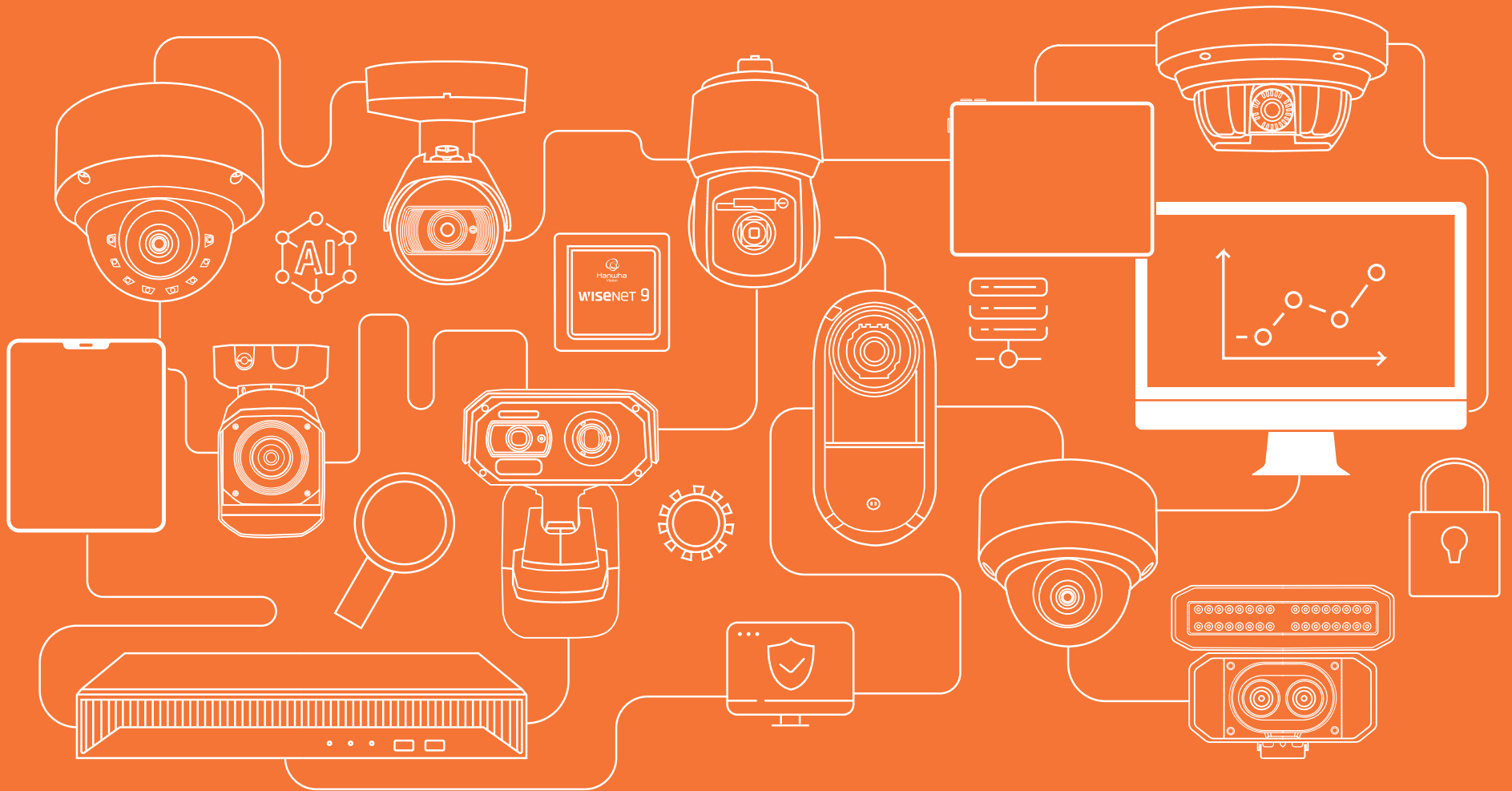


2025

H2 PRODUCT PORTFOLIO

Europe



PROUDLY
KOREAN

Hanwha Group

Hanwha embraces bold challenges.

Founded in 1952, Hanwha continues to grow by anticipating and responding to changing business environments with a balanced business portfolio that includes aerospace, energy, finance and retail. We are the seventh-largest business enterprise in South Korea. 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
2023

61.3 USD
Billions

Years of History
Founded in 1952

73

Business Enterprise
in South Korea

Total assets, as of end of 2023

TOP 7

Global Networks
As of end of 2023

776



Hanwha champions a more
sustainable and vibrant future.

History

- 2025 — Launched Wisenet 9, AI-native System on Chip
- 2024 — Unveiled AI Packs for tailored sector solutions
 - Launched first camera that combines barcode reading and video surveillance
- 2023 — Changed name to 'Hanwha Vision'
 - Announced focus on becoming a vision solution provider
- 2022 — Launched IP audio system
- 2021 — Launched the X series AI cameras
 - 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 series AI cameras
 - Launched Winsenet 7 SoC, a camera series with Wisenet 7 SoC acquired UL CAP (UL Cybersecurity Assurance Program)
- 2019 — UK Government official cybersecurity certification
 - Launched the world's first 55x IR PTZ camera
- 2018 — Established Hanwha Techwin Vietnam manufacturing corporation
 - Wisenet 5 SoC and X camera series launched
 - Acquired CES, a UK Government cybersecurity 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
 - 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

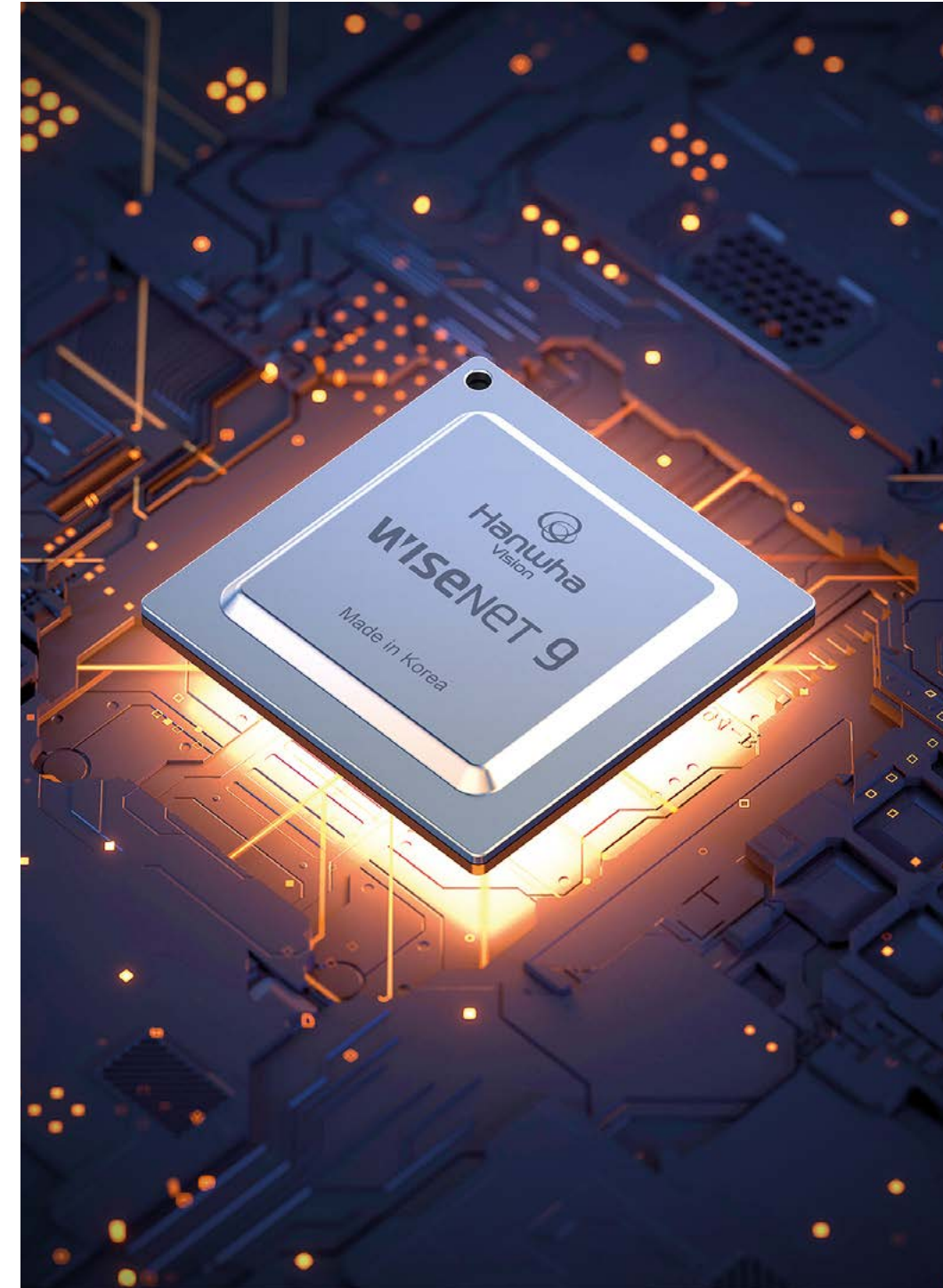
Your vision partner.

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

We have been ensuring safety and peace of mind around the world with outstanding products and solutions and industry-leading cybersecurity.

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.



CORE COMPETENCIES

Strengthening our competitiveness.

Our core competitiveness is based on industry-leading optical and image processing technology, AI-powered analysis, and trusted cybersecurity.



Vision technology

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



AI-based intelligent analysis

Hanwha Vision offers AI-powered solutions with intelligent algorithms that enable our customers to efficiently analyse data and make better decisions.



Cybersecurity

With cybersecurity always at the top of its priority list, Hanwha Vision is committed to designing, developing and manufacturing products and solutions which are cyber-secure, keep users' confidential information safe and comply with international data protection regulations.

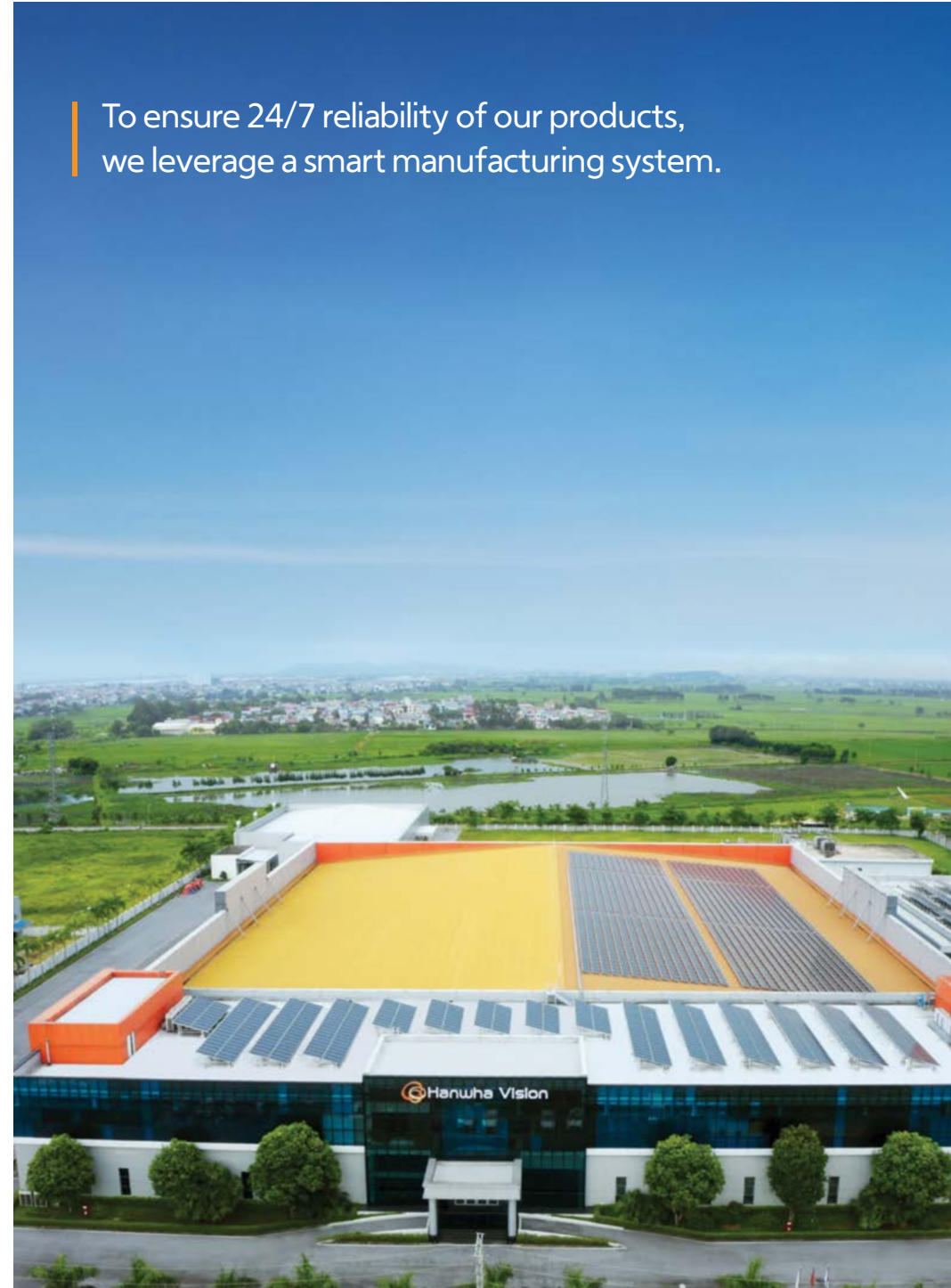
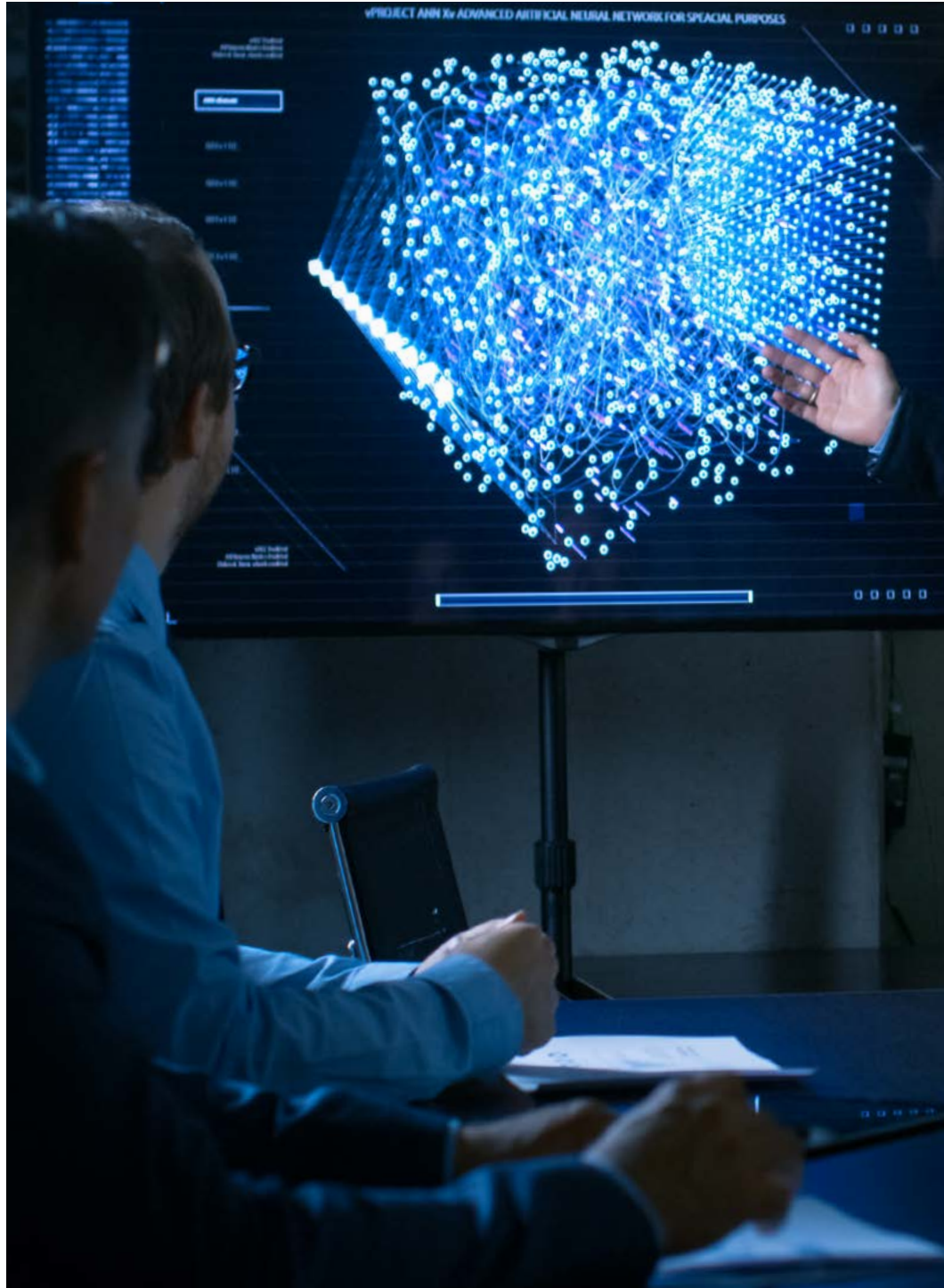
R&D POWER

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

In 2022 Hanwha Vision established an Innovation Centre in the US, with the remit of developing key technologies of the future, such as AI and cloud.

Alongside these efforts, we have established a global AI R&D organisation across our headquarters, the US R&D Centre, and our AI data lab. This secures our AI full stack capabilities, from strategy to data processing, commercialisation, 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 leverage a smart manufacturing system.

HIGH-TECH POWERED IN VIETNAM

Hanwha Vision's manufacturing subsidiary in Vietnam (HVSV) has been in operation since 2018, to expand global production capability as well as strengthen cost competitiveness. Through automation and smart systems, Hanwha Vision has built sophisticated manufacturing lines producing all product line-ups including cameras and storage devices. Products produced in HVSV go through a reliable manufacturing and quality assurance process. Sold globally, these products represent 85% of Hanwha Vision's total sales.

END-TO-END CYBERSECURITY

Hanwha Vision offers best-in-class cybersecurity 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 in development as well as manufacturing.



- 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

PROUDLY KOREAN

Hanwha Vision

Cybersecurity you can trust

UL NDA

hanwhavision.eu

NINE COLOURS

Black White Gray Red Orange Yellow Green Blue Purple

Q series AI Camera

Quality AI

AI-powered object detection for accurate analytics and efficient forensic search.

- AI-based object detection (Person, Vehicle)
- Colour classification (Upper/Lower Clothing, Vehicle)
- Dynamic Privacy Masking
- Heatmap, Queue Management, People/Vehicle Counting
- False alarm reduction
- Assist forensic search
- WiseNRII, SSNRV, WiseStreamIII

*Features may vary across models; please refer to product specifications.

Q series AI



X series AI Camera

Powerful AI for the X series

- Object detection
- Edge-based business intelligence
- Improved image quality
- Next-level cybersecurity
- Dynamic Privacy Masking
- Reinforced durability

Featuring advanced artificial intelligence and deep-learning technologies, X series AI cameras offer industry-leading AI-based object detection for false alarm reduction, enhanced image quality and edge-based business intelligence.



Dynamic Privacy Masking on second-generation X series AI cameras for people, faces, vehicles and licence plates



P series AI Camera & NVR

Premium AI for unparalleled accuracy

- Object/attribute detection
- Glasses
- Bag
- Mask
- Colour classification
- Demographic analytics
- Slip and Fall
- People/vehicle counting
- Dynamic Privacy Masking

Equipped with a powerful artificial intelligence engine, P series AI cameras are designed to accurately capture the unique attributes of objects, whilst reducing false alarms. This enables operators to quickly and efficiently search for specific events or objects with defined attributes.

Available for AI Packs – Factory, Retail and Traffic

*Features may vary across models; please refer to product specifications.

P series AI

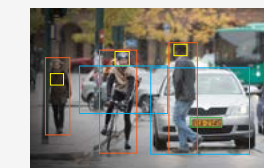


Network Video Recorders



P series AI Cameras

Detect and classify objects real-time



Person, face, vehicle, licence plate

VMS Plug-in for improved AI search

AI Search

Quickly search based on attributes



AI plug-ins offer seamless integration with VMS from Milestone and Genetec



Bolstering safety at industrial sites

Tailored AI analytics for manufacturing, logistics

FACTORY & SAFETY AI PACK | AIA-C01FSP

- AI detection for people and forklifts
- Oversee forklift speed and queues with AI
- Monitor distances between forklifts, forklifts and people
- Optimise operations with heatmap analytics (people, forklifts)
- Blocked exit detection bolsters safety
- Slip and fall detection improves incident response
- Perpetual licensing, no ongoing monthly costs

www.hanwhavision.eu



PROUDLY
KOREAN



Reliability of supply.

Our products are expertly engineered and manufactured in-house, ensuring stability of supply.



Unlocking smarter store management

Tailored AI analytics for retailers

RETAIL & BUSINESS AI PACK | AIA-C01RET

- AI detection for people and shopping trolleys
- Optimise stores with heatmap analytics (people, trolley)
- Higher checkout efficiency with advanced queue monitoring
- Blocked exit detection bolsters safety and compliance
- Slip and fall detection improves incident response
- Perpetual licensing, no ongoing monthly costs

www.hanwhavision.eu




PROUDLY
KOREAN



We supply peace of mind.

- Expertly engineered and manufactured in-house
- Excellent cost/performance ratio
- Trusted cybersecurity
- Stability of supply

 Hanwha Vision

TAILORED INDUSTRY SOLUTIONS

At Hanwha Vision, we believe that effective security goes beyond generic products. It's about understanding the unique challenges and opportunities within each vertical market. Hanwha Vision delivers purpose-built vision solutions that are designed to make a real difference. We leverage our deep expertise in hardware design, manufacturing, and cutting-edge software development, including advanced AI analytics, to create solutions precisely tuned to your industry's specific needs. From retail to finances, our comprehensive portfolio offers intelligent insights and robust protection.



Data Centre



Logistics



Retail



Oil & Gas



Finance



Manufacturing



Transportation



Healthcare



Residential



Education



City Surveillance



GLOBAL NETWORK

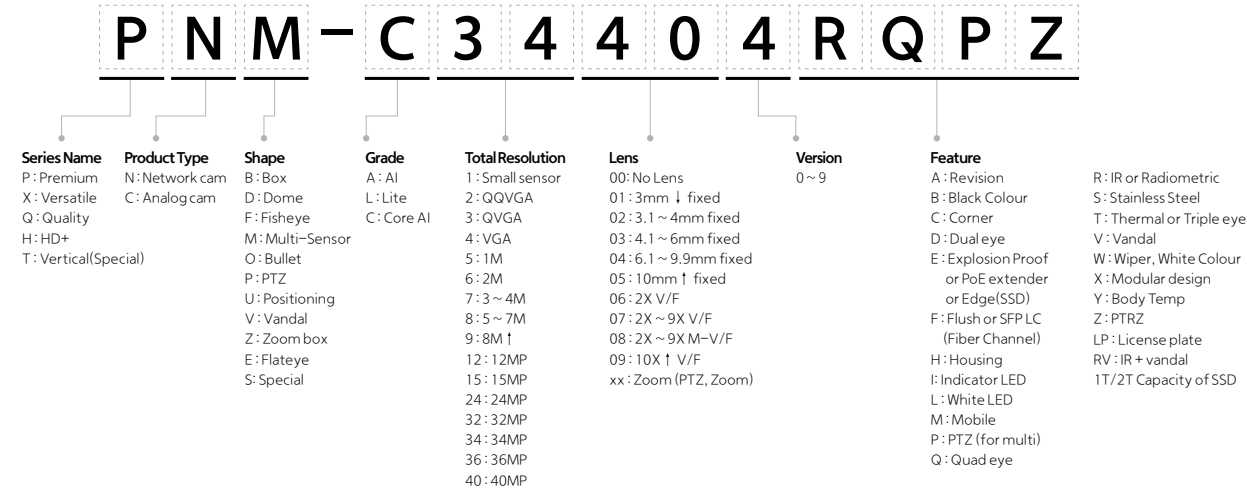
Hanwha Vision works with customers and partners around the world for global R&D, manufacturing and sales partnerships.

- Hanwha Vision R&D Centre (HQ, South Korea)
- Hubs around the world

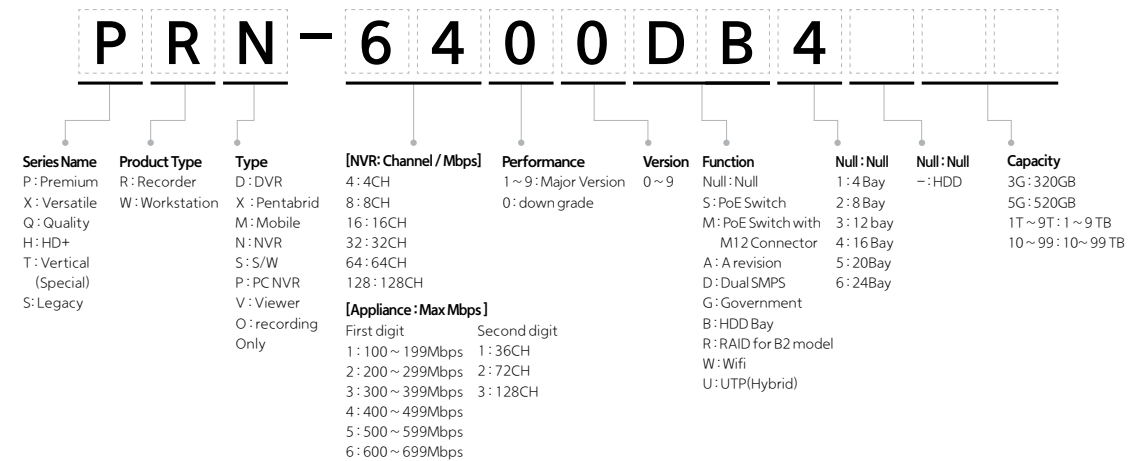


PRODUCT NAMING RULE

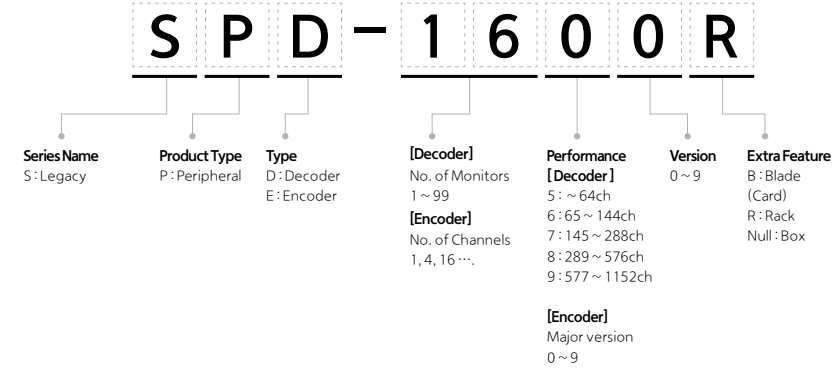
Camera



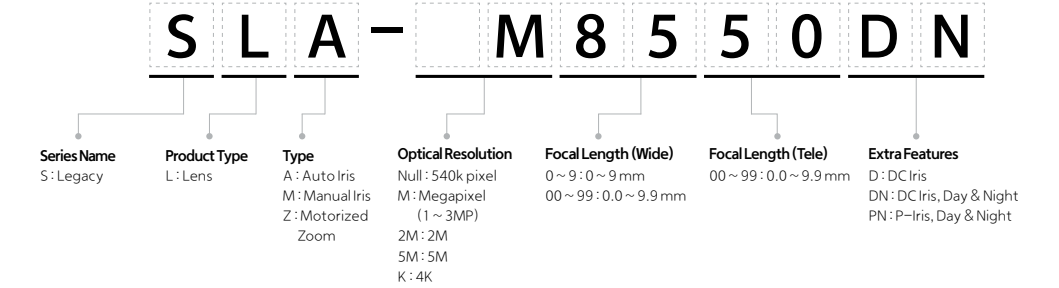
Recorder



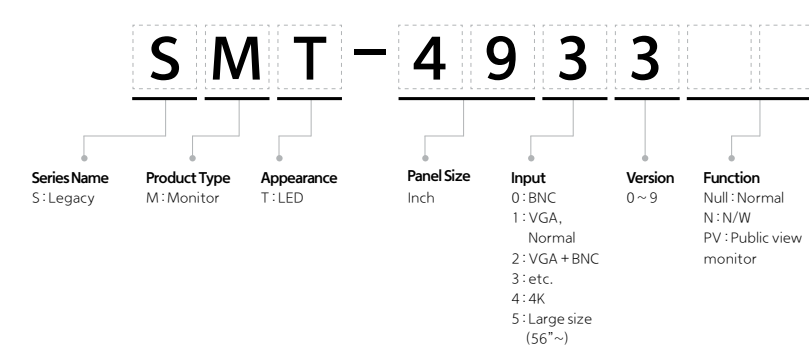
Decoder/Encoder



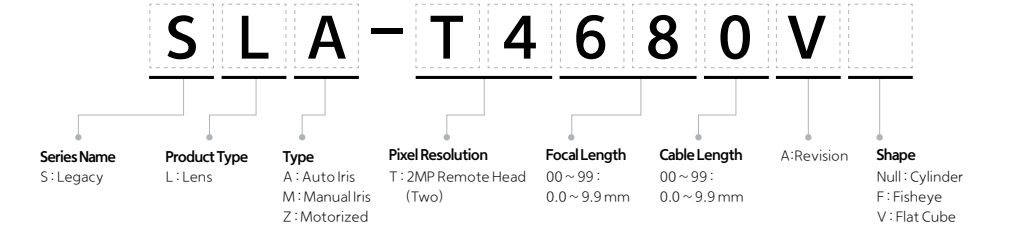
Lens : CS Mount



Monitor



Lens : Remote Head



NETWORK

Camera

AI Cameras

X series

P series

Q series

T series

NVR

Smart Network Interface (SNI)

VMS

Wisenet Access Control

Audio Solutions

ANALOG

Camera

DVR

PERIPHERAL

Monitor

Controller

Lens

INSTALLATION SOLUTION

Toolbox Plus

* Product specifications in this brochure may differ as products are continuously updated to meet our customers' needs. We recommend to check out our website for the latest specs: www.hanwhavision.eu

AI Camera



XND-A9084RV
8MP AI IR Dome Camera



XND-A8084RV
5MP AI IR Dome Camera



XNO-A9084R
8MP AI IR Bullet Camera



XNO-A8084R
5MP AI IR Bullet Camera



XNV-A9084R
8MP AI IR Vandal Dome Camera



XNV-A8084R
5MP AI IR Vandal Dome Camera

Imaging Device	1/1.8" CMOS		1/2.8" CMOS		1/1.8" CMOS		1/2.8" CMOS		1/1.8" CMOS		1/2.8" CMOS	
Resolution / Max. Frame Rate	"H.265/H.264: Max. 30fps/25fps(60Hz/50Hz) MJPEG: Max. 30fps@8MP Max. 5fps)"		"H.265/H.264: Max. 30fps/25fps(60Hz/50Hz) MJPEG: Max. 30fps@5MP Max. 5fps)"		"H.265/H.264: Max. 30fps/25fps(60Hz/50Hz) MJPEG: Max. 30fps@8MP Max. 5fps)"		"H.265/H.264: Max. 30fps/25fps(60Hz/50Hz) MJPEG: Max. 30fps@5MP Max. 5fps)"		"H.265/H.264: Max. 30fps/25fps(60Hz/50Hz) MJPEG: Max. 30fps@8MP Max. 5fps)"		"H.265/H.264: Max. 30fps/25fps(60Hz/50Hz) MJPEG: Max. 30fps@5MP Max. 5fps)"	
Min. Illumination	Color: 0.04Lux(F1.3, 1/30sec, 30IRE), BW: 0.004Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)											
Video Out	USB: Micro USB Type C for installation											
Focal Length (Zoom Ratio)	4.4~9.3mm(2.1x) motorized varifocal		3.3~9.3mm(2.8x) motorized varifocal		4.4~9.3mm(2.1x) motorized varifocal		3.3~9.3mm(2.8x) motorized varifocal		4.4~9.3mm(2.1x) motorized varifocal		3.3~9.3mm(2.8x) motorized varifocal	
Angular Field of View	"H: 113° (Wide)~47° (Tele) V: 58° (Wide)~26° (Tele) D: 138° (Wide)~54° (Tele)"		"H: 99° (Wide)~31° (Tele) V: 71° (Wide)~23° (Tele) D: 133° (Wide)~39° (Tele)"		"H: 113° (Wide)~47° (Tele) V: 58° (Wide)~26° (Tele) D: 138° (Wide)~54° (Tele)"		"H: 99° (Wide)~31° (Tele) V: 71° (Wide)~23° (Tele) D: 133° (Wide)~39° (Tele)"		"H: 113° (Wide)~47° (Tele) V: 58° (Wide)~26° (Tele) D: 138° (Wide)~54° (Tele)"		"H: 99° (Wide)~31° (Tele) V: 71° (Wide)~23° (Tele) D: 133° (Wide)~39° (Tele)"	
IR Viewable Length	WiseIR 40m(131.23ft)											
Day & Night	Auto(ICR)											
Wide Dynamic Range	120dB											
Digital Noise Reduction	SSNR V, WiseNR II (Based on AI engine)											
Digital Image Stabilization	support											
Analytics	"Classified object type: Person/Face/Vehicle(Type: car/bus/truck/motorcycle/bicycle)/License plate Attributes: Person(Gender, Clothing top/bottom color, Bag), Face(Age, Gender, Mask, Glasses), Vehicle(Type: car/bus/truck/motorcycle/bicycle, Color) Support BestShot Analytics events based on AI engine - Motion detection, Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit/Appear/Disappear), Slip & fall detection, Face mask detection, Social distancing detection Analytics events - Defocus detection, Tampering, Shock detection, Audio detection"											
Business Intelligence	Based on AI engine: People/Vehicle/Crowd counting, Queue management, Heatmap											
Alarm I/O	"2 configurable I/O ports, *Support extra alarm I/O via optional I/O box"											
Audio I/O	Selectable(mic in/line in) / line out											
Video Compression	"H.265/H.264: Main/Baseline/High, MJPEG"											
WiseStream	WiseStream(Based on AI engine)											
Streaming	"Unicast(20 users) / Multicast, Multiple streaming(Up to 5 profiles, 3 virtual channel support)"											
Edge Storage	Micro SD/SDHC/SDXC 1slot 1TB											
Application Programming Interface	"ONVIF Profile S/G/T/M SUNAPI(HTTP API) Hanwha Vision Open Platform"											
Operating Temperature / Humidity	". -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) +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	IP52, IK 10						IP66/IP67, NEMA4X, IK 10, NEMA-TS 2(2.2.7.2-8, 2.2.8, 2.2.9)					
Power Consumption	"PoE: Max. 11.2W, typical 8.4W Support Wisepower - Power monitoring(Max./Current/ Avg.) - ECO mode"		"PoE: Max. 9.4W, typical 7.0W Support Wisepower - Power monitoring(Max./Current/ Avg.) - ECO mode"		"PoE: Max. 11.2W, typical 8.4W Support Wisepower - Power monitoring(Max./Current/ Avg.) - ECO mode"		"PoE: Max. 9.4W, typical 7.0W Support Wisepower - Power monitoring(Max./Current/ Avg.) - ECO mode"		"PoE: Max. 11.2W, typical 8.4W Support Wisepower - Power monitoring(Max./Current/ Avg.) - ECO mode"		"PoE: Max. 9.4W, typical 7.0W Support Wisepower - Power monitoring(Max./Current/ Avg.) - ECO mode"	
Product Dimensions / Weight	ø 160x118mm(6.30x4.65"), 1,020g(2.25lb)		ø 160x118mm(6.30x4.65"), 1,010g(2.23lb)		ø 93.4x276.6mm(3.68x10.89"), 1,630g(3.59lb)		ø 93.4x276.6mm(3.68x10.89"), 1,630g(3.59lb)		ø 160x118mm(6.30x4.65"), 1,220g(2.69lb)		ø 160x118mm(6.30x4.65"), 1,210g(2.67lb)	

NETWORK

ANALOG

PERIPHERAL

INSTALLATION SOLUTION

AI Camera

20



X Plus
XNO-9083R
8MP AI IR Bullet Camera



X Plus
XNV-9083R
8MP AI IR Vandal Dome Camera



X Plus
XNV-9083RZ
8MP AI IR PTRZ Dome Camera



X Plus
XND-9083RV
8MP AI IR Dome Camera



X Plus
XNB-9003
8MP AI Box Camera

Imaging Device	1/1.8" progressive CMOS				
Resolution / Max. Frame Rate	8MP / 30fps				
Min. Illumination	Colour: 0.04Lux(F1.3, 1/30sec, 30IRE) BW: 0.004Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)	Colour: 0.04Lux(F1.3, 1/30sec, 30IRE) BW: 0.004Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)	Colour: 0.03Lux(F1.3, 1/30sec, 30IRE) BW: 0.003Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)	Colour: 0.04Lux(F1.3, 1/30sec, 30IRE) BW: 0.004Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)	Colour: 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	WiselR 50m (164.04ft)	WiselR 50m (164.04ft)	15m (49.21ft) 30m (98.43ft) based on scene	WiselR 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	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)				
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(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) 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	φ93.4x298.4mm(φ3.68x11.75"), 2200g(4.85 lb)	φ180x125mm(φ7.09x4.92"), 1900g(4.19 lb)	φ180x135mm(φ7.09x5.31"), 2000g(4.41 lb)	φ160x125mm(φ6.30x4.92"), 1600g(3.53 lb)	81(W)x67(H)x165(D)mm(3.19x2.64x6.48"), 880g(1.94 lb)

AI Camera

21



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	Colour: 0.06Lux(F1.7, 1/30sec, 30IRE) BW: 0.006Lux(F1.7, 1/30sec, 30IRE), 0Lux(IR LED on)	Colour: 0.06Lux(F1.7, 1/30sec, 30IRE) BW: 0.006Lux(F1.7, 1/30sec, 30IRE), 0Lux(IR LED on)	Colour: 0.04Lux(F1.3, 1/30sec, 30IRE) BW: 0.004Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)	Colour: 0.04Lux(F1.3, 1/30sec, 30IRE) BW: 0.004Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)	Colour: 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	WiselR 70m (229.66ft)	WiselR 70m (229.66ft)	WiselR 50m (164.04ft)	WiselR 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	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)				
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) Hanwha 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, IK10+	IP52, IK10	IP66, IP67, NEMA4X, IK10	IP66, IP67, IP6K9K, NEMA4X, IK10+	IP66, IP67, IP6K9K, NEMA4X, 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 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 Power redundancy failover
Product Dimensions / Weight	φ93.4x298.4mm(φ3.68x11.75"), 2200g(4.85 lb)	φ160x125mm(φ6.30x4.92"), 1600g(3.53 lb)	φ93.4x298.4mm(φ3.68x11.75"), 2200g(4.85 lb)	φ180x125mm(φ7.09x4.92"), 1900g(4.19 lb)	φ180x135mm(φ7.09x5.31"), 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		1/2.8" progressive CMOS	
Resolution / Max. Frame Rate	6MP/30fps		2MP / 120fps	
Min. Illumination	Colour: 0.03Lux(F1.3, 1/30sec, 30IRE) BW: 0.003Lux(F1.3, 1/30sec, 30IRE)	Colour: 0.04Lux(F1.3, 1/30sec, 30IRE) BW: 0.004Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)	Colour: 0.03Lux(F1.2, 1/30sec, 30IRE) BW: 0.003Lux(F1.2, 1/30sec, 30IRE)	Colour: 0.03Lux(F1.6, 1/30sec, 30IRE) BW: 0.003Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED on), 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			
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)
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)
Pan / Tilt / Rotate	0°~350° / 0°~85° / 0°~340°	0°~360° / -45°~85° / 0°~355°	-	-
IR Viewable Length	-	WiseIR 50m (164.04ft)	-	WiseIR 90m (295.28ft)
Day & Night	Auto(ICR)			
Wide Dynamic Range	extremeWDR (120dB)	extremeWDR (120dB)	extremeWDR (120dB)	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 (Type: car/bus/truck/motorcycle/bicycle)/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, Tampering, Fog detection, Virtual area (Appear/Disappear) * Audio detection, Sound classification (with NW I/O box SPM-4210)	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)		
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	-
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)
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
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, 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) * 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
Certification	IP66, IP67, IP6K9K, NEMA4X, IK10+	IP52, IK10	-	IP66, IP67, IK10, NEMA4X, NEMA-TS 2 (2.2.8, 2.2.9)
Power Consumption	PoE+: Max 17.0W, typical 12.1W 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 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
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)

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	Colour: 0.03Lux(F1.6, 1/30sec, 30IRE) BW: 0.003Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps	Colour: 0.03Lux(F1.3, 1/30sec, 30IRE) BW: 0.003Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)	Colour: 0.01Lux(F1.4, 1/30sec, 30IRE) BW: 0.001Lux(F1.4, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps	Colour: 0.01Lux(F1.4, 1/30sec, 30IRE) BW: 0.001Lux(F1.4, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps	Colour: 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 / 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)	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	WiseIR 90m (295.28ft)	15m(42.91ft)	WiseIR 50m (164.04ft)	-	WiseIR 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	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)				
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, 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)

NETWORK

ANALOG

PERIPHERAL

INSTALLATION SOLUTION

NETWORK

ANALOG

PERIPHERAL

INSTALLATION SOLUTION

AI Camera

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	Colour: 0.007Lux(F1.2, 1/30sec, 30IRE) BW: 0.0007Lux(F1.2, 1/30sec, 30IRE), 30/25fps	Colour: 0.04Lux(F1.3, 1/30sec, 30IRE) BW: 0.004Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)	Colour: 0.04Lux(F1.3, 1/30sec, 30IRE) BW: 0.004Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)	Colour: 0.04Lux(F1.3, 1/30sec, 30IRE) BW: 0.004Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)	Colour: 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	-	-	-	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) Hanuha Vision Open Platform				
Operating Temperature / Humidity	-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(3.19x2.64x4.48"), 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)

AI Camera

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	Colour: 0.04Lux(F1.3, 1/30sec, 30IRE) BW: 0.004Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)	Colour: 0.04Lux(F1.3, 1/30sec, 30IRE) BW: 0.004Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)	Colour: 0.038Lux(F1.4, 1/30sec, 30IRE) BW: 0.0038Lux(F1.4, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps	Colour: 0.038Lux(F1.4, 1/30sec, 30IRE) BW: 0.0038Lux(F1.4, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps	Colour: 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	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) / Line out	-	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				
Edge Storage	micro SD/SDHC/SDXC 1slot 512GB				
Application Programming Interface	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 -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(3.20lb)	ø 160x118mm(ø 6.30x4.65"), 1350g(2.98lb)	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)

AI Camera

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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	Colour: 0.01Lux(F1.4, 1/30sec, 30IRE) B/W: 0.001Lux(F1.4, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps	Colour: 0.01Lux(F1.4, 1/30sec, 30IRE) B/W: 0.001Lux(F1.4, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps	Colour: 0.01Lux(F1.4, 1/30sec, 30IRE) B/W: 0.001Lux(F1.4, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps	Colour: 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)	Wise IR, 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 Support DetectionShot Attributes: Vehicle (Type:car/bus/truck/motorcycle/bicycle) 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), Motion detection 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	-	-	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) Wise IR 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	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)	ø 160x72mm(6.23x2.84"), 1,170g(2.58lb)

AI Camera

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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	Colour: 0.06Lux(F1.36, 1/30sec, 30 IRE) BW: 0.006Lux(F1.36, IR LED Off), 0Lux (IR LED On)	Colour: 0.1Lux(F1.6, 1/30sec) BW: 0Lux(IR LED On)	Colour: 0.1Lux(F1.6, 1/30sec) BW: 0Lux(IR LED On)	Colour: 0.1Lux(F1.6, 1/30sec) BW: 0.01Lux(F1.6, 1/30sec)	Colour: 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)	Wise IR 200m (656.17ft)	Wise IR 200m(656.17ft)	-	Wise IR 200m(656.17ft)
Day & Night	Auto (ICR)/Colour/BW/Schedule				
Wide Dynamic Range	extremeWDR (120dB)				
Digital Noise Reduction	WiseNR III (Based on AI engine), SSNRV				
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 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)				
Business Intelligence	-				
Alarm I/O	Compatible with NW I/O Box (Optional: SPM-4210)				
Audio I/O	-				
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°(-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°(-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

NETWORK

ANALOG

PERIPHERAL

INSTALLATION SOLUTION

NETWORK

ANALOG

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INSTALLATION SOLUTION

AI Camera

AI PTZ Plus



XNP-C8253R
6MP 40x 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	Colour: 0.1Lux(F1.6, 1/30sec) BW: 0Lux(IR LED On)	Colour: 0.1Lux(F1.6, 1/30sec) BW: 0.01Lux(F1.6, 1/30sec)	Colour: 0.04Lux (F1.36, 1/30sec, 30IRE) BW: 0.004Lux(F1.36, IR LED Off), 0Lux(IR LED On)	Colour: 0.05Lux(F1.6, 1/30sec) BW: 0Lux(IR LED On)	Colour: 0.05Lux(F1.6, 1/30sec) BW: 0Lux(IR LED On)	Colour: 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	Wise IR 200m(656.17ft)	-	WiseIR 300m(984ft)	Wise IR 200m (656.17ft)	Wise IR 200m (656.17ft)	-
Day & Night	Auto (ICR)/Colour/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	<p>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)</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) 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	φ 158x293.3mm(6.22x11.55") / 3200g(7.05lb)	φ 158x293.3mm(6.22x11.55") / 3200g(7.05lb)	φ 188x264.9mm(φ 7.40x10.47") / 4400g(9.70lb)	φ 184.9x318.8mm(7.28x12.55") / 5600g(12.34lb)	φ 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

AI Camera



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	Colour: 0.075Lux(F1.36, 1/30sec, 30IRE) BW: 0.0075Lux(F1.36, 1/30sec, 30IRE), 0Lux(IR LED on)	Colour: 0.05Lux(F1.6, 1/30sec) BW: 0.005Lux(F1.6, 1/30sec), 0Lux(IR LED on)	Colour: 0.05Lux(F1.6, 1/30sec) BW: 0.005Lux(F1.6, 1/30sec), 0Lux(IR LED on)	Colour: 0.05Lux(F1.6, 1/30sec) BW: 0.005Lux(F1.6, 1/30sec), 0Lux(IR LED on)	Colour: 0.05Lux(F1.6, 1/30sec) BW: 0.005Lux(F1.6, 1/30sec), 0Lux(IR LED on)	Colour: 0.03Lux(F1.2, 1/30sec) B/W: 0.003Lux(F1.2, 1/30sec)
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)	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), SSNRV					
Digital Image Stabilisation	Support (built-in gyro sensor)					
Analytics	<p>Classified object type: Person/Face/Vehicle/License plate Attributes: Person(Gender, Colour and Bag), Face(Age, Gender, Mask and Glasses), Vehicle(Type: car/bus/truck/motorcycle/bicycle and Colour) 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(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 2slot Max. 512GB(256GBx2)	Micro SD/SDHC/SDXC 2slots 512GB				-
Application Programming Interface	ONVIF Profile S/G/T/M, SUNAPI(HTTP API) Hanuwa Vision Open Platform - WiseAI 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 12.7.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 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	Ø 136.2x358.7mm(φ 5.36x14.12") (Without sunshield), 3200g(7.05lb) * backbox: φ 160mm(φ 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)	Ø 160x125mm(6.30x4.92"), 1.60Kg (3.53lb)	Ø 205x163mm(8.07x4.92"), 1.95Kg (4.30lb)	81x67x165mm(3.19x2.64x6.48"), 0.88kg(1.94lb)

NETWORK

ANALOG

PERIPHERAL

INSTALLATION SOLUTION

NETWORK

ANALOG

PERIPHERAL

INSTALLATION SOLUTION

PNO-A6081R
2MP AI IR Bullet CameraPNV-A6081R
2MP AI IR Vandal Dome CameraPND-A6081RV
2MP AI IR Dome CameraPND-A6081RF
2MP AI IR Dome CameraPNB-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	Colour: 0.007Lux(F1.3, 1/30sec, 30IRE) B/W: 0.0007Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps	Colour: 0.007Lux(F1.3, 1/30sec, 30IRE) B/W: 0.0007Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps	Colour: 0.007Lux(F1.3, 1/30sec, 30IRE) B/W: 0.0007Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps	Colour: 0.007Lux(F1.3, 1/30sec, 30IRE) B/W: 0.0007Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps	Colour: 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 / 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	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	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)	4.38~9.33mm(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 Attributes: Person(Gender, Colour and Bag), Face(Age, Gender, Mask and Glasses), Vehicle(Type: car/bus/truck/motorcycle/bicycle and Colour) 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</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	ONVIF Profile S/G/T/M, SUNAPI(HTTP API) Hanwha Vision Open Platform - WiseAI application included(Analytic based on AI, Business intelligence)				
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)

PNM-C34404RQPZ
4K 4CH PTRZ + 2MP 40x PTZ AI CameraPNM-C16083RVQ
4MP x 4CH AI CameraPNM-C32083RVQ
4K x 4CH AI 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	Colour: 0.1Lux(F1.5, 1/30sec, 30IRE) BW: 0.01Lux(F1.5, 1/30sec, 30IRE), 0Lux(IR LED on)	Colour: 0.05Lux(F1.6, 1/30sec, 30IRE) BW: 0.005Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)	Colour: 0.075Lux(F1.5, 1/30sec, 30IRE) BW: 0.0075Lux(F1.5, 1/30sec, 30IRE), 0Lux(IR LED on)	Colour: 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)~31.2°(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°
IR Viewable Length	20m (65.62ft)		WiseIR 15m(49.21ft)	WiseIR 15m(49.21ft)
Day & Night	Auto (ICR)		Auto(ICR)	Auto (ICR)
Wide Dynamic Range	120dB		extremeWDR (150dB)	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	<p>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)</p>	<p>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)</p>	<p>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)</p>	-
Business Intelligence	-		-	-
Alarm I/O	-		2 configurable I/O ports * Support extra alarm I/O via optional SPM-4210I/O box	2 configurable I/O ports * Support extra alarm I/O via optional SPM-4210I/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
WiseStream	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)			
Application Programming Interface	ONVIF Profile S/T, SUNAPI(HTTP API) Hanwha Vision 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°C0~95% 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			
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 Camera



PNM-C16083RQZ
4MP x 4CH PTRZ Multi-directional Camera



PNM-C32083RQZ
8MP x 4CH PTRZ Multi-directional Camera

Imaging Device	1/2.8" CMOS x 4CH	1/2.8" CMOS x 4CH	1/1.8" CMOS x 4CH
Resolution / Max. Frame Rate	4MP / 15fps	4MP / 30fps	[AI On] 8MP Max. 15fps [AI Off] 8MP Max. 20fps
Min. Illumination	Colour: 0.05Lux(F1.2, 1/30sec, 30IRE) BW: 0.005Lux(F1.2, 1/30sec, 30IRE), 0Lux(IR LED on)	Colour: 0.1Lux(F1.6, 1/30sec, 30IRE) BW: 0.01Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)	Colour: 0.07Lux(F1.3, 1/30sec, 30IRE) BW: 0Lux(IR LED on)
Video Out	USB: Micro USB Type B, 2592x1520 for installation	-	-
Focal Length (Zoom Ratio)	3.19mm fixed focal	3.2~10.2mm(3.2x) motorized varifocal	4.38~9.33mm(2.13x) motorized varifocal
Angular Field of View	H: 97° / V: 54° / D: 116°	H: 93° (Wide)~29° (Tele) V: 53° (Wide)~17° (Tele) D: 111° (Wide)~34° (Tele)	H: 113° (Wide)~47° (Tele) V: 58° (Wide)~26° (Tele) D: 138° (Wide)~54° (Tele)
Pan / Tilt / Rotate	0~360° (100° per CH) / 0~75° / 0~90°	Remote adjustment(Max. 200cycles) 0° ~360° / 30° ~90° / 0° ~90°	
IR Viewable Length	20m(65.62ft)	WiseIR: PoE++ 20m(65.62ft) / PoE+ 15m(49.21ft)	WiseIR: PoE++ 25m(82.02ft) / PoE+ 15m(49.21ft)
Day & Night	Auto (ICR)	Auto (ICR)	
Wide Dynamic Range	120dB	120dB	
Digital Noise Reduction	WiseNR II (Based on AI engine), SSNR V	SSNR V, WiseNR II (Based on AI engine)	
Digital Image Stabilization	-	-	
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) Analytics events - Motion detection, Tampering, Virtual area(Appear/Disappear) Audio detection, Sound classification (with NW I/O box SPM-4210)	Classified object type: Person/Face/Vehicle/License plate Attributes: Vehicle(Type: car/bus/truck/motorcycle/bicycle, Color), Person (clothing color) 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) * Audio detection, Sound classification(with NW 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 Alarm via optional SPM-4210 I/O box	
Audio I/O	Selectable(mic in/line in) / -	*Support Audio via optional SPM-4210 I/O box * Support Audio via optional SPM-4210 I/O box	
Video Compression	H.265 / H.264, MJPEG	H.265/H.264: Main/High, MJPEG	
WiseStream	Manual(5ea area), WiseStream II, WiseStream III (Based on AI engine)	Manual(5ea area), WiseStream III	
Streaming	Up to 4 profiles per channel	Unicast(10 users) / Multicast Multiple streaming(Up to 3 profiles per CH)	
Edge Storage	Micro SD/SDHC/SDXC 2slot Max. 1TB(512GBx2)	Micro SD/SDHC/SDXC 2slot Max. 1TB(512GBx2)	
Application Programming Interface	ONVIF Profile S/T/M, SUNAPI(HTTP API) Hanwha Vision Open Platform	ONVIF Profile S/T/G/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 -35°C 0~95% RH(non-condensing) Humidity control with AIR vent	-40° C~-55° C(-40° F~-+131° F) / 0~100% RH(condensing) * Start up should be done at above -35° C Humidity control /w AIR vent	-40° C~-55° C(-40° F~-+131° F) / 0~100% RH(condensing) * Start up should be done at above -20° C Humidity control /w AIR vent
Certification	IP66, NEMA4X, IK09	IP66, NEMA4X, IK10	
Power Consumption	PoE+: Max 23.5W, typical 13W	PoE++: Max 41.0W, Typical 22.0W PoE+: Max 25.5W, Typical 22.0W	
Product Dimensions / Weight	ø 200x80mm(ø 7.87x3.15"), 1380g(3.04lb)	ø 312.7x145.9mm(ø 12.31x5.74") / 4400g(9.7lb)	



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



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



PNM-C9022RV
2MP x 4CH AI Panoramic Camera

Imaging Device	1/2.8" CMOS x 2CH	1/2.8" CMOS x 2CH	1/2.8" CMOS x 4CH
Resolution / Max. Frame Rate	6MP / 15fps	2MP / 30fps	2MP / 20fps x 4CH
Min. Illumination	Colour: 0.16lux(F1.67, 1/30sec, 30IRE) BW: 0.016lux(F1.67, 1/30sec, 30IRE), 0lux(IR LED on)	Colour: 0.035lux(F2.2, 1/30sec, 30IRE) BW: 0.0035lux(F2.2, 1/30sec, 30IRE), 0lux(IR LED on)	Colour: 0.1Lux(F2.0, 1/30sec) BW: 0.01Lux(F2.0, 1/30sec), 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)	3.54~6.69mm(1.9x) motorized varifocal	3~6mm(2x) motorized varifocal	2.8mm fixed focal(x4)
Angular Field of View	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° ~ 355° / 0° ~ 78° / 0° ~ 180°	0° ~ 355° / 0° ~ 78° / 0° ~ 180°	0° ~ 360° / 0° ~ 65° / -
IR Viewable Length	25m(82ft)	25m(82ft)	20m(65.62ft)
Day & Night	Auto (ICR)	Auto (ICR)	Auto (ICR)
Wide Dynamic Range	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
Digital Image Stabilization	-	-	-
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, Audio detection, Sound classification, Virtual area(Appear/Disappear)		
Business Intelligence	-		
Alarm I/O	Support Alarm via optional SPM-4210 I/O box	Support Alarm via optional SPM-4210 I/O box	2 configurable I/O ports
Audio I/O	Audio in/out via optional SPM-4210 I/O box	Audio in/out via optional SPM-4210 I/O box	Selectable (mic in/line in) / Line out
Video Compression	H.265 / H.264, MJPEG		
WiseStream	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	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 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, SUNAPI(HTTP API) Open platform	ONVIF Profile S/T, SUNAPI(HTTP API) Open platform	ONVIF Profile S/G/T/M, SUNAPI(HTTP API) Hanwha Vision Open Platform
Operating Temperature / Humidity	-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, 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	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)



QND-C8013R
5MP AI IR Dome Camera



QND-C8023R
5MP AI IR Dome Camera



QNO-C8013R
5MP AI IR Bullet Camera



QNO-C8023R
5MP AI IR Bullet Camera



QNV-C8013R
5MP AI IR Vandal Dome Camera



QNV-C8023R
5MP AI IR Vandal Dome Camera

Imaging Device	1/2.8" CMOS					
Resolution / Max. Frame Rate	30fps@5MP					
Min. Illumination	"Color: 0.05Lux(F1.6, 1/30sec, 30IRE) BW: 0.005Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)"					
Video Out	USB: Micro USB Type B, 1280x720 for installation					
Focal Length (Zoom Ratio)	3.0mm fixed focal	4.0mm fixed focal	3.0mm fixed focal	4.0mm fixed focal	3.0mm fixed focal	4.0mm fixed focal
Angular Field of View	H: 100° / V: 73° / D: 129°	H: 80° / V: 59° / D: 102°	H: 100° / V: 73° / D: 129°	H: 80° / V: 59° / D: 102°	H: 100° / V: 73° / D: 129°	H: 80° / V: 59° / D: 102°
IR Viewable Length	25m(82.02ft)	30m(98.42ft)	25m(82.02ft)	30m(98.42ft)	25m(82.02ft)	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	-	-	-	-	-	-
Analytics	"Classified object type: Person/Vehicle(Type:car/bus/truck/motorcycle/bicycle) Attributes: Person(Upper/lower clothes color), Vehicle(Type:car/bus/truck/motorcycle/bicycle and color) Support BestShot 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"					
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-C7200)"	Input 1ea / Output 1ea	Input 1ea / Output 1ea	Input 1ea / Output 1ea	Input 1ea / Output 1ea	* Alarm I/O is supported through an optional cable(SPP-C7400)"
Audio I/O	Built-in MIC					
Video Compression	H.265/H.264: Main/High, MJPEG					
WiseStream	WiseStream III					
Streaming	"Unicast(20 users) / Multicast Multiple streaming(Up to 5 profiles)"					
Edge Storage	Micro SD/SDHC/SDXC 1slot 256GB					
Application Programming Interface	"ONVIF Profile S/G/T/M SUNAPI(HTTP API) Hanwha Vision Open Platform Oncloud edge recording, compatible with Hanwha Vision's Micro SD cards up to 1TB"					
Operating Temperature / Humidity	"-.45° C(+14° F~+113° F) 0~95% RH(Non-Condensing)"	"-.10° C~+45° C(+14° F~+113° F) 0~95% RH(Non-Condensing)"	"-.30° C~+55° C(-22° F~+131° F) * Start up should be done at above -30° C 0~100% RH(Condensing) Humidity control / w 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"	"-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"
Certification	IP66, IK10					
Power Consumption	"PoE: Max 8.1W, typical 4.0W"					
Product Dimensions / Weight	ø 110x90mm(ø 4.33x3.54"), 317.0g(0.70 lb)		ø 93.4x245.8mm(ø 3.68x9.68"), 890g(1.96 lb)		ø 120x97.5mm(ø 4.72x3.84"), 579.0g(1.27 lb)	



QNE-C9013RL
8MP AI Dual Light Flateye Camera



QNE-C8013RL
5MP AI Dual Light Flateye Camera



QNO-C9083R
8MP AI IR Bullet Camera



QNO-C8083R
5MP AI IR Bullet Camera



QNO-C6083R
2MP AI 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	Colour: 0.034Lux (F1.6, 1/30sec) BW: 0.0034Lux (F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)	Colour: 0.022Lux (F1.2, 1/30sec) BW: 0.0022Lux (F1.2, 1/30sec, 30IRE), 0Lux(IR LED on)	Colour: 0.06Lux(F1.6, 1/30sec, 30IRE) BW: 0.006Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)	Colour: 0.07Lux(F1.6, 1/30sec, 30IRE) BW: 0.007Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)	Colour: 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	Classified object type: Person/Vehicle Attributes: Person, Vehicle(Type: car/bus/truck/motorcycle/bicycle) 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, Motion Detection Analytics events - Defocus detection, Tampering, Virtual area(Appear/Disappear) Support WiseDetector for Adding custom objects *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	-	-	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(Sea 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, 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)

AI Camera



QNV-C9083R
8MP AI IR Vandal Dome Camera



QNV-C8083R
5MP AI IR Vandal Dome Camera



QNV-C6083R
2MP AI IR Vandal Dome Camera



QNV-C9011R
8MP AI IR Vandal Dome Camera

Imaging Device	1/2.8" CMOS			
Resolution / Max. Frame Rate	8MP/30fps	5MP / 30fps	2MP / 30fps	8MP / 30fps
Min. Illumination	Colour: 0.06Lux(F1.6, 1/30sec, 30IRE) BW: 0.006Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)	Colour: 0.07Lux(F1.6, 1/30sec, 30IRE) BW: 0.007Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)	Colour: 0.04Lux (F1.6, 1/30sec) BW: 0.004Lux (F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)	Colour: 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	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			
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(Sea area), WiseStream III (Based on AI engine)	Manual(Sea area), WiseStream III (Based on AI engine)	Manual(Sea area), WiseStream III	Manual(Sea 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	-30°C~+55°C(-22°F~+131°F) / 0~95% RH(non-condensing) * Start up should be done at above -30°C	-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	ø 140x110.2mm(ø 5.51x4.34"), 875g(1.93 lb)	ø 140x110.2mm(ø 5.51x4.34"), 875g(1.93 lb)	ø 140x110.2mm(ø 5.51x4.34"), 850g(1.87 lb)	ø 110x77mm(ø 4.33x3.03"), 522g(1.15 lb)

AI Camera



QNV-C8011R
5MP AI IR Vandal Dome Camera



QNV-C8012
5MP AI IR Vandal Dome Camera



QNF-C9010
12MP AI Fisheye Camera



QNF-C9010V
12MP AI Fisheye Camera

Imaging Device	1/2.8" CMOS	1/2.8" CMOS	1/1.6" 12MP CMOS	
Resolution / Max. Frame Rate	5MP / 30fps	5MP / 30fps	"Original view: Max. 20fps@3008x3008 Double panorama: Max. 20fps@3584x1792 Single panorama: Max. 20fps@3584x896 Quad view: Max. 20fps@3584x2688"	
Min. Illumination	Colour: 0.03Lux(F1.6, 1/30sec, 30IRE) BW: 0.003Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)	Colour: 0.05Lux(F2.0, 1/30sec, 30IRE) BW: 0.005Lux(F2.0, 1/30sec, 30IRE)	"Color: 0.02Lux (F1.8, 1/30sec) BW: 0.001Lux (F1.8, 1/30sec)"	
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	2.4mm fixed focal	1.76mm fixed focal	
Angular Field of View	H: 100° / V: 73° / D: 129°	H: 123° / V: 91° / D: 159°	H: 185° / V: 185° / D: 185°	
Pan / Tilt / Rotate	0°~350° / -35°~70° / 0°~355°	0°~350° / -35°~70° / 0°~355°	-	
IR Viewable Length	20m(65.62ft)	-	Auto(ICR)	
Day & Night	Auto(ICR)	Auto(ICR)	120dB	
Wide Dynamic Range	120dB	120dB	SSNR V, WiseNR II (Based on AI engine)	
Digital Noise Reduction	SSNR V, WiseNR II (Based on AI engine)	SSNR V, WiseNR II (Based on AI engine)	-	
Digital Image Stabilization	-		-	
Analytics	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		Classified object type: Person/Vehicle Attributes: Person(Upper/lower clothes color), Vehicle(color) Support BestShot Analytics events based on AI engine - Motion detection*, Object detection, Virtual line*(Crossing/Direction), Virtual area*(Loitering/Intrusion/Enter/Exit/Appear/Disappear) Analytics events - Defocus detection, Tampering * 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		Based on AI engine: People 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/High, MJPEG	
WiseStream	Manual(Sea area), WiseStream III (Based on AI engine)		WiseStream III	
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 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		"ONVIF Profile S/G/T/M, SUNAPI(HTTP API), Hanwha Vision Open Platform, - Cloud connector application included"	
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	- 10° C~+40° C(+14° F~+104° F) / 0~90% RH	"40° C~+55° C(-40° F~+131° F) / 0~100% RH(condensing), * Start up should be done at above -30° C"
Certification	IP66, IK10, NEMA4X	IP66, IK10, NEMA4X	IP42	
Power Consumption	PoE: Max 7W, typical 4.9W	PoE: Max 7W, typical 4.9W	PoE: Max 7.3W, typical 4.3W	
Product Dimensions / Weight	ø 110x77mm(ø 4.33x3.03"), 522g(1.15 lb)	ø 110x77mm(ø 4.33x3.03"), 522g(1.15 lb)	ø 99x52mm(ø 3.9x2.05"), 360g(0.79lb)	

NETWORK

ANALOG

PERIPHERAL

INSTALLATION SOLUTION

NETWORK

ANALOG

PERIPHERAL

INSTALLATION SOLUTION

AI Camera



TNO-C3032TRA



TNO-C3022TRA



TNO-C3012TRA



TNO-C3030TRA



TNO-C3020TRA



TNO-C3010TRA

QVGA Radiometric AI Thermal Camera

Imaging Device	Uncooled micro bolometer (Spectral range: 8~14μm)					
Resolution	768x576, 384x288(original)					
Max. Frame Rate	8fps			30fps		
NETD	<30mK					
Pixel pitch	17μm					
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	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					
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 ± 2°C Above 150°C: up to ± 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 1 slot 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	ø 93.8x233.5mm(ø 3.69X/9.19"), 1700g(3.75 lb)					

AI Camera



TNO-C8083E
5MP AI Explosion-proof bullet camera



TNM-C4960TD
Bi-spectrum AI Thermal Camera



TNM-C4950TD
Bi-spectrum AI Thermal Camera

Imaging Device	Thermal		Visible	
	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	5MP / 30fps	640x480 / 30fps	3840x2160 / 30fps	640x480 / 30fps
Min. Illumination	Colour: 0.07Lux(F1.6, 1/30sec, 30IRE) BW: 0.007Lux(F1.6, 1/30sec, 30IRE)	-	Colour: 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)	3.2~10.2mm(3.2x) motorized varifocal	25mm fixed focal	10.9~29mm(2.6x) motorized varifocal	13.5mm fixed focal
Angular Field of View	H: 95°(Wide)~29°(Tele) / V: 69°(Wide)~21°(Tele) / D: 126°(Wide)~36°(Tele)	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)
Pan / Tilt / Rotate	-170°~+170° / -40°~50° / -		-170°~+170° / -40°~50° / -	
IR Viewable Length	-		-	
Day & Night	Auto(ICR)	-	Auto(ICR)	-
Wide Dynamic Range	120dB	-	WDR(120dB)	-
Digital Noise Reduction	SSNR V, WiseNR II (Based on AI engine)	-	SSNR V, WiseNR II	-
Digital Image Stabilization	-		Support(built-in gyro sensor)	
Analytics	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	Analytics events based on AI engine: Object detection (Person/Vehicle), Bestshot, IVA (Virtual line/Area, Enter/Exit, Loitering, direction, intrusion), Stopped vehicle, Traffic jam Analytics events: Motion detection	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 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	Analytics events based on AI engine: Object detection (Person/Vehicle), Bestshot, IVA (Virtual line/Area, Enter/Exit, Loitering, direction, intrusion), Stopped vehicle, Traffic jam Analytics events: Motion detection
Business Intelligence	Based on AI engine: People counting, Vehicle counting, Queue management, Heatmap		Vehicle counting	
Alarm I/O	-		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	
Video Compression	H.265/H.264: Main/Baseline/High, MJPEG		H.265/H.264: Main/High, MJPEG	
WiseStream	Manual(5ea area), WiseStream III (Based on AI engine)	WiseStream II	Manual(5ea area), WiseStream III	WiseStream II
Streaming	Unicast(20 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	
Application Programming Interface	ONVIF Profile S/T/M, SUNAPI(HTTP API)		ONVIF Profile S/T, SUNAPI(HTTP API), Hanwha Vision Open Platform (visible channel only)	
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		-40°C to +60°C(-58°F to +140°F) * Start up should be done at above -30°C, less than 95% RH(non-condensing)	
Certification	CE, KC, IP66, IK10, 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		IP66/IP67, IK10, NEMA4X, NEMA TS 2(2.2.8, 2.2.9)	
Power Consumption	PoE: Max 9.50W, typical 5.30W		PoE+: Max 23.5W, Typ 16.0W, 12VDC: Max 19.5W, Typ 14.0W	
Product Dimensions / Weight	ø 110.5 x 316.2mm(ø 4.35x12.44"), 4770g(10.51 lb)		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

Imaging Device	Thermal	Visible	Thermal	Visible
	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	-	Colour: 0.06Lux(F1.3, 1/30sec) BW: 0.004Lux(F1.3, 1/30sec), 0Lux(IR LED on)	-	Colour: 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			
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) * 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) * 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			
Audio I/O	Selectable(mic in/line in) Line out, Max.output level: 1Vrms			
Video Compression	H.265/H.264: Main/High, MJPEG			
WiseStream	WiseStream II	Manual(Sea area), WiseStream III	WiseStream II	Manual(Sea area), WiseStream III
Streaming	Unicast(6 users) / Multicast Multiple streaming(Up to 3 profiles)			
Edge Storage	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 to +60°C (-58°F to +140°F) * Start up should be done at above -30°C less than 95% RH(non-condensing)		-40°C to +60°C (-58°F to +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)			
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)			



TNM-C4940TDR
Radiometric Bi-spectrum AI Thermal Camera



TNM-C2712TDR / TNM-C2722TDR
Radiometric Bi-spectrum AI Thermal Camera

Imaging Device	Thermal	Visible	Thermal	Visible
	Uncooled micro bolometer (Spectral range: 8~14μm, 12μm, <60mK)	1/1.8" CMOS	Uncooled micro bolometer	1/2.8" CMOS
Resolution / Max. Frame Rate	640x480 / 30fps	3840x2160 / 30fps	"640x480, 320x240 (Original sensor resolution: 160x120) H.265/H.264: Max. 8fps, MJPEG: Max. 5fps"	"2048x1536, 1920x1080, 1280x960, 1280x720, 800x600, 800x448, 720x576, 720x480, 640x480, 640x360, 320x240, H.265/H.264: Max. 30fps/25fps MJPEG: Max. 5fps"
Min. Illumination	-	Colour: 0.06Lux(F1.3, 1/30sec) BW: 0.004Lux(F1.3, 1/30sec), 0Lux(IR LED on)	None	"Color: 0.06Lux(F1.6, 1/30sec) BW: 0.06Lux(F1.6, 1/30sec)"
Video Out	USB : Micro USB Type B, 1280x720 for installation			
Focal Length (Zoom Ratio)	9.1mm fixed focal	4.4~9.3mm(2.2x) motorized varifocal	1.2mm fixed focal	3.06mm fixed focal
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: 95° / V: 69° / D: 119°	H: 100° / V: 73° / D: 129°
Pan / Tilt / Rotate	-170° ~ +170° / -40° ~ 50° / -			
IR Viewable Length	-			
Day & Night	-	Auto(ICR)	None	Auto(Electrical)
Wide Dynamic Range	-	WDR(120dB)	None	WDR
Digital Noise Reduction	-	SSNR V, WiseNR II	None	SSNR V
Digital Image Stabilization	-	Support(built-in gyro sensor)	None	Support
Analytics	<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) * Some of the video analytics only works with people and vehicle detection</p>	<p>"Temperature detection, Temperature difference detection</p> <p>Analytics events - Motion detection"</p>	<p>"Analytics events based on AI engine - Early fire detection</p> <p>Analytics events - Tampering, Audio detection, Motion detection"</p>
Business Intelligence	-			
Alarm I/O	4 configurable I/O ports			
Audio I/O	Selectable(mic in/line in) / Line out			
Video Compression	H.265/H.264: Main/High, MJPEG			
WiseStream	WiseStream II	Manual(Sea area), WiseStream III	WiseStream II	Manual(Sea area), WiseStream II
Streaming	Unicast(6 users) / Multicast Multiple streaming(Up to 3 profiles)			
Edge Storage	Micro SD/SDHC/SDXC 2slots 512GB		Micro SD/SDHC/SDXC 1slots 512GB	
Application Programming Interface	ONVIF Profile S/T, SUNAPI(HTTP API) Hanwha Vision Open Platform (visible channel only)		"ONVIF Profile S/T SUNAPI(HTTP API) Hanwha Vision Open Platform"	
Operating Temperature / Humidity	-40°C to +60°C (-58°F to +140°F) * Start up should be done at above -30°C 0~95% RH(non-condensing)		"-30° C~+55° C(-22° F~+131° F) / 0~95% RH(non-condensing) * Start up should be done at above -10° C"	
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			
Product Dimensions / Weight	353.4(W)x287.5(H)x191.2(D)mm(13.92x11.32x7.53")		Ø110x97mm(ø4.33x3.82"), 650g(1.43lb)	
Additional Features	-			
			"Temperature detection range: Narrow: -10° C~140° C, Wide: -10° C~450° C"	

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TNM-C3622TDR
Radiometric Bi-spectrum AI Thermal Camera



TNM-C3620TDR
Radiometric Bi-spectrum AI Thermal Camera

	Thermal	Visible	Thermal	Visible
Imaging Device	Uncooled micro bolometer (Spectral range: 8~14μm, 12μm, <50mK)	1/2.8" 2MP CMOS	Uncooled micro bolometer (Spectral range: 8~14μm, 12μm, <50mK)	1/2.8" 2MP CMOS
Resolution / Max. Frame Rate	320x240/ 8fps	1920x1080 / 30fps	320x240 / 30fps	1920x1080 / 30fps
Min. Illumination	-	Colour: 0.05 lux(F1.6, 1/30sec) B/W: 0.005 lux(F1.6, 1/30sec)	-	Colour: 0.05 lux(F1.6, 1/30sec) B/W: 0.005 lux(F1.6, 1/30sec)
Video Out	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	
Focal Length (Zoom Ratio)	4.7mm fixed focal	4mm fixed focal	4.7mm fixed focal	4mm 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°	H: 50.0° / V: 36.4° / D: 65.3° (iFoV: 2.553 mRad)	H: 87.6° / V: 46.4° / D: 104.5°
Pan / Tilt / Rotate	-		-	
IR Viewable Length	-		-	
Day & Night	-	Auto(ICR)	-	Auto(ICR)
Wide Dynamic Range	-	extremeWDR(150dB)	-	extremeWDR(150dB)
Digital Noise Reduction	-	SSNR V	-	SSNR V
Digital Image Stabilization	-	Support (built-in gyro sensor)	-	Support (built-in gyro sensor)
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)	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)
Business Intelligence	-		-	
Alarm I/O	Input 1ea / Output 2ea		Input 1ea / Output 2ea	
Audio I/O	Selectable (mic in/line in) / Line out		Selectable (mic in/line in) / Line out	
Video Compression	H.265/H.264: Main/Baseline/High, MJPEG		H.265/H.264: Main/Baseline/High, MJPEG	
WiseStream	WiseStream II	Manual(5ea area), WiseStream II	WiseStream II	Manual(5ea area), WiseStream II
Streaming	Unicast(20 users) / Multicast Multiple streaming(Up to 6 profiles)		Unicast(20 users) / Multicast Multiple streaming(Up to 6 profiles)	
Edge Storage	Micro SD/SDHC/SDXC 1slot 256GB		Micro SD/SDHC/SDXC 1slot 256GB	
Application Programming Interface	ONVIF Profile S/T/M SUNAPI(HTTP API)		ONVIF Profile S/T/M SUNAPI(HTTP API)	
Operating Temperature / Humidity	-10°C~-+55°C(+14°F~+131°F) / Less than 95% RH		-10°C~-+55°C(+14°F~+131°F) / Less than 95% RH	
Certification	-		-	
Power Consumption	PoE+: Max. 17.0W, typical 12.5W / 12VDC: Max. 14.5W, typical 11.0W		PoE+: Max. 17.0W, typical 12.5W / 12VDC: Max. 14.5W, typical 11.0W	
Product Dimensions / Weight	135(W)x75(H)x188.5(D)mm, (5.31x2.95x7.42"), 1.7kg(3.77lb)		135(W)x75(H)x188.5(D)mm, (5.31x2.95x7.42"), 1.7kg(3.77lb)	



TNV-C8014RM / TNV-C8034RM
5MP AI IR Mobile Camera



TNO-A26081
Ultra-resolution 26MP T AI camera

Imaging Device	1/2.8" CMOS	Diagonal 28.3mm 1.8" CMOS
Resolution / Max. Frame Rate	30fps@5MP	26MP / 30fps
Min. Illumination	"Color: 0.03Lux (F1.6, 1/30sec) BW: 0.003Lux (F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)"	Color: 0.2Lux(F4.0, 1/30sec) B/W: 0.02Lux(F4.0, 1/30sec)
Video Out	USB: Micro USB Type B, 1280x720 for installation	USB: Micro USB Type C, 1280x720 for installation
Focal Length (Zoom Ratio)	3.0mm fixed focal / 6.0mm fixed focal	55~250mm(4.54x) manual varifocal
Angular Field of View	H: 100° / V: 73° / D: 129° H: 50° / V: 37° / D: 64°	H: 24° (Wide)~5.4° (Tele) V: 16° (Wide)~3.6° (Tele) D: 29° (Wide)~6.5° (Tele)
IR Viewable Length	30m (98.42ft)	-
Day & Night	Auto(ICR)	Auto(ICR)
Wide Dynamic Range	120dB	-
Digital Noise Reduction	"WiseNR II (Based on AI engine), SSNR V"	SSNR V, WiseNR II (Based on AI engine)
Digital Image Stabilization	Support (built-in gyro sensor)	-
Analytics	Classified object type: Person/Vehicle (Type: car/bus/truck/motorcycle/bicycle) Attributes: Person(Upper/lower clothes color), Vehicle(Type: car/bus/truck/motorcycle/bicycle and color) Support BestShot 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	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), Motion detection Analytics events - Defocus detection, Tampering, Audio 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	Based on AI engine: People counting, Queue management, Heatmap, Vehicle counting
Alarm I/O	Analytics, Network disconnect, MQTT subscription	2 configurable I/O ports
Audio I/O	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: Main/High, MJPEG	H.265/H.264: Main/High, MJPEG
WiseStream	WiseStream III	Manual(5ea 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 10 profiles)
Edge Storage	Micro SD/SDHC/SDXC 1slot 256GB	Micro SD/SDHC/SDXC 2slot 1TB
Application Programming Interface	"ONVIF Profile S/G/T/M SUNAPI(HTTP API) Hanwha Vision Open Platform Oncloud edge recording, compatible with Hanwha Vision's Micro SD cards up to 1TB"	"ONVIF Profile S/G/T/M SUNAPI(HTTP API)"
Operating Temperature / Humidity	-40° C~-+55° C(-40° F~+131° F)	"-40° C~-+55° C(-40° F~+131° F) / 0~100%RH(condensing) Humidity control /w Air vent"
Certification	IP66, IK10	-
Power Consumption	PoE: Max 7.2W, typical 4.2W	"PoE++: Max 44.3W, Typical 24.9W 12VDC: Max 35.4W, Typical 19.6W"
Product Dimensions / Weight	106x105x55mm(4.17x4.13x2.17"), 466g(1.03lb)	193.5x193.5x532mm(7.62"x7.62"x20.94"), 8100g(17.86lb)



TNV-C7013RC
AI Corner Mount Camera



TNV-C8011RW
AI Wall Mount Camera

Imaging Device	1/1.8" progressive CMOS	1/2.8" progressive 5MP CMOS
Resolution / Max. Frame Rate	3MP / 30fps	5MP / 30fps
Min. Illumination	Colour: 0.04Lux(F2.0, 1/30sec, 30IRE) BW: 0.04Lux(F2.0, 1/30sec, 30IRE), 0Lux(IR LED on)	Colour: 0.038Lux(F1.6, 1/30sec, 30IRE) BW: 0.0038Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)
Video Out	-	USB: Micro USB Type B, 1280x720 for installation
Focal Length (Zoom Ratio)	2.39mm fixed focal	1.6mm fixed focal
Angular Field of View	H: 128° / V: 100°	H: 175° / V: 125° / D: 175°
IR Viewable Length	Wise IR 15m (49.21 ft), invisible 940nm wavelength	15m(49.21ft)
Day & Night	Auto (ICR)	Auto(ICR)
Wide Dynamic Range	extremeWDR (120dB)	120dB
Digital Noise Reduction	SSNR V, WiseNR II (Based on AI engine)	SSNR V, WiseNR II (Based on AI engine)
Digital Image Stabilization	Support	-
Analytics	<p>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 colour detection (Orange/Black/Red, @400lux)</p>	<p>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</p>
Business Intelligence	-	Based on AI engine: People counting, Vehicle counting, Queue management, Heatmap
Alarm I/O	2 configurable I/O ports * Support Alarm via optional SPM-4210 I/O box	-
Audio I/O	Selectable(mic in/line in) / Line out	Built-in mic only / -
Video Compression	H.265/H.264, MJPEG	H.265/H.264: Main/High, MJPEG
WiseStream	Manual(Sea area), WiseStream II, WiseStream III (Based on AI engine)	Manual(Sea area), WiseStream III (Based on AI engine)
Streaming	Up to 10 profiles, 3 virtual channel support	Unicast(20 users) / Multicast Multiple streaming(Up to 5 profiles)
Edge Storage	Micro SD/SDHC/SDXC 1slot 1TB	Micro SD/SDHC/SDXC 1slot 256GB
Application Programming Interface	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) 0~95% RH(non-condensing) Humidity control with AIR vent	-30° C ~ +55° C (-22° F ~ +131° F) / Less than 95% RH
Certification	IP66, IP6K9K, IK10+	IP66, IK10
Power Consumption	PoE: Max 12.95W, typical 9.7W DC: Max 12.7W, typical 9.0W	Max 11.5W / Typ 4.8W
Product Dimensions / Weight	198.3(W)x104.8(H)x198.6(D)mm (7.87"x4.13"x7.82"), 1.935g (4.27lb)	80(W)x167(H)x57(D)mm(3.15x6.56x2.24"), 600g(1.32 lb)



PNO-A9311RLP
8MP 31x Zoom LPR/ANPR/MMCR 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	4K / 30fps	8MP / 30fps	8MP / 30fps	8MP / 30fps	3MP / 55fps
Min. Illumination	Colour: 0.075Lux(F1.36, 1/30sec, 30IRE) BW: 0.0075Lux(F1.36, 1/30sec, 30IRE), 0Lux(IR LED on)	Colour: 0.05Lux(F1.6, 1/30sec) BW: 0Lux(IR LED on)	Colour: 0.05Lux(F1.6, 1/30sec) BW: 0.005Lux(F1.6, 1/30sec), 0Lux(IR LED on)	Colour: 0.03Lux(F1.2, 1/30sec) B/W: 0.003Lux(F1.2, 1/30sec)	Colour 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	120dB	120dB	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)	-
Analytics	Wisenet Road AI application (Pre-installed), licence plate recognition, make/model/colour recognition, black/white list notification, smart search (number plate, country, brand, model, colour)				
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(Sea area), WiseStream II	WiseStream II	WiseStream II	WiseStream II	WiseStream II
Streaming	Micro SD/SDHC/SDXC 1slot (32GB Card preinstalled)	Up to 3 profiles	Up to 3 profiles	Up to 3 profiles	Up to 10 Profiles
Edge Storage	Micro SD/SDHC/SDXC 1slot (32GB Card preinstalled)	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	Micro SD/SDHC/SDXC 1slot (32GB Card preinstalled)
Application Programming Interface	ONVIF Profile S/G/T/M, SUNAPI(HTTP API)	ONVIF Profile S/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°C) / 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 5.36x 14.12") (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) x 259.3(H) x 293.7(D) (mm) / 4.8kg (10.5 lb)

RoadWatch ANPR Camera



XNO-6080R/RW
2MP IR Bullet Camera



XNO-6120R/RW
2MP IR Bullet Camera



XNO-6123R/RW
2MP IR Bullet Camera



XNO-C6083R/RW
2MP IR Bullet Camera



XNV-6080R/RW
2MP IR Vandal Dome Camera



XNV-C6083R/RW
2MP IR Vandal Dome Camera

Imaging Device	1/2.8" 2MP CMOS	1/2.8" 2MP CMOS	1/2.8" progressive CMOS	1/2.8" progressive CMOS	1/2.8" 2MP CMOS	1/2.8" progressive CMOS
Resolution / Max. Frame Rate	2MP / 60fps	2MP / 60fps	2MP / 120fps	2MP / 60fps	2MP / 60fps	2MP / 60fps
Min. Illumination	Colour: 0.015 lux(F1.4, 1./30sec) / B/W: 0 Lux (IR LED On)	Colour: 0.03Lux(F1.6, 1./30sec) / BW: 0Lux(IR LED On)	Colour: 0.03 Lux (F1.6, 1./30sec, 30IRE), 0 Lux (IR LED on)	Colour: 0.011 Lux (F1.4, 1./30sec, 30IRE), 0 Lux (IR LED on)	Colour: 0.015 lux(F1.4, 1./30sec), B/W: 0 Lux (IR LED On)	Colour: 0.011 Lux (F1.4, 1./30sec, 30IRE), 0 Lux (IR LED on)
Video Output	CVBS: 1.0 Vp-p, Micro USB Type B					
Focal Length	2.8~12mm(4.3x) motorized varifocal	5.2~62.4mm (Optical 12X) motorized varifocal	5.2~62.4mm(12x) zoom (digital 32x, total 384x zoom)	2.8~12mm(4.3x) motorized varifocal	2.8~12mm (4.3x) motorized varifocal lens	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), T: 142.1° (Wide)~32.0° (Tele)	H: 54.58° (Wide)~5.30° (Tele) / V: 32.19° (Wide)~3.00° (Tele) / D: 61.4(Wide)~6.06(Tele)	H: 55° (Wide)~5° (Tele) / V: 33° (Wide)~3° (Tele) / D: 62° (Wide)~6° (Tele)	H: 120° (Wide)~27° (Tele) / V: 63° (Wide)~15° (Tele) / D: 143° (Wide)~32° (Tele)	H: 119.5° (Wide)~27.9° (Tele), V: 62.8° (Wide)~15.7° (Tele), T: 142.1° (Wide)~32.0° (Tele)	H: 120° (Wide)~27° (Tele) / V: 63° (Wide)~15° (Tele) / D: 143° (Wide)~32° (Tele)
IR Viewable Length	50m(164.04ft)	70m(229.66ft)	90m(295.28ft)	40m(131.23ft)	50m(164.04ft)	40m(131.23ft)
Day & Night	Auto(ICR)					
Wide Dynamic Range	150dB					
Digital Noise Reduction	SSNRV	SSNRV	WiseNR II (Based on AI engine), SSNRV	WiseNR II (Based on AI engine), SSNRV	SSNRV	WiseNR II (Based on AI engine), SSNRV
Digital Image Stabilization	Support (built-in gyro sensor)	Support	Support(built-in gyro sensor)	Support(built-in gyro sensor)	Support	Support(built-in gyro sensor)
Streaming	Unicast(20 users) / Multicast Multiple streaming(Up to 10 profiles)			Unicast(20 users) / Multicast Multiple streaming(Up to 10 profiles, 3 virtual channel support)	Unicast(20 users) / Multicast Multiple streaming(Up to 10 profiles)	Unicast(20 users) / Multicast Multiple streaming(Up to 10 profiles, 3 virtual channel support)
Edge Storage	Pre-installed SD Card (Data storage for RoadWatch application)					
Operating Temperature	-40° C~+55° C(-40° F~+131° F) / Less than 90% RH	-40° C~+55° C(-40° F~+131° F) / Less than 90%RH * Start up should be done at above -35° C	-40° C~+60° C(-40° F~+140° F) * Start up should be done at above -30° C	-40° C~+55° C(-40° F~+131° F) * Start up should be done at above -20° C	-40° C~+55° C(-40° F~+131° F) / Less than 90% RH	-40° C~+55° C(-40° F~+131° F) * Start up should be done at above -20° C
Certification	IP67/IP66/NEMA 4X, IK 10					
Power Consumption	PoE: Max 12.95W, 12VDC: Max 12W, 24VAC: Max 15W	PoE: Max 12.95W, 12VDC: Max. 12.5W, 24VAC: Max. 14.5W	PoE+: Max 19.5W, typical 15.5W; 12VDC: Max 16.5W, typical 13.1W; Power redundancy failover	PoE: Max 12.95W, typical 10.8W; 12VDC: Max 12.5W, typical 10.0W	PoE: Max 12.95W, 12VDC: Max 11.5W, 24VAC: Max 14W	PoE: Max 12.95W, typical 10.8W; 12VDC: Max 12.5W, typical 10.0W
RoadWatch						
Solution	Urban traffic					
Speed Description	Moderate speed	Regular speed			Moderate speed	
Lane Coverage	1 lane (3.6m/ 12ft wide)					
Speed limit	up to 50km/h (30mph)	up to 90km/h (55mph)			up to 50km/h (30mph)	
Min. Forward Distance	7m (23ft)	17m (55ft)			7m (23ft)	
Max. Forward Distance	13m (42ft)	32m (105ft)			13m (42ft)	
Max. Horizontal Angle	30°					
Max Vertical Angle	30°					
Horizontal Offset	up to 4m (13ft)	up to 9.8m (32ft)			up to 4m (13ft)	
Camera Height	up to 4m (13ft)	up to 9.8m (32ft)			up to 4m (13ft)	

AI SSD Camera

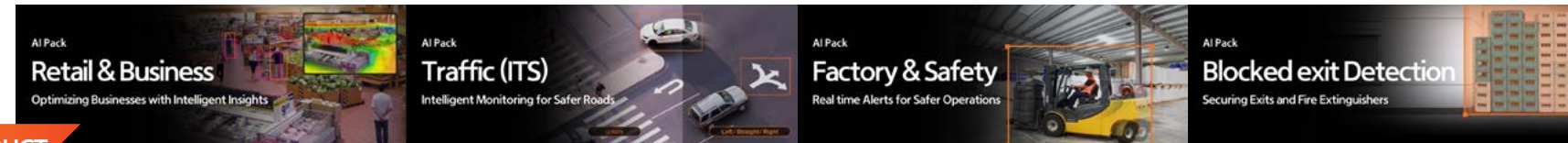


PNV-A6081R-E1T
2MP Camera with 1TB Rugged SSD



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

SolidEDGE AI Camera		
Imaging Device	1/2" CMOS	1/2" CMOS
Resolution / Max. Frame Rate	2MP/120fps	2MP/120fps
Min. Illumination	Colour: 0.007Lux(F1.3, 1./30sec, 30IRE) BW: 0.0007Lux(F1.3, 1./30sec, 30IRE), 0Lux(IR LED on), 30/25fps	Colour: 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
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)
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), SSNRV	WiseNR II (Based on AI engine), SSNRV
Digital Image Stabilization	-	-
Analytics	Classified object type: Person/Face/Vehicle/License plate Attributes: Person(Gender, Colour and Bag), Face(Age, Gender, Mask and Glasses), Vehicle(Type: car/bus/truck/motorcycle/bicycle and Colour) 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	
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
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)
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)
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	
Certification	IP66/IP67/IP6K9K, NEMA4X, IK10	
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
Product Dimensions / Weight	ø 180x130mm(ø 7.09x5.12"), 1900g(4.19 lb)	ø 180x130mm(ø 7.09x5.12"), 1900g(4.19 lb)



FEATURED PRODUCT

	Retail & Business AI Pack	Traffic (ITS) AI Pack	Factory & Safety AI Pack	Blocked Exit Detection AI Pack
Installation App	Retail & Business WiseAI app	Traffic (ITS) WiseAI app	Factory & Safety WiseAI app	Licensed feature within camera WiseAI app
Licence Type	Perpetual	Perpetual	Perpetual	Perpetual
Ordering Part Number	AIA-C01RET	AIA-C01TRF	AIA-C01FAC	AIA-C01BLK
Supported Cameras	4K: PND-A9081RV/A9081RF, PNV-A9081R, PNO-A9081R, PND-A9081RVX, PNV-A9081RX, PNB-A9001 2MP: PND-A6081RV/A6081RF, PNV-A6081R, PNO-A6081R, PNB-A6001			
Analytics				
Object	Person, Shopping Cart	Vehicle (Car, Truck, Bus, Motorcycle, Bicycle), License plate	Person, Forklift	Excludes Person and Vehicle
BestShot	Person, Shopping Cart	Vehicle, License plate	Person, Forklift	WiseAI app feature
Event Rules				
Exclude Area	Yes - 8 areas	Yes - 8 areas	Yes - 8 areas	WiseAI app feature
Virtual Line	Line crossing by Object class - 8 areas	Line crossing by Object class - 8 areas	Line crossing by Object class - 8 areas	WiseAI app feature
Virtual Area	Loitering/Intrusion/Enter/Exit by Object class - 8 areas, Appear/Disappear	Loitering/Intrusion/Enter/Exit by Object class - 8 areas, Appear/Disappear	Loitering/Intrusion/Enter/Exit by Object class - 8 areas, Appear/Disappear	WiseAI app feature
Blocked Exit	With duration settings (min 5mins, max 60mins) - 3 areas	-	With duration settings (min 5mins, max 60mins) - 3 areas	With duration settings (min 5mins, max 60mins) - 3 areas
Slip & Fall	8 areas	-	8 areas	WiseAI app feature
Other (AI pack specific)	-	1. Stopped vehicle detection (max 3 hours timer per Object class) - 8 areas 2. Traffic jam detection (distance/speed/time rules) - 4 areas 3. Pedestrian detection (duration setting) - 3 areas 4. Wrong-way detection by Object class - 3 areas 5. Vehicle speed detection by Object class - 3 areas (Distance and speed settings) - Max 40kph/25mph	1. Proximity detection between People / between Forklifts / between People and Forklifts (Total of 3 rules, distance and duration settings) 2. Forklift speed detection (speed and duration settings) - Max 50kph/31mph	-
Statistics				
Counting	Person - 2 lines, Shoping Cart - 2 lines	Vehicle by Object class - 2 lines	Person - 2 lines, Forklift - 2 lines	WiseAI app feature
Heatmap	Person, Shopping Cart	Vehicle	Person, Forklift	WiseAI app feature
Queue	Person - 3 areas, Shoping Cart - 3 areas + queue event	Vehicle - 3 areas + queue event	Person - 3 areas, Forklift - 3 areas + queue event	WiseAI app feature
Other (AI pack specific)	Counting by gender	Multi-lane vehicle turning movement counting by Object class (straight, left/right, u-turns) - 20 areas	-	WiseAI app feature
Reporting	FTP and Email by schedule XLSX, TXT file for counting, PNG for Heatmap data	FTP and Email by schedule XLSX, TXT file for counting, PNG for Heatmap data	FTP and Email by schedule XLSX, TXT file for counting, PNG for Heatmap data	WiseAI app feature



XNO-8082R
6MP IR Bullet Camera



XNV-8082R
6MP IR Vandal Dome Camera



XND-8082RV
6MP IR Dome Camera



XNB-8002
6MP Box Camera



XNB-9002
8MP Box Camera

Imaging Device	1/2.8" CMOS			
Resolution / Max. Frame Rate	6MP / 30fps			
Min. Illumination	Colour: 0.05Lux(F1.2, 1/30sec, 30IRE) BW: 0.005Lux(F1.2, 1/30sec, 30IRE), 0Lux(IR LED on)		Colour: 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	-
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)	-
Pan / Tilt / Rotate Range	0°~360° / 0°~100° / 0°~360°	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)	-
Day & Night	Auto(ICR)	Auto(ICR)	Auto(ICR)	Auto(ICR)
Wide Dynamic Range	extremeWDR(120dB)	extremeWDR(120dB)	extremeWDR(120dB)	extremeWDR(120dB)
Digital Noise Reduction	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)
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
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: 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(Sea area), WiseStream II	Manual(Sea area), WiseStream II	Manual(Sea area), WiseStream II	Manual(Sea 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)	-10°C~+55°C(+14°F~+131°F) / 0~95% RH(non-condensing)
Certification	IP66/IP67, NEMA4X, IK10	IP66/IP67/IP6K9K, IK10+, NEMA4X	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 8.2W 12VDC: Max 11.5W, typical 7.5W 24VAC: Max 13.5W, typical 8.9W Power redundancy failover
Product Dimensions / Weight	ø 91x368.6mm(ø 3.85x14.51"), 2200g(4.85 lb)	ø 180x125mm(ø 7.09x4.92"), 1900g(4.19 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)
Additional Features	UL CAP, Secure by Default			



XNV-6081Z
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	Colour : 0.015Lux (F1.4) B/W : 0.0015Lux (F1.4)	Colour : 0.07Lux (F1.2) B/W : 0.007Lux (F1.2)	Colour : 0.07Lux (F1.3) B/W : 0Lux (IR LED on)	Colour : 0.16Lux (F1.6) B/W : 0Lux (IR LED on)
Video Out	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	± 175° / 0° ~ 85° / ± 175° (Remote)	-	-	-
IR Viewable Length	-	-	50m (164.04ft)	30m (98.43ft)
Day & Night	Auto (ICR)			
Wide Dynamic Range	150dB	120dB	120dB	120dB
Digital Noise Reduction	SSNRV			
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			
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, IK10+, NEMA4X	-	IP67, IP66, NEMA4X, IK10	IP67, IP66, NEMA4X, IK10
Power Consumption	PoE : Max 11W 12VDC : Max 9.5W 24VAC : Max 11W	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	Ø180 x 125mm (Ø7.1" x 4.9") 1.75kg (3.86lb)	W73.1 x H66.6 x D147.8mm (2.88" x 2.62" x 5.82") 420g (0.93lb)	Ø91 x 368.6mm (Ø6.3" x 4.67") 2.18kg (4.81lb)	Ø70 x 296mm (Ø2.76" x 11.65") 1.22kg (2.69lb)
Additional Features	Modular structure, Motorized PTRZ	Handover, Hallway View	Handover, Hallway View	Handover, Hallway View



XND-8080R/8080RV
5MP IR Dome Camera



XND-8020R/8030R/8040R
5MP IR Dome Camera



XND-8020F
5MP Flush Mount Dome Camera



XNV-8080R
5MP IR Vandal Dome Camera

Imaging Device	1/1.8" CMOS			
Resolution / Max. Frame Rate	H.265, H.264, MJPEG			
Min. Illumination	Colour : 0.07Lux (F1.3) B/W : 0Lux (IR LED on)	Colour : 0.16Lux (F1.6) B/W : 0Lux (IR LED on)	Colour : 0.16Lux (F1.6) B/W : 0.16Lux (F1.6)	Colour : 0.07Lux (F1.3) B/W : 0Lux (IR LED on)
Video Out	CVBS 1.0 Vp-p, Micro USB type B	CVBS 1.0Vp-p, Micro USB type B	Micro USB type B	CVBS 1.0 Vp-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	SSNRV			
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-8020R/8030R/8040R
5MP IR Vandal Dome Camera



XNF-9010RV/9010RVM
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	1/1.8" CMOS	1/2.3" 12MP CMOS	1/1.8" CMOS	1/2" CMOS	1/2.8" CMOS
Resolution / Max. Frame Rate	5MP / 30fps	3008 x 3008 / 30fps	2048 x 2048 / 30fps	2MP / 60fps	2MP / 60fps
Min. Illumination	Colour: 0.16Lux (F1.6) B/W: 0Lux (IR LED on)	Colour: 0.39 Lux (F2.2) B/W: 0Lux (IR LED on)	Colour: 0.1Lux (F1.6) B/W: 0Lux (IR LED on)	Colour: 0.006Lux (F1.2) B/W: 0.0006Lux (F1.2)	Colour: 0.01Lux (F1.2) B/W: 0.001Lux (F1.2)
Video Out	CVBS 1.0 Vp-p, Micro USB type B		CVBS: 1.0 Vp-p, Micro USB Type B		
Focal Length (Zoom Ratio)	3.7mm fixed (XNV-8020R) 4.6mm fixed (XNV-8030R) 7.0mm fixed (XNV-8040R)	1.08mm fixed focal	1.6mm fixed	-	-
Angular Field of View	H: 97.5° / V: 71.9° / D: 126.2° (XNV-8020R) H: 77.9° / V: 57.9° / D: 98.7° (XNV-8030R) H: 50.7° / V: 37.8° / D: 63.8° (XNV-8040R)	H: 187° / V: 187° / D: 187°	H: 192° / V: 192° / D: 192°	-	-
Pan / Tilt / Rotate Range	0° ~ 354° / 0° ~ 67° / 0° ~ 355°	-	-	-	-
IR Viewable Length	30m (98.43ft)	10m (32.8ft), Wise IR	15m (49.21ft)	-	-
Day & Night	Auto (ICR)		Auto (ICR)	Auto (ICR)	Auto (ICR)
Wide Dynamic Range	120dB	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)	Support (Built-in Gyro sensor)
Analytics	Intelligent analytics, Audio detection, Sound classification		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	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	Selectable (mic in/line in), Built-in mic / Line out
Video Compression	H.265 / H.264, MJPEG		H.265 / H.264, MJPEG		
WiseStream	WiseStream II		WiseStream II		
Streaming	Up to 10 Profiles		Up to 10 Profiles		
Edge Storage	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(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	-30°C ~ +55°C (-22°F ~ +131°F)	-40°C ~ +60°C (-40°F ~ +140°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, IK10	IP66, IK10, NEMA4X, EN50155 class T3 (XNF-9010RVM only)	IP66, IK10 (XNF-8010RV/8010RVM)	-	-
Power Consumption	PoE: Max 9W 12VDC: Max 8W	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 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)	Ø 146 x 54.8mm (Ø 5.75" x 2.16") 730g (1.61lb) (XNF-8010R) Ø 146 x 65.8mm (Ø 5.75" 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	Handover, Hallway View	Various mode support (Original, Double panorama, Single panorama, Quad view) M12 Connector (XNF-9010RVM)	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	-	Colour: 0.06Lux (F2.5) B/W: 0.06Lux (F2.5)	Colour: 0.45Lux (F2.0) B/W: 0.45Lux (F2.0)	Colour: 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, MJPEG	-	-	-
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-6080R
2MP IR Bullet Camera



XNO-L6080R
2MP IR Bullet Camera



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

Imaging Device	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS
Resolution / Max. Frame Rate	2MP / 60fps			
Min. Illumination	Colour: 0.03Lux (F1.6) B/W: 0Lux (IR LED on)	Colour: 0.015Lux (F1.4) B/W: 0Lux (IR LED on)	Colour: 0.03Lux (F1.6) B/W: 0Lux (IR LED on)	Colour: 0.055Lux (F2.0) (XNO-6010R) Colour: 0.015Lux (F1.4) (XNO-6020R) 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)	2.8 ~ 12mm (4.3x) motorized varifocal	3.2 ~ 10mm (3.1x) motorized varifocal	2.4mm fixed (XNO-6010R) 4mm fixed (XNO-6020R)
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: 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: 139° V: 73° D: 167° (XNO-6010R) H: 88.6° V: 47.5° D: 104.8° (XNO-6020R)
Pan / Tilt / Rotate Range	-			
IR Viewable Length	70m (229.66ft)	50m (164.04ft)	30m (98.42ft)	20m (65.62ft) (XNO-6010R) 30m (98.43ft) (XNO-6020R)
Day & Night	Auto (ICR)			
Wide Dynamic Range	150dB			
Digital Noise Reduction	SSNRV			
Digital Image Stabilization	Support			
Analytics	Intelligent analytics Audio detection Sound classification	Intelligent analytics Audio detection Sound classification	Intelligent analytics	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/T, SUNAPI, Wisenet open platform	ONVIF profile S/G, SUNAPI, Wisenet open platform	ONVIF profile S/G/T, 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)	-40°C ~ +55°C (-40°F ~ +131°F)	-30°C ~ +55°C (-22°F ~ +131°F) * Start up above -20°C
Certification	IP67, IP66, NEMA 4X, IK10	IP67, IP66, NEMA 4X, IK10	IP66, IK10	IP67, IP66, NEMA 4X, IK10
Power Consumption	PoE: Max 12.95W 12VDC: Max 12.5W 24VAC: Max 14.5W	PoE: Max 12.95W 12VDC: Max 12W 24VAC: Max 15W	PoE: Max. 11W	PoE: Max 9.7W 12VDC: Max 8.8W
Product Dimensions / Weight	Ø91 x 368.6mm (Ø3.58" x 14.51") 2.18kg (4.81lb)	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)	Ø70 x 301.5mm (Ø2.76" x 11.87") (XNO-6010R) Ø70 x 296mm (Ø2.76" x 11.65") (XNO-6020R) 1.22kg (2.69lb)
Additional Features	Handover, Hallway View			



XND-6080/6080V
2MP Dome Camera



XND-6080R
2MP IR Dome Camera



XND-L6080R
2MP IR Dome Camera

Imaging Device	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS
Resolution / Max. Frame Rate	2MP / 60fps		
Min. Illumination	Colour: 0.015Lux (F1.4) B/W: 0.0015Lux (F1.4)	Colour: 0.015Lux (F1.4) B/W: 0Lux (IR LED on)	Colour: 0.03Lux (F1.6) B/W: 0Lux (IR LED on)
Video Out	CVBS 1.0Vp-p, Micro USB type B		
Focal Length (Zoom Ratio)	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: 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	0° ~ 354° / 0° ~ 67° / 0° ~ 355°	0° ~ 354° / 0° ~ 67° / 0° ~ 355°	0° ~ 354° / 0° ~ 67° / 0° ~ 355°
IR Viewable Length	-		
Day & Night	Auto (ICR)		
Wide Dynamic Range	150dB	150dB	120dB
Digital Noise Reduction	SSNRV		
Digital Image Stabilization	Support		
Analytics	Intelligent analytics Audio detection Sound classification	Intelligent analytics Audio detection Sound classification	Intelligent analytics
Business Intelligence	-		
Alarm I/O	1 / 1	1 / 1	-
Audio I/O	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, 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	-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 6.5W 12VDC: Max 6W	PoE: Max 10W 12VDC: Max 9W	PoE: Max 8W
Product Dimensions / Weight	Ø140.8 x 113mm (Ø5.54" x 4.45") 610g (1.34lb) (XND-6080) 714g (1.57lb) (XND-6080V)	Ø140.8 x 113mm (Ø5.54" x 4.45") 624g (1.38lb) (XND-6080R) 724g (1.60lb) (XND-6080RV)	Ø140.8 x 113mm (Ø5.54" x 4.45") 580g (1.28lb) (XND-L6080R) 690g (1.52lb) (XND-L6080RV)
Additional Features	Handover, Hallway View		



XND-6020R
2MP IR Dome Camera



XND-6010
2MP Dome Camera

Imaging Device	1/2.8" CMOS	
Resolution / Max. Frame Rate	2MP / 60fps	
Min. Illumination	Colour : 0.015Lux (F1.4) B/W : 0Lux (IR LED on)	Colour : 0.055Lux (F2.0) B/W : 0.055Lux (F2.0)
Video Out	CVBS 1.0Vp-p, Micro USB type B	CVBS 1.0Vp-p, Micro USB type B
Focal Length (Zoom Ratio)	4mm fixed	2.4mm fixed
Angular Field of View	H: 88.6° / V: 47.5° / D: 104.8°	H: 139° / V: 73° / D: 167°
Pan / Tilt / Rotate Range	0° ~ 354° / 0° ~ 67° / 0° ~ 355°	0° ~ 354° / 0° ~ 75° / 0° ~ 355°
IR Viewable Length	30m (98.43ft)	-
Day & Night	Auto (ICR)	Auto (ICR)
Wide Dynamic Range	150dB	150dB
Digital Noise Reduction	SSNRV	
Digital Image Stabilization	Support	
Analytics	Intelligent analytics, Audio detection, Sound classification	
Business Intelligence	People counting, Queue management, Heatmap	People counting, Queue management, Heatmap
Alarm I/O	1 / 1	
Audio I/O	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
Application Programming Interface	ONVIF profile S/G, 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)
Certification	IK08	
Power Consumption	PoE : Max 9W 12VDC : Max 8W	PoE : Max 6.5W 12VDC : Max 6W
Product Dimensions / Weight	Ø 110 x 90mm (Ø4.33" x 3.54") 380g (0.84lb)	Ø 140.8 x 113mm (Ø5.54" x 4.45") 610g (1.34lb)
Additional Features	Handover, Hallway View	



XNV-6080
2MP Vandal Dome Camera



XNV-6080R
2MP IR Vandal Dome Camera



XNV-L6080
2MP Vandal Dome Camera

Imaging Device	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS
Resolution / Max. Frame Rate	2MP / 60fps		
Min. Illumination	Colour : 0.015Lux (F1.4) B/W : 0.015Lux (F1.4)	Colour : 0.015Lux (F1.4) B/W : 0Lux (IR LED on)	Colour : 0.03Lux (F1.6) B/W : 0.01Lux (F1.6)
Video Out	CVBS 1.0Vp-p, Micro USB type B		
Focal Length (Zoom Ratio)	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: 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	0° ~ 354° / 0° ~ 67° / 0° ~ 355°	0° ~ 354° / 0° ~ 67° / 0° ~ 355°	0° ~ 354° / 0° ~ 67° / 0° ~ 355°
IR Viewable Length	-	50m (164.04ft)	-
Day & Night	Auto (ICR)		
Wide Dynamic Range	150dB	150dB	120dB
Digital Noise Reduction	SSNRV		
Digital Image Stabilization	Support	Support	Support
Analytics	Intelligent analytics Audio detection, Sound classification	Intelligent analytics Audio detection, Sound classification	Intelligent analytics
Business Intelligence	-		
Alarm I/O	1 / 1	1 / 1	-
Audio I/O	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/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	-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, NEMA4X, IK10	IP67, IP66, NEMA4X, IK10	IP66, IK10
Power Consumption	PoE : Max 7.8W 12VDC : Max 7W 24VAC : Max 8.2W	PoE : Max 12.95W 12VDC : Max 11.5W 24VAC : Max 14W	PoE : Max 8W
Product Dimensions / Weight	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 118.5mm (Ø6.3" x 4.67") 940g (2.11lb)
Additional Features	Handover, Hallway View		



XNV-L6080R
2MP IR Vandal Dome 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	Colour: 0.03Lux (F1.6) B/W: 0Lux (IR LED on)	Colour: 0.015Lux (F1.4) B/W: 0Lux (IR LED on)	Colour: 0.04Lux (F2.0) B/W: 0.04Lux (F2.0)	Colour: 0.04Lux (F2.0) B/W: 0.04Lux (F2.0)
Video Out	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)	3.2~10mm (3.1x) motorized varifocal	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: 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°	0° ~ 354° / 0° ~ 67° / 0° ~ 355°	± 5° / ± 10° / ± 90°	± 5° / 0 ~ 67° / ± 90°
IR Viewable Length	30m (98.43ft)	30m (98.43ft)	-	-
Day & Night	Auto (ICR)	Auto (ICR)	Auto (Electrical)	Auto (Electrical)
Wide Dynamic Range	120dB	150dB	150dB	150dB
Digital Noise Reduction	SSNRV			
Digital Image Stabilization	Support	Support	Support (Built-in Gyro sensor)	Support (Built-in Gyro sensor)
Analytics	Intelligent analytics	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) / 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
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)	-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	IP67, IP66, IK10	IP67, IP6K9K, IK10, NEMA4X	IP66, IK10, NEMA4X
Power Consumption	PoE: Max 11W	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)	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	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



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



XNP-6400R
2MP 40x IR PTZ Camera



XNP-6400
2MP 40x PTZ Camera

Imaging Device	1/2.8" CMOS				
Resolution / Max. Frame Rate	2MP / 60fps	2MP / 60fps	2MP / 60fps	2MP / 60fps	2MP / 60fps
Min. Illumination	Colour: 0.055Lux (F2.0) B/W: 0.055Lux (F2.0)	Colour: 0.055Lux (F2.0) B/W: 0.055Lux (F2.0)	Colour: 0.05Lux (F1.6, 1/30sec) BW: 0Lux (IR LED On)	Colour: 0.05Lux (F1.6, 1/30sec) BW: 0Lux (IR LED On)	Colour: 0.05Lux (F1.6, 1/30sec) BW: 0.005Lux (F1.6, 1/30sec)
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	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: 112° / V: 62° / D: 130°	H: 139° / V: 73° / D: 167°	H: 65.66° (Wide) ~ 1.88° (Tele) V: 39.40° (Wide) ~ 1.09° (Tele)	H: 65.66° (Wide) ~ 1.88° (Tele) V: 39.40° (Wide) ~ 1.09° (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), Wise IR	200m (656.17ft), Wise IR	-
Day & Night	Auto (Electrical)	Auto (ICR)	Auto (ICR) / Colour / BW / Schedule	Auto (ICR) / Colour / BW / Schedule	Auto (ICR) / Colour / BW / Schedule
Wide Dynamic Range	150dB	150dB	Extreme WDR (150dB)	Extreme WDR (150dB)	Extreme WDR (150dB)
Digital Noise Reduction	SSNRV				
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 NW I/O Box)		
Business Intelligence	People counting, Queue management, Heatmap	People counting, Queue management, Heatmap	-		
Alarm I/O	-	1 / 1	Compatible with NW I/O Box (Optional: SPM-4210)		
Audio I/O	-	Selectable (mic in/line in) / Line out	Compatible with NW I/O Box (Optional: SPM-4210)		
Video Compression	H.265, H.264, MJPEG			H.265/H.264: Main/Baseline/High, MJPEG	
WiseStream	WiseStream II	WiseStream II	Manual (Sea area), WiseStream II		
Streaming	Up to 10 Profiles			Up to 10 profiles	
Edge Storage	micro SD/SDHC/SDXC	micro SD/SDHC/SDXC	Micro SD/SDHC/SDXC 2slots 1TB (512GBx2)	Micro SD/SDHC/SDXC 2slot 1TB	
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	-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, 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)	IP66, IK10, NEMA4X, NEMA-TS 2(2.2.8, 2.2.9)	
Power Consumption	PoE: Max 6.5W	PoE: Max 6W / 12V DC: Max 5.5W	Typical 20W, Max 42W		Typical 20W, Max 40W
Dimensions (WxHxD) / Weight	Ø 112.8 x 63.7mm (Ø 4.44" x 2.51") 420g (0.93lb)	Ø 120 x 97.5mm (Ø 4.72" x 3.84") 625g (1.38lb)	Ø 184.9 x 138.8mm (7.28 x 5.46") / 5400g (11.90lb)		Ø 158 x 293.3mm (6.22 x 11.55") / 3200g (7.05lb)
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		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			
Min. Illumination	Colour: 0.02Lux (F1.6) B/W: 0Lux (IR LED on)	Colour: 0.01Lux (F1.5, 1/30sec) B/W: 0Lux (IR LED)	Colour: 0.03 Lux (1/30sec, F1.6, 30IRE) B/W: 0.003 Lux (1/30sec, F1.6, 30IRE)	Colour: 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	
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)			
Wide Dynamic Range	150dB			
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	
Business Intelligence	-			
Alarm I/O	Input 4ea / Output 2ea	Input 4ea / Output 2ea	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, MJPEG			
WiseStream	Manual(Sea area), WiseStream II			
Streaming	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 2slot 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			
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	φ 236.9x407.7mm(9.33x16.05"), 7.1Kg(15.65 lb)	φ 236.9x407.7mm(9.33x16.05"), 7.1Kg(15.65 lb)	φ 168x161.5mm(6.61x6.36"), 1.9kg(4.19 lb)	φ 136x106mm(5.35x4.17"), 780g(1.72 lb)
Additional Features	Defog, Auto tracking			

Imaging Device	1/2.8" 2MP CMOS	
Resolution / Max. Frame Rate	2MP / 60fps	
Min. Illumination	Colour: 0.05Lux (1/30sec, F1.6) B/W: 0.005Lux (1/30sec, F1.6)	Colour: 0.05Lux (1/30sec, F1.6) B/W: 0.005Lux (1/30sec, F1.6)
Video Out	CVBS 1.0 Vp-p, Micro USB Type B	CVBS 1.0 Vp-p
Focal Length (Zoom Ratio)	4.44 ~ 142.6mm (Optical 32X) (digital 32x, total 1024x zoom)	4.44 ~ 142.6mm (Optical 32X) (digital 32x, total 1024x 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)
Pan / Tilt / Rotate Range	-	-
IR Viewable Length	-	-
Day & Night	Auto(ICR)	Auto(ICR)
Wide Dynamic Range	120dB	120dB
Digital Noise Reduction	SSNR V	
Digital Image Stabilization	Support(built-in gyro sensor)	
Analytics	Intelligent analytics, Audio detection, Sound classification Shock detection	Intelligent analytics, Audio detection Sound classification
Business Intelligence	-	
Alarm I/O	1 / 2	1 / 1
Audio I/O	Selectable (mic in/line in) / Line out	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	
Edge Storage	Micro SD/SDHC/SDXC 2 slot 512GB	Micro SD/SDHC/SDXC 1 slot 256GB
Application Programming Interface	ONVIF Profile S/G/T, 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 90% RH
Certification	-	
Power Consumption	PoE: Max 7.5W, Typical 4.5W 12VDC: Max 7.0W, Typical 4.0W	PoE: Max 7.5W, Typ 5.0W 12VDC: Max 5.7W, Typ 3.7W
Product Dimensions / Weight	96 x 76 x 143.5mm(3.78x2.99x5.65"), 578g(1.27 lb)	72 x 63.9 x 135.4mm(2.83x2.52x5.33"), 480g(1.06 lb)
Additional Features	Defog	



PNM-9031RV
15MP 192° IR Panoramic Camera



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



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



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" 5MP CMOS (x4)	1/1.8" 5MP CMOS x 4CH	1/2.8" CMOS x 4CH
Resolution / Max. Frame Rate	15MP / 20fps	8MP / 30fps	8MP / 60fps
Min. Illumination	Colour: 0.1Lux(F1.6, 1/30sec) BW: 0Lux(IR LED on)	Colour: 0.11lux(F1.92, 30IRE) BW: 0Lux(IR LED on)	Colour: 0.05lux(F1.6, 30IRE) BW: 0Lux(IR LED on)
Video Out	Micro USB Type B	-	-
Focal Length (Zoom Ratio)	4.3mm Fixed	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)	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° / -	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	120dB
Digital Noise Reduction		SSNRV	
Digital Image Stabilization	-	Support	Support
Analytics	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	-	-
Alarm I/O	2 / 1.	1 / 1	1 / 1
Audio I/O	Selectable (mic in/line in)	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
WiseStream	WiseStream II	WiseStream II	WiseStream II
Streaming	Up to 3 profiles	Up to 10 profiles	Up to 10 profiles
Edge Storage	Micro SD/SDHC/SDXC 2slots 512GB (256GBx2)	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/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° (-40° F~+131° F) * Startup should be above -30° C Less than 95% RH(Non-condensing)	-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, NEMA4X	IP66, IK 10, NEMA4X
Power Consumption	PoE+: Max 23.5W, Typical 18.0W 12VDC: Max 20.5W, Typical 16.0W	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	Ø315x145.9mm(12.40"x5.74") / 5.2kg(11.5lb)	Ø315x145.9mm(12.40"x5.74") / 5.2kg(11.5lb)
Additional Features	-	Motorized PTRZ	Motorized PTRZ

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	Colour: 0.04lux(F2.2, 1/30sec) BW: 0.004lux(F2.2, 1/30sec)	Colour: 0.04lux(F2.2) BW: 0.004lux(F2.2)	Colour: 0.16lux(F1.67, 1/30sec, 30IRE) BW: 0lux(IR LED on)	Colour: 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	SSNRV	SSNRV	WiseNR, SSNRV	WiseNR, SSNRV
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, IK 10, NEMA4X	IP66, IK 10, NEMA4X	IP66/IP67, NEMA4X, IK 10	IP66/IP67, NEMA4X, IK 10
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	Ø251 x 116.5mm / 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	-	-

Accessories for PNM-9000QB, PNM-C20000QB



PNM-C20000QB
2MP x 4CH AI Remote Head Camera



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

Resolution / Max. Frame Rate	30fps/25fps	2MP / 30fps
Video Out	"USB: Micro USB Type C for installation HDMI(1920x1080, Single/Quad view)"	HDMI(1920x1080, Quad view support)
Day & Night	Auto(Electrical)	Auto(electrical)
Wide Dynamic Range	120dB	extreme WDR(150dB)
Digital Noise Reduction	SSNRV, WiseNR II (Based on AI engine)	SSNRV
Digital Image Stabilization	Support	Support
Analytics	"Classified object type: Person/Face/ Vehicle(Type: car/bus/truck/motorcycle/ bicycle)/License plate Attributes: Person(Clothing top/bottom color), Vehicle(Type: car/bus/truck/ motorcycle/bicycle, Color) Support BestShot Analytics events based on AI engine - Object detection, Virtual line(Crossing/ Direction), Virtual area(Loitering/Intrusion/Enter/Exit/Appear/ Disappear) Analytics events - Motion detection, Defocus detection, Tampering, Shock detection, Audio detection"	Defocus detection, Directional detection, Motion detection, Enter/Exit, Tampering, Virtual line
Business Intelligence	People/Vehicle counting	-
Alarm I/O	4 configurable I/O ports	1 / 1
Audio I/O	"Unicast(20 users) / Multicast Multiple streaming(Up to 4 profiles per channel)"	Selectable(mic in/line in) / Line out
Video Compression	"H.265/H.264: Main/Baseline/High MJPEG"	H.265, H.264, MJPEG
Streaming	Unicast(20 users) / Multicast	Up to 10 profiles
Edge Storage	Micro SD/SDHC/SDXC 2slot 2TB(1TBx2)	Micro SD/SDHC/SDXC
Application Programming Interface	"ONVIF Profile S/G/T/M SUNAPI(HTTP API) Hanwha Vision Open Platform"	ONVIF Profile S/G/T, SUNAPI(HTTP API) Hanwha Vision Open Platform
Operating Temperature / Humidity	-10° C~+45° C(14° F~+113° F) / 0~95% RH(Non-condensing)	-10° C~+45° C(-40° F~+113° F) / Less than 95% RH(Non condensing)
Power Consumption	"PoE+: Max. 25.5W, Typical 23.8W 12VDC: Max 23.1W, Typical 21.5W"	PoE: Max 22W, Typical 16.70W DC: Max 19W, Typical: 14W
Product Dimensions / Weight	200(W)x37(H)x146(D)mm(7.87x1.46x5.75"), 1015g(2.24lb)	W 200 x H 37 x D 146mm (7.87" x 1.46" x 5.75") 715g (1.58lb)
Additional Features	-	Optional pinhole / fixed lens



SLA-T4680A/T4680VA
2MP lens



SLA-T2480A/T2480VA
2MP lens



SLA-T1080FA
2MP lens

Imaging Device	1/2.8" 2MP CMOS	1/2.8" 2MP CMOS	1/2.8" 2MP CMOS
Min. Illumination	Colour: 0.06Lux(F2.5)	Colour: 0.045Lux(F2.0)	Colour: 0.03Lux(F1.6)
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°
Product Dimensions / Weight	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



SLA-T2480WA
2MP Lens Module



SLA-T2480WDA
2MP Waterproof
Dome Lens Module



SLA-T4680DA / T4680DSA
Doorjam camera - also
compatible with XNB-6002

Imaging Device	1/2.8" CMOS	1/2.8" CMOS	1/2.8" 2M CMOS
Min. Illumination	Color: 0.045Lux(F2.0, 1/30sec, 30IRE) BW: 0.045Lux(F2.0, 1/30sec, 30IRE) * with PNM-9000QB, XNB-6002	Color: 0.045Lux(F2.0, 1/30sec, 30IRE) BW: 0.045Lux(F2.0, 1/30sec, 30IRE) * with PNM-9000QB, XNB-6002	Color: 0.06Lux(F2.5) BW: 0.06Lux(F2.5) * with PNM-9000QB, XNB-6002, PNM-C16000QB
Focal Length (Zoom Ratio)	2.4mm fixed focal	2.4mm fixed focal	4.6mm fixed focal
Angular Field of View	H: 138° / V: 73° / D: 165°	H: 138° / V: 73° / D: 165°	H: 73° / V: 39° / D: 85°
Product Dimensions / Weight	" Ø35x63.2mm(Ø 1.38x2.49"), 101g(0.22lb) Cable: 8m(26.2ft)"	" Ø 110.0x77.0mm(Ø 3.54x2.36"), 450g(0.99lb) Cable: 8m(26.2ft)"	Housing: 42.9(W)x33.0(H)x 170.0(D)mm(1.69" x 1.30" x 6.69"), 70g(0.15lb), Lens: 30(W)x27.9(H) x45(D)mm(1.18" x 1.10" x 1.77"), 41g(0.09lb), Cable: 8m(26.2ft)"



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	Colour : 0.15Lux (F1.6) B/W : 0Lux (IR LED on)	Colour : 0.15Lux (F1.6) B/W : 0Lux (IR LED on)	Colour : 0.15Lux (F2.0) B/W : 0Lux (IR LED on)	Colour : 0.15Lux (F1.6) B/W : 0Lux (IR LED on)	Colour : 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	Intelligent analytics	Intelligent analytics	Intelligent analytics	Intelligent analytics	Intelligent analytics
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 ~ +50°C (+14°F ~ +122°F)	-10°C ~ +50°C (+14°F ~ +122°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
Min. Illumination	Colour : 0.15Lux (F2.0) B/W : 0Lux (IR LED on)	Colour : 0.15Lux (F1.6)
Video Out	CVBS 1.0 Vp-p	Micro HDMI
Focal Length (Zoom Ratio)	2.8mm fixed	4mm fixed
Angular Field of View	H: 104.7° / V: 76.5° / D: 136°	H: 80.1° / V: 58° / D: 105.8°
Pan / Tilt / Rotate Range	0° ~ 350° / 0° ~ 67° / 0° ~ 355°	0° ~ 350° / 0° ~ 69° / 0° ~ 355°
IR Viewable Length	20m (65.62ft)	-
Day & Night	Auto (ICR)	Auto (Electrical)
Wide Dynamic Range	120dB	
Digital Noise Reduction	SSNR	
Digital Image Stabilization	-	
Analytics	Intelligent analytics	Intelligent analytics
Business Intelligence	-	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
Application Programming Interface	ONVIF profile S/G/T, SUNAPI, Hanuwa Vision Open Platform	ONVIF profile S/G/T, SUNAPI, Hanuwa Vision Open Platform
Operating Temperature / Humidity	-10°C ~ +50°C (+14°F ~ +122°F)	-10°C ~ +40°C (+14°F ~ +104°F)
Certification	-	IP42, IK08
Power Consumption	PoE : Max 7.5W, typical 5.8W	PoE : Max 5W, typical 4W
Product Dimensions / Weight	Ø110.6 x 89.5mm (Ø4.35" x 3.52") 360g (0.794lb)	Ø99 x 56mm (Ø3.9" x 2.2") 165g (0.364lb)
Additional Features	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	Colour : 0.15Lux (F1.6) B/W : 0Lux (IR LED on)	Colour : 0.15Lux (F1.6) B/W : 0Lux (IR LED on)	Colour : 0.15Lux (F2.0) B/W : 0Lux (IR LED on)	Colour : 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°	-
Pan / Tilt / Rotate Range	0° ~ 350° / 0° ~ 67° / 0° ~ 355°	0° ~ 350° / 0° ~ 67° / 0° ~ 355°	0° ~ 350° / 0° ~ 67° / 0° ~ 355°	-
IR Viewable Length	30m (98.42ft)	25m (82.02ft)	20m (65.62ft)	-
Day & Night	Auto (ICR)			
Wide Dynamic Range	120dB			
Digital Noise Reduction	SSNR			
Digital Image Stabilization	-			
Analytics	Intelligent analytics			
Business Intelligence	-			
Alarm I/O	1 / 1	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, Hanuwa 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	-
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	Ø137 x 106.1mm (Ø5.39" x 4.18") 700g (1.543lb)	Ø120.3 x 91.7mm (Ø4.74" x 3.61") 510g (1.124lb)	Ø120.3 x 91.7mm (Ø4.74" 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



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



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



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

Imaging Device	1/3" CMOS			
Resolution / Max. Frame Rate	4MP / 30fps			
Min. Illumination	Colour: 0.1Lux (F1.6, 1/30sec) B/W: 0Lux (IR LED On)	Colour: 0.15Lux (F2.0, 1/30sec) B/W: 0Lux (IR LED On)	Colour: 0.15Lux (F1.6, 1/30sec) B/W: 0Lux (IR LED On)	Colour: 0.15Lux (F2.0, 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	CVBS: 1.0 Vp-p
Focal Length (Zoom Ratio)	3.2~10mm (3.1x) motorized varifocal	6mm fixed focal	4mm fixed focal	2.8mm 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°	H: 107.5° / V: 59.7° / D: 122°
Pan / Tilt / Rotate Range	-	-	-	-
IR Viewable Length	30m (98.42ft)	30m (98.42ft)	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)	Intelligent 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)
Business Intelligence	-			
Alarm I/O	1/1	1/1	1/1	1/1
Audio I/O	Line in / -	Selectable (mic in/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	H.265, H.264, MJPEG
WiseStream	WiseStream II			
Streaming	Up to 3 Profiles			
Edge Storage	micro SD/SDHC/SDXC 1 slot 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)	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	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	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 (1.984lb)	Ø70.0 x 246.0mm (Ø2.76" x 9.69"), 700g (1.543lb)	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
Additional Features	Defocus detection, Directional detection, Motion detection, Enter/Exit, Tampering, Virtual line			

Imaging Device	1/2.8" CMOS		
Resolution / Max. Frame Rate	2MP / 30fps		
Min. Illumination	Colour: 0.03Lux (F1.6) B/W: 0Lux (IR LED on)		
Video Out	CVBS 1.0 Vp-p		
Focal Length (Zoom Ratio)	3.2~10mm (3.1x) motorized 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: 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)	25m (82.02ft)	20m (65.62ft)
Day & Night	Auto (ICR)		
Wide Dynamic Range	120dB		
Digital Noise Reduction	SSNR		
Digital Image Stabilization	-		
Analytics	Intelligent analytics		
Business Intelligence	-		
Alarm I/O	1 / 1		
Audio I/O	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		
Application Programming Interface	ONVIF profile S/G/T, SUNAPI, Wisenet 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 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") 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	Colour: 0.1Lux (F1.6, 1/30sec) B/W: 0Lux (IR LED On)	Colour: 0.15Lux (F2.0, 1/30sec) B/W: 0Lux (IR LED On)	Colour: 0.15Lux (F2.0, 1/30sec) B/W: 0Lux (IR LED On)	Colour: 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	2.8mm 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°	H: 107.5° / V: 59.7° / D: 122°
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	Intelligent analytics			
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	micro SD/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	PoE: Max 7.9W, typical 6.1W 12VDC: Max 7.1W, typical 5.1W
Product Dimensions / Weight	Ø 119.8 x 98.8mm (Ø 4.72" x 3.89") 320g (0.705lb)	Ø 110.0 x 86.0mm (Ø 4.33" x 3.39") 255g (0.562lb)	Ø 110 x 86mm (Ø 4.33" x 3.39") 255g (0.562lb)	Ø 110 x 86mm (Ø 4.33" x 3.39") 255g (0.562lb)
Additional Features	Defocus detection, Directional detection, Motion detection, Enter/Exit, Tampering, Virtual line			



QND-6082R/6082R1
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	Colour: 0.03Lux (F1.6) B/W: 0Lux (IR LED on)	Colour: 0.03Lux (F1.6) B/W: 0Lux (IR LED on)	Colour: 0.03Lux (F2.0) B/W: 0Lux (IR LED on)
Video Out	CVBS 1.0 Vp-p		
Focal Length (Zoom Ratio)	3.2~10mm (3.1x) motorized 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: 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	Intelligent analytics		
Business Intelligence	-		
Alarm I/O	1 / 1		
Audio I/O	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 7.4W, 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 (Ø 4.72" x 3.89") 320g (0.705lb)	Ø 110 x 86mm (Ø 4.33" x 3.39") 255g (0.562lb)	Ø 110 x 86mm (Ø 4.33" 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	Colour: 0.03Lux (F1.6)	Colour: 0.03Lux (F2.0)	Colour: 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	Intelligent analytics	Intelligent analytics	Intelligent analytics
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, Hanuwa Vision Open Platform	ONVIF profile S/G/T, SUNAPI, Hanuwa 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	Defocus detection, Directional detection, Motion detection, Enter/Exit, Tampering, Virtual line

**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

Imaging Device	1/3" CMOS	1/3" CMOS	1/3" CMOS	1/2.8" CMOS
Resolution / Max. Frame Rate	4MP / 30fps	4MP / 30fps	4MP / 30fps	2MP / 30fps
Min. Illumination	Colour: 0.15Lux (F2.0, 1/30sec) B/W: 0Lux (IR LED On)	Colour: 0.15Lux (F1.6, 1/30sec) B/W: 0Lux (IR LED On)	Colour: 0.15Lux (F2.0, 1/30sec) B/W: 0Lux (IR LED On)	Colour: 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
Angular Field of View	H: 49.0° / V: 27.6° / D: 55.6°	H: 78.2° / V: 41.2° / D: 92°	H: 78.2° / V: 41.2° / D: 92°	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)
Day & Night	Auto (ICR)			
Wide Dynamic Range	120dB			
Digital Noise Reduction	SSNR			
Digital Image Stabilization	-			
Analytics	Intelligent analytics			
Business Intelligence	-			
Alarm I/O	1 / 1			
Audio I/O	Selectable (mic in/line in) / -			
Video Compression	H.265 / H.264, MJPEG			
WiseStream	WiseStream III			
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
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, Hanuwa 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 should be done at -20°C (-4°F)
Certification	IP66, IK10	IP66, IK10	-	IP66, IK10
Power Consumption	PoE: Max 10.7W, typical 8.1W 12VDC: Max 9.1W, typical 6.5W			
Product Dimensions / Weight	Ø120.3 x 91.7mm (Ø4.74" x 3.61"), 510g (1.124lb)	Ø120.3 x 91.7mm (Ø4.74" x 3.61") 510g (1.124lb)	Ø120.3 x 91.7mm (Ø4.74" x 3.61") 510g (1.124lb)	Ø137 x 106.1mm (Ø5.39" x 4.18") 710g (1.565lb)
Additional Features	Defocus detection, Directional detection, Motion detection, Enter/Exit, Tampering, Virtual line			Hallway View



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



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



QNV-6024RM
2MP IR Flat Camera



QNP-6320
2MP 32x Indoor PTZ Camera



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			
Resolution / Max. Frame Rate	2MP / 30fps			
Min. Illumination	Colour: 0.03Lux (F1.6) B/W: 0Lux (IR LED on)	Colour: 0.03Lux (F2.0) B/W: 0Lux (IR LED on)	Colour: 0.03Lux (F2.0) B/W: 0Lux (IR LED on)	Colour: 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	Intelligent analytics	Intelligent analytics	Intelligent analytics	Analytics events - Directional detection, Motion detection, Enter/Exit, Tampering, Virtual line, Audio detection
Business Intelligence	-	-	-	-
Alarm I/O	1 / 1	1 / 1	-	Input 4ea / Output 2ea
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		Manual (5ea area), 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 1slot 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 (3.75lb)
Additional Features	Hallway View	Hallway View	M12 connector, Hallway View	Directional detection, Motion detection, Enter/Exit, Tampering, Virtual line, Audio detection

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	Colour: 0.05Lux (F1.6, 1/30sec, 30IRE) BW: 0.005Lux (F1.6, 1/30sec, 30IRE), 0Lux (IR LED On)	Colour: 0.05Lux (F1.6, 1/30sec, 30IRE) BW: 0.005Lux (F1.6, 1/30sec, 30IRE)	Colour: 0.05Lux (F1.6, 1/30sec, 30IRE) BW: 0.005Lux (F1.6, 1/30sec, 30IRE)	Colour: 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 NW I/O Box (Optional: SPM-4210)		Input 4ea / Output 2ea	Compatible with NW I/O Box (Optional: SPM-4210)
Audio I/O	Compatible with NW I/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 NW I/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 (5ea 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	Directional detection, Motion detection, Enter/Exit, Tampering, Virtual line * Audio detection (with NW I/O Box)			



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

TNO-3010T/3020T/3030T*/3040T/3050T
QVGA Thermal Bullet Camera (*Low framerate available)

TNO-4030TR/4040TR
VGA Radiometric Thermal Camera (Low framerate available)

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	Colour: 0.05Lux(F1.6, 1/30sec, 30IRE) BW: 0.005Lux(F1.6, 1/30sec, 30IRE)	Colour: 0.05Lux(F1.6, 1/30sec, 30IRE) BW: 0.005Lux(F1.6, 1/30sec, 30IRE)	Colour: 0.01Lux (F1.2)	Colour: 0.39 Lux (F2.2, 1/30sec)	Colour: 0.2 Lux (F2.5)
Video Out	-	-	CVBS 1.0 Vp-p	CVBS 1.0 Vp-p	CVBS 1.0 Vp-p
Focal Length (Zoom Ratio)	4.44~11.1mm(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	SSNRV	SSNRV	SSNRV	SSNRV	SSNRV
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 (5ea 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 49 mm (Ø 3.9" x 1.93") 370g(0.82lb)	Ø99 x 49 mm (Ø 3.9" x 1.93") 320g(0.705lb)
Additional Features	Directional detection, Motion detection, Enter/Exit, Tampering, Virtual line * Audio detection (with NW I/O Box)	Directional detection, Motion detection, Enter/Exit, Tampering, Virtual line, SUS316L * Audio detection (with NW I/O Box)	Hallway View	Panorama view, Business Intelligence	Panorama view, Business Intelligence

Imaging Device	Uncooled micro bolometer (Spectral range: 8~14µm)	Uncooled micro bolometer (Spectral range: 8~14µm)
Resolution	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	<60mK	<50mK
Pixel Pitch	12µm	17µm
Focal Length	2.7mm / 4.7mm / 13.7mm / 19mm / 35mm	13mm / 19mm fixed focal
Angular Field of View	H: 92.0° / V: 65.5° / D: 125.7° (iFoV: 1.308 mRad) 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) H: 6.3° / V: 4.7° / D: 7.8° (iFoV: 0.34 mRad)	H: 48.6° / V: 36.4° / D: 61.6° (iFoV: 1.308 mRad) H: 32° / V: 24.3° / D: 39.2° (iFoV: 0.895 mRad)
Min. Object Distance	0.3m(0.98ft) / 1m(3.28ft) / 8m(26.25ft) / 15m(49.21ft) / 51m	5m(16.40ft) (iFoV: 1.308 mRad) / 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
Temperature Detect Range	-	-20°C ~ 130°C (-4°F ~ 266°F)
Temperature Accuracy	-	± 5°C (≤ 100°C), ± 20% (> 100°C)
Temperature Detection	-	6 Quadrangle ROI zones, whole FoV area
Additional	-	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) Wisenet 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. 8.7W, typical 7.5W 12VDC: Max. 7.8W, typical 6.7W 24VAC: Max. 9.2W, typical 8.0W	PoE: Max. 10W, typical 8.6W 12VDC: Max. 9W, typical 7.5W 24VAC: Max. 10.5W, typical 8.9W
Dimensions (WxHxD) / Weight	Φ 147.51x375.3mm(5.80x14.77") / 2512g(5.54lb) Φ 147.51x375.3mm(58.07x14.76") / 2512g(5.538lb) Φ 147.51x375.3mm(58.07x14.76") / 2512g(5.538lb) Φ 147.51x375.3mm(5.81x14.78") / 2495g(5.50lb) Φ 147.51x401.3mm(5.81x15.79") / 2742g(6.05lb)	Φ 101.97x401.8mm(4.01x15.82") / 3,124g(6.89lb) Φ 101.97x401.8mm(4.01x15.82") / 3,175g(7.01lb)



TNO-4030T/4040T/4050T
VGA Thermal Bullet Camera (Low framerate available)



TNO-4041T/4051T
VGA Thermal Bullet Camera



TNO-4041TR
VGA NW Thermal Radiometric Camera

	TNO-4030T/4040T/4050T VGA Thermal Bullet Camera (Low framerate available)	TNO-4041T/4051T VGA Thermal Bullet Camera	TNO-4041TR VGA NW Thermal Radiometric Camera
Imaging Device	Uncooled micro bolometer (Spectral range: 8~14μm)	Uncooled microbolometer	Uncooled micro bolometer
Resolution	640x480(original), 640x360, 320x240	640 x 480	640 x 480
Max. Frame Rate	H.265/H.264: Max. 30fps/25fps(60Hz/50Hz) MJPEG: Max. 30fps/25fps(60Hz/50Hz)	30fps	30fps
NETD	<50mK	<50mK	<50mK
Pixel Pitch	17μm	17μm	17μm
Focal Length	13mm / 19mm / 35mm fixed focal	19mm / 25mm fixed focal	19mm fixed focal
Angular Field of View	H: 48.6° / V: 36.4° / D: 61.6° (FoV: 1.308 mRad) H: 32° / V: 24.3° / D: 39.2° (FoV: 0.895 mRad) H: 17.2° / V: 13° / D: 22° (FoV: 0.47 mRad)	H: 32° / V: 24.3° / D: 39.2° H: 17.2° / V: 13° / D: 22°	H: 32° / V: 24.3° / D: 39.2°
Min. Object Distance	5m(16.40ft) / 11m(36.09ft) / 36m(118.11ft)	11m (36.09ft) / 36m (118.11ft)	11m (36.09ft)
Video Output	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	CVBS: 1.0 Vp-p / 75Ω composite, 720x480(N), 720x576(P) 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	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	-	-	-20 °C~-130 °C (-4 °F~-266 °F)
Temperature Accuracy	-	-	±5 °C(≤100 °C), ±20%(>100 °C)
Temperature Detection	-	-	3ea rectangular
WiseStream	Manual(Sea area), WiseStream II	WiseStreamII	Manual(Sea area), WiseStream II
Streaming	Unicast(20 users) / Multicast Multiple streaming(Up to 10 profiles)	-	-
Edge Storage	Micro SD/SDHC/SDXC 1slot 256GB	SD/SDHC/SDXC (up to 256GB) – Motion images recorded in the SD/SDHC/SDXC memory card can be downloaded, NAS (Network Attached Storage), Local PC for instant recording	Micro SD/SDHC/SDXC 1slot 256GB
Application Programming Interface	ONVIF Profile S/G/T SUNAPI(HTTP API) Hanuwa Vision Open Platform	ONVIF Profile S/G, SUNAPI (HTTP API), Wisenet Open Platform	ONVIF Profile S/G/T SUNAPI (HTTP API) Wisenet 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	-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	Max. 10.5W (24V AC), Max. 9W (12V DC), Max. 10W (PoE) Typical 8.9W (24V AC), Typical 7.5W (12V DC), Typical 8.6W (PoE)	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") / 3124g(6.89lb) Φ101.97x401.8mm(4.01x15.82") / 3175g(7.01lb) Φ101.97x401.8mm(4.01x15.82") / 3175g(7.01lb)	Φ101.97 x 309mm (Φ4.01" x 12.17") / 2,452g (5.41 lb)	Φ101.97x309mm(4.01x12.17") / 2,452g (5.41lb)



TNV-7011RC
3MP Corner Mount Camera



TNV-8011C
5MP Corner Mount Camera



TNO-6322ER
2MP Explosion-proof IR Camera



TID-600R
2MP Intercom

	TNV-7011RC 3MP Corner Mount Camera	TNV-8011C 5MP Corner Mount Camera	TNO-6322ER 2MP Explosion-proof IR Camera
Imaging Device	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS
Resolution / Max. Frame Rate	3MP / 30fps	5MP / 30fps	2MP / 60fps
Min. Illumination	Colour: 0.3 lux (F2.0, 1/30sec) B/W: 0 lux (F2.0, 1/30sec)	Colour: 0.1 lux (F2.3, 1/30sec) B/W: 0.02 lux (F2.3, 1/30sec)	Colour: 0.05Lux(F1.6, 1/30sec) BW: 0.005Lux(F1.6, 1/30sec), 0Lux(IR LED on)
Video Out	CVBS: 1.0 Vp-p	CVBS: 1.0 Vp-p, Micro USB Type B	-
Focal Length (Zoom Ratio)	2.8mm fixed focal	2.3mm fixed focal	4.44~142.6mm(32x) zoom
Angular Field of View	H: 102° / V: 75° / D: 129°	H: 131° / V: 93.4° / D: 174°	H: 61.8°(Wide)~2.19°(Tele) / V: 36.2°(Wide)~1.24°(Tele)
Pan / Tilt / Rotate Range	- / 30°~60° / -	-	-
IR Viewable Length	10m(32.8ft)	-	70m (229.66ft)
Day & Night	Auto(ICR)	Auto(ICR)	Auto(ICR)
Wide Dynamic Range	120dB	120dB	120dB
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	Defocus detection, Directional detection, Fog detection, Face detection, Motion detection, Appear/Disappear, Enter/Exit, Loitering, Tampering, Virtual line, Audio detection"
Business Intelligence	-	-	-
Alarm I/O	1 / 1	1 / 1	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) Supply voltage: 2.5VDC(4mA), Input impedance: 2K Ohm Line out, Max.output level: 1Vrms
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(Sea 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	-
Application Programming Interface	SUNAPI(HTTP API) Hanuwa Vision Open Platform	SUNAPI(HTTP API) Hanuwa Vision Open Platform	ONVIF Profile S/G/T, SUNAPI(HTTP API) Hanuwa 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	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
Certification	IP66, IP6K9K, IK10+	IP66, IP6K9K, IK10	IECEX, ATEX, KCs, KC, CE IP67, IK10, PESO certified
Power Consumption	PoE: Max 12W, typical 10.1W, 12VDC: Max. 11W, typical 8.6W	PoE: Max 6.49W, typical 4.6W,	24VAC: Max. 45W
Product Dimensions / Weight	Ø295.5x113.5mm(11.6x4.47") / 2.1kg (4.63lb)	170(W)x165(H)x78.8(D)mm(6.69x6.49x3.10") / 830g(1.83lb)	175(W)x242.5(H)x320(D)mm(6.89x9.59x12.59"), 11.5kg(25.35lb)
Additional Features	Ø295.5x113.5mm(11.6x4.47") / 2.1kg (4.63lb)	170(W)x165(H)x78.8(D)mm(6.69x6.49x3.10") / 830g(1.83lb)	Stainless(SUS316L) housing, Built in wiper

Imaging Device	1/2.8" CMOS
Resolution / Max. Frame Rate	1920x1080 / 60fps
Focal Length (Zoom Ratio)	1.6mm fixed focal
Angular Field of View	H: 180 / V: 114 / D: 180
Wide Dynamic Range	150dB
Analytics	Directional detection, Motion detection, Appear/Disappear, Enter/Exit, Loitering, Tampering, Virtual line, Audio detection, Shock detection, Sound classification
Audio Streaming	Two-way/one-way selectable, Full duplex, Echo cancellation and noise reduction
Audio-In	Built-in mic
Certification	IP65, IK08, NEMA4X, Safety(UL), EMC(FCC, CE)

FEATURED PRODUCT



TNS-9040IBC
Barcode Reader Camera

Dual-sensor for barcode reading and video monitoring



TNS-9050IBC
Barcode Reader Camera

Dual-sensor for barcode reading and video monitoring



TNS-9060IBC
Barcode Reader Camera

Dual-sensor for barcode reading and video monitoring

Imaging Device	Global Shutter Mono 1" CMOS: Global Shutter color 1" CMOS		
Resolution / Max Frame Rate	Mono: 4096x2160 / 20fps; Color: 4096x2160 / 20fps		
Max. Aperture Ratio	"Mono: F8.0 Color: F8.0"	"Mono: F2.8~F16.0 Color: F2.8~F16.0"	"Mono: F8.0 Color: F8.0"
Focal Length (Zoom Ratio)	16mm	25mm	35mm
Angular Field of View	"Mono: H47.5° / V26.9° / D53.2° Color: H47.5° / V26.9° / D53.2° "	"Mono: H30.4° / V16.6° / D34.2° Color: H30.4° / V16.6° / D34.2° "	"Mono: H21.5° / V11.5° / D24.2° Color: H21.5° / V11.5° / D24.2° "
Min. Object Distance	0.15m (0.49ft)	0.15m (0.49ft)	0.2m (0.66ft)
Light Type	White LED 32ea	White LED 32ea	White LED 48ea
Day & Night	IP67, IP66, IK10(Exclude Window), NAME 4X		
Digital Noise Reduction	SSNRV		
Analytics	"Barcode recognition -Barcode type: 1D Code, Code 128 / CODE39 / CODE93 / Codabar / ITF(Interleaved 2 of 5) / UPC / EAN"		
Video Compression	H.265/H.264: Main/High, MJPEG		
Streaming	"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"		
Secure Storage	HTPM (Hanwha Trusted Platform Module)		
"Application Programming Interface"	"SUNAPI(HTTP API) Wisenet Open Platform"		
"Operating Temperature / Humidity"	"-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"		
Power Consumption	"Max 28.6W, Typical 13.7W * Max: LED On Typical: LED Off"	"Max 28.6W, Typical 13.7W * Max: LED On Typical: LED Off"	"Max 35.4W, Typical 13.7W * Max: LED On Typical: LED Off"
"Product Dimensions / Weight"	"Camera: 218x104.1x127.1mm, 1897g LED: 255.8x73.8x49.8mm, 996g Total: 255.8x181x127.1mm, 3438g(with install bracket)"		



Barcode Reader Camera

Your single-device logistics solution

TNS-9040IBC | TNS-9050IBC | TNS-9060IBC

- Real-time barcode recognition and colour video in a single device
- Improves inventory management, traceability and incident investigation
- 4K resolution and global shutter for clear, distortion-free images
- Leverages AI to accurately read and track multiple barcodes
- 16, 25 or 35mm lens, suitable for all logistics environments
- Built for industrials - IP66/67 and IK10 ratings, M12 connections



NETWORK

ANALOG

PERIPHERAL

INSTALLATION SOLUTION

High performance NVR

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

Hanwha Vision's NVR allows recording and streaming of videos in high resolution and enhances efficiency of event and channel management. It also offers AI-based object detection and classification in addition to smart search.



Monitor sub channels without registering them all

With the Virtual Channel View, user can register only one main channel for recording, and monitor sub channels without registering them to the NVR.

Registered channel

Recording and monitoring



Unregistered channel

Monitoring sub channels without recording



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

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



XRN-6420RB2
64CH NVR



XRN-6420B2
64CH NVR



XRN-3220RB2
32CH NVR

OS	Linux		
Supported Compression	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 Degrade/ Rebuild : Up to 520 Mbps"	"Distributed mode : Up to 520 Mbps Normal mode : Up to 300 Mbps"	"Distributed mode : Up to 520 Mbps Normal mode : Up to 300 Mbps {RAID mode} Normal : Up to 520 Mbps Degrade/ Rebuild : Up to 520 Mbps"
Max # of Cameras	Max. 64CH		Max. 32CH
Network Camera Resolution	32MP ~ CIF		
HDD Slot	SATA 8ea(Max. 80TB, Non-RAID mode), Hot swap	SATA 8ea(Max. 80TB)	SATA 8ea(Max. 80TB, Non-RAID mode), Hot swap
Record Mode	Normal, DualStream, 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 HDDs x 1 Array)	-	RAID-5/6(Array Size : 8 HDDs x 1 Array)
Hot Swap	Support		
Network Viewer Software	SSM, Webviewer, 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."		Dynamic layout, Virtual channel view Clone Mode : Up to 64 Division Expand Mode : HDMI1 up to 32 Div. HDMI2 up to 16 Div.
Network Camera Protocol	Wisenet, ONVIF		
Power Input	100 ~ 240 VAC ± 10%; 50/60 Hz, 1.7A	100 ~ 240 VAC ± 10%; 50/60 Hz, 1.5A	100 ~ 240 VAC ± 10%; 50/60 Hz, 1.7A
Power Consumption	Max. 162W (553BTU with HDD 8ea)	Max. 143W (488BTU with HDD 8ea)	Max. 162W (553BTU with HDD 8ea)
PoE Budget	-	-	-
Additional Features	-	-	-

NETWORK

ANALOG

PERIPHERAL

INSTALLATION SOLUTION



XRN-3220B2
32CH NVR



XRN-6420DB4/B4
64CH NVR



XRN-6410DB4/6410B4
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 520 Mbps Normal mode : Up to 300 Mbps"	Distributed mode : Up to 520 Mbps Normal mode : Up to 300 Mbps {RAID mode} Normal : Up to 520 Mbps Degrade/ Rebuild : Up to 520 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
Max of Cameras	Max. 32CH	Max. 64CH	Max. 64CH	Max. 64CH
Network Camera Resolution	32MP ~ CIF	32MP ~ CIF	32MP ~ CIF	32MP ~ CIF
HDD Slot	SATA 8ea(Max. 80TB)	SATA 16ea(Max. 160TB, Non-RAID mode), Hot swap	SATA 16ea(Max. 160TB, Non-RAID mode), Hot swap	SATA 8ea(Max. 80TB)
Record Mode	Normal, Dual Stream, Schedule (Continuous/Event), Event (Pre/Post), Bookmark	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	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		
External Storage	iSCSI	iSCSI		
RAID	-	RAID-5/6	RAID-5/6	-
Hot Swap	Support	Support	Support	-
Network Viewer Software	SSM, Webviewer, Wisenet Viewer, Wisenet mobile Support CGI(SUNAPI) for integration to 3rd party VMS	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 32 Div. HDMI2 up to 16 Div.	- 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, 1.5A	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, 1.5A (Single SMPS)
Power Consumption	Max. 143W (488BTU with HDD 8ea)	Max. 265W (904.2 BTU with HDD 16ea)	Max. 265W (904.2 BTU with HDD 16ea)	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 Hanwha Vision 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 Hanwha Vision 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 Hanwha Vision AI cameras PTZ camera configuration and control Fisheye dewarping



XRN-3220B4
32CH NVR



XRN-3210B4
32CH NVR



XRN-3210RB2
32CH NVR



XRN-3210B2
32CH 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 520 Mbps Normal mode : Up to 300 Mbps {RAID mode} Normal : Up to 520 Mbps Degrade/ Rebuild : Up to 520 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
Max of Cameras	Max. 32CH	Max. 32CH	Max. 32CH	Max. 32CH
Network Camera Resolution	32MP ~ CIF	32MP ~ CIF	32MP ~ CIF	32MP ~ CIF
HDD Slot	SATA 16ea(Max. 160TB, Non-RAID mode)	SATA 16ea(Max. 160TB, Non-RAID mode)	SATA 8ea(Max. 80TB, Non-RAID mode)	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	Alarm Input, Video Loss, Camera Event (Sensor, MD, Video Analytics, Defocus, Audio), Dynamic Event, User Event	Alarm Input, Video Loss, Camera Event (Sensor, MD, Video Analytics, Defocus, Audio), Dynamic Event, User Event	Alarm Input, Video Loss, Camera Event (Sensor, MD, Video Analytics, Defocus, Audio), Dynamic 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, FTP, SUNAPI Command, Shutdown	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			
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	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	1/ 2H/ 2V/ 3V/ 4/ 6/ 8/ 9/ 13/ 16/ 25/ 36/ Sequence [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 (Single SMPS)	100 ~ 240 VAC ± 10%; 50/60 Hz, 2.7A (Single 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 Hanwha Vision AI cameras PTZ camera configuration and control <ul style="list-style-type: none"> Dynamic layout Virtual channel view Fisheye dewarping 			

NETWORK

ANALOG

PERIPHERAL

INSTALLATION SOLUTION

XRN-1620SB1
16CH NVRXRN-1620B2
16CH NVRXRN-820S
8CH NVRXRN-815S
8CH NVRXRN-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 3rd 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%; 50/60Hz	100 ~ 240 VAC ± 10%; 50/60Hz	100 ~ 240 VAC ± 10%; 50/60Hz	100 ~ 240 VAC ± 10%; 50/60Hz	100 ~ 240 VAC ± 10%; 50/60Hz
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 Hanwha Vision AI cameras <ul style="list-style-type: none"> PTZ camera configuration and control 				

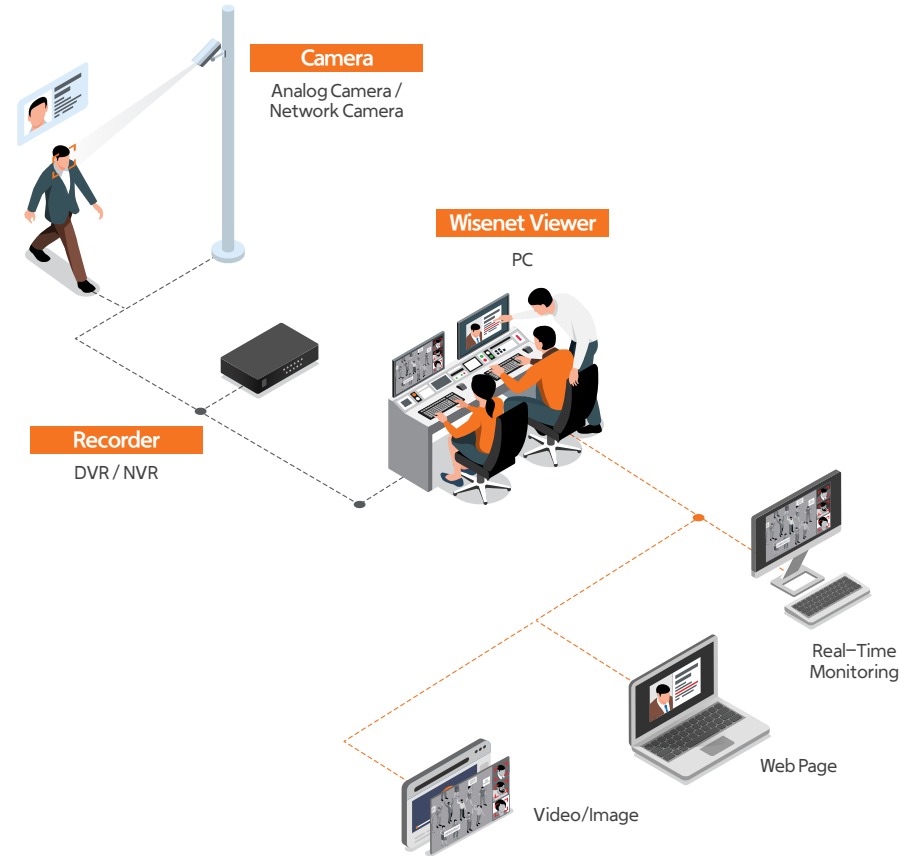
FEATURED PRODUCT

AIB-800
8CH AI BOXXRN-426S-1T/2T
4CH AI NVRQRN-1630S
16CH NVRQRN-830S
8CH NVRQRN-430S
4CH NVR

OS	Windows 11/10, macOS 10.13	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	-	Max. 40Mbps	Max. 128Mbps	Max. 80Mbps	Max. 40Mbps
Max of Cameras	Max. 8CH	Max. 4CH	Max. 16CH	Max. 8CH	Max. 4CH
Network Camera Resolution	CIF ~ 32MP	8MP ~ CIF	8MP ~ CIF	8MP ~ CIF	8MP ~ CIF
HDD Slot	-	1TB or 2TB SSD included	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	Pre-installed Event: 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) Business Intelligence: - Based on AI engine: People counting, Vehicle counting, Queue management, Heatmap	AI Search: Object Attribute (When integrated with Hanwha Vision AI Cameras)	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, FTP, SUNAPI Command, Shutdown	e-Mail, Event Push, PTZ Preset, Alarm Out, Buzzer, Monitor Out
External Storage	-	-	-	-	-
RAID	-	-	-	-	-
Hot Swap	-	-	-	-	-
Network Viewer Software	WebViewer, WAVE, SSM, Genetec, Milestone	WAVE, SSM, Webviewer, Wisenet Viewer, Wisenet mobile Support CGI(SUNAPI) for integration to 3rd party VMS			
Local Monitor	-	Dynamic layout, Virtual channel view, Up to 4 Div. [Web] 1/ 2H/ 2V/ 3V/ 4	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	SUNAPI, ONVIF	SUNAPI, ONVIF
Power Input	100 ~ 240 VAC ± 10%; 50/60Hz, 12V, 4A Adaptor	54VDC/1.67A	100 ~ 240 VAC ± 10%; 50/60Hz	54VDC / 1.55A	100 ~ 240 VAC ± 10%; 50/60Hz
Power Consumption	28W	Max 68W(PoE On)	Max. 200W(682 BTU with 2HDD, PoE ON)	Max 84W (287 BTU with 1HDD, PoE ON)	Max 52W (1HDD, PoE On)
PoE Budget	-	50W	130W	65W	35W
Additional Features	<ul style="list-style-type: none"> PoE supported N+1 failover supported ARB (Auto Recovery Backup) redundancy supported PTZ camera configuration and control Easy configuration (Setup Wizard, P2P (QR Code)) 				

Wisenet Viewer

Powerful NVR·DVR Management Software



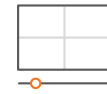
Monitoring with PC gets easier

- 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)

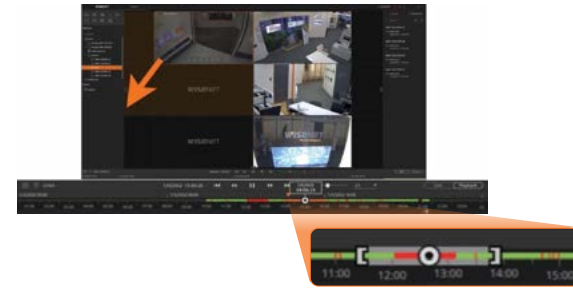


Available on Windows, macOS, Linux

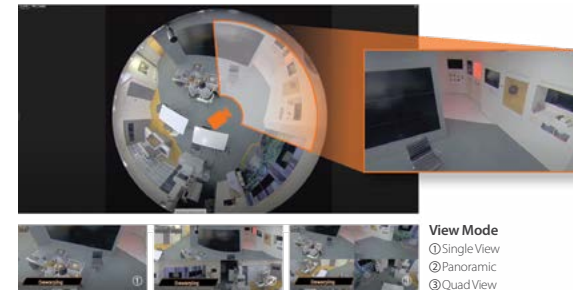
Effective monitoring with essential features



Customisable channel layout & Timeline



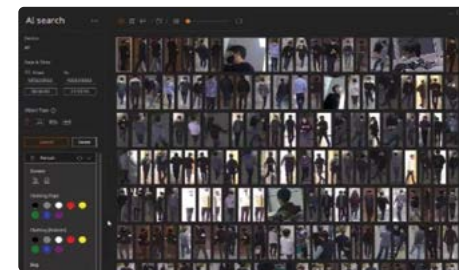
Easy monitoring with Fisheye Dewarping



View Mode
① Single View
② Panoramic
③ Quad View



Intelligent monitoring powered by AI Search



Seagate Hard Drives



Skyhawk



Exos

Standard Model Numbers with SRS	4TB 6TB 8TB 10TB	Standard Model Numbers with SRS	4TB 6TB 8TB 10TB 12TB 14TB
SkyHawk™ Health Management Included	ST4000VX016 ST6000VX009 ST8000VX010 ST10000VE001	SkyHawk™ Health Management Included	ST4000NM000B ST6000NM000B ST8000NM019B ST10000NM017BST 12000NM001J ST14000NM001J
Recording Technology	SATA 6 Gb/s	Average Latency (ms)	4.16
Drive Design	CMR	SuperParity	Yes
Features and Performance	Air	Low Halogen	Yes
Drive Bays Supported	Up to 16	PowerChoice™ Technology	Yes
RV Sensors	Yes	PowerBalance Technology	Yes
Max Sustained Transfer Rate OD (MB/s)	180MB/s	Bytes per Sector	512
Cache (MB)	256MB	Max Sustained Transfer Rate OD (MB/s)	215
Reliability/Data Integrity	600,000	Cache (MB)	256MB
Non-recoverable Read Errors Rate	Max 1 per 10E14	Advanced Write Caching (8M internal NOR flash)	Yes
Power-On Hours per year	8,760	Vibration, Non-operating: 10 Hz to 500 Hz (Grms) 5	5
Workload Rate Limit (WRL)	1180	Reliability Rating @ Full 24x7 Operation (AFR)	0.44%
Mean Time Between Failures (MTBF) (hours)	1000000 hr	Non-recoverable Read Errors per Bits Read	1 sector per 10E15
Rescue Data Recovery Services	3 years	Mean Time Between Failures (MTBF) (hours)	2000 000hr
Average Operating Power (W)	5.3 W	Warranty, Limited	5 years
Idling Average (W)	3.4W	Power-On Hours per Year	8760
Operating (drive reported, max ° C)	65° C	Temperature, Operating (° C) Drive Reported	5 to 60
Non-operating (ambient, min ° C)	-40°	Shock, Operating 2 ms Read/Write (Gs)	70/40 Gs
		Shock, Non-operating, (1 ms/2 ms) (Gs)	150/300
Height	26 mm	Height	26 mm
Width	102 mm	Width	102 mm
Depth	147 mm	Depth	147 mm
Weight	630 g	Weight	630 g

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)



WRN-2010S



WRN-2110B1



WRN-2110SB1

	Edge Wave NVR		
OS	Ubuntu 22.04 LTS		
Supported Compression	H.265, H.264, MJPEG		
Max. Recording Bit Rate	Max. 150Mbps	Max. 250Mbps	Max. 250Mbps
Max # of Cameras	Max. 16CH	Max. 36CH	Max. 36CH
Network Camera Resolution	12MP – CIF		
HDD Slot	SATA 2ea (Max. 20TB)	SATA 4ea (Max. 40TB)	SATA 4ea (Max. 40TB)
Record Mode	Normal, Dual Stream, Schedule (Continuous/Event), Event (Pre/Post), Bookmark	Normal, Dual Stream, Schedule (Continuous/Event), Event (Pre/Post), Bookmark	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	Alarm Input, Video Loss, Camera Event (Sensor, MD, Video Analytics, Defocus, Audio), Dynamic Event, User Event	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, FTP, SUNAPI Command, Shutdown
Network Viewer Software	Supported by Wave client, mobile and Cloud Sync	Supported by Wave client, mobile and Cloud Sync	Supported by Wave client, mobile and Cloud Sync
Local Monitor	Yes (set-up only)		
Network Camera Protocol	SUNAPI, ONVIF, RTSP		
Power Input	100 ~ 240 VAC ± 10%; 50/60 Hz		
Power Consumption	170W	80W	340W
PoE Budget	8 PoE/PoE+ ports, with a total power budget of 100W	N/A	16 PoE/PoE+ ports, with a total power budget of 200W

Wisenet Wave

Video Management System

Intuitive and easy to use

- An intuitive 'drag & drop' tool makes it easy for operators to set a display of live and recorded images on a single screen or video wall, with customisable layouts and sizes.
- Zoom windows enable 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 incidents occur.
- A wide range of smart, keyword, calendar and preview search options facilitate rapid retrieval of recorded video.

An operating system to suit your needs

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



WAVE Sync

A cloud-based service that enables simple, centralised 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 VMS 6.0 NOW AVAILABLE

Wisenet WAVE Sync

A cloud-based service that can be remotely accessed by an unlimited number of authorised 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 SSM

Ideal choice for integrated monitoring

Wisenet SSM (Smart Security Manager) is a video monitoring software that maximises the operational efficiency of Hanwha Vision products (Network camera, Encoder, DVR and NVR). It provides seamless system integration and central monitoring.



Cost Competitiveness

Impressive features that are cost-effective

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

High quality VMS features

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

Leverage features to improve operations

Highly versatile for different environments

AI video search

Connect Hanwha Vision AI cameras to SSM.

Best Shot search

System operators can utilise SSM's AI video search feature to easily search specific events in the video by designating distinctive attributes of objects such as faces and vehicles. If a user searches specific attributes such as "red motorcycle" or "man wearing shorts", the best still cuts of the classified objects in the video will be retrieved. BestShot can be used as forensic data for accident investigations, playing back video that includes the images.



Hanwha Vision SSM search

Support quick search using attributes

BestShot

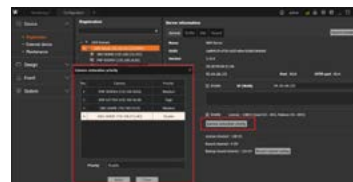
Object detection & classification (Person, face, vehicle, licence plate)

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 footage without loss of data.



Smart Network Interface (SNI)



SNI-1MC-PS



SNI-1PI-PS



SNI-1MC



SNI-1PI

	Smart Network Interface (SNI)			
Operating Temp	-40 to +75° C / -40 to +167° F	-40 to +75° C / -40 to +167° F	-40 to +75° C / -40 to +167° F	-40 to +75° C / -40 to +167° F
Storage Temp	-40 to +85° C / -40 to +185° F	-40 to +85° C / -40 to +185° F	-40 to +85° C / -40 to +185° F	-40 to +85° C / -40 to +185° F
RJ45 Ports	1x 10/100/1000T(X) RJ45 with Auto MDI/MDI-X and 2 kV Isolation Protection	2x 10/100/1000T(X) RJ45 with 2 kV Isolation Protection	1x 10/100/1000T(X) RJ45 with Auto MDI/MDI-X and 2 kV Isolation Protection	2x 10/100/1000T(X) RJ45 with 2 kV Isolation Protection
SFP Module	SNI-SFP-CU; SNI-SFP-MM; SNI-SFP-SM	-	SNI-SFP-CU; SNI-SFP-MM; SNI-SFP-SM	-
SFP Slot	1x 100/1000FX SFP	-	1x 100/1000FX SFP	-
Mains Power	1x 3-Way Screw Terminal	1x IEC14 Socket with locking security bracket	1x 2-way Screw Terminal	1x 4-way Screw Terminal
Switch	1x 4 Position DIP Switch	-	1x 4 Position DIP Switch	-
Switch Functions	Link Fault Pass-Through Mode Remote Reset Mode Extended Distance Mode	-	Link Fault Pass-Through Mode Remote Reset Mode Extended Distance Mode	-
Housing Dimensions	Anodised Aluminium Anodised Aluminium 38 x 110 x 84 mm	Anodised Aluminium 65 x 88 x 107 mm	Anodised Aluminium 31 x 57 x 57 mm	Anodised Aluminium 37 x 88 x 107 mm
Installation	Wall Mount or DIN-Rail Optional Magnetic Mounts	Wall Mount or DIN-Rail	Wall Mount or DIN-Rail Optional Magnetic Mounts	Wall Mount or DIN-Rail
IP Rating	IP40			
Input Voltage	85-264VAC / 120-370VDC	85-264VAC / 120-370VDC	-	-
Integrated PSU Type	54VDC @ 90W	54VDC @ 90W	-	-
Protection	Overload Current	Overload Current	Reverse Polarity, Overload Current	Reverse Polarity, Overload Current

Wisenet Access Control System

Access control meets video surveillance

- Integrates with video surveillance to enhance security
- Easily manage door access, reset forced doors, and change system relay
- Access control and intercom available via WAVE VMS
- Tiered licensing, ideal for all needs
- Flexible system with mobile viewing options



Intercom TID-600R WAVE WAVE Mobile Monitoring



View the range

www.hanwhavision.eu

Wisenet Access Control System

FEATURED PRODUCT

	Functions		
License options NEW	Wisenet Access Control Software Lite version, 6 doors Wisenet Access Control Software Standard, SSA-M3000 , 32* doors	Wisenet Access Control Software Professional, SSA-M4000 , 256* doors Wisenet Access Control Software Enterprise, SSA-M5000 , unlimited doors	*first 6 doors included in the license
Access Control	Device Auto Discovery, Cardholder Management, Batch Uploads Card(s) pre-registration, Lift Control, Two-card access, Device Maintenance	Unlimited/ Multiple Access Groups, Time Schedules, Interlocking, Area/Zone Management, Biometric Readers, Visitor Management, Anti Passback, I/O, Guard Tour	
Monitoring	Real time access events and 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, Fargo printer support		
Fire Input	Operator pop-up notification on alarm		
Advanced Reporting	Extensive reporting options, Export to multiple formats (printer, csv supported in excel and pdf)		
Video Integration with Wisenet WAVE, SSM	Seamless Integration with Hanwha Vision's VMS in event monitoring, Review video of the access and alarm events, Real-time access and alarm events notification to Wisenet WAVE, SSM		
Maintenance	User Group and User Privileges, Manual and Scheduled database backup, Database Backup/ Restore	Cardholder Data Export and Import, 128x Custom Fields, Auditing and User Activity Logs	
System	Max 1400 doors per gateway, unlimited gateway, Very simple and intuitive user interface, Highly Scalable		



X1100A-H003
Intelligent 2x Door 4x Reader Controller – X1100
*Model will update this year to X1100C-H003



X100A-H003
2x Door 4x Reader Expansion Module – X100



X200A-H003
16x AUX Input Expansion Module – X200



X300A-H003
12x Relay Output Expansion Module – X300

Total ID Users	250,000	-	-	-
Event Buffers	50,000	-	-	-
Reader Port	2x 10-PIN (supporting 2x Wiegand or 4x OSDP readers)	2x 10-PIN (supporting 2x Wiegand or 4x OSDP readers)	-	-
Input Port	7x supervised (Tamper, AC Fail, Battery fail & 2x Door Lock and 2x AUX)	7x supervised (Tamper, AC Fail, Battery fail & 2x Door Lock and 2x AUX)	19x supervised (Tamper, AC Fail, Battery fail & 16x AUX)	5x supervised (Tamper, AC Fail, Battery fail & 2x AUX)
Output Port	2x Lock Form-C & 2x AUX Form-C	2x Lock Form-C & 2x AUX Form-C	2x AUX Form-C	12x AUX Form-C
Output Relay Rating	Recommended 3Amp @ 30VDC	Recommended 3Amp @ 30VDC	Recommended 2Amp @ 30VDC	Recommended 2Amp @ 30VDC
Operating Voltage	12/24 VDC			
Network Port	Ethernet (10/100 BaseT)	-	-	-
RS-485 Connection	2x	1x	1x	1x
LED / Beeper	LEDs provide a status showing communications between the system, if the module is powered, if there is a battery fail, AC fail or tamper or if inputs/outputs are active			
Lift Control	Yes	-	-	Yes
I/O Board Expansion	Up to 20x X100 or X200 or X300 via RS485 Port 1 or Port 2 on the X1100			
Operating Temperature / Humidity	0° C ~ +70° C (+32° F ~ +158° F) / 5% ~ 85% Relative, non-condensing			
Dimension	164 mm x 140 mm x 26 mm			
Weight	352g	342g	326g	326g
HS-CODE	8537.10.9	8537.10.9	9030.33.3	8537.10.9

Wisenet Access Control System – 13.56MHz



Signo Express
20XTKK-X1-0011RW-H003



Signo 20
20TKS-01-00039R-H003



Signo 20 Keypad
20KTKS-01-00039R-H003



Signo 40
40TKS-01-00039R-H003



Signo 40 Keypad
40KTKS-01-00039R-H003

2.4 GHz (Bluetooth) Credential Compatibility	Mobile Credentials powered by Seos® (Mobile Access)	Mobile Credentials powered by Seos® (Mobile Access)		
Credential Compatibility	Signo 20 Express (13.56MHz) SEOS Reader, Wiegand, NFC/BLE 2.4GHz, Mobile & SEOS Cards	Signo 20/40 (13.56MHz) SEOS Reader, Wiegand, NFC/BLE 2.4GHz, Mobile & SEOS Cards		
Typical Read Range	SEOS Single Technology Cards - 1.6 to 4 in (4 to 10 cm)	SEOS Single Technology Cards - 1.6 to 4 in (4 to 10 cm)		
Dimensions	1.77 in x 4.78 in x 0.77 in (45 mm x 121.5 mm x 19.5 mm)	1.78 in x 4.79 in x 0.85 in (45 mm x 121.5 mm x 21.5 mm)	3.15 in x 4.78 in x 0.77 in (80 mm x 121.5 mm x 19.5 mm)	3.16 in x 4.79 in x 0.85 in (80 mm x 121.5 mm x 21.5 mm)
Product Weight	Terminal: 2.65 oz (75 g)	Terminal: 3.17 oz (90 g)	Terminal: 4.23 oz (120 g)	Terminal: 4.94 oz (140 g)
Operating Voltage	12VDC	12VDC		
Current Draw	NSC: 60 mA, Peak: 250 mA Max. Avg: 70 mA, IPM: 45 mA	NSC: 65 mA, Peak: 250 mA Max. Avg: 75 mA, IPM: 48 mA	NSC: 65 mA, Peak: 250 mA Max. Avg: 75 mA, IPM: 45 mA	NSC: 70 mA, Peak: 250 mA Max. Avg: 80 mA, IPM: 55 mA
Input	Tri-color LED, Buzzer, Hold @ Active Low			
Output	Tamper Relay 0-60V DC @ 100mA Max (Dry Contact)			
Operating Temperature	-31° F to +150° F (-35° C to +66° C)			
Humidity	0% to 95% non-condensing			
Storage Temperature	-40° F to +185° F (-40° C to +85° C)			
Environmental Rating	UL294 Outdoor and Indoor rated, IP65			
Communications & Panel Connection	Wiegand via Terminal Strip	Wiegand and RS-485 Half Duplex (OSDP) via Terminal Strip		
Device Management	HID Reader Manager / OSDP configuration			
Certifications	UL294/cUL (US), FCC (US), IC (Canada), CE (EU), RCM (Australia, New Zealand), SRRC (China), KCC (Korea), NCC (Taiwan), iDA (Singapore), RoHS, MIC (Japan), GreenCircle, Bluetooth SIG			
Security Ratings	EAL 5+* Certified Secure Element Hardware			
HS-CODE	8471.90.0000			

Wisenet Access Control System – 13.56MHz & 125KHz



Signo 20
20TKS-00-00000P-H003



Signo 20 Keypad
20KTKS-00-00000P-H003



Signo 40
40TKS-00-00000P-H003



Signo 40 Keypad
40KTKS-00-00000P-H003

2.4 GHz (Bluetooth) Credential Compatibility	Mobile Credentials powered by Seos® (Mobile Access)			
Credential Compatibility	Signo 20/40 SEOS Reader, Wiegand/OSDP, NFC/BLE Mobile SEOS Credential & SEOS Cards, iCLASS, iCLASS SE/SR, MIFARE HID DESFire EV 1/EV2/EV3 (SIO/CSN), MIFARE HID Classic (SIO/CSN), 125kHz HID Prox/Indala, 125kHz EM4102			
Typical Read Range	iCLASS SE®/iCLASS SEOS/HID MIFARE/HID MIFARE DESFire EV 1/EV2, MIFARE Classic & ISO14443A Single Technology Cards - 1.6 to 4 in (4 to 10 cm) HID/ EM Proximity & 125 kHz Single Technology Cards - 2.4 to 4 in (6 to 10 cm)			
Dimensions	1.77 in x 4.78 in x 0.77 in (45 mm x 121.5 mm x 19.5 mm)	1.78 in x 4.79 in x 0.85 in (45 mm x 121.5 mm x 21.5 mm)	3.15 in x 4.78 in x 0.77 in (80 mm x 121.5 mm x 19.5 mm)	3.16 in x 4.79 in x 0.85 in (80 mm x 121.5 mm x 21.5 mm)
Product Weight	Terminal: 2.65 oz (75 g)	Terminal: 3.17 oz (90 g)	Terminal: 4.23 oz (120 g)	Terminal: 4.94 oz (140 g)
Operating Voltage	12VDC			
Current Draw	NSC: 60 mA, Peak: 250 mA Max. Avg: 70 mA, IPM: 45 mA	NSC: 65 mA, Peak: 250 mA Max. Avg: 75 mA, IPM: 48 mA	NSC: 65 mA, Peak: 250 mA Max. Avg: 75 mA, IPM: 45 mA	NSC: 70 mA, Peak: 250 mA Max. Avg: 80 mA, IPM: 55 mA
Input	Tri-color LED, Buzzer, Hold @ Active Low			
Output	Tamper Relay 0-60V DC @ 100mA Max (Dry Contact)			
Operating Temperature	-31° F to +150° F (-35° C to +66° C)			
Humidity	0% to 95% non-condensing			
Storage Temperature	-40° F to +185° F (-40° C to +85° C)			
Environmental Rating	UL294 Outdoor and Indoor rated, IP65			
Communications & Panel Connection	Wiegand and RS-485 Half Duplex (OSDP) via Pigtail (18 in / 0.5 m) or Terminal Strip			
Device Management	HID Reader Manager / OSDP configuration			
Certifications	UL294/cUL (US), FCC (US), IC (Canada), CE (EU), RCM (Australia, New Zealand), SRRC (China), KCC (Korea), NCC (Taiwan), iDA (Singapore), RoHS, MIC (Japan), GreenCircle, Bluetooth SIG			
Security Ratings	EAL 5+* Certified Secure Element Hardware			
HS-CODE	8471.90.0000			

IP Audio System

Amplifying your security systems to keep areas secure and clear.



Motion Detection

Please stay away from the fence



- TTS**
Text To Speech
- PoE & PoE+**
Dual Support+
- SIP**
PBX integration
- Scheduler**
Day, Week, Month and Year

IP Speakers



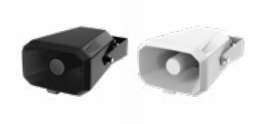
SPA-C100B / SPA-C100W
Ceiling Speaker



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	101dB	101dB	125dB
Frequency Range (-10dB)	120Hz~20kHz	130Hz~20kHz	120Hz~20kHz	650Hz~5.3kHz
Sensitivity (1Watt)	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 Bridge



SPA-B1000
IP Audio Bridge

Maximum Input Level	L, R: +6dBV Max
Power	PoE (IEEE 802.3 af type 1 Class 0), DC 24V
Supported Protocol	IPv4, HTTP, HTTPS, mDNS, DNS, NTP, TCP, UDP, DHCP, ARP, ICMP

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	-7dBV, Aux Input Volume Max
Supported Protocols	IPv4, HTTP, HTTPS, SIP, mDNS, DNS, NTP, TCP, UDP, DHCP, ARP, ICMP
Power	Max. 12W, DC24V PoE (IEEE 802.3 af type 1 Class 3)



Hear the Unseen, Audio Beacon

SPS-A100M



SPS-A100M
Audio Beacon

Audio Compression	G.711 u-law /G.726 Selectable	
	G.726(ADPCM) 8KHz, G.711 8KHz	
	G.726: 16Kbps, 24Kbps, 32Kbps, 40Kbps	
	AAC-LC: 48Kbps at 16KHz	
Audio Streaming	Two-way/one-way selectable, Full duplex, Echo cancellation and noise reduction	
Audio In	Five built-in digital MEMS mics	
Audio Out	Built-in Speaker	Max. Sound Pressure Level 90dB at 1m(3.28ft)
		Frequency Range: 144Hz~20kHz
Analytics	Sound Classification	Classified sound type: Extreme decibel(TBD), Glass break, Scream Event metadata: sound type, sound direction, confidence, timestamp, audio clip, dB(±10dB)
	Sound Direction	Ceiling: ±15 degree
Alarm Events	When Alarm Trigger Occurred	File upload(Audio): e-mail/FTP
		Notification: e-mail
		Alarm output
		Handover: PTZ preset, send message by HTTP/HTTPS/TCP
		Audio clip playback(6MB, WAV in mono/ stereo from 64 kbps to 320 kbps.
		• MQTT: publication
		LED
Speaker		
USB	USB: Micro USB-C, for true north setting using Wisenet installation mobile app	
Alarm I/O	2 configurable I/O ports	
Power Consumption	PoE+: Max 18.5W, typical 8.2W	
Product Dimensions / Weight	215.1x135.1x52.8mm(8.47x5.32x2.08"), 973g(2.15 lb)	



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	Colour: 0.16Lux (F1.2) B/W: 0.009Lux (F1.2)	Colour: 0.16Lux (F1.6) B/W: 0Lux (IR LED on)	Colour: 0.26Lux (F1.8) (HCO-7010R) 0.27Lux (F2.0) (HCO-7020R/7030R) B/W: 0Lux (IR LED on)	Colour: 0.16Lux (F1.6) B/W: 0Lux (IR LED on)	Colour: 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 ~ +13°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)	Ø78 x 259.8mm (Ø3.07" x 10.23") (Without sunshield) 914g (2.02lb)	Ø70 x 246mm (Ø2.76" x 9.69") (Without sunshield) 670g (1.48lb)	Ø119.8 x 98.5mm (Ø4.72" x 3.88") 320g (0.71lb)	Ø110.1 x 86.1mm (Ø4.33" x 3.39") 240g (0.53lb)
Additional Features	Video Transmission up to 500m (5C2V Coaxial Cable)				

NETWORK

ANALOG

PERIPHERAL

INSTALLATION SOLUTION



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

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	1/3" 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	Colour : 0.16Lux (F1.6) B/W : 0Lux (IR LED on)	Colour : 0.26Lux (F1.8) (HCV-7010R) 0.27Lux (F2.0) (HCV-7020R/7030R) B/W : 0Lux (IR LED on)	Colour : 0.09Lux (F1.2) B/W : 0.009Lux (F1.2)	Colour : 0.09Lux (F1.2) B/W : 0.009Lux (F1.2)	Colour : 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 (1.58 lb)	Ø120.3 x 91.7mm (Ø4.74" x 3.61") 510g (1.12 lb)	W 130.9 x H 73.1 x D 67.2mm (5.15" x 2.88" x 2.65") 287g (0.63 lb)	W 68.4 x H 59.6 x D 92.7mm (2.69" x 2.35" x 3.65") 186g (0.41 lb)	Ø78 x 259.8mm (Ø3.07" x 10.23") (Without sunshield) 914g (2.02 lb)
Additional Features	Video Transmission up to 500m (5C2V Coaxial Cable), Simple Focus (HCD-6080R, HCB-6001)				

NETWORK

ANALOG

PERIPHERAL

INSTALLATION SOLUTION

Imaging Device	1/2.8" CMOS			
Resolution	1920 x 1080			
Min. Illumination	Colour : 0.11Lux (F1.6) B/W : 0Lux (IR LED on)	Colour : 0.17Lux (F1.6) B/W : 0Lux (IR LED on)	Colour : 0.11Lux (F1.6) B/W : 0Lux (IR LED on)	Colour : 0.17Lux (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)	4mm fixed (F1.6)
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)	H: 87.6° / V: 46.4° / D: 104.5°
Pan / Tilt / Rotate	-	-	0° ~ 350° / 0° ~ 67° / 0° ~ 355°	0° ~ 350° / 0° ~ 67° / 0° ~ 355°
IR Viewable Length	30m (98.43ft)	30m (98.43ft)	20m (65.62ft)	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)	-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)	12VDC : Max 5.4W
Dimensions (WxHxD) / Weight	Ø78 x 259.8mm (Ø3.07" x 10.23") (Without sunshield) 914g (2.02 lb)	Ø58.6 x 165.2mm (Ø2.31" x 6.5") (Without sunshield) 279g (0.62 lb)	Ø119.8 x 98.5mm (Ø4.72" x 3.88") 330g (0.73 lb) (HCD-6080R) 320g (0.71 lb) (HCD-6070R)	Ø110 x 86mm (Ø4.33" x 3.39") 227g (0.71 lb)
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

Imaging Device	1/2.8" CMOS	
Resolution	1920 x 1080	
Min. Illumination	Colour : 0.27Lux (F2.0) B/W : 0.017Lux (F2.0)	Colour : 0.11Lux (F1.6) B/W : 0Lux (IR LED on)
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)
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)	
Digital Noise Reduction	SSNRIV	
Motion detection	Support	
Privacy Masking	8 Zones	
Alarm I/O	-	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)
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)
Certification	-	IP66, IK10
Power Consumption	12VDC : Max 3.6W	12VDC & 24VAC : Max 5.8W (HCV-6080R) 12VDC & 24VAC : Max 4.2W (HCV-6070R)
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)
Additional Features	Video transmission up to 500m (5C2V Coaxial Cable), Simple Focus (HCV-6080R only)	



HRX-1635
16CH 8MP Pentabrid Recorder



HRX-835A
8CH 8MP Pentabrid Recorder



HRX-435
4CH 8MP Pentabrid Recorder

OS	Linux	Linux	Linux
Compression	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG
Signal Type	AHD(8MP, 5MP, 4MP, 1080p, 720p) HDTV(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 - 8CH(1Vp-p 75ohm, BNC) Network Camera - 2CH(Up to 10CH)	"Analog Camera - 4CH(1Vp-p 75ohm, BNC) Network Camera - 2CH(Up to 6CH)"
Record Rate	(Main Stream, NT/PAL) 8M8/8fps, 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 4ea(Max 24TB)	SATA 2ea(Max 12TB)
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 (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	8 Line in (RCA 4 Line, Option : Audio Extension Cable) / 1 Line 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 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)
N/W Camera Support	SUNAPI, ONVIF	SUNAPI, ONVIF	SUNAPI, ONVIF
Additional Features	-	-	-

AI PVMs



SMT-3231PV
32" AIPVM



SMT-3221PV
32" AIPVM



SMT-2731PV
27" AIPVM



SMT-2721PV
27" AIPVM



SMT-1031PV
10" AIPVM



SMT-1031PVW
10" AIPVMr

Controller



SPC-2001
PTZ / DVR System Controller

Imaging Device	1/2.8" 2MP CMOS	
Max FrameRate	"H.265/H.264: Max. 30fps/25fps(60Hz/50Hz) MJPEG: Max. 15fps/12fps(60Hz/50Hz)"	
Focal Length (Zoom Ratio)	3.06mm fixed focal	
Min. Illumination	Color: 0.03Lux (F1.6, 1/30sec)	
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)w	
Business Intelligence	People counting, Queue management, Heatmap based on AI engine	
Privacy Masking	32ea, 4point Quadrangle zones	
Wide Dynamic Range	120dB	
Digital Noise Reduction	SSNR V, WiseNR II (Based on AI engine)	
Edge Storage	Micro SD/SDHC/SDXC 1 slot 256GB	
Application Programming Interface	"ONVIF Profile S/G/T/MSUNAPI(HTTP API)"	
VESA Mounts Interface	VESA 100 x 100mm, 200 x 100mm, 200 x 200mm	VESA 75 x 75mm
Power Consumption	56W	31W
		14W

Features	<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
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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

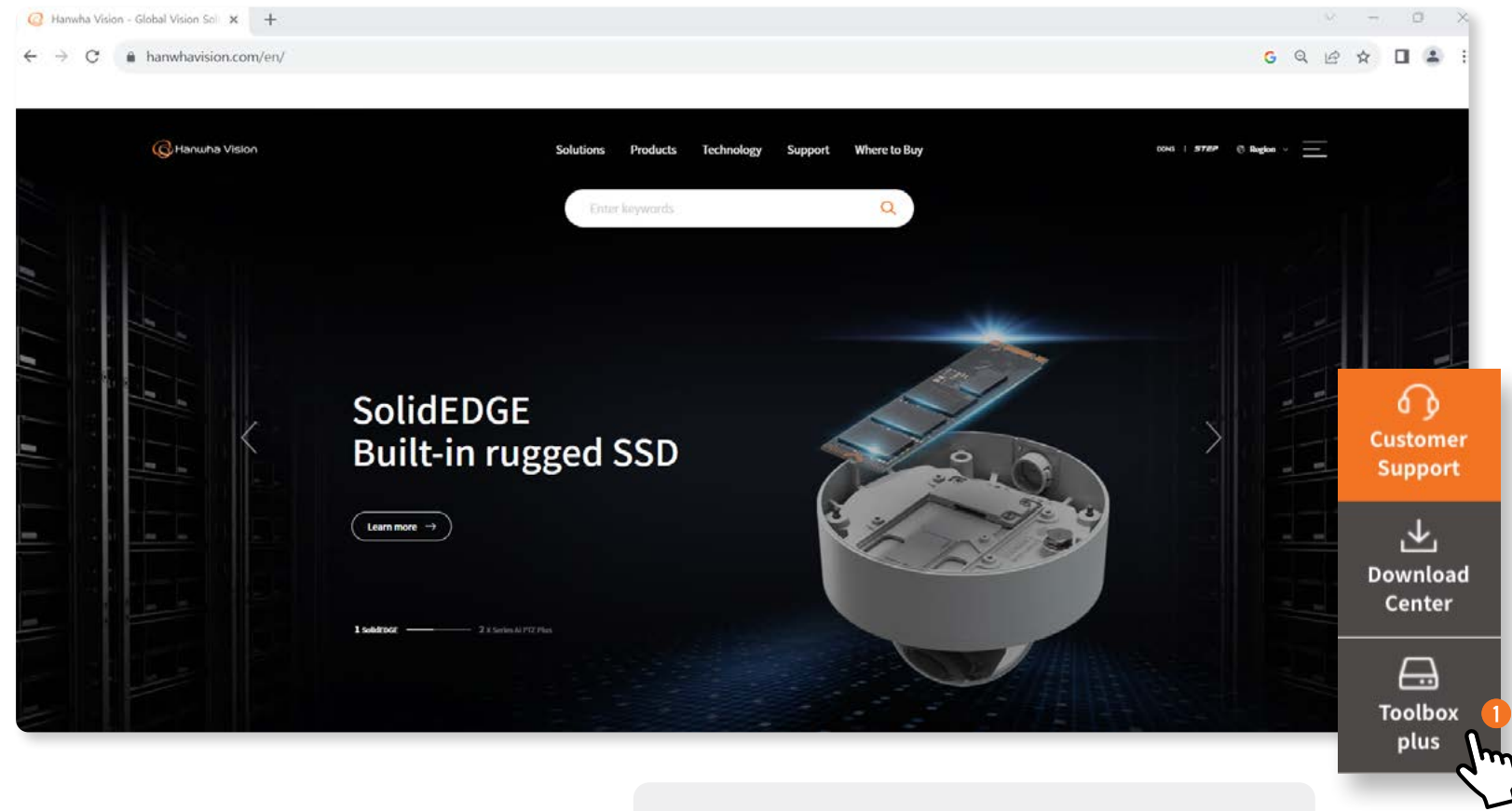


SMT-2212
22" LED Monitor

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	-	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
Additional Features	Remote Controller	-	-	-	-	-	-

Lens

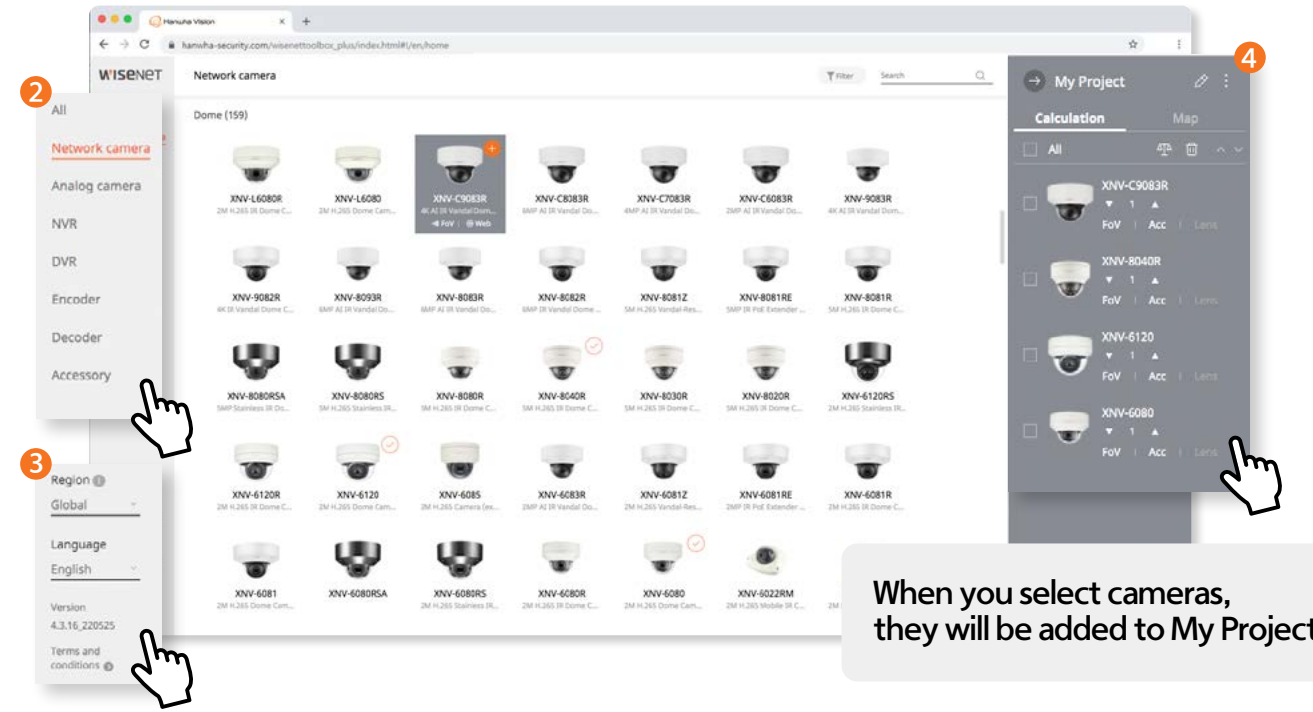
Model	Image	Mount	Image Format	Resolution	Focal Length	Back Focal Length	Zoom Ratio	F. No	Angle of View	Operation			Dimensions WxHxD (mm / inch)	Weight (g / lb)
										Iris	Focus	Zoom		
SLA-M8550D					8.5~50mm (0.33"~1.97")	9.4~10.7mm (0.37"~0.42")	5.9	F1.6	42.3°~7.5°	DC			W46 xH 60 xD 58.2mm (1.81" x 2.36" x 2.29")	80g (0.17lb)
SLA-M2890DN		CS	1 / 2.8"	3Megapixel						Manual	Manual		W45 xH 51.5 xD 54.3mm (1.77" x 2.03" x 2.14")	84g (0.19lb)
SLA-M2890PN					2.8~9mm (0.11"~0.35")	7.5~15.9mm (0.3"~0.63")	3.2	1.2	134.2°~42.7°	P-Iris				82.1g (0.18lb)



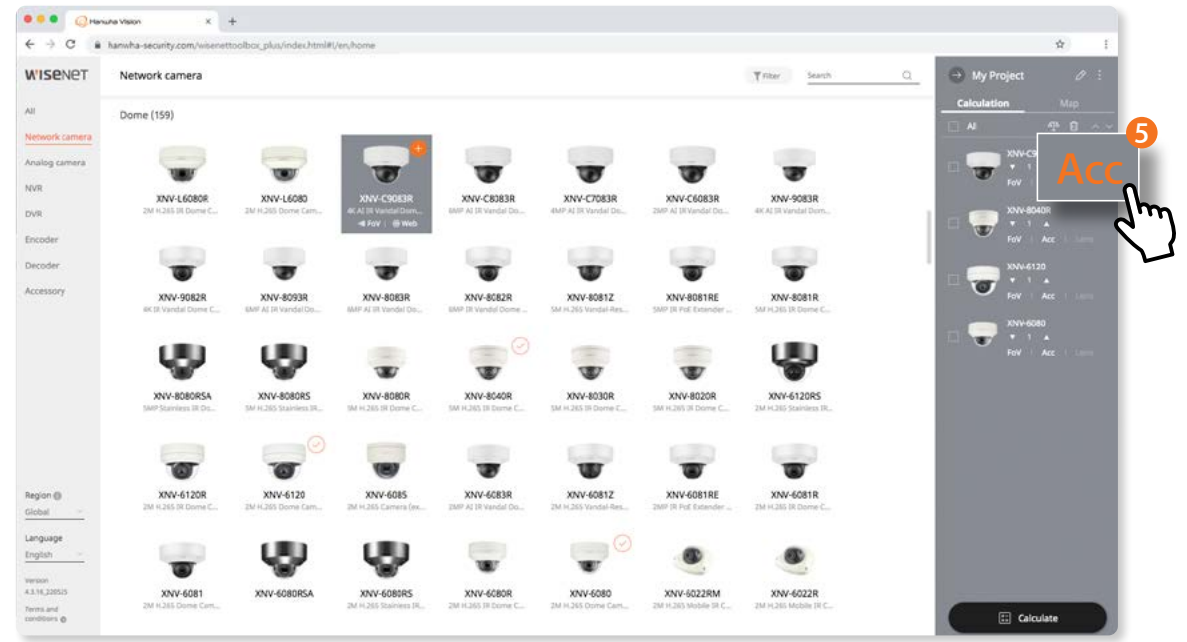
Click Toolbox Plus on Hanwha Vision.com
 Or you can also connect by using below URL
 (https://www.hanwhavision.com/wisenettoolbox_plus)

Choose a product

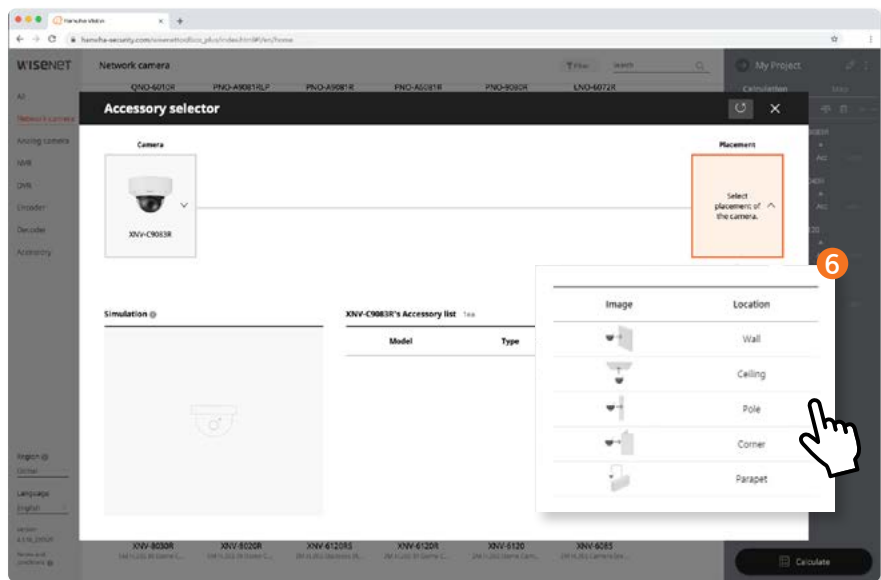
Select region and language



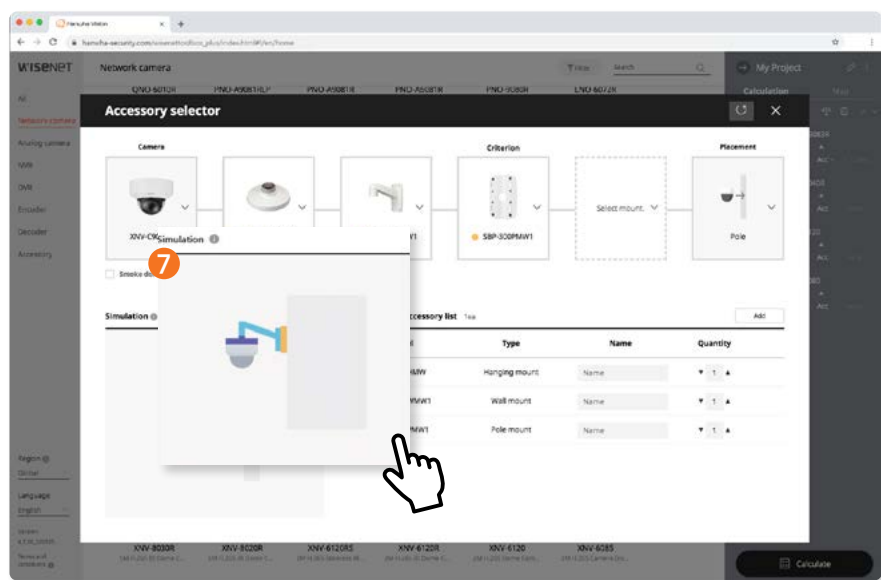
When you select cameras, they will be added to My Project



Click the Acc to find compatible accessories



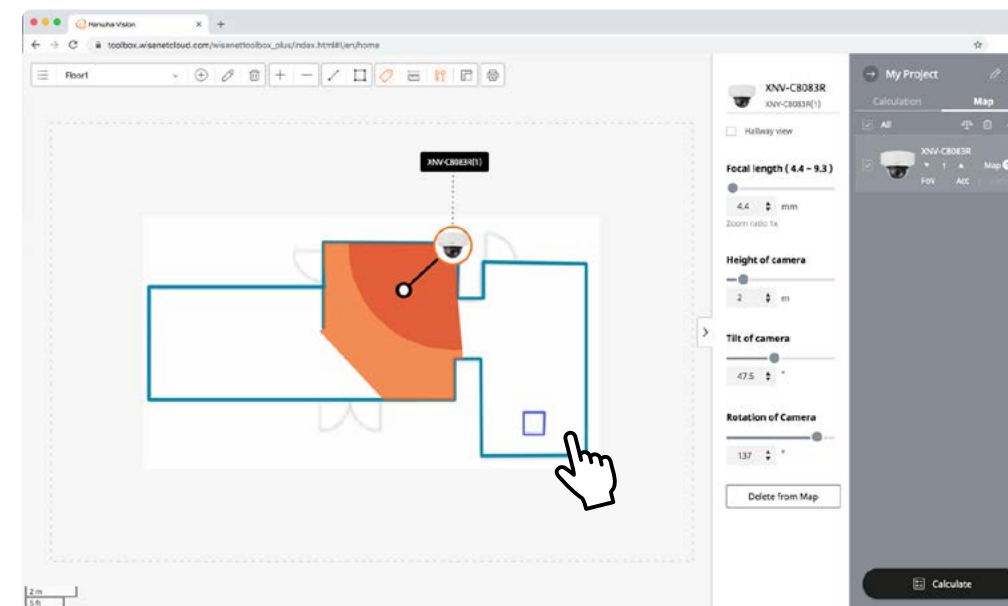
Accessory Selector pops up with all compatible accessories shown



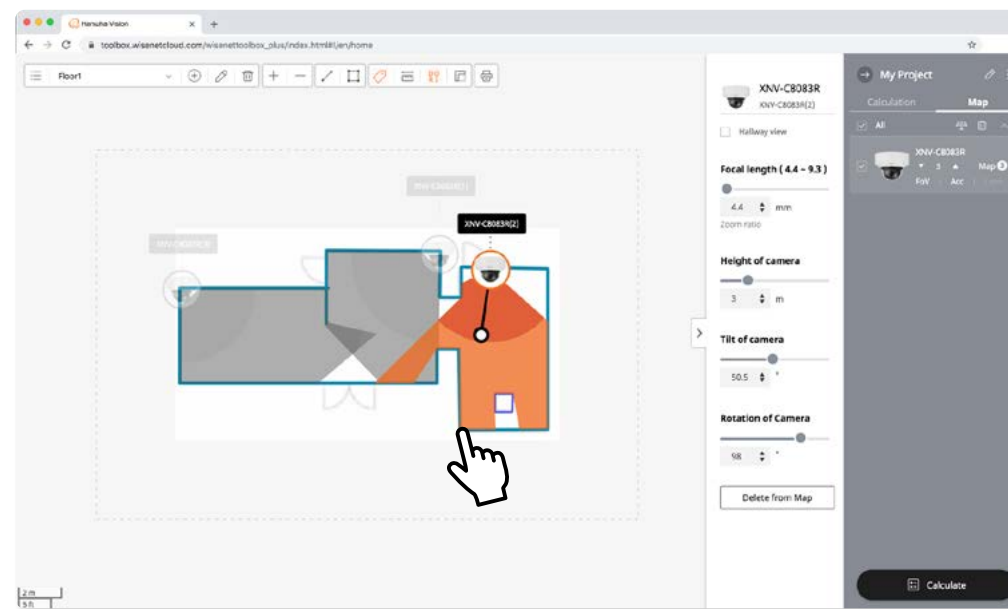
Choose accessories, then the simulation intuitively shows all connected accessories

Newly updated in Toolbox Plus: Simulate on the map

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

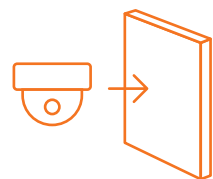


By uploading your map to Toolbox Plus, you can test how cameras cover your space

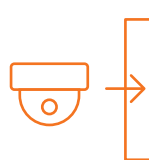


It can guide you on how to choose and install cameras to minimise blind spots in advance

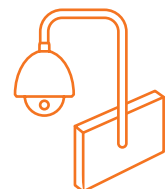
WM Wall mounts



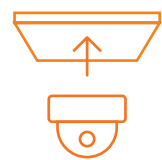
PM Pole mounts



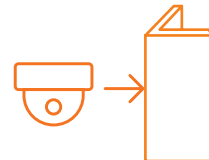
LM Parapet mounts



CM Ceiling mounts



KM Corner mounts



HEAD OFFICE

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