II
Streaming	Up to 10 profiles	Up to 10 profiles	Up to 10 profiles	Up to 10 profiles
Edge Storage	Micro SD/SDHC/SDXC 4slot 256GB(each CH)	Micro SD/SDHC/SDXC	Micro SD/SDHC/SDXC 1slot Max. 512GB	Micro SD/SDHC/SDXC 1slot Max. 512GB
Application Programming Interface	ONVIF Profile S/T SUNAPI(HTTP API) Hanwha Vision Open Platform	ONVIF Profile S/G/T SUNAPI(HTTP API)	ONVIF Profile S/T SUNAPI(HTTP API) Open platform	ONVIF Profile S/T SUNAPI(HTTP API) Open platform
Operating Temperature / Humidity	-40°C~+55°C(-40°F~+131°F) / Less than 90% RH *Start up should be above at -35°C			
Certification	IP66, IK10, NEMA4X	IP66, IK10, NEMA4X	IP66/IP67, NEMA4X, IK10	IP66/IP67, NEMA4X, IK10
Power Consumption	Max. 33W, Typical 20W	PoE+: Max : 16.5W, Typical : 8.2W	PoE+: Max 18.3W, typical 13.5W	PoE+: Max 17W, typical 12.5W
Product Dimensions / Weight	Ø251x116.5mm / 3Kg	Ø251 x 116.5mm (Ø9.88" x 4.59") 3kg (6.6lb)	215(W)x135(D)x93.2(H)mm(8.46"x5.31"x3.67") / 1330g	215(W)x135(D)x93.2(H)mm(8.46"x5.31"x3.67") / 1330g
Additional Features	Motorized PTRZ	3CH Multi-directional	-	-



PNM-9000QB
2MP x 4CH Remote Head Camera



SLA-T4680A/T4680VA
2MP lens for PNM-9000QB



SLA-T2480A/T2480VA
2MP lens for PNM-9000QB



SLA-T1080FA
2MP lens for PNM-9000QB

Imaging Device	-	1/2.8" 2MP CMOS	1/2.8" 2MP CMOS	1/2.8" 2MP CMOS
Resolution / Max. Frame Rate	2MP / 30fps	-	-	-
Min. Illumination	-	Color: 0.06Lux(F2.5)	Color: 0.045Lux(F2.0)	Color: 0.03Lux(F1.6)
Video Out	HDMI(1920x1080, Quad view support)	-	-	-
Focal Length (Zoom Ratio)	-	4.6mm fixed focal	2.4mm fixed focal	1.6mm fixed focal
Angular Field of View	-	H: 73° / V: 39° / D: 85°	H: 138° / V: 73° / D: 165°	H: 187° / V: 113.9°
Pan / Tilt / Rotate Range	-	-	-	-
IR Viewable Length	-	-	-	-
Day & Night	Auto(electrical)	-	-	-
Wide Dynamic Range	extreme WDR(150dB)	-	-	-
Digital Noise Reduction	SSNRV	-	-	-
Digital Image Stabilization	Support	-	-	-
Analytics	Defocus detection, Directional detection, Motion detection, Enter/Exit, Tampering, Virtual line	-	-	-
Business Intelligence	-	-	-	-
Alarm I/O	1 / 1	-	-	-
Audio I/O	Selectable(mic in/line in) / Line out	-	-	-
Video Compression	H.265, H.264, MJPEG	-	-	-
WiseStream	WiseStream II	-	-	-
Streaming	Up to 10 profiles	-	-	-
Edge Storage	Micro SD/SDHC/SDXC	-	-	-
Application Programming Interface	ONVIF Profile S/G/T, SUNAPI(HTTP API) Hanwha Vision Open Platform	-	-	-
Operating Temperature / Humidity	-10° C ~ +45° C (-40° F ~ +113° F) / Less than 95% RH(Non condensing)	-	-	-
Certification	-	-	-	-
Power Consumption	PoE: Max 22W, Typical 16.70W DC: Max 19W, Typical: 14W	-	-	-
Product Dimensions / Weight	W 200 x H 37 x D 146mm (7.87" x 1.46" x 5.75") 715g (1.58lb)	Ø24 x L49.8mm, 310g (SLA-T4681) W30 x H27.9 x D45mm, 321g (SLA-T4681V)	Ø24 x L49.8mm, 318g (SLA-T2481) W30 x H27.9 x D45mm, 328g (SLA-T2481V)	Ø35 x L68.9mm 430g
Additional Features	Optional pinhole/ fixed lens	-	-	-



QNO-8080R
5MP IR Bullet Camera



QNO-8020R
5MP IR Bullet Camera



QNO-8010R
5MP IR Bullet Camera



QND-8080R
5MP IR Dome Camera



QND-8020R
5MP IR Dome Camera

Imaging Device	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS
Resolution / Max. Frame Rate	5MP / 30fps	5MP / 30fps	5MP / 30fps	5MP / 30fps	5MP / 30fps
Min. Illumination	Color : 0.15Lux (F1.6) B/W : 0Lux (IR LED on)	Color : 0.15Lux (F1.6) B/W : 0Lux (IR LED on)	Color : 0.15Lux (F2.0) B/W : 0Lux (IR LED on)	Color : 0.15Lux (F1.6) B/W : 0Lux (IR LED on)	Color : 0.15Lux (F1.6) B/W : 0Lux (IR LED on)
Video Out	CVBS 1.0 Vp-p	CVBS 1.0 Vp-p	CVBS 1.0 Vp-p	CVBS 1.0 Vp-p	CVBS 1.0 Vp-p
Focal Length (Zoom Ratio)	3.2 ~ 10mm (3.1x) motorized varifocal	4.0mm fixed	2.8mm fixed	3.2 ~ 10mm (3.1x) motorized varifocal	4.0mm fixed
Angular Field of View	H : 100.3° (Wide) ~ 31.2° (Tele) / V : 72.3° (Wide) ~ 23.5° (Tele) / D : 133.1° (Wide) ~ 38.8° (Tele)	H : 79.8° / V : 58.1° / D : 105.9°	H : 104.7° / V : 76.5° / D : 136.0°	H : 100.3° (Wide) ~ 31.2° (Tele) / V : 72.3° (Wide) ~ 23.5° (Tele) / D : 133.1° (Wide) ~ 38.8° (Tele)	H : 79.8° / V : 58.1° / D : 105.9°
Pan / Tilt / Rotate Range	-	-	-	0° ~ 350° / 0° ~ 67° / 0° ~ 355°	0° ~ 350° / 0° ~ 67° / 0° ~ 355°
IR Viewable Length	30m (98.43ft)	25m (82.02ft)	20m (65.62ft)	20m (65.62ft)	20m (65.62ft)
Day & Night	Auto (ICR)	Auto (ICR)	Auto (ICR)	Auto (ICR)	Auto (ICR)
Wide Dynamic Range	120dB	120dB	120dB	120dB	120dB
Digital Noise Reduction	SSNR	SSNR	SSNR	SSNR	SSNR
Digital Image Stabilization	-	-	-	-	-
Analytics	Motion detection, Tampering, Defocus detection, Virtual area (Intrusion/Enter/Exit), Virtual line (Crossing/Direction)				
Business Intelligence	-	-	-	-	-
Alarm I/O	-	-	1/1	-	-
Audio I/O	-	-	-	-	-
Video Compression	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
WiseStream	WiseStream II	WiseStream II	WiseStream II	WiseStream II	WiseStream II
Streaming	Up to 3 Profiles	Up to 3 Profiles	Up to 3 Profiles	Up to 3 Profiles	Up to 3 Profiles
Edge Storage	Micro SD/SDHC/SDXC	Micro SD/SDHC/SDXC	Micro SD/SDHC/SDXC	Micro SD/SDHC/SDXC	Micro SD/SDHC/SDXC
Application Programming Interface	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform
Operating Temperature / Humidity	-30°C ~ +55°C (-22°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)	-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)
Certification	IP66, IK10	IP66, IK10	IP66, IK10	-	-
Power Consumption	PoE : Max 9.5W, typical 7.3W	PoE : Max 7.5W, typical 6.1W	PoE : Max 7.5W, typical 6.1W	PoE : Max 8.9W, typical 6.6W	PoE : Max 6.8W, typical 5.0W
Dimensions (WxHxD) / Weight	Ø91 x 322.9mm (Ø3.58" x 12.71") 1190g (2.624 lb)	Ø70.0 x 246.0mm (Ø2.76" x 9.69") 680g (1.499 lb)	Ø70.0 x 246.0mm (Ø2.76" x 9.69") 680g (1.499 lb)	Ø120.3 x 102.0mm (Ø4.74" x 4.02") 430g (0.948 lb)	Ø110.6 x 89.5mm (Ø4.35" x 3.52") 360g (0.794 lb)
Additional Features	Hallway View	Hallway View	Hallway View	Hallway View	Hallway View



QND-8010R
5MP IR Dome Camera



QND-8021
5MP Dome Camera



QND-8011
5MP Dome Camera

Imaging Device	1/2.8" CMOS		
Resolution / Max. Frame Rate	5MP / 30fps	5MP / 30fps	5MP / 30fps
Min. Illumination	Color : 0.15Lux (F2.0) B/W : 0Lux (IR LED on)	Color : 0.15Lux (F1.6)	Color : 0.15Lux (F2.0)
Video Out	CVBS 1.0 Vp-p	Micro HDMI	Micro HDMI
Focal Length (Zoom Ratio)	2.8mm fixed	4mm fixed	2.8mm fixed
Angular Field of View	H : 104.7° / V : 76.5° / D : 136°	H : 80.1° / V : 58° / D : 105.8°	H : 104.4° / V : 76.7° / D : 136.1°
Pan / Tilt / Rotate Range	0° ~ 350° / 0° ~ 67° / 0° ~ 355°	0° ~ 350° / 0° ~ 69° / 0° ~ 355°	0° ~ 350° / 0° ~ 69° / 0° ~ 355°
IR Viewable Length	20m (65.62ft)	-	-
Day & Night	Auto (ICR)	Auto (Electrical)	Auto (Electrical)
Wide Dynamic Range	120dB		
Digital Noise Reduction	SSNR		
Digital Image Stabilization	-		
Analytics	Motion detection, Tampering, Defocus detection, Virtual area(Intrusion/Enter/Exit), Virtual line(Crossing/Direction)	Defocus detection, Motion detection, Tampering	Defocus detection, Motion detection, Tampering
Business Intelligence	-	People counting	People counting
Alarm I/O	1 / 1	-	-
Audio I/O	-		
Video Compression	H.265 / H.264, MJPEG		
WiseStream	WiseStream II		
Streaming	Up to 3 Profiles		
Edge Storage	micro SD/SDHC/SDXC	micro SD/SDHC/SDXC	micro SD/SDHC/SDXC
Application Programming Interface	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform
Operating Temperature / Humidity	-10°C ~ +55°C (+14°F ~ +131°F)	-10°C ~ +40°C (+14°F ~ +104°F)	-10°C ~ +40°C (+14°F ~ +104°F)
Certification	-	IP42, IK08	IP42, IK08
Power Consumption	PoE : Max 7.5W, typical 5.8W	PoE : Max 5W, typical 4W	PoE : Max 5W, typical 4W
Product Dimensions / Weight	Ø 110.6 x 89.5mm (Ø4.35" x 3.52") 360g (0.794lb)	Ø 99 x 56mm (Ø3.9" x 2.2") 165g (0.364lb)	Ø 99 x 56mm (Ø3.9" x 2.2") 165g (0.364lb)
Additional Features	Hallway View	Super compact design, Hallway View	Super compact design, Hallway View



QNV-8080R
5MP IR Vandal Dome Camera



QNV-8020R
5MP IR Vandal Dome Camera



QNV-8010R
5MP IR Vandal Dome Camera



QNB-8002
5MP Box Camera



QNE-8011R
5MP IR Flateye Camera

Imaging Device	1/2.8" CMOS			
Resolution / Max. Frame Rate	5MP / 30fps			
Min. Illumination	Color: 0.15Lux (F1.6) B/W: 0Lux (IR LED on)	Color: 0.15Lux (F1.6) B/W: 0Lux (IR LED on)	Color: 0.15Lux (F2.0) B/W: 0Lux (IR LED on)	Color: 0.07Lux (F1.2)
Video Out	CVBS 1.0 Vp-p			
Focal Length (Zoom Ratio)	3.2~10mm (3.1x) motorized varifocal	4.0mm fixed	2.8mm fixed	-
Angular Field of View	H: 100.3° (Wide) ~ 31.2° (Tele) V: 72.3° (Wide) ~ 23.5° (Tele) D: 133.1° (Wide) ~ 38.8° (Tele)	H: 79.8° / V: 58.1° / D: 105.9°	H: 104.7° / V: 76.5° / D: 136°	H: 104.4° V: 76.7° D: 136.1°
Pan / Tilt / Rotate Range	0° ~ 350° / 0° ~ 67° / 0° ~ 355°	0° ~ 350° / 0° ~ 67° / 0° ~ 355°	0° ~ 350° / 0° ~ 67° / 0° ~ 355°	0° ~ 350° / 0° ~ 75° / 0° ~ 360°
IR Viewable Length	30m (98.42ft)	25m (82.02ft)	20m (65.62ft)	20m (65.62ft)
Day & Night	Auto (ICR)			
Wide Dynamic Range	120dB			
Digital Noise Reduction	SSNR			
Digital Image Stabilization	-			
Analytics	Motion detection, Tampering, Defocus detection, Virtual area (Intrusion/Enter/Exit), Virtual line (Crossing/Direction)			Intelligent analytics
Business Intelligence	-			
Alarm I/O	1 / 1	1 / 1	1 / 1	-
Audio I/O	-	-	-	Line in / Line out
Video Compression	H.265 / H.264, MJPEG			
WiseStream	WiseStream II			
Streaming	Up to 3 Profiles			
Edge Storage	micro SD/SDHC/SDXC			
Application Programming Interface	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform			
Operating Temperature / Humidity	-30°C ~ +55°C (-22°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)	-30°C ~ +55°C (-22°F ~ +131°F) * Start up above -20°C (-4°F)	-10°C ~ +55°C (+14°F ~ +131°F)
Certification	IP66, IK10	IP66, IK10	IP66, IK10	IP67, IK10
Power Consumption	PoE: Max 8.9W, typical 6.6W	PoE: Max 7.2W, typical 5.4W	PoE: Max 7.5W, typical 5.8W	PoE: Max 6.4W, typical 4.6W 12VDC: Max 5.8W, typical 4.1W
Product Dimensions / Weight	Ø 137 x 106.1mm (Ø 5.39" x 4.18") 700g (1.543lb)	Ø 120.3 x 91.7mm (Ø 4.74" x 3.61") 510g (1.124lb)	Ø 120.3 x 91.7mm (Ø 4.74" x 3.61") 510g (1.124lb)	W 73.8 x H 66.6 x D 136.2mm (2.91" x 2.62" x 5.36") 320g (0.71lb)
Additional Features	Hallway View			



QNO-7082R
4MP IR Bullet Camera



QNO-7032R
4MP IR Bullet Camera



QNO-7022R
4MP IR Bullet Camera



QNO-7012R
4MP IR Bullet Camera

Imaging Device	1/3" CMOS		
Resolution / Max. Frame Rate	4MP / 30fps		
Min. Illumination	Color : 0.1Lux (F1.6, 1/30sec) B/W : 0Lux (IR LED On)	Color : 0.15Lux (F2.0, 1/30sec) B/W : 0Lux (IR LED On)	Color : 0.15Lux (F1.6, 1/30sec) B/W : 0Lux (IR LED On)
Video Out	CVBS 1.0 Vp-p	CVBS 1.0 Vp-p	CVBS: 1.0 Vp-p
Focal Length (Zoom Ratio)	3.2~10mm (3.1x) motorized varifocal	6mm fixed focal	4mm fixed focal
Angular Field of View	H: 98.6°(Wide) ~ 30.8°(Tele) V: 52.3°(Wide) ~ 17.3°(Tele) D: 115.7°(Wide) ~ 35.3°(Tele)	H: 49.0° / V: 27.6° / D: 55.6°	H: 78.2° / V: 41.2° / D: 92°
Pan / Tilt / Rotate Range	-	-	-
IR Viewable Length	30m (98.42ft)	30m (98.42ft)	25m (82.02ft)
Day & Night	Auto (ICR)		
Wide Dynamic Range	120dB		
Digital Noise Reduction	SSNR		
Digital Image Stabilization	-	-	-
Analytics	Motion detection, Tampering, Defocus detection, Virtual area(Intrusion/Enter/Exit), Virtual line(Crossing/Direction)	Motion detection, Tampering, Defocus detection, Virtual area(Intrusion/Enter/Exit), Virtual line(Crossing/Direction)	Motion detection, Tampering, Defocus detection, Virtual area(Intrusion/Enter/Exit), Virtual line(Crossing/Direction)
Business Intelligence	-	-	-
Alarm I/O	1/1	1/1	1/1
Audio I/O	Line in / -	Selectable (mic in/line in) / -	Selectable (mic in/line in) / -
Video Compression	H.265 / H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG
WiseStream	WiseStream II		
Streaming	Up to 3 Profiles		
Edge Storage	micro SD/SDHC/SDXC 1slot 128GB		
Application Programming Interface	ONVIF Profile S/G/T, SUNAPI (HTTP API)	ONVIF Profile S/G/T, SUNAPI (HTTP API)	ONVIF Profile S/G/T, SUNAPI (HTTP API)
Operating Temperature / Humidity	-40°C ~ +55°C (-40°F ~ +131°F) / 0~95% RH * Start up should be done at -30°C or above		
Certification	IP66, IK10	IP66, IK10	IP66, IK10
Power Consumption	PoE: Max 11.4W, typical 8W 12VDC: Max 9.6W, typical 7W	PoE: Max 10.7W, typical 8W 12VDC: Max 9.1W, typical 6.8W	PoE: Max 10.7W, typical 8W 12VDC: Max 9.1W, typical 6.8W
Product Dimensions / Weight	Ø78.0 x 259.8mm (Ø3.07 x 10.23"), 900g (1.984 lb)	Ø70.0 x 246.0mm (Ø2.76 x 9.69"), 700g (1.543 lb)	PoE: Max 10.7W, typical 8W 12VDC: Max 9.1W, typical 6.8W
Additional Features	Hallway View		



QNO-6082R/6082R1
2MP IR Bullet Camera



QNO-6072R/6072R1
2MP IR Bullet Camera



QNO-6022R/6022R1
2MP IR Bullet Camera



QNO-6012R/6012R1
2MP IR Bullet Camera

Imaging Device	1/2.8" CMOS							
Resolution / Max. Frame Rate	2MP / 30fps							
Min. Illumination	Color: 0.03Lux (F1.6) B/W: 0Lux (IR LED on)							
Video Out	CVBS 1.0Vp-p							
Focal Length (Zoom Ratio)	3.2~10mm (3.1x) motorized varifocal		3.2~10mm (3.1x) manual varifocal		4mm fixed		2.8mm fixed	
Angular Field of View	H: 109° (Wide) ~ 33.2° (Tele) V: 57.4° (Wide) ~ 18.7° (Tele) D: 132° (Wide) ~ 38° (Tele)		H: 109° (Wide) ~ 33.2° (Tele) V: 57.4° (Wide) ~ 18.7° (Tele) D: 132° (Wide) ~ 38° (Tele)		H: 87.6° / V: 46.4° / D: 104.5°		H: 113.74° / V: 61.5° / D: 134.45°	
Pan / Tilt / Rotate Range	-							
IR Viewable Length	30m (98.43ft)		30m (98.43ft)		25m (82.02ft)		20m (65.62ft)	
Day & Night	Auto (ICR)							
Wide Dynamic Range	120dB							
Digital Noise Reduction	SSNR							
Digital Image Stabilization	-							
Analytics	Motion detection, Tampering, Defocus detection, Virtual area (Intrusion/Enter/Exit), Virtual line (Crossing/Direction)							
Business Intelligence	-							
Alarm I/O	1 / 1							
Audio I/O	Selectable (mic in/line in)	-	Selectable (mic in/line in)	-	Selectable (mic in/line in)	-	Selectable (mic in/line in)	-
Video Compression	H.265 / H.264, MPEG							
WiseStream	WiseStream II							
Streaming	Up to 3 Profiles							
Edge Storage	micro SD/SDHC/SDXC							
Application Programming Interface	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform							
Operating Temperature / Humidity	-30°C ~ +55°C (-22°F ~ +131°F) * Start up above -20°C (-4°F)							
Certification	IP66, IK10							
Power Consumption	PoE: Max 7.4W, typical 5.4W 12VDC: Max 6.5W, typical 4.8W		PoE: Max 7.4W, typical 5.4W 12VDC: Max 6.5W, typical 4.8W		PoE: Max 7W, typical 5.2W 12VDC: Max 6.1W, typical 4.5W		PoE: Max 7W, typical 5.2W 12VDC: Max 6.1W, typical 4.5W	
Product Dimensions / Weight	Ø78 x 259.8mm (Ø3.07" x 10.23") 900g (1.984lb)		Ø70 x 246mm (Ø2.76" x 9.69") 730g (1.609lb)		Ø70 x 246mm (Ø2.76" x 9.69") 700g (1.543lb)		Ø70 x 246mm (Ø2.76" x 9.69") 700g (1.543lb)	
Additional Features	Hallway View							



QND-7082R
4MP IR Dome Camera



QND-7032R
4MP IR Dome Camera



QND-7022R
4MP IR Dome Camera



QND-7012R
4MP IR Dome Camera

Imaging Device	1/3" CMOS		
Resolution / Max. Frame Rate	4MP / 30fps		
Min. Illumination	Color: 0.1Lux (F1.6, 1/30sec) B/W: 0Lux (IR LED On)	Color: 0.15Lux (F2.0, 1/30sec) B/W: 0Lux (IR LED On)	Color: 0.15Lux (F2.0, 1/30sec) B/W: 0Lux (IR LED On)
Video Out	CVBS 1.0 Vp-p		
Focal Length (Zoom Ratio)	3.2~10mm (3.1x) motorized varifocal	6mm fixed focal	4mm fixed focal
Angular Field of View	H: 98.6° (Wide) ~ 30.8° (Tele) V: 52.3° (Wide) ~ 17.3° (Tele) D: 115.7° (Wide) ~ 35.3° (Tele)	H: 49.0° / V: 27.6° / D: 55.6°	H: 78.2° / V: 41.2° / D: 92°
Pan / Tilt / Rotate Range	0° ~ 350° / 0° ~ 67° / 0° ~ 355°		
IR Viewable Length	20m (65.62ft)		
Day & Night	Auto (ICR)		
Wide Dynamic Range	120dB		
Digital Noise Reduction	SSNR		
Digital Image Stabilization	-		
Analytics	Motion detection, Tampering, Defocus detection, Virtual area (Intrusion/Enter/Exit), Virtual line (Crossing/Direction)		
Business Intelligence	-		
Alarm I/O	1/1		
Audio I/O	Built-in mic / -		
Video Compression	H.265 / H.264, MJPEG		
WiseStream	WiseStream II		
Streaming	Up to 3 Profiles		
Edge Storage	microSD/SDHC/SDXC 1slot 128GB		
Application Programming Interface	ONVIF Profile S/G/T, SUNAPI (HTTP API)		
Operating Temperature / Humidity	-10°C ~ +55°C (+14°F ~ +131°F) / 0~95% RH		
Certification	-		
Power Consumption	PoE: Max 8.6W, typical 6.3W 12VDC: Max 7.6W, typical 5.4W	PoE: Max 7.9W, typical 6.1W 12VDC: Max 7.1W, typical 5.1W	PoE: Max 7.9W, typical 6.1W 12VDC: Max 7.1W, typical 5.1W
Product Dimensions / Weight	Ø119.8 x 98.8mm (Ø4.72" x 3.89") 320g (0.705 lb)	Ø110.0 x 86.0mm (Ø4.33 x 3.39"), 255g (0.562 lb)	Ø110 x 86mm (Ø4.33" x 3.39") 255g (0.562 lb)
Additional Features	Hallway View		



QND-6082R/6082R1
2MP IR Dome Camera



QND-6072R/6072R1
2MP IR Dome Camera



QND-6022R/6022R1
2MP IR Dome Camera



QND-6012R/6012R1
2MP IR Dome Camera

Imaging Device	1/2.8" CMOS							
Resolution / Max. Frame Rate	2MP / 30fps							
Min. Illumination	Color : 0.03Lux (F1.6) B/W : 0Lux (IR LED on)		Color : 0.03Lux (F1.6) B/W : 0Lux (IR LED on)		Color : 0.03Lux (F1.6) B/W : 0Lux (IR LED on)		Color : 0.03Lux (F2.0) B/W : 0Lux (IR LED on)	
Video Out	CVBS 1.0Vp-p							
Focal Length (Zoom Ratio)	3.2~10mm (3.1x) motorized varifocal		3.2~10mm (3.1x) manual varifocal		4mm fixed		2.8mm fixed	
Angular Field of View	H: 109° (Wide) ~ 33.2° (Tele) V: 57.4° (Wide) ~ 18.7° (Tele) D: 132° (Wide) ~ 38° (Tele)		H: 109° (Wide) ~ 33.2° (Tele) V: 57.4° (Wide) ~ 18.7° (Tele) D: 132° (Wide) ~ 38° (Tele)		H: 87.6° / V: 46.4° / D: 104.5°		H: 113.74° / V: 61.5° / D: 134.45°	
Pan / Tilt / Rotate Range	0° ~ 350° / 0° ~ 67° / 0° ~ 355°							
IR Viewable Length	20m (65.62ft)							
Day & Night	Auto (ICR)							
Wide Dynamic Range	120dB							
Digital Noise Reduction	SSNR							
Digital Image Stabilization	-							
Analytics	Motion detection, Tampering, Defocus detection, Virtual area (Intrusion/Enter/Exit), Virtual line (Crossing/Direction)							
Business Intelligence	-							
Alarm I/O	1 / 1							
Audio I/O	Built-in mic	-	Built-in mic	-	Built-in mic	-	Built-in mic	-
Video Compression	H.265 / H.264, MJPEG							
WiseStream	WiseStream II							
Streaming	Up to 3 Profiles							
Edge Storage	micro SD/SDHC/SDXC							
Application Programming Interface	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform							
Operating Temperature / Humidity	-10°C ~ +55°C (+14°F ~ +131°F)							
Certification	-							
Power Consumption	PoE: Max 7.7W, typical 6W 12VDC: Max 6.5W, typical 5.1W		PoE: Max 7.7W, typical 6W 12VDC: Max 6.5W, typical 5.1W		PoE: Max 7.4W, typical 6W 12VDC: Max 6.4W, typical 5.1W		PoE: Max 7.4W, typical 6W 12VDC: Max 6.4W, typical 5.1W	
Product Dimensions / Weight	Ø 119.8 x 98.8mm (Ø4.72" x 3.89") 320g (0.705lb)		Ø 119.8 x 98.8mm (Ø4.72" x 3.89") 320g (0.705lb)		Ø 110 x 86mm (Ø4.33" x 3.39") 255g (0.562lb)		Ø 110 x 86mm (Ø4.33" x 3.39") 255g (0.562lb)	
Additional Features	Hallway View							



Q mini
QND-6021
2MP Dome Camera



Q mini
QND-6011
2MP Dome Camera



QNV-7082R
4MP IR Vandal Dome Camera

Imaging Device	1/2.8" CMOS	1/2.8" CMOS	1/3" CMOS
Resolution / Max. Frame Rate	2MP / 30fps	2MP / 30fps	4MP / 30fps
Min. Illumination	Color : 0.03Lux (F1.6)	Color : 0.03Lux (F2.0)	Color : 0.1Lux (F1.6, 1/30sec) B/W : 0Lux (IR LED On)
Video Out	-	-	CVBS 1.0 Vp-p
Focal Length (Zoom Ratio)	4mm fixed	2.8mm fixed	3.2~10mm (3.1x) motorized varifocal
Angular Field of View	H: 87.6° / V: 46.4° / D: 104.5°	H: 113.74° / V: 61.5° / D: 134.45°	H: 98.6° (Wide) ~ 30.8° (Tele) V: 52.3° (Wide) ~ 17.3° (Tele) D: 115.7° (Wide) ~ 35.3° (Tele)
Pan / Tilt / Rotate Range	0° ~ 350° / 0° ~ 69° / 0° ~ 355°	0° ~ 350° / 0° ~ 69° / 0° ~ 355°	0° ~ 350° / 0° ~ 67° / 0° ~ 355°
IR Viewable Length	-	-	30m (98.42ft)
Day & Night	Auto (Electrical)	Auto (Electrical)	Auto (ICR)
Wide Dynamic Range		120dB	
Digital Noise Reduction		SSNR	
Digital Image Stabilization		-	
Analytics	Defocus detection, Motion detection, Tampering	Defocus detection, Motion detection, Tampering	Motion detection, Tampering, Defocus detection, Virtual area(Intrusion/Enter/Exit), Virtual line(Crossing/Direction)
Business Intelligence	People counting	People counting	-
Alarm I/O	-	-	1 / 1
Audio I/O	-	-	Line in / -
Video Compression		H.265 / H.264, MJPEG	
WiseStream		WiseStream II	
Streaming		Up to 3 Profiles	
Edge Storage	micro SD/SDHC/SDXC	micro SD/SDHC/SDXC	micro SD/SDHC/SDXC 1slot 128GB
Application Programming Interface	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform	ONVIF Profile S/G/T, SUNAPI (HTTP API)
Operating Temperature / Humidity	-10°C ~ +55°C (+14°F ~ +131°F)	-10°C ~ +55°C (+14°F ~ +131°F)	-40°C ~ +55°C (-40°F ~ +131°F) / 0~95% RH * Start up should be done at -30°C or above
Certification	IP42, IK08	IP42, IK08	IP66, IK10
Power Consumption	PoE : Max 4.8W, typical 2.8W	PoE : Max 4.8W, typical 2.8W	PoE : Max 11.4W, typical 8.5W 12VDC : Max 9.6W, typical 7.2W
Product Dimensions / Weight	Ø99 x 56mm (Ø3.9" x 2.2") 145g (0.320lb)	Ø99 x 56mm (Ø3.9" x 2.2") 145g (0.320lb)	Ø137 x 106.1mm (Ø5.39" x 4.18") 710g (1.565lb)
Additional Features	Super compact design, Hallway View	Super compact design, Hallway View	Hallway View



QNV-7032R
4MP IR Vandal Dome Camera



QNV-7022R
4MP IR Vandal Dome Camera



QNV-7012R
4MP IR Vandal Dome Camera



QNV-6082R/6082R1
2MP IR Vandal Dome Camera



QNV-6072R/6072R1
2MP IR Vandal Dome Camera

	QNV-7032R 4MP IR Vandal Dome Camera	QNV-7022R 4MP IR Vandal Dome Camera	QNV-7012R 4MP IR Vandal Dome Camera	QNV-6082R/6082R1 2MP IR Vandal Dome Camera	QNV-6072R/6072R1 2MP IR Vandal Dome Camera
Imaging Device	1/3" CMOS	1/3" CMOS	1/3" CMOS	1/2.8" CMOS	1/2.8" CMOS
Resolution / Max. Frame Rate	4MP / 30fps	4MP / 30fps	4MP / 30fps	2MP / 30fps	2MP / 30fps
Min. Illumination	Color : 0.15Lux (F2.0, 1/30sec) B/W : 0Lux (IR LED On)	Color : 0.15Lux (F1.6, 1/30sec) B/W : 0Lux (IR LED On)	Color : 0.15Lux (F2.0, 1/30sec) B/W : 0Lux (IR LED On)	Color : 0.03Lux (F1.6) B/W : 0Lux (IR LED on)	Color : 0.03Lux (F1.6) B/W : 0Lux (IR LED on)
Video Out	CVBS 1.0 Vp-p				
Focal Length (Zoom Ratio)	6mm fixed focal	4mm fixed focal	2.8mm fixed focal	3.2 ~ 10mm (3.1x) motorized varifocal	3.2 ~ 10mm (3.1x) manual varifocal
Angular Field of View	H: 49.0° / V: 27.6° / D: 55.6°	H: 78.2° / V: 41.2° / D: 92°	H: 108° / V: 60° / D: 122°	H: 109° (Wide) ~ 33.2° (Tele) V: 57.4° (Wide) ~ 18.7° (Tele) D: 132° (Wide) ~ 38° (Tele)	H: 109° (Wide) ~ 33.2° (Tele) V: 57.4° (Wide) ~ 18.7° (Tele) D: 132° (Wide) ~ 38° (Tele)
Pan / Tilt / Rotate Range	0° ~ 350° / 0° ~ 67° / 0° ~ 355°				
IR Viewable Length	30m (98.42ft)	25m (82.02ft)	20m (65.62ft)	30m (98.42ft)	30m (98.42ft)
Day & Night	Auto (ICR)				
Wide Dynamic Range	120dB				
Digital Noise Reduction	SSNR				
Digital Image Stabilization	-				
Analytics	Motion detection, Tampering, Defocus detection, Virtual area (Intrusion/Enter/Exit), Virtual line (Crossing/Direction)				
Business Intelligence	-				
Alarm I/O	1 / 1				
Audio I/O	Selectable (mic in/line in)	Selectable (mic in/line in)	Selectable (mic in/line in)	Selectable (mic in/line in)	-
Video Compression	H.265 / H.264, MJPEG				
WiseStream	WiseStream II				
Streaming	Up to 3 Profiles				
Edge Storage	Micro SD/SDHC/SDXC 1slot 128GB	micro SD/SDHC/SDXC 1slot 128GB	micro SD/SDHC/SDXC 1slot 128GB	micro SD/SDHC/SDXC	micro SD/SDHC/SDXC
Application Programming Interface	ONVIF Profile S/G/T, SUNAPI (HTTP API)	ONVIF Profile S/G/T, SUNAPI (HTTP API)	ONVIF Profile S/G/T, SUNAPI (HTTP API)	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform
Operating Temperature / Humidity	-40°C ~ +55°C (-40°F ~ +131°F) / 0~95% RH * Start up should be done at -30°C or above	-40°C ~ +55°C (-40°F ~ +131°F) / 0~95% RH * Start up should be done at -30°C or above	-40°C ~ +55°C (-40°F ~ +131°F) / 0~95% RH * Start up should be done at -30°C or above	-30°C ~ +55°C (-22°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)
Certification	IP66, IK10	IP66, IK10	IP66, IK10	IP66, IK10	IP66, IK10
Power Consumption	PoE: Max 10.7W, typical 8.1W 12VDC: Max 9.1W, typical 6.5W			PoE: Max 7.70W, typical 6.00W 12VDC: Max 6.50W, typical 5.10W	
Product Dimensions / Weight	Ø 120.3 x 91.7mm (Ø4.74" x 3.61"), 510g (1.124lb)	Ø 120.3 x 91.7mm (Ø4.74" x 3.61") 510g (1.124lb)	Ø 120.3 x 91.7mm (Ø4.74" x 3.61") 510g (1.124lb)	Ø 137 x 106.1mm (Ø5.39" x 4.18") 710g (1.565lb)	Ø 137 x 106.1mm (Ø5.39" x 4.18") 710g (1.565lb)
Additional Features	Hallway View				



QNV-6022R/6022R1
2MP IR Vandal Dome Camera



QNV-6012R/6012R1
2MP IR Vandal Dome Camera



QNV-6024RM
2MP IR Mobile Camera



QNP-6320
2MP 32x Indoor PTZ Camera

Imaging Device				1/2.8" CMOS
Resolution / Max. Frame Rate				2MP / 30fps
Min. Illumination	Color: 0.03Lux (F1.6) B/W: 0Lux (IR LED on)	Color: 0.03Lux (F2.0) B/W: 0Lux (IR LED on)	Color: 0.03Lux (F2.0) B/W: 0Lux (IR LED on)	Color: 0.05Lux (F1.6, 1/30sec) BW: 0.005Lux (F1.6, 1/30sec)
Video Out	CVBS 1.0 Vp-p	CVBS 1.0 Vp-p	CVBS 1.0 Vp-p	-
Focal Length (Zoom Ratio)	4mm fixed	2.8mm fixed	3.6mm fixed	4.44~142.6mm(32x) zoom (digital 32x, total 1024x zoom)
Angular Field of View	H: 87.6° / V: 46.4° / D: 104.5°	H: 113.74° / V: 61.5° / D: 134.45°	H: 94.8° / V: 49.3° / D: 114.3°	H: 64.66° (Wide)~2.29° (Tele) V: 38.08° (Wide)~1.30° (Tele)
Pan / Tilt / Rotate Range	0° ~ 350° / 0° ~ 67° / 0° ~ 355°	0° ~ 350° / 0° ~ 67° / 0° ~ 355°	± 5° / 0° ~ 67° / ± 90°	360° Endless / -105° (90° ~ -15°)
IR Viewable Length	25m (82.02ft)	20m (65.62ft)	15m (49.21ft)	-
Day & Night				Auto (ICR)
Wide Dynamic Range				120dB
Digital Noise Reduction	SSNR	SSNR	SSNR	SSNR V
Digital Image Stabilization	-	-	-	Support(built-in gyro sensor)
Analytics	Motion detection, Tampering, Defocus detection, Virtual area(Intrusion/Enter/Exit), Virtual line(Crossing/Direction)	Motion detection, Tampering, Defocus detection, Virtual area(Intrusion/Enter/Exit), Virtual line(Crossing/Direction)	Intelligent analytics	Analytics events - Directional detection, Motion detection, Enter/Exit, Tampering, Virtual line, Audio detection
Business Intelligence	-	-	-	-
Alarm I/O	1 / 1	1 / 1	-	4/2
Audio I/O	Selectable (mic in/line in)	-	Selectable (mic in/line in)	-
			Selectable (mic in/line in/built-in mic) / Line out	Selectable(mic in/line in) Supply voltage: 2.5VDC(4mA), Input impedance: 2K Ohm Line out, Max.output level: 1Vrms
Video Compression				H.265 / H.264, MJPEG
WiseStream				WiseStream II
Streaming	Up to 3 Profiles	Up to 3 Profiles	Up to 3 Profiles	Up to 10 profiles
Edge Storage	micro SD/SDHC/SDXC	micro SD/SDHC/SDXC	micro SD/SDHC/SDXC	micro SD/SDHC/SDXC 1 slot 256GB
Application Programming Interface	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform
Operating Temperature / Humidity	-30°C ~ +55°C (-22°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)	-30°C ~ +55°C (-22°F ~ +131°F)	-10°C ~ +55°C (14°F ~ +131°F) / 0~95% RH(Non-condensing)
Certification	IP66, IK10	IP66, IK10	IP66, IK10, NEMA4X	-
Power Consumption	PoE: Max 7.4W, typical 6W 12VDC: Max 6.4W	PoE: Max 7.4W, typical 6W 12VDC: Max 6.4W	PoE: Max 6.7W, typical 5W	PoE+: Max 14.5W, typical 12W
Product Dimensions / Weight	Ø 120.3 x 91.7mm (Ø 4.74" x 3.61") 510g (1.124lb)	Ø 120.3 x 91.7mm (Ø 4.74" x 3.61") 510g (1.124lb)	W 98.9 x H 52 x D 100mm (3.89" x 2.05" x 3.94") 295g (0.65lb)	ø 152x218mm(ø 5.98x8.58"), 1 700g(3.75 lb)
Additional Features	Hallway View	Hallway View	M12 connector, Hallway View	-



QNP-6320R
2MP 32x IR PTZ Camera



QNP-6320H
2MP 32x Outdoor PTZ Camera



QNP-6250
2MP 32x Outdoor PTZ Camera



QNP-6250R
2MP 25x IR PTZ Camera

Imaging Device	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS
Resolution / Max. Frame Rate	2MP / 60fps	2MP / 60fps	2MP / 60fps	2MP / 60fps
Min. Illumination	Color: 0.05Lux(F1.6, 1/30sec, 30IRE) BW: 0.005Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED On)	Color: 0.05Lux(F1.6, 1/30sec, 30IRE) BW: 0.005Lux(F1.6, 1/30sec, 30IRE)	Color: 0.05Lux(F1.6, 1/30sec, 30IRE) BW: 0.005Lux(F1.6, 1/30sec, 30IRE)	Color: 0.05Lux(F1.6, 1/30sec, 30IRE) BW: 0.005Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED On)
Video Out	-	-	-	-
Focal Length (Zoom Ratio)	4.44~142.6mm(32x) zoom (digital 32x, total 1024x zoom)	4.44~142.6mm(32x) zoom (digital 32x, total 1024x zoom)	4.44~111mm(25x) zoom (digital 32x, total 800x zoom)	4.44~111mm(25x) zoom (digital 32x, total 800x zoom)
Angular Field of View	H: 64.66°(Wide)~2.29°(Tele) V: 38.08°(Wide)~1.30°(Tele)	H: 64.66°(Wide)~2.29°(Tele) V: 38.08°(Wide)~1.30°(Tele)	H: 64.66°(Wide)~2.99°(Tele) V: 38.08°(Wide)~1.68°(Tele)	H: 64.66°(Wide)~2.99°(Tele) V: 38.08°(Wide)~1.68°(Tele)
Pan / Tilt / Rotate Range	360° Endless / -110° (90° ~ -20°)	360° Endless / 105° (90° ~ -15°)	360° Endless / 105° (90° ~ -15°)	360° Endless / -110° (90° ~ -20°)
IR Viewable Length	100m(328.08ft)	-	-	100m(328.08ft)
Day & Night	Auto(ICR)			
Wide Dynamic Range	120dB			
Digital Noise Reduction	SSNR V			
Digital Image Stabilization	Support(built-in gyro sensor)			
Analytics	Analytics events - Directional detection, Motion detection, Enter/Exit, Tampering, Virtual line * Audio detection(Via optional I/O box SPM-4210)		Analytics events - Directional detection, Motion detection, Enter/Exit, Tampering, Virtual line, Audio detection	
Business Intelligence	-	-	-	-
Alarm I/O	Compatible with NWI/O Box (Optional: SPM-4210)		4/2	Compatible with NWI/O Box (Optional: SPM-4210)
Audio I/O	Compatible with NWI/O Box (Optional: SPM-4210)		Selectable(mic in/line in) Supply voltage: 2.5VDC(4mA), Input impedance: 2K Ohm Line out, Max.output level: 1Vrms	Compatible with NWI/O Box (Optional: SPM-4210)
Video Compression	H.265/H.264: Main/High, MJPEG	H.265/H.264: Main/High, MJPEG	H.265/H.264: Main/High, MJPEG	H.265/H.264: Main/High, MJPEG
WiseStream	Manual(Sea area), WiseStream II			
Streaming	Up to 10 profiles			
Edge Storage	Micro SD/SDHC/SDXC 1slot Max. 256GB	Micro SD/SDHC/SDXC 1slot Max. 256GB	Micro SD/SDHC/SDXC 1slot Max. 256GB	Micro SD/SDHC/SDXC 1slot Max. 256GB
Application Programming Interface	ONVIF Profile S/G/T, SUNAPI(HTTP API) Hanwha Vision Open Platform			
Operating Temperature / Humidity	-35°C~+55°C(-31°F~+131°F) * Start up should be done at above -30°C 0~100%RH(Condensing) Humidity control with AIR vent	-35°C~+55°C(-31°F~+131°F) * Start up should be done at above -30°C 0~100%RH(Condensing) Humidity control with AIR vent	-10°C~+55°C(14°F~+131°F) / 0~95% RH (Non-condensing)	-35°C~+55°C(-31°F~+131°F) * Start up should be done at above -30°C 0~100%RH(Condensing) Humidity control with AIR vent
Certification	IP66, IK10, NEMA4X	IP66, IK10, NEMA4X	-	IP66, IK10, NEMA4X
Power Consumption	PoE+: Max. 25.5W, typical 14.7W	PoE+: Max. 23W, typical 14W	PoE+: Max 14.5W, typical 12W	PoE+: Max. 25.5W, typical 14.7W
Product Dimensions / Weight	ø 158x293.3mm(ø 6.22x11.55"), 3100g(6.83lb)	ø 204.3x265mm(ø 8.04x10.43"), 2700g(5.95lb)	ø 152x218mm(ø 5.98x8.58"), 1700g(3.75lb)	ø 158x293.3mm(ø 6.22x11.55"), 3100g(6.83lb)
Additional Features	-			



QNP-6250H
2MP 25x Outdoor PTZ Camera



QNP-6320HS
2MP 32x Stainless Steel PTZ Camera



QNB-6002
2MP Box Camera



QNF-9010
12MP Fisheye Camera



QNF-8010
6MP Fisheye Camera

Imaging Device	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS	1/2.3" CMOS	1/1.8" CMOS
Resolution / Max. Frame Rate	2MP / 60fps	2MP / 30fps	2MP / 30fps	9MP / 30fps	4MP / 30fps
Min. Illumination	Color: 0.05Lux(F1.6, 1/30sec, 30IRE) BW: 0.005Lux(F1.6, 1/30sec, 30IRE)	Color: 0.05Lux(F1.6, 1/30sec, 30IRE) BW: 0.005Lux(F1.6, 1/30sec, 30IRE)	Color: 0.01Lux (F1.2)	Color: 0.39Lux (F2.2, 1/30sec)	Color: 0.2Lux (F2.5)
Video Out	-	-	CVBS 1.0 Vp-p	CVBS 1.0 Vp-p	CVBS 1.0 Vp-p
Focal Length (Zoom Ratio)	4.44~111mm(25x) zoom (digital 32x, total 800x zoom)	4.44~142.6mm(32x) zoom (digital 32x, total 1024x zoom)	-	1.08mm fixed	1.14mm fixed
Angular Field of View	H: 64.66°(Wide)~2.99°(Tele) V: 38.08°(Wide)~1.68°(Tele)	H: 64.66° (Wide)~2.29° (Tele) V: 38.08° (Wide)~1.30° (Tele)	-	H: 187° / V: 187° / D: 187°	H: 187° / V: 187° / D: 187°
Pan / Tilt / Rotate Range	360° Endless / -105° (90°~-15°)	360° Endless / -105° (90°~-15°)	-	-	-
IR Viewable Length	-	-	-	-	-
Day & Night	Auto(ICR)	Auto(ICR)	Auto(ICR)	Auto(Electrical)	Auto(Electrical)
Wide Dynamic Range	120dB	120dB	120dB	120dB	120dB
Digital Noise Reduction	SSNR V	SSNR V	SSNR	SSNR V	SSNR V
Digital Image Stabilization	Support(built-in gyro sensor)	Support(built-in gyro sensor)	-	-	-
Analytics	Analytics events -Directional detection, Motion detection, Enter/Exit, Tampering, Virtual line * Audio detection(Via optional I/O box SPM-4210)		Intelligent analytics	Defocus detection, Motion detection, Tampering	Intelligent analytics
Business Intelligence	-	-	-	People counting, Heatmap	People counting, Heatmap
Alarm I/O	Compatible with NW I/O Box (Optional: SPM-4210)		1 / 1	-	-
Audio I/O	Compatible with NW I/O Box (Optional: SPM-4210)		Line in / Line out	-	-
Video Compression			H.265, H.264, MJPEG		
WiseStream	Manual(Sea area), WiseStream II		WiseStream II	WiseStream II	WiseStream II
Streaming	Up to 10 profiles		Up to 3 Profiles	Up to 3 profiles	Up to 3 profiles
Edge Storage	Micro SD/SDHC/SDXC 1slot Max. 256GB	micro SD/SDHC/SDXC 1slot 256GB	Micro SD/SDHC/SDXC	micro SD/SDHC/SDXC	micro SD/SDHC/SDXC
Application Programming Interface	ONVIF Profile S/G/T SUNAPI(HTTP API) Hanwha Vision Open Platform	ONVIF Profile S/G/T SUNAPI(HTTP API) Hanwha Vision Open Platform	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform	ONVIF profile S/G, SUNAPI, Hanwha Vision Open Platform
Operating Temperature / Humidity	-35°C~+55°C(-31°F~+131°F) * Start up should be done at above -30°C 0~100%RH(Condensing) Humidity control with AIR vent	-35°C~+55°C(-31°F~+131°F) / * Start up should be done at above -25°C 0~95%RH(non-condensing)	-10°C ~ +55°C (-14°F ~ +131°F)	-10°C ~ +40°C (+14°F ~ +104°F)	-10°C ~ +55°C (+14°F ~ +131°F)
Certification	IP66, IK10, NEMA4X	IP66, IP67, IK10, NEMA4X	-	-	IP42
Power Consumption	Max. 23W, Typ. 14W	Max. 23W, Typ. 14W	PoE: Max 6.4W, typical 4.6W 12VDC: Max 5.8W, typical 4.1W	PoE: Max 7.7W, typical 6.4W	PoE: Max 6.4W, typical 4.6W
Product Dimensions / Weight	ø 204.3x265mm(ø 8.04x10.43"), 2700g(5.95lb)	Ø227x299.2mm(8.94x11.78"), 5400g(11.93lb)	W 73.8 x H 66.6 x D 136.2mm (2.91" x 2.62" x 5.36") 320g(0.71lb)	Ø99 x 49mm (Ø3.9" x 1.93") 370g(0.82lb)	Ø99 x 49mm (Ø3.9" x 1.93") 320g(0.705lb)
Additional Features	-	-	Hallway View	Panorama view, Business Intelligence	Panorama view, Business Intelligence



TNO-4050T
VGA Thermal Bullet Camera



TNO-4040T
VGA Thermal Bullet Camera

Imaging Device	Uncooled micro bolometer (Spectral range: 8~14 μ m)	Uncooled micro bolometer (Spectral range: 8~14 μ m)
Resolution	640x480(original), 640x360, 320x240	640x480(original), 640x360, 320x240
Max. Frame Rate	H.265/H.264: Max. 30fps/25fps(60Hz/50Hz) MJPEG: Max. 30fps/25fps(60Hz/50Hz)	H.265/H.264: Max. 30fps/25fps(60Hz/50Hz) MJPEG: Max. 30fps/25fps(60Hz/50Hz)
NETD	< 50mK	< 50mK
Pixel Pitch	17 μ m	17 μ m
Focal Length	35mm fixed focal	19mm fixed focal
Angular Field of View	H: 17.2° / V: 13° / D: 22° (iFoV: 0.47 mRad)	H: 32° / V: 24.3° / D: 39.2° (iFoV: 0.895 mRad)
Min. Object Distance	36m(118.11ft)	11m(36.09ft)
Video Output	CVBS: 1.0 Vp-p / 75 Ω composite, 720x480(N), 720x576(P) for installation USB: Micro USB Type B, 1280x720 for installation	CVBS: 1.0 Vp-p / 75 Ω composite, 720x480(N), 720x576(P) for installation USB: Micro USB Type B, 1280x720 for installation
Analytics	Directional detection, Motion detection, Appear/Disappear, Enter/Exit, Loitering, Tampering, Virtual line, Audio detection, Temperature detection, Sound classification, Shock detection	Directional detection, Motion detection, Appear/Disappear, Enter/Exit, Loitering, Tampering, Virtual line, Audio detection, Temperature detection, Sound classification, Shock detection
Alarm I/O	Input 1ea / Output 2ea	Input 1ea / Output 2ea
Audio I/O	Selectable(mic in/line in) Supply voltage: 2.5VDC(4mA), Input impedance: 2K Ohm Line out, Max.output level: 1Vrms	Selectable(mic in/line in) Supply voltage: 2.5VDC(4mA), Input impedance: 2K Ohm Line out, Max.output level: 1Vrms
Temperature Detect Range	-	-
Temperature Accuracy	-	-
Temperature Detection	-	-
Additional	-	-
WiseStream	Manual(5ea area), WiseStream II	Manual(5ea area), WiseStream II
Streaming	Unicast(20 users) / Multicast Multiple streaming(Up to 10 profiles)	Unicast(20 users) / Multicast Multiple streaming(Up to 10 profiles)
Edge Storage	Micro SD/SDHC/SDXC 1slot 256GB	Micro SD/SDHC/SDXC 1slot 256GB
Application Programming Interface	ONVIF Profile S/G/T SUNAPI(HTTP API) Hanwha Vision Open Platform	ONVIF Profile S/G/T SUNAPI(HTTP API) Hanwha Vision Open Platform
Memory	1024MB RAM, 256MB Flash	1024MB RAM, 256MB Flash
Operating Temperature/ Humidity	-40°C ~ +60°C (-40°F ~ +140°F) / Less than 90% RH	-40°C ~ +60°C (-40°F ~ +140°F) / Less than 90% RH
Certification	IP66, IK10, NEMA4X	IP66, IK10, NEMA4X
Power Consumption	PoE: Max. 10W, typical 8.6W 12VDC: Max. 9W, typical 7.5W 24VAC: Max. 10.5W, typical 8.9W	PoE: Max. 10W, typical 8.6W 12VDC: Max. 9W, typical 7.5W 24VAC: Max. 10.5W, typical 8.9W
Dimensions (WxHxD) / Weight	Φ 101.97x401.8mm(4.01x15.82") / 3175g(7.01 lb)	Φ 101.97x401.8mm(4.01x15.82") / 3175g(7.01 lb)



TNO-4030T
VGA Thermal Bullet Camera



TNO-3010T
QVGA Thermal Bullet Camera

Imaging Device	Uncooled micro bolometer (Spectral range: 8~14 μ m)	Uncooled micro bolometer (Spectral range: 8~14 μ m)
Resolution	640x480, 640x360, 320x240	320x240
Max. Frame Rate	H.265/H.264: Max. 30fps/25fps(60Hz/50Hz) MJPEG: Max. 30fps/25fps(60Hz/50Hz)	H.265/H.264: Max. 30fps/25fps(60Hz/50Hz) MJPEG: Max. 30fps/25fps(60Hz/50Hz)
NETD	<50mK	<60mK
Pixel Pitch	17 μ m	12 μ m
Focal Length	13mm fixed focal	2.7mm fixed focal
Angular Field of View	H: 48.6° / V: 36.4° / D: 61.6° (iFoV: 1.308 mRad)	H: 92.0° / V: 65.5° / D: 125.7° (iFoV: 1.308 mRad)
Min. Object Distance	5m(16.40ft)	0.3m(0.98ft)
Video Output	CVBS: 1.0 Vp-p / 75 Ω composite, 720x480(N), 720x576(P) for installation USB: Micro USB Type B, 1280x720 for installation	CVBS: 1.0 Vp-p / 75 Ω composite, 720x480(N), 720x576(P) for installation USB: Micro USB Type B, 1280x720 for installation
Analytics	Directional detection, Motion detection, Appear/Disappear, Enter/Exit, Loitering, Tampering, Virtual line, Audio detection, Temperature detection, Sound classification, Shock detection	Directional detection, Motion detection, Appear/Disappear, Enter/Exit, Loitering, Tampering, Virtual line, Audio detection, Temperature detection, Sound classification, Shock detection
Alarm I/O	Input 1ea / Output 2ea	Input 1ea / Output 2ea
Audio I/O	Selectable(mic in/line in) Supply voltage: 2.5VDC(4mA), Input impedance: 2K Ohm Line out, Max.output level: 1 Vrms	Selectable(mic in/line in) Supply voltage: 2.5VDC(4mA), Input impedance: 2K Ohm Line out, Max.output level: 1 Vrms
Temperature Detect Range	-	-
Temperature Accuracy	-	-
Temperature Detection	-	-
Additional	-	-
WiseStream	Manual(5ea area), WiseStream II	Manual(5ea area), WiseStream II
Streaming	Unicast(20 users) / Multicast Multiple streaming(Up to 10 profiles)	Unicast(20 users) / Multicast Multiple streaming(Up to 10 profiles)
Edge Storage	Micro SD/SDHC/SDXC 1slot 256GB	Micro SD/SDHC/SDXC 1slot 256GB
Application Programming Interface	ONVIF Profile S/G/T, SUNAPI(HTTP API) Hanwha Vision Open Platform	ONVIF Profile S/G/T, SUNAPI(HTTP API) Hanwha Vision Open Platform
Memory	1024MB RAM, 256MB Flash	1024MB RAM, 256MB Flash
Operating Temperature/ Humidity	-40°C ~ +60°C (-40°F ~ +140°F) / Less than 90% RH	-40°C ~ +60°C (-40°F ~ +140°F) / Less than 90% RH
Certification	IP66, IK10, NEMA4X	IP66, IK10, NEMA4X
Power Consumption	PoE: Max. 10W, typical 8.6W 12VDC: Max. 9W, typical 7.5W 24VAC: Max. 10.5W, typical 8.9W	PoE: Max. 8.7W, typical 7.5W 12VDC: Max. 7.8W, typical 6.7W 24VAC: Max. 9.2W, typical 8.0W
Dimensions (WxHxD) / Weight	Φ101.97x401.8mm(4.01x15.82") / 3124g(6.89 lb)	Φ147.51x375.3mm(5.80x14.77") / 2512g(5.54lb)



TNO-3020T
QVGA Thermal Bullet Camera



TNO-3030T
QVGA Thermal Bullet Camera



TNO-3040T
QVGA Thermal Bullet Camera

Imaging Device	Uncooled micro bolometer (Spectral range: 8~14 μ m)	Uncooled micro bolometer (Spectral range: 8~14 μ m)	Uncooled micro bolometer (Spectral range: 8~14 μ m)
Resolution	320x240	320x240	320x240
Max. Frame Rate	H.265/H.264: Max. 30fps/25fps(60Hz/50Hz) MJPEG: Max. 30fps/25fps(60Hz/50Hz)	H.265/H.264: Max. 30fps/25fps(60Hz/50Hz) MJPEG: Max. 30fps/25fps(60Hz/50Hz)	H.265/H.264: Max. 30fps/25fps(60Hz/50Hz) MJPEG: Max. 30fps/25fps(60Hz/50Hz)
NETD	<60mK	<60mK	<60mK
Pixel Pitch	12 μ m	12 μ m	12 μ m
Focal Length	4.7mm fixed focal	13.7mm fixed focal	19mm fixed focal
Angular Field of View	H:50.0°/ V:36.4°/ D:65.3° (iFoV: 2.73 mRad)	H:16.0°/ V:12.0°/ D:20.0° (iFoV: 2.73 mRad)	H:11.5°/ V: 8.7°/ D: 14.4° (iFoV: 2.73 mRad)
Min. Object Distance	1m(3.28ft)	8m(26.25ft)	15m(49.21ft)
Video Output	CVBS: 1.0 Vp-p / 75 Ω composite, 720x480(N), 720x576(P) for installation USB: Micro USB Type B, 1280x720 for installation		
Analytics	Directional detection, Motion detection, Appear/Disappear, Enter/Exit, Loitering, Tampering, Virtual line, Audio detection, Temperature detection, Sound classification, Shock detection		
Alarm I/O	Input 1ea / Output 2ea	Input 1ea / Output 2ea	Input 1ea / Output 2ea
Audio I/O	Selectable(mic in/line in) Supply voltage: 2.5VDC(4mA), Input impedance: 2K Ohm Line out, Max.output level: 1Vrms	Selectable(mic in/line in) Supply voltage: 2.5VDC(4mA), Input impedance: 2K Ohm Line out, Max.output level: 1Vrms	Selectable(mic in/line in) Supply voltage: 2.5VDC(4mA), Input impedance: 2K Ohm Line out, Max.output level: 1Vrms
Temperature Detect Range	-	-	-
Temperature Accuracy	-	-	-
Temperature Detection	-	-	-
Additional	-	-	-
WiseStream	Manual(5ea area), WiseStream II	Manual(5ea area), WiseStream II	Manual(5ea area), WiseStream II
Streaming	Unicast(20 users) / MulticastMultiple streaming(Up to 10 profiles)		
Edge Storage	Micro SD/SDHC/SDXC 1slot 256GB		
Application Programming Interface	ONVIF Profile S/G/T SUNAPI(HTTP API) Hanwha Vision Open Platform	ONVIF Profile S/G/T SUNAPI(HTTP API) Hanwha Vision Open Platform	ONVIF Profile S/G/T SUNAPI(HTTP API) Hanwha Vision Open Platform
Memory	1024MB RAM, 256MB Flash	1024MB RAM, 256MB Flash	1024MB RAM, 256MB Flash
Operating Temperature/ Humidity	-40°C ~ +60°C (-40°F ~ +140°F) / Less than 90% RH	-40°C ~ +60°C (-40°F ~ +140°F) / Less than 90% RH	-40°C ~ +60°C (-40°F ~ +140°F) / Less than 90% RH
Certification	IP66, IK10, NEMA4X	IP66, IK10, NEMA4X	IP66, IK10, NEMA4X
Power Consumption	PoE: Max. 8.7W, typical 7.5W 12VDC: Max. 7.8W, typical 6.7W 24VAC: Max. 9.2W, typical 8.0W	PoE: Max. 8.7W, typical 7.5W 12VDC: Max. 7.8W, typical 6.7W 24VAC: Max. 9.2W, typical 8.0W	PoE: Max. 8.7W, typical 7.5W 12VDC: Max. 7.8W, typical 6.7W 24VAC: Max. 9.2W, typical 8.0W
Dimensions (WxHxD) / Weight	Φ147.51x375.3mm(58.07x147.76") / 2512g(5.538lb)	Φ147.51x375.3mm(58.07x147.76") / 2512g(5.538lb)	Φ147.51x375.3mm(5.81x14.78") / 2495g(5.50lb)



TNO-3050T
QVGA Thermal Bullet Camera



TNO-L3030T
QVGA Thermal Bullet Camera



TNO-L4030T
VGA Thermal Bullet Camera

Imaging Device	Uncooled micro bolometer (Spectral range: 8~14 μ m)	Uncooled micro bolometer (Spectral range: 8~14 μ m)	Uncooled micro bolometer (Spectral range: 8~14 μ m)
Resolution	320x240	320x240	640x480(original), 640x360, 320x240
Max. Frame Rate	H.265/H.264: Max. 30fps/25fps(60Hz/50Hz) MJPEG: Max. 30fps/25fps(60Hz/50Hz)	H.265/H.264/MJPEG: Max. 8fps	H.265/H.264/MJPEG: Max. 8fps
NETD	<60mK	<60mK	<50mK
Pixel Pitch	12 μ m	12 μ m	17 μ m
Focal Length	35mm fixed focal	13.7mm fixed focal	13mm fixed focal
Angular Field of View	H: 6.3° / V: 4.7° / D: 7.8° (iFoV: 0.34 mRad)	H: 16.0° / V: 12.0° / D: 20.0° (iFoV: 0.87 mRad)	H: 48.6° / V: 36.4° / D: 61.6° (iFoV: 1.308 mRad)
Min. Object Distance	51m	8m(26.25ft)	5m(16.40ft)"
Video Output	CVBS: 1.0 Vp-p / 75 Ω composite, 720x480(N), 720x576(P) for installation USB: Micro USB Type B, 1280x720 for installation		
Analytics	Directional detection, Motion detection, Appear/Disappear, Enter/Exit, Loitering, Tampering, Virtual line, Audio detection, Temperature detection, Sound classification, Shock detection		
Alarm I/O	Input 1ea / Output 2ea	Input 1ea / Output 2ea	Input 1ea / Output 2ea
Audio I/O	Selectable(mic in/line in) Supply voltage: 2.5VDC(4mA), Input impedance: 2K Ohm Line out, Max.output level: 1Vrms	Selectable(mic in/line in) Supply voltage: 2.5VDC(4mA), Input impedance: 2K Ohm Line out, Max.output level: 1Vrms	Selectable(mic in/line in) Supply voltage: 2.5VDC(4mA), Input impedance: 2K Ohm
Temperature Detect Range	-	-	-
Temperature Accuracy	-	-	-
Temperature Detection	-	-	-
Additional	-	-	-
WiseStream	Manual(5ea area), WiseStream II	Manual(5ea area), WiseStream II	Manual(5ea area), WiseStream II
Streaming	Unicast(20 users) / Multicast Multiple streaming(Up to 10 profiles)	Unicast(20 users) / Multicast Multiple streaming(Up to 10 profiles)	Unicast(20 users) / Multicast Multiple streaming(Up to 10 profiles)
Edge Storage	Micro SD/SDHC/SDXC 1 slot 256GB	Micro SD/SDHC/SDXC 1 slot 256GB	Micro SD/SDHC/SDXC 1 slot 256GB
Application Programming Interface	ONVIF Profile S/G/T SUNAPI(HTTP API) Hanwha Vision Open Platform	ONVIF Profile S/G/T SUNAPI(HTTP API) Hanwha Vision Open Platform	ONVIF Profile S/G/T SUNAPI(HTTP API) Hanwha Vision Open Platform
Memory	1024MB RAM, 256MB Flash	1024MB RAM, 256MB Flash	1024MB RAM, 256MB Flash
Operating Temperature/ Humidity	-40°C ~ +60°C (-40°F ~ +140°F) / Less than 90% RH	-40°C to +60°C (-40°F to +140°F) / Less than 90% RH	-40°C ~ +60°C (-40°F ~ +140°F) / Less than 90% RH
Certification	IP66, NEMA4X	IP66, IK 10, NEMA4X	IP66, IK 10, NEMA4X
Power Consumption	PoE: Max. 8.7W, typical 7.5W 12VDC: Max. 7.8W, typical 6.7W 24VAC: Max. 9.2W, typical 8.0W	PoE: Max. 8.7W, typical 7.5W 12VDC: Max. 7.8W, typical 6.7W 24VAC: Max. 9.2W, typical 8.0	PoE: Max. 10W, typical 8.6W 12VDC: Max. 9W, typical 7.5W 24VAC: Max. 10.5W, typical 8.9W
Dimensions (WxHxD) / Weight	Φ147.51x401.3mm(5.81x15.79") / 2742g(6.05lb)	Φ147.51x375.3mm(58.07x147.76") / 2512g(5.538lb)	Φ101.97x401.8mm(4.01x15.82") / 3124g(6.89lb)



TNO-L4040T
VGA Thermal Bullet Camera



TNO-L4050T
VGA Thermal Bullet Camera

Imaging Device	Uncooled micro bolometer (Spectral range: 8~14 μ m)	Uncooled micro bolometer (Spectral range: 8~14 μ m)
Resolution	640x480(original), 640x360, 320x240	640x480(original), 640x360, 320x240
Max. Frame Rate	H.265/H.264/MJPEG: Max. 8fps	H.265/H.264/MJPEG: Max. 8fps
NETD	< 50mK	< 50mK
Pixel Pitch	17 μ m	17 μ m
Focal Length	19mm fixed focal	35mm fixed focal
Angular Field of View	H: 32° / V: 24.3° / D: 39.2° (iFoV: 0.895 mRad)	H: 17.2° / V: 13° / D: 22° (iFoV: 1.308 mRad)
Min. Object Distance	11m(36.09ft)	36m(118.11ft)
Video Output	CVBS: 1.0 Vp-p / 75 Ω composite, 720x480(N), 720x576(P) for installation USB: Micro USB Type B, 1280x720 for installation	
Analytics	Directional detection, Motion detection, Appear/Disappear, Enter/Exit, Loitering, Tampering, Virtual line, Audio detection, Temperature detection, Sound classification, Shock detection	
Alarm I/O	Input 1ea / Output 2ea	Input 1ea / Output 2ea
Audio I/O	Selectable(mic in/line in) Supply voltage: 2.5VDC(4mA), Input impedance: 2K Ohm Line out, Max.output level: 1Vrms	Selectable(mic in/line in) Supply voltage: 2.5VDC(4mA), Input impedance: 2K Ohm Line out, Max.output level: 1Vrms
Temperature Detect Range	-	-
Temperature Accuracy	-	-
Temperature Detection	-	-
Additional	-	-
WiseStream	Manual(5ea area), WiseStream II	Manual(5ea area), WiseStream II
Streaming	Unicast(20 users) / Multicast Multiple streaming(Up to 10 profiles)	Unicast(20 users) / Multicast Multiple streaming(Up to 10 profiles)
Edge Storage	Micro SD/SDHC/SDXC 1slot 256GB	Micro SD/SDHC/SDXC 1slot 256GB
Application Programming Interface	ONVIF Profile S/G/T SUNAPI(HTTP API) Hanwha Vision Open Platform	ONVIF Profile S/G/T SUNAPI(HTTP API) Hanwha Vision Open Platform
Memory	1024MB RAM, 256MB Flash	1024MB RAM, 256MB Flash
Operating Temperature/ Humidity	-40°C ~ +60°C (-40°F ~ +140°F) / Less than 90% RH	-40°C ~ +60°C (-40°F ~ +140°F) / Less than 90% RH
Certification	IP66, IK10, NEMA4X	IP66, IK10, NEMA4X
Power Consumption	PoE: Max. 10W, typical 8.6W 12VDC: Max. 9W, typical 7.5W 24VAC: Max. 10.5W, typical 8.9W	PoE: Max. 10W, typical 8.6W 12VDC: Max. 9W, typical 7.5W 24VAC: Max. 10.5W, typical 8.9W
Dimensions (WxHxD) / Weight	ø 101.97x401.8mm(4.01x15.82") / 3,124g(6.89lb)	ø 101.97x401.8mm(4.01x15.82") / 3,124g(6.89lb)



TNO-4040TR
VGA Radiometric Thermal Camera



TNO-4030TR
VGA Radiometric Thermal Camera

Imaging Device	Uncooled micro bolometer (Spectral range: 8~14 μ m)	Uncooled micro bolometer (Spectral range: 8~14 μ m)
Resolution	640x480, 640x360, 320x240	640x480, 640x360, 320x240
Max. Frame Rate	H.265/H.264: Max. 30fps/25fps(60Hz/50Hz) MJPEG: Max. 30fps/25fps(60Hz/50Hz)	H.265/H.264: Max. 30fps/25fps(60Hz/50Hz) MJPEG: Max. 30fps/25fps(60Hz/50Hz)
NETD	< 50mK	< 50mK
Pixel Pitch	17 μ m	17 μ m
Focal Length	19mm fixed focal	13mm fixed focal
Angular Field of View	H: 32° / V: 24.3° / D: 39.2° (iFoV: 0.895 mRad)	H: 48.6° / V: 36.4° / D: 61.6° (iFoV: 1.308 mRad)
Min. Object Distance	11m(36.09ft)	5m(16.40ft) (iFoV: 1.308 mRad)
Video Output	CVBS: 1.0 Vp-p / 75 Ω composite, 720x480(N), 720x576(P) for installation USB: Micro USB Type B, 1280x720 for installation	CVBS: 1.0 Vp-p / 75 Ω composite, 720x480(N), 720x576(P) for installation USB: Micro USB Type B, 1280x720 for installation
Analytics	Directional detection, Motion detection, Appear/Disappear, Enter/Exit, Loitering, Tampering, Virtual line, Audio detection, Temperature detection, Sound classification, Shock detection	Directional detection, Motion detection, Appear/Disappear, Enter/Exit, Loitering, Tampering, Virtual line, Audio detection, Temperature detection, Sound classification, Shock detection
Alarm I/O	Input 1ea / Output 2ea	Input 1ea / Output 2ea
Audio I/O	Selectable(mic in/line in) Supply voltage: 2.5VDC(4mA), Input impedance: 2K Ohm	Selectable(mic in/line in) Supply voltage: 2.5VDC(4mA), Input impedance: 2K Ohm
Temperature Detect Range	-20°C~130°C(-4°F~266°F)	-20°C~130°C(-4°F~266°F)
Temperature Accuracy	± 5°C(≤ 100°C), ± 20%(> 100°C)	± 5°C(≤ 100°C), ± 20%(> 100°C)
Temperature Detection	6 Quadrangle ROI zones, whole FoV area	6 Quadrangle ROI zones, whole FoV area
Additional	Hybrid palettes, Spot temperature reading	Hybrid palettes, Spot temperature reading
WiseStream	Manual(5ea area), WiseStream II	Manual(5ea area), WiseStream II
Streaming	Unicast(20 users) / Multicast Multiple streaming(Up to 10 profiles)	Unicast(20 users) / Multicast Multiple streaming(Up to 10 profiles)
Edge Storage	Micro SD/SDHC/SDXC 1slot 256GB	Micro SD/SDHC/SDXC 1slot 256GB
Application Programming Interface	ONVIF Profile S/G/T, SUNAPI(HTTP API) Hanwha Vision Open Platform	ONVIF Profile S/G/T, SUNAPI(HTTP API) Hanwha Vision Open Platform
Memory	1024MB RAM, 256MB Flash	1024MB RAM, 256MB Flash
Operating Temperature/ Humidity	-40°C ~ +60°C (-40°F ~ +140°F) / Less than 90% RH	-40°C ~ +60°C (-40°F ~ +140°F) / Less than 90% RH
Certification	IP66, IK10, NEMA4X	IP66, IK10, NEMA4X
Power Consumption	PoE: Max. 10W, typical 8.6W 12VDC: Max. 9W, typical 7.5W 24VAC: Max. 10.5W, typical 8.9W	PoE: Max. 10W, typical 8.6W 12VDC: Max. 9W, typical 7.5W 24VAC: Max. 10.5W, typical 8.9W
Dimensions (WxHxD) / Weight	Φ101.97x401.8mm(4.01x15.82") / 3,175g(7.01lb)	Φ101.97x401.8mm(4.01x15.82") / 3,124g(6.89lb)



TNV-7011RC
3MP Corner Mount Camera



TNV-8011C
5MP Corner Mount Camera



TID-600R
2MP Intercom

Imaging Device	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS
Resolution / Max. Frame Rate	3MP / 30fps	5MP / 30fps	2MP / 30fps
Min. Illumination	Color: 0.3 lux (F2.0, 1/30sec) B/W: 0 lux (F2.0, 1/30sec)	Color: 0.1 lux (F2.3, 1/30sec) B/W: 0.02 lux (F2.3, 1/30sec)	Color: 0.018Lux(F1.6, 1/30sec) BW: 0Lux(IR LED on)
Video Out	CVBS: 1.0 Vp-p	CVBS: 1.0 Vp-p, Micro USB Type B	CVBS: 1.0Vp-p / 75 Ω composite, 720x480(N), 720x576(P) for installation
Focal Length (Zoom Ratio)	2.8mm fixed focal	2.3mm fixed focal	1.6mm fixed focal
Angular Field of View	H: 102° / V: 75° / D: 129°	H: 131° / V: 93.4° / D: 174°	H: 180° / V: 114° / D: 180°
Pan / Tilt / Rotate Range	- / 30° ~ 60° / -	-	-
IR Viewable Length	10m(32.8ft)	-	-
Day & Night	Auto(ICR)	Auto(ICR)	Auto(ICR)
Wide Dynamic Range	120dB	120dB	150dB
Digital Noise Reduction	SSNR V	SSNR	SSNR V
Digital Image Stabilization	Support	Support	Support
Analytics	Tampering, Loitering, Directional detection, Defocus detection, Fog detection, Virtual line, Enter/Exit, Appear/Disappear, Audio detection, Face detection, Motion detection, Digital auto tracking, Sound classification, Shock detection	Defocus detection, Directional detection, Motion detection, Enter/Exit, Tampering, Virtual line, Audio detection	Directional detection, Motion detection, Appear/Disappear, Enter/Exit, Loitering, Tampering, Virtual line, Audio detection, Shock detection, Sound classification
Business Intelligence	-	-	-
Alarm I/O	1 / 1	1 / 1	Input 2ea / Output 1ea, Relay out 1ea (12VDC Max. 550mA with 2A adapter), Tampering switch, Touchless call
Audio I/O	Selectable(mic in/line in) / Line out	Selectable(mic in/line in) / Line out	Built-in mic / Built-in speaker: 85dB at 0.5m(1.64ft)
Video Compression	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265/H.264: Main/Baseline/High, MJPEG
WiseStream	WiseStream II	WiseStream II	Manual(5ea area), WiseStream II
Streaming	Up to 10 profiles	Up to 3 profiles	Unicast(20 users) / Multicast Multiple streaming(Up to 10 profiles)
Edge Storage	Micro SD/SDHC/SDXC 1slot 256GB	Micro SD/SDHC/SDXC 1slot 128GB	Micro SD/SDHC/SDXC 1slot 256GB
Application Programming Interface	SUNAPI(HTTP API) Hanwha Vision Open Platform	SUNAPI(HTTP API) Hanwha Vision Open Platform	ONVIF Profile S, SUNAPI(HTTP API), Hanwha Vision Open Platform
Operating Temperature / Humidity	-10°C ~ +55°C (+14°F ~ +131°F) / Less than 90% RH	-10°C ~ +55°C (+14°F ~ +131°F) / Less than 95% RH	-30° C ~ +55° C (-22° F ~ +131° F) / 0~95% RH
Certification	IP66, IP6K9K, IK10+	IP66, IP6K9K, IK10	IP65, IK08, NEMA4X, Safety(UL), EMC(FCC, CE)
Power Consumption	PoE: Max 12W, typical 10.1W, 12VDC: Max. 11W, typical 8.6W	PoE: Max 6.49W, typical 4.6W,	PoE: Max 12.95W, typical 9.1W, 12VDC: Max 17.6W, typical 7W * 12VDC power consumption includes 12VDC/550mA relay out.
Product Dimensions / Weight	Ø295.5x113.5mm(11.6x4.47") / 2100g(4.63lb)	170(W)x165(H)x78.8(D)mm(6.69x6.49x3.10") / 830g(1.83lb)	49(W)x165(H)x48(D)mm(1.93x6.50x1.89") / 490g(1.08lb)



TNO-6322ER
2MP Explosion-proof IR Camera



TNU-6324E
2MP Explosion-proof IR Camera



TNU-6324ER
2MP Explosion-proof IR Camera

Imaging Device	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS
Resolution / Max. Frame Rate	2MP / 60fps	2MP / 60fps	2MP / 60fps
Min. Illumination	Color: 0.05Lux(F1.6, 1/30sec) BW: 0.005Lux(F1.6, 1/30sec), 0Lux(IR LED on)	Color: 0.05Lux(F1.6, 1/30sec) BW: 0.005Lux(F1.6, 1/30sec)	Color: 0.05Lux(F1.6, 1/30sec) BW: 0.005Lux(F1.6, 1/30sec)
Video Out	-	-	-
Focal Length (Zoom Ratio)	4.44~142.6mm(32x) zoom	4.44~142.6mm(Optical 32X)	4.44~142.6mm(Optical 32X)
Angular Field of View	H: 61.8°(Wide)~2.19°(Tele) / V: 36.2°(Wide)~1.24°(Tele)	H: 64.66°(Wide)~2.29°(Tele) / V: 38.08°(Wide)~1.30°(Tele)	H: 64.66°(Wide)~2.29°(Tele) / V: 38.08°(Wide)~1.30°(Tele)
Pan / Tilt / Rotate Range	-	Pan Range - 360° Endless Pan Speed - Preset: 50°/sec, Manual: 0.1°/sec~40°/sec Tilt Range - 180° (-90°~90°) Tilt Speed - Preset: 50°/sec, Manual: 0.1°/sec~40°/sec Sequence - Preset(300ea), Swing, Group(6ea), Trace, Tour, Auto Run, Schedule Preset Accuracy - ±0.25°	Pan Range - 360° Endless Pan Speed - Preset: 50°/sec, Manual: 0.1°/sec~40°/sec Tilt Range - 180° (-90°~90°) Tilt Speed - Preset: 50°/sec, Manual: 0.1°/sec~40°/sec Sequence - Preset(300ea), Swing, Group(6ea), Trace, Tour, Auto Run, Schedule Preset Accuracy - ±0.25°
IR Viewable Length	70m (229.66ft)	-	-
Day & Night	Auto(ICR)	Auto(ICR)	Auto(ICR)
Wide Dynamic Range	120dB	120dB	120dB
Digital Noise Reduction	SSNR V	SSNR V	SSNR V
Digital Image Stabilization	Support	Support	Support
Analytics	Defocus detection, Directional detection, Fog detection, Face detection, Motion detection, Appear/Disappear, Enter/Exit, Loitering, Tampering, Virtual line, Audio detection"	Directional detection, Fog detection, Face detection, Motion detection, Appear/Disappear, Enter/Exit, Loitering, Tampering, Virtual line	Directional detection, Fog detection, Face detection, Motion detection, Appear/Disappear, Enter/Exit, Loitering, Tampering, Virtual line
Business Intelligence	-	-	-
Alarm I/O	Input 1ea / Output 1ea	Input 1ea / Output 1ea	Input 1ea / Output 1ea
Audio I/O	Selectable(mic in/line in) Supply voltage: 2.5VDC(4mA), Input impedance: 2K Ohm Line out, Max.output level: 1Vrms	-	-
Video Compression	H.265/H.264: Main/Baseline/High, MJPEG	H.265/H.264: Main/Baseline/High, MJPEG	H.265/H.264: Main/Baseline/High, MJPEG
WiseStream	Manual(5ea area), WiseStream II	Manual(5ea area), WiseStream II	Manual(5ea area), WiseStream II
Streaming	Unicast(20 users) / Multicast, Multiple streaming(Up to 10 profiles)		
Edge Storage	-	-	-
Application Programming Interface	ONVIF Profile S/G/T, SUNAPI(HTTP API) Hanwha Vision Open Platform	ONVIF Profile S/T, SUNAPI(HTTP API) Hanwha Vision Open Platform	
Operating Temperature / Humidity	IR Off: -40°C~+60°C(-40°F~+140°F) / Less than 95% RH IR On: -40°C~+55°C(-40°F~+131°F) / Less than 95% RH	-40°C~+60°C(-40°F~+140°F) / Less than 95% RH * Start up should be done at above -30°C	-40°C~+60°C(-40°F~+140°F) / Less than 95% RH * Start up should be done at above -30°C
Certification	IECEX, ATEX, KCs, KC, CE IP67, IK10, PESO certified	IECEX, ATEX, KCs, KC, CE/UKCA IP67, IK10 certified	IECEX, ATEX, KCs, KC, CE/UKCA IP67, IK10 certified
Power Consumption	24VAC, Max. 45W	1.4A, Max. 87W	1.7A, Max. 120W
Product Dimensions / Weight	175(W)x242.5(H)x320(D)mm(6.89x9.59x12.59"), 11.5kg(25.35lb)	355(W)x427(H)x235(D)mm(13.97x16.81x9.25"), 26kg(57.32lb)	611(W)x438(H)x235(D)mm(24.06x17.24x9.25"), 38kg(83.78lb)
Additional Features	Stainless(SUS316L) housing, Built in wiper	Stainless(SUS316L) housing, Built in wiper	Stainless(SUS316L) housing, Built in wiper



LNO-6012R
2MP IR Bullet Camera



LNO-6022R
2MP IR Bullet Camera



LNO-6072R
2MP IR Bullet Camera



LND-6012R
2MP IR Dome Camera



LND-6022R
2MP IR Dome Camera

Imaging Device	1/2.8" CMOS				
Resolution / Max. Frame Rate	2MP / 30fps				
Min. Illumination	Color: 0.03Lux (F2.0, 1/30sec) BW: 0Lux (IR LED on)	Color: 0.03Lux (F2.0, 1/30sec) BW: 0Lux (IR LED on)	Color: 0.03Lux (F1.6, 1/30sec) BW: 0Lux (IR LED on)	Color: 0.03Lux (F2.0, 1/30sec) BW: 0Lux (IR LED on)	Color: 0.03Lux (F1.6, 1/30sec) BW: 0Lux (IR LED on)
Video Out	-				
Focal Length (Zoom Ratio)	2.8mm fixed focal	4.0mm fixed focal	3.2~10mm (3.1x) manual varifocal	2.8mm fixed focal	4.0mm fixed focal
Angular Field of View	H: 113.7° / V: 61.5° / D: 134.4°	H: 84.3° / V: 45.6° / D: 98.3°	H: 109°(Wide)~33.2°(Tele) V: 57.4°(Wide)~18.7°(Tele) D: 132°(Wide)~38°(Tele)	H: 113.7° / V: 61.5° / D: 134.4°	H: 84.3° / V: 45.6° / D: 98.3°
Pan / Tilt / Rotate Range	-	-	-	0°~350° / 0°~67° / 0°~355°	0°~350° / 0°~67° / 0°~355°
IR Viewable Length	30m (98.43ft)	30m (98.43ft)	30m (98.43ft)	20m (65.62ft)	20m (65.62ft)
Day & Night	Auto (ICR)				
Wide Dynamic Range	120dB				
Digital Noise Reduction	SSNR				
Digital Image Stabilization	-				
Analytics	Motion detection, Tampering				
Business Intelligence	-				
Alarm I/O	-				
Audio I/O	-				
Video Compression	H.264, MJPEG				
WiseStream	WiseStream II				
Streaming	Up to 3 profiles				
Edge Storage	micro SD/SDHC 1slot 32GB				
Operating Temperature / Humidity	ONVIF Profile S/G/T SUNAPI (HTTP API)				
Operating Temperature	-30°C ~ +55°C (-22°F ~ +131°F) / 0~90% RH * Start up should be done at above -20°C (-4°F)	-30°C ~ +55°C (-22°F ~ +131°F) / 0~90% RH * Start up should be done at above -20°C (-4°F)	-30°C ~ +55°C (-22°F ~ +131°F) / 0~90% RH * Start up should be done at above -20°C (-4°F)	-10°C ~ +55°C (+14°F ~ +131°F) / 0~90% RH	-10°C ~ +55°C (+14°F ~ +131°F) / 0~90% RH
Certification	IP66	IP66	IP66	-	-
Power Consumption	Max 6.4W, Typical 5W				
Product Dimensions / Weight	Ø78 x 262mm (Ø3.07" x 10.31") 390g (0.86lb)	Ø78 x 262mm (Ø3.07" x 10.31") 390g (0.86lb)	Ø78 x 262mm (Ø3.07" x 10.31") 420g (0.93lb)	Ø110 x 86mm (Ø4.33" x 3.39") 270g (0.59lb)	Ø110 x 86mm (Ø4.33" x 3.39") 270g (0.59lb)



LND-6072R
2MP IR Dome Camera



LNV-6012R
2MP IR Vandal Dome Camera



LNV-6022R
2MP IR Vandal Dome Camera



LNV-6072R
2MP IR Vandal Dome Camera

Imaging Device	1/2.8" CMOS			
Resolution / Max. Frame Rate	2MP / 30fps			
Min. Illumination	Color: 0.03Lux (F1.6, 1/30sec) BW: 0Lux (IR LED on)	Color: 0.03Lux (F2.0, 1/30sec) BW: 0Lux (IR LED on)	Color: 0.03Lux (F2.0, 1/30sec) BW: 0Lux (IR LED on)	Color: 0.03Lux (F1.6, 1/30sec) BW: 0Lux (IR LED on)
Video Out	-			
Focal Length (Zoom Ratio)	3.2~10mm (3.1x) manual varifocal	2.8mm fixed focal	4.0mm fixed focal	3.2~10mm (3.1x) manual varifocal
Angular Field of View	H: 109° (Wide) ~ 33.2° (Tele) V: 57.4° (Wide) ~ 18.7° (Tele) D: 132° (Wide) ~ 38° (Tele)	H: 113.7° / V: 61.5° / D: 134.4°	H: 84.3° / V: 45.6° / D: 98.3°	H: 109° (Wide) ~ 33.2° (Tele) V: 57.4° (Wide) ~ 18.7° (Tele) D: 132° (Wide) ~ 38° (Tele)
Pan / Tilt / Rotate Range	0°~350° / 0°~67° / 0°~355°			
IR Viewable Length	20m (65.62ft)	30m (98.43ft)	30m (98.43ft)	30m (98.43ft)
Day & Night	Auto (ICR)			
Wide Dynamic Range	120dB			
Digital Noise Reduction	SSNR			
Digital Image Stabilization	-			
Analytics	Motion detection, Tampering			
Business Intelligence	-			
Alarm I/O	-			
Audio I/O	-			
Video Compression	H.264, MJPEG			
WiseStream	WiseStream II			
Streaming	Up to 3 profiles			
Edge Storage	micro SD/SDHC 1slot 32GB			
Application Programming Interface	ONVIF Profile S/G/T SUNAPI (HTTP API)			
Operating Temperature / Humidity	-10°C ~ +55°C (+14°F ~ +131°F) / 0~90% RH	-30°C ~ +55°C (-22°F ~ +131°F) / 0~90% RH * Start up should be done at above -20°C (-4°F)	-30°C ~ +55°C (-22°F ~ +131°F) / 0~90% RH * Start up should be done at above -20°C (-4°F)	-30°C ~ +55°C (-22°F ~ +131°F) / 0~90% RH * Start up should be done at above -20°C (-4°F)
Certification	-	IP66, IK 10	IP66, IK 10	IP66, IK 10
Power Consumption	Max 6.4W, Typical 5W			
Product Dimensions / Weight	Ø119.8 x 98.8mm (Ø4.72" x 3.89") 315g (0.69lb)	Ø120.3 x 91.7mm (Ø4.74" x 3.61") 410g (0.9lb)	Ø120.3 x 91.7mm (Ø4.74" x 3.61") 410g (0.9lb)	Ø137.8 x 106.1mm (Ø5.43" x 4.18") 525g (1.16lb)

High performance NVR

High resolution and great efficiency.
Quick and precise search enabled by
Hanwha Vision NVR

Hanwha Vision's NVR allows recording and streaming of videos in super high resolution and enhanced the efficiency of event and channel management with the new UI. It also offers AI based quick and precise object detection and classification on top of smart search.



Monitor all sub channels without registering them all

With the new Virtual Channel View, user can register only 1 main channel for recording and monitor sub channels without registering them to the NVR. In other words, no need to record every sub channel that needs to be simply streamed for live monitoring.

Registered channel
Recording and monitoring

CAMERA A
Channel #01

Using 1 channel on NVR
(can monitor up to 4CH)

Unregistered channel
Monitoring sub channels without recording

CAMERA A
Channel #02

CAMERA A
Channel #03

CAMERA A
Channel #04

Installation Wizard for easy auto recognition and setup

Local/web based installation wizard with a single UI provides easy and quick auto camera recognition and registration as well as configuration of each channel.



Local

Web



Design your own monitoring channels with the Dynamic layout

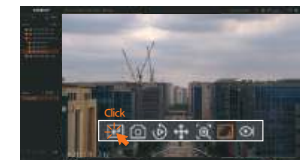
Dynamic layout allows users to freely customize the channel display. Set the best channel display and create the most intuitive monitoring environment.



Code your own event action with SUNAPI command and Integrate with the Software Key

Users can code their own event action using SUNAPI commands and integrate it with the Software Key. Then, a simple click on the Software Key appears on the channel display will run the event action. Customized codes run separately.

- 1 Code event action* and integrate with the Software key
* Simple focus, Day&Night (ICR), Alarm Out, etc.
- 2 Click the Software key to initiate the event action



AI NVR

AI enhances accuracy and efficiency

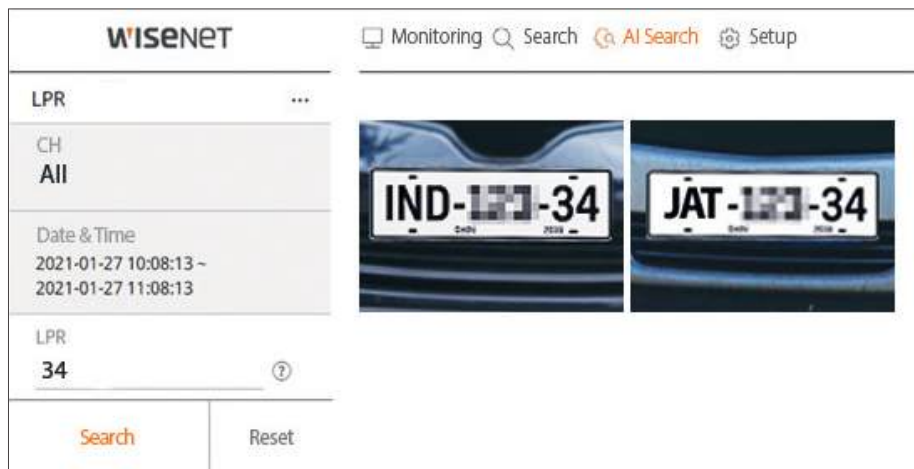
Hanwha AI NVR with AI algorithms provides accurate object detection/classification/search, increasing the efficiency of monitoring operation.



License Plate Recognition LPR (Search)

Through OCR (Optical Character Recognition) processing, the BestShot images of the license plates are converted into machine-readable text and numbers then stored in the AI NVR in the form of digital data together with the images of license plates. Users can easily search license plates by typing in the numbers or characters of the license plate.

* Attributes : People (Clothing colors for top and bottom/ Wearing or carrying a bag) / Face (Age group, gender, mask/glasses wearing) when integrated with Wisenet cameras, Vehicle (Types, colors) / License plate (Optical technology converts images into texts for storage, supporting search in text



When managing multi channels, the Hanwha's AI NVR greatly improves search efficiency by allowing users to preview images and videos by simply hovering mouse cursor on the timeline. Moreover, users can configure event and alarm for all channels within a single page.



Live monitoring and bookmarks

With Live Monitoring, users can configure the split mode as desired to view video footage in real time or find information such as system malfunction, overload or recording status for each channel. In the PTZ control mode, users can click arrow keys to move the PTZ in eight directions or zoom in to a certain area for more detailed monitoring. With Bookmark feature, users can designate up to 100 events for easy and quick event search.



Live monitoring and PTZ control

Bookmark setup and event search



PRN-6400DB4
64CH AI NVR



PRN-6400B4
64CH AI NVR



PRN-3200B4
32CH AI NVR



PRN-3200B2
32CH AI NVR



PRN-1600B2
16CH AI NVR

OS	Linux	Linux	Linux	Linux	Linux
Supported Compression	H.265, H.264, MJPEG				
Max. Recording Bit Rate	Distributed mode : Up to 400 Mbps Normal mode : Up to 150 Mbps {RAID mode} Normal : Up to 400 Mbps Degrade/ Rebuild : Up to 320 Mbps	Distributed mode : Up to 400 Mbps Normal mode : Up to 150 Mbps {RAID mode} Normal : Up to 400 Mbps Degrade/ Rebuild : Up to 320 Mbps	Distributed mode : Up to 400 Mbps Normal mode : Up to 150 Mbps {RAID mode} Normal : Up to 400 Mbps Degrade/ Rebuild : Up to 320 Mbps	Distributed mode : Up to 400 Mbps Normal mode : Up to 150 Mbps {RAID mode} Normal : Up to 400 Mbps Degrade/ Rebuild : Up to 320 Mbps	Distributed mode : Up to 250 Mbps Normal mode : Up to 150 Mbps RAID mode : Up to 250 Mbps
Max # of Cameras	Max. 64CH	Max. 64CH	Max. 32CH	Max. 32CH	Max. 16CH
Network Camera Resolution	32MP ~ CIF	32MP ~ CIF	32MP ~ CIF	32MP ~ CIF	32MP ~ CIF
HDD Slot	SATA 16ea(Max. 160TB, Non-RAID mode), Hot swap	SATA 16ea(Max. 160TB, Non-RAID mode), Hot swap	SATA 16ea(Max. 160TB, Non-RAID mode), Hot swap	SATA 8ea(Max. 80TB, Non-RAID mode)	SATA 8ea(Max. 80TB, Non-RAID mode)
Record Mode	Normal, Dual Stream, Schedule (Continuous/Event), Event (Pre/Post), Bookmark				
Event Trigger	Alarm Input, Video Loss, Camera Event (Sensor, MD, Video Analytics, Defocus, Audio), Dynamic Event, User Event				
Event Action	e-Mail, Event Push, PTZ Preset, Alarm Out, Buzzer, Monitor Out, FTP, SUNAPI Command, Shutdown				
External Storage	iSCSI				
RAID	RAID-5/6(Array Size : 8 HDD x 2 Array)	RAID-5/6(Array Size : 8 HDD x 2 Array)	RAID-5/6(Array Size : 8 HDD x 2 Array)	RAID-5/6(Single, 1 Array)	RAID-5/6(Single, 1 Array)
Hot Swap	Support				
Network Viewer Software	SSM, Webviewer, WAVE, Wisenet Viewer, Wisenet, mobile Support CGI(SUNAPI) for integration to 3rd party VMS				
Local Monitor	- Dynamic layout, Virtual channel view - Clone Mode : Up to 64 Division - Expand Mode : HDMI 1 up to 36 Div. HDMI2 up to 16 Div. [Web] 1/ 2H/ 2V/ 3V/ 4/ 6/ 8/ 9	- Dynamic layout, Virtual channel view - Clone Mode : Up to 64 Division - Expand Mode : HDMI 1 up to 36 Div. HDMI2 up to 16 Div. [Web] 1/ 2H/ 2V/ 3V/ 4/ 6/ 8/ 9	- Dynamic layout, Virtual channel view - Clone Mode : Up to 36 Division - Expand Mode : HDMI 1 up to 36 Div. HDMI2 up to 16 Div. [Web] 1/ 2H/ 2V/ 3V/ 4/ 6/ 8/ 9	- Dynamic layout, Virtual channel view - Clone Mode : Up to 36 Division - Expand Mode : HDMI 1 up to 36 Div. HDMI2 up to 16 Div. [Web] 1/ 2H/ 2V/ 3V/ 4/ 6/ 8/ 9	- Dynamic layout, Virtual channel view - Clone Mode : Up to 16 Division - Expand Mode : HDMI 1 up to 16 Div. HDMI2 up to 16 Div. [Web] 1/ 2H/ 2V/ 3V/ 4/ 6/ 8/ 9
Network Camera Protocol	SUNAPI, ONVIF				
Power Input	100 ~ 240 VAC ± 10%: 50/60Hz (Dual SMPS)	100 ~ 240 VAC ± 10%: 50/60Hz	100 ~ 240 VAC ± 10%: 50/60Hz	100 ~ 240 VAC ± 10%: 50/60Hz, 2.1A	100 ~ 240 VAC ± 10%: 50/60Hz, 2.1A
Power Consumption	Max. 285W (972.5 BTU with HDD 16ea)	Max. 285W (972.5 BTU with HDD 16ea)	Max. 285W (972.5 BTU with HDD 16ea)	Max. 205W (With 10TB HDDs 8EA)	Max. 205W (With 10TB HDDs 8EA)
PoE Budget	-	-	-	-	-
Additional Features	-				



XRN-6420DB4/B4
64CH NVR



XRN-6410DB4/6410B4
64CH NVR



XRN-6410RB2
64CH NVR



XRN-6410B2
64CH NVR

OS	Linux	Linux	Linux	Linux
Supported Compression	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG
Max. Recording Bit Rate	Distributed mode : Up to 520Mbps Normal mode : Up to 300Mbps {RAID mode} Normal : Up to 520Mbps Degradate/ Rebuild : Up to 520Mbps	Distributed mode : Up to 400Mbps Normal mode : Up to 150Mbps {RAID mode} Normal : Up to 400Mbps Degradate/ Rebuild : Up to 320Mbps	Distributed mode : Up to 400Mbps Normal mode : Up to 150Mbps {RAID mode} Normal : Up to 400Mbps Degradate/ Rebuild : Up to 320Mbps	Distributed mode : Up to 400Mbps Normal mode : Up to 150Mbps
Max of Cameras	Max. 64CH	Max. 64CH	Max. 64CH	Max. 64CH
Network Camera Resolution	32MP ~ CIF	32MP ~ CIF	32MP ~ CIF	32MP ~ CIF
HDD Slot	SATA 16ea(Max. 160TB, Non-RAID mode), Hot swap	SATA 16ea(Max. 160TB, Non-RAID mode), Hot swap	SATA 8ea(Max. 80TB, Non-RAID mode), Hot swap	SATA 8ea(Max. 80TB)
Record Mode	Normal, Dual Stream, Schedule (Continuous/Event), Event (Pre/Post), Bookmark			
Event Trigger	Alarm Input, Video Loss, Camera Event (Sensor, MD, Video Analytics, Defocus, Audio), Dynamic Event, User Event			
Event Action	e-Mail, Event Push, PTZ Preset, Alarm Out, Buzzer, Monitor Out, FTP, SUNAPI Command, Shutdown			
External Storage	iSCSI			
RAID	RAID-5/6	RAID-5/6	RAID-5/6	-
Hot Swap	Support	Support	Support	-
Network Viewer Software	SSM, Webviewer, Wave, Wisenet Viewer, Wisenet mobile, Support CGI(SUNAPI) for integration to 3rd party VMS			
Local Monitor	- Dynamic layout, Virtual channel view - Clone Mode : Up to 64 Division - Expand Mode : HDMI1 up to 36 Div. HDMI2 up to 32 Div.[Web] 1/ 2H/ 2V/ 3V/ 4/ 6/ 8/ 9			
Network Camera Protocol	SUNAPI, ONVIF	SUNAPI, ONVIF	SUNAPI, ONVIF	SUNAPI, ONVIF
Power Input	100 ~ 240 VAC ± 10%; 50/60 Hz, 2.7A (Dual SMPS)	100 ~ 240 VAC ± 10%; 50/60 Hz, 2.7A (Dual SMPS)	100 ~ 240 VAC ± 10%; 50/60 Hz, 1.7A (Single SMPS)	100 ~ 240 VAC ± 10%; 50/60 Hz, 1.5A (Single SMPS)
Power Consumption	Max. 265W (904.2 BTU with HDD 16ea)	Max. 265W (904.2 BTU with HDD 16ea)	Max. 160W (with 10TB HDD 8EA)	Max. 138W (with 10TB HDD 8EA)
PoE Budget	-	-	-	-
Additional Features	<ul style="list-style-type: none"> N+1 failover supported AI search (BestShot, Attribute) <ul style="list-style-type: none"> - When integrated with Wisenet AI cameras PTZ camera configuration and control Dual SMPS (6410DB4) Dynamic layout Virtual channel view Fisheye dewarping 	<ul style="list-style-type: none"> N+1 failover supported AI search (BestShot, Attribute) <ul style="list-style-type: none"> - When integrated with Wisenet AI cameras PTZ camera configuration and control Dual SMPS (6410DB4) Dynamic layout Virtual channel view Fisheye dewarping 	<ul style="list-style-type: none"> N+1 failover supported AI search (BestShot, Attribute) <ul style="list-style-type: none"> - When integrated with Wisenet AI cameras PTZ camera configuration and control Dynamic layout Virtual channel view Fisheye dewarping 	<ul style="list-style-type: none"> N+1 failover supported AI search (BestShot, Attribute) <ul style="list-style-type: none"> - When integrated with Wisenet AI cameras PTZ camera configuration and control Fisheye dewarping



XRN-3220B4
32CH AI NVR



XRN-3210B4
32CH NVR



XRN-3210RB2
32CH NVR



XRN-3210B2
32CH NVR

OS	Linux		Linux	
Supported Compression	H.265, H.264, MJPEG		H.265, H.264, MJPEG	
Max. Recording Bit Rate	Distributed mode : Up to 520 Mbps Normal mode : Up to 300 Mbps {RAID mode} Normal : Up to 520 Mbps Degradate/ Rebuild : Up to 520 Mbps		Distributed mode : Up to 400 Mbps Normal mode : Up to 150 Mbps {RAID mode} Normal : Up to 400 Mbps Degradate/ Rebuild : Up to 320 Mbps	
Max of Cameras	Max. 32CH		Max. 32CH	
Network Camera Resolution	32MP ~ CIF		32MP ~ CIF	
HDD Slot	SATA 16ea(Max. 160TB, Non-RAID mode)		SATA 16ea(Max. 160TB, Non-RAID mode)	
Record Mode	Normal, Dual Stream, Schedule(Continuous/Event), Event (Pre/Post), Bookmark			
Event Trigger	Alarm Input, Video Loss, Camera Event (Sensor, MD, Video Analytics, Defocus, Audio), Dynamic Event, User Event			
Event Action	e-Mail, Event Push, PTZ Preset, Alarm Out, Buzzer, Monitor Out, FTP, SUNAPI Command, Shutdown			
External Storage	iSCSI			
RAID	RAID-5/6		RAID-5/6	
Hot Swap	Support			
Network Viewer Software	SSM, Webviewer, WAVE, Wisenet Viewer, Wisenet mobile, Support CGI(SUNAPI) for integration to 3rd party VMS			
Local Monitor	Dynamic layout, Virtual channel view Clone Mode : Up to 32 Division Expand Mode : HDMI1 up to 32 Div, HDMI2 up to 16 Div. [Web] 1/ 2H/ 2V/ 3V/ 4/ 6/ 8/ 9		Dynamic layout, Virtual channel view Clone Mode : Up to 64 Division Expand Mode : HDMI1 up to 32 Div, HDMI2 up to 16 Div. [Web] 1/ 2H/ 2V/ 3V/ 4/ 6/ 8/ 9	
Network Camera Protocol	SUNAPI, ONVIF		SUNAPI, ONVIF	
Power Input	100 ~ 240 VAC ± 10%; 50/60Hz, 2.7A (Single SMPS)		100 ~ 240 VAC ± 10%; 50/60Hz, 2.7A (Single SMPS)	
Power Consumption	Max. 265W (904.2 BTU with HDD 16ea)		Max. 160W (with 10TB HDD 8EA)	
PoE Budget	-		-	
Additional Features	<ul style="list-style-type: none"> • N+1 failover supported • AI search (BestShot, Attribute) - When integrated with Wisenet AI cameras • PTZ camera configuration and control <ul style="list-style-type: none"> • Dynamic layout • Virtual channel view • Fisheye dewarping 			



XRN-1620SB1
16CH NVR



XRN-1620B2
16CH NVR



XRN-820S
8CH NVR



XRN-815S
8CH NVR



XRN-420S
4CH NVR

OS	Linux	Linux	Linux	Linux	Linux
Supported Compression	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
Max. Recording Bit Rate	Max. 140Mbps	Max. 140Mbps	Max. 120Mbps	Max. 100Mbps	Max. 50Mbps
Max # of Cameras	Max. 16CH	Max. 16CH	Max. 8CH	Max. 8CH	Max. 4CH
Network Camera Resolution	32MP ~ CIF	32MP ~ CIF	32MP ~ CIF	12MP ~ CIF	8MP ~ CIF
HDD Slot	SATA 4ea(Max. 24TB)	SATA 8ea(Max. 80TB)	SATA 2ea(Max. 12TB)	SATA 2ea(Max. 20TB)	SATA 1ea(Max. 6TB)
Record Mode	Normal, Dual Stream, Schedule(Continuous/Event), Event (Pre/Post), Bookmark				
Event Trigger	Alarm Input, Video Loss, Camera Event (Sensor, MD, Video Analytics, Defocus, Audio), Dynamic Event, User Event				
Event Action	e-Mail, Event Push, PTZ Preset, Alarm Out, Buzzer, Monitor Out, FTP, SUNAPI Command, Shutdown				
External Storage	-	-	-	-	-
RAID	RAID-1	-	RAID-1	-	-
Hot Swap	-	-	-	-	-
Network Viewer Software	WAVE, SSM, Webviewer, Wisenet Viewer, Wisenet Viewer, Wisenet mobile, Support CGI(SUNAPI) for integration to 3'rd party VMS				
Local Monitor	Dynamic layout, Virtual channel view Clone mode : Up to 16 Division Expand mode : Up to 9 Division[Web] 1/ 2H/ 2V/ 3V/ 4/ 6/ 8/ 9			Clone Mode : Dynamic layout Expand Mode : HDMI1 Dynamic layout, HDMI2 up to 9 Div. [Web] 1/ 2H/ 2V/ 3V/ 4/ 6/ 8/ 9	1/ 2V/ 2H/ 3V/ 4/ Sequence [Web] 1/ 2V/ 2H/ 3V/ 4
Network Camera Protocol	SUNAPI, ONVIF	SUNAPI, ONVIF	SUNAPI, ONVIF	SUNAPI, ONVIF	SUNAPI, ONVIF
Power Input	100 ~ 240 VAC ± 10%; 50/60 Hz	100 ~ 240 VAC ± 10%; 50/60 Hz	100 ~ 240 VAC ± 10%; 50/60 Hz	100 ~ 240 VAC ± 10%; 50/60 Hz	100 ~ 240 VAC ± 10%; 50/60 Hz
Power Consumption	Max. 310W	130W	Max 160W	Max 165W (563 BTU with 2HDD, PoE On)	Max 67W(1HDD, PoE On)
PoE Budget	200W	-	100W	100W	50W
Additional Features	<ul style="list-style-type: none"> • PoE supported • N+1 failover supported • AI search (BestShot, Attribute) - When integrated with Wisenet AI cameras • PTZ camera configuration and control 				



QRN-1630S
16CH NVR



QRN-830S
8CH NVR

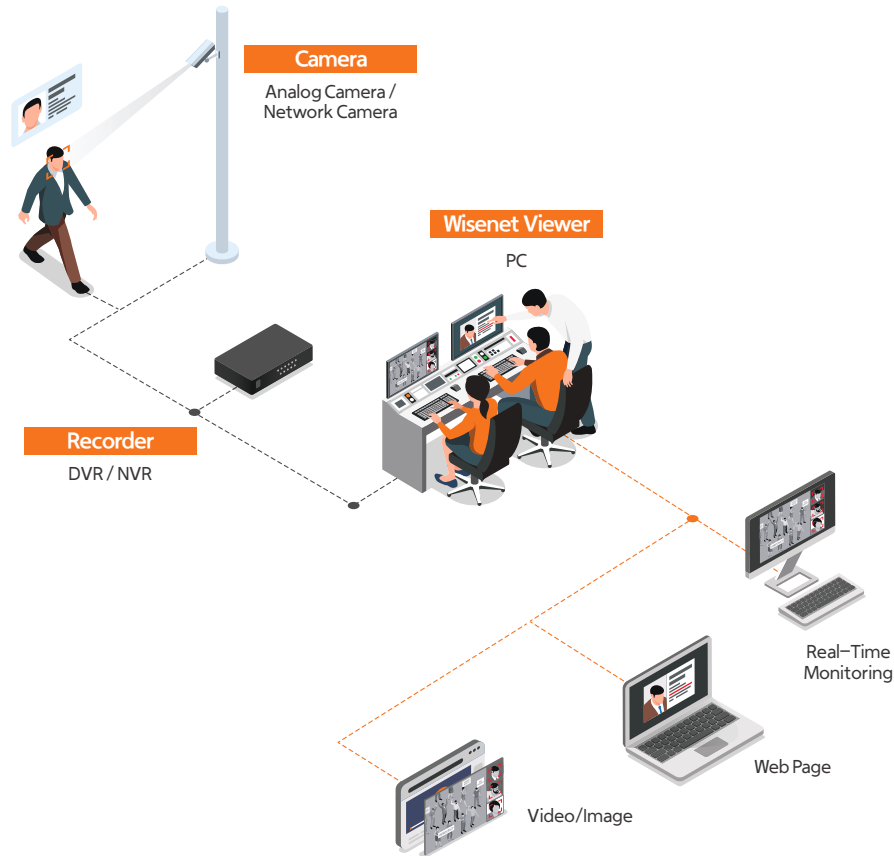


QRN-430S
4CH NVR

OS	Linux	Linux	Linux
Supported Compression	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG
Max. Recording Bit Rate	Max. 128Mbps	Max. 80Mbps	Max. 40Mbps
Max of Cameras	Max. 16CH	Max. 8CH	Max. 4CH
Network Camera Resolution	8MP ~ CIF	8MP ~ CIF	8MP ~ CIF
HDD Slot	SATA 2ea(Max. 20TB)	SATA 1ea(Max. 6TB)	SATA 1ea(Max. 6TB)
Record Mode	Normal, Dual Stream, Schedule(Continuous/Event), Event (Pre/Post), Bookmark		
Event Trigger	Alarm Input, Video Loss, Camera Event (Sensor, MD, Video Analytics, Defocus, Audio), Dynamic Event, User Event		
Event Action	"e-Mail, Event Push, PTZ Preset, Alarm Out, Buzzer, Monitor Out, FTP, SUNAPI Command, Shutdown"	e-Mail, Event Push, PTZ Preset, Alarm Out, Buzzer, Monitor Out, FTP, SUNAPI Command, Shutdown	e-Mail, Event Push, PTZ Preset, Alarm Out, Buzzer, Monitor Out
External Storage	-	-	-
RAID	-	-	-
Hot Swap	-	-	-
Network Viewer Software	WAVE, SSM, Webviewer, Wisenet Viewer, Wisenet mobile Support CGI(SUNAPI) for integration to 3rd party VMS		
Local Monitor	Clone Mode : Dynamic layout Expand Mode : HDMI1 Dynamic layout, HDMI2 up to 16 Div. [Web] 1/ 2H/ 2V/ 3V/ 4/ 6/ 8/ 9	Dynamic layout [Web] 1/ 2H/ 2V/ 3V/ 4/ 6/ 8/ 9	1/ 2V/ 2H/ 3V/ 4/ Sequence [Web] 1/ 2V/ 2H/ 3V/ 4
Network Camera Protocol	SUNAPI, ONVIF	SUNAPI, ONVIF	SUNAPI, ONVIF
Power Input	100 ~ 240 VAC ± 10%; 50/60Hz	54VDC / 1.55A	100 ~ 240 VAC ± 10%; 50/60Hz
Power Consumption	Max. 200W(682 BTU with 2HDD, PoE ON)	Max 84W (287 BTU with 1HDD, PoE ON)	Max 52W(1HDD, PoE On)
PoE Budget	130W	65W	35W
Additional Features	<ul style="list-style-type: none"> • PoE supported • N+1 failover supported • ARB (Auto Recovery Backup) redundancy supported <ul style="list-style-type: none"> • PTZ camera configuration and control • Easy configuration (Setup Wizard, P2P (QR Code)) 		

Wisenet Viewer

Costless yet powerful NVR·DVR Management Software

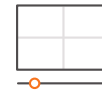


Available on Windows, macOS, Linux

Monitoring with PC gets easier

- Supports multiple OS (Windows, macOS, Linux)
- Flexible channel division and custom layout
- AI search (Person, Face, Vehicle, LPR)
- Fisheye de-warping
- Displays web pages (ex. NVR web-viewer) and video tutorials
- Allows videos to be directly saved to PC
- Event trigger and action rule management
- Remote connection (DDNS/P2P)

Effective monitoring with essential features



Customizable channel layout & Timeline



Easy monitoring with Fisheye De-warping



Intelligent monitoring powered by AI Search



Encoder



SPE-1630
16CH Encoder



SPE-420
4CH Encoder

Max. # of Cameras	16	4
Supported Compression	H.265 / H.264, MJPEG	H.265 / H.264, MJPEG
Max. Resolution	5MP/4MP/1080p/720p/WD1/4CIF/CIF	5MP/4MP/1080p/720p/WD1/4CIF/CIF
Max. Frame Rate per Channel	5MP: 12fps/CH, 4MP: 15fps/CH, 1080p/720p/WD1/4CIF/CIF: 30fps/CH(N), 25fps/CH(P)	5MP: 12fps/CH, 4MP: 15fps/CH, 1080p/720p/WD1/4CIF/CIF: 30fps/CH(N), 25fps/CH(P)
Bi-Directional Audio	Support	Support
RS-485	Support	Support
Alarm I/O	4 / 1	4 / 2
Application Programming Interface	ONVIF profile S, SUNAPI	ONVIF profile S, SUNAPI
Power	MAX: 20W (12V, 1.67A)	MAX: 5W (PoE & 12VDC)

Decoder



SPD-152
1 Monitor Decoder

Video Out	HDMI (2ea)
Resolution	HDMI#1 up to 4K, HDMI#2 up to 1080p
Display	Max. 64ch decoding Decoding performance: 8M@60fps, 2M@360fps
Power	Dual Power: 12VDC, PoE (IEEE802.3af)
Additional Features	Multi adapter for monitor back mount (VESA)

AI Box



AIB-800
AI Box

Inputs	Max. 8CH
Resolution	CIF ~ 32MP
Protocols	SUNAPI, ONVIF
Analytics	<p>Classified object type : Person/Vehicle Attributes : Vehicle (Type:car/bus/truck/motorcycle/bicycle) Support Bestshot Analytics events based on AI engine: - Motion Detection*, Object detection, Virtual line* (Crossing/Direction), Virtual area* (Loitering/Intrusion/Enter/Exit) * Some of the video analytics only works with people/vehicle detection Analytics events : Virtual area(Appear/Disappear)</p> <p>Business Intelligence : - Based on AI engine: People counting, Vehicle counting, Queue management, Heatmap</p>
Protocol	TCP/IP, UDP/IP, RTP (UDP), RTP (TCP), RTSP, NTP, HTTP, DHCP (Server, Client), SMTP, ICMP, IGMP, ARP, DNS, DDNS, uPnP, HTTPS, SNMP, ONVIF (Profile-S), SUNAPI (Server, Client), SRTP
DDNS	Hanwha DDNS
Max Manipulated Streams	80 Streams (10 Streams per 1CH)
IP Version	IPv4/v6
Security	IP address filtering, User access Log, 802.1x, Encryption Device certificate(Hanwha Techwin Root CA)
OS	Windows 11/10, macOS 10.13
Web Browser	Google Chrome, Microsoft Edge, Mac Safari
Viewer/CMS	WebViewer, WAVE, SSM, Genetec, Milestone Support SDK/CGI(SUNAPI) for interworking with 3rd party VMS
Ethernet	RJ-45 1ea (1Gbps)
Alarm	In(8EA, Terminal Block), Alarm Reset(1EA), Out(4EA, Terminal Block) - Relay Out 1(NO/NC/COM), - Relay Out 2~4(NO/COM)
USB	1EA(Rear 1 x USB 3.0) for DEBUG
Log List	Max. 3,000 (System 1,000, Access 1,000, EVENT 1,000)
CPU	NVIDIA ORIN NX 8GB (SOM)
Operating Temperature / Humidity	+0°C~+40°C(+32°F~+104°F), 20%~85% RH
Power Consumption	100 ~ 240 VAC ± 10%; 50/60 Hz, 12V, 4A Adaptor, 28W
Color / Material	Black / Metal
Product Dimensions / Weight	300 x 47.6 x 240.9 mm (11.81 x 1.87 x 9.48 inch), 1.39kg

Wisenet WAVE

Video Management System

Intuitive and Easy to Use

- An intuitive 'drag & drop' tool makes it extremely easy for operators to set up a display of live and recorded images on a single screen or video wall, with customizable layouts and sizes.
- Zoom windows which, with just simple clicks of a mouse, enables operators to zoom in to see close up detail of any suspicious activity.
- Motion detection and video analytics support can be configured to generate alerts when user defined incidents occur.
- A wide range of smart, keyword, calendar and preview search options facilitate rapid retrieval of recorded video.

Wisenet WAVE targets the needs of projects in the mid-market with an emphasis on simplified user experience.

An Operating System to Suit Your Needs

Wisenet WAVE has applications for all major operating systems so our users are not limited by what device or operating system they choose to use on their desktops, mobile devices, rack mount servers, or even low-powered embedded devices. (For embedded devices, please contact **Hanwha Vision Support**)



WAVE Sync

A cloud-based service that enables simple, centralized remote access and insight into any Wisenet WAVE system.



Desktop

A rich media player designed to view and manage a single Wisenet WAVE system from a desktop or laptop PC.



Mobile

A mobile app designed for viewing Wisenet WAVE system video and archives while on-the-go.



Server

A media server responsible for discovering, connecting to, and managing system devices and data.

Supported Browsers	Desktop OS Support	Mobile OS Support	Server OS Support
Google Chrome	Microsoft Windows	Google Android	Microsoft Windows
Mozilla Firefox	Ubuntu Linux	Apple iOS	Ubuntu Linux
Opera / Opera Neon	Apple macOS		
Microsoft Edge			
Apple Safari			

Cloud

Wisenet WAVE Sync Simplifies Everything

A cloud-based service which can be remotely accessed by an unlimited number of authorized users from anywhere in the world.

Setup in Seconds

- Step 1: Create Wisenet WAVE Sync Account
- Step 2: Link your System to Wisenet WAVE Sync
- Step 3: Connect, View and Manage from anywhere



Wisenet WAVE

Desktop

The Ultimate Flexibility

Wisenet WAVE offers a wide range of options to allow users to choose how and where to manage their video surveillance systems with minimal hardware requirements. Wisenet WAVE is offered as software which can be installed onto a user's desktop running Windows, Linux or Apple devices.



Mobile

Smart Phone. Smart Video.

A mobile app provides the opportunity to remotely access the key functions of Wisenet WAVE from a smart device to enable 'on-the-road' users to view and respond to any incidents captured by connected cameras.



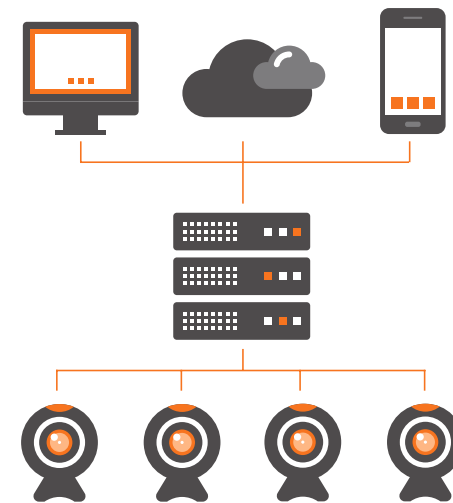
Server

Lightweight. Powerful. Server Hive.

The Wisenet WAVE server application is the foundation of the entire platform - with the ability to operate alone or as one part of a hive.

Wisenet WAVE is available as a downloadable software application from the **Hanwha Vision** website which enables the installers to easily and effortlessly install and configure.

The supporting web-based application enables each Wisenet WAVE platform to be managed as a stand alone system or as part of a larger, scalable video management solution. The application also provides an audit trail, real-time health monitoring and camera failover support, as well as reports on server health and storage status.



Server Hive

Connect to any Server w/ any Client

- Instant synchronization
- No single point of failure
- Automatic failover
- One-click upgrades

Wisenet SSM

Ideal choice for integrated monitoring

Wisenet SSM (Smart Security Manager) is a video monitoring software that maximizes the operational efficiency of Wisenet products (Network camera, Encoder, DVR and NVR). **Hanwha Vision** provides video surveillance products and also in-house developed Wisenet software to monitor whole systems. It provides seamless system integration and central monitoring with cost effectiveness and reliability.

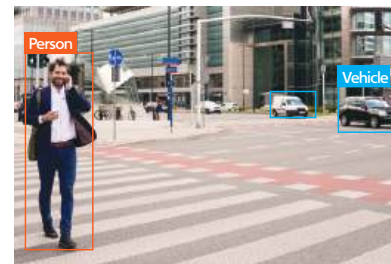


AI video search

Connect **Hanwha** AI cameras to SSM for various search features adopting AI algorithms.

• Best Shot search using unique attributes

System operators can utilize SSM's 'AI video search' feature to easily search specific events in the video by designating distinctive attributes of objects such as persons, faces, and vehicles. If a user searches specific attributes such as red motorcycle or a man wearing short pants, the best still cuts (Best Shot) of the classified objects in the video will be retrieved. Best Shots can be used as forensic data for accident investigations, playing back video that includes Best Shots.



Hanwha SSM search
Support quick search using attributes



Best Shot
Object detection & classification (Person, face, vehicle, license plate)

Parking management solution

Connect ANPR cameras to Wisenet SSM for various parking management features.

• Vehicle management & event search

Hanwha SSM's parking management solution utilizes ANPR (Automatic number plate recognition) cameras offering real-time parking entrance/exit monitoring. Users can register and manage vehicles without additional parking management software, while simple search feature quickly searches and retrieves vehicle footage.



Stable monitoring

SSM provides safe and stable monitoring environment through Failover.

• Vehicle management & event search

Failover priority (High, medium, never) can be configured for each channel. If a camera is failed, high priority cameras will be failed over at first. Users can record and save important footages without loss of data.



Cost Competitiveness

Offer major features of video surveillance in reasonable price

One time licensing cost (No cost for upgrades and maintenance)

High quality VMS features for the price

High reliability

Superb device compatibility offered as a VMS of device manufacturer

Integrated operation of H/W and S/W for efficient maintenance and management

Dashboard that can monitor device status

Convenient Operation

A single manufacturer providing unified user experience

Be the first to use the latest device features

Offer various solutions for user environments



XRP-4310DB4
128CH Server NVR (SSM Appliance)



XRP-4210B4
72CH Server NVR (SSM Appliance)

OS	Windows 10 IoT Enterprise (SSM preinstalled)	
Supported Compression	H.265, H.264, MJPEG, WiseStream	
Max. Recording Bit Rate	400Mbps	
Max # of Cameras	128CH (If clustering, 132CH)	72CH (If clustering, 132CH)
Network Camera Resolution	32MP ~ CIF	
HDD Slot	SATA 16ea (3.5" 16ea Hot Swap - Volume 2ea)	
Record Mode	Normal, Schedule (Continuous / Event), Event (Pre / Post), Event Profile, ARB, Dual-Track	
Event Trigger	Video loss, Camera event (Sensor, MD, Passing, Entering, Exiting, Disappearing (Appearing), Tampering, Tracking, Face Detection, Audio Detection, ANPR, Bestshot), AI Event (Face, Appearance, Face mask, Vehicle)	
Event Action	Instant Viewer, Preset, Alarm Out, Pop-up, Sound and E-mail notification	
External Storage	-	
RAID	RAID 1 / 5 / 6 / 10 / 50	
Hot Swap	Yes	
Network Viewer Software	SSM Client, SSM Mobile	
Local Monitor	Dual if Full HD monitor, Single if UHD monitor	
Network Camera Protocol	Wisenet, ONVIF	
Power Input	100 ~ 240VAC, 50 ~ 60Hz	
Power Consumption	250W Dual	
PoE Budget	-	
Additional Features	<ul style="list-style-type: none"> • SSM Preinstalled • Redundant Power Support • ARB (Auto Recovery Backup) redundancy supported • AI Event (Face, Appearance, Face mask, Vehicle) Trigger 	<ul style="list-style-type: none"> • SSM Preinstalled • ARB (Auto Recovery Backup) redundancy supported • AI Event (Face, Appearance, Face mask, Vehicle) Trigger

Wisenet Access Software 2.2

Wisenet Access Software is access control management software integrated with Wisenet SSM, WAVE for Total security solution. It is highly scalable up to unlimited doors system and has robust software architecture.

ACSMonitoring



Fire Alarm



Lift Control



Key Features

- Interlocking**
 Control the locking of two or more doors
 If one door is opened or unlocked, the remaining doors refuse access
- Mustering Report**
 Provide information of the occupants in the fire grouping area based in Fire event
- Visitor management**
 Providing visitor management features :Visitor/Host information, Visit history, Check in/out and archive
- LDAP integration**
 Synchronize Active Directory "Security group" users to have the same "Access Group", "Company", "Department" in WACS
- Lift access control**
 Provide Access control for LIft up to 12floors per output board (V300, X300)
- Guard Tour**
 Provide Guard Tour : Sequential, Time Bound types



Configuration

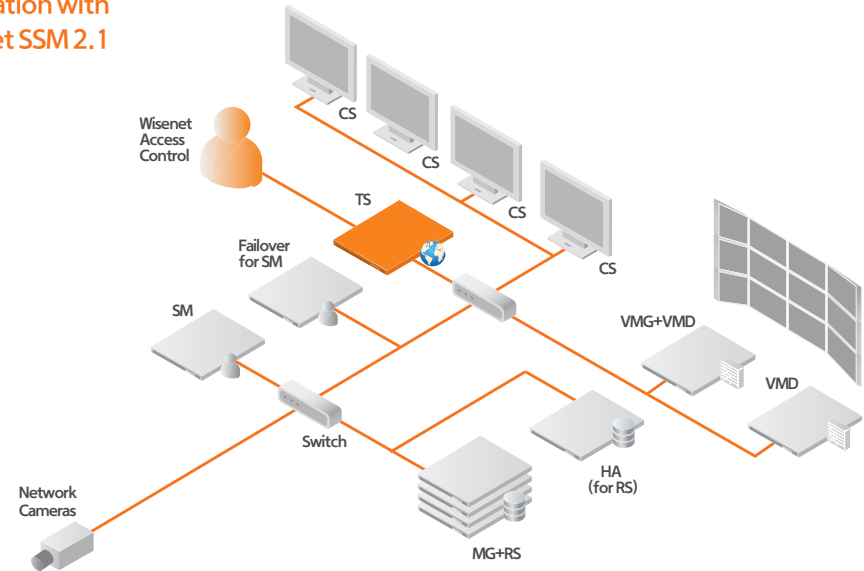


Monitoring



Mustering Report

Integration with Wisenet SSM 2.1



Access Control	Device auto discovery Cardholder management Batch uploads Card (s) pre-registration Lift Control Role based ACS Device maintenance	Unlimited access groups, Time schedules Interlocking Area / Zone management Biometric readers (FP, Face) Visitor Management Global APB, I/O Guard Tour
Monitoring	Real time access events & alarm monitoring Graphic maps Remote door management (Close / Open) I/O monitoring	Mustering Configure Event Specific Instructions for Operators Event Filtering for Monitoring Control Door Monitoring/ Management permissions per User
Card Design and Printing	Create multiple design templates Auto-fill card holder data from system database Print cards	
Fire Groups	Create fire-groups for each fire sensor input	
Advanced Reporting	Extensive reporting options Export to multiple formats (excel, pdf, word etc.) Meal Count Report	
Video Integration	Seamless Integration with Hanwha Vision 's VMS in event monitoring Review video of the access & alarms events Real-time access & alarms events notification to Wisenet WAVE, SSM	
Maintenance	User group & user privileges Manual & scheduled database backup Database restore	Data export & import Custom fields Auditing & user activity logs
System	Unlimited doors Very simple and intuitive user interface Highly scalable	

Reader



Signo 20/20K/40/40K
Card / Keypad Reader



U90
Long Range UHF Reader



BioEntry W2
Fingerprint / Card Reader



BioMini
Fingerprint Scanner

Credential Compatibility	125KHz/ 13.56Mhz	902~928 MHz	13.56Mhz	-
Communication	Wiegand/Clock & Data/BLE/NFC	Wiegand	Wiegand	USB 2.0
Compatible Access Cards	Standard Profile : iClass SE/SEOS, MIFARE (Classic/SIO), HID Prox, EM4102, MIFARE DESFire EV1/EV2 (CSN/SIO) SEOS Profile : iClass SEOS	UHF Card	iCLASS SE/SEOS, MIFARE (Classic) / DESFire EV1 CSN	-
Keypad	No / Yes (6x2) / No / Yes (4x3)	-	-	-
Operating Voltage Range	12V DC	12V DC or 24V DC	12V DC	USB 2.0
Operating Temperature	-35°C ~ 66°C (-31°F ~ 150°F)	-35°C ~ +65°C (-31°F ~ +150°F)	-20°C ~ +50°C (-4°F ~ +122°F)	-10°C ~ +50°C (+14°F ~ +122°F)
Ingress Protection	IP65	IP65	IP67	-
Impact Protection	-	-	IK08	-
Panel Connection	Pigtail	Pigtail	Pigtail	-
Color	Black with silver	Black	Dark Gray	Dark Gray
OSDP	Support	-	-	-
Max. User	-	-	500,000 (1 : 1), 100,000 (1 : N)	-
Max. Fingerprint Template	-	-	1,000,000 (1 : 1), 200,000 (1 : N)	-
Ethernet	-	-	10/100Mbps	-

Controller



X1100
Hybrid controller



X100/X200/X300
Expansion Reader/ Input/ Output Module

Peripheral



SSA-X300
Power Package

Card



iCLASS SEOS (Elite)
13.56MHz



Mobile Subscription


UHF Card
902-928 MHz Card

Communication	Ethernet (10/100)/RS-485	RS-485	Controller/ Interface On Board	Max. 2ea Boards in enclosure	<ul style="list-style-type: none"> • 13.56Mhz • Compatible with Signo 20 (k)/40K, R10 EXP • Encoded by Hanwha Vision unique format (Elite) 	<ul style="list-style-type: none"> • Bluetooth/NFC via mobile device (Android, IOS) 	<ul style="list-style-type: none"> • Long range card (3~5m)
Reader interface	2ea	2ea/ -	Input Power	100 ~ 240V AC (50Hz/60Hz) / 2.0A			
Max. expansion board	32ea	-	Power Consumption	13.5V ± 5%, 4.7A (Strobe, Horn 12.5V DC ± 5%)			
Max. card holders	250,000	-	Charging Current	700mA			
Max. Event buffers	50,000	-	Back up Battery	12V, 18Ah, rechargeable			
Input port	7ea	7ea/ 19ea/ 3ea	SMPS Status Transmission	AC loss, Battery fail (Non battery)			
Output port	4ea	4ea/ 2ea/ 12ea	AC Input Protection	by Fuse in input port			
Operating Temperature	0°C ~ 70°C (32°F ~ 158°F)	0°C ~ 70°C (32°F ~ 158° F)	Operation Temperature	0°C ~ +45°C (+32°F ~ +113°F)			
PoE	-	-	Case Lock	Lock on front door with keys			
Color	Gray	Gray	Dimension (mm)	W410 x H410 x D97mm (16.14" x 16.14" x 3.82")			
OSDP	Yes	Yes					

IP Audio System

IP audio meets network surveillance system for better safety and operational efficiency in daily life.



 Please stay away from the fence

 Motion Detection



TTS
Text To Speech



PoE & PoE+
Dual Support +



SIP
PBX integration



Scheduler
Day, Week, Month and Year

IP Speakers



* US only
SPA-C110B/SPA-C110W
Ceiling Speaker



SPA-C100B / SPA-C100W
Ceiling Speaker



SPA-P100B/SPA-P100W
Pendant speaker



SPA-W100B / SPA-W100W
Wall speaker



SPA-H100B/SPA-H100W
Horn speaker

Amplifier	Built in 10W Class D				
Ethernet	10/100 Base-T				
Internal Memory	1 GBytes				
Max. Sound Pressure Level	100dB	100dB	101dB	101dB	125dB
Frequency Range (-10dB)	120Hz~20kHz	120Hz~20kHz	130Hz~20kHz	120Hz~20kHz	650Hz~5.3kHz
Sensitivity (1Watt)	90dB	90dB	91dB	91dB	111dB
Power	PoE/ PoE+				
TTS	Korean, English(US, UK), German, French, Spanish, Russian				

IP Audio Module



SPA-D1000
IP Audio Module

Amplifier	Built in 10W Class D
Power	PoE (IEEE 802.3 af type 1 Class 3), PoE+(IEEE 802.3 at type 2 Class 4)
Multi-source Dynamic PA control	Multi-source up to 48 (Multicast) (Audio 24CH + Mic 24CH) Up to 256 Zone Control (Multicast) Up to 20 Zone Control (Unicast) Up to 255 Groups
TTS	English(US, UK), German, French, Spanish, Russian

IP Audio Server



SPA-S1000
IP Audio Server

Ethernet	100/1000 Base-T
Power	AC 120-240V, 50/60Hz, 10W DC 24V, 350mA
Multi-source Dynamic PA control	Multi-source up to 48 (Multicast) (Audio 24CH + Mic 24CH) Up to 256 Zone Control (Multicast) Up to 20 Zone Control (Unicast) Up to 255 Groups

SIP Microphone



SPA-M2000
SIP Microphone

Mic input Level	AUX (Input Volume Max) -7dBV
Supported Protocols	IPv4, HTTP, HTTPS, SIP, mDNS, DNS, NTP, TCP, UDP, DHCP, ARP, ICMP
Power	Max. 10W, DC24V PoE (IEEE 802.3 af type 1 Class 3)

IP Audio Bridge



SPA-B1000
IP Audio Bridge

Power	PoE (IEEE 802.3 af type 1 Class 3) DC 24V
Supported Audio Format	File Streaming: WAV, MP3 in mono/stereo from 64 kbps to 320 kbps. Sampling rate from 16 kHz up to 48 kHz
Supported Protocols	IPv4, HTTP, HTTPS, mDNS, DNS, NTP, TCP, UDP, DHCP, ARP, ICMP



HCB-7000A
QHD Box Camera



HCO-7070RA
QHD IR Bullet Camera



HCO-7010RA/20RA/30RA
QHD IR Bullet Camera



HCD-7070RA
QHD IR Dome Camera



HCD-7010RA/20RA/30RA
QHD IR Dome Camera

Imaging Device	1/3" CMOS				
Resolution	2560 x 1440				
Min. Illumination	Color: 0.16Lux (F1.2) B/W: 0.009Lux (F1.2)	Color: 0.16Lux (F1.6) B/W: 0Lux (IR LED on)	Color: 0.26Lux (F1.8) (HCO-7010R) 0.27Lux (F2.0) (HCO-7020R/7030R) B/W: 0Lux (IR LED on)	Color: 0.16Lux (F1.6) B/W: 0Lux (IR LED on)	Color: 0.26Lux (F1.8) (HCD-7010RA) 0.27Lux (F2.0) (HCD-7020R/7030RA) B/W: 0Lux (IR LED on)
Focal Length	-	3.2 ~ 10mm (3.1x) varifocal	2.8mm fixed (HCO-7010R) 4.0mm fixed (HCO-7020R) 6.0mm fixed (HCO-7030R)	3.2 ~ 10mm (3.1x) varifocal	2.8mm fixed (HCD-7010RA) 4.0mm fixed (HCD-7020RA) 6.0mm fixed (HCD-7030RA)
Angular Field of View	-	H: 93.48° (Wide) ~ 29.44° (Tele) V: 50.47° (Wide) ~ 16.64° (Tele) D: 112.53° (Wide) ~ 33.7° (Tele)	H: 107.48° / V: 59.67° / D: 122.01° (HCO-7010RA) H: 78.22° / V: 41.21° / D: 87.91° (HCO-7020RA) H: 49.01° / V: 27.61° / D: 55.6° (HCO-7030RA)	H: 93.48° (Wide) ~ 29.44° (Tele) V: 50.47° (Wide) ~ 16.64° (Tele) D: 112.53° (Wide) ~ 33.7° (Tele)	H: 107.48° / V: 59.67° / D: 122.01° (HCD-7010RA) H: 78.22° / V: 41.21° / D: 87.91° (HCD-7020RA) H: 49.02° / V: 27.61° / D: 55.6° (HCD-7030RA)
Pan / Tilt / Rotate	-	-	-	0° ~ 350° / 0° ~ 63° / 0° ~ 355°	0° ~ 350° / 0° ~ 67° / 0° ~ 355°
IR Viewable Length	-	30m (98.43ft)	20m (65.62ft) (HCO-7010R) 25m (82.02ft) (HCO-7020R) 30m (98.43ft) (HCO-7030R)	20m (65.62ft)	20m (65.62ft) (HCD-7010RA) 25m (82.02ft) (HCD-7020RA) 30m (98.43ft) (HCD-7030RA)
Day & Night	Auto (ICR)				
Backlight Compensation	BLC/HLC/DWDR				
Digital Noise Reduction	2D DNR				
Motion detection	Support				
Privacy Masking	2 Zones				
Alarm I/O	0/1	0/1	0/0	0/1	0/0
Protocol	AHD: ACP (AHD Coax Protocol), CVBS: Pelco-C (Coaxitron) RS-485: Samsung T, Pelco D/P	AHD: ACP (AHD Coax Protocol), CVBS: Pelco-C (Coaxitron)	AHD: ACP (AHD Coax Protocol), CVBS: Pelco-C (Coaxitron)	AHD: ACP (AHD Coax Protocol), CVBS: Pelco-C (Coaxitron)	AHD: ACP (AHD Coax Protocol), CVBS: Pelco-C (Coaxitron)
Operating Temperature	-10°C ~ +55°C (+14°F ~ +131°F)	-30°C ~ +55°C (-22°F ~ +131°F) * Start up above -10°C (+14°F)	-30°C ~ +55°C (-22°F ~ +131°F) * Start up above -10°C (+14°F)	-10°C ~ +55°C (+14°F ~ +131°F)	-10°C ~ +55°C (+14°F ~ +131°F)
Certification	-	IP66, IK10	IP66, IK10	-	-
Power Consumption	12VDC & 24VAC: Max 3.6W	12VDC & 24VAC: Max 5.8W	12VDC: Max 5W	12VDC & 24VAC: Max 5.8W	12VDC: Max 5W
Dimensions (WxHxD) / Weight	W 59.6 x H 68.4 x D 92.7mm (2.35" x 2.69" x 3.65") 186g (0.41lb)	Ø 78 x 259.8mm (Ø 3.07" x 10.23") (Without sunshield) 914g (2.02lb)	Ø 70 x 246mm (Ø 2.76" x 9.69") (Without sunshield) 670g (1.48lb)	Ø 119.8 x 98.5mm (Ø 4.72" x 3.88") 320g (0.71lb)	Ø 110.1 x 86.1mm (Ø 4.33" x 3.39") 240g (0.53lb)
Additional Features	Video Transmission up to 500m (5C2V Coaxial Cable)				



HCV-7070RA
QHD IR Vandal Dome Camera



HCV-7010RA/20RA/30RA
QHD IR Vandal Dome Camera



HCB-6001
1080p HD Box Camera



HCB-6000
1080p HD Box Camera



HCO-6080R
1080p HD IR Bullet Camera

	HCV-7070RA	HCV-7010RA/20RA/30RA	HCB-6001	HCB-6000	HCO-6080R
Imaging Device	1/3" CMOS	1/3" CMOS	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS
Resolution	2560 x 1440	2560 x 1440	1920 x 1080	1920 x 1080	1920 x 1080
Min. Illumination	Color: 0.16Lux (F1.6) B/W: 0Lux (IR LED on)	Color: 0.26Lux (F1.8) (HCV-7010R) 0.27Lux (F2.0) (HCV-7020R/7030R) B/W: 0Lux (IR LED on)	Color: 0.09Lux (F1.2) B/W: 0.009Lux (F1.2)	Color: 0.09Lux (F1.2) B/W: 0.009Lux (F1.2)	Color: 0.11Lux (F1.6) B/W: 0Lux (IR LED on)
Focal Length	3.2 ~ 10mm (3.1x) varifocal	2.8mm fixed (HCV-7010R) 4.0mm fixed (HCV-7020R) 6.0mm fixed (HCV-7030R)	-	-	3.2 ~ 10mm (3.1x) motorized varifocal
Angular Field of View	H: 93.48° (Wide) ~ 29.44° (Tele) V: 50.47° (Wide) ~ 16.64° (Tele) D: 112.53° (Wide) ~ 33.7° (Tele)	H: 107.48° / V: 59.67° / D: 122.01° (HCV-7010R) H: 78.22° / V: 41.21° / D: 87.91° (HCV-7020R) H: 49.01° / V: 27.61° / D: 55.6° (HCV-7030R)	-	-	H: 110.2° (Wide) ~ 32° (Tele) V: 55.4° (Wide) ~ 18° (Tele) D: 128.4° (Wide) ~ 36.6° (Tele)
Pan / Tilt / Rotate	0° ~ 350° / 0° ~ 67° / 0° ~ 355°	0° ~ 350° / 0° ~ 67° / 0° ~ 355°	-	-	-
IR Viewable Length	30m (98.43ft)	20m (65.62ft) (HCV-7010R) 25m (82.02ft) (HCV-7020R) 30m (98.43ft) (HCV-7030R)	-	-	30m (98.43ft)
Day & Night	Auto (ICR)				
Backlight Compensation	BLC / HLC / DWDR	BLC/HLC/DWDR	WDR (120dB)	WDR (120dB)	WDR (120dB)
Digital Noise Reduction	2D DNR	2D DNR	SSNRIV	SSNRIV	SSNRIV
Motion detection	Support				
Privacy Masking	2 Zones	2 Zones	4 Zones	8 Zones	8 Zones
Alarm I/O	MD Output 1				
Protocol	AHD: ACP (AHD Coax Protocol), CVBS: Pelco-C (Coaxitron)	AHD: ACP (AHD Coax Protocol), CVBS: Pelco-C (Coaxitron)	AHD: ACP (AHD Coax Protocol), CVBS: Pelco-C (Coaxitron), CCP (CVI Coax Protocol), TCP (TVI Coax Protocol), RS-485: Samsung T, Pelco D/P, Panasonic, Bosch, Honeywell, Vicon, GE, AD	AHD: ACP (AHD Coax Protocol), CVBS: Pelco-C (Coaxitron), CCP (CVI Coax Protocol), TCP (TVI Coax Protocol), RS-485: Samsung T, Pelco D/P, Panasonic, Bosch, Honeywell, Vicon, GE, AD	AHD: ACP (AHD Coax Protocol), CVBS: Pelco-C (Coaxitron), CCP (CVI Coax Protocol), TCP (TVI Coax Protocol)
Operating Temperature	-30°C ~ +55°C (-22°F ~ +131°F) * Start up above -10°C (+14°F)	-30°C ~ +55°C (-22°F ~ +131°F) * Start up above -10°C (+14°F)	-10°C ~ +55°C (+14°F ~ +131°F)	-10°C ~ +55°C (+14°F ~ +131°F)	-30°C ~ +55°C (-22°F ~ +131°F) * Start up above -10°C (+14°F)
Certification	IP66, IK10	IP66, IK10	-	-	IP66, IK10
Power Consumption	12VDC & 24VAC: Max 5.8W	12VDC: Max 5W	12VDC & 24VAC: Max 6W	12VDC & 24VAC: Max 3.5W	12VDC & 24VAC: Max 5.8W
Dimensions (WxHxD) / Weight	Ø137 x 106.1mm (Ø5.39" x 4.18") 715g (1.58lb)	Ø120.3 x 91.7mm (Ø4.74" x 3.61") 510g (1.12lb)	W 130.9 x H 73.1 x D 67.2mm (5.15" x 2.88" x 2.65") 287g (0.63lb)	W 68.4 x H 59.6 x D 92.7mm (2.69" x 2.35" x 3.65") 186g (0.41lb)	Ø78 x 259.8mm (Ø3.07" x 10.23") (Without sunshield) 948g (2.09lb)
Additional Features	Video Transmission up to 500m (5C2V Coaxial Cable), Simple Focus (HCO-6080R, HCB-6001)				



HCO-6070R
1080p HD IR Bullet Camera



HCO-6020R
1080p HD IR Bullet Camera



HCD-6080R/6070R
1080p HD IR Dome Camera



HCD-6020R
1080p HD IR Dome Camera

Imaging Device	1/2.8" CMOS		
Resolution	1920 x 1080		
Min. Illumination	Color: 0.11Lux (F1.6) B/W: 0Lux (IR LED on)	Color: 0.17Lux (F1.6) B/W: 0Lux (IR LED on)	Color: 0.11Lux (F1.6) B/W: 0Lux (IR LED on)
Focal Length	3.2 ~ 10mm (3.1x) varifocal	4mm fixed (F1.6)	3.2 ~ 10mm (3.1x) motorized varifocal (HCD-6080R) varifocal (HCD-6070R)
Angular Field of View	H: 110.2° (Wide) ~ 32° (Tele) V: 55.4° (Wide) ~ 18° (Tele) D: 128.4° (Wide) ~ 36.6° (Tele)	H: 87.6° / V: 46.4° / D: 104.5°	H: 110.2° (Wide) ~ 32° (Tele) V: 55.4° (Wide) ~ 18° (Tele) D: 128.4° (Wide) ~ 36.6° (Tele)
Pan / Tilt / Rotate	-	-	0° ~ 350° / 0° ~ 67° / 0° ~ 355°
IR Viewable Length	30m (98.43ft)	30m (98.43ft)	20m (65.62ft)
Day & Night	Auto (ICR)		
Backlight Compensation	WDR (120dB)		
Digital Noise Reduction	SSNRIV		
Motion detection	Support		
Privacy Masking	8 Zones		
Alarm I/O	0/1	-	0/1
Protocol	AHD: ACP (AHD Coax Protocol), CVBS: Pelco-C (Coaxitron), CCP (CVI Coax Protocol), TCP (TVI Coax Protocol)		
Operating Temperature	-30°C ~ +55°C (-22°F ~ +131°F) *Start up above -10°C (+14°F)	-30°C ~ +55°C (-22°F ~ +131°F) *Start up above -10°C (+14°F)	-10°C ~ +55°C (+14°F ~ +131°F)
Certification	IP66, IK10	IP66	-
Power Consumption	12VDC & 24VAC : Max 6W	12VDC : Max 5.4W	12VDC & 24VAC : Max 5.8W (HCD-6080R) 12VDC & 24VAC : Max 4.2W (HCD-6070R)
Dimensions (WxHxD) / Weight	Ø78 x 259.8mm (Ø3.07" x 10.23") (Without sunshield) 914g (2.02lb)	Ø58.6 x 165.2mm (Ø2.31" x 6.5") (Without sunshield) 279g (0.62lb)	Ø119.8 x 98.5mm (Ø4.72" x 3.88") 330g (0.73lb) (HCD-6080R) 320g (0.71lb) (HCD-6070R)
Additional Features	Video Transmission up to 500m (5C2V Coaxial Cable), Simple Focus (HCD-6080R only)		



HCD-6010
1080p HD Dome Camera



HCV-6080R/6070R
1080p HD IR Vandal Dome Camera



SCB-6005
1080p HD Box Camera



SCO-6085R
1080p HD IR Bullet Camera

Imaging Device	1/2.8" CMOS		
Resolution	1920x1080		
Min. Illumination	Color: 0.27Lux (F2.0) B/W: 0.017 Lux (F2.0)	Color: 0.11Lux (F1.6) B/W: 0Lux (IR LED on)	Color: 0.04Lux (F1.2, 1/30sec) BW: 0.004Lux (F1.2)
Focal Length	2.8mm fixed (F2.0)	3.2~10mm (3.1x) motorized varifocal (HCV-6080R) varifocal (HCV-6070R)	-
Angular Field of View	H: 113.7° / V: 61.5° / D: 134.5°	H: 110.2° (Wide)~32° (Tele) V: 55.4° (Wide)~18° (Tele) D: 128.4° (Wide)~36.6° (Tele)	H: 110.2° (Wide)~32° (Tele) V: 55.4° (Wide)~18° (Tele) D: 128.4° (Wide)~36.6° (Tele)
Pan / Tilt / Rotate	0° ~350° / 0° ~67° / 0° ~355°	0° ~350° / 0° ~67° / 0° ~355°	-
IR Viewable Length	-	30m (98.43ft)	-
Day & Night	Auto (ICR)		
Backlight Compensation	WDR(120dB)		DWDR
Digital Noise Reduction	SSNRIV		
Motion detection	Support		
Privacy Masking	8 Zones		
Alarm I/O	-	0 / 1	0 / 1
Protocol	AHD: ACP (AHD Coax Protocol), CVBS: Pelco-C (Coaxitron), CCP (CVI Coax Protocol), TCP (TVI Coax Protocol)	AHD: ACP (AHD Coax Protocol), CVBS: Pelco-C (Coaxitron), CCP (CVI Coax Protocol), TCP (TVI Coax Protocol)	ACP (AHD Coax Protocol) CVBS: Pelco-C (Coaxitron)
Operating Temperature	-10°C ~ +55°C (+14°F ~ +131°F)	-30°C ~ +55°C (-22°F ~ +131°F) * Start up above -10°C (+14°F)	-10°C ~ +55°C (+14°F ~ +131°F) / 0~90% RH
Certification	-	IP66, IK10	-
Power Consumption	12VDC: Max 3.6W	12VDC & 24VAC: Max 5.8W (HCV-6080R) 12VDC & 24VAC: Max 4.2W (HCV-6070R)	AC 24V / 0.37A (Max 3.6W) DC 12V / 0.32A (Max 3.5W)
Dimensions (WxHxD) / Weight	Ø110 x 86mm (Ø4.33" x 3.39") 225g (0.49lb)	Ø137 x 106.1mm (Ø5.39" x 4.18") 725g (1.60lb) (HCV-6080R) 715g (1.58lb) (HCV-6070R)	W68.4 x H59.6 x D92.7mm (2.69" x 2.35" x 3.65") 186g (0.41lb)
Additional Features	Video transmission up to 500m (5C2V Coaxial Cable), Simple Focus (HCV-6080R only)		



SCO-6025R
1080p HD IR Bullet Camera



SCD-6085R
1080p HD IR Dome Camera



SCD-6025R
1080p HD IR Dome Camera



SCV-6085R
1080p HD IR Vandal Dome Camera

Imaging Device	1/2.8" CMOS			
Resolution	1920x1080			
Min. Illumination	Color: 0.11Lux (F1.6, 1/30sec) BW: 0Lux (IR LED on)	Color: 0.11Lux (F1.6, 1/30sec) BW: 0Lux (IR LED on)	Color: 0.17Lux (F1.6, 1/30sec) BW: 0Lux (IR LED on)	Color: 0.11Lux (F1.6, 1/30sec) BW: 0Lux (IR LED on)
Focal Length	4mm fixed	3.2~10mm (3.1x) varifocal	4mm fixed	3.2~10mm (3.1x) varifocal
Angular Field of View	H: 87.6° / V: 46.4° / D: 104.5°	H: 110.2° (Wide) ~ 32° (Tele) V: 55.4° (Wide) ~ 18° (Tele) D: 128.4° (Wide) ~ 36.6° (Tele)	H: 87.6° / V: 46.4° / D: 104.5°	H: 110.2° (Wide) ~ 32° (Tele) V: 55.4° (Wide) ~ 18° (Tele) D: 128.4° (Wide) ~ 36.6° (Tele)
Pan / Tilt / Rotate	-	0° ~ 350° / 0° ~ 67° / 0° ~ 355°	0° ~ 350° / 0° ~ 67° / 0° ~ 355°	0° ~ 350° / 0° ~ 67° / 0° ~ 355°
IR Viewable Length	30m (98.42ft)	20m (65.62ft)	20m (65.62ft)	30m (98.43ft)
Day & Night	Auto (ICR)			
Backlight Compensation	BLC, HLC, DWDR			
Digital Noise Reduction	SSNRIV			
Motion detection	Support			
Privacy Masking	8 Zones			
Alarm I/O	0 / 1	0 / 1	0 / 1	0 / 1
Protocol	ACP (AHD Coax Protocol) CVBS: Pelco-C (Coaxitron)			
Operating Temperature	-30°C ~ +55°C (+14°F ~ +131°F) / 0~90% RH * Start up should be done at above -10°C	-10°C ~ +55°C (+14°F ~ +131°F) / 0~90% RH	-10°C ~ +55°C (+14°F ~ +131°F) / 0~90% RH	-30°C ~ +55°C (+14°F ~ +131°F) / 0~90% RH * Start up should be done at above -10°C
Certification	IP66	-	-	IP66, IK10
Power Consumption	DC 12V/0.45A (Max 5.4W)	AC 24V / 0.45A DC 12V / 0.46A	DC 12V/0.45A (Max 5.4W)	AC 24V / 0.45A DC 12V / 0.46A
Dimensions (WxHxD) / Weight	Ø58.6 x 165.2mm (Ø 2.31" x 6.5") (without sunshield) 279g (0.62lb)	Ø119.8 x 98.5mm (Ø4.72" x 3.88") 320g (0.7lb)	Ø110 x 86mm (Ø4.33" x 3.39") 227g (0.5lb)	Ø137 x 106.1mm (Ø5.39" x 4.18") 715g (1.57lb)
Additional Features	Video transmission up to 500m (5C2V Coaxial Cable)			

**HRX-1635**

16CH 8MP Pentabrid Recorder

**HRX-1634**

16CH 8MP Pentabrid Recorder

**HRX-835A**

8CH 8MP Pentabrid Recorder

**HRX-435**

4CH 8MP Pentabrid Recorder

**HRX-434**

4CH 8MP Pentabrid Recorder

OS	Linux	Linux	Linux	Linux	Linux
Compression	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
Signal Type	AHD(8MP, 5MP, 4MP, 1080p, 720p) HDTV I(8MP, 5MP, 4MP, 1080p, 720p) HDCVI(5MP, 4MP, 1080p, 720p) CVBS(NTSC/PAL)				
Inputs	Analog Camera – 16CH(1Vp-p 75ohm, BNC) Network Camera – 2CH(Up to 18CH)	Analog Camera – 16CH(1Vp-p 75ohm, BNC) Network Camera – 2CH(Up to 18CH)	Analog Camera – 8CH(1Vp-p 75ohm, BNC) Network Camera – 2CH(Up to 10CH)	"Analog Camera – 4CH(1Vp-p 75ohm, BNC) Network Camera – 2CH(Up to 6CH)"	"Analog Camera – 4CH(1Vp-p 75ohm, BNC) Network Camera – 2CH(Up to 6CH)"
Record Rate	(Main Stream, NT/PAL) 8M 8/8fps, 5M 12/12fps, 4M 15/12fps, 2M 30/25fps, 720p 30/25fps, Under 960H 30/25fps/CH (Sub Stream) 720p/CH or Higher: 640x368 Full fps, SD: up to SD Full fps *The maximum recording framerate depends on the frame rate of the input camera.				
HDD Slot	SATA 8ea(Max. 48TB)	SATA 2ea(Max. 12TB)	SATA 4ea(Max 24TB)	SATA 2ea(Max 12TB)	SATA 1ea(Max 6TB)
Viewer Software	SSM, Webviewer, Wisenet Mobile, Wisenet Viewer				
Local Display	1x HDMI, 1x VGA (Dual monitor) HDMI: 3840 x 2160, 2560x1440, 1920x1080, 1280x1024, 1280x720 VGA: 1920x1080, 1280x1024, 1280x720, 1024x768	1x HDMI, 1x VGA (Dual monitor) HDMI: 3840 x 2160, 2560x1440, 1920x1080, 1280x1024, 1280x720 VGA: 1920x1080, 1280x1024, 1280x720, 1024x768	1x HDMI, 1x VGA (Dual monitor) HDMI: 3840 x 2160, 2560x1440, 1920x1080, 1280x1024, 1280x720 VGA: 1920x1080, 1280x1024, 1280x720, 1024x768	1x HDMI, 1x VGA (simultaneous output) HDMI: 3840 x 2160, 2560x1440, 1920x1080, 1280x1024, 1280x720 VGA: 1920x1080, 1280x1024, 1280x720	1x HDMI, 1x VGA (simultaneous output) HDMI: 3840 x 2160, 2560x1440, 1920x1080, 1280x1024, 1280x720 VGA: 1920x1080, 1280x1024, 1280x720
Audio In/Out	16 Line in (RCA 4 Line, Option: Audio Extension Cable) / 1 Line line out	4 Line in / 1 Line out	8 Line in (RCA 4 Line, Option: Audio Extension Cable) / 1 Line line out	4 Line in / 1 Line out	4 Line in / 1 Line out
Alarm In/Out	In 16EA, Out 4EA – Relay Out 1(NO/NC/COM) – Relay Out 2~4(NO/COM)	In 16EA, Out 4EA – Relay Out 1(NO/NC/COM) – Relay Out 2~4(NO/COM)	In 8EA, Out 4EA – Relay Out 1(NO/NC/COM) – Relay Out 2~4(NO/COM)	In 4EA, Out 2EA – Relay Out 1(NO/NC/COM) – Relay Out 2(NO/COM)	In 4EA, Out 1EA – Relay Out 1(NO/NC/COM)
N/W Camera Support	SUNAPI, ONVIF	SUNAPI, ONVIF	SUNAPI, ONVIF	SUNAPI, ONVIF	SUNAPI, ONVIF
Additional Features	-	-	-	-	-

AI PVM



SMT-3231PV
32" AI PVM with PIP/PBP



SMT-3221PV
32" AI PVM



SMT-2731PV
27" AI PVM with PIP/PBP



SMT-2721PV
27" AI PVM



SMT-1031PV
10" AI PVM



SMT-1031PVWV
10" AI PVM

Monitor	Screen Size	31.5"	31.5"	27"	27"	10.1"	10.1"
	Max. Resolution	1920*1080	1920*1080	1920*1080	1920*1080	1024*600	1024*600
	Brightness	400 cd/m ²	400 cd/m ²	300 cd/m ²	300 cd/m ²	500cd/m ²	500cd/m ²
	Contrast Ratio	1300:1	1300:1	1000:1	1000:1	500:1	500:1
	Aspect Ratio	16:9	16:9	16:9	16:9	16:9	16:9
	Viewing Angle(H/V)	178° /178°	178° /178°	178° /178°	178° /178°	140° /120°	140° /120°
	Video	Camera(Internal), HDMI(2), PIP/PBP	Camera(Internal), HDMI(2)	Camera(Internal), HDMI(2), PIP/PBP	Camera(Internal), HDMI(2)	Camera(Internal)	Camera(Internal)
	VESA Mount(mm)	100*100/200*100/200*200	100*100/200*100/200*200	100*100/200*100/200*200	100*100/200*100/200*200	75*75	75*75
	Power	DC24V, HPOE 802.3bt	DC24V, HPOE 802.3bt	DC24V, HPOE 802.3bt	DC24V, HPOE 802.3bt	DC24V, PoE+ 802.3at	DC24V, PoE+ 802.3at
Cabinet Color	Black	Black	Black	Black	Black	White	
Camera	Imaging Device	1/2.8" 2MP CMOS	1/2.8" 2MP CMOS	1/2.8" 2MP CMOS	1/2.8" 2MP CMOS	1/2.8" 2MP CMOS	1/2.8" 2MP CMOS
	Min. Illumination	Color: 0.03Lux (F1.6, 1/30sec)	Color: 0.03Lux (F1.6, 1/30sec)	Color: 0.03Lux (F1.6, 1/30sec)	Color: 0.03Lux (F1.6, 1/30sec)	Color: 0.03Lux (F1.6, 1/30sec)	Color: 0.03Lux (F1.6, 1/30sec)
	Focal Length	3.06mm fixed focal					
	Max. Aperture Ratio	F1.6					
	Angular Field of View	H: 107.7° / V: 59.0° / D: 126.7°					
	Analytics	Classified object type: Person/Face Attributes: Not support, Support DetectionShot Analytics events based on AI engine : Motion detection, Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit) Analytics events : Defocus detection, Tampering, Virtual area(Appear/Disappear)					
	Business Intelligence	People counting, Queue management, Heatmap based on AI engine					
	Additional Features	Loss prevention and Advertisement					

LED Monitor



SMT-4343
43" LED Monitor



SMT-3240
32" LED Monitor



SMT-3215
31.5" LED Monitor



SMT-2740
27" LED Monitor



SMT-2710
27" LED Monitor



SMT-2431
24" LED Monitor



SMT-2212
22" LED Monitor

Screen Size	43"	32"	31.5"	27"	27"	24"	22"
Max. Resolution	3840 x 2160	3840 x 2160	1920*1080, 60Hz (FHD)	3840 x 2160, 60Hz (UHD)	1920 x 1080, 60Hz (FHD)	1920 x 1080	1920 x 1080
Brightness	300 cd/m ²	300 cd/m ²	300cd/m ²	300 cd/m ²	250 cd/m ²	250 cd/m ²	250 cd/m ²
Contrast Ratio	1000:1	1000:1	4000:1	1200:1	4000:1	4000:1	3000:1
Aspect Ratio	16:9						
Viewing Angle(H/V)	178° /178°						
Response Time	8.5ms	14ms	20ms	14ms	6.5ms	14ms	6.5ms
Interface	HDMI (1), DP (1)	HDMI 2.0(1), DP1.2(1)	VGA(1), HDMI 1.4(1), DP 1.2(1)	HDMI 2.0(2), DP1.4(1), two windows PIP/PBP	VGA(1), HDMI 1.4(1), DP 1.2(1)	HDMI (1), VGA (1)	HDMI(1), VGA (1)
Audio In/Out	-/1	-/1	1/1	-/-	1/1	-/-	-/-
Built-in Speakers	Yes	Yes	Yes	Yes	Yes	-	-
VESA Mount(mm)	100*100/400*200	100*100	100*100	100*100	100*100	100*100	100*100
Power	100V~240V AC	100V~240V AC	100V~240V AC	100V~240V AC	100V~240V AC	100V~240V AC	DC 12V 5A
Stand	Optional	Yes	Yes	Yes	Yes	Yes	Yes
Tempered Glass Screen	-						
Additional Features	Remote Controller	-	-	-	-	-	-

Controller



SPC-7000
System Controller



SPC-2010
PTZ / DVR System Controller






SPC-2001
PTZ / DVR System Controller



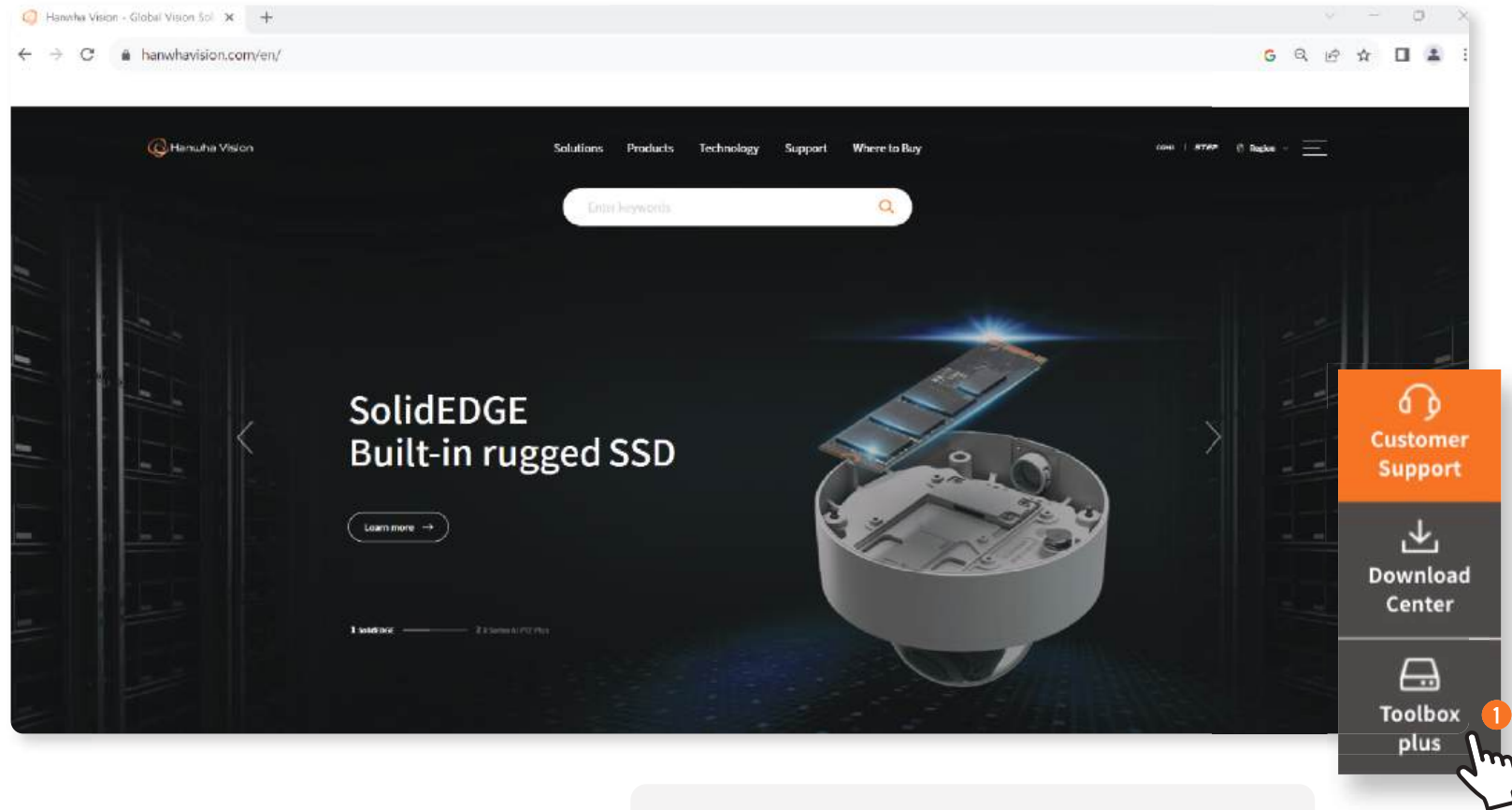
SPC-1010
PTZ Control Keyboard

Features	<ul style="list-style-type: none"> • 5" TFT Touch LCD • Network Camera / SSM / Analog Camera / DVR Control • User-Friendly Design and Easy-to-Use Keypad • 3 Axis Joystick to Control PTZ Function • Detachable Joystick / Jogshuttle for Universe Use (Right / Left Hand Use) • USB Interface Support (1 ea for SSM, 1 ea for Image Snapshot / Upgrade) • Fast Camera-Tile Mapping, Config Import / Export 	<ul style="list-style-type: none"> • Control up to 255 PTZ Cameras / DVRs • Built-in 3 Axis Twist Zoom Joystick • Built-in Jog Shuttle • 16 x 2 Character LCD Display • RS-485 and RS-422 Interface 	<ul style="list-style-type: none"> • Control up to 255 PTZ Cameras / DVRs • Built-in 3 Axis Twist Zoom Joystick • Built-in Jog Shuttle • 16 x 2 Character LCD Display • RS-485 and RS-422 Interface 	<ul style="list-style-type: none"> • Control up to 255 PTZ Cameras • Multi Protocols Supports • OSD Menu, 3D Joystick Control • RS-485 and RS-422 Interface
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Lens

Model	Image	Mount	Image Format	Resolution	Focal Length	Back Focal Length	Zoom Ratio	F.No	Angle of View	Operation			Dimensions W x H x D (mm / inch)	Weight (g / lb)
										Iris	Focus	Zoom		
SLA-M8550D		CS	1 / 2.8"	3Megapixel	8.5 ~ 50mm (0.33" ~ 1.97")	9.4 ~ 10.7mm (0.37" ~ 0.42")	5.9	F1.6	42.3° ~ 7.5°	DC	Manual	Manual	W 46 x H 60 x D 58.2mm (1.81" x 2.36" x 2.29")	80g (0.17 lb)
SLA-M2890DN					2.8 ~ 9mm (0.11" ~ 0.35")	7.5 ~ 15.9mm (0.3" ~ 0.63")	3.2	1.2	134.2° ~ 42.7°				W 45 x H 51.5 x D 54.3mm (1.77" x 2.03" x 2.14")	84g (0.19 lb)
SLA-M2890PN					P-Iris	82.1g (0.18 lb)								

Toolbox Plus



Click the Toolbox Plus on Hanwha Vision.com

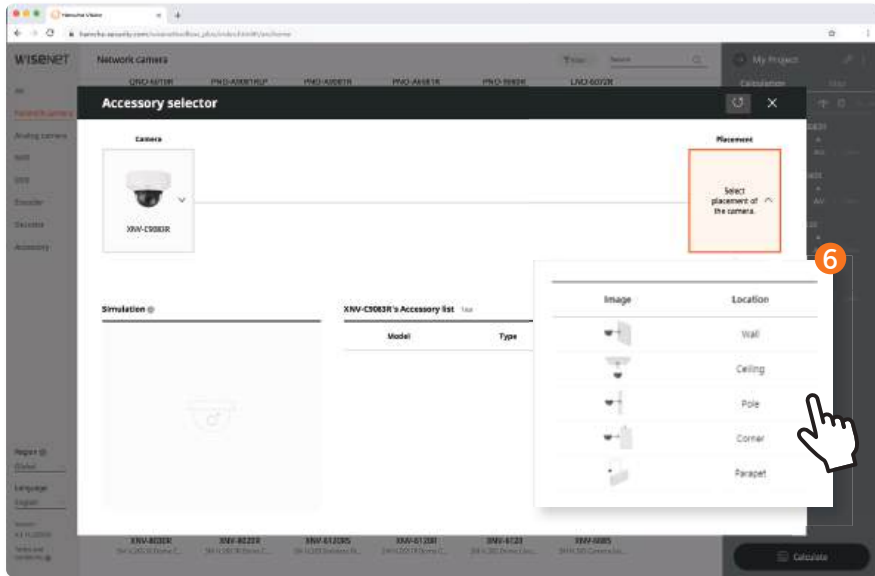
Or you can also connect by using below URL
(https://www.hanwhavision.com/wisenettoolbox_plus)

Choose product you are interested in

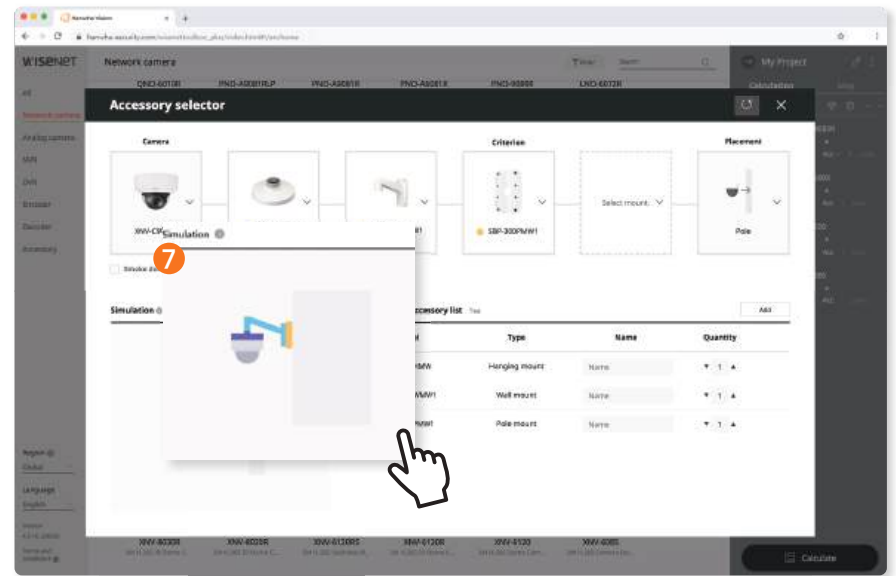
Select region and language

When you select cameras, they will be added on My Project

Click the Acc to find compatible accessories

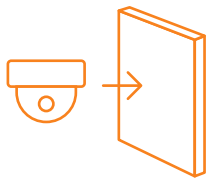


Accessory Selector pops up. All compatible accessories are shown

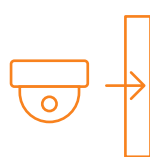


Choose accessories then the simulation intuitively shows all connected accessories

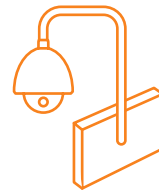
WM Wall mounts



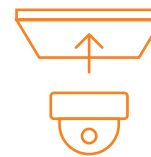
PM Pole mounts



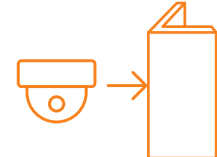
LM Parapet mounts



CM Ceiling mounts

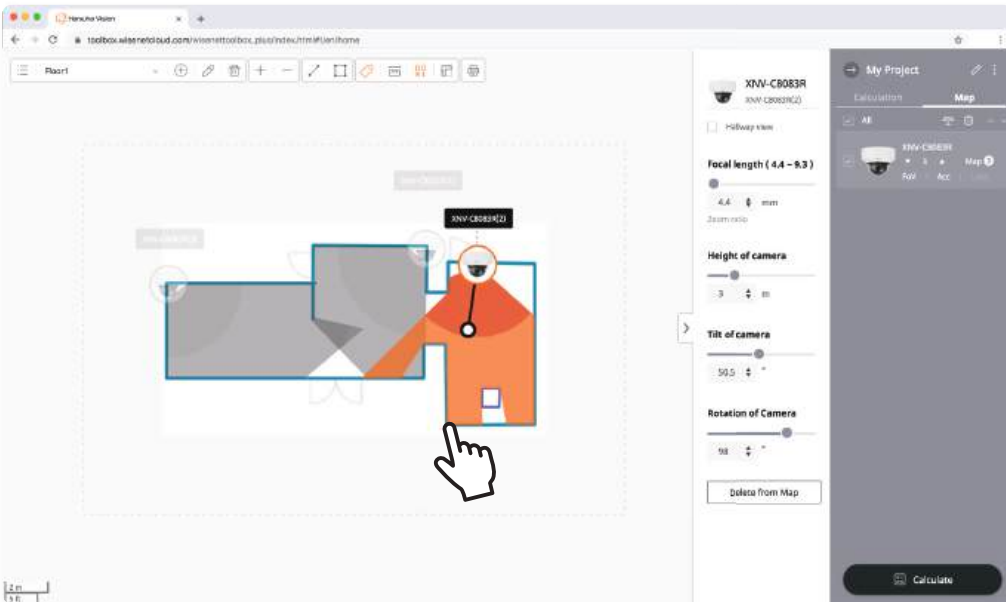
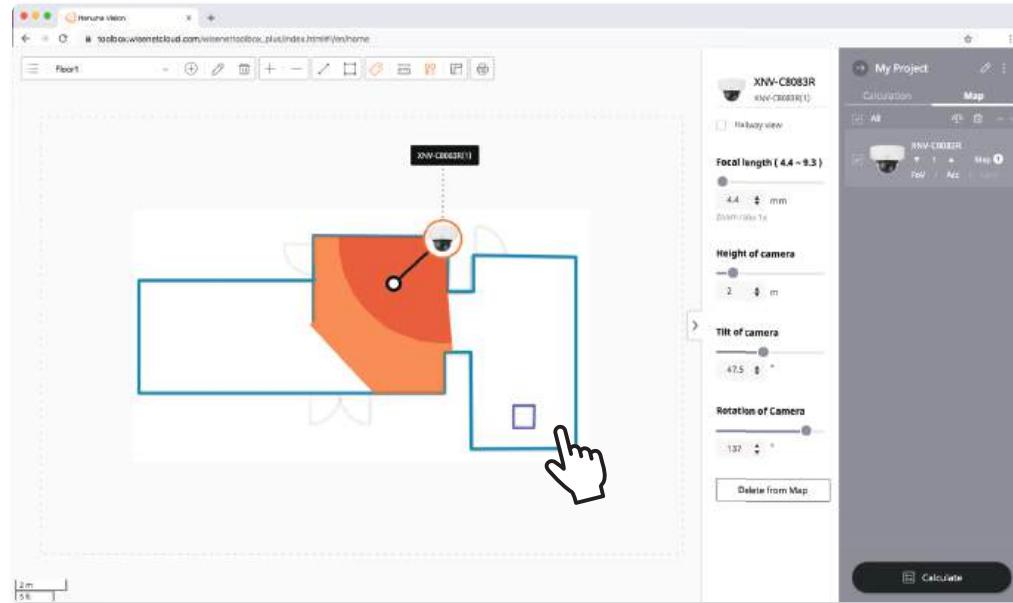


KM Corner mounts



Newly updated in Toolbox Plus: Simulate on the map

Toolbox Plus helps you simulate
the best place for installing cameras.



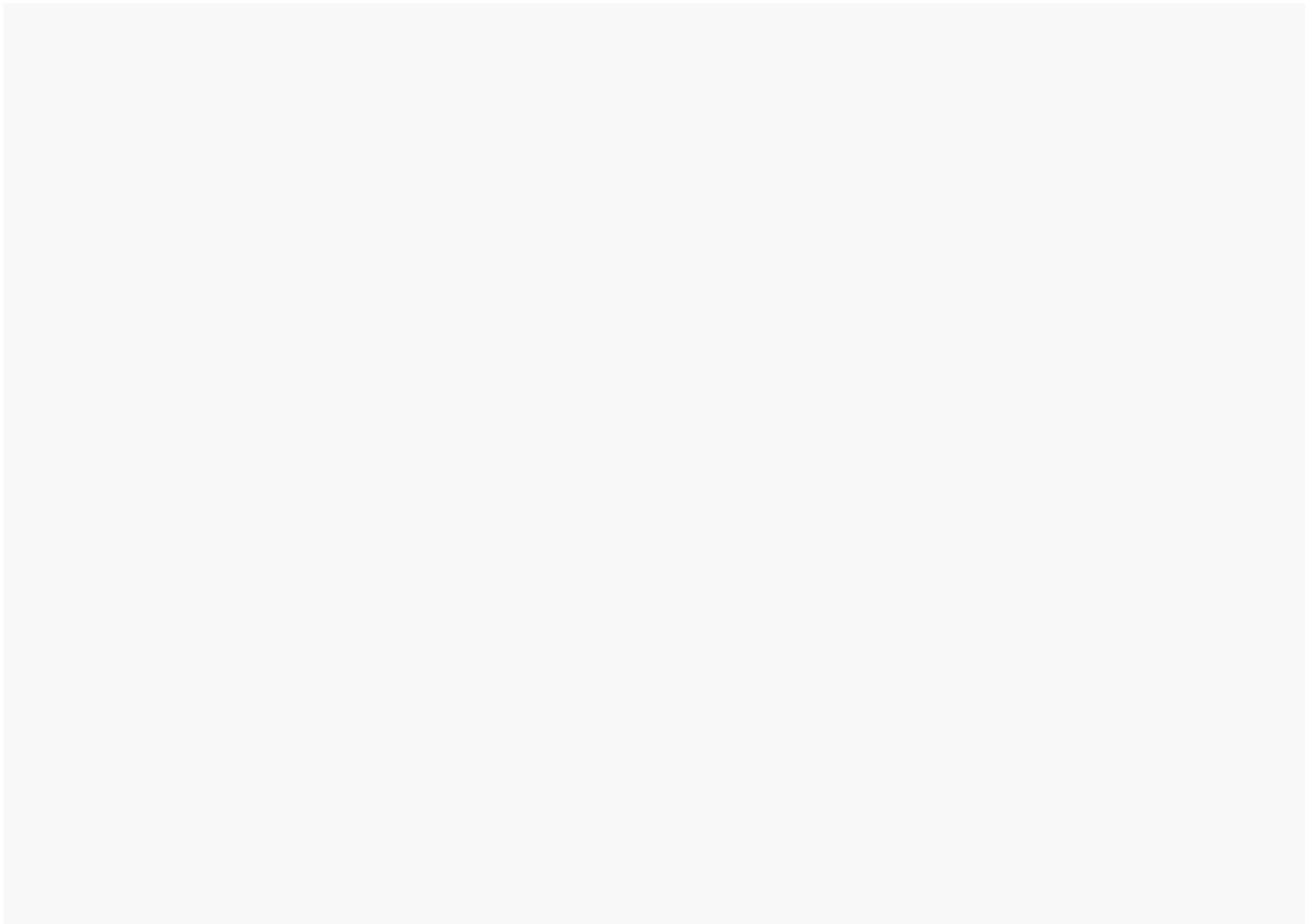
By uploading your map to Toolbox plus,
you can test how much
cameras can cover in your own space.

It can guide you on how to compose and install
cameras to minimize blind spots in advance.

MEMO



MEMO



MEMO



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