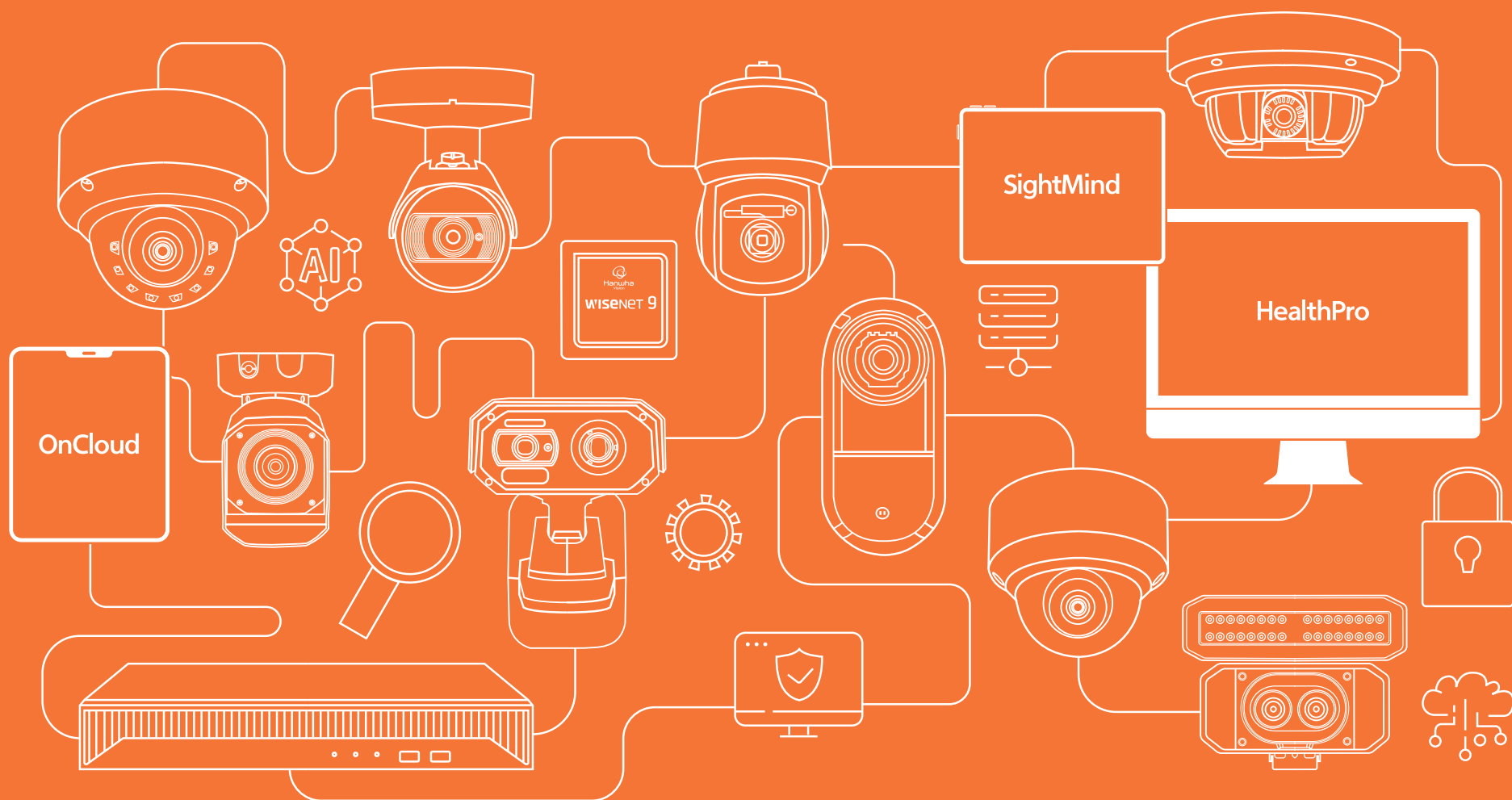


2025

2H PRODUCT PORTFOLIO



CONTENTS

INTRODUCTION

Company Overview	04
Cybersecurity & Sustainability	08
Solutions by Vertical Market	09
Product Naming Rule	10

NETWORK CAMERAS

AI Cameras	12
X series	43
P series	54
Q series	57
T series	64
L series	70

VIDEO RECORDERS

NVR	80
SSM Appliances	89
DVR	99

CLOUD

OnCloud	72
HealthPro	74
SightMind	76

PERIPHERAL

Encoders/Decoders	86
AI Box	86
Audio Beacon	87
Monitors	100
Controllers	101
Lens	101

ACCESS CONTROL

Reader	91
Controller	91
Peripheral	91
Card	91

IP AUDIO

ANALOG

Cameras	94
DVR	99



5 Year Warranty



Offering long-term peace of mind with a comprehensive five-year warranty on Hanwha Vision network products globally, ensuring reliability and support.

- **5 Year product warranty**
- **Consistent global support**
- **Minimized total cost of ownership (TCO)**

The 5-year warranty period has specific exceptions for consumable parts. For full details, please refer to the [official Warranty Policy](#) on our website.



Hanwha Vision Toolbox PLUS



[Hanwha Vision Toolbox PLUS](#) is an all-in-one software solution that simplifies surveillance system design, letting you accurately plan camera placement and coverage, estimate bandwidth and storage needs, and easily compare products to build the perfect security setup.



Technical Support Portal



A Comprehensive online hub that provides users with 24/7 self-service resources including an extensive knowledge base with FAQs, alongside valuable tools. [Technical Support Portal](#) also facilitates direct technical support by allowing users to submit and manage support tickets, ultimately streamlining problem resolution and ensuring optimal performance of Hanwha Vision products.



Hanwha Vision Open Platform



The [Hanwha Vision Open Platform](#) enables third-party developers to create and integrate intelligent applications directly into Hanwha Vision cameras, essentially transforming them into smarter devices. This provides advanced functionalities like on-camera video analytics and custom features, eliminating the need for complex, separate servers or additional computer equipment for these capabilities. As a result, users gain greater customization and efficiency for their security systems, adapting to future security needs.



Wisenet Device Manager



Streamline your surveillance system management with the [Hanwha Vision Wisenet Device Manager](#). This powerful tool simplifies discovering, configuring, and updating multiple Hanwha Vision devices across your network. From bulk IP assignment and firmware updates to advanced camera settings, gain effortless control and maximize the efficiency of your security solutions.



Hanwha Vision Learning Center



Unlock your full potential and master the latest in video surveillance technology with the [Hanwha Vision Learning Center](#). Our expert-led, practical training dives deep into cutting-edge solutions, emerging technologies, and critical industry trends. From camera basics to advanced AI and VMS configurations, our comprehensive, self-paced courses are designed to build your expertise.

* 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.com

Hanwha Group

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

Founded in 1952, Hanwha continues to grow by quickly anticipating and responding to rapidly changing business environments with a balanced business portfolio that includes aerospace, energy & materials, finance and retail & services. As of 2024, we are the seventh largest business enterprise in South Korea and recognized among the world's top 500 companies by a prestigious global publication, as well as one of the 100 most influential companies by renowned international media.

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

72

Domestic affiliates
As of end of June 2023

103

Business Enterprise in
South Korea
Total asset basis, as of end of 2023

TOP 7

Global Networks
As of end of 2023

776



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

Hanwha Vision

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

Over the past 31 years, we have established ourselves as a global video security specialist based on world-class optical design, manufacturing, and image processing technology. We have been ensuring safety and security around the world and across society with products and solutions with outstanding performance, high reliability, and industry-leading cybersecurity policies.

Our growth and innovation started with our customers' needs. This began with their desire to improve safety and security, now evolving to answer wider business opportunities and challenges. Ultimately, all our solutions enable our customers to reach their goals. Our investment in innovation and continually pushing the boundaries of what's possible in video is core to our competitiveness, ensuring our steady success in vision solutions.

Scan this QR code to view full company overview



History

- | | | | | | |
|------|---|--|------|---|--|
| 2025 | - | Wisenet 9 SoC and camera series with Wisenet 9 SoC are launched | 2018 | - | Established Hanwha Techwin Vietnam manufacturing corporation |
| 2024 | - | Joined 'UN Global Compact(UNGC)' | 2017 | - | Wisenet 5 SoC and X camera series launched |
| | - | Launched Industry's First Dual Sensor BCR Camera | | - | Acquired CES, a UK Government cyber security certification |
| 2023 | - | Changed company name to 'Hanwha Vision' | 2016 | - | Establishment of Hanwha Techwin Middle East FZE |
| | - | Launched World's First built-in SSD camera, SolidEDGE | 2015 | - | Launched Hanwha Techwin |
| | - | Vietnam Factory reached cumulative production of 10 million units | 2013 | - | Wisenet 3 SoC and camera series with Wisenet 3 SoC are launched |
| 2022 | - | Launched IP audio system | 2012 | - | Launched the world's first 37x IR PTZ camera |
| 2021 | - | Launched the X AI camera series | 2009 | - | Establishment of Hanwha Techwin Tianjin and Shanghai |
| | - | Launched AI NVR and AI integrated solution | 2008 | - | Launched the world's first 37x PTZ camera |
| | - | Developed AI-based infectious disease response solutions | 2005 | - | Developed advanced intruder automatic location tracking system |
| 2020 | - | 30th anniversary of the video security business | 2004 | - | Developed Winner 3 Analog ISP chip |
| | - | Launched the P AI camera series | 2001 | - | Establishment of Hanwha Techwin Europe |
| | - | Launched Winsenet 7 SoC, a camera series with Wisenet 7 SoC acquired UL CAP (UL Cybersecurity Assurance Program) | 1997 | - | Launched the world's best ultra-low illumination video surveillance camera |
| 2019 | - | UK Government official cybersecurity certification | 1993 | - | Developed Korea's first Auto Iris lens for CCTV |
| | - | Acquired 'Secure by Default' | 1990 | - | Started video surveillance business, establishment of Hanwha Techwin America |
| | - | Launched the world's first 55x IR PTZ camera | | | |

R&D POWER

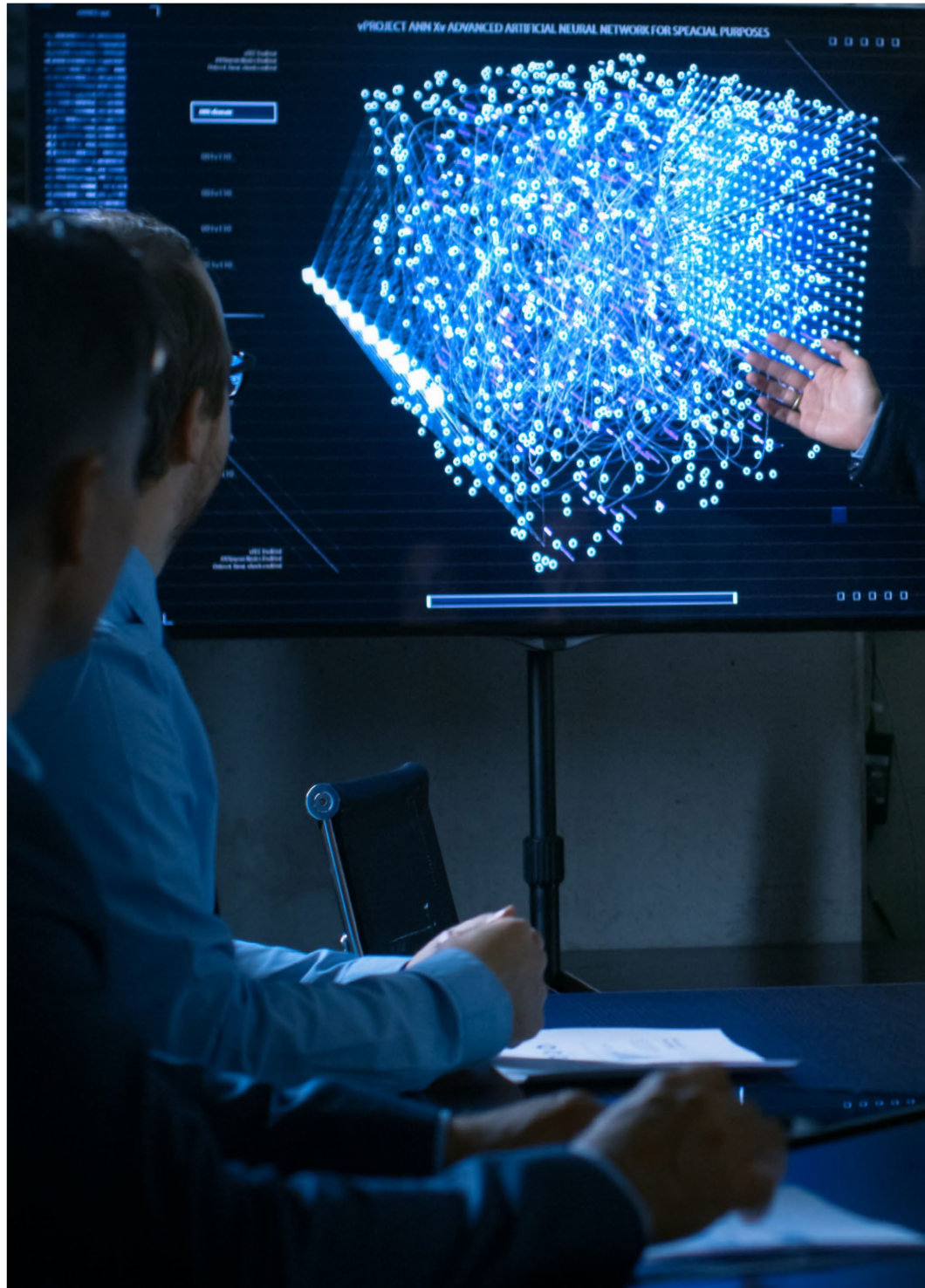
Hanwha Vision continues to accelerate research and development efforts to sustain its competitive edge.

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

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

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

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



6



GLOBAL NETWORK

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

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

Scan this QR to view [Hanwha Vision's full global network](#), including subsidiaries and offices.



Scan this QR to view [Global Hanwha Vision Innovation and Technology Experience Center \(HITE\)](#).



HIGH-TECH POWERED IN VIETNAM

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

Scan this QR to view Hanwha Vision's competitiveness in Manufacturing & SCM.



Scan this QR to view Hanwha Vision's competitiveness in Quality.



7

END-TO-END CYBERSECURITY

Hanwha Vision offers cybersecurity with the industry's highest levels of cybersecurity policy with secure boot/OS/storage, a signed firmware/open platform app, secure JTAG and more. Hanwha Vision established its own device certificate issuing system to embed certificates into the product not only in the development progress but also in the manufacturing progress.

- Hanwha Vision Private Device Certification Root CA
- UL CAP, Secure element(FIPS 140-3 level3, CC EAL 6+)
- 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, Secure element(FIPS 140-3 level3, CC EAL 6+) applied products.

SUSTAINABILITY

As a responsible member of society, Hanwha Vision seeks to provide fundamental solutions to solve economic, environmental, and social problems and lead positive change through our business, technology, and social activities. Along with this, based on the philosophy of 'Together, further,' Hanwha Vision is deeply committed to responsible management, integrating Environmental, Social, and Governance (ESG) principles across its operations. This includes stringent environmental compliance such as RoHS, ISO 14001, green purchasing, fostering a positive social impact by respecting employee rights, promoting work-life balance, collaborating with SMEs, and upholding product quality and worker safety such as ISO 9001 and ISO 45001.

Scan this QR to learn more about [Hanwha Vision's ESG initiatives](#).



Scan this QR to view [Hanwha Vision's Sustainability Report](#).



Tailored Solutions for EVERY INDUSTRY

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 and cloud integration, to create solutions precisely tuned to your industry's specific needs. From retail to finances and data center, our comprehensive portfolio offers intelligent insights and robust protection.



Data Center

Proven solutions for safer and smarter data centers



Logistics

Robust solutions for safer logistic management, and across general manufacturing operations



Retail

Solutions to create more secure, efficient, and insightful retail operations



Scan this QR to access detailed information on [Hanwha Vision's innovative security solutions for vertical markets](#).



Scan this QR to discover [Hanwha Vision's proven impact across diverse industries](#).



Oil & Gas

Robust, specialized, and reliable solutions to ensure critical safety and operational excellence in oil & gas



Finance

Advanced, intelligent video solutions securing financial institutions, protecting assets, and optimizing operations



General Manufacturing

Solutions optimizing manufacturing safety, streamlining production, and boosting operational efficiency



Transportation

Solutions enabling safer, smarter and more efficient transportation



Healthcare

Intelligent video solutions enhance patient safety, optimize operations, and secure healthcare facilities effectively



Residential Complex

Enhancing residential safety, managing access, and fostering secure, harmonious community living for complexes



Education

Creating safer learning environments, enhancing campus security, and optimizing operations for education



City Surveillance

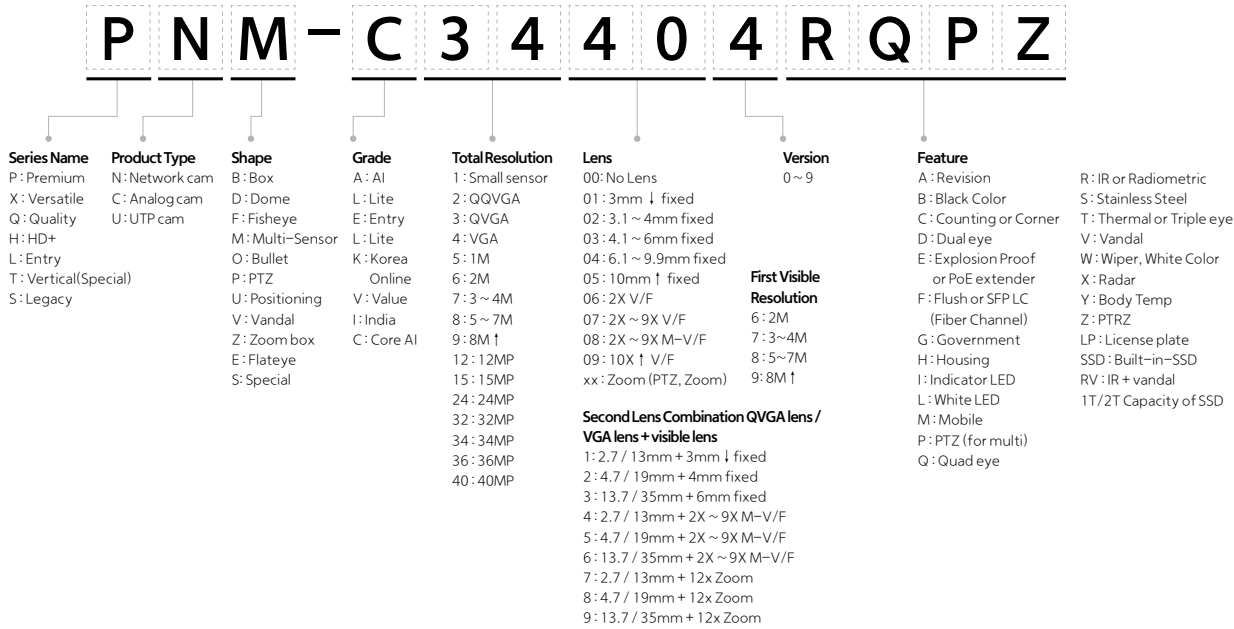
Empowering smarter cities with advanced surveillance for public safety, traffic management, and urban insights

PRODUCT NAMING RULE

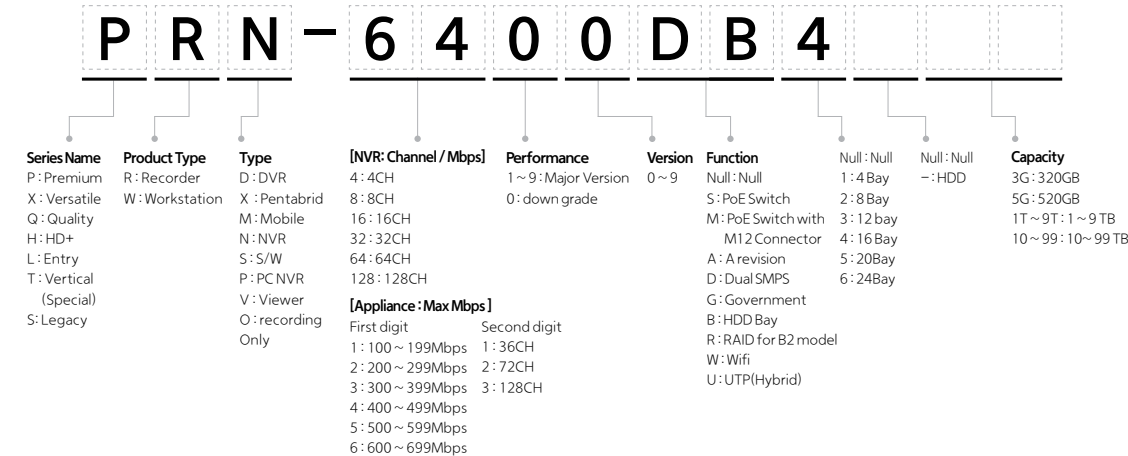
Hanwha Vision's product naming system provides a systematic and clear structure to identify our extensive range of security solutions—from advanced cameras to robust video recorders and all accompanying peripherals. Each product name acts as a concise identifier, composed of specific codes that instantly convey its core attributes. For more information, see: [Product Naming Rule](#).



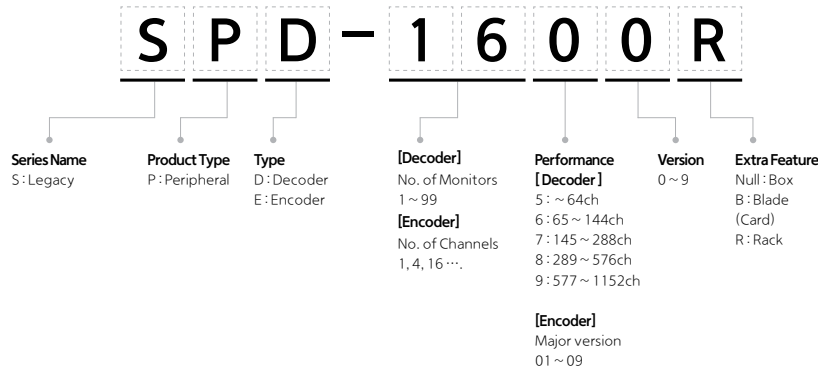
Camera



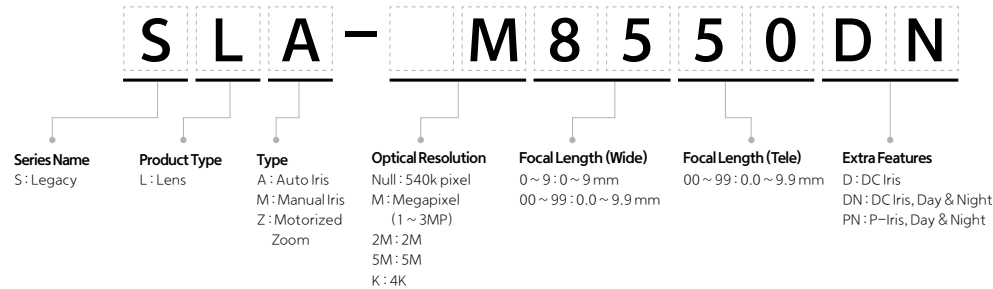
Recorder



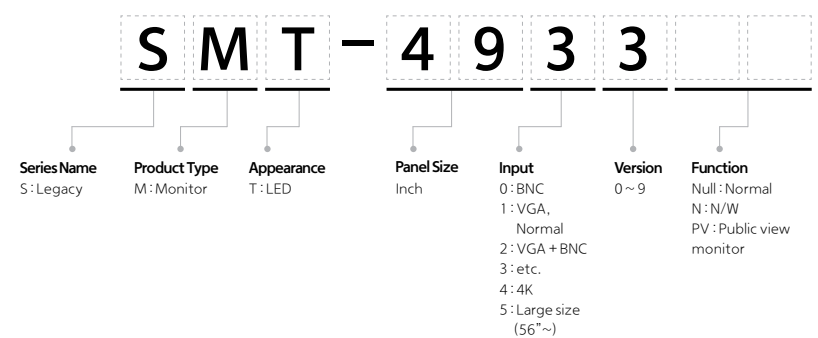
Decoder/Encoder



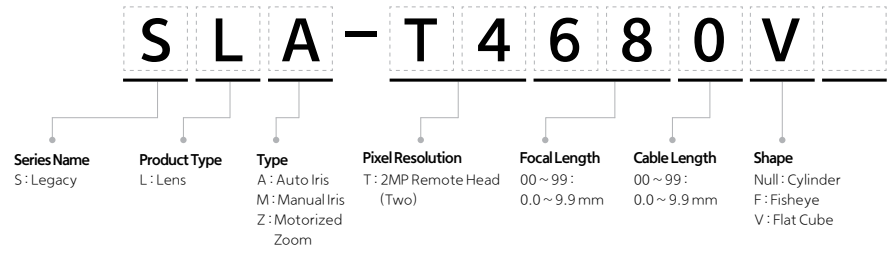
Lens : CS Mount



Monitor



Lens : Remote Head



AI Camera

12

X Core



XNV-A9084R
8MP AI IR Vandal Dome Camera

X Core



XND-A9084RV
8MP AI IR Dome Camera

X Core



XNO-A9084R
8MP AI IR Bullet Camera

X Core



XNV-A8084R
5MP AI IR Vandal Dome Camera

X Core



XND-A8084RV
5MP AI IR Dome Camera

Imaging Device	1/1.8" CMOS		1/1.8" CMOS		1/1.8" CMOS		1/2.8" CMOS		
Resolution / Max. Frame Rate	8MP / 30fps		5MP / 30fps		8MP / 30fps		5MP / 30fps		
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		4.4~9.3mm(2.1x) 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: 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: 99° (Wide) ~ 31° (Tele) V: 71° (Wide) ~ 23° (Tele) D: 133° (Wide) ~ 39° (Tele)		
Pan / Tilt / Rotate Range	0° ~ 360° / 0° ~ 75° / 0° ~ 355°		0° ~ 360° / 0° ~ 75° / 0° ~ 355°		0° ~ 360° / 0° ~ 90° / 0° ~ 355°		0° ~ 360° / 0° ~ 75° / 0° ~ 355°		
IR Viewable Length	WiseIR 40m(131.23ft)								
Day & Night	Auto(ICR)								
Wide Dynamic Range	120dB								
Digital Noise Reduction	WiseNR II (Based on AI engine), SSNRV								
Digital Image Stabilization	Support								
Analytics	Classified object type: Person/Face/Vehicle/License plate Attributes: Person(Gender, Clothing top/bottom Color, Bag), Face(Age, Gender, Mask, Glasses), Vehicle(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	-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		-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	IP66/IP67, NEMA4X, IK10, NEMA-TS 2(2.2.7.2~8, 2.2.8, 2.2.9)		IP52, IK10		IP66/IP67, NEMA4X, IK10, NEMA-TS 2(2.2.7.2~8, 2.2.8, 2.2.9)			IP52, IK10	
Power Consumption	PoE: Max. 11.2W, typical 8.4W, 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. 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"), 1,220g(2.69lb)		ø 160x118mm(6.30x4.65"), 1,020g(2.25lb)		ø 93.4x276.6mm(3.68x10.89"), 1,630g(3.59lb)		ø 160x118mm(6.30x4.65"), 1,210g(2.67lb)		
							ø 160 x118mm(6.30x4.65"), 1,010g(2.23lb)		

AI Camera

13

X Core



XNO-A8084R
5MP AI IR Bullet Camera

X Plus



XNV-9083RZ
8MP AI IR Vandal Dome Camera

X Plus



XNV-9083R
8MP AI IR Vandal Dome Camera

X Plus



XND-9083RV
8MP AI IR Dome Camera

X Plus



XNO-9083R
8MP AI IR Bullet Camera

Imaging Device	1/2.8" CMOS		1/1.8" CMOS		
Resolution / Max. Frame Rate	5MP / 30fps		8MP / 30fps		
Min. Illumination	Color: 0.04Lux(F1.3, 1/30sec, 30IRE) BW: 0.004Lux(F1.3, 1/30sec, 30IRE) 0Lux(IR LED on)	Color: 0.03Lux(F1.3, 1/30sec, 30IRE) BW: 0.003Lux(F1.3, 1/30sec, 30IRE) 0Lux(IR LED on)	Color: 0.04Lux(F1.3, 1/30sec, 30IRE) BW: 0.004Lux(F1.3, 1/30sec, 30IRE) 0Lux(IR LED on)		
Video Out	USB: Micro USB Type C 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)	3.3~9.3mm(2.8x) motorized varifocal		4.4~9.3mm(2.1x) motorized varifocal		
Angular Field of View	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)		
Pan / Tilt / Rotate Range	0° ~ 360° / 0° ~ 75° / 0° ~ 355°	Remote adjustment(Max. 200cycles) 0° ~ 350° / 0° ~ 85° / 0° ~ 340°	0° ~ 360° / 0° ~ 85° / 0° ~ 355°	0° ~ 360° / 0° ~ 85° / 0° ~ 355°	0° ~ 360° / 0° ~ 90° / 0° ~ 355°
IR Viewable Length	WiseIR 40m(131.23ft)	WiseIR 15m(49.21ft) 30m(98.43ft) wall installation scenario	WiseIR 50m(164.04ft)	WiseIR 50m(164.04ft)	WiseIR 50m(164.04ft)
Day & Night	Auto(ICR)				
Wide Dynamic Range	120dB				
Digital Noise Reduction	WiseNR II(Based on AI engine), SSNR V				
Digital Image Stabilization	Support				
Analytics	Classified object type: Person/Face/Vehicle/ License plate Attributes: Person(Gender, Clothing top/bottom color, Bag), Face(Age, Gender, Mask, Glasses), Vehicle(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		Classified object type: Person/Face/Vehicle/License plate Attributes: Vehicle(Car/Bus/Truck/Motorcycle/Bicycle, Color) 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, Fog detection, Audio detection, Sound classification, Shock detection, Virtual area(Appear/Disappear)		
Business Intelligence	Based on AI engine: People/Vehicle/Crowd 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 *Support extra alarm I/O via optional I/O box	–	2 configurable I/O ports DC 12V output(Max. 50mA)		
Audio I/O	Selectable(mic in/line in) / Line out	Support via optional I/O box	Selectable(mic in/line in) / Line out		
Video Compression	H.265/H.264: Main/Baseline/High, MJPEG		H.265/H.264, MJPEG		
WiseStream	WiseStream(Based on AI engine)		Manual(Sea area) WiseStream III (Based on AI engine)		
Streaming	Unicast(20 users) / Multicast/Multiple streaming (Up to 5 profiles, 3 virtual channel support)		Up to 10 profiles, 3 virtual channel support		
Edge Storage	Micro SD/SDHC/SDXC 1 slot 1TB		Micro SD/SDHC/SDXC 2 slot Max. 1TB(512GBx2)		
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) +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 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, NEMA4X, IK10, NEMA-TS 2(2.2.7.2-8, 2.2.8, 2.2.9)		IP66/IP67/IP6K9K, NEMA4X, IK10+	IP66/IP67/IP6K9K, NEMA4X, IK10+	IP52, IK10
Power Consumption	PoE: Max. 9.4W, typical 7.0W Support Wisepower, Power monitoring (Max./Current/Avg.), ECO mode		PoE+: Max 22.5W, typical 12.1W	PoE+: Max 22.5W, typical 17.9W 12VDC: Max 20.0W, typical 15.6W Power redundancy failover	PoE+: Max 22.5W, typical 17.9W 12VDC: Max 20.0W, typical 15.6W Power redundancy failover
Product Dimensions / Weight	ø 93.4x276.6mm(3.68x10.89"), 1,630g(3.59lb)		ø 180x135mm(ø 7.09x5.31"), 2,000g(4.41 lb)	ø 180x125mm(ø 7.09x4.92"), 1,900g(4.19 lb)	ø 160x125mm(ø 6.30x4.92"), 1,600g(3.53 lb)
					ø 93.4x298.4mm(ø 3.68x11.75"), 2,200g(4.85 lb)

AI Camera

X Plus



XNF-9013RV
12MP AI Fisheye Camera

X Plus



XNV-8083RZ
6MP AI IR Vandal Dome Camera

X Plus



XNV-8083Z
6MP AI Vandal Dome Camera

X Plus



XNV-8083R
6MP AI IR Vandal Dome Camera

Imaging Device	1/2.3" 12MP CMOS	1/1.8" CMOS	1/1.8" CMOS	1/1.8" CMOS
Resolution / Max. Frame Rate	12MP / 30fps	6MP / 30fps	6MP / 30fps	6MP / 30fps
Min. Illumination	Color: 0.39Lux (F2.2, 1/30sec) BW: 0Lux(IR LED on)	Color: 0.03Lux(F1.3, 1/30sec, 30IRE) BW: 0.003Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.03Lux(F1.3, 1/30sec, 30IRE) BW: 0.003Lux(F1.3, 1/30sec, 30IRE)	Color: 0.04Lux(F1.3, 1/30sec, 30IRE) BW: 0.004Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)
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
Focal Length (Zoom Ratio)	1.08mm fixed focal	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: 187° / V: 187° / D: 187°	H: 113° (Wide) ~ 47° (Tele), V: 58° (Wide) ~ 26° (Tele), D: 138° (Wide) ~ 54° (Tele)		
Pan / Tilt / Rotate Range	Lens Rotation	Remote adjustment(Max. 200cycles) 0° ~ 350° / 0° ~ 85° / 0° ~ 340°	0° ~ 350° / 0° ~ 85° / 0° ~ 340°	0° ~ 350° / 0° ~ 85° / 0° ~ 340°
IR Viewable Length	Wise IR, PoE : 8m(26.25ft), PoE+ : 13m(42.65ft)	15m(49.21ft) 30m(98.43ft) wall installation scenario	–	WiseIR 50m(164.04ft)
Day & Night	Auto(ICR)			
Wide Dynamic Range	extremeWDR (120dB)			
Digital Noise Reduction	WiseNR II (Based on AI engine), SSNRV			
Digital Image Stabilization	–	Support	Support	Support
Analytics	Classified object type: Person/Face/Vehicle/ License plate Analytics events based on AI engine: Object detection, Virtual line (Crossing/Direction), Virtual area (Loitering/Intrusion/Enter/Exit) Support DetectionShot 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 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, Audio detection, Sound classification, Shock detection, Virtual area (Appear/Disappear)	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, Tampering, Fog detection, Audio detection, Sound classification, Shock 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, 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	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	–	–	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
Video Compression	H.265/H.264, MJPEG			
WiseStream	Manual(5ea area), WiseStream III (Based on AI engine)			
Streaming	Up to 10 profiles	Unicast(20 users) / Multicast / Multiple streaming (Up to 10 profiles, 3 virtual channel support)		
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	–40°C ~ +60°C (–40°F ~ +140°F) / Less than 95% RH POE+ Mode 55° C (Hysteresis 5° C)	–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, IK10, NEMA4X	IP66/IP67/IP6K9K, NEMA4X, IK10+	IP66/IP67/IP6K9K, NEMA4X, IK10+	IP66/IP67/IP6K9K, NEMA4X, IK10+
Power Consumption	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	PoE+: Max 22.5W, typical 12.1W	PoE+: Max 22.5W, typical 12.1W	PoE+: Max 22.5W, typical 17.9W 12VDC: Max 20.0W, typical 15.6W Power redundancy failover
Product Dimensions / Weight	ø 160x72mm (ø 6.23x2.84"), 1,170g (2.58lb)	ø 180x135mm (ø 7.09x5.31"), 2000g(4.41 lb)	ø 180x135mm (ø 7.09x5.31"), 2000g(4.41 lb)	ø 180x125mm (ø 7.09x4.92"), 1900g(4.19 lb)

AI Camera

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

Imaging Device	1/1.8" CMOS		
Resolution / Max. Frame Rate	6MP/30fps		
Min. Illumination	Color: 0.06Lux(F1.7, 1/30sec, 30IRE) BW: 0.006Lux(F1.7, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.06Lux(F1.7, 1/30sec, 30IRE) BW: 0.006Lux(F1.7, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.04Lux(F1.3, 1/30sec, 30IRE) BW: 0.004Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)
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
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: 23° (Wide) ~ 8° (Tele) D: 49° (Wide) ~ 17° (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°
IR Viewable Length	WiseIR 70m (229.66ft)	WiseIR 70m(229.66ft)	WiseIR 50m(164.04ft)
Day & Night	Auto (ICR)		
Wide Dynamic Range	extremeWDR (120dB)		
Digital Noise Reduction	WiseNR II (Based on AI engine), SSNRV		
Digital Image Stabilization	Support		
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		
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
Video Compression	H.265 / H.264, MJPEG	H.265 / H.264, MJPEG	H.265 / H.264, MJPEG
WiseStream	Manual(5ea area), WiseStream III (Based on AI engine)		
Streaming	Up to 10 profiles, 3 virtual channel support	Unicast(20 users) / Multicast / Multiple streaming(Up to 10 profiles, 3 virtual channel support)	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/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
Certification	IP66, IP67, IP6K9K, NEMA4X, IK10+	IP52, IK10	IP66/IP67, 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 20.0W, typical 15.6W Power redundancy failover	PoE+: Max 22.5W, typical 17.9W 12VDC: Max 20.0W, typical 15.6W Power redundancy failover
Product Dimensions / Weight	ø 180x125mm(ø 7.09x4.92"), 1,900g(4.19 lb)	ø 160x125mm(ø 6.30x4.92"), 1,600g(3.53 lb)	ø 93.4x298.4mm(ø 3.68x11.75"), 2,200g(4.85 lb)

AI Camera

16

X Plus



XNV-6083RZ
2MP AI IR Vandal Dome Camera

X Plus



XNV-6083Z
2MP AI Vandal Dome Camera

X Plus



XNO-6123R
2MP AI IR Bullet Camera

X Plus



XNV-6083R
2MP AI IR Vandal Dome Camera

X Plus



XND-6083RV
2MP AI IR Dome Camera

Imaging Device	1/2.8" CMOS				
Resolution / Max. Frame Rate	2MP / 120fps				
Min. Illumination	Color: 0.03Lux(F1.3, 1/30sec, 30IRE) BW: 0.003Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.01Lux(F1.4, 1/30sec, 30IRE) BW: 0.001Lux(F1.4, 1/30sec, 30IRE), 30/25fps	Color: 0.03Lux(F1.6, 1/30sec, 30IRE) BW: 0.003Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps	Color: 0.01Lux(F1.4, 1/30sec, 30IRE) BW: 0.001Lux(F1.4, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps	Color: 0.01Lux(F1.4, 1/30sec, 30IRE) BW: 0.001Lux(F1.4, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps
Video Out	CVBS: 1.0 Vp-p / 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	2.8~12mm(4.3x) 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
Angular Field of View	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: 55°(Wide)~5°(Tele) V: 35°(Wide)~3°(Tele) D: 62°(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°~350° / 0°~85° / 0°~340°	0°~350° / 0°~85° / 0°~340°	—	0°~360° / -45°~80° / 0°~355°	0°~360° / -45°~85° / 0°~355°
IR Viewable Length	15m(42.91ft)	—	WiseIR 90m (295.28ft)	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), SSNRV				
Digital Image Stabilization	Support				
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	—	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)
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), WiseStreamIII(Based on AI engine)				
Streaming	Up to 10 profiles	Up to 10 profiles	Up to 10 profiles	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 (512GBx2)				
Application Programming Interface	ONVIF Profile S/G/T/M, SUNAPI(HTTP API) Hanwha Vision Open Platform				
Operating Temperature / Humidity	-50°C~+55°C(-58°F~+131°F) * Start up should be done at above -30°C 0~100%RH(condensing) Humidity control with AIR vent	-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	-25°C~+50°C(-13°F~+122°F) 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, IK10, NEMA4X, NEMA-TS 2(2.2.8, 2.2.9)		IP52, IK10
Power Consumption	PoE+: Max 22.5W, typical 11.0W	PoE+: Max 17.0W, typical 11.0W	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 17.0W, typical 11.0W
Product Dimensions / Weight	ø 180x135mm(ø 7.09x5.31"), 2,000g(4.41 lb)	ø 180x135mm(ø 7.09x5.31"), 2,000g(4.41 lb)	ø 93.4x298.4mm(ø 3.68x11.75"), 2,300g(5.07 lb)	ø 180x125mm(ø 7.09x4.92"), 1,900g(4.19 lb)	ø 160x125mm(ø 6.30x4.92"), 1,600g(3.53 lb)

AI Camera

17

X Plus



XNO-6083R
2MP AI IR Bullet Camera

X Plus



XNB-6003
2MP AI Box Camera

X Core



XNV-C9083R
8MP AI IR Vandal Dome Camera

X Core



XND-C9083RV
8MP AI IR Dome Camera

Imaging Device	1/2.8" CMOS		1/2.8" CMOS		1/1.8" CMOS		1/1.8" CMOS	
Resolution / Max. Frame Rate	2MP/120fps		2MP / 120fps		8MP / 30fps		8MP / 30fps	
Min. Illumination	Color: 0.01Lux(F1.4, 1/30sec, 30IRE) BW: 0.001Lux(F1.4, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps		Color: 0.007Lux(F1.2, 1/30sec, 30IRE) BW: 0.0007Lux(F1.2, 1/30sec, 30IRE), 30/25fps		Color: 0.04Lux(F1.3, 1/30sec, 30IRE) BW: 0.004Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)		Color: 0.04Lux(F1.3, 1/30sec, 30IRE) BW: 0.004Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)	
Video Out	CVBS: 1.0 Vp-p / 75 Ω 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	
Focal Length (Zoom Ratio)	2.8~12mm(4.3x) motorized varifocal		-		4.4~9.3mm(2.1x) motorized varifocal		4.4~9.3mm(2.1x) 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: 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 50m (164.04ft)		-		WiseIR 40m (131.23ft)		WiseIR 40m (131.23ft)	
Day & Night	Auto(ICR)							
Wide Dynamic Range	extremeWDR (150dB)		extremeWDR(120dB)					
Digital Noise Reduction	WiseNR II (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: 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, 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/built-in mic) / Line out					
Video Compression	H.265/H.264, MJPEG							
WiseStream	Manual(5ea area), WiseStreamIII (Based on AI engine)							
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/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		-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		-10°C ~ +50°C (14°F ~ +122°F) 0~100% RH (condensing) Humidity control with AIR vent	
Certification	IP66, IP67, NEMA4X, IK10		-		IP66, IP67, NEMA4X, IK10		IP52, IK08	
Power Consumption	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 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	ø 93.4x298.4mm (ø 3.68x11.75"), 2,200g(4.85 lb)		81(W)x67(H)x165(D)mm(3.19x2.64x6.48"), 880g(1.94 lb)		ø 160 x 118mm (ø 6.30x4.65"), 1,450g(3.20 lb)		ø 160 x 118mm (ø 6.30x4.65"), 1,350g(2.98 lb)	

AI Camera

X Core



XNO-C9083R
8MP AI IR Bullet Camera

X Core



XNV-C8083R
6MP AI IR Vandal Dome Camera

X Core



XND-C8083RV
6MP AI Dome Camera

X Core



XNO-C8083R
6MP AI IR Bullet Camera

X Core



XNV-C7083R
4MP AI IR Vandal Dome Camera

Imaging Device	1/1.8" CMOS		1/1.8" CMOS		1/1.8" CMOS	1/2.8" CMOS	
Resolution / Max. Frame Rate	8MP / 30fps		6MP / 30fps		6MP / 30fps		4MP / 60fps
Min. Illumination	Color: 0.04Lux(F1.3, 1/30sec, 30IRE) BW: 0.004Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)		Color: 0.04Lux(F1.3, 1/30sec, 30IRE) BW: 0.004Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)		Color: 0.04Lux(F1.3, 1/30sec, 30IRE) BW: 0.004Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)		Color: 0.038Lux(F1.4, 1/30sec, 30IRE) BW: 0.0038Lux(F1.4, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps
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		4.4~9.3mm(2.1x) 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: 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)
Pan / Tilt / Rotate	-		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), 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: 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/built-in mic) / Line out						
Video Compression	H.265 / H.264, MJPEG						
WiseStream	Manual(5ea area), WiseStreamIII(Based on AI engine)						
Streaming	Up to 10 profiles, 3 virtual channel support						
Edge Storage	micro SD/SDHC/SDXC 2slot Max. 1TB (512GB * 2)	micro SD/SDHC/SDXC 1slot 512GB	micro SD/SDHC/SDXC 1slot 512GB	micro SD/SDHC/SDXC 2slot Max. 1TB (512GBx2)	micro SD/SDHC/SDXC 1slot 512GB		
Application Programming Interface	ONVIF Profile S/G/T/M, SUNAPI(HTTP API) Hanwha Vision Open Platform						
Operating Temperature / Humidity	-40°C~-+55°C(-40°F~-+131°F) * Start up should be done at above -20°C 0~100%RH(condensing) Humidity control with AIR vent			-10°C~-+50°C(14°F~-+122°F) / 0~100% RH(condensing) Humidity control with AIR vent		-40°C~-+55°C(-40°F~-+131°F) * Start up should be done at above -20°C 0~100%RH(condensing) Humidity control with AIR vent	
Certification	IP66, IP67, NEMA4X, IK10	IP66, IP67, NEMA4X, IK10	IP52, IK08	IP66, IP67, NEMA4X, IK10	IP66, IP67, NEMA4X, IK10		
Power Consumption	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
Product Dimensions / Weight	ø93.4x276.6mm(ø 3.68x10.89"), 1,640g(3.62 lb)	ø 160x118mm(ø 6.30x4.65"), 1,450g(3.20 lb)	ø 160x118mm(ø 6.30x4.65"), 1,350g(2.98 lb)	ø 93.4x276.6mm(ø 3.68x10.89"), 1,640g(3.62 lb)	ø 160x118mm(ø 6.30x4.65"), 1,450g(3.20 lb)		

AI Camera

X Core



XND-C7083RV
4MP AI IR Dome Camera

X Core



XNO-C7083R
4MP AI IR Bullet Camera

X Core



XNV-C6083R
2MP AI IR Vandal Dome Camera

X Core



XND-C6083RV
2MP AI Dome Camera

X Core



XNO-C6083R
2MP AI IR Bullet Camera

Imaging Device	1/2.8" CMOS		1/2.8" CMOS		1/2.8" CMOS
Resolution / Max. Frame Rate	4MP / 60fps		4MP / 60fps		2MP / 60fps
Min. Illumination	Color: 0.038Lux(F1.4, 1/30sec, 30IRE) BW: 0.0038Lux(F1.4, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps		Color: 0.038Lux(F1.4, 1/30sec, 30IRE) BW: 0.0038Lux(F1.4, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps		Color: 0.01Lux(F1.4, 1/30sec, 30IRE) B/W: 0.001Lux(F1.4, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps
Video Out	Micro SD/SDHC/SDXC 2slot Max. 1TB (512GBx2)		Micro SD/SDHC/SDXC 2slot Max. 1TB (512GBx2)		USB: Micro USB Type B, 1280x720 for installation
Focal Length (Zoom Ratio)	2.8~10mm(3.6x) motorized varifocal		2.8~10mm(3.6x) motorized varifocal		2.8~12mm(4.3x) motorized varifocal
Angular Field of View	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: 120° (Wide) ~ 27° (Tele) V: 63° (Wide) ~ 15° (Tele) D: 143° (Wide) ~ 32° (Tele)
Pan / Tilt / Rotate	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	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				
Alarm I/O	2 configurable I/O ports				
Audio I/O	Selectable (mic in/line in) / Line out				
Video Compression	H.265 / H.264, MJPEG				
WiseStream	Manual (Sea area), WiseStream III (Based on AI engine)				
Streaming	Up to 10 profiles, 3 virtual channel support				
Edge Storage	micro SD/SDHC/SDXC 1slot 512GB				
Application Programming Interface	ONVIF Profile S/G/T/M, SUNAPI (HTTP API) Hanwha Vision Open Platform				
Operating Temperature / Humidity	-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			-10°C ~ +50°C (14°F ~ +122°F) 0 ~ 100% RH (condensing) Humidity control with AIR vent
Certification	IP52, IK08	IP66, IP67, NEMA4X, IK10	IP66, IP67, NEMA4X, IK10	IP52, IK08	IP66, IP67, NEMA4X, IK10
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 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"), 1350g (2.98 lb)	ø 93.4x276.6mm (ø 3.68x10.89"), 1640g (3.62 lb)	ø 160x118mm (ø 6.30x4.65"), 1450g (3.20 lb)	ø 160x118mm (ø 6.30x4.65"), 1350g (2.98 lb)	ø 93.4x276.6mm (ø 3.68x10.89"), 1640g (3.62 lb)

AI Camera

20

AI PTZ Plus



XNP-C9310R
8MP 31x AI IR PTZ Camera

AI PTZ Plus



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

AI PTZ Plus



XNP-C9253R
8MP 25x AI IR PTZ Camera

AI PTZ Plus



XNP-C9253
8MP 25x AI PTZ Camera

AI PTZ Plus



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

Imaging Device	1/1.8" CMOS	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS
Resolution / Max. Frame Rate	8MP / 30fps	8MP / 30fps	8MP / 30fps	8MP / 30fps	6MP / 30fps
Min. Illumination	Color: 0.06 Lux(F1.36, 1/30sec, 30IRE) BW: 0.006 Lux(F1.36, IR LED Off), 0Lux (IR LED On)	Color: 0.1Lux(F1.6, 1/30sec) BW: 0Lux(IR LED On)	Color: 0.1Lux(F1.6, 1/30sec) BW: 0Lux(IR LED On)	Color: 0.1Lux(F1.6, 1/30sec) BW: 0.01Lux(F1.6, 1/30sec)	Color: 0.1Lux(F1.6, 1/30sec) BW: 0Lux(IR LED On)
Video Out	–	–	–	–	–
Focal Length (Zoom Ratio)	6.91 ~ 214.7mm(31x) zoom (digital 32x, total 992x zoom) Support Quick zoom	5 ~ 150mm(30x) zoom (digital 32x, total 960x zoom)	5 ~ 125mm(25x) zoom (digital 32x, total 800x zoom)	5 ~ 125mm(25x) zoom (digital 32x, total 800x zoom)	5 ~ 150mm(30x) zoom (digital 32x, total 960x zoom)
Angular Field of View	H: 60.6° (Wide) ~ 2.59° (Tele) V: 35.1° (Wide) ~ 1.45° (Tele) D: 68.8° (Wide) ~ 2.97° (Tele)	H: 57.42° (Wide) ~ 2.19° (Tele) V: 33.54° (Wide) ~ 1.25° (Tele)	H: 57.42° (Wide) ~ 2.71° (Tele) V: 33.54° (Wide) ~ 1.55° (Tele)	H: 57.42° (Wide) ~ 2.71° (Tele) V: 33.54° (Wide) ~ 1.55° (Tele)	H: 57.42° (Wide) ~ 2.19° (Tele) V: 33.54° (Wide) ~ 1.25° (Tele)
Pan / Tilt / Rotate	360° Endless / –20° ~ 90°				
IR Viewable Length	WiseIR 250m(820ft)	WiseIR 200m (656.17ft)	WiseIR 200m(656.17ft)	–	WiseIR 200m(656.17ft)
Day & Night	Auto (ICR)/Color/BW/Schedule				
Wide Dynamic Range	extremeWDR(120dB)				
Digital Noise Reduction	WiseNR II (Based on AI engine), 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	–				
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), WiseStreamIII(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	–40°C~+55°C(–58°F ~ +131°F)/ +74°C(165°F)(Max) based on NEMA TS–2(2.2.7) * Start up should be done at above –30°C 0~100%RH(Condensing) Humidity control with AIR vent			–40°C~+55°C(–58°F ~ +131°F)/ +74°C(165°F)(Max) based on NEMA TS–2(2.2.7) * Start up should be done at above –30°C 0~100%RH(Condensing) Humidity control with AIR vent	
Certification	IP66/IP67, IK10, NEMA4X 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)	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)

AI Camera

21

AI PTZ Plus



XNP-C8253R
6MP 25x AI IR PTZ Camera

AI PTZ Plus



XNP-C8253
6MP 25x AI PTZ Camera

AI Focus PTZ



XNP-C7310R
4MP 31x AI IR PTZ Camera

AI PTZ Plus



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

AI PTZ Plus



XNP-C6403R
2MP 40x AI IR PTZ Camera

AI PTZ Plus



XNP-C6403
2MP 40x AI PTZ Camera

Imaging Device	1/2.8" CMOS	1/2.8" CMOS	1/1.8" CMOS	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS
Resolution / Max. Frame Rate	6MP / 30fps	6MP / 30fps	4MP /60fps	2MP / 60fps	2MP / 60fps	2MP / 60fps
Min. Illumination	Color: 0.1Lux(F1.6, 1/30sec) BW: 0Lux(IR LED On)	Color: 0.1Lux(F1.6, 1/30sec) BW: 0.01Lux(F1.6, 1/30sec)	Color: 0.04 Lux (F1.36, 1/30sec, 30IRE) BW: 0.004 Lux(F1.36, IR LED Off), 0Lux (IR LED On)	Color: 0.05Lux(F1.6, 1/30sec) BW: 0Lux(IR LED On)	Color: 0.05Lux(F1.6, 1/30sec) BW: 0Lux(IR LED On)	Color: 0.05Lux(F1.6, 1/30sec) BW: 0.005Lux(F1.6, 1/30sec)
Video Out	—	—	—	—	—	—
Focal Length (Zoom Ratio)	5~125mm(25x) zoom (digital 32x, total 800x zoom)	5~125mm(25x) zoom (digital 32x, total 800x zoom)	6.91 ~ 214.7mm(31x) zoom (digital 32x, total 992x zoom) Support Quick zoom	4.25~170mm(40x) zoom (digital 32x, total 1280x zoom)	4.25~170mm(40x) zoom (digital 32x, total 1280x zoom)	4.25~170mm(40x) zoom (digital 32x, total 1280x zoom)
Angular Field of View	H: 57.42° (Wide) ~ 2.71° (Tele) V: 33.54° (Wide) ~1.55° (Tele)	H: 57.42° (Wide) ~ 2.71° (Tele) V: 33.54° (Wide) ~1.55° (Tele)	H: 59.4° (Wide) ~ 2.54° (Tele) V: 35.8° (Wide) ~ 1.49° (Tele)	H: 65.66° (Wide) ~1.88° (Tele) V: 39.4° (Wide) ~1.09° (Tele)	H: 65.66° (Wide) ~1.88° (Tele) V: 39.4° (Wide) ~1.09° (Tele)	H: 65.66° (Wide) ~1.88° (Tele) V: 39.4° (Wide) ~1.09° (Tele)
Pan / Tilt / Rotate	360° Endless / ~20° ~ 90°					
IR Viewable Length	WiseIR 200m(656.17ft)	—	WiseIR 300m(984ft)	WiseIR 200m (656.17ft)	WiseIR 200m (656.17ft)	—
Day & Night	Auto (ICR)/Color/BW/Schedule					
Wide Dynamic Range	extremeWDR (120dB)	extremeWDR (120dB)	extremeWDR (120dB)	extremeWDR(150dB)	extremeWDR(150dB)	extremeWDR(150dB)
Digital Noise Reduction	WiseNR II(Based on AI engine), SSNR V					
Digital Image Stabilization	Support(built-in gyro sensor)					
Analytics	Classified object type: Person/Face/Vehicle/License plate Attributes: Vehicle (Type:car/bus/truck/motorcycle/bicycle) Support 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, Shock detection, Virtual area(Appear/Disappear) * Audio detection, Sound classification(Via optional I/O box SPM-4210)					
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), WiseStreamIII (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	-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 sheet		-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 sheet		-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 sheet	
Certification	IP66, IK10, NEMA4X, NEMA-TS 2(2.2.7, 2.2.8, 2.2.9)		IP66, IP67, 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	Typical 23W, Max 62W	Typical 26W, Max 46W	Typical 24W, Max 40W	Typical 24W, Max 25.5W
Product Dimensions / Weight	ø 158x293.3mm(6.22x11.55") / 3200g(7.05lb)	ø 158x293.3mm(6.22x11.55") / 3200g(7.05lb)	ø 188x264.9mm(ø 7.40x10.47") / 4400g (9.70lb)	ø 184.9x318.8mm(7.28x12.55") / 5600g (12.34lb)	ø 158x293.3mm(6.22x11.55") / 3200g(7.05lb)	Ø 158x293.3mm (6.22x11.55") / 3,200g (7.05lb)

AI Camera

22



PNV-A9082RZ
8MP AI IR Vandal Camera



PND-A9082RV
8MP AI IR Dome Camera



PNO-A9092R
8MP AI IR Bullet Camera



PNO-A9082R
8MP AI IR Bullet Camera



PNV-A7082RZ
4MP AI IR Vandal Camera

Imaging Device	1/1.2" CMOS				1/1.8" CMOS
Resolution / Max. Frame Rate	8MP/ 30fps				4MP/ 60fps
Min. Illumination	Color: 0.03Lux(F1.67, 1/30sec, 30IRE), BW: 0.003Lux(F1.67, 1/30sec, 30IRE)				Color: 0.03Lux(F1.3, 1/30sec, 30IRE) BW: 0.003Lux(F1.3, 1/30sec, 30IRE)
Video Out	–	USB: Micro USB Type C for installation			–
Focal Length (Zoom Ratio)	5.9~13.3mm(2.25x) motorized varifocal		15~50mm(3.33x) motorized varifocal	5.9~13.3mm(2.25x) motorized varifocal	4.6~9.35mm(2.0x) motorized varifocal
Angular Field of View	H: 109° (Wide) ~ 49° (Tele) V: 59° (Wide) ~ 27° (Tele) D: 128° (Wide) ~ 56° (Tele)		H: 42.7° (Wide) ~ 12.6° (Tele) V: 24.1° (Wide) ~ 7.2° (Tele) D: 49° (Wide) ~ 14.3° (Tele)	H: 109° (Wide) ~ 49° (Tele) V: 59° (Wide) ~ 27° (Tele) D: 128° (Wide) ~ 56° (Tele)	H: 105° (Wide) ~ 47° (Tele) V: 58° (Wide) ~ 27° (Tele) D: 128° (Wide) ~ 55° (Tele)
Pan / Tilt / Rotate Range	Remote adjustment(Max. 3,650cycles) 0° ~ 350° / 0° ~ 85° / -95° ~ 95°	0° ~ 360° / 0° ~ 85° / 0° ~ 355°			Remote adjustment(Max. 3,650cycles) 0° ~ 350° / 0° ~ 85° / -95° ~ 95°
IR Viewable Length	WiseIR 30m(98.43ft)	WiseIR 60m(196.85ft)	WiseIR 100m(328.08ft)	WiseIR 60m(196.85ft)	WiseIR 30m(98.43ft)
Day & Night	Auto(ICR)				
Wide Dynamic Range	120dB				
Digital Noise Reduction	WiseNR II (Based on AI engine), SSNRV				
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, Support Re-ID(Person) 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, Sound classification(To be released) 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, DC 12V output(Max. 50mA)			–
Audio I/O	– / –	Selectable(mic in/line in/built-in 3mics)/ Line out	Selectable(mic in/line in)/Line Out	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 2slots 2TB(1TBx2), Max. 1TB x 1 slot				
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) / 0~100% RH(Condensing) +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	-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) / 0~100% RH(Condensing) +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/IP67/IP6K9K, NEMA4X, IK11, NEMA-TS 2(2.2.7.2~8, 2.2.8, 2.2.9)	IP52, IK10	IP66/IP67, NEMA4X, IK10, NEMA-TS 2(2.2.7.2~8, 2.2.8, 2.2.9)		IP66/IP67/IP6K9K, NEMA4X, IK11, NEMA-TS 2(2.2.7.2~8, 2.2.8, 2.2.9)
Power Consumption	PoE: Max. 17.5W, typical 11.0W Support Wisepower – Power monitoring(Max./Current/ Avg.)	PoE: Max. 19.2W, typical 11.0W, 12VDC: Max. 16.5W, typical 9.5W Support Wisepower – Power monitoring(Max./Current/ Avg.) – Power Redundance Failover			PoE: Max. 15.0W, typical 9.0W Support Wisepower – Power monitoring(Max./Current/ Avg.)
Product Dimensions / Weight	ø 180x135mm(ø 7.09x5.31"), 2,100g(4.63lb)	ø 160x125mm(ø 6.30x4.92"), 1,550g(3.42lb)	ø 93.4x298.4mm(ø 3.68x11.75"), 2,180g(4.81lb)	ø 93.4x298.4mm(ø 3.68x11.75"), 2,060g(4.54lb)	ø 180x135mm(ø 7.09x5.31"), 2,100g(4.63lb)

AI Camera

23



PND-A7082RV
4MP AI IR Dome Camera



PNO-A7082R
4MP 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

Imaging Device	1/1.8" CMOS			
Resolution / Max. Frame Rate	4MP/60fps		8MP / 30fps	
Min. Illumination	Color: 0.03Lux(F1.3, 1/30sec, 30IRE), BW: 0.001Lux(F1.3, 1/30sec, 30IRE)		Color: 0.05Lux(F1.6, 1/30sec), BW: 0.005Lux(F1.6, 1/30sec), 0Lux(IR LED on)	
Video Out	USB: Micro USB Type C 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)	4.6~9.35mm(2.0x) motorized varifocal		4.5~10mm(2.2x) motorized varifocal	
Angular Field of View	H: 105° (Wide) ~ 47° (Tele) V: 58° (Wide) ~ 27° (Tele) D: 128° (Wide) ~ 55° (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 Range	0° ~ 360° / 0° ~ 85° / 0° ~ 355°	0° ~ 360° / 0° ~ 90° / 0° ~ 180°	-	0° ~ 360° / -45° ~ 85° / 0° ~ 355°
IR Viewable Length	WiseIR 60m(196.85ft)		WiseIR 30m(98.42ft)	WiseIR 30m(98.42ft)
Day & Night	Auto(ICR)			
Wide Dynamic Range	120dB			
Digital Noise Reduction	WiseNR II (Based on AI engine), SSNRV			
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, Support Re-ID(Person) 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, Sound classification(To be released) Analytics events: Defocus detection, Tampering, Shock detection, Audio detection		Classified object type: Person/Face/Vehicle/License plate Attributes: Person(Gender/Color/Bag), Face(Age/Gender/Mask/Glasses), Vehicle(Type: car/bus/truck/motorcycle/bicycle and Color) Support BestShot per object Analytics events based on AI engine: Object detection, Virtual line*(Crossing/Direction), Virtual area*(Loitering/Intrusion/Enter/Exit), Face mask detection, Social distancing detection, Slip&Fall detection Analytics events: Defocus detection, Motion detection, Tampering, Audio detection, Sound classification, Shock detection, Virtual area(Appear/Disappear) Support WiseDetector for Adding custom objects *Some of the video analytics only works with people and vehicle detection	
Business Intelligence	Based on AI engine: People/Vehicle/Crowd counting, Queue management, Heatmap		People/Vehicle/Crowd counting, Queue management, Heatmap based on AI engine	
Alarm I/O	2 configurable I/O ports, DC 12V output(Max. 50mA)		2 configurable I/O ports, DC 12V output(Max. 50mA)	
Audio I/O	Selectable(mic in/line in/built-in 3mics)/ Line out	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/High, MJPEG	
WiseStream	WiseStream(Based on AI engine)		Manual(5ea area), WiseStream II, WiseStreamIII(using AI engine)	
Streaming	Unicast(20 users) / Multicast, Multiple streaming(Up to 5 profiles, 3 virtual channel support)		Unicast(6 users) / Multicast Multiple streaming(up to 6 profiles)	
Edge Storage	Micro SD/SDHC/SDXC 2slots 2TB(1TBx2), Max. 1TB x 1 slot		Micro SD/SDHC/SDXC 2slots 512GB	
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 - WiseAI application included(Analytic based on AI, Business intelligence)	
Operating Temperature / Humidity	-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) 0~100% RH(Condensing) +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	-50°C ~ +55°C (-58°F ~ +131°F) / 0~90%RH(Non-condensing) * Start up should be done at above -30° C	-50°C ~ +55°C (-58°F ~ +131°F) / 0~90%RH(Non-condensing) * Start up should be done at above -30° C
Certification	IP52, IK10	IP66/IP67, NEMA4X, IK10, NEMA-TS 2(2.2.7.2-8, 2.2.8, 2.2.9)	IP66/IP67, IK10, NEMA4X	IP66/IP67/IP6K9K, IK10+, NEMA4X
Power Consumption	PoE: Max. 15.0W, typical 9.0W, 12VDC: Max. 12.7W, typical 7.8W Support Wisepower - Power monitoring(Max./Current/ Avg.) - Power Redundance Failover		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
Product Dimensions / Weight	ø 160x125mm(ø 6.30x4.92"), 1,550g(3.42lb)	ø 93.4x298.4mm(ø 3.68x11.75"), 2,060g(4.54lb)	Ø 91.0x368.6mm (3.58" x 14.51") (Without sunshield), 2480g (5.47lb)	Ø 180x125mm(7.09x4.92"), 1900g (4.19lb)

AI Camera

24



PNO-A9311R
8MP AI IR Bullet Camera



PND-A9081RF
8MP AI IR Dome Camera



PNO-A6081R
2MP AI IR Bullet Camera



PNV-A6081R
2MP AI IR Vandal Dome Camera



PND-A6081RV
2MP AI IR Dome Camera



PND-A6081RF
2MP AI IR Dome Camera

Imaging Device	1/1.8" CMOS		1/2" CMOS			
Resolution / Max. Frame Rate	4K / 30fps		2MP / 120fps			
Min. Illumination	Color: 0.075Lux(F1.36, 1/30sec, 30IRE) BW: 0.0075Lux(F1.36, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.05Lux(F1.6, 1/30sec) BW: 0.005Lux(F1.6, 1/30sec), 0Lux(IR LED on)	Color: 0.007Lux(F1.3, 1/30sec, 30IRE) B/W: 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 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	4.38~9.33mm(2.13x) 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: 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°		
IR Viewable Length	WiseIR 70m(229.66ft)	WiseIR 30m(98.42ft)	WiseIR 40m(131.23ft)			
Day & Night	Auto(ICR)					
Wide Dynamic Range	120dB					
Digital Noise Reduction	WiseNR II (Based on AI engine), SSNRV					
Digital Image Stabilization	Support					
Analytics	Classified object type: Person/Face/Vehicle/License plate Attributes: Person(Gender, Color and Bag), Face(Age, Gender, Mask and Glasses), Vehicle(Type: car/bus/truck/motorcycle/bicycle and Color) Support BestShot per object Analytics events based on AI engine : Object detection, Virtual line*(Crossing/Direction), Virtual area*(Loitering/Intrusion/Enter/Exit), Face mask detection, Social distancing detection, Slip&Fall detection Analytics events : Defocus detection, Motion detection, Tampering, Audio detection, Sound classification, Shock detection, Virtual area(Appear/Disappear) Support WiseDetector for Adding custom objects *Some of the video analytics only works with people and vehicle detection					
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/built-in mic) line out		Selectable (mic in/line in) / line out
Video Compression	H.265/H.264: Main/High, MJPEG					
WiseStream	Manual(5ea area), WiseStream II, WiseStreamIII(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	-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	-25°C ~ +50° C (-13° F ~ +122°F) 0~90% RH(Non-condensing)	-50°C ~ +55°C (-58°F ~ +131°F) / 0~90% RH(Non-condensing) * Start up should be done at above -30°C		-25°C ~ +50°C (-13°F ~ +122°F) / 0~90% RH(Non-condensing)	
Certification	IP66/IP67, IK10, NEMA4X	IP52, IK10, Plenum rate	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 20.00W, typical 16.00W 12VDC: Max 17.70W, typical 14.00W	PoE+: Max 19.50W, typical 16.00W 12VDC: Max 17.00W, typical 13.50W			
Product Dimensions / Weight	Ø 136.2x358.7mm(ø 5.36x14.12") (Without sunshield), 3200g(7.05lb) * backbox: ø 160mm(ø 6.30")	Ø 205x163mm(8.07x4.92"), 1950g(4.30lb)	Ø 91.0x368.6mm(3.58" x 14.51") (Without sunshield), 2480g(5.47lb)	Ø 180x125mm(7.09x4.92"), 1900g(4.19lb)	Ø 160x125mm(6.30x4.92"), 1600g(3.53lb)	Ø 205x163mm(8.07x4.92"), 1950g(4.30lb)

AI Camera

25



PNB-A9092
8MP AI Box Camera



PNB-A9082
8MP AI Box Camera



PNB-A9001
8MP AI Box Camera



PNB-A6001
2MP AI Box Camera

Imaging Device	1/1.2" CMOS		1/1.8" CMOS		1/2" CMOS	
Resolution / Max. Frame Rate	8MP / 30fps				2MP / 120fps	
Min. Illumination	Color: 0.03Lux(F1.67, 1/30sec, 30IRE), BW: 0.003Lux(F1.67, 1/30sec, 30IRE)		Color: 0.03Lux(F1.2, 1/30sec) B/W: 0.003Lux(F1.2, 1/30sec)		Color: 0.006Lux(F1.2, 1/30sec,30IRE) B/W : 0.0006Lux(F1.2, 1/30sec,30IRE), 30/25fps	
Video Out	USB: Micro USB Type C 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)	15~50mm(3.33x) motorized varifocal	5.9~13.3mm(2.25x) motorized varifocal	-			
Angular Field of View	H: 42.7° (Wide) ~12.6° (Tele) V: 24.1° (Wide) ~ 7.2° (Tele) D: 49° (Wide) ~14.3° (Tele)	H: 109° (Wide) ~ 49° (Tele) V: 59° (Wide) ~ 27° (Tele) D: 128° (Wide) ~ 56° (Tele)	-			
Pan / Tilt / Rotate	-					
IR Viewable Length	-					
Day & Night	Auto(ICR)					
Wide Dynamic Range	120dB					
Digital Noise Reduction	SSNRV, 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, Support Re-ID(Person) 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, Sound classification(To be released) Analytics events: Defocus detection, Tampering, Shock detection, Audio 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), 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			
Business Intelligence	Based on AI engine: People/Vehicle/Crowd counting, Queue management, Heatmap					
Alarm I/O	2 configurable I/O ports, DC 12V output(Max. 50mA) *Support extra alarm I/O via optional I/O box		2 configurable I/O ports, DC 12V output(Max. 50mA)			
Audio I/O	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/High, MJPEG			
WiseStream	WiseStream(Based on AI engine)		Manual(5ea area), WiseStream II, WiseStream III(using AI engine)			
Streaming	Unicast(20 users) / Multicast, Multiple streaming (Up to 5 profiles, 3 virtual channel support)		Unicast(6 users) / Multicast Multiple streaming(Up to 6 profiles)			
Edge Storage	Micro SD/SDHC/SDXC 2slots 2TB(1TBx2), Max. 1TB x 1slot		Micro SD/SDHC/SDXC 2slots 512GB			
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 - WiseAI application included(Analytic based on AI, Business intelligence)			
Operating Temperature / Humidity	-10°C ~ +55°C(14°F ~ +131°F) / 0~95% RH		-10°C ~ +55°C(+14°F ~ +131°F) / 0~90%RH(Non-condensing)			
Certification	-					
Power Consumption	PoE: Max. 13.6W, typical 12.7W, 12VDC: Max. 11.5W, typical 10.9W, Support Wisepower - Power monitoring(Max./Current/Avg.) - Power Redundance Failover		PoE+: Max 16.50W, typical 12.50W 12VDC: Max 13.50W, typical 10.80W		PoE+: Max 17.5W, Typ 13.7W 12VDC: Max 14W, Typ 10.6W	
Product Dimensions / Weight	82(W)x76(H)x190(D)mm(3.23x2.99x7.48"), 1020g(2.25lb)	82(W)x76(H)x190(D)mm(3.23x2.99x7.48"), 900g(1.98lb)	81x67x165mm(3.19x2.64x6.48"), 880g(1.94lb)		81x67x165mm(3.19x2.64x6.48"), 880g(1.94lb)	

AI Camera

26



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



PNM-C19183RVTP
3CH + 1CH PTZ AI Camera

NEW



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

NEW



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

NEW

Imaging Device	1/2.8" CMOS x 4CH	1/2.8" CMOS x 1CH PTZ	1/2.8" CMOS x 3CH	1/2.8" CMOS	1/1.8" CMOS x 4CH	1/2.8" CMOS x 4CH
Resolution / Max. Frame Rate	8MP/20fps	2MP / 60fps	5MP/30fps	4MP/30fps	8MP / 20fps	4MP / 30fps
Min. Illumination	Color: 0.1Lux(F1.5, 1/30sec, 30IRE) BW: 0.01Lux(F1.5, 1/30sec, 30IRE), 0Lux(IR LED on)		Color: 0.08Lux(F2.0, 1/30sec, 30IRE) BW: 0.008Lux(F2.0, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.05Lux(F2.0, 1/30sec, 30IRE) BW: 0.005Lux(F2.0, 1/30sec, 30IRE)	Color: 0.07Lux(F1.3, 1/30sec, 30IRE) BW: 0Lux(IR LED on)	Color: 0.1Lux(F1.6, 1/30sec, 30IRE) BW: 0.01Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)
Video Out	-		USB: Micro USB Type C for installation			
Focal Length (Zoom Ratio)	3.3~5.7mm(1.7x) motorized varifocal	4.25~170mm(40x) zoom (digital 32x, total 1280x zoom)	2.4mm fixed focal	5.42~98.29mm(18x) zoom(digital 32x, total 576x zoom)	4.38~9.33mm(2.13x) motorized varifocal	3.2~10.2mm(3.2x) 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: 123° / V: 91° / D: 159°	H: 53.1°(Wide)~3.39°(Tele) V: 31.75°(Wide)~1.98°(Tele) D: 60.8°(Wide)~3.92°(Tele)	H: 113°(Wide)~47°(Tele) V: 58°(Wide)~26°(Tele) D: 138°(Wide)~54°(Tele)	H: 93°(Wide)~29°(Tele) V: 53°(Wide)~17°(Tele) D: 111°(Wide)~34°(Tele)
Pan / Tilt / Rotate	0°~360° / 9°~65° / 0°~90° * Tilt angle with Shield IR: 40°~65°	0°~360° / ~20°~90°	-	-	Remote adjustment(Max. 200cycles) 0°~ 360° / 30°~ 90° / 0°~ 90°	Remote adjustment(Max. 200cycles) 0°~ 360° / 30°~ 90° / 0°~ 90°
IR Viewable Length	20m (65.62ft)	WiselR 200m (656.17ft)	15m(49.21ft)	-	WiselR: PoE++ 25m(82.02ft) / PoE+ 15m(49.21ft)	WiselR: PoE++ 20m(65.62ft) / PoE+ 15m(49.21ft)
Day & Night	Auto (ICR)					
Wide Dynamic Range	120dB					
Digital Noise Reduction	WiseNR II (Based on AI engine), SSNR V					
Digital Image Stabilization	-	Support	-	Support	-	
Analytics	Classified object type: Person/Face/Vehicle/License plate Attributes: Vehicle(car/bus/truck/motorcycle/bicycle) Support BestShot Analytics events based on AI engine: Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit) Analytics events: Defocus detection, Motion detection, Tampering, Virtual area(Appear/Disappear)	Analytics events: Motion detection, Fog detection, Tampering, Virtual area(Loitering/Intrusion/Enter/Exit/Virtual line(Crossing/Direction), Support Audio detection, Sound classification via optional I/O box(SPM-4210)	Classified object type: Person/Face/Vehicle/License plate Attributes: Vehicle(car/bus/truck/motorcycle/bicycle, Color), Person(Clothing top/bottom color) Support BestShot Analytics events based on AI engine: Object detection, Virtual line (Crossing/Direction), Virtual area (Loitering/Intrusion/Enter/Exit), Motion detection Analytics events: Tampering, Virtual area(Appear/Disappear) *Audio detection via optional I/O box	Classified object type: Person/Face/Vehicle/License plate Attributes: Vehicle(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, Virtual area (Appear/Disappear), Fog detection *Audio detection via optional I/O box	Classified object type: Person/Face/Vehicle/License plate Attributes: Vehiclecar/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, Audio detection, Sound classification, Virtual area(Appear/Disappear) * Audio detection, Sound classification(with NW I/O box SPM-4210)	
Business Intelligence	-	-	Based on AI engine: People/Vehicle counting, Queue management, Heatmap		-	-
Alarm I/O	-	-	* Support Alarm I/O via optional SPM-4210 I/O box		2 configurable I/O ports *Support extra alarm I/O via optional SPM-4210 I/O box	
Audio I/O	-	-	* Support Alarm I/O 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/Baseline/High, MJPEG		H.265/H.264: Main/High, MJPEG	
WiseStream	Manual(Sea area), WiseStream II, WiseStream III(Based on AI engine)		Manual(Sea area), WiseStream(Based on AI engine)	Manual(Sea area), WiseStream II	Manual(Sea area), 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(5 users per channel)/ Multicast/Multiple streaming (Up to 4 profiles per channel)	Unicast(5 users) / Multicast / Multiple streaming(Up to 3 profiles)	Unicast(10 users) / Multicast Multiple streaming(Up to 3 profiles per channel)	
Edge Storage	Micro SD/SDHC/SDXC 2slot 1TB(512GBx2)		Micro SD/SDHC/SDXC 2slot Max. 2TB(1TBx2)		Micro SD/SDHC/SDXC 2slot Max. 2TB(1TBx2)	
Application Programming Interface	ONVIF Profile S/T, SUNAPI (HTTP API) Hanwha Vision Open Platform		ONVIF Profile S/T/G/M, SUNAPI (HTTP API) Hanwha Vision Open Platform		ONVIF Profile S/T/M, 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°C 0~95% RH(non-condensing)		-40°C ~ +55°C (-40°F ~ +131°F) * Start up should be done at above -35°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 -35°C 0~100%RH(Condensing) Humidity control with Air vent	
Certification	IP66, IK10, NEMA4X		IP66, IK10, NEMA4X		IP66, IK10, NEMA4X	
Power Consumption	HPoE: Max 64.00W, typical 45.00W		PoE++: Max 42W, typical 32W		PoE+: Max 25.5W, typical 22.0W, PoE++: Max 33.0W, typical 22.0W	
Product Dimensions / Weight	ø 140x110.2mm(ø 5.51x4.34"), 875g(1.93 lb)		ø 251.4x212mm(ø 9.9x8.35") / 4,800g(10.58lb)		ø 250x114.2mm(ø 9.84x4.50"), 2820g(6.22 lb)	ø 250x114.2mm(ø 9.84x4.50"), 2730g(6.02 lb)

AI Camera

27



PNM-C32083RVQ
4MP x 4ch AI Camera



PNM-C16083RVQ
4MP x 4ch AI Camera



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



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



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

Imaging Device	1/2.8" CMOS x 4CH			1/2.8" CMOS x 2CH	
Resolution / Max. Frame Rate	[AI On] 8MP Max. 15fps [AI Off] 8MP Max 20fps	4MP / 30fps	4MP/15fps	6MP / 15fps	2MP / 30fps
Min. Illumination	Color: 0.1Lux(F1.5, 1/30sec, 30IRE) BW: 0.01Lux(F1.5, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.075Lux(F1.5, 1/30sec, 30IRE) BW: 0.0075Lux(F1.5, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.05Lux(F1.2, 1/30sec, 30IRE) BW: 0.005Lux(F1.2, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.16lux(F1.67, 1/30sec, 30IRE) BW: 0.016lux(F1.67, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.035lux(F2.2, 1/30sec, 30IRE) BW: 0.0035lux(F2.2, 1/30sec, 30IRE), 0Lux(IR LED on)
Video Out	USB: Micro USB Type B, 1280x720 for installation		USB: Micro USB Type B, 2592x1520 for installation	USB: micro USB Type B, 1280x720 for installation	
Focal Length (Zoom Ratio)	3.3~5.7mm(1.7x) motorized varifocal		3.19mm fixed focal	3.54~6.69mm(1.9x) motorized varifocal	3~6mm(2x) motorized varifocal
Angular Field of View	H: 109° (Wide) ~ 56° (Tele) V: 55° (Wide) ~ 31° (Tele) D: 136° (Wide) ~ 65° (Tele)	H: 100° (Wide) ~ 53° (Tele) V: 54° (Wide) ~ 30° (Tele) D: 125° (Wide) ~ 61° (Tele)	H: 97° / V: 54° / D: 116°	H: 96° (Wide) ~ 47° (Tele) V: 51° (Wide) ~ 26° (Tele) D: 113° (Wide) ~ 54° (Tele)	H: 107° (Wide) ~ 56° (Tele) V: 57° (Wide) ~ 31° (Tele) D: 126° (Wide) ~ 64° (Tele)
Pan / Tilt / Rotate	0° ~ 360° / 0° ~ 65° / 0° ~ 90°		0 ~ 360° (100° per CH) / 0 ~ 75° / 0 ~ 90°	0° ~ 355° / 0° ~ 78° / 0° ~ 180°	
IR Viewable Length	WiseIR 15m(49.21ft)		20m(65.62ft)	25m (82ft)	
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/Face/Vehicle/License plate Attributes: Vehicle(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)	Classified object type: Person/Face/Vehicle/License plate Attributes: Vehicle (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(car/bus/truck/motorcycle/bicycle) Support BestShot Analytics events based on AI engine: Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit) Analytics events: Defocus detection, Motion detection, Tampering, Audio detection, Sound classification, Virtual area(Appear/Disappear)		
Business Intelligence	-				
Alarm I/O	2 configurable I/O ports * Support extra alarm I/O via optional SPM-4210 I/O box		2 configurable I/O ports * Support extra alarm I/O via optional SPM-4210 I/O box	Support Alarm via optional SPM-4210 I/O box	
Audio I/O	Selectable(mic in/line in) / Line out		Selectable(mic in/line in) / -	Audio in/out via optional SPM-4210 I/O box	
Video Compression	H.265/H.264: Main/High, MJPEG		H.265 / H.264, MJPEG	H.265 / H.264, MJPEG	
WiseStream	Manual(Sea area), WiseStream III (Based on AI engine)		Manual(Sea area), WiseStream II , WiseStream III(Based on AI engine)	WiseStream II , WiseStream III (Based on AI engine)	
Streaming	Up to 3 profiles per channel		Up to 4 profiles per channel	Unicast (10 users) / Multicast, 5 profiles per channel	
Edge Storage	Micro SD/SDHC/SDXC 2slot Max. 1TB(512GBx2)		Micro SD/SDHC/SDXC 2slot Max. 1TB(512GBx2)	micro SD/SDHC/SDXC 1slot Max. 512GB	
Application Programming Interface	ONVIF Profile S/T/M SUNAPI(HTTP API) Hanwha Vision Open Platform			ONVIF Profile S/T, SUNAPI(HTTP API) Open platform	
Operating Temperature / Humidity	-40°C ~ +55°C (-40°F ~ +131°F) * Start up should be done at above -35°C 0~100%RH(Condensing) Humidity control with Air vent			-40°C~-+55°C(-40°F ~ +131°F) / 0~100%RH(Condensing) Humidity control with Air vent	
Certification	IP66, NEMA4X, IK10		IP66, NEMA4X, IK09	IP66, IP67, NEMA4X, IK10	
Power Consumption	PoE+: Max 25.5W, typical 22.0W		-	PoE+: Max 21W, typical 16.5W	PoE+: Max 20W, typical 15.5W
Product Dimensions / Weight	ø 250x114.2mm(ø 9.84x4.50"), 2820g(6.22 lb)	ø 250x114.2mm(ø 9.84x4.50"), 2730g(6.02 lb)	ø 200x80mm(ø 7.87x3.15"), 1380g(3.04 lb)	215(W)x135(D)x93.2(H)mm(8.46"x5.31"x3.67"), 1330g	



PNM-C9022RV
8MP AI Panoramic Camera



PNM-C20000QB
2MP AI Remote Head Camera

Imaging Device	1/2.8" CMOS x 4CH	1/2" CMOS
Resolution / Max. Frame Rate	2MP / 20fps x 4CH	2MP / 120fps
Min. Illumination	Color: 0.1Lux(F2.0, 1/30sec) BW: 0.01Lux(F2.0, 1/30sec), 0Lux(IR LED on)	Color: 0.006Lux(F1.2, 1/30sec,30IRE) B/W: 0.0006Lux(F1.2, 1/30sec,30IRE), 30/25fps
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)	2.8mm fixed focal(x4)	—
Angular Field of View	H: 209° / V: 60°	—
Pan / Tilt / Rotate	0° ~ 360° / 0° ~ 65° / —	—
IR Viewable Length	20m (65.62ft)	—
Day & Night	Auto (ICR)	
Wide Dynamic Range	extremeWDR (120dB)	
Digital Noise Reduction	WiseNR II (Based on AI engine), SSNR V	
Digital Image Stabilization	—	Support
Analytics	Classified object type: Person/Face/Vehicle/License plate Attributes: Vehicle(Type: car/bus/truck/motorcycle/bicycle) Support BestShot Analytics events based on AI engine: Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit) Analytics events: Defocus detection, Motion detection, Tampering, Audio detection, Sound classification, Virtual area(Appear/Disappear)	Classified object type: Person/Face/Vehicle/License plate Attributes: Person(Gender/Color/Bag), Face(Age/ Gender/Mask/Glasses), Vehicle(car/bus/truck/motorcycle/ bicycle and Color) Support BestShot per object Analytics events based on AI engine: Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/ Intrusion/Enter/Exit), Face mask detection, Social distancing detection, Slip&Fall detection Analytics events: Defocus detection, Motion detection, Tampering, Audio detection, Sound classification, Shock detection, Virtual area(Appear/Disappear) Support WiseDetector for Adding custom objects
Business Intelligence	—	People/Vehicle/Crowd counting, Queue management, Heatmap based on AI engine
Alarm I/O	2 configurable I/O ports	2 configurable I/O ports, DC 12V output(Max. 50mA)
Audio I/O	Selectable (mic in/line in) / Line out	Line in / Line out
Video Compression	H.265 / H.264, MJPEG	Selectable (mic in/line in/built-in mic) /line out
WiseStream	Manual(5ea area), WiseStream II, WiseStreamIII(Based on AI engine)	Manual(5ea area), WiseStream II, WiseStreamIII(using AI engine)
Streaming	Unicast(20 users) / Multicast, Multiple streaming (Up to 3 profiles, 2 virtual channel support)	Unicast(6 users) / Multicast, Multiple streaming(Up to 6 profiles)
Edge Storage	microSD/SDHC/SDXC 2slotMax.1TB(512GB*2)	Micro SD/SDHC/SDXC 2slots 512GB
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 — 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	−10°C ~ +55°C(+14°F ~ +131°F) / 0~90%RH(Non-condensing)
Certification	IP66, IK10, NEMA4X	—
Power Consumption	PoE+: Max 24.5W, typical 11.3W 12VDC: Max 22.0W, typical 10.4W Power redundancy failover	PoE+: Max 17.5W, Typ 13.7W 12VDC: Max 14W, Typ 10.6W
Product Dimensions / Weight	ø 253x170mm(9.96"x6.69"), 2900g(6.39lb)	81x67x165mm(3.19x2.64x6.48"), 880g(1.94lb)



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-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	8MP / 30fps	5MP / 30fps	2MP / 30fps	5MP / 30fps
Min. Illumination	Color: 0.06Lux(F1.6, 1/30sec, 30IRE) BW: 0.006Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.07Lux(F1.6, 1/30sec, 30IRE) BW: 0.007Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.04Lux (F1.6, 1/30sec) BW: 0.004Lux (F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.05Lux(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		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			3.0mm 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° (Wide) ~ 32° (Tele) V: 55° (Wide) ~ 18° (Tele) D: 119° (Wide) ~ 36° (Tele)	H: 100° / V: 73° / D: 129°
Pan / Tilt / Rotate	0° ~ 350° / −35° ~ 70° / 0° ~ 355°	0° ~ 350° / −35° ~ 70° / 0° ~ 355°	0° ~ 350° / −35° ~ 70° / 0° ~ 355°	0° ~ 355° / −30° ~ 75° / 0° ~ 355°
IR Viewable Length	30m(98.42ft)		40m(131.23ft)	25m (82.02ft)
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(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(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			
Audio I/O	Selectable(mic in/line in) / Line out			
Video Compression	H.265/H.264: Main/High, MJPEG			
WiseStream	Manual(5ea area), WiseStreamIII(Based on AI engine)			
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			
Operating Temperature / Humidity	−30°C~+55°C(−22°F~+131°F) 0~100%RH(Condensing) * Start up should be done at above −30°C Humidity control with AIR vent	−30°C~+55°C(−22°F~+131°F) 0~100%RH(Condensing) * Start up should be done at above −30°C Humidity control with AIR vent	−40°C~+55°C(−40°F ~ +131°F) / 0~100%RH(Condensing) Humidity control with AIR vent	−30°C ~ +55°C(−22°F ~ +131°F) / 0~100% RH(Condensing) * Start up should be done at above −30° C Humidity control with Air vent
Certification	IP66, IK10, NEMA4X			IP66, IK10
Power Consumption	PoE: Max 12W, typical 5.3W		PoE: Max 9.8W, typical 4.0W	PoE: Max 8.1W, typical 4.0W
Product Dimensions / Weight	ø 140x110.2mm(ø 5.51x4.34"), 875g(1.93 lb)		ø 140x110.2mm(ø 5.51x4.34"), 850g(1.87 lb)	ø 120x97.5mm(ø 4.72x3.84"), 579g(1.27 lb)



QNV-C9011R
8MP IR Vandal Dome Camera



QNV-C8012
5MP Vandal Dome Camera



QNV-C8011R
5MP IR Vandal Dome Camera

Imaging Device	1/2.8" CMOS		
Resolution / Max. Frame Rate	8MP / 30fps	5MP / 30fps	5MP / 30fps
Min. Illumination	Color: 0.03Lux(F1.6, 1/30sec, 30IRE) BW: 0.003Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.05Lux(F2.0, 1/30sec, 30IRE) BW: 0.005Lux(F2.0, 1/30sec, 30IRE)	Color: 0.03Lux(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		
Focal Length (Zoom Ratio)	3.0mm fixed focal	2.4mm fixed focal	3.0mm fixed focal
Angular Field of View	H: 108° / V: 59° / D: 127°	H: 123° / V: 91° / D: 159°	H: 100° / V: 73° / D: 129°
Pan / Tilt / Rotate	0°~350° / -35°~70° / 0°~355°		
IR Viewable Length	20m(65.62ft)	-	20m(65.62ft)
Day & Night	Auto (ICR)		
Wide Dynamic Range	120db		
Digital Noise Reduction	WiseNR II (Based on AI engine), SSNRV		
Digital Image Stabilization	-		
Analytics	Classified object type: Person/Vehicle Attributes: Person, Vehicle(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	-		
Audio I/O	-		
Video Compression	H.265/H.264: Main/High, MJPEG		
WiseStream	Manual(Sea area), WiseStreamIII(Based on AI engine)		
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		
Operating Temperature / Humidity	-40°C~-+55°C(-40°F~-+131°F) / 0~100%RH(Condensing) * Start up should be done at above -30°C Humidity control with AIR vent vapor control		
Certification	IP66, IK10, NEMA4X		
Power Consumption	PoE: Max 8.5W, typical 4.9W	PoE: Max 7W, typical 4.9W	Max. 8.5W, typical 4.9W
Product Dimensions / Weight	ø 110x77mm(ø 4.33x3.03"), 522g(1.15 lb)		



QNO-C9083R
8MP IR Bullet Camera



QNO-C8083R
5MP IR Bullet Camera



QNO-C6083R
2MP IR Bullet Camera



QNO-C8013R
5MP AI IR Bullet Camera



QNO-C8023R
5MP AI IR Bullet Camera

Imaging Device	1/2.8" CMOS				
Resolution / Max. Frame Rate	8MP/30fps	5MP/30fps	2MP/30fps	5MP / 30fps	5MP / 30fps
Min. Illumination	Color: 0.06Lux(F1.6, 1/30sec, 30IRE) BW: 0.006Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.07Lux(F1.6, 1/30sec, 30IRE) BW: 0.007Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.04Lux(F1.6, 1/30sec) BW: 0.004Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.05Lux(F1.6, 1/30sec, 30IRE) BW: 0.005Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.05Lux(F1.6, 1/30sec, 30IRE) BW: 0.005Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)
Video Out	USB: Micro USB Type B, 1280x720 for installation				
Focal Length (Zoom Ratio)	3.2~10.2mm(3.2x) motorized varifocal			3.0mm fixed focal	4.0mm 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: 100° / V: 73° / D: 129°	H: 80° / V: 59° / D: 102°
Pan / Tilt / Rotate	0°~360° / 0°~100° / 0°~360°				
IR Viewable Length	30m(98.42ft)	30m(98.42ft)	40m(131.23ft)	25m(82.02ft)	30m (98.42ft)
Day & Night	Auto(ICR)				
Wide Dynamic Range	120dB				
Digital Noise Reduction	SSNRV, WiseNR II (Based on AI engine)				
Digital Image Stabilization	-				
Analytics	Classified object type: Person/Vehicle Attributes: Person, Vehicle(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(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) 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				
Audio I/O	Selectable(mic in/line in) / Line out				
Video Compression	H.265/H.264: Main/High, MJPEG				
WiseStream	Manual(Sea area), WiseStreamIII(Based on AI engine)				
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				
Operating Temperature / Humidity	-30°C~-+55°C(-22°F~-+131°F) / 0~100%RH(Condensing) * Start up should be done at above -30°C Humidity control with AIR vent		-40°C~-+55°C(-40°F ~+131°F) / 0~100%RH(Condensing) Humidity control with AIR vent	-30°C~-+60°C(-22°F ~+140°F)(MAX) / 0~100% RH(Condensing) * Start up should be done at above -30°C Humidity control with Air vent	
Certification	IP66, IK10				
Power Consumption	PoE: Max 12W, typical 5.3W	PoE: Max 12W, typical 5.3W	PoE: Max 8.9W, typical 3.7W	PoE: Max 8.1W, typical 4.0W	PoE: Max 8.1W, typical 4.0W
Product Dimensions / Weight	ø 93.4x245.8mm(ø 3.68x9.68"), 930g(2.05 lb)			ø 93.4x245.8mm(ø 3.68x9.68"), 890g(1.96 lb)	



QND-C8013R
5MP AI IR Dome Camera



QND-C8023R
5MP AI IR Dome Camera



QNF-C9010
12MP Fisheye Camera



QNF-C9010V
12MP Vandal Fisheye Camera



QNE-C9013RL
8MP AI Dual Light Flateye Camera



QNE-C8013RL
5MP AI Dual Light Flateye Camera

Imaging Device	1/2.8" CMOS		1/1.6" CMOS		1/2.8" CMOS	
Resolution / Max. Frame Rate	5MP / 30fps		12MP / 20fps		8MP / 30fps	5MP/30fps
Min. Illumination	Color: 0.05Lux(F1.6, 1/30sec, 30IRE) BW: 0.005Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)		Color: 0.02Lux (F1.8, 1/30sec)		Color: 0.034Lux (F1.6, 1/30sec) BW: 0.0034Lux (F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.022Lux (F1.2, 1/30sec) BW: 0.0022Lux (F1.2, 1/30sec, 30IRE), 0Lux(IR LED on)
Video Out	USB: Micro USB Type B, 1280x720 for installation				-	
Focal Length (Zoom Ratio)	3.0mm fixed focal	4.0mm fixed focal	1.76mm fixed focal		3.0mm fixed focal	
Angular Field of View	H: 100° / V: 73° / D: 129°	H: 80° / V: 59° / D: 102°	H: 185° / V: 185° / D: 185°		H: 108° / V: 59° / D: 127°	H: 97° / V: 53° / D: 113°
Pan / Tilt / Rotate Range	0°~355° / 0°~75° / 0°~355°	0°~355° / 0°~75° / 0°~355°	Digital Rotation		0°~350° / 0°~75° / 0°~360°	0°~350° / 0°~75° / 0°~360°
IR Viewable Length	25m (82.02ft)	30m (98.42ft)	-		White LED: 30m(98.42ft), IR : 30m(98.42ft)	
Day & Night	Auto(ICR)					
Wide Dynamic Range	120dB					
Digital Noise Reduction	SSNRV , WiseNR II (Based on AI engine)					
Digital Image Stabilization	-					
Analytics	Classified object type: Person/Vehicle Attributes: Person(Upper/lower clothes color), Vehicle (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) 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) Analytics events: Defocus detection, Tampering, Virtual area(Appear/Disappear) * Some of the video analytics only works with people and vehicle detectio		Classified object type: Person/Vehicle Attributes: Person, Vehicle(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		Based on AI engine: People counting, Queue management, Heatmap		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)				-	
Audio I/O	Built-in mic / -				-	
Video Compression	H.265/H.264: Main/High, MJPEG					
WiseStream	Manual(5ea area), WiseStreamIII(Based on AI engine)					
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					
Operating Temperature / Humidity	-10°C ~ +45°C(+14°F ~ +113°F) / 0~95% RH(Non-Condensing)		-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	-40°C~+60°C(-40°F~+140°F) / 0 ~100% RH * Start up should be done at above -30°C Humidity control with Air sheet	
Certification	-		IP42	IP66, IK 10, NEMA4X	IP66/IP67, IK 10	
Power Consumption	PoE: Max 8.1W, typical 4.0W		PoE: Max 7.3W, typical 4.3W	PoE: Max 6.7W, typical 4.8W	PoE: Max 10.0W, typical 4.5W	
Product Dimensions / Weight	ø 110x90mm(ø 4.33x3.54"), 317.0g(0.70 lb)		ø 99x52mm(ø 3.9x2.05"), 360g(0.79lb)	ø 120x75.7mm(ø 4.7x2.05"), 573g(1.26lb)	ø 140.0x99.6mm(ø 5.51x3.92"), 790g(1.74 lb)	



TNO-C3082T



TNO-C3080T



TNO-C3062T



TNO-C3060T

AI Thermal bullet camera

Imaging Device	Uncooled micro bolometer (Spectral range: 8~14μm)		
Resolution	768x576, 384x288(original)		
Max. Frame Rate	H.265/H.264/MJPEG: Max. 8fps	H.265/H.264/MJPEG: Max. 30fps	H.265/H.264/MJPEG: Max. 8fps H.265/H.264/MJPEG: Max. 30fps
NETD	≤20mK @25°C, F1.0		≤20mK @25°C
Pixel pitch	17μm		
Focal Length	60mm fixed focal		35mm fixed focal
Angular Field of View	H: 6.2° / V: 4.7° / D: 7.7° iFoV: 0.283 mRad		H: 10.7° / V: 8.0° / D: 13.3° iFoV: 0.486 mRad
Min. Object Distance	88.3m(289.7ft)		36.1m(118.44ft)
Video out	USB: Micro USB Type B, 768x576 for installation		
Analytics	Classified object type: Person/Vehicle Support BestShot Analytics events based on AI engine: Motion detection, Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit) Analytics events: Tampering, Audio detection, Sound classification, Shock detection, Virtual area(Appear/Disappear)detection, Sound classification, Shock detection, Virtual area(Appear/Disappear)		
Alarm I/O	2 configurable I/O ports * Support extra alarm I/O via optional SPM-4210 I/O box		
Audio I/O	Selectable(mic in/line in) / Line out		
Temparature Detect Range	-		
Temperature Accuracy	-		
Temperature Detection	-		
Additional	Temperature change detection (3 areas)		
WiseStream	Manual(5ea area), WiseStream II , WiseStreamIII(Based on AI engine)		
Streaming	Unicast(20 users) / Multicast, Multiple streaming(Up to 10 profiles)		
Edge Storage	Micro SD/SDHC/SDXC 1slot Max. 1TB		
Application Programming Interface	ONVIF Profile S/G/T/M , SUNAPI(HTTP API, Hanwha Vision Open Platform		
Memory	2GB RAM, 512MB Flash		
Operating Temperature	-40° C ~ +60° C(-40° F ~ +140° F) +74° C(+165° F)(MAX) based on NEMA-TS 2(2.2.7) , 0~95% RH(non-condensing)		
Certification	IP66/IP67, IK10, NEMA4X, NEMA-TS 2(2.2.7, 2.2.8, 2.2.9), MIL-STD-810H		
Power Consumption	PoE: Max 10.8W, typical 9W 12VDC: Max 9.4W, typical 7.7W		
Dimensions (WxHxD) / Weight	ø 107.3 x 275mm(ø 4.22/10.83"), 2340g(5.16 lb)		ø 107.3 x 275mm(ø 4.22/10.83"), 2370g(5.22 lb)

AI Camera



NEW

TNO-C3052T
QVGA AI Thermals Camera



NEW

TNO-C3050T
QVGA AI Thermals Camera



NEW

TNO-C3042T
QVGA AI Thermals Camera



NEW

TNO-C3040T
QVGA AI Thermals Camera



TNO-C3032TRA
QVGA Radiometric AI Thermal Camera

Imaging Device	Uncooled micro bolometer (Spectral range: 8~14μm)				
Resolution	768x576, 384x288(original)				
Max. Frame Rate	H.265/H.264/MJPEG: Max. 8fps	H.265/H.264/MJPEG: Max. 30fps	H.265/H.264/MJPEG: Max. 8fps	H.265/H.264/MJPEG: Max. 30fps	8fps
NETD	≤20mK @25℃				<30mK
Pixel pitch	17μm				
Focal Length	19mm fixed focal	19mm fixed focal	13mm fixed focal	13mm fixed focal	9.7mm fixed focal
Angular Field of View	H: 19.3° / V: 14.6° / D: 23.9° iFoV: 0.895 mRad	H: 19.3° / V: 14.6° / D: 23.9° iFoV: 0.895 mRad	H: 28.5° / V: 21.4° / D: 35.5° iFoV: 1.308 mRad	H: 28.5° / V: 21.4° / D: 35.5° iFoV: 1.308 mRad	H: 37.9° / V: 28.7° / D: 46.7° (iFoV: 1.8 mRad)
Min. Object Distance	10.6m(34.78ft)		5m(16.40ft)		2.8m(9.19ft)
Video out	USB: Micro USB Type B, 768x576 for installation				
Analytics	Classified object type: Person/Vehicle Support BestShot Analytics events based on AI engine: Motion detection, Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit) Analytics events: Tampering, Audio detection, Sound classification, Shock detection, Virtual area(Appear/Disappear)				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)
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
Audio I/O	Selectable(mic in/line in) / Line out				
Temperature Detect Range	-				-40℃~-550℃(-40°F~1,022°F)
Temperature Accuracy	-				below 150℃: up to ± 2℃ Above 150℃: up to ± 15% * based on measurements in a room temperature environment. Auto Temperature mode
Temperature Detection	-				10 Polygonal ROI zones, whole FoV area
Additional	Temperature change detection (3 areas)				Hybrid palettes, Spot temperature reading (ROI condition monitoring: Above/ Below/ Increase/ Decrease)
WiseStream	Manual(5ea area), WiseStream II , WiseStreamIII(Based on AI engine)				
Streaming	Unicast(20 users) / Multicast, Multiple streaming(Up to 10 profiles)				
Edge Storage	Micro SD/SDHC/SDXC 1slot Max. 1TB				
Application Programming Interface	ONVIF Profile S/G/T/M, SUNAPI(HTTP API) Hanwha Vision OpenPlatform				
Memory	2GB RAM, 512MB Flash				
Operating Temperature	-40℃~-+60℃(-40°F~+140°F); +74℃(+165°F)(MAX) based on NEMA-TS 2(2.2.7) 0~95% RH(non-condensing)				-40℃~-+60℃(-40°F~+140°F) / 0~95% RH(non-condensing)
Certification	IP66/IP67, IK10, NEMA4X, NEMA-TS 2(2.2.7, 2.2.8, 2.2.9), MIL-STD-810H				IP66, IK10, NEMA4X
Power Consumption	PoE: Max 10.8W, typical 9W, 12VDC: Max 9.4W, typical 7.7W				
Dimensions (WxHxD) / Weight	ø 93.8 x 233.5mm(ø 3.69/9.19"), 1730g(3.81 lb)				ø 93.8x233.5mm(ø 3.69X/9.19"), 1700g(3.75 lb)

AI Camera



TNO-C3030TRA



TNO-C3022TRA



TNO-C3020TRA



TNO-C3012TRA



TNO-C3010TRA

QVGA Radiometric AI Thermal Camera					
Imaging Device	Uncooled micro bolometer (Spectral range: 8~14μm)				
Resolution	768x576, 384x288(original)				
Max. Frame Rate	30fps	8fps	30fps	8fps	30fps
NETD	<30mK				
Pixel pitch	17μm				
Focal Length	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)	
Min. Object Distance	2.8m(9.19ft)	1.4m(4.59ft)		0.6m(1.97ft)	
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)				
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 , WiseStreamIII(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



TNM-C2712TDR
Early Fire Detection Bi-spectrum Thermal Camera

Imaging Device	Thermal	Visible	Thermal	Visible
	Uncooled micro bolometer	1/2.8" CMOS	Uncooled micro bolometer	1/2.8" CMOS
Resolution / Max. Frame Rate	3MP / 30fps	3MP / 30fps	3MP / 8fps	3MP / 30fps
Min. Illumination	–	Color: 0.06Lux(F1.6, 1/30sec) BW: 0.06Lux(F1.6, 1/30sec)	–	Color: 0.07Lux(F1.65, 1/30sec) BW: 0.07Lux(F1.65, 1/30sec)
Video Out	–			
Focal Length (Zoom Ratio)	1.2mm fixed focal	3.06mm fixed focal	1.9mm fixed focal	4.46mm fixed focal
Angular Field of View	H: 95° / V: 69° / D: 119°	H: 100° / V: 73° / D: 129°	H: 57° / V: 44° / D: 71°	H: 69° / V: 50.8° / D: 88.9°
Pan / Tilt / Rotate	0° ~ 360° / 0° ~ 70° / 0° ~ 360°			
IR Viewable Length	–			
Day & Night	–	Auto(Electrical)	–	Auto(Electrical)
Wide Dynamic Range	–	WDR	–	WDR
Digital Noise Reduction	–	SSNR V	–	SSNR V
Digital Image Stabilization	–	Support	–	Support
Analytics	Temperature detection, Temperature difference detection Analytics events: Motion detection	Analytics events based on AI engine: Early fire detection Analytics events: Tampering, Audio detection, Motion detection	Temperature detection, Temperature difference detection Analytics events: Motion detection	Analytics events based on AI engine: Early fire detection Analytics events: Tampering, Audio detection, Motion detection
Business Intelligence	–		–	
Alarm I/O	Input 1ea / Output 1ea			
Audio I/O	Selectable(mic in/line in) / Line out			
Video Compression	H.265/H.264: Main/High, MJPEG		H.265/H.264: Main/High, MJPEG	
WiseStream	WiseStream II	Manual(5ea area), WiseStream II	WiseStream II	Manual(5ea area), WiseStream II
Streaming	Unicast(6 users) / Multicast / Multiple streaming(Up to 3 profiles)			
Edge Storage	Micro SD/SDHC/SDXC 1slots 512GB			
Application Programming Interface	ONVIF Profile S/T, 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 –10° C			
Certification	IP66, IP67, IK09 (except lenses in front)			
Power Consumption	PoE: Max 10.8W, typical 6.2W			
Product Dimensions / Weight	Ø 110x97mm(ø 4.33x3.82"), 650g(1.43lb)			



TNM-C2722TDR
Early Fire Detection Bi-spectrum Thermal Camera

AI Camera



TNM-C4960TD
Bi-spectrum AI Thermal Camera

Imaging Device	Thermal	Visible		
	Uncooled micro bolometer	1/1.8" CMOS	Uncooled micro bolometer	1/1.8" CMOS
Resolution / Max. Frame Rate	640x480 / 30fps	3840x2160 / 30fps	640x480 / 30fps	3840x2160 / 30fps
Min. Illumination	–	Color: 0.06Lux(F1.7, 1/30sec) BW: 0.005Lux(F1.7, 1/30sec)	–	Color: 0.06Lux(F1.7, 1/30sec) BW: 0.005Lux(F1.7, 1/30sec)
Video Out	USB : Micro USB Type B, 1280x720 for installation		USB : Micro USB Type B, 1280x720 for installation	
Focal Length (Zoom Ratio)	25mm fixed focal	10.9~29mm(2.6x) motorized varifocal	13.5mm fixed focal	10.9~29mm(2.6x) motorized varifocal
Angular Field of View	H: 17.4°, V: 13.1°, D: 21.6°	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°	H: 42.0°(Wide) ~ 15.0°(Tele) / V: 22.8°(Wide) ~ 8.4°(Tele) / D: 48.7°(Wide) ~ 17.1°(Tele)
Pan / Tilt / Rotate	–		–	
IR Viewable Length	–		–	
Day & Night	–	Auto(ICR)	–	Auto(ICR)
Wide Dynamic Range	–	WDR(120dB)	–	WDR(120dB)
Digital Noise Reduction	–	WiseNR II, SSNR V	–	SSNR V, WiseNR II
Digital Image Stabilization	–	Support(built-in gyro sensor)	–	Support(built-in gyro sensor)
Analytics	Analytics events based on AI engine : Object detection (Person/Vehicle), Bestshot, IVA (Virtual line/Area, Enter/Exit, Loitering, direction, intrusion), Stopped vehicle, Trafficjam 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, Trafficjam 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, Trafficjam 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, Trafficjam 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	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/High, MJPEG			
WiseStream	WiseStream II	Manual(5ea area), WiseStreamIII	WiseStream II	Manual(5ea area), WiseStreamIII
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 ~ +60°C (–58°F ~ +140°F) * Start up should be done at above –30°C, less than 95% RH(non-condensing)			
Certification	IP66/IP67, IK10, NEMA 4X, NEMA TS 2(2.2.8, 2.2.9)			
Power Consumption	PoE+ : Max 23.5W, Typ 16.0W 12VDC : Max 19.5W, Typ 14.0W			
Product Dimensions / Weight	353.4(W)x287.5(H)x191.2(D)mm(13.92x11.32x7.53")/ 4530g(9.99lb)			



TNM-C4950TD
Bi-spectrum AI Thermal Camera



TNM-C4940TD
Bi-spectrum AI Thermal Camera

Imaging Device	Thermal	Visible	Thermal	Visible
	Uncooled micro bolometer	1/1.8" CMOS	Uncooled micro bolometer	1/1.8" CMOS
Resolution / Max. Frame Rate	640x480 / 30fps	8M/ 30fps	640x480 / 8fps	8M / 30fps
Min. Illumination	—	Color: 0.06Lux(F1.3, 1/30sec) BW: 0.004Lux(F1.3, 1/30sec), 0Lux(IR LED on)	—	Color: 0.06Lux(F1.3, 1/30sec) BW: 0.004Lux(F1.3, 1/30sec), 0Lux(IR LED on)
Video Out	USB : Micro USB Type B, 1280x720 for installation		USB : Micro USB Type B, 1280x720 for installation	
Focal Length (Zoom Ratio)	9.1mm fixed focal	4.4~9.3mm(2.2x) motorized varifocal	9.1mm fixed focal	4.4~9.3mm(2.2x) motorized varifocal
Angular Field of View	H: 50.0° / V: 37.0° / D: 63.8° (iFoV: 1.319 mRad)	H: 112.1°(Wide) ~ 47.5°(Tele) / V: 58.0°(Wide) ~ 26.6°(Tele) / D: 137.5°(Wide) ~ 54.6°(Tele)	H: 50.0° / V: 37.0° / D: 63.8° (iFoV: 1.319 mRad)	H: 112.1°(Wide)~47.5°(Tele) / V: 58.0°(Wide)~26.6°(Tele) / D: 137.5°(Wide)~54.6°(Tele)
Pan / Tilt / Rotate	-170° ~ +170° / -40° ~ 50° / -			
IR Viewable Length	—	—	—	—
Day & Night	—	Auto(ICR)	—	Auto(ICR)
Wide Dynamic Range	—	WDR(120dB)	—	WDR(120dB)
Digital Noise Reduction	—	WiseNR II, SSNRV	—	SSNR V, WiseNR II
Digital Image Stabilization	—	Support(built-in gyro sensor)	—	Support(built-in gyro sensor)
Analytics	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	Classified object type : Person/Vehicle Support BestShot Analytics events based on AI engine : Object detection, Virtual line(Crossing/Direction), Virtual area*(Loitering/Intrusion/Enter/Exit) Analytics events : Motion detection, Temperature detection	Classified object type: Person/Face/Vehicle/License plate Attributes: Vehicle (Type:car/bus/truck/motorcycle/bicycle) Support BestShot Analytics events based on AI engine : Object detection, Virtual line(Crossing/Direction), Virtual area*(Loitering/Intrusion/Enter/Exit) Analytics events : Defocus detection, Motion detection, Tampering, Audio detection, Sound classification, Shock detection, Virtual area(Appear/Disappear) * Some of the video analytics only works with people and vehicle detection
Business Intelligence	Vehicle counting		—	
Alarm I/O	4 configurable I/O ports			
Audio I/O	Selectable(mic in/line in)			
Video Compression	H.265/H.264: Main/High, MJPEG			
WiseStream	WiseStream II	Manual(Sea area), WiseStreamIII	WiseStream II	Manual(Sea area), WiseStreamIII
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/M, SUNAPI(HTTP API), Hanwha Vision Open Platform (visible channel only)			
Operating Temperature / Humidity	-40°C~-+60°C(-58°F~-+140°F) * Start up should be done at above -30°C, less than 95% RH(non-condensing)			
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")/ 4530g(9.99lb)			



TNM-C4942TDR
Radiometric Bi-spectrum AI Thermal Camera



TNM-C4940TDR
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, <50mK)	1/2.8" 2MPCMOS
Resolution / Max. Frame Rate	640x480 / 30fps	8MP/ 30fps	320x240/ 8fps	2MP / 30fps
Min. Illumination	—	Color: 0.06Lux(F1.3, 1/30sec) BW: 0.004Lux(F1.3, 1/30sec), 0Lux(IR LED on)	—	Color: 0.05 lux(F1.6, 1/30sec) B/W: 0.005 lux(F1.6, 1/30sec)
Video Out	USB : Micro USB Type B, 1280x720 for installation		CVBS: 1.0 Vp-p / 75Ω composite, 720x480(N), 720x576(P) for installation USB : Micro USB Type B, 1280x720 for installation	
Focal Length (Zoom Ratio)	9.1mm fixed focal	4.4~9.3mm(2.2x) motorized varifocal	4.7mm fixed focal	4mm 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: 50.0° / V: 36.4° / D: 65.3° (iFoV: 2.553 mRad)	H: 87.6° / V: 46.4° / D: 104.5°
Pan / Tilt / Rotate	-170° ~ +170° / -40° ~ 50° / -		—	
IR Viewable Length	—		—	
Day & Night	—	Auto(ICR)	—	Auto(ICR)
Wide Dynamic Range	—	WDR(120dB)	—	extremeWDR(150dB)
Digital Noise Reduction	—	SSNR V, WiseNR II	—	SSNR V
Digital Image Stabilization	—	Support(built-in gyro sensor)	—	Support (built-in gyro sensor)
Analytics	Classified object type : Person/Vehicle Support BestShot Analytics events based on AI engine : Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit) Analytics events Motion detection, Temperature detection	Classified object type : Person/Face/Vehicle/License plate Attributes: Vehicle(Type:car/bus/truck/motorcycle/bicycle) Support BestShot Analytics events based on AI engine : Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit) Analytics events : Defocus detection, Motion detection, Tampering, Audio detection, Sound classification, Shock detection, Virtual area(Appear/Disappear) * Some of the video analytics only works with people and vehicle detection	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	4 configurable I/O ports		Input 1ea / Output 2ea	
Audio I/O	Selectable (mic in/line in) / Line out			
Video Compression	H.265/H.264: Main/High, MJPEG		H.265/H.264: Main/Baseline/High, MJPEG	
WiseStream	WiseStream II	Manual(5ea area), WiseStream III	WiseStream II	Manual(5ea area), WiseStream II
Streaming	Unicast(6 users) / Multicast Multiple streaming(Up to 3 profiles)		Unicast(20 users) / Multicast Multiple streaming(Up to 6 profiles)	
Edge Storage	Micro SD/SDHC/SDXC 2slots 512GB		Micro SD/SDHC/SDXC 1slot 256GB	
Application Programming Interface	ONVIF Profile S/T/M SUNAPI(HTTP API) Hanwha Vision Open Platform (visible channel only)		ONVIF Profile S/T/M SUNAPI(HTTP API)	
Operating Temperature / Humidity	-40°C ~ +60°C (-58°F ~ +140°F) * Start up should be done at above -30°C 0~95% RH(non-condensing)		-10°C ~ +55°C (+14°F ~ +131°F) / Less than 95% RH	
Certification	IP66/IP67, IK10, NEMA4X, NEMA TS 2(2.2.8, 2.2.9)		—	
Power Consumption	PoE+ : Max 25.5W, Typ 16.0W / 12VDC : Max 21.5W, Typ 14.0W		PoE+ : Max. 17.0W, typical 12.5W / 12VDC: Max. 14.5W, typical 11.0W	
Product Dimensions / Weight	353.4(W)x287.5(H)x191.2(D)mm(13.92x11.32x7.53"), 4530g(9.99lb)		135(W)x75(H)x188.5(D)mm, (5.31x2.95x7.42"), 1700g(3.77lb)	

AI Camera



TNM-C3620TDR
Radiometric Bi-spectrum AI Thermal Camera



TNB-9000
8K Box Camera



TNO-A26081
26MP AI Bullet camera



TNV-C8011RW
AI Wall Mount Camera



TNO-C8083E
5MP AI Explosion-proof Camera

Imaging Device	Thermal	Visible	43.3mm Full-frame CMOS	Diagonal 28.3mm 1.8" CMOS	1/2.8" CMOS	1/2.8" CMOS
	Uncooled micro bolometer (Spectral range: 8~14μm, 12μm, <50mK)	1/2.8" CMOS				
Resolution / Max. Frame Rate	320x240 / 30fps	2MP / 30fps	8K / 15fps, 24MP / 20fps, 15MP / 30fps, 4K / 60fps	26MP / 30fps	5MP / 30fps	5MP / 30fps
Min. Illumination	—	Color: 0.05 lux(F1.6, 1/30sec) B/W: 0.005 lux(F1.6, 1/30sec)	Color: 0.015Lux(F1.4) BW: 0.0015Lux(F1.4)	Color: 0.2Lux(F4.0, 1/30sec) B/W: 0.02Lux(F4.0, 1/30sec)	Color: 0.038Lux(F1.6, 1/30sec, 30IRE) BW: 0.0038Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.07Lux(F1.6, 1/30sec, 30IRE) BW: 0.007Lux(F1.6, 1/30sec, 30IRE)
Video Out	CVBS: 1.0 Vp-p / 75Ω composite, 720x480(N), 720x576(P) for installation USB : Micro USB Type B, 1280x720 for installation		HDMI	USB: Micro USB Type C, 1280x720 for installation	USB: Micro USB Type B, 1280x720 for installation	—
Focal Length (Zoom Ratio)	4.7mm fixed focal	4mm fixed focal	—	55~250mm(4.54x) manual varifocal	1.6mm fixed focal	3.2~10.2mm(3.2x) motorized varifocal
Angular Field of View	H: 50.0° / V: 36.4° / D: 65.3° (iFoV: 2.553 mRad)	H: 87.6° / V: 46.4° / D: 104.5°	Canon 24mm, H: 57.4° , Canon 35mm, H: 42.6° , Canon 50mm, H: 30.9° , Canon 85mm, H: 19.1° , Canon 100mm, H: 16.0° , Canon 70~200mm, H: 22.8° ~ 8.0°	H: 24° (Wide) ~ 5.4° (Tele) V: 16° (Wide) ~ 3.6° (Tele) D: 29° (Wide) ~ 6.5° (Tele)	H: 175° / V: 125° / D: 175°	H: 95°(Wide)~29°(Tele) V: 69°(Wide)~21°(Tele) D: 126°(Wide)~36°(Tele)
IR Viewable Length	—				15m(49.21 ft)	—
Day & Night	—	Auto(ICR)				
Wide Dynamic Range	—	extremeWDR(150dB)	—		120dB	120dB
Digital Noise Reduction	—	SSNR V		SSNR V, WiseNR II (Based on AI engine)		
Digital Image Stabilization	—	Support	—			
Analytics	Directional detection, Motion detection, Enter/Exit, Virtual line, Temperature detection	Directional detection, Motion detection, Enter/Exit, Tampering, Virtual line, Audio detection AI based Object detection (person/face, visible channel only)	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) Analytics events: Defocus/Audio/ Motion detection, Tampering, 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/Motion detection, Virtual line (Crossing/Direction), Virtual area (Loitering/Intrusion/Enter/Exit), Analytics events: Defocus detection, Tampering, Audio detection, Virtual area(Appear/Disappear) *Some of the video analytics only works with people and vehicle detection	Classified object type: Person/Face/ Vehicle Attributes: Vehicle(Type:car/bus/truck/motorcycle/bicycle) Support DetectionShot Analytics events based on AI engine: Motion detection, Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit) Analytics events: Defocus detection, Tampering, Shock detection, Virtual area(Appear/Disappear) * Some of the video analytics only works with people and vehicle detection	
Business Intelligence	—		Based on AI engine: People counting, Vehicle counting, Queue management, Heatmap			
Alarm I/O	1/2		1 / 1		2 configurable I/O ports	
Audio I/O	Selectable (mic in/line in) / Line out					Built-in mic only / —
Video Compression	H.265/H.264: Main/Baseline/High, MJPEG		H.265, H.264, MJPEG		H.265/H.264: Main/High, MJPEG	
WiseStream	WiseStream II	Manual(5ea area), WiseStream II	Manual(5ea area), WiseStream III(Based on AI engine)			
Streaming	Unicast(20 users) / Multicast, Multiple streaming(Up to 6 profiles)		Up to 3 Profiles		Unicast(20 users) / Multicast, Multiple streaming(Up to 5 profiles)	
Edge Storage	Micro SD/SDHC/SDXC 1slot 256GB		micro SD/SDHC/SDXC		Micro SD/SDHC/SDXC 1slot 256GB	
Application Programming Interface	ONVIF Profile S/T/M, SUNAPI(HTTP API)		ONVIF Profile S/G/T, SUNAPI		ONVIF Profile S/G/T/M, SUNAPI(HTTP API), Hanwha Vision Open Platform	
Operating Temperature / Humidity	-10°C~-+55°C(+14°F~-+131°F) / Less than 95% RH		0°C ~ +45°C (32°F ~ +122°F)		-30°C ~ +55°C(-22°F ~ +131°F) / Less than 95% RH -30°C~-+55°C(-22°F ~ +131°F) 0~95% RH(non-condensing) * Start up should be done at above -30°C	
Certification	—		EMC		IP66, IK 10	
Power Consumption	PoE+: Max. 17.0W, typical 12.5W 12VDC: Max. 14.5W, typical 11.0W		PoE: Max 30W, typical 20W 12VDC: Max 26W, typical 18W		Max 11.5W / Typ 4.8W PoE: Max 9.50W, typical 5.30W	
Product Dimensions / Weight	135(W)x75(H)x188.5(D)mm, (5.31x2.95x7.42"), 1700g(3.77lb)		120x118.5x179mm, 2200g(4.85 lb)		80(W)x167(H)x57(D) mm(3.15x6.56x2.24"), 600g(1.32 lb) ø 110.5 x 316.2mm(ø 4.35x12.44"), 4770g(10.51 lb)	

AI Camera



TNV-C8014RM
T AI Mobile



TNV-C8034RM
T AI Mobile



TNV-C7013RC
AI Corner Mount Camera

Imaging Device	1/2.8" CMOS		1/1.8" CMOS
Resolution / Max. Frame Rate	5MP / 30fps		3MP / 30fps
Min. Illumination	Color: 0.03Lux (F1.6, 1/30sec) BW: 0.003Lux (F1.6, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.03Lux (F1.65, 1/30sec) BW: 0.003Lux (F1.65, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.04Lux(F2.0, 1/30sec, 30IRE) BW: 0.04Lux(F2.0, 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	6.0mm fixed focal	2.39mm fixed focal
Angular Field of View	H: 100° / V: 73° / D: 129°	H: 50° / V: 37° / D: 64°	H: 128° / V: 100°
Pan / Tilt / Rotate	± 5° / 0° ~ 67° / ± 90°	± 5° / 0° ~ 67° / ± 90°	—
IR Viewable Length	30m(98.42ft)		WiseIR 15m (49.21ft), invisible 940mm wavelength
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/Vehicle Attributes: Person(Upper/lower clothes color), Vehicle(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 Support DetectionShot Analytics events based on AI engine: Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit) Analytics events: Defocus detection, Motion detection, Tampering, Audio detection, Sound classification, Virtual area(Appear/Disappear), Clothes color detection (Orange/Black/Red, @400lux)
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/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
WiseStream	Manual(5ea area), WiseStream III (Based on AI engine)		Manual(5ea area), WiseStream II, WiseStream III (Based on AI engine)
Streaming	Unicast(20 users) / Multicast, Multiple streaming(Up to 5 profiles)		Up to 10 profiles, 3 virtual channel support
Edge Storage	Micro SD/SDHC/SDXC 1slot 256GB		Micro SD/SDHC/SDXC 1slot 1TB
Application Programming Interface	ONVIF Profile S/G/T/M SUNAPI(HTTP API) Hanwha Vision Open Platform		ONVIF Profile S/T, SUNAPI(HTTP API) Hanwha Vision Open Platform
Operating Temperature / Humidity	-40°C~-+55°C(-40°F~-+131°F) / 0~100% RH(Condensing) * Start up should be done at above -30°C, Humidity control /w Air vapor control		-10°C~-+55°C (14°F~-+131°F) 0~100%RH(Condensing) Humidity control with Air vent
Certification	IP66, IK 10		IP66, IP6K9K, IK 10+
Power Consumption	PoE: Max 7.2W, typical 4.2W		PoE: Max 12.95W, typical 9.7W DC: Max 12.7W, typical 9.0W
Product Dimensions / Weight	106x105x55mm(4.17x4.13x2.17"), 466g(1.03 lb)		198.3(W)x104.8(H)x198.6(D)mm (7.87"x4.13"x7.82"), 1935g(4.27lb)

AI ANPR Camera



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



PNO-A9081RLP
8MP AI LPR IR Bullet Camera



PNV-A9081RLP
8MP AI LPR IR Vandal Dome Camera



PNB-A9001LP
8MP AI LPR Box Camera



TNO-7180RLP
3MP AI LPR Box Camera

Imaging Device	1/1.8" CMOS				1/1.8" CMOS, Global Shutter
Resolution / Max. Frame Rate	8MP / 30fps				3MP / 55fps
Min. Illumination	Color: 0.075Lux(F1.36, 1/30sec, 30IRE) BW: 0.0075Lux(F1.36, 1/30sec, 30IRE), 0Lux(IR LED on)	Color: 0.05Lux(F1.6, 1/30sec) BW: 0Lux(IR LED on)	Color: 0.05Lux(F1.6, 1/30sec) BW: 0.005Lux(F1.6, 1/30sec), 0Lux(IR LED on)	Color: 0.03Lux(F1.2, 1/30sec) B/W: 0.003Lux(F1.2, 1/30sec)	Color 0.1 Lux (1/30sec, gain 48dB)
Video Out	CVBS: 1.0 Vp-p, Micro USB Type B				
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)
Wide Dynamic Range	120dB	—	—	—	—
Digital Noise Reduction	SSNR V				SSNR V
Digital Image Stabilization	Support	Support	—	—	—
Analytics	Defocus detection, Tampering, Audio detection, Sound classification, Shock detection				Motion detection, Tampering, Virtual line (Crossing/Direction), Virtual Area(Loitering/ Intrusion/Enter/Exit, Appear/Disappear)
Business Intelligence	—				
Alarm I/O	2 configurable I/O ports, DC 12V output (Max. 50mA)	1/1	1/1	1/1	4 configurable I/O ports
Audio I/O	Selectable(mic in/line in) / Line out	Selectable (mic in/line in/built-in mic) / Line out	Selectable (mic in/line in/built-in mic) / Line out	Selectable (mic in/line in/built-in mic) / Line out	Selectable(mic in/line in) / Line out
Video Compression	H.265/H.264: Main/High, MJPEG	H.265 / H.264, MJPEG	H.265 / H.264, MJPEG	H.265/H.264: Main/High, MJPEG	H.265 / H.264, MJPEG
WiseStream	Manual(Sea area), WiseStream II	WiseStream II	WiseStream II	WiseStream II	WiseStream II
Streaming	Up to 6 profiles	Up to 3 profiles	Up to 3 profiles	Up to 3 profiles	Up to 10 Profiles
Edge Storage	Pre-installed with 32GB Micro SD to support 10,000 LPR images	Pre-installed with 32GB Micro SD to support 10,000 LPR images	Pre-installed with 32GB Micro SD to support 10,000 LPR images	Pre-installed with 32GB Micro SD to support 10,000 LPR images	Pre-installed with 32GB Micro SD to support 10,000 LPR images
Application Programming Interface	ONVIF Profile S/G/T/M SUNAPI(HTTP API)	ONVIF Profile S/G/T SUNAPI(HTTP API)	ONVIF Profile S/G/T SUNAPI(HTTP API)	ONVIF Profile S/G/T SUNAPI(HTTP API)	ONVIF Profile S/G/T SUNAPI(HTTP API)
Operating Temperature / Humidity	-40°C ~ +55°C (-40°F ~ +131°F) / 0~90%RH(Non-condensing) * Start up should be done at above -30°C	-40°C ~ +55°C (-40°F ~ +131°F) / 0~90%RH(Non-condensing) * Start up should be done at above -30°C	-40°C ~ +55°C (-40°F ~ +131°F) / 0~90%RH(Non-condensing) * Start up should be done at above -30°C	-10°C ~ +55°C (+14°F ~ +131°F) / 0~90%RH(Non-condensing)	-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
Solution	City Traffic	Community Traffic, Parking Application	Community Traffic, Parking Application	City Traffic	City Traffic Observation, Highways
Speed Description	High Speed	Moderate Speed / Low Speed	Moderate Speed / Low Speed	Regular Speed	Regular Speed / High Speed
Lane Coverage	Up to 2 lanes (5m/ 18ft Wide)	1 lane (3.6m/ 12ft Wide) (with built in IR) / 1 lane (3.6m/ 12ft Wide) (with built in IR)	Up to 2 lanes (5m/ 18ft Wide) (with 50mm lens & Ext. IR)	Up to 2 lanes (5m/ 18ft Wide) (with 50mm lens & Ext. IR)	Up to 2 lanes / Up to 2 lanes
Speed Limit	Up to 130kmh (80mph)	Up to 70kmh (45mph) (with built in IR) / Up to 40kmh (25mph) (with built in IR)	Up to 100kmh (65mph) (with 50mm lens & Ext. IR)	Up to 120kmh (75mph) for 2 lanes Up to 200kmh (125mph) for 2 lanes	
Vehicle Recognition	Make : 100+, Model : 4700+ Color : 11 colors				Make : 70+, Model : 600+ Color : 11
Product Dimensions / Weight	Ø136.2x358.7mm(ø 5.36x14.12") (Without sunshield), 3200g(7.05lb) * backbox: ø 160mm(ø 6.30")	Ø91.0x368.6mm (3.58" x 14.51") (Without sunshield), 2480g (5.47lb)	Ø180x125mm(7.09x4.92"), 1900g (4.19lb)	81x67x165mm(3.19x2.64x6.48"), 0.88kg(1.94lb)	186.9(W) x259.3(H) x 293.7(D) (mm) 4800g (10.5 lb)

AI Camera

SolidEDGE



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

SolidEDGE



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



TNS-9050IBC
Barcode Reader Camera

Imaging Device	1/2" CMOS		Global Shutter Mono 1" CMOS / Global Shutter Color 1" CMOS
Resolution / Max. Frame Rate	2MP/ 120fps		Mono: Max 4096x2160, Max 20fps Color: Max 4096x2160, Max 20fps
Min. Illumination	Color: 0.007Lux(F1.3, 1/30sec, 30IRE) BW: 0.0007Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on), 30/25fps		—
Video Out	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		25mm
Angular Field of View	H: 104°(Wide)~44°(Tele) V: 55°(Wide)~24°(Tele) D: 124°(Wide)~51°(Tele)		Mono:H30.4° / V16.6° / D34.2° Color:H30.4° / V16.6° / D34.2°
Pan / Tilt / Rotate Range	0°~360° / 0°~85° / 0°~355°		—
IR Viewable Length	40m(131.23ft)		—
Day & Night	Auto(ICR)		—
Wide Dynamic Range	120dB		—
Digital Noise Reduction	SSNR V, WiseNR II (Based on AI engine)		SSNR V
Digital Image Stabilization	—		—
Analytics	Classified object type: Person/Face/Vehicle/License plate Attributes: Person(Gender, Color and Bag), Face(Age, Gender, Mask and Glasses), Vehicle(car/bus/truck/motorcycle/bicycle and Color) Support BestShot per object Analytics events based on AI engine: Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit), Face mask detection, Social distancing detection Analytics events: Defocus detection, Motion detection, Tampering, Audio detection, Sound classification, Shock detection, Virtual area(Appear/Disappear) *Some of the video analytics only works with people and vehicle detection		AI barcode location search - Track barcodes on high speed conveyor belt moving at 2m/s(6.5ft/s) - 1D: Code 128/Code 39/Code 93/EAN/UPC/ Codabar/ITF(Interleaved 2 of 5) 2D: Q4.2024
Business Intelligence	—		—
Alarm I/O	Input 1ea / Output 1ea		—
Audio I/O			—
Video Compression	H.265/H.264: Main/High, MJPEG		—
WiseStream	Manual(Sea area), WiseStream III		—
Streaming	Unicast(6 users) / Multicast Multiple streaming(Up to 5 profiles)		Unicast(6 users) / Multicast Mono: (1) 4096x2160 @ 15/18/20fps all codec Color: (1) 4096x2160 @ 15/18/20fps all codec (2) 640x360 @ 15/18/20fps all codec
Edge Storage	1TB SSD included(WAVE pre-installed) Possible to register the maximum number of camera - up to 6 camera(Host + 5 camera) - Total bandwidth: up to 33Mbps * Cannot support the camera when host camera use AI mode	2TB SSD included(WAVE pre-installed) Possible to register the maximum number of camera - up to 6 camera(Host + 5 camera) - Total bandwidth: up to 33Mbps * Cannot support the camera when host camera use AI mode	—
Application Programming Interface	ONVIF Profile S/T/M, SUNAPI(HTTP API)		SUNAPI(HTTP API), Wisenet Open Platform
Operating Temperature / Humidity	-30°C ~ +55°C (-22°F ~ +131°F) ~100%RH(Condensing) Humidity control with Air vent * Start up should be done at above -20°C		-40°C ~ +55°C (-40°F ~ +131°F) / 0~95% RH * Start up should be done at above -30°C NEMA TS-2: 74° C - / 0~95% RH
Certification	IP66/IP67/IP6K9K, NEMA4X, IK10		IP67, IP66, IK10(Exclude Window), NAME 4X, EN 60068-2-6(Vibration Resistance), EN60068-2-27(Shock Resistance)
Power Consumption	PoE+: Max 19.2W, typical 14.4W / 12VDC: Max 17.5W, typical 12.7W Power redundancy failover		Max 28.6W, Typical 13.7W * Max: LED On Typical: LED Off
Product Dimensions / Weight	ø 180x130mm(ø 7.09x5.12"), 1900g(4.19lb)		Camera: 218x104.1x127.1mm, 1897g LED: 255.8x73.8x49.8mm, 996g Total: 255.8x181x127.1mm, 3438g(with install bracket)



XNO-9082R
8MP IR Bullet Camera



XND-9082RV
8MP IR Dome Camera



XND-9082RF
8MP IR Dome Camera



XNO-9082R
8MP IR Bullet Camera

Imaging Device	1/2.8" CMOS			
Resolution / Max. Frame Rate	8MP / 30fps			
Min. Illumination	Color: 0.05Lux(F1.2, 1/30sec, 30IRE) BW: 0.005Lux(F1.2, 1/30sec, 30IRE), 0Lux(IR LED on)			
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			
Angular Field of View	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°~100° / 0°~360°
IR Viewable Length	WiseIR 40m(131.23ft)			
Day & Night	Auto(ICR)			
Wide Dynamic Range	extremeWDR(120dB)			
Digital Noise Reduction	SSNR V			
Digital Image Stabilization	Support			
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			
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
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(5ea area), WiseStream II			
Streaming	Unicast(20 users) / Multicast Multiple streaming(Up to 10 profiles, 3 virtual channel support)			
Edge Storage	Micro SD/SDHC/SDXC 2slot Max. 1TB(512GBx2)			
Application Programming Interface	ONVIF Profile S/T, SUNAPI(HTTP API) Hanwha Vision Open Platform			
Operating Temperature / Humidity	-50°C ~ +60°C(-58°F ~+140°F) 0~95% RH(non-condensing) * Start up should be done at above -30°C	-25°C ~+60°C(-13°F ~+140°F) 0~95% RH(non-condensing)		-50°C ~+60°C(-58°F ~+140°F) 0~95% RH(non-condensing) * Start up should be done at above -30°C
Certification	IP66/IP67, NEMA4X, IK10	IP52, IK10	IP52, Plenum rated, 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 Power redundancy failover		PoE: Max 12.95W, typical 10.5W 12VDC: Max 12.5W, typical 9.4W 24VAC: Max 14.5W, typical 11.2W Power redundancy failover
Product Dimensions / Weight	ø 91x368.6mm(ø 3.85x14.51"), 2200g(4.85 lb)	ø 160x125mm(ø 6.30x4.92"), 1600g(3.53 lb)	ø 205x163mm(ø 8.07x6.42"), 1950g(4.29 lb)	

X Plus



XNV-8082R
6MP IR Vandal Dome Camera

X Plus



XND-8082RV
6MP IR Dome Camera

X Plus



XND-8082RF
6MP IR Dome Camera

X Plus



XNO-8082R
6MP IR Bullet Camera

Imaging Device	1/2.8" CMOS		
Resolution / Max. Frame Rate	6MP / 30fps		
Min. Illumination	Color: 0.05Lux(F1.2, 1/30sec, 30IRE) BW: 0.005Lux(F1.2, 1/30sec, 30IRE), 0Lux(IR LED on)		
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		
Angular Field of View	H: 114°(Wide)~40°(Tele) V: 62°(Wide)~22°(Tele) D: 133°(Wide)~46°(Tele)		
Pan / Tilt / Rotate Range	0°~360° / 0°~85° / 0°~355°		0°~360° / 0°~100° / 0°~360°
IR Viewable Length	WiseIR 40m(131.23ft)		
Day & Night	Auto(ICR)		
Wide Dynamic Range	extremeWDR(120dB)		
Digital Noise Reduction	SSNR V		
Digital Image Stabilization	Support		
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		
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
Video Compression	H.265/H.264: Main/Baseline/High, MJPEG		
WiseStream	Manual(5ea area), WiseStream II		
Streaming	Unicast(20 users) / Multicast / Multiple streaming(Up to 10 profiles, 3 virtual channel support)		
Edge Storage	Micro SD/SDHC/SDXC 2slot Max. 1TB(512GBx2)		
Application Programming Interface	ONVIF Profile S/T, SUNAPI(HTTP API) Hanwha Vision Open Platform		
Operating Temperature / Humidity	–50°C~+60°C(–58°F~+140°F) 0~95% RH(non-condensing) * Start up should be done at above –30°C	–25°C~+60°C(–13°F~+140°F) / 0~95% RH(non-condensing) * Start up should be done at above –30°C	
Certification	IP66/IP67/IP6K9K, IK10+, NEMA4X	IP52, IK10	IP52, Plenum rated, IK10 IP66/IP67, NEMA4X, IK10
Power Consumption	PoE: Max 12.95W, typical 10.7W 12VDC: Max 11.5W, typical 9.0W 24VAC: Max 13.5W, typical 11.0W Power redundancy failover	PoE: Max 12.95W, typical 10.7W 12VDC: Max 11.5W, typical 9.0W Power redundancy failover PoE: Max 12.95W, typical 10.5W 12VDC: Max 12.5W, typical 9.4W 24VAC: Max 14.5W, typical 11.2W Power redundancy failover	
Product Dimensions / Weight	ø 180x125mm(ø 7.09x4.92"), 1900g(4.19 lb)	ø 160x125mm(ø 6.30x4.92"), 1600g(3.53 lb)	ø 205x163mm(ø 8.07x6.42"), 1950g(4.29 lb) ø 91x368.6mm(ø 3.85x14.51"), 2200g(4.85 lb)



XNV-8080R
5MP IR Vandal Dome Camera



XNV-8080RSA
5MP Stainless IR Vandal Dome Camera



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



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



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

Imaging Device	1/1.8" CMOS			
Resolution / Max. Frame Rate	H.265, H.264, MJPEG	5MP / 30fps		H.265, H.264, MJPEG
Min. Illumination	Color : 0.07Lux (F1.3) B/W : 0Lux (IR LED on)	Color : 0.16Lux (F1.6) B/W : 0Lux (IR LED on)	Color : 0.07Lux (F1.3) B/W : 0Lux (IR LED on)	Color : 0.16Lux (F1.6) B/W : 0Lux (IR LED on)
Video Out	CVBS 1.0 Vp-p, Micro USB type B			
Focal Length (Zoom Ratio)	3.9 ~ 9.4mm (2.4x) motorized varifocal	3.7mm fixed (XNV-8020R) 4.6mm fixed (XNV-8030R) 7.0mm fixed (XNV-8040R)	3.9 ~ 9.4m (2.4x) motorized varifocal	3.7mm fixed (XND-8020R) 4.6mm fixed (XND-8030R) 7.0mm fixed (XND-8040R)
Angular Field of View	H : 92.1° (Wide) ~ 38.7° (Tele) V : 67.2° (Wide) ~ 29° (Tele) D : 119.9° (Wide) ~ 48.6° (Tele)	H : 97.5° / V : 71.9° / D : 126.2° (XNV-8020R) H : 77.9° / V : 57.9° / D : 98.7° (XNV-8030R) H : 50.7° / V : 37.8° / D : 63.8° (XNV-8040R)	H : 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)
Pan / Tilt / Rotate Range	0° ~ 354° / 0° ~ 67° / 0° ~ 355°			
IR Viewable Length	50m (164.04ft)	30m (98.43ft)		
Day & Night	Auto (ICR)			
Wide Dynamic Range	120dB			
Digital Noise Reduction	SSNR V			
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) / 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, 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)		-10°C ~ +55°C (+14°F ~ +131°F)	
Certification	IP67, IP66, NEMA4X, IK10	IP66, NEMA4X, IP6K9K, IK10+	IP66, IP67, IK10	IK08
Power Consumption	PoE : Max 12.95W 12VDC : Max 11.5W 24VAC : Max 14W	PoE : Max 9W 12VDC : Max 8W	PoE : Max 10W 12VDC : Max 9W	PoE : Max 9W 12VDC : Max 8W
Product Dimensions / Weight	Ø 160 x 118.5mm (Ø 6.3" x 4.67") 1010g (2.23lb)	Ø 160 X 120.5mm (Ø 6.38" x 4.74") 2800g (6.17lb)	Ø 120 x 97.5mm (Ø 4.72" x 3.84") 615g (1.36lb)	Ø 140.8 x 113mm (Ø 5.54" x 4.45") 628g (1.38lb) (XND-8080R) 732g (1.61lb) (XND-8080RV)
				Ø 110 x 90mm (Ø 4.33" x 3.54") 380g (0.84lb)



XND-8020F
5MP Flush Mount Dome Camera



XNO-8080R
5MP IR Bullet Camera



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



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

Imaging Device	1/1.8" CMOS	1/1.8" CMOS	1/1.8" CMOS	1/2.3" CMOS
Resolution / Max. Frame Rate	5MP / 30fps	5MP / 30fps	5MP / 30fps	12MP / 30fps
Min. Illumination	Color : 0.16Lux (F1.6) B/W : 0.16Lux (F1.6)	Color : 0.07Lux (F1.3) B/W : 0Lux (IR LED on)	Color : 0.16Lux ((F1.6) B/W : 0Lux (IR LED on)	Color: 0.39 Lux (F2.2) BW : 0Lux (IR LED on)
Video Out	Micro USB type B	CVBS 1.0 Vp-p, Micro USB Type B		
Focal Length (Zoom Ratio)	3.7mm fixed	3.7 ~ 9.4mm (2.5x) motorized varifocal	3.7mm fixed (XNO-8020R) 4.6mm fixed (XNO-8030R) 7.0mm fixed (XNO-8040R)	1.08mm fixed focal
Angular Field of View	H : 97.5° / V : 71.9° / D : 126.2°	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)	H : 187° / V : 187° / D : 187°
Pan / Tilt / Rotate Range	0° ~ 355° / 0° ~ 47° / 0° ~ 353°	-		
IR Viewable Length	-	50m (164.04ft)	30m (98.43ft)	10m (32.8ft), WiseIR
Day & Night	Auto (Electrical)	Auto (ICR)		
Wide Dynamic Range	-	120dB		
Digital Noise Reduction	SSNR V			
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		2 configured I / O
Audio I/O	Built-in mic / -	Selectable (mic in/line in) / Line out		Selectable (mic in/line in), Built-in mic / Line out
Video Compression	H.265 / H.264, MJPEG			
WiseStream	WiseStream II			
Streaming	Up to 10 Profiles			
Edge Storage	micro SD/SDHC/SDXC			
Application Programming Interface	ONVIF profile S/G, SUNAPI, Hanwha Vision Open Platform	ONVIF Profile S/T, SUNAPI Hanwha Vision Open Platform	ONVIF Profile S/T, SUNAPI Hanwha Vision Open Platform	ONVIF Profile S/G/T SUNAPI(HTTP API) Hanwha Vision Open Platform
Operating Temperature / Humidity	-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)	-40°C ~ +60°C (-40°F ~ +140°F) / 0~95% RH
Certification	-	IP67, IP66, NEMA4X, IK10		IP66, IK10, NEMA4X, EN50155 class T3 (XNF-9010RVM only)
Power Consumption	PoE : Max 4.7W	PoE : Max 12.95W 12VDC : Max 12.5W 24VAC : Max 14.5W	PoE : Max 10.3W 12VDC : Max 9.3W	PoE : Max 12.95W, typical 11W 12VDC : Max 11W, typical 9.1W
Product Dimensions / Weight	Ø98.9 x 129.1mm (Ø3.89" x 5.08") 275g (0.61lb)	Ø91 x 368.6mm (Ø6.3" x 4.67") 2180g (4.81lb)	Ø70 x 296mm (Ø2.76" x 11.65") 1220g (2.69lb)	Ø160 x 72mm (Ø6.38" x 2.83") 1100g (2.43lb)



XNF-9010RS
12MP IR Fisheye Camera



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



XNV-6080R
2MP IR Vandal Dome Camera

Imaging Device	1/2.3" CMOS	1/1.8" CMOS	1/2.8" CMOS
Resolution / Max. Frame Rate	12MP / 30fps	6MP / 30fps	2MP / 60fps
Min. Illumination	Color: 0.39Lux (F2.2, 1/30sec) BW: 0Lux (IR LED on)	Color: 0.1Lux (F1.6) B/W: 0Lux (IR LED on)	Color: 0.015Lux (F1.4) B/W: 0Lux (IR LED on)
Video Out	CVBS: 1.0Vp-p, Micro USB Type B		
Focal Length (Zoom Ratio)	1.08mm fixed focal	1.6mm fixed	2.8 ~ 12mm (4.3x) motorized varifocal
Angular Field of View	H: 187° / V: 187° / D: 187°	H: 192° / V: 192° / D: 192°	H: 119.5° (Wide) ~ 27.9° (Tele) V: 62.8° (Wide) ~ 15.7° (Tele) D: 142.1° (Wide) ~ 32° (Tele)
Pan / Tilt / Rotate Range	-	-	0° ~ 354° / 0° ~ 67° / 0° ~ 355°
IR Viewable Length	9m (29.53ft), WiselR	15m (49.21ft)	50m (164.04ft)
Day & Night	Auto (ICR)		
Wide Dynamic Range	120dB		150dB
Digital Noise Reduction	SSNR V		
Digital Image Stabilization	-		Support
Analytics	Intelligent analytics, Audio detection, Sound classification		
Business Intelligence	People counting, Queue management, Heatmap		-
Alarm I/O	2 configured 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
Video Compression	H.265 / H.264, MJPEG		
WiseStream	WiseStream II		
Streaming	Up to 10 Profiles		
Edge Storage	micro SD/SDHC/SDXC		
Application Programming Interface	ONVIF Profile S/G/T, SUNAPI(HTTP API) Hanwha Vision Open Platform	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform
Operating Temperature / Humidity	-40°C ~ +50°C (-40°F ~ +122°F) / 0~95% RH	-10°C ~ +55°C (+14°F ~ +131°F) (XNF-8010R) -40°C ~ +55°C (-40°F ~ +131°F) (XNF-8010RV/8010RVM)	-40°C ~ +55°C (-40°F ~ +131°F)
Certification	IP66, IP67, IP6K9K, NEMA4X, IK10, IK10+ (it can resist impacts of 40 joules), NSF, ANSI Standard 169 ~ Special Purpose Food Equipment and Devices.	IP66, IK10 (XNF-8010RV/8010RVM)	IP67, IP66, NEMA4X, IK10
Power Consumption	PoE: Max 12.95W, typical 11W 12VDC: Max 11W, typical 9.1W	PoE: Max 12W, 12VDC: Max 11W (XNF-8010R) PoE: Max 12.95W, 12VDC: Max 12W (XNF-8010RV/8010RVM)	PoE: Max 12.95W 12VDC: Max 11.5W 24VAC: Max 14W
Product Dimensions / Weight	Ø 167.9 x 72.1mm (Ø 66.1" x 28.38") 2980g (6.57lb)	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)	Ø 160 x 118.5mm (Ø 6.3" x 4.67") 995g (2.19lb)



XNV-6080RSA
2MP Stainless IR Vandal Dome Camera



XNV-6080
2MP Vandal Dome Camera



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



XNV-6020R
2MP IR Vandal Dome Camera



XNV-6013M
2MP Mobile Camera

Imaging Device	1/2.8" CMOS			
Resolution / Max. Frame Rate	2MP / 60fps			
Min. Illumination	Color: 0.015Lux (F1.4) B/W: 0Lux (IR LED on)	Color: 0.04Lux (F2.0) B/W: 0Lux (IR LED on)	Color: 0.015Lux (F1.4) B/W: 0Lux (IR LED on)	Color: 0.04Lux (F2.0) B/W: 0.04Lux (F2.0)
Video Out	CVBS 1.0Vp-p, Micro USB type B		Micro USB Type B	CVBS 1.0Vp-p, Micro USB type B
Focal Length (Zoom Ratio)	2.8 ~ 12mm (4.3x) motorized varifocal		3.6mm fixed	4mm fixed
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: 94.8° / V: 49.3° / D: 114.3°	H: 88.6° / V: 47.5° / D: 104.8°
Pan / Tilt / Rotate Range	0° ~ 354° / 0° ~ 67° / 0° ~ 355°		± 5° / 0° ~ 67° / ± 90°	0° ~ 354° / 0° ~ 67° / 0° ~ 355°
IR Viewable Length	50m (164.04ft)	-	15m (49.21ft)	30m (98.43ft)
Day & Night	Auto (ICR)			
Wide Dynamic Range	150dB			
Digital Noise Reduction	SSNR V			
Digital Image Stabilization	Support			
Analytics	Intelligent analytics Audio detection Sound classification		Intelligent analytics Audio detection Sound classification (w/ external MIC)	Intelligent analytics Audio detection Sound classification
Business Intelligence	-			People counting, Queue management, Heatmap
Alarm I/O	1 / 1		-	1 / 1
Audio I/O	Selectable (mic in/line in) / Line out			
Video Compression	H.265 / H.264, MJPEG			
WiseStream	WiseStream II			
Streaming	Up to 10 Profiles			
Edge Storage	micro SD/SDHC/SDXC			
Application Programming Interface	ONVIF profile S/G, 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)		-30°C ~ +55°C (-22°F ~ +131°F) * Start up above -20°C (-4°F)	
Certification	IP66, NEMA4X, IP6K9K, IK10+	IP67, IP66, NEMA4X, IK10	IP66, IK10, NEMA4X	IP67, IP66, IK10
Power Consumption	PoE: Max 12.95W 12VDC: Max 11.5W 24VAC: Max 14W	PoE: Max 7.8W 12VDC: Max 7W 24VAC: Max 8.2W	PoE: Max 6.7W	PoE: Max 9W 12VDC: Max 8W
Product Dimensions / Weight	Ø 160 x 120.5mm (Ø 6.38" x 4.74") 2.8kg (6.17lb)	Ø 160 x 118.5mm (Ø 6.3" x 4.67") 985g (2.17lb)	W 98.9 x H 52 x D 100mm (3.89" x 2.05" x 3.94") 295g (0.65lb)	Ø 120 x 97.5mm (Ø 4.72" x 3.84") 615g (1.36lb)



XNV-6012M/6012
2MP Mobile Flat Camera



XNV-6011
2MP Vandal Dome Camera



XNV-6010
2MP Vandal Dome Camera



XND-6080V/6080
2MP Dome Camera

Imaging Device	1/2.8" CMOS			
Resolution / Max. Frame Rate	2MP / 60fps			
Min. Illumination	Color : 0.04Lux (F2.0) B/W : 0.04Lux (F2.0)	Color : 0.055Lux (F2.0) B/W : 0.055Lux (F2.0)	Color : 0.055Lux (F2.0) B/W : 0.0055Lux (F2.0)	Color : 0.015Lux (F1.4) B/W : 0.0015Lux (F1.4)
Video Out	Micro USB type B	CVBS 1.0Vp-p, Micro USB type B		
Focal Length (Zoom Ratio)	2.4mm fixed	2.8mm fixed	2.4mm fixed	2.8~12mm (4.3x) motorized varifocal
Angular Field of View	H : 135.4° / V : 71.2° / D : 161.6°	H : 112° / V : 62° / D : 130°	H : 139° / V : 73° / D : 167°	H : 119.5° (Wide) ~ 27.9° (Tele) V : 62.8° (Wide) ~ 15.7° (Tele) D : 142.1° (Wide) ~ 32° (Tele)
Pan / Tilt / Rotate Range	± 5° / 0 ~ 67° / ± 90°	0° ~ 353° / 0° ~ 59° / 0° ~ 353°	0° ~ 354° / 0° ~ 67° / 0° ~ 355°	
IR Viewable Length	-			
Day & Night	Auto (Electrical)		Auto (ICR)	
Wide Dynamic Range	150dB			
Digital Noise Reduction	SSNR V			
Digital Image Stabilization	Support			
Analytics	Intelligent analytics, Audio detection Sound classification (w/ external MIC)	Intelligent analytics	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), 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, MJPEG			
WiseStream	WiseStream II			
Streaming	Up to 10 Profiles			
Edge Storage	micro SD/SDHC/SDXC			
Application Programming Interface	ONVIF profile S/G, SUNAPI, Hanwha Vision Open Platform			ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform
Operating Temperature / Humidity	-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, NEMA4X		IP67, IP66, IK10	
Power Consumption	PoE : Max 6.5W	PoE : Max 6.5W	PoE : Max 6W / 12V DC : Max 5.5W	PoE : Max 6.5W / 12VDC : Max 6W
Product Dimensions / Weight	W 98.9 x H 52 x D 100mm (3.89" x 2.05" x 3.94") 295g (0.65lb)	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 140.8 x 113mm (Ø 5.54" x 4.45") 610g (1.34lb) (XND-6080) 714g (1.57lb) (XND-6080V)



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



XND-6020R
2MP IR Dome Camera



XND-6011F
2MP Flush Mount Dome Camera



XND-6010
2MP Dome Camera

Imaging Device	1/2.8" CMOS			
Resolution / Max. Frame Rate	2MP / 60fps			
Min. Illumination	Color : 0.015Lux (F1.4) B/W : 0Lux (IR LED on)		Color : 0.055Lux (F2.0) B/W : 0.055Lux (F2.0)	
Video Out	CVBS 1.0Vp-p, Micro USB type B		Micro USB type B	CVBS 1.0Vp-p, Micro USB type B
Focal Length (Zoom Ratio)	2.8~12mm (4.3x) motorized varifocal	4mm fixed	2.8mm fixed	2.4mm fixed
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 : 88.6° / V : 47.5° / D : 104.8°	H : 112° / V : 62° / D : 130°	H : 139° / V : 73° / D : 167°
Pan / Tilt / Rotate Range	0° ~ 354° / 0° ~ 67° / 0° ~ 355°		0° ~ 355° / 0° ~ 47° / 0° ~ 353°	0° ~ 354° / 0° ~ 75° / 0° ~ 355°
IR Viewable Length	30m (98.43ft)		-	-
Day & Night	Auto (ICR)		Auto (Electrical)	Auto (ICR)
Wide Dynamic Range	150dB		-	150dB
Digital Noise Reduction	SSNR V			
Digital Image Stabilization	Support			
Analytics	Intelligent analytics, Audio detection, Sound classification			
Business Intelligence	-	People counting, Queue management, Heatmap		
Alarm I/O	1 / 1		-	1 / 1
Audio I/O	Selectable (mic in/line in), Built-in mic / Line out		Built-in mic / -	Selectable (mic in/line in), Built-in mic / Line out
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 / Humidity	-10°C ~ +55°C (+14°F ~ +131°F)			
Certification	IK08		-	IK08
Power Consumption	PoE : Max 10W 12VDC : Max 9W	PoE : Max 9W 12VDC : Max 8W	PoE : Max 4.7W	PoE : Max 6.5W 12VDC : Max 6W
Product Dimensions / Weight	Ø 140.8 x 113mm (Ø 5.54" x 4.45") 624g (1.38lb) (XND-6080R) 724g (1.60lb) (XND-6080RV)	Ø 110 x 90mm (Ø 4.33" x 3.54") 380g (0.84lb)	Ø 98.9 x 129mm (Ø 3.89" x 5.08") 275g (0.61lb)	Ø 140.8 x 113mm (Ø 5.54" x 4.45") 610g (1.34lb)



XNO-6080R
2MP IR Bullet Camera



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



XNB-6000
2MP Box Camera

Imaging Device	1/2.8" CMOS		
Resolution / Max. Frame Rate	2MP / 60fps		
Min. Illumination	Color : 0.015Lux (F1.4) B/W : 0Lux (IR LED on)	Color : 0.055lux (F2.0) (XNO-6010R) Color : 0.015lux (F1.4) (XNO-6020R) B/W: 0Lux (IR LED On)	Color : 0.01Lux (F1.2) B/W : 0.001Lux (F1.2)
Video Out	CVBS 1.0Vp-p, Micro USB type B		
Focal Length (Zoom Ratio)	2.8 ~ 12mm (4.3x) motorized varifocal	2.4mm fixed (XNO-6010R) 4mm fixed (XNO-6020R)	-
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 : 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	50m (164.04ft)	20m (65.62ft) (XNO-6010R) 30m (98.43ft) (XNO-6020R)	-
Day & Night	Auto (ICR)		
Wide Dynamic Range	150dB		
Digital Noise Reduction	SSNR V		
Digital Image Stabilization	Support		
Analytics	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
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, Wisenet open platform	ONVIF profile S/G/T, SUNAPI, Wisenet open platform	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	-10°C ~ +55°C (+14°F ~ +131°F)
Certification	IP67, IP66, NEMA 4X, IK10		
Power Consumption	PoE : Max 12.95W 12VDC : Max 12W 24VAC : Max 15W	PoE : Max 9.7W 12VDC : Max 8.8W	PoE : Max 7.5W 12VDC : Max 6.5W 24VAC : Max 8W
Product Dimensions / Weight	Ø91 x 368.6mm (Ø 3.58" x 14.51") 2180g (4.81lb)	Ø70 x 301.5mm (Ø 2.76" x 11.87") (XNO-6010R) Ø70 x 296mm (Ø 2.76" x 11.65") (XNO-6020R) 1220g (2.69lb)	W 73.1 x H 66.6 x D 147.8mm (2.88" x 2.62" x 5.82") 420g (0.93lb)



XNB-6002
2MP Remote Head Camera



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		
Resolution / Max. Frame Rate	2MP / 60fps		-	-	-
Min. Illumination	-		Color : 0.06Lux (F2.5) B/W: 0.06Lux (F2.5)	Color : 0.45Lux (F2.0) B/W : 0.45Lux (F2.0)	Color : 0.03Lux (F1.6)
Video Out	CVBS 1.0Vp-p, Micro USB type B		-		
Focal Length (Zoom Ratio)	-		4.6mm Pinhole	2.4mm fixed	1.6mm fisheye
Angular Field of View	-		H: 73° / V: 39° / D: 85°	H: 138° / V: 73° / D: 168°	H: 187° / V: 113.9°
Pan / Tilt / Rotate Range	-		-		
IR Viewable Length	-		-		
Day & Night	-		Auto (Electrical)		
Wide Dynamic Range	120dB		-		
Digital Noise Reduction	SSNR V		-		
Digital Image Stabilization	Support		-		
Analytics	Analytics events: Defocus detection, Motion detection, Tampering, Fog detection, Audio detection, Sound classification, Face detection, Virtual area(Loitering/Intrusion/Enter/Exit/ Appear/Disappear), Virtual line(Crossing/Direction)	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: Main/Baseline/High, MJPEG	H.265 / H.264, MJPEG	-		
WiseStream	Manual(Sea area), WiseStream II	WiseStream II	-		
Streaming	Unicast(20 users) / Multicast Multiple streaming(Up to 10 profiles)	Up to 10 Profiles	-		
Edge Storage	Micro SD/SDHC/SDXC 1 slot Max. 1TB	SD/SDHC/SDXC	-		
Application Programming Interface	ONVIF Profile S/G/T SUNAPI(HTTP API) Hanwha Vision Open Platform	ONVIF profile S/G, SUNAPI, Hanwha Vision Open Platform	-		
Operating Temperature / Humidity	-10°C~-55°C(+14°F~+131°F) 0~95% RH(non-condensing)	-10°C~-55°C (+14°F~+131°F)			
Certification	-				
Power Consumption	PoE: Max 10.5W, typical 6.9W 12VDC: Max 8.6W, typical 5.5W Power redundancy failover	PoE : Max 6W 12VDC : Max 6.5W	-		
Product Dimensions / Weight	131.1(W)x33.5(H)x86(D)mm (5.16x1.32x3.39") 420g(0.93lb)	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) 321 g (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)



XNZ-6320A
2MP 32x Zoom Camera



XNZ-L6320A
2MP 32x Zoom Camera



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

Imaging Device	1/2.8" CMOS		1/2" 2MP CMOS		1/2.8" CMOS	
Resolution / Max. Frame Rate	2MP / 60fps					
Min. Illumination	Color: 0.05Lux (1/30sec, F1.6) B/W: 0.005Lux (1/30sec, F1.6)		Color: 0.02Lux (F1.6) B/W: 0Lux (IR LED on)	Color: 0.01Lux (F1.5, 1/30sec) BW: 0Lux (IR LED)	Color: 0.03 Lux (1/30sec, F1.6, 30IRE) B/W: 0.003 Lux (1/30sec, F1.6, 30IRE)	Color: 0.015Lux (F1.4, 1/30sec) BW: 0.0015Lux (F1.4, 1/30sec)
Video Out	CVBS 1.0 Vp-p, Micro USB Type B	CVBS 1.0 Vp-p	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)	4.44 ~ 142.6mm (Optical 32X) (digital 32x, total 1024x zoom)		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: 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: 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°) / —		0° ~ 355° / 0° ~ 90°
IR Viewable Length	—	—	500m (1,640.42ft)	350m (1,148.29ft)	—	—
Day & Night	Auto(ICR)					
Wide Dynamic Range	120dB		150dB			
Digital Noise Reduction	SSNR V					
Digital Image Stabilization	Support					
Analytics	Intelligent analytics, Audio detection Sound classification Shock detection	Intelligent analytics Audio detection Sound classification	Intelligent analytics, Audio detection Sound classification Shock detection		Intelligent analytics Audio detection Sound classification	
Business Intelligence	—					
Alarm I/O	1 / 2	1 / 1	4/2		1/1	
Audio I/O	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					
WiseStream	WiseStream II		Manual (Sea area), WiseStream II			
Streaming	Up to 10 profiles					
Edge Storage	Micro SD/SDHC/SDXC 2slot 512GB					
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) / 0 ~ 90% RH (Non–condensing)	–10° C ~ +55° C (–14° F ~ +131° F) / 0 ~ 90% RH (Non–condensing)	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) / 0 ~ 90% RH (Non–condensing)
Certification	—		IP66, IK10			
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	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	96 x 76 x 143.5mm (3.78x2.99x5.65"), 578g (1.27lb)	72 x 63.9 x 135.4mm (2.83x2.52x5.33"), 480g (1.06lb)	ø 236.9x407.7mm (9.33x16.05"), 7100g (15.65lb)	ø 236.9x407.7mm (9.33x16.05"), 7100g (15.65lb)		ø 168x161.5mm (6.61x6.36"), 1900g (4.19lb) ø 136x106mm (5.35x4.17"), 780g (1.72lb)



PNM-9031RV
15MP 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

Imaging Device	1/2.8" CMOS (x4)	1/1.8" CMOS x 4CH	1/2.8" CMOS x 4CH	1/2.8" CMOS x 4CH
Resolution / Max. Frame Rate	15MP / 20fps	8MP / 30fps	8MP / 60fps	8MP / 60fps
Min. Illumination	Color: 0.1Lux(F1.6, 1/30sec) BW: 0Lux(IR LED on)	Color: 0.11lux(F1.92, 30 IRE) BW: 0Lux(IR LED on)	Color: 0.05lux(F1.6,30 IRE) BW: 0Lux(IR LED on)	Color: 0.04lux(F2.2, 1/30sec) BW: 0.004lux(F2.2, 1/30sec)
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	3~6mm(2x) 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)	H: 107° (Wide) ~ 56.3° (Tele) V: 57° (Wide) ~ 31.5° (Tele) D: 126° (Wide) ~ 64.3° (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° / 0~73° / 0~90°
IR Viewable Length	20m(65.62ft)	30m(98.43ft)		-
Day & Night	Auto(ICR)			
Wide Dynamic Range	120dB			
Digital Noise Reduction	SSNR V			
Digital Image Stabilization	-	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		
Business Intelligence	Heatmap	-		
Alarm I/O	2 / 1	1 / 1		
Audio I/O	Selectable (mic in/line in)			
Video Compression	H.265/H.264, MJPEG			
WiseStream	WiseStream II			
Streaming	Up to 3 profiles	Up to 10 profiles		
Edge Storage	Micro SD/SDHC/SDXC 2slots 512GB (256GBx2)	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) Hanuwa Vision Open Platform		
Operating Temperature / Humidity	-40°C~-55°C(-40°F~-131°F) * Startup should be above -30°C Less than 95% RH(Non-condensing)	-40°C~-55°C(-40°F~-131°F) / 0~90%RH(Non-condensing)		-40°C~-55°C(-40°F~-131°F) 0~90%RH(Non-condensing) *Start up should be above at -35°C
Certification	IP66, IK10, NEMA4X			
Power Consumption	PoE+: Max 23.5W, Typical 18.0W 12VDC: Max 20.5W, Typical 16.0W	PoE: Max. 45 W, Typical 33.7 W 12VDC: Max. 42 W, Typical 32 W	PoE: Max. 42 W, Typical 30 W 12VDC: Max. 38 W, Typical 28.2 W	Max. 33W, Typical 20W
Product Dimensions / Weight	Ø253x170mm / 2600g	Ø315x145.9mm(12.40"x5.74") / 5200g(11.5lb)		Ø251x116.5mm / 3000g



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



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



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

Imaging Device	1/2.8" CMOS x 3CH	1/2.8" CMOS x 2CH	
Resolution / Max. Frame Rate	2MP / 30fps	6MP / 15fps	2MP / 30fps
Min. Illumination	Color: 0.04lux(F2.2) BW: 0.004lux(F2.2)	Color: 0.16lux(F1.67, 1/30sec, 30IRE) BW: 0lux(IR LED on)	Color: 0.035lux(F2.2, 1/30sec, 30IRE) BW: 0lux(IR LED on)
Video Out	CVBS: 1.0 Vp-p	micro USB Type B	micro USB Type B
Focal Length (Zoom Ratio)	3~6mm(2x) motorized varifocal	3.54~6.69mm(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: 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	0~360° / 0~73° / 0~90°	0~355° / 0~78° / 0~180°	0~355° / 0~78° / 0~180°
IR Viewable Length	-	25m(82ft)	
Day & Night	Auto(ICR)		
Wide Dynamic Range	extreme WDR(150dB)		
Digital Noise Reduction	SSNR V		
Digital Image Stabilization	Support	-	-
Analytics	Defocus detection, Directional detection, Motion detection, Enter/Exit, Tampering, Virtual line	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	-		
Audio I/O	-		
Video Compression	H.265, H.264, MJPEG	H.265/H.264: Main/Baseline/High, MJPEG	
WiseStream	WiseStream II		
Streaming	Up to 10 profiles		
Edge Storage	Micro SD/SDHC/SDXC	Micro SD/SDHC/SDXC 1slot Max. 512GB	Micro SD/SDHC/SDXC 1slot Max. 512GB
Application Programming Interface	ONVIF Profile S/G/T, SUNAPI(HTTP API)	ONVIF Profile S/T, SUNAPI(HTTP API), Open platform	
Operating Temperature / Humidity	-40°C~-+55°C(-40°F~-+131°F) / 0~90%RH(Non-condensing) *Start up should be above at -35°C		
Certification	IP66, IK10, NEMA4X	IP66/IP67, NEMA4X, IK10	
Power Consumption	PoE+: Max: 16.5W, Typical : 8.2W	PoE+: Max 18.3W, typical 13.5W	PoE+: Max 17W, typical 12.5W
Product Dimensions / Weight	Ø 251 x 116.5mm (Ø9.88"" x 4.59"), 3000g (6.6lb)	215(W)x135(D)x93.2(H)mm(8.46"x5.31"x3.67") / 1330g	



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



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



SLA-T2480WA/T2480WDA
2MP lens for PNM-9000QB



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



SLA-T1080FA
2MP lens for PNM-9000QB

Imaging Device	–	1/2.8" CMOS			
Resolution / Max. Frame Rate	2MP / 30fps	–			
Min. Illumination	–	Color: 0.06Lux(F2.5)	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)	Color: 0.03Lux(F1.6)
Video Out	HDMI(1920x1080, Quad view support)	–			
Focal Length (ZoomRatio)	–	4.6mm fixed focal	2.4mm fixed focal		1.6mm fixed focal
Angular Field of View	–	H: 73° / V: 39° / D: 85°	H: 183° / V: 73° / D: 165°		H: 187° / V: 113.9°
Pan / Tilt / Rotate Range	–				
IR Viewable Length	–				
Day & Night	Auto(electrical)	–			
Wide Dynamic Range	extreme WDR(150dB)	–			
Digital Noise Reduction	SSNR V	–			
Digital Image Stabilization	Support	–			
Analytics	Defocus detection, Directional detection, Motion detection, Enter/Exit, Tampering, Virtual line	–			
Business Intelligence	–	–			
Alarm I/O	1 / 1	–			
Audio I/O	Selectable(mic in/line in) / Line out	–			
Video Compression	H.265, H.264, MJPEG	–			
WiseStream	WiseStream II	–			
Streaming	Up to 10 profiles	–			
Edge Storage	Micro SD/SDHC/SDXC	–			
Application Programming Interface	ONVIF Profile S/G/T, SUNAPI(HTTP API) Hanwha Vision Open Platform	–			
Operating Temperature / Humidity	–10°C ~ +45°C (–40°F ~ +113°F) / Less than 95% RH(Non condensing)	–			
Certification	–				
Power Consumption	PoE : Max 22W, Typical 16.70W DC : Max 19W, Typical : 14W	–			
Product Dimensions / Weight	W 200 x H 37 x D 146mm (7.87" x 1.46" x 5.75") 715g (1.58lb)	Ø 24 x L49.8mm, 310g (SLA–T4681) W30 x H27.9 x D45mm, 321g (SLA–T4681V)	ø 35x63.2mm(ø 1.38x2.49"), 101g(0.22lb) (SLA–T2480WA) ø 110.0x77.0mm(ø 3.54x2.36"), 450g(0.99lb) (SLA–T2480WDA) Cable: 8m(26.2ft)	Ø 24 x L49.8mm, 318g (SLA–T2481) W30 x H27.9 x D45mm, 328g (SLA–T2481V)	Ø 35 x L68.9mm 430g

							
	QND-8011 5MP Dome Camera	QND-8021 5MP Dome Camera	QNO-7082R 4MP IR Bullet Camera	QNO-7022R 4MP IR Bullet Camera	QNO-7012R 4MP IR Bullet Camera	QNO-6082R/6082R1 2MP IR Bullet Camera	QNO-6072R/6072R1 2MP IR Bullet Camera
Imaging Device	1/2.8" CMOS		1/3" CMOS			1/2.8" CMOS	
Resolution / Max. Frame Rate	5MP / 30fps		4MP / 30fps			2MP / 30fps	
Min. Illumination	Color : 0.15Lux (F2.0)	Color: 0.15Lux (F1.6, 1/30sec, 30IRE) BW: 0.15Lux (F1.6, 1/30sec, 30IRE)	Color: 0.1Lux (F1.6, 1/30sec) B/W: 0Lux (IR LED On)	Color : 0.15Lux (F1.6, 1/30sec) B/W : 0Lux (IR LED On)		Color : 0.03Lux (F1.6) B/W : 0Lux (IR LED on)	
Video Out	Micro HDMI		CVBS 1.0 Vp-p	CVBS: 1.0 Vp-p	CVBS: 1.0 Vp-p	CVBS 1.0 Vp-p	
Focal Length (Zoom Ratio)	2.8mm fixed	4.0mm fixed focal	3.2~10mm (3.1x) motorized varifocal	4mm fixed focal	2.8mm fixed focal	3.2 ~ 10mm (3.1 x) motorized varifocal	3.2 ~ 10mm (3.1 x) varifocal
Angular Field of View	H : 104.4° / V : 76.7° / D : 136.1°	H : 81° / V : 58° / D : 106°	H : 98.6° (Wide) ~ 30.8° (Tele) V : 52.3° (Wide) ~ 17.3° (Tele) D : 115.7° (Wide) ~ 35.3° (Tele)	H : 78.2° / V : 41.2° / D : 92°	H : 107.5° / V : 59.7° / D : 122°	H : 109° (Wide) ~ 33.2° (Tele) V : 57.4° (Wide) ~ 18.7° (Tele) D : 132° (Wide) ~ 38° (Tele)	
Pan / Tilt / Rotate	0° ~ 350° / 0° ~ 69° / 0° ~ 355°		–	–	–	0° ~ 350° / 0° ~ 67° / 0° ~ 355°	0° ~ 360° / 0° ~ 100° / 0° ~ 360°
IR Viewable Length	–		30m (98.42ft)	25m (82.02ft)	20m (65.62ft)	30m (98.43ft)	30m (98.43ft)
Day & Night	Auto (Electrical)		Auto (ICR)				
Wide Dynamic Range	120dB						
Digital Noise Reduction	SSNR						
Digital Image Stabilization	–						
Analytics	Defocus detection, Motion detection, Tampering		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	People counting		–				
Alarm I/O	–	–	1 / 1				
Audio I/O	–	–	Line in / –	Selectable (mic in/line in) / –			
Video Compression	H.265/H.264: Main/High, MJPEG						
WiseStream	WiseStream II						
Streaming	Unicast(6 users) / Multicast, Multiple streaming(Up to 3 profiles)						
Edge Storage	micro SD/SDHC/SDXC	micro SD/SDHC/SDXC 1slot 128GB				micro SD/SDHC/SDXC	
Application Programming Interface	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform		ONVIF Profile S/G/T, SUNAPI (HTTP API)			ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform	
Operating Temperature	–10°C ~ +40°C (+14°F ~ +104°F)	–10°C ~ +40°C (+14°F ~ +104°F) 0 ~ 90% RH(non-condensing)	–40°C ~ +55°C (–40°F ~ +131°F) / 0~95% RH * Start up should be done at –30°C or above			–30°C ~ +55°C (–22°F ~ +131°F) * Start up above –20°C (–4°F)	
Certification	IP42, IK08	IP42, IK08	IP66, IK10			IP66, IK10, NEMA4X	IP66, IK10
Power Consumption	PoE : Max 5W, typical 4W	PoE: Max 5.00W, typical 4.00W	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 7.4W, typical 5.4W 12VDC : Max 6.5W, typical 4.8W	
Dimensions (WxHxD) / Weight	Ø99 x 56mm (Ø3.9" x 2.2") 165g (0.364lb)	Ø99.0x56.0mm(Ø3.9x2.2"), 165g(0.36 lb)	Ø78.0 x 259.8mm (Ø3.07 x 10.23"), 900g (1.984 lb)	Ø70.0 x 246.0mm (Ø2.76 x 9.69"), 700g (1.543 lb)		Ø78 x 259.8mm (Ø3.07" x 10.23") 900g (1.984lb)	Ø70 x 246mm (Ø2.76" x 9.69") 730g (1.609lb)

										
QNO-6022R/6022R1 2MP IR Bullet Camera		QNO-6012R/6012R1 2MP IR Bullet Camera		QND-7082R 4MP IR Dome Camera		QND-7022R 4MP IR Dome Camera		QND-7012R 4MP IR Dome Camera		
Imaging Device	1/2.8" CMOS			1/3" CMOS						
Resolution / Max. Frame Rate	2MP / 30fps			4MP / 30fps						
Min. Illumination	Color : 0.03Lux (F1.6) B/W : 0Lux (IR LED on)			Color : 0.1Lux (F1.6, 1/30sec) B/W : 0Lux (IR LED On)		Color : 0.15Lux (F2.0, 1/30sec) B/W : 0Lux (IR LED On)				
Video Out	CVBS 1.0 Vp-p									
Focal Length (Zoom Ratio)	4mm fixed		2.8mm fixed		3.2~10mm (3.1x) motorized varifocal		4mm fixed focal		2.8mm fixed focal	
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)		H : 78.2° / V : 41.2° / D : 92°		H : 107.5° / V : 59.7° / D : 122°	
Pan / Tilt / Rotate	-			0° ~ 350° / 0° ~ 67° / 0° ~ 355°						
IR Viewable Length	25m (82.02ft)		20m (65.62ft)							
Day & Night	Auto (ICR)									
Wide Dynamic Range	120dB									
Digital Noise Reduction	SSNR									
Digital Image Stabilization	-									
Analytics	Motion detection, Tampering, Defocus detection , Virtual area(Intrusion/Enter/Exit), Virtual line(Crossing/Direction)									
Business Intelligence	-									
Alarm I/O	1 / 1									
Audio I/O	Selectable (mic in/line in) / -				Built-in mic / -					
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		micro SD/SDHC/SDXC 1slot 128GB		micro SD/SDHC/SDXC 1slot 128GB	
Application Programming Interface	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform		ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform		ONVIF Profile S/G/T, SUNAPI (HTTP API)		ONVIF Profile S/G/T, SUNAPI (HTTP API)		ONVIF Profile S/G/T, SUNAPI (HTTP API)	
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)		-10°C ~ +55°C (+14°F ~ +131°F) / 0~95% RH		-10°C ~ +55°C (+14°F ~ +131°F) / 0~95% RH		-10°C ~ +55°C (+14°F ~ +131°F) / 0~95% RH	
Certification	IP66, IK10		IP66, IK10		-		-		-	
Power Consumption	PoE : Max 7W, typical 5.2W 12VDC : Max 6.1W, typical 4.5W				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			
Dimensions (WxHxD) / Weight	Ø70 x 246mm (Ø2.76" x 9.69") 700g (1.543lb)				Ø119.8 x 98.8mm (Ø4.72" x 3.89") 320g (0.705 lb)		Ø110 x 86mm (Ø4.33" x 3.39") 255g (0.562 lb)		Ø110 x 86mm (Ø4.33" x 3.39") 255g (0.562 lb)	



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



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



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



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



Q mini
2MP Dome Camera

Imaging Device	1/2.8" CMOS			
Resolution / Max. Frame Rate	2MP / 30fps			
Min. Illumination	Color : 0.03Lux (F1.6) B/W : 0Lux (IR LED on)			Color : 0.03Lux (F1.6)
Video Out	CVBS 1.0 Vp-p			
Focal Length (Zoom Ratio)	3.2~10mm (3.1x) motorized varifocal	3.2~10mm (3.1x) 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°			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	Motion detection, Tampering, Defocus detection , Virtual area(Intrusion/Enter/Exit), Virtual line(Crossing/Direction)			Defocus detection, Motion detection, Tampering
Business Intelligence	-			People counting
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			
Application Programming Interface	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform			
Operating Temperature / Humidity	-10℃ ~ +55℃ (+14°F ~ +131°F)			
Certification	-			IP42, IK08
Power Consumption	PoE : Max 7.7W, typical 6W 12VDC : Max 6.5W, typical 5.1W	PoE : Max 7.7W, typical 6W 12VDC : Max 6.5W, typical 5.1W		PoE : Max 4.8W, typical 2.8W
Product Dimensions / Weight	Ø 119.8 x 98.8mm (Ø 4.72" x 3.89") 320g (0.705lb)	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)



QND-6011
2MP Dome Camera



QNV-7082R
4MP IR Vandal Dome Camera



QNV-7032R
4MP IR Vandal Dome Camera



QNV-7022R
4MP IR Vandal Dome Camera



QNV-7012R
4MP IR Vandal Dome Camera

Imaging Device	1/2.8" CMOS	1/3" CMOS			
Resolution / Max. Frame Rate	2MP / 30fps	4MP / 30fps			
Min. Illumination	Color : 0.03Lux (F2.0)	Color : 0.1Lux (F1.6, 1/30sec) B/W : 0Lux (IR LED On)	Color : 0.15Lux (F2.0, 1/30sec) B/W : 0Lux (IR LED On)		
Video Out	–	CVBS 1.0 Vp–p	CVBS: 1.0 Vp–p / 75Ω composite, 720x480(N), 720x576(P) for installation	CVBS 1.0 Vp–p	
Focal Length (Zoom Ratio)	2.8mm fixed	3.2~10mm (3.1x) motorized varifocal	6.0mm fixed focal	4mm fixed focal	2.8mm fixed focal
Angular Field of View	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)	H: 49° / V: 28° / D: 56°	H: 78.2° / V: 41.2° / D: 92°	H: 108° / V: 60° / D: 122°
Pan / Tilt / Rotate Range	0° ~ 350° / 0° ~ 69° / 0° ~ 355°	0° ~ 350° / 0° ~ 67° / 0° ~ 355°			
IR Viewable Length	–	30m (98.42ft)		25m (82.02ft)	20m (65.62ft)
Day & Night	Auto (Electrical)	Auto (ICR)			
Wide Dynamic Range	120dB				
Digital Noise Reduction	SSNR				
Digital Image Stabilization	–				
Analytics	Defocus detection, Motion detection, Tampering	Motion detection, Tampering, Defocus detection , Virtual area(Intrusion/Enter/Exit), Virtual line(Crossing/Direction)			
Business Intelligence	People counting	–			
Alarm I/O	–	1 / 1			
Audio I/O	–	Line in / –	Selectable (mic in/line in) / –	Selectable (mic in/line in)	
Video Compression	H.265 / H.264, MJPEG		H.265/H.264 : Main/High, MJPEG	H.265 / H.264, MJPEG	
WiseStream	WiseStream II		Manual (5ea area), WiseStream II	WiseStreamII II	
Streaming	Up to 3 Profiles		Unicast(6 users) / Multicast Multiple streaming(Up to 3 profiles)	Up to 3 Profiles	
Edge Storage	micro SD/SDHC/SDXC	micro SD/SDHC/SDXC 1slot 128GB			
Application Programming Interface	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform	ONVIF Profile S/G/T, SUNAPI (HTTP API)			
Operating Temperature / Humidity	–10℃ ~ +55℃ (+14°F ~ +131°F)	–40℃ ~ +55℃ (–40°F ~ +131°F) / 0~95% RH * Start up should be done at –30℃ or above			
Certification	IP42, IK08	IP66, IK10			
Power Consumption	PoE : Max 4.8W, typical 2.8W	PoE: Max 11.4W, typical 8.5W 12VDC: Max 9.6W, typical 7.2W	PoE: Max 10.7W, typical 8.1W 12VDC: Max 9.1W, typical 6.5W		
Product Dimensions / Weight	Ø 99 x 56mm (Ø 3.9" x 2.2") 145g (0.320lb)	Ø 137 x 106.1mm (Ø 5.39" x 4.18") 710g (1.565 lb)	Ø 120.3 x 91.7mm (Ø 4.74" x 3.61") 510g (1.124lb)		



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



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



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



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



QNV-6024RM
2MP IR Mobile Camera

Imaging Device	1/2.8" CMOS				
Resolution / Max. Frame Rate	2MP / 30fps				
Min. Illumination	Color : 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	3.2 ~ 10mm (3.1x) varifocal	4mm fixed	2.8mm fixed	3.6mm fixed
Angular Field of View	H : 109° (Wide) ~ 33.2° (Tele) V : 57.4° (Wide) ~ 18.7° (Tele) D : 132° (Wide) ~ 38° (Tele)	H : 109° (Wide) ~ 33.2° (Tele) V : 57.4° (Wide) ~ 18.7° (Tele) D : 132° (Wide) ~ 38° (Tele)	H : 87.6° / V : 46.4° / D : 104.5°	H : 113.74° / V : 61.5° / D : 134.45°	H : 94.8° / V : 49.3° / D : 114.3°
Pan / Tilt / Rotate Range	0° ~ 350° / 0° ~ 67° / 0° ~ 355°				± 5° / 0 ~ 67° / ± 90°
IR Viewable Length	30m (98.42ft)		25m (82.02ft)		15m (49.21ft)
Day & Night	Auto (ICR)				
Wide Dynamic Range	120dB				
Digital Noise Reduction	SSNR				
Digital Image Stabilization	-				
Analytics	Motion detection, Tampering, Defocus detection , Virtual area(Intrusion/Enter/Exit), Virtual line(Crossing/Direction)				Intelligent analytics
Business Intelligence	-				
Alarm I/O	1 / 1				-
Audio I/O	Selectable (mic in/line in) / -				Selectable (mic in/line in/built-in mic) / Line out
Video Compression	H.265 / H.264, MJPEG				
WiseStream	WiseStreamII				
Streaming	Up to 3 Profiles				
Edge Storage	micro SD/SDHC/SDXC				
Application Programming Interface	ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform				
Operating Temperature / Humidity	-30°C ~ +55°C (-22°F ~ +131°F) * Start up above -20°C (-4°F)		-30°C ~ +55°C (-22°F ~ +131°F) * Start up above -20°C (-4°F)		-30°C ~ +55°C (-22°F ~ +131°F)
Certification	IP66, IK10				IP66, IK10, NEMA4X
Power Consumption	PoE : Max 7.70W, typical 6.00W 12VDC: Max 6.50W, typical 5.10W		PoE : Max 7.4W, typical 6W 12VDC: Max 6.4W		PoE : Max 6.7W, typical 5W
Product Dimensions / Weight	Ø 137 x 106.1mm (Ø 5.39" x 4.18") 710g (1.565lb)		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)



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



QNP-6250H
2MP 25x Outdoor PTZ Camera

Imaging Device	1/2.8" CMOS			
Resolution / Max. Frame Rate	2MP / 60fps			
Min. Illumination	Color: 0.05Lux(F1.6, 1/30sec, 30IRE) BW: 0.005Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED On)	Color: 0.05Lux(F1.6, 1/30sec, 30IRE) BW: 0.005Lux(F1.6, 1/30sec, 30IRE)	Color: 0.05Lux(F1.6, 1/30sec, 30IRE) BW: 0.005Lux(F1.6, 1/30sec, 30IRE), 0Lux(IR LED On)	Color: 0.05Lux(F1.6, 1/30sec, 30IRE) BW: 0.005Lux(F1.6, 1/30sec, 30IRE)
Video Out	-			
Focal Length (Zoom Ratio)	4.44~142.6mm(32x) zoom (digital 32x, total 1024x 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)			
Pan / Tilt / Rotate Range	360° Endless / -110° (90° ~ -20°)	360° Endless / 105°(90° ~ -15°)	360° Endless / -110° (90° ~ -20°)	360° Endless / -105° (90° ~ -15°)
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			
Analytics	Analytics event: 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	Analytics events: Directional detection, Motion detection, Enter/Exit, Tampering, Virtual line * Audio detection(Via optional I/O box SPM-4210)	
Business Intelligence	-			
Alarm I/O	Compatible with NW I/O Box (Optional: SPM-4210)	4/2	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, MJPEG
WiseStream	Manual(Sea area), WiseStream II			
Streaming	Up to 10 profiles			
Edge Storage	Micro SD/SDHC/SDXC 1slot Max. 256GB			
Application Programming Interface	ONVIF Profile S/G/T, SUNAPI(HTTP API) Hanuwa 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	-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	
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 Max. 23W, Typ. 14W
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(3.75 lb)	ø 158x293.3mm(ø 6.22x11.55"), 3100g(6.83lb) ø 204.3x265mm(ø 8.04x10.43"), 2700g(5.95lb)



QNP-6250H
2MP 25x PTZ Camera



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



QNB-6002
2MP Box Camera



QNF-9010
12MP Fisheye Camera



QNF-8010
6MP Fisheye Camera

Imaging Device	1/2.8" CMOS			1/2.3" CMOS	1/1.8" CMOS
Resolution / Max. Frame Rate	2MP / 60fps	2MP / 30fps	2MP / 30fps	9MP / 30fps	4MP / 30fps
Min. Illumination	Color: 0.05Lux(F1.6, 1/30sec, 30IRE) BW: 0.005Lux(F1.6, 1/30sec, 30IRE)	Color: 0.05Lux(F1.6, 1/30sec, 30IRE) BW: 0.005Lux(F1.6, 1/30sec, 30IRE)	Color : 0.01Lux (F1.2)	Color: 0.39 Lux (F2.2, 1/30sec)	Color : 0.2 Lux (F2.5)
Video Out	–	–	CVBS 1.0 Vp-p		
Focal Length (Zoom Ratio)	4.44~111mm(25x) zoom (digital 32x, total 800x zoom)	4.44~142.6mm(32x) zoom (digital 32x, total 1024x zoom)	–	1.08mm fixed	1.14mm fixed
Angular Field of View	H: 64.66° (Wide) ~ 2.99° (Tele) V: 38.08° (Wide) ~ 1.68° (Tele)	H: 64.66° (Wide) ~ 2.29° (Tele) V: 38.08° (Wide) ~ 1.30° (Tele)	–	H: 187° / V: 187° / D: 187°	H: 187° / V: 187° / D: 187°
Pan / Tilt / Rotate Range	360° Endless / –105° (90° ~ –15°)		–		
IR Viewable Length	–				
Day & Night	Auto(ICR)				
Wide Dynamic Range	120dB				
Digital Noise Reduction	SSNR V				
Digital Image Stabilization	Support		–		
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	
Alarm I/O	4 / 2	–	1 / 1	–	
Audio I/O	Selectable (mic in/line in) Supply voltage: 2.5VDC(4mA), Input impedance: 2K Ohm Line out, Max. output level: 1 Vrms	Compatible with NW I/O Box (Optional: SPM-4210)	Line in / Line out	–	
Video Compression	H.265, H.264, MJPEG				
WiseStream	Manual (Sea area), WiseStream II		WiseStream II		
Streaming	Up to 10 profiles		Up to 3 Profiles		
Edge Storage	Micro SD/SDHC/SDXC 1slot Max. 256GB		micro SD/SDHC/SDXC		
Application Programming Interface	ONVIF Profile S/G/T, SUNAPI(HTTP API) Hanwha Vision Open Platform		ONVIF profile S/G/T, SUNAPI, Hanwha Vision Open Platform		ONVIF profile S/G, SUNAPI, Hanwha Vision Open Platform
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)	Ø 227x299.2mm (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)	Ø 99 x 49mm (Ø 3.9" x 1.93") 370g (0.82lb)	Ø 99 x 49mm (Ø 3.9" x 1.93") 320 g (0.705lb)



TNU-6322E
2MP Explosion-proof Camera



TNU-6322ER
2MP Explosion-proof Camera



TNU-6321
2MP Explosion-proof Camera



TNV-7011RC
3MP Corner Mount Camera



TNV-8011C
5MP Corner Mount Camera

Imaging Device	1/2.8" CMOS			
Resolution / Max. Frame Rate	2MP / 60fps		3MP / 30fps	5MP / 30fps
Min. Illumination	Color: 0.05Lux(F1.6, 1/30sec) BW: 0.005Lux(F1.6, 1/30sec)	Color: 0.05Lux(F1.6, 1/30sec) BW: 0.005Lux(F1.6, 1/30sec), 0Lux (IR LED on)	Color: 0.05Lux(F1.6, 1/30sec) B/W: 0.005 Lux(F1.6, 1/30sec)	Color: 0.3 lux (F2.0, 1/30sec) B/W: 0 lux (F2.0, 1/30sec)
Video Out	–		CVBS: 1.0 Vp–p / 75 Ω composite, 720x480(N), 720x576(P), for installation	CVBS: 1.0 Vp–p
Focal Length (Zoom Ratio)	4.44~142.6mm(32x) zoom		2.8mm fixed focal	
Angular Field of View	H: 61.8° (Wide) ~ 2.19° (Tele) V: 36.2° (Wide) ~ 1.24° (Tele)		H: 102° / V: 75° / D: 129°	H: 131° / V: 93.4° / D: 174°
Pan / Tilt / Rotate Range	–	–	– / 30° ~ 60° / –	–
IR Viewable Length	–	200m (656.1ft)	–	–
Day & Night	Auto(ICR)			
Wide Dynamic Range	120dB			
Digital Noise Reduction	SSNR V			
Digital Image Stabilization	Support			
Analytics	Defocus detection, Directional detection, Fog detection, Face detection, Motion detection, Appear/Disappear, Enter/Exit, Loitering, Tampering, Virtual line, Audio detection		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
Business Intelligence	–			
Alarm I/O	1 / 1			
Audio I/O	Selectable (mic in/line in) / Line out, Max. output level: 1 Vrms, Supply voltage: 2.5VDC (4mA), Input impedance: 2K Ohm		Selectable (mic in/line in) / Line out	
Video Compression	H.265/H.264: Main/Baseline/High, MJPEG		H.265, H.264, MJPEG	
WiseStream	Manual (Sea area), WiseStream II		WiseStream II	
Streaming	Unicast (20 users) / Multicast, Multiple streaming (Up to 10 profiles)		Up to 10 profiles	
Edge Storage	–	–	Micro SD/SDHC/SDXC 1slot 128GB	
Application Programming Interface	ONVIF Profile S/G/T, SUNAPI (HTTP API) Hanwha Vision Open Platform		SUNAPI (HTTP API) Hanwha Vision Open Platform	
Operating Temperature / Humidity	–40°C ~ +60°C (–40°F ~ +140°F) Less than 95% RH		–40°C ~ +55°C (–40°F ~ +131°F) 0~90% RH (Non–condensing)	–10°C ~ +55°C (+14°F ~ +131°F) Less than 95% RH
Certification	IECEX, ATEX, KCs, KC, CE IP67, IK10, PESO certified		IP66, Safety (UL, KC–SDOC), EMC (FCC, CE, VCCI, RCM, KC), IK10 (Except wiper & window)	IP66, IP6K9K, IK10+
Power Consumption	24VAC: Max. 99W	24VAC: Max. 99W (Camera) 24VAC: Max. 50W (IR)	Max 100W (Heater On), typical 25W (Heater Off)	PoE: Max 12W, typical 10.1W, 12VDC: Max. 11W, typical 8.6W
Product Dimensions / Weight	355(W) x 427(H) x 235(D) mm (13.97x16.81x9.25"), 2500g (55.12lb)	611(W) x 438(H) x 235(D) mm (24.06x17.24x9.25"), 3600g (79.37lb)	219(W) x 528.2(H) x 460(D) mm (8.62x20.79x18.11"), 1400g (30.86lb)	Ø 295.5x113.5mm (11.6x4.47") 2100g (4.63lb)



TNU-6324E
2MP Explosion-proof Camera



TNU-6324ER
2MP Explosion-proof Camera



TNO-6322ER
2MP Explosion-proof Camera

Imaging Device	1/2.8" CMOS	
Resolution / Max. Frame Rate	2MP / 60fps	
Min. Illumination	Color: 0.05Lux(F1.6, 1/30sec) BW: 0.005Lux(F1.6, 1/30sec)	Color: 0.05Lux(F1.6, 1/30sec) BW: 0.005Lux(F1.6, 1/30sec), 0Lux(IR LED on)
Video Out	-	
Focal Length (Zoom Ratio)	4.44~142.6mm(Optical 32X)	
Angular Field of View	H: 64.66°(Wide)~2.29°(Tele) / V: 38.08°(Wide)~1.30°(Tele)	H: 61.8°(Wide)~2.19°(Tele) / V: 36.2°(Wide)~1.24°(Tele)
Pan / Tilt / Rotate Range	Pan Range - 360° Endless Pan Speed - Preset: 50°/sec, Manual: 0.1°/sec ~ 40°/sec Tilt Range - 180° (~90° ~ 90°) Tilt Speed - Preset: 50°/sec, Manual: 0.1°/sec ~ 40°/sec Sequence - Preset(300ea), Swing, Group(6ea), Trace, Tour, Auto Run, Schedule, Preset Accuracy - ± 0.25°	-
IR Viewable Length	-	70m (229.66ft)
Day & Night	Auto(ICR)	
Wide Dynamic Range	120dB	
Digital Noise Reduction	SSNR V	
Digital Image Stabilization	Support	
Analytics	Directional detection, Fog detection, Face detection, Motion detection, Appear/Disappear, Enter/Exit, Loitering, Tampering, Virtual line	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	
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	
WiseStream	Manual(5ea area), WiseStream II	
Streaming	Unicast(20 users) / Multicast, Multiple streaming(Up to 10 profiles)	
Edge Storage	-	
Application Programming Interface	ONVIF Profile S/T, SUNAPI(HTTP API), Hanwha Vision Open Platform	ONVIF Profile S/G/T, SUNAPI(HTTP API), Hanwha Vision Open Platform
Operating Temperature / Humidity	-40°C~+60°C(-40°F~+140°F) / Less than 95% RH * Start up should be done at above -30°C	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	IECEX, ATEX, KCs, KC, CE/UKCA IP67, IK10 certified	IECEX, ATEX, KCs, KC, CE IP67, IK10, PESO certified
Power Consumption	100~240VAC, 1.4A, Max. 87W	100~240VAC, 1.7A, Max. 120W 24VAC: Max. 45W
Product Dimensions / Weight	355(W)x427(H)x235(D)mm(13.97x16.81x9.25"), 2600g(57.32lb)	611(W)x438(H)x235(D)mm(24.06x17.24x9.25"), 3800g(83.78lb) 175(W)x242.5(H)x320(D)mm(6.89x9.59x12.59"), 1150g(25.35lb)
Additional Features	Stainless(SUS316L) housing, Built in wiper	



TNU-4051T
VGA Thermal Positioning Camera



TNU-4041T
VGA Thermal Positioning Camera



TNO-4050T
VGA Thermal Bullet Camera



TNO-4040T
VGA Thermal Bullet Camera

Imaging Device	Uncooled micro bolometer		Uncooled micro bolometer (Spectral range: 8~14μm)	
Resolution	640x480 / 30fps		640x480(original), 640x360, 320x240	
Max. Frame Rate	H.265/H.264: Max. 30fps/25fps(60Hz/50Hz), MJPEG: Max. 30fps/25fps(60Hz/50Hz)			
NETD	< 50mK			
Pixel Pitch	17μm			
Focal Length	35mm fixed focal	19mm fixed focal	35mm fixed focal	19mm fixed focal
Angular Field of View	H: 17.2° / V: 13° / D: 22°	H: 32° / V: 24.3° / D: 39.2°	H: 17.2° / V: 13° / D: 22° (iFoV: 0.47 mRad)	H: 32° / V: 24.3° / D: 39.2° (iFoV: 0.895 mRad)
Min. Object Distance	360° Endless Pan		36m(118.11ft)	11m(36.09ft)
Video Output	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	
Analytics	Directional detection, Motion detection, Appear/Disappear, Enter/Exit, Loitering, Tampering, Virtual line, Audio detection, Temperature detection, Sound classification, Shock detection			
Alarm I/O	Input 1ea / Output 1ea		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			
Temperature Detect Range	-			
Temperature Accuracy	-			
Temperature Detection	-			
Additional	-			
WiseStream	WiseStream II		Manual(5ea area), WiseStream II	
Streaming	Unicast(20 users) / Multicas, Multiple streaming(Up to 10 profiles)			
Edge Storage	Micro SD/SDHC/SDXC 1slot 256GB			
Application Programming Interface	ONVIF Profile S/G/T, SUNAPI(HTTP API), Hanwha Vision Open Platform			
Memory	1024MB RAM, 256MB Flash			
Operating Temperature/ Humidity	-40°C ~ +55°C (-40°F ~ +131°F) / 0~90%RH(Non-condensing)		-40°C ~ +60°C (-40°F ~ +140°F) / 0~90%RH(Non-condensing)	
Certification	IP66, NEMA4X	IP66, IK10, NEMA4X		
Power Consumption	24VAC: Max 84W(Heater on), Max 62W(Heater off)		PoE: Max. 10W, typical 8.6W 12VDC: Max. 9W, typical 7.5W 24VAC: Max. 10.5W, typical 8.9W	
Dimensions (WxHxD) / Weight	(W)219 × (H)528 × (D)335mm(8.62x20.79x13.19"), 1170g(25.79lb)		Ø 101.97x401.8mm(4.01x15.82") / 3175g(7.01 lb)	



TNO-L4040TR
VGA Thermal Bullet Camera



TNO-4040TR
VGA Thermal Bullet Camera



TNO-4030T
VGA Thermal Bullet Camera



TNO-L4030T
VGA Thermal Bullet Camera

Imaging Device	Uncooled micro bolometer			
Resolution	640x480, 640x360, 320x240			
Max. Frame Rate	H.265/H.264/MJPEG: Max. 8fps	H.265/H.264: Max. 30fps/25fps(60Hz/50Hz) MJPEG: Max. 30fps/25fps(60Hz/50Hz)	H.265/H.264: Max. 30fps/25fps(60Hz/50Hz) MJPEG: Max. 30fps/25fps(60Hz/50Hz)	H.265/H.264/MJPEG: Max. 8fps
NETD	<50mK			
Pixel Pitch	17μm			
Focal Length	19mm fixed focal		13mm fixed focal	
Angular Field of View	H: 32° / V: 24.3° / D: 39.2°		H: 48.6° / V: 36.4 / D: 61.6°	
Min. Object Distance	11m(36.09ft)		5m(16.40ft)	
Video Output	CVBS: 1.0Vp-p / 75Ω 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 ditionction, Sound classification, Shock detection			
Alarm I/O	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			
Temperature Detect Range	-20°C ~ 130°C (-4°F ~ 266°F)	-20°C ~ 130°C (-4°F ~ 266°F)	-	
Temperature Accuracy	± 5° C (≤ 100°C), ± 20% (> 100°C)	± 5° C (≤ 100°C), ± 20% (> 100°C)	-	
Temperature Detection	6 Quadrangle ROI zones, whole FoV area	6 Quadrangle ROI zones, whole FoV area	-	
Additional	Hybrid palettes, Spot temperature reading	Hybrid palettes, Spot temperature reading	-	
WiseStream	Manual(5ea area), WiseStream II			
Streaming	Unicast(20 users) / Multicast, Multiple streaming(Up to 10 profiles)			
Edge Storage	Micro SD/SDHC/SDXC 1slot 256GB			
Application Programming Interface	ONVIF Profile S/G/T, SUNAPI(HTTP API), Hanuwa Vision open platform			
Memory	1024MB RAM, 256MB Flash			
Operating Temperature/ Humidity	-40°C ~ +60°C (-40°F ~ +140°F) / 0~90%RH(Non-condensing)			
Certification	IP66, IK10, NEMA4X			
Power Consumption	PoE: Max. 10W, typical 8.6W 12VDC: Max. 9W, typical 7.5W 24VAC: Max. 10.5W, typical 8.9W		PoE: Max. 8.7W, typical 7.5W 12VDC: Max. 7.8W, typical 6.7W 24VAC: Max. 9.2W, typical 8.0W	
Dimensions (WxHxD) / Weight	ø 101.97x401.8mm(4.01x15.82") / 3124g(6.89lb)	ø 101.97x401.8mm(4.01x15.82") / 3175g(7.01lb)	ø 101.97x401.8mm(4.01x15.82") / 3124g(6.89lb)	Ø 101.97x401.8mm(4.01x15.82") / 3124g(6.89lb)



TNO-3050T
QVGA Thermal Bullet Camera



TNO-3040T
QVGA Thermal Bullet Camera



TNO-3030T
QVGA Thermal Bullet Camera



TNO-3020T
QVGA Thermal Bullet Camera

Imaging Device	Uncooled micro bolometer			
Resolution	320x240			
Max. Frame Rate	H.265/H.264: Max. 30fps/25fps(60Hz/50Hz), MJPEG: Max. 30fps/25fps(60Hz/50Hz)			
NETD	<60mK			
Pixel Pitch	12μm			
Focal Length	35mm fixed focal	19mm fixed focal	13.7mm fixed focal	4.7mm fixed focal
Angular Field of View	H: 6.3° / V: 4.7° / D: 7.8°	H: 11.5° / V: 8.7° / D: 14.4°	H: 16.0° / V: 12.0° / D: 20.0°	H: 50.0° / V: 36.4° / D: 65.3°
Min. Object Distance	51m	15m	8m(26.25ft)	1m(3.28ft)
Video Output	CVBS: 1.0 Vp-p / 75 Ω composite, 720x480(N), 720x576(P) for installation, USB: Micro USB Type B, 1280x720 for installation			
Analytics	Directional detection, Motion detection, Appear/Disappear, Enter/Exit, Loitering, Tampering, Virtual line, Audio detection, Temperature ditionction, Sound classification, Shock detection			
Alarm I/O	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			
Temperature Detect Range	-			
Temperature Accuracy	-			
Temperature Detection	-			
Additional	-			
WiseStream	Manual(5ea area), WiseStream II			
Streaming	Unicast(20 users) / Multicast, Multiple streaming(Up to 10 profiles)			
Edge Storage	Micro SD/SDHC/SDXC 1slot 256GB			
Application Programming Interface	ONVIF Profile S/G/T, SUNAPI(HTTP API), Hanwha Vision Open Platform			
Memory	1024MB RAM, 256MB Flash			
Operating Temperature/ Humidity	-40°C ~ +60°C (-40°F ~ +140°F) / 0~90%RH(Non-condensing)			
Certification	IP66, 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			
Dimensions (WxHxD) / Weight	Ø 147.51x401.3mm(5.81x15.79") / 2742g(6.05lb)	Ø 147.51x375.3mm(5.81x14.78") / 2495g(5.50lb)	Ø 147.51x375.3mm(58.07x147.76") / 2512g(5.538lb)	Ø 147.51x375.3mm(58.07x147.76") / 2512g(5.538lb)



TNO-L3030T
QVGA Thermal Bullet Camera



TNO-3010T
QVGA Thermal Bullet Camera



TNO-4030TR
VGA Thermal Bullet Camera



TNO-L4030TR
VGA Thermal Bullet Camera



TID-600R
2MP Intercom

Imaging Device	Uncooled micro bolometer				1/2.8" CMOS
Resolution	320x240		640x480, 640x360, 320x240		2MP
Max. Frame Rate	8fps	30fps	30fps	H.265/H.264/MJPEG: Max. 8fps	H.265/H.264: Max. 60fps/50fps(60Hz/50Hz) MJPEG: Max. 30fps
NETD	< 60mK		< 50mK		—
Pixel Pitch	12μm		17μm		—
Focal Length	35mm fixed focal	2.7mm fixed focal	13mm fixed focal		1.6mm fixed focal
Angular Field of View	H: 6.3° / V: 4.7° / D: 7.8°	H: 92.0° / V: 65.5° / D: 125.7°	H: 48.6° / V: 36.4 / D: 61.6°		H: 180° / V: 114° / D: 180°
Min. Object Distance	51m	0.3m(0.98ft)	5m(16.40ft)	5m(16.40ft)	0.3m(0.98ft)
Video Output	CVBS: 1.0 Vp-p / 75Ω composite, 720x480(N), 720x576(P) for installation, USB: Micro USB Type B, 1280x720 for installation				CVBS: 1.0Vp-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 ditionction, Sound classification, Shock detection				
Alarm I/O	Input 1ea / Output 2ea				Input 2ea / Output 1ea, Relay out 1ea (12VDC Max. 550mA with 2A adapter), Tampering switch, Touchless call
Audio I/O	Selectable(mic in/line in, Supply voltage: 2.5VDC(4mA), Input impedance: 2K Ohm, Line out, Max.output level: 1Vrms				Built-in mic / Built-in speaker: 85dB at 0.5m(1.64ft)
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				
Streaming	Unicast(20 users) / Multicast, Multiple streaming(Up to 10 profiles)				
Edge Storage	Micro SD/SDHC/SDXC 1slot 256GB				
Application Programming Interface	ONVIF Profile S/G/T, SUNAPI(HTTP API), Hanwha Vision Open Platform				ONVIF Profile S, SUNAPI(HTTP API), Hanwha Vision Open Platform
Memory	1024MB RAM, 256MB Flash				—
Operating Temperature/ Humidity	-40°C ~ +60°C (-40°F ~ +140°F) / 0~90%RH(Non-condensing)				-30° C ~ +55° C (-22° F ~ +131° F) / 0~95% RH
Certification	IP66, NEMA4X		IP66, IK10, NEMA4X		IP65, IK08, NEMA4X, Safety(UL), EMC(FCC, CE)
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 12.95W, typical 9.1W, 12VDC: Max 17.6W, typical 7W * 12VDC power consumption includes 12VDC/550mA relay out.
Dimensions (WxHxD) / Weight	Ø 147.51x401.3mm(5.81x15.79") / 2742g(6.05lb)	Ø 147.51x375.3mm(5.81x14.78") / 2495g(5.50lb)	Ø 147.51x375.3mm(58.07x147.76") / 2512g(5.538lb)	Ø 147.51x375.3mm(58.07x147.76") / 2512g(5.538lb)	49(W)x165(H)x48(D)mm(1.93x6.50x1.89") / 490g(1.08lb)



LNO-6072R
2MP IR Bullet Camera



LNO-6022R
2MP IR Bullet Camera



LNO-6012R
2MP IR Bullet Camera



LND-6072R
2MP IR Dome Camera



LND-6022R
2MP IR Dome Camera

Imaging Device	1/2.8" CMOS				
Resolution / Max. Frame Rate	2MP / 30fps				
Min. Illumination	Color: 0.03Lux (F1.6, 1/30sec) BW : 0Lux (IR LED on)				
Video Out	-				
Focal Length (Zoom Ratio)	3.2~10mm (3.1x) manual varifocal	4.0mm fixed focal	2.8mm fixed focal	3.2~10mm(3.1x) manual varifocal	4.0mm fixed focal
Angular Field of View	H: 109°(Wide) ~ 33.2°(Tele) V: 57.4°(Wide) ~ 18.7°(Tele) D: 132°(Wide) ~ 38°(Tele)	H: 84.3° / V: 45.6° / D: 98.3°	H: 113.7° / V: 61.5° / D: 134.4°	H: 109.0° (Wide) ~ 33.2° (Tele) V: 57.4° (Wide) ~ 18.7° (Tele) D: 132.0° (Wide) ~ 38.0° (Tele)	H: 84.3° / V: 45.6° / D: 98.3°
Pan / Tilt / Rotate Range	-			0°~ 350° / 0°~ 67° / 0°~355°	
IR Viewable Length	30m (98.43ft)				
Day & Night	Auto (ICR)				
Wide Dynamic Range	120dB				
Digital Noise Reduction	SSNR				
Digital Image Stabilization	-				
Analytics	Motion detection, Tampering				
Business Intelligence	-				
Alarm I/O	-				
Audio I/O	-				
Video Compression	H.264, MJPEG				
WiseStream	WiseStream II				
Streaming	Up to 3 profiles				
Edge Storage	micro SD/SDHC 1slot 32GB				
Operating Temperature / Humidity	ONVIF Profile S/G/T, SUNAPI (HTTP API)				
Operating Temperature	-30°C ~ +55°C (-22°F ~ +131°F) / 0~90% RH * Start up should be done at above -20°C (-4°F)			-10°C ~ +55°C (+14°F ~ +131°F) / 0~90% RH	
Certification	IP66			-	
Power Consumption	Max 6.4W, Typical 5W				
Product Dimensions / Weight	Ø 78 x 262mm (Ø 3.07" x 10.31") 420g (0.93lb)	Ø 78 x 262mm (Ø 3.07" x 10.31") 390g (0.86lb)	Ø 78 x 262mm (Ø 3.07" x 10.31") 390g (0.86lb)	Ø 119.8x98.8mm(Ø 4.72x3.89"), 315g	Ø 110 x 86mm (Ø 4.33" x 3.39") 270g (0.59lb)



LND-6012R
2MP IR Dome Camera



LNV-6072R
2MP IR Vandal Dome Camera



LNV-6022R
2MP IR Vandal Dome Camera



LNV-6012R
2MP IR Vandal Dome Camera

Imaging Device	1/2.8" CMOS			
Resolution / Max. Frame Rate	2MP / 30fps			
Min. Illumination	Color: 0.03Lux (F2.0, 1/30sec) BW : 0Lux (IR LED on)			
Video Out	-			
Focal Length (Zoom Ratio)	2.8mm fixed focal	3.2~10mm (3.1x) manual varifocal	4.0mm fixed focal	2.8mm fixed focal
Angular Field of View	H: 113.7° / V: 61.5° / D: 134.4°	H: 109° (Wide) ~ 33.2° (Tele) V: 57.4° (Wide) ~ 18.7° (Tele) D: 132° (Wide) ~ 38° (Tele)	H: 84.3° / V: 45.6° / D: 98.3°	H: 113.7° / V: 61.5° / D: 134.4°
Pan / Tilt / Rotate Range	0°~350° / 0°~67° / 0°~355°			
IR Viewable Length	20m (65.62ft)	30m (98.43ft)		
Day & Night	Auto (ICR)			
Wide Dynamic Range	120dB			
Digital Noise Reduction	SSNR			
Digital Image Stabilization	-			
Analytics	Motion detection, Tampering			
Business Intelligence	-			
Alarm I/O	-			
Audio I/O	-			
Video Compression	H.264, MJPEG			
WiseStream	WiseStream II			
Streaming	Up to 3 profiles			
Edge Storage	micro SD/SDHC 1 slot 32GB			
Operating Temperature / Humidity	ONVIF Profile S/G/T, SUNAPI (HTTP API)			
Operating Temperature	-10°C ~ +55°C (+14°F ~ +131°F) / 0~90% RH	-30°C ~ +55°C (-22°F ~ +131°F) / 0~90% RH * Start up should be done at above -20°C (-4°F)		
Certification	-	IP66, IK10	IP66, IK10	IP66, IK10
Power Consumption	Max 6.4W, Typical 5W	Max 6.4W, Typical 5W	Max 6.4W, Typical 5W	Max 6.4W, Typical 5W
Product Dimensions / Weight	Ø 110 x 86mm (Ø4.33" x 3.39") 270g (0.59lb)	Ø 137.8x106.1mm (Ø 5.43" x 4.18") 525g (1.16lb)	Ø 120.3 x 91.7mm (Ø4.74" x 3.61") 410g (0.9lb)	Ø 120.3 x 91.7mm (Ø4.74" x 3.61") 410g (0.9lb)

Direct-to-cloud video management solution OnCloud

A Comprehensive Video Surveillance-as-a-Service(VSaaS) platform designed to provide direct-to-cloud security solutions with powerful edge analytics, wide compatibility, and seamless user experience. It supports a broad range of devices and offers flexible deployment with built-in AI, cloud storage, and mobile access—all tailored to end users, integrators, and distributors.

Hanwha Vision OnCloud is initially launched with a strong focus on the North American market with plans for global expansion.



Frictionless Cloud Ecosystem

- **Infinitely Scalable**
Expand your system by adding unlimited cameras, locations, and users. OnCloud natively supports over 100 Hanwha Vision camera models.
- **Always Accessible**
Centralized and easy access for all users, anytime, anywhere.

Easy Setup and Intuitive Management

- **Easy Onboarding**
Quickly add cameras in just two steps, without needing QR codes, serial numbers, or model selections.
- **Intuitive & Instant**
Quickly find footage, gain insights, and manage cameras through intuitive dashboards. Intuitive web and mobile interfaces for end users.

Comprehensive Monitoring & Management Tools

- **Dynamic Camera Wall**
Monitor up to 12 cameras simultaneously with customizable live views and playback.
- **Smart Search**
Quickly find specific footage and information.
- **Real-time Alerts & Event Management:**
Receive instant event notifications and efficiently manage events with reporting tools.
- **Streamlined Incident Management**
Easily manage incidents, share video clips, and collaborate on evidence.

Customizable Service Plans

- Choose from diverse storage options and flexible 1, 3, or 5-year subscriptions.

Mobile-Friendly

- Conveniently manage your system on the go using the OnCloud mobile app for Android and iOS.



Scan this QR to learn more about HealthPro.



General	Product Name	HealthPro v1.6.2
	Product Type	Software as a Service (SaaS)
	Cloud Service Provider	AWS
	Service Region	US
	User Interface	Supports all OS / environments that can use standard web browsers such as Chrome, Edge, and Safari
	Supported Language	English
General	Protocol	HTML5, CSS, JS, ARIA, DOM, Web APIs, HTTP, REST API, MIME type, JSON, WebSocket, XML, JSON, CSV, TLS, HTTPS, CORS, UTF-8, i18n, i10n, MQTTs, SUNAPI, VAPIX, WAVE HTTP REST API
	Network Connection	Domain (Dest.) / Protocol&Port / Application: *.hanwhavision.cloud / TCP (TLS) 443 / HTTPS *.hanwhavision.cloud / TCP (TLS) 443 / MQTTS *.hanwhavision.cloud / TCP (TLS) 443 / WSS *.hanwhavision.cloud / TCP 443, 33000 / ICE *.hanwhavision.cloud / UDP 3478-3479 / ICE *.hanwhavision.cloud / UDP (DTLS) 49152-65535 / TURN *.hanwhavision.cloud / UDP (DTLS) 0-65535 / STUN *.amplitude.com / TCP 443 / HTTPS maps.gstatic.com / TCP (TLS) 443 / HTTPS fonts.gstatic.com / TCP (TLS) 443 / HTTPS maps.googleapis.com / TCP (TLS) 443 / HTTPS *.s3.amazonaws.com / TCP (TLS) 443 / HTTPS *A firewall exception is required.
Scalability	# of Locations per Org.	5,000
	# of Devices per Org.	10,000
	# of Users per Org.	1,000
	# of Clients (web) per Org.	Unlimited
Compatible Devices	Hanwha Vision Camera	SUNAPI v2.6.0 or later via Direct-to-Cloud Cameras or HealthPro Bridge
	Hanwha Vision VMS	WAVE v5 or later via HealthPro Bridge or WAVE sync account
	AXIS Camera	VAPIX v1.0 or later via HealthPro Bridge
	HealthPro Bridge v1.6.4	- Lightweight Free Cloud Agent Software based on Web & Node.js with CloudConnector (Some components use C#.NET Framework, MS VisualC++) - Supported Language: English - # of Devices per Software: 200 - Supported Devices: Hanwha Vision Camera, WAVE VMS, AXIS Camera - OS: Windows 10 to 11 Pro or higher (incl. Windows Server 2016 to 2025 Standard or higher), x86-64 Ubuntu Linux 22.04 LTS (v1.5.88 beta) - DBMS: SQLite (Encrypted with AES-256) - Min. Requirements: Intel Atom x7425E 1.50GHz / 8GB RAM / Microsoft Visual C++ 2015-2022 redistributable - Protocol: HTTP(S), SUNAPI, VAPIX, WAVE REST API - Device Information: Status, Type, Vendor, Model, MAC Address, IP, Port, HTTP/HTTPS, Access Credential (ID/PW), Serial Number, Firmware - It does not store any personal or video information.

Hanwha Vision HealthPro is initially launched with a strong focus on the North American market with plans for global expansion.

Features	Dashboard	Location, Server, Camera, License, Warranty, Firmware
	Widget	Server, Storage, Camera, License, Warranty, Firmware, Notification
	Health Monitor (Server & Storage, Camera)	Hanwha Vision Camera (SUNAPI v2.6.0 or later / via D2C or HealthPro Bridge), AXIS Camera (VAPIX v1.0 or later, via HealthPro Bridge), WAVE VMS (v5 or later via HealthPro Bridge or WAVE sync account)
	Software (Firmware) Management	Automatic, Manual (Immediately or Schedule), Local file *AXIS only supports local file updates.
	Warranty Management	Hanwha Vision Camera w/ STEP Code
	License Management	Hanwha Vision Camera, AXIS Camera
	Task Management	Create / Assign / Resolve 9 Types of Tasks: Camera Disconnected, Camera IP Conflict, Authentication Issue, Network Issue, Server Certification Error, Server Conflict, Server Failure, Storage Issue, Server Started
	Notification	Notification Center, Email, Web Push
	Remote Control	Hanwha Vision Camera (Reboot), AXIS Camera (Reboot)
	Logs	User (Added / Removed / Changed), Device (Firmware / License / Reboot), Task (Occurred / Pending / Assigned / Resolved), Health (Camera Disconnected, Camera Connected, Server Failure, Server Started, Camera Re-authenticated, Camera Credential Error)
Data *No video & images are stored on the cloud platform.	Report	Download of 5 types of dashboards (Server, Camera, License, Warranty, Firmware) as csv files
	GIS	Google Map
	Personal Information	Organization (Company) & Address, Name, Email, Phone (Optional), Photo (Optional)
	Device Information	Status, Name, Vendor, Model, Location, Parents (Server), Network (MAC & IP address, G/W, S/M, DNS), Serial number, Resources usage (CPU, RAM, N/W, storage), Firmware version, Warranty, SD/SSD & recording, Live snapshot (Not stored in DB)
Cybersecurity	Logs (reprocess device information)	Event / Type, Time, User / Device information
	Stored Data (DB) Protection	Database Encryption and Access Control
	Data Transmission Protection	TLS-based Encrypted Communication
	Server Protection	Security Patching, Access Control, and Enhanced Authentication
	Network Protection	VPC, Security Groups, and Firewall Policy Implementation
High Availability	Managed Security	24/365 from a Certified Professional Company
	Redundancy	Redundant Configuration of Servers and Services
	Data Backup	Regular Backups and Disaster Recovery Policies in Place

Multi-site Health Monitoring and Maintenance Solution

HealthPro

HealthPro is a powerful cloud-based device health monitoring solution designed for organizations managing large-scale, multi-site security systems. HealthPro centralizes the monitoring, management, and maintenance of security infrastructure, like cameras, servers, and storage—across thousands of locations. Whether you’re in retail, banking, transportation, or critical infrastructure, HealthPro helps you stay ahead of device issues, firmware updates, and warranty mangement-without the need for on-site intervention.



Total Visibility One Dashboard

- **Unified Monitoring**
Get a centralized, real-time overview of device health across thousands of locations.
- **Instant Drill-Down**
Instantly drill into cameras, servers, and storage to see issues, logs, and status at a glance.

Remote Fixes, No Travel Needed

- **Cloud Updates**
Remotely update firmware, reboot cameras, and manage devices—all through the cloud.
- **Cost Reduction**
Reduce operational costs by eliminating the need for on-site tech visits.

Prevent Downtime with Smart Alerts

- **Real-time Alerts**
Receive email and web push notifications when devices fail, degrade, or go offline.
- **Task Automation**
Assign and track tasks through workflows to ensure fast, accountable resolution.

Plan Ahead with Life Cycle Insights

- **Warranty Tracking**
Monitor warranty status and device age to prioritize replacements and upgrades.
- **Smart Reporting**
Export actionable reports for asset planning, budgeting, and compliance audits.



Scan this QR
to learn more
about SightMind.



SightMind
AI analytics dashboard

General	Product Name	SightMind
	Product Type	Software as a Service (SaaS)
	Cloud Service Provider	AWS
	Service Region	US
Scalability	User Interface	Supports all OS / environments that can use standard web browsers such as Chrome, Edge, and Safari
	# of Locations per Org.	5,000
	# of Devices per Org.	100,000
	# of Users per Org.	1,000
Features	# of Clients (web) per Org.	Unlimited
	Dashboard	Multi-dashboards - Dashboard tree - Unlimited logical grouping
	Widget	24 widgets - Cumulative count (People/Shopping cart/Vehicle) - Occupancy (People/Shopping cart/Vehicle) - Queues (People/Shopping cart/Vehicle) - People Flow / Vehicle Flow - People count by Area - Busiest locations - Heatmap (People/Shopping cart/Vehicle) - Visitor Area Traffic - Slip & fall - Crowd counting - Forklift speeding - MES - Stopped vehicle analytics - Slow traffic
	CSV export	Export CSV file from all widgets
	Map	Status monitoring map based on Image and google map
	Analytics	Search and Analysis Based on Metadata
	GenAI	Analytics-to-insights conversion powered by Generative AI
	Report	Search data report: Download pdf file, Email sending, Report sharing
	Notification	Notification Center, Email, Web Push
Supported cameras	Hanwha Vision Camera	AI cameras via Direct-to-Cloud Cameras - P series: 23 models - X series: 44 models - Q series: 19 models - T and others: 9 models

Hanwha Vision SightMind is initially launched with a strong focus on the North American market with plans for global expansion.

Supported AI applications	Wise AI	People counting, Queue management Heatmap, Crowd counting, Slip & fall detection
	Retail & Business AI Pack v1.0	People counting, Queue management Line crossing (shopping cart), Shopping cart counting Shopping cart queue management, Slip & fall detection
	Traffic AI Pack v1.0	Stopped vehicle detection, Traffic jam detection Vehicle counting, Vehicle queue
	Factory & Safety AI Pack v1.0	Forklift speed detection, Speed detection People counting, Queue management, Heatmap
License	VCB-1YB0001(1 year access)	Data retention period: 1 year
	VCB-3YB0001(3 year access)	Data retention period: 3 year
	VBC-5YB0001(5 year access)	Data retention period: 5 year
Stored Data *No video & images are stored on the cloud platform.	Personal Information	Organization (Company) & Address, Name, Email, Phone (Optional), Photo (Optional), Role
	Device Information	Name, Model, Location, Network (MAC & IP address, Serial number, Live snapshot (Not stored in DB)
	Metadata	Object counting (people, shopping cart, vehicle)
		Queue management (people, shopping cart, vehicle)
		Traffic jam detection
		Stopped vehicle detection
		Crowd counting
		Slip & fall detection
		Forklift over speed deteciton
		Heat map (people, shopping cart, vehicle)
Cybersecurity	Stored Data (DB) Protection	Database Encryption and Access Control
	Data Transmission Protection	TLS-based Encrypted Communication
	Server Protection	Security Patching, Access Control, and Enhanced Authentication
	Network Protection	VPC, Security Groups, and Firewall Policy Implementation
	Managed Security	24/365 from a Certified Professional Company
High Availability	Redundancy	Redundant Configuration of Servers and Services
	Data Backup	Regular Backups and Disaster Recovery Policies in Place

AI Analytics Dashboard SightMind

SightMind is a powerful AI-driven cloud solution designed to transform raw video data into meaningful business insights. It offers a unified platform that combines advanced analytics, real-time visualization, and cloud scalability to help organizations boost operational efficiency, safety, and productivity. Whether monitoring people flow, traffic patterns, or facility usage, SightMind delivers actionable intelligence through intuitive dashboards and automated reporting.



Frictionless Cloud Ecosystem

- **Infinitely Scalable**
Easily manage multiple locations, devices, and users without the need for local infrastructure.
- **Always Accessible**
Centralized access via web portal enables users to easily view and analyze data from anywhere.

Easy Setup and Intuitive Management

- **Quick Device Onboarding**
Devices could be added using the CloudConnector app, streamlining installation without complex local configurations.
- **Easy Management**
Manage users, devices, locations, and licenses from a single Cloud Portal dashboard. Easily Assign and manage user roles (Super admin, Admin, Operator and Viewer) to streamline access and permissions.

Easily Manage Meaningful Business Insights

- **AI-Powered Insights**
Automatically detect crowding, slip & falls, vehicle stoppage, and forklift speeding for improved operational safety. Use natural language to generate insights, making data analysis to all users without technical skills.
- **Custom Dashboards and Reports**
Build tailored dashboards and automated reports with visual charts and heatmaps to support clear, data-driven decisions.
- **Real-Time and Historical Analytics**
Instantly analyze trends in people flow, traffic and wait times across multiple locations to optimize operations.

High performance NVR

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

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



Monitor all sub channels without registering them all

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

Registered channel
Recording and monitoring

CAMERA A
Channel #01

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

Unregistered channel
Monitoring sub channels without recording

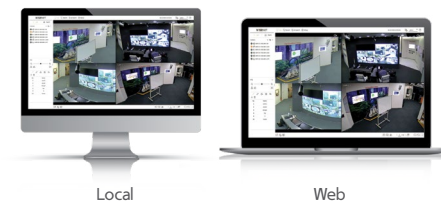
CAMERA A
Channel #02

CAMERA A
Channel #03

CAMERA A
Channel #04

Installation Wizard for easy auto recognition and setup

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



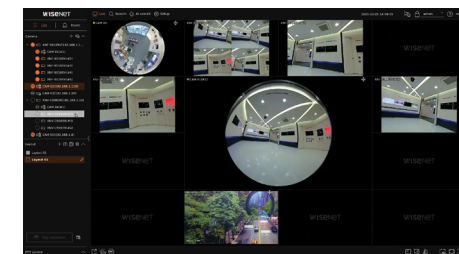
Local

Web



Design your own monitoring channels with the Dynamic layout

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



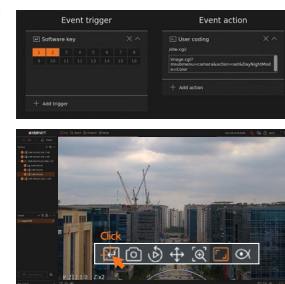
Code your own event action with SUNAPI command and Integrate with the Software Key

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

- 1 Code event action* and integrate with the Software key

* Simple focus, Day&Night (ICR), Alarm Out, etc.

- 2 Click the Software key to initiate the event action



AI NVR

AI enhances accuracy and efficiency

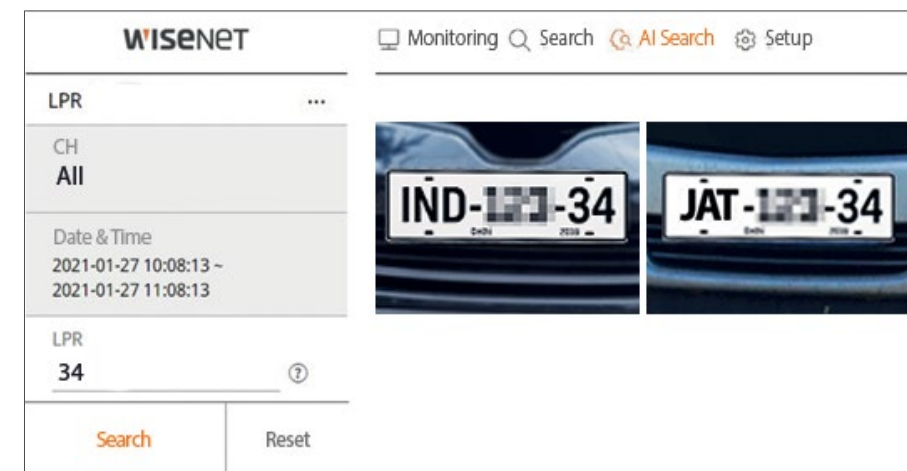
Hanwha Vision AI NVR with AI algorithms provides accurate object detection/classification/search, increasing the efficiency of monitoring operation.



License Plate Recognition LPR (Search)

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

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

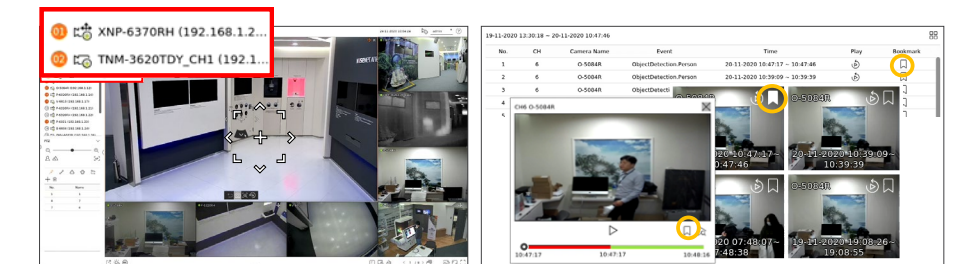


When managing multi channels, the Hanwha Vision's AI NVR greatly improves search efficiency by allowing users to preview images and videos by simply hovering mouse cursor on the timeline. Moreover, users can configure event and alarm for all channels within a single page.



Live monitoring and bookmarks

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



Live monitoring and PTZ control

Bookmark setup and event search



PRN-6400DB4
64CH AI NVR



PRN-6400B4
64CH AI NVR



PRN-3200B4
32CH AI NVR



PRN-3200B2
32CH AI NVR



PRN-1600B2
16CH AI NVR

OS	Linux				
Supported Compression	H.265, H.264, MJPEG, WiseStream	H.265, H.264, MJPEG, WiseStream	H.265, H.264, MJPEG, WiseStream	H.265, H.264, MJPEG	H.265, H.264, MJPEG
Max. Recording Bit Rate	400Mbps	400Mbps	400Mbps	400Mbps	250Mbps
Max # of Cameras	64CH	64CH	32CH	32CH	16CH
Network Camera Resolution	32MP ~ CIF				
HDD Slot	SATA 16ea(Max. 160TB, Non-RAID mode)	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, Non-RAID mode)
Record Mode	Normal, Dual Stream, Schedule (Continuous/Event), Event (Pre/Post), Bookmark				
Event Trigger	Alarm Input, Video Loss, Camera Event, (Sensor, MD, Video Analytics, Defocus, Audio), Dynamic Event, User Event				
Event Action	e-Mail, Event Push, PTZ Preset, Alarm Out, Buzzer, Monitor Out, FTP, SUNAPI Command, Shutdown				
External Storage	iSCSI				
RAID	RAID-5/6(Array Size : 8 HDD x 2 Array)	RAID-5/6(Array Size : 8 HDD x 2 Array)	RAID-5/6(Array Size : 8 HDD x 2 Array)	RAID-5/6(Single, 1 Array)	RAID-5/6(Single, 1 Array)
Hot Swap	Support				
Network Viewer Software	SSM, Webviewer, Smart Viewer, Wisenet mobile, Support CGI(SUNAPI) for integration to 3'rd party VMS				
Local Monitor	Support dual monitor HDMI 1 (Up to 4K), HDMI 2 (FHD)				
Network Camera Protocol	SUNAPI, ONVIF				
Power Input	100 ~ 240 VAC ± 10%: 50/60 Hz (Dual SMPS)				
Power Consumption	Max. 285W (972.5 BTU with HDD 16ea)	Max. 285W (972.5 BTU with HDD 16ea)	Max. 285W (972.5 BTU with HDD 16ea)	Max. 205W (With 10TB HDDs 8EA)	Max. 205W (With 10TB HDDs 8EA)
PoE Budget	-				
Additional Features	• LPR search (English, Numbers) • AI search attribute (Person, Face - with Wisenet AI camera, Vehicle, Liscence plate) • N+1 failover supported • PTZ camera configuration and control • Dynamic layout • Virtual channel view				



XRN-6420DB4
64CH NVR
with 12th gen. Intel® Processor



XRN-6420B4
64CH NVR
with 12th gen. Intel® Processor



XRN-6420RB2
64CH NVR
with 12th gen. Intel® Processor



XRN-6420B2
64CH NVR
with 12th gen. Intel® Processor



XRN-3220B4
32CH NVR
with 12th gen. Intel® Processor

OS	Linux				
Supported Compression	H.265, H.264, MJPEG				
Max. Recording Bit Rate	520Mbps	520Mbps	520Mbps	520Mbps	Distributed/RAID mode : Up to 520 Mbps Single mode : Up to 520 Mbps
Max # of Cameras	64CH	64CH	64CH	64CH	32CH
Network Camera Resolution	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)	SATA 16ea(Max. 160TB, Non-RAID mode)
Record Mode	Normal, Dual Stream, Schedule(Continuous/Event), Event (Pre/Post), Bookmark				
Event Trigger	Alarm Input, Video Loss, Camera Event (Sensor, MD, Video Analytics, Defocus, Audio), Dynamic Event, User Event				
Event Action	e-Mail, Event Push, PTZ Preset, Alarm Out, Buzzer, Monitor Out, FTP, SUNAPI Command, Shutdown				
External Storage	iSCSI				
RAID	RAID-5/6(Array Size : 8 HDDs x 2 Array)	RAID-5/6(Array Size : 8 HDDs x 2 Array)	RAID-5/6(Array Size : 8 HDDs x 1 Array)	-	RAID-5/6(Array Size : 8 HDDs x 2 Array), SW RAID
Hot Swap	Support	Support	Support	-	Support
Network Viewer Software	SSM, Webviewer, Wisenet Viewer, Wisenet mobile, Support CGI(SUNAPI) for integration to 3'rd party VMS				
Local Monitor	Support dual monitor HDMI 1 (Up to 4K), HDMI 2 (FHD)				
Network Camera Protocol	SUNAPI, ONVIF				
Power Input	100 ~ 240 VAC ± 10%: 50/60 Hz, 2.7A (Dual SMPS)	100 ~ 240 VAC ± 10%: 50/60 Hz, 2.7A (Single SMPS)	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, 2.7A
Power Consumption	Max. 265W (904.2 BTU with HDD 16ea)	Max. 265W (904.2 BTU with HDD 16ea)	Max. 162W (553 BTU with HDD 8ea)	Max. 143W (488 BTU with HDD 8ea)	Max. 265W (904.2 BTU with HDD 16ea)
PoE Budget	-				
Additional Features	• N+1 failover supported • PTZ camera configuration and control • Dynamic layout • Virtual channel view • ARB(Auto Recovery Backup) supported				



XRN-3220RB2
32CH NVR
with 12th gen. Intel® Processor



XRN-3220B2
32CH NVR
with 12th gen. Intel® Processor



XRN-1620SB1
16CH NVR



XRN-1620B2
16CH NVR



XRN-820S
8CH NVR

OS	Linux				
Supported Compression	H.265, H.264, MJPEG				
Max. Recording Bit Rate	520Mbps	520Mbps	140Mbps	140Mbps	120Mbps
Max # of Cameras	32CH	32CH	16CH	16CH	8CH
Network Camera Resolution	32MP~CIF				
HDD Slot	SATA 8ea(Max. 80TB, Non-RAID mode)	SATA 8ea(Max. 80TB)	SATA 4ea(Max. 24TB)	SATA 8ea(Max. 80TB)	SATA 2ea(Max. 12TB)
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	Normal, Dual Stream, Schedule(Continuous/Event), Event (Pre/Post)	Normal, Dual Stream, Schedule(Continuous/Event), Event (Pre/Post)
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	iSCSI	–	–	–
RAID	RAID-5/6(Array Size : 8 HDDs x 1 Array)	–	RAID-1	–	RAID-1
Hot Swap	Support	–	–	–	–
Network Viewer Software	SSM, Webviewer, Wisenet Viewer, Wisenet mobile, Support CGI(SUNAPI) for integration to 3'rd party VMS	SSM, Webviewer, Wisenet Viewer, Wisenet mobile, Support CGI(SUNAPI) for integration to 3'rd party VMS	SSM, Webviewer, Wisenet Viewer, Wisenet mobile, Support CGI(SUNAPI) for integration to 3'rd party VMS	SSM, Webviewer, Wisenet Viewer, Wisenet mobile, Support CGI(SUNAPI) for integration to 3'rd party VMS	SSM, Webviewer, Wisenet Viewer, Wisenet mobile, Support CGI(SUNAPI) for integration to 3'rd party VMS
Local Monitor	Support dual monitor HDMI 1 (Up to 4K), HDMI 2 (FHD)	Support dual monitor HDMI 1 (Up to 4K), HDMI 2 (FHD)	Support dual monitor HDMI 1 (Up to 4K), HDMI 2 (FHD)	Support dual monitor HDMI 1 (Up to 4K), HDMI 2 (FHD)	Support dual monitor HDMI 1 (Up to 4K), HDMI 2 (FHD)
Network Camera Protocol	SUNAPI, 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	100 ~ 240 VAC ± 10%; 50/60 Hz	100 ~ 240 VAC ± 10%; 50/60 Hz
Power Consumption	Max. 162W (553BTU with HDD 8ea)	Max. 143W (488BTU with HDD 8ea)	Max. 310W	Max. 130W	Max. 160W
PoE Budget	–	–	200W	–	100W
Additional Features	• N+1 failover supported • PTZ camera configuration and control • Dynamic layout • Virtual channel view • ARB(Auto Recovery Backup) supported	• N+1 failover supported • PTZ camera configuration and control • Dynamic layout • Virtual channel view • ARB(Auto Recovery Backup) supported	• PoE supported • N+1 failover supported • PTZ camera configuration and control • Dynamic layout • Virtual channel view • ARB(Auto Recovery Backup) supported	• N+1 failover supported • PTZ camera configuration and control • Dynamic layout • Virtual channel view • ARB(Auto Recovery Backup) supported	• PoE supported • N+1 failover supported • PTZ camera configuration and control • Dynamic layout • Virtual channel view



XRN-815S
8CH NVR



XRN-420S
4CH NVR



QRN-1630S
16CH NVR



QRN-830S
8CH NVR



QRN-430S
4CH NVR

OS	Linux				
Supported Compression	H.265, H.264, MJPEG				
Max. Recording Bit Rate	100Mbps	50Mbps	128Mbps	80Mbps	40Mbps
Max # of Cameras	8CH	4CH	16CH	8CH	4CH
Network Camera Resolution	12MP ~ CIF	8MP ~ CIF	8MP ~ CIF	8MP ~ CIF	8MP ~ CIF
HDD Slot	SATA 2ea(Max. 20TB)	SATA 1ea(Max. 6TB)	SATA 2ea(Max. 20TB)	SATA 1ea(Max. 6TB)	SATA 1ea(Max. 6TB)
Record Mode	Normal, Dual Stream, Schedule(Continuous/Event), Event (Pre/Post), Bookmark				
Event Trigger	Alarm Input, Video Loss, Camera Event (Sensor, MD, Video Analytics, Defocus, Audio), Dynamic Event, User Event	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	e-Mail, Event Push, PTZ Preset, Alarm Out, Buzzer, Monitor Out
External Storage	–				
RAID	–				
Hot Swap	–				
Network Viewer Software	WAVE, SSM, Webviewer, Smart Viewer, Wisenet Viewer, Wisenet mobile, Support CGI(SUNAPI) for integration to 3'rd party VMS				
Local Monitor	Support dual monitor HDMI 1 (Up to 4K), HDMI 2 (FHD)	HDMI 1 (Up to 4K)	HDMI 1 (Up to 4K), HDMI 2 (FHD)	HDMI 1 (Up to 4K)	HDMI 1 (Up to 4K)
Network Camera Protocol	SUNAPI, ONVIF				
Power Input	100 ~ 240 VAC ± 10%; 50/60 Hz	100 ~ 240 VAC ± 10%; 50/60 Hz	100 ~ 240 VAC ± 10%; 50/60 Hz	54VDC / 1.55A	100 ~ 240 VAC ± 10%; 50/60 Hz
Power Consumption	Max 165W (563 BTU with 2HDD, PoE On)	Max 67W (1HDD, 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	100W	50W	130W	65W	35W
Additional Features	• PoE supported • N+1 failover supported • PTZ camera configuration and control • Dynamic layout • ARB(Auto Recovery Backup) supported	• PoE supported • N+1 failover supported • PTZ camera configuration and control • ARB(Auto Recovery Backup) supported • Easy configuration(P2P(QR code))	• PoE supported • N+1 failover supported • PTZ camera configuration and control • ARB(Auto Recovery Backup) supported • Easy configuration(P2P(QR code))	• PoE supported • N+1 failover supported • PTZ camera configuration and control • ARB(Auto Recovery Backup) supported • Easy configuration(P2P(QR code))	• PoE supported • N+1 failover supported • PTZ camera configuration and control • ARB(Auto Recovery Backup) supported • Easy configuration(P2P(QR code))

Wisenet Viewer

Costless yet powerful NVR·DVR Management Software

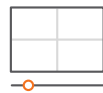


Monitoring with PC gets easier

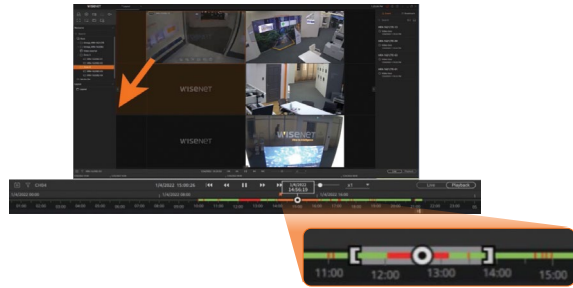
- Supports multiple OS (Windows, macOS, Linux)
- Flexible channel division and custom layout
- AI search (Person, Face, Vehicle, LPR)
- Fisheye de-warping
- Displays web pages (ex. NVR web-viewer) and video tutorials
- Allows videos to be directly saved to PC
- Event trigger and action rule management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

Available on Windows, macOS, Linux

Effective monitoring with essential features



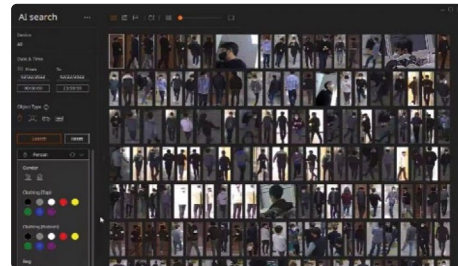
Customizable channel layout & Timeline



Easy monitoring with Fisheye Dewarping



Intelligent monitoring powered by **AI Search**



Wisenet WAVE

Video Management System

Intuitive and Easy to Use

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

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

An Operating System to Suit Your Needs

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



WAVE Sync

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



Desktop

A rich media player designed to view and manage a single Wisenet WAVE system video and archives while on-the-go.



Mobile

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



Server

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

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

Cloud

Wisenet WAVE Sync Simplifies Everything

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

Setup in Seconds

Step 1: Create Wisenet WAVE Sync Account

Step 2: Link your System to Wisenet WAVE Sync

Step 3: Connect, View and Manage from anywhere



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	4MP: 15fps/CH(N)	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 (12V, 0.417A)

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, 12ch x 2M@30fps
Power	Dual Power: 12VDC, PoE (IEEE802.3af)
Additional Features	Multi adapter for monitor back mount (VESA)

AI Box



AIB-800
AI Box

Inputs	Max. 8CH
Resolution	CIF ~ 32MP
Protocols	SUNAPI, ONVIF
Analytics	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
Protocol	TCP/IP, UDP/IP, RTP (UDP), RTP (TCP), RTSP, NTP, HTTP, DHCP (Server, Client), SMTP, ICMP, IGMP, ARP, DNS, DDNS, uPnP, HTTPS, SNMP, ONVIF (Profile-S), SUNAPI (Server, Client), SRTP
DDNS	Hanwha DDNS
Max Manipulated Streams	80 Streams (10 Streams per 1CH)
IP Version	IPv4/v6
Security	IP address filtering, User access Log, 802.1x, Encryption Device certificate(Hanwha Techwin Root CA)
OS	Windows 11/10, macOS 10.13
Web Browser	Google Chrome, Microsoft Edge, Mac Safari
Viewer/CMS	Web Viewer, WAVE, SSM, Genetec, Milestone Support SDK/CGI(SUNAPI) for interworking with 3rd party VMS
Ethernet	RJ-45 1ea (1Gbps)
Alarm	In(8EA, Terminal Block), Alarm Reset(1EA), Out(4EA, Terminal Block) – Relay Out 1(NO/NC/COM), – Relay Out 2~4(NO/COM)
USB	1EA(Rear 1 x USB 3.0) for DEBUG
Log List	Max. 3,000 (System 1,000, Access 1,000, EVENT 1,000)
CPU	NVIDIA ORIN NX 8GB (SOM)
Operating Temperature / Humidity	+0°C~+40°C(+32°F~+104°F), 20%~85% RH
Power Consumption	100 ~ 240 VAC ± 10%: 50/60 Hz, 12V, 4A Adaptor, 28W
Color / Material	Black / Metal
Product Dimensions / Weight	300 x 47.6 x 240.9 mm (11.81 x 1.87 x 9.48 inch), 1.39kg

Audio Beacon



SPS-A100M
Audio Beacon

Resolution	1920x1080, 1280x1024, 1280x960, 1280x720, 1024x768, 800x600, 800x448, 720x576, 720x480, 640x480, 640x360
Max. Framerate	Static image video H.265/H.264: Max. 10fps MJPEG: Max. 5fps
Video Out	USB: Micro USB Type C, setting true north point using Wisenet installation
Analytics	AI Sound Classification - Classified sound type: Crashing glass, Screaming, Vehicle horn, Tire screech - Event metadata: Sound type, Sound direction, Confidence, Timestamp, Best sound(audio file), dB(± 10dB) - Sound direction(Celling mounting: ± 15 degrees)
Alarm I/O	2 configurable I/O ports
Alarm Triggers	Analytics, Network disconnect, Alarm input, App event(Sound classification), Time schedule, MQTT subscription, Case tampering
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) - MQTT: publication - LED - Speaker
Audio Streaming	Two-way/one-way selectable, Full duplex, Echo cancellation, and noise reduction
Audio In	Five built-in MEMS MICs
Audio Out	Built-in speaker - Max. Sound Pressure Level 90dB at 1m(3.28ft) - Frequency Range: 144Hz~20kHz
Light Type	LED Ring(Green, Blue, Red, Pink, Sky blue, Purple), for event action
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
Application Programming Interface	ONVIF Profile S, SUNAPI(HTTP API) Wisenet open platform – AI Sound Classification pack included
Operating Temperature / Humidity	-20°C ~ +55°C (-4°F ~ +122°F) / Less than 90% RH
Input Voltage	PoE+(IEEE802.3at, Class4)
Power Consumption	PoE+: Max 18.5W, typical 8.2W
Product Dimensions / Weight	215.1(W)x135.1(D)x52.8(H)mm(8.47"x5.32"x2.08") / 973g(2.15 lb)



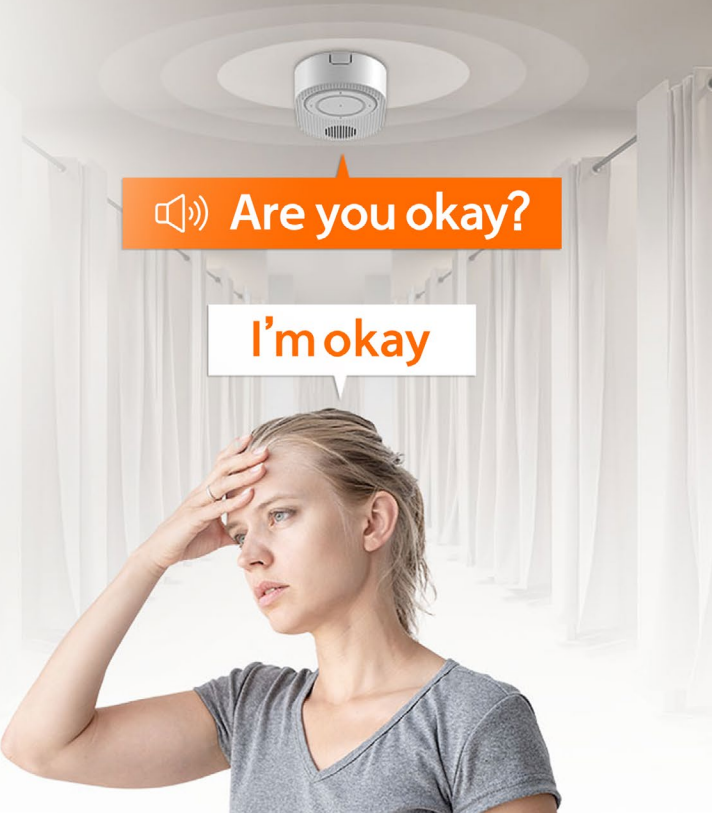
Extreme
Decibel Detection



Screaming



Glass Break Detection



Wisenet SSM

Ideal choice for integrated monitoring

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



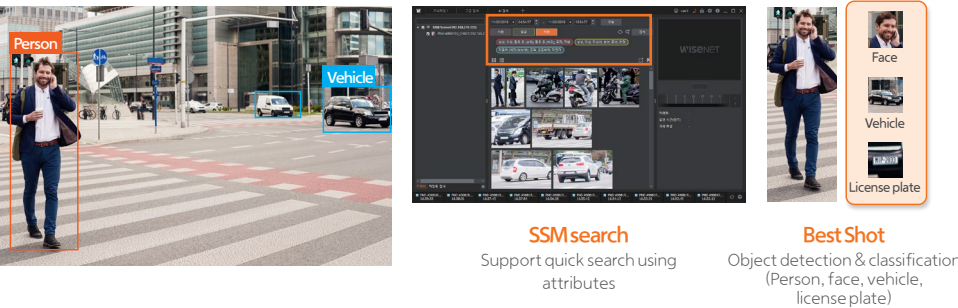
Cost Competitiveness	High Reliability	Convenient Operation
Offer major features of video surveillance in reasonable price	Superb device compatibility offered as a VMS of device manufacturer	A single manufacturer providing unified user experience
One time licensing cost (No cost for upgrades and maintenance)	Integrated operation of H/W and S/W for efficient maintenance and management	Be the first to use the latest device features
High quality VMS features for the price	Dashboard that can monitor device status	Offer various solutions for user environments

AI video search

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

• Best Shot search using unique attributes

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



Parking management solution

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

• Vehicle management & event search

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

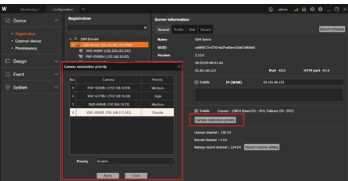


Stable monitoring

SSM provides safe and stable monitoring environment through Failover.

• Vehicle management & event search

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



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



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

OS	Windows 10 IoT Enterprise (SSM preinstalled)	
Supported Compression	H.265, H.264, MJPEG, WiseStream	
Max. Recording Bit Rate	400Mbps	
Max # of Cameras	128CH (If clustering, 132CH)	72CH (If clustering, 132CH)
Network Camera Resolution	32MP ~ CIF	
HDD Slot	SATA 16ea (3.5" 16ea Hot Swap – Volume 2ea)	
Record Mode	Normal, Schedule (Continuous / Event), Event (Pre / Post), Event Profile, ARB, Dual-Track	
Event Trigger	Video loss, Camera event (Sensor, MD, Passing, Entering, Exiting, Disappearing (Appearing), Tampering, Tracking, Face Detection, Audio Detection, ANPR, Bestshot), AI Event (Face, Appearance, Face mask, Vehicle)	
Event Action	Instant Viewer, Preset, Alarm Out, Pop-up, Sound and E-mail notification	
RAID	RAID 1 / 5 / 6 / 10 / 50	
Hot Swap	Yes	
Network Viewer Software	SSM Client, Wisenet Mobile	
Local Monitor	Dual if Full HD monitor, Single if UHD monitor	
Network Camera Protocol	Wisenet, ONVIF	
Power Input	100 ~ 240VAC, 50 ~ 60Hz	
Power Consumption	285W Dual	285W
Additional Features	- SSM Preinstalled - Redundant Power Support - ARB (Auto Recovery Backup) redundancy supported - AI Event (Face, Appearance, Face mask, Vehicle) Trigger	- SSM Preinstalled - ARB (Auto Recovery Backup) redundancy supported - AI Event (Face, Appearance, Face mask, Vehicle) Trigger

Wisenet ACS

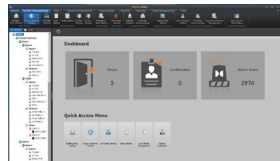
Wisenet Access Software 2.4

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



Key Features

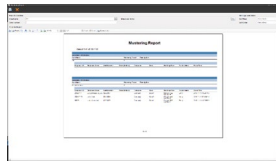
- Interlocking**
Control the locking of two or more doors
If one door is opened or unlocked, the remaining doors refuse access
- Mustering Report**
Provide information of the occupants in the fire grouping area based in Fire event
- Visitor management**
Providing visitor management features : Visitor/Host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



Configuration

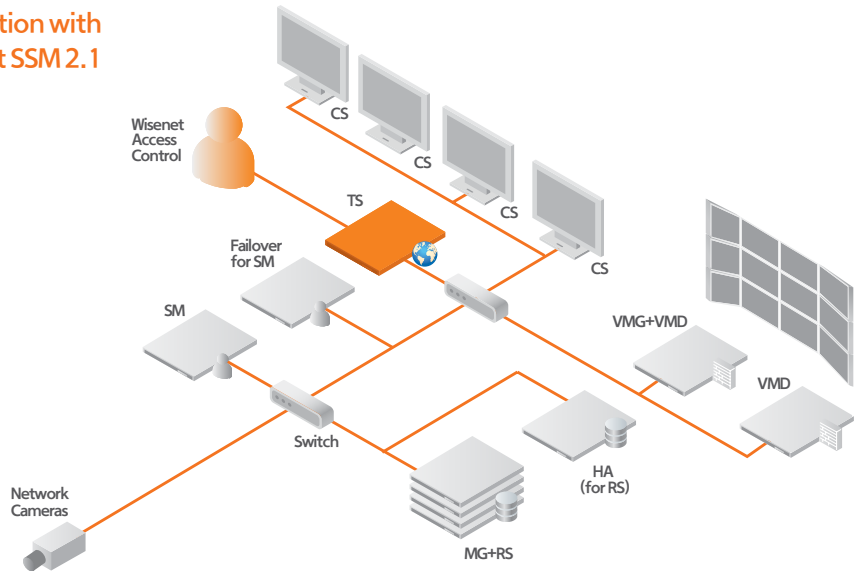


Monitoring



Mustering Report

Integration with Wisenet SSM 2.1



Hanwha Vision WACS is offered solely within the EMEA region.

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

Reader



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



U90
Long Range UHF Reader



BioEntry W2
Fingerprint / Card Reader



BioMini
Fingerprint Scanner

Credential Compatibility	125KHz/ 13.56Mhz	902 ~ 928 MHz	13.56Mhz	-
Communication	Wiegand/Clock & Data/BLE/NFC	Wiegand	Wiegand	USB 2.0
Compatible Access Cards	Standard Profile : iClass SE/SEOS, MIFARE (Classic/SIO), HID Prox, EM4 102, MIFARE DESFire EV1/EV2 (CSN/SIO) SEOS Profile : iClass SEOS	UHF Card	iCLASS SE/SEOS, MIFARE (Classic), DESFire EV1 CSN	-
Keypad	No / Yes (6x2) / No / Yes (4x3)	-	-	-
Operating Voltage Range	12V DC	12V DC or 24V DC	12V DC	USB 2.0
Operating Temperature	-35°C ~ 66°C (-31°F ~ 150°F)	-35°C ~ +65°C (-31°F ~ +150°F)	-20°C ~ +50°C (-4°F ~ +122°F)	-10°C ~ +50°C (+14°F ~ +122°F)
Ingress Protection	IP65	IP65	IP67	-
Impact Protection	-	-	IK08	-
Panel Connnection	Pigtail	Pigtail	Pigtail	-
Color	Black with silver	Black	Dark Gray	Dark Gray
OSDP	Support	-	-	-
Max. User	-	-	500,000 (1 : 1), 100,000 (1 : N)	-
Max. Fingerprint Template	-	-	1,000,000 (1 : 1), 200,000 (1 : N)	-
Ethernet	-	-	10/100Mbps	-

Controller



X1100
Hybrid controller



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

Communication	Ethernet (10/100)/ RS-485	RS-485
Reader interface	2ea	2ea / - / -
Max. expansion board	32ea	-
Max. card holders	250,000	-
Max. Event buffers	50,000	-
Input port	7ea	7ea/ 19ea/ 3ea
Output port	4ea	4ea/ 2ea/ 12ea
Operating Temperature	0°C ~ 70°C (32°F ~ 158°F)	0°C ~ 70°C (32°F ~ 158° F)
PoE	-	-
Color	Gray	Gray
OSDP	Yes	Yes

Card



iCLASS SEOS (Elite)
13.56MHz



Mobile Subscription

UHF Card
902-928 MHz Card

• 13.56Mhz • Compatible with Signo 20 (K)/40K, R10EXP • Encoded by Hanwha Vision unique format (Elite)	• Bluetooth/NFC via mobile device (Android, IOS)	• Long range card (3~5m)
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Peripheral



SSA-X300
Power Package

Controller/ Interface On Board	Max. 2ea Boards in enclosure
Input Power	100 ~ 240V AC (50Hz/60Hz) / 2.0A
Power Consumption	13.5V ± 5%, 4.7A, (Strobe, Horn 12.5V DC ± 5%)
Charging Current	700mA
Back up Battery	12V, 18Ah, rechargeable
SMPS Status Transmission	AC loss, Battery fail (Non battery)
AC Input Protection	by Fuse in input port
Operation Temperature	0°C ~ +45°C (+32°F ~ +113°F)
Case Lock	Lock on front door with keys
Dimension (mm)	W410 x H410 x D97mm (16.14" x 16.14" x 3.82")

IP Audio System

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



TTS
Text To Speech



PoE & PoE+
Dual Support +



SIP
PBX integration



Scheduler
Day, Week, Month and Year

 **Motion Detection**

 **Please stay away from the fence**

IP Speakers



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



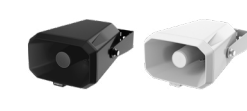
SPA-C100B / SPA-C100W
Ceiling Speaker



SPA-P100B/SPA-P100W
Pendant speaker



SPA-W100B / SPA-W100W
Wall speaker



SPA-H100B/SPA-H100W
Horn speaker

Amplifier	Built in 10W Class D				
Ethernet	10/100 Base-T				
Internal Memory	1 GBytes				
Max. Sound Pressure Level	100dB	100dB	101dB	101dB	125dB
Frequency Range (-10dB)	120Hz~20kHz	120Hz~20kHz	130Hz~20kHz	120Hz~20kHz	650Hz~5.3kHz
Sensitivity (1Watt)	90dB	90dB	91dB	91dB	111dB
Power	PoE / PoE+				
TTS	Korean, English(US, UK), German, French, Spanish, Russian				
Plenum Rating Certificate	UL2043	-			

IP Audio Module



SPA-D1000
IP Audio Module

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

IP Audio Server



SPA-S1000
IP Audio Server

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

SIP Microphone



SPA-M2000
SIP Microphone

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

IP Audio Bridge



SPA-B1000
IP Audio Bridge

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



HCB-7000A
4MP Box Camera



HCO-7070RA
4MP IR Bullet Camera



HCO-7010RA/20RA/30RA
4MP IR Bullet Camera



HCD-7070RA
4MP IR Dome Camera



HCD-7010RA/20RA/30RA
4MP IR Dome Camera

Imaging Device	1/3" CMOS				
Resolution	2560 x 1440				
Min. Illumination	Color : 0.16Lux (F1.2) B/W : 0.009Lux (F1.2)	Color : 0.16Lux (F1.6) B/W : 0Lux (IR LED on)	Color : 0.26Lux (F1.8) (HCO-7010R) 0.27Lux (F2.0) (HCO-7020R/7030R) B/W : 0Lux (IR LED on)	Color : 0.16Lux (F1.6) B/W : 0Lux (IR LED on)	Color : 0.26Lux (F1.8) (HCD-7010RA) 0.27Lux (F2.0) (HCD-7020R/7030RA) B/W : 0Lux (IR LED on)
Focal Length	–	3.2 ~ 10mm (3.1x) varifocal	2.8mm fixed (HCO-7010R) 4.0mm fixed (HCO-7020R) 6.0mm fixed (HCO-7030R)	3.2 ~ 10mm (3.1x) varifocal	2.8mm fixed (HCD-7010RA) 4.0mm fixed (HCD-7020RA) 6.0mm fixed (HCD-7030RA)
Angular Field of View	–	H : 93.48° (Wide) ~ 29.44° (Tele) V : 50.47° (Wide) ~ 16.64° (Tele) D : 112.53° (Wide) ~ 33.7° (Tele)	H : 107.48° / V : 59.67° / D : 122.01° (HCO-7010RA) H : 78.22° / V : 41.21° / D : 87.91° (HCO-7020RA) H : 49.01° / V : 27.61° / D : 55.6° (HCO-7030RA)	H : 93.48° (Wide) ~ 29.44° (Tele) V : 50.47° (Wide) ~ 16.64° (Tele) D : 112.53° (Wide) ~ 33.7° (Tele)	H : 107.48° / V : 59.67° / D : 122.01° (HCD-7010RA) H : 78.22° / V : 41.21° / D : 87.91° (HCD-7020RA) H : 49.02° / V : 27.61° / D : 55.6° (HCD-7030RA)
Pan / Tilt / Rotate	–			0° ~ 350° / 0° ~ 63° / 0° ~ 355°	0° ~ 350° / 0° ~ 67° / 0° ~ 355°
IR Viewable Length	–	30m (98.43ft)	20m (65.62ft) (HCO-7010R) 25m (82.02ft) (HCO-7020R) 30m (98.43ft) (HCO-7030R)	20m (65.62ft)	20m (65.62ft) (HCD-7010RA) 25m (82.02ft) (HCD-7020RA) 30m (98.43ft) (HCD-7030RA)
Day & Night	Auto (ICR)				
Backlight Compensation	BLC/HLC/DWDR				
Digital Noise Reduction	2D DNR				
Motion detection	Support				
Privacy Masking	2 Zones				
Alarm I/O	0/1	0/1	0/0	0/1	0/0
Protocol	AHD : ACP (AHD Coax Protocol), CVBS : Pelco-C (Coaxitron) RS-485 : Samsung T, Pelco D/P	AHD : ACP (AHD Coax Protocol), CVBS : Pelco-C (Coaxitron)			
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×H 68.4×D 92.7mm (2.35"×2.69"×3.65") 186g (0.41lb)	Ø78×259.8mm (Ø3.07"×10.23") (Without sunshield) 914g (2.02lb)	Ø70×246mm (Ø2.76"×9.69") (Without sunshield) 670g (1.48lb)	Ø119.8×98.5mm (Ø4.72"×3.88") 320g (0.71lb)	Ø110.1×86.1mm (Ø4.33"×3.39") 240g (0.53lb)
Additional Features	Video Transmission up to 500m (5C2V Coaxial Cable)	Video Transmission up to 500m (5C2V Coaxial Cable)	Video Transmission up to 500m (5C2V Coaxial Cable)	Video Transmission up to 500m (5C2V Coaxial Cable)	Video Transmission up to 500m (5C2V Coaxial Cable)



HCV-7070RA
4MP IR Vandal Dome Camera



HCV-7010RA/20RA/30RA
4MP IR Vandal Dome Camera



HCB-6001
2MP Box Camera



HCB-6000
2MP Box Camera



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



HCO-6070R
2MP IR Bullet Camera



HCO-6020R
2MP IR Bullet Camera



HCD-6080R/6070R
2MP IR Dome Camera



HCD-6020R
2MP IR Dome Camera

Imaging Device	1/2.8" CMOS			
Resolution	1920 x 1080			
Min. Illumination	Color : 0.11Lux (F1.6) B/W : 0Lux (IR LED on)	Color : 0.17Lux (F1.6) B/W : 0Lux (IR LED on)	Color : 0.11Lux (F1.6) B/W : 0Lux (IR LED on)	Color : 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	8 Zones	8 Zones	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 (2.02lb)	Ø58.6 x 165.2mm (Ø2.31" x 6.5") (Without sunshield) 279g (0.62lb)	Ø119.8 x 98.5mm (Ø4.72" x 3.88") 330g (0.73lb) (HCD-6080R) 320g (0.71lb) (HCD-6070R)	Ø110 x 86mm (Ø4.33" x 3.39") 227g (0.71lb)
Additional Features	Video Transmission up to 500m (5C2V Coaxial Cable), Simple Focus (HCD-6080R only)			



HCD-6010
2MP Dome Camera



HCV-6080R/6070R
2MP IR Vandal Dome Camera



SCB-6005
2MP Box Camera



SCO-6085R
2MP IR Bullet Camera

Imaging Device	1/2.8" CMOS			
Resolution	1920 x 1080			
Min. Illumination	Color : 0.27Lux (F2.0) B/W : 0.017 Lux (F2.0)	Color : 0.11Lux (F1.6) B/W : 0Lux (IR LED on)	Color : 0.04Lux (F1.2, 1/30sec) BW : 0.004Lux (F1.2)	Color : 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)	-	3.2 ~ 10mm (3.1x) manual varifocal
Angular Field of View	H : 113.7° / V : 61.5° / D : 134.5°	H : 110.2° (Wide) ~ 32° (Tele) V : 55.4° (Wide) ~ 18° (Tele) D : 128.4° (Wide) ~ 36.6° (Tele)	-	H : 110.2° (Wide) ~ 32° (Tele) V : 55.4° (Wide) ~ 18° (Tele) D : 128.4° (Wide) ~ 36.6° (Tele)
Pan / Tilt / Rotate	0° ~ 350° / 0° ~ 67° / 0° ~ 355°	0° ~ 350° / 0° ~ 67° / 0° ~ 355°	-	-
IR Viewable Length	-	30m (98.43ft)	-	30m (98.42ft)
Day & Night	Auto (ICR)			
Backlight Compensation	WDR (120dB)	WDR (120dB)	DWDR	DWDR
Digital Noise Reduction	SSNRIV			
Motion detection	Support			
Privacy Masking	8 Zones			
Alarm I/O	-	0 / 1	0 / 1	0 / 1
Protocol	AHD : ACP (AHD Coax Protocol), CVBS : Pelco-C (Coaxitron), CCP (CVI Coax Protocol), TCP (TVI Coax Protocol)	AHD : ACP (AHD Coax Protocol), CVBS : Pelco-C (Coaxitron), CCP (CVI Coax Protocol), TCP (TVI Coax Protocol)	ACP (AHD Coax Protocol) CVBS : Pelco-C (Coaxitron)	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)	-10°C ~ +55°C (+14°F ~ +131°F) / 0~90% RH	-30°C ~ +55°C (-22°F ~ +131°F)
Certification	-	IP66, IK10	-	IP66, IK10
Power Consumption	12VDC : Max 3.6W	12VDC & 24VAC : Max 5.8W (HCV-6080R) 12VDC & 24VAC : Max 4.2W (HCV-6070R)	AC 24V / 0.37A (Max 3.6W) DC 12V / 0.32A (Max 3.5W)	24VAC : Max 5.4W, typical 3.4W 12VDC : Max 5.4W, typical 3.4W
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)	W 68.4 x H 59.6 x D 92.7mm (2.69" x 2.35" x 3.65") 186g (0.41lb)	Ø78 x 259.8mm (Ø3.07" x 10.23") 887g (1.95lb)
Additional Features	Video transmsstion up to 500m (5C2V Coaxial Cable), Simple Focus (HCV-6080R only)			



SCO-6025R
2MP IR Bullet Camera



SCD-6085R
2MP IR Dome Camera



SCD-6025R
2MP IR Dome Camera



SCV-6085R
2MP IR Vandal Dome Camera

Imaging Device	1/2.8" CMOS			
Resolution	1920 x 1080			
Min. Illumination	Color: 0.11Lux (F1.6, 1/30sec) BW: 0Lux (IR LED on)	Color: 0.11Lux (F1.6, 1/30sec) BW: 0Lux (IR LED on)	Color: 0.17Lux (F1.6, 1/30sec) BW: 0Lux (IR LED on)	Color: 0.11Lux (F1.6, 1/30sec) BW: 0Lux (IR LED on)
Focal Length	4mm fixed	3.2~10mm (3.1x) varifocal	4mm fixed	3.2~10mm (3.1x) varifocal
Angular Field of View	H: 87.6° / V: 46.4° / D: 104.5°	H: 110.2° (Wide) ~ 32° (Tele) V: 55.4° (Wide) ~ 18° (Tele) D: 128.4° (Wide) ~ 36.6° (Tele)	H: 87.6° / V: 46.4° / D: 104.5°	H: 110.2° (Wide) ~ 32° (Tele) V: 55.4° (Wide) ~ 18° (Tele) D: 128.4° (Wide) ~ 36.6° (Tele)
Pan / Tilt / Rotate	–	0° ~ 350° / 0° ~ 67° / 0° ~ 355°	0° ~ 350° / 0° ~ 67° / 0° ~ 355°	0° ~ 350° / 0° ~ 67° / 0° ~ 355°
IR Viewable Length	30m (98.42ft)	20m (65.62ft)	20m (65.62ft)	30m (98.43ft)
Day & Night	Auto (ICR)			
Backlight Compensation	BLC, HLC, DWDR			
Digital Noise Reduction	SSNRIV			
Motion detection	Support			
Privacy Masking	8 Zones			
Alarm I/O	0 / 1			
Protocol	ACP (AHD Coax Protocol) CVBS: Pelco-C (Coaxitron)			
Operating Temperature	-30°C ~ +55°C (+14°F ~ +131°F) / 0~90% RH * Start up should be done at above -10°C	-10°C ~ +55°C (+14°F ~ +131°F) / 0~90% RH	-10°C ~ +55°C (+14°F ~ +131°F) / 0~90% RH	-30°C ~ +55°C (+14°F ~ +131°F) / 0~90% RH * Start up should be done at above -10°C
Certification	IP66	–	–	IP66, IK10
Power Consumption	DC 12V/0.45A (Max 5.4W)	AC 24V / 0.45A DC 12V / 0.46A	DC 12V/0.45A (Max 5.4W)	AC 24V / 0.45A DC 12V / 0.46A
Dimensions (WxHxD) / Weight	Ø58.6 x 165.2mm (Ø 2.31" x 6.5") (without sunshield) 279g (0.62lb)	Ø119.8 x 98.5mm (Ø 4.72" x 3.88") 320g (0.7lb)	Ø110 x 86mm (Ø 4.33" x 3.39") 227g (0.5lb)	Ø137 x 106.1mm (Ø 5.39" x 4.18") 715g (1.57lb)
Additional Features	Video transmsstion up to 500m (5C2V Coaxial Cable)			



HRX-1635
16CH Pentabrid DVR



HRX-1634
16CH Pentabrid DVR



HRX-835A
8CH Pentabrid DVR



HRX-435
4CH Pentabrid DVR



HRX-434
4CH Pentabrid DVR

OS	Linux				
Compression	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 – 16CH(1Vp–p 75ohm, BNC) Network Camera – 2CH (Up to 18CH)	Analog Camera – 8CH(1Vp–p 75ohm, BNC) Network Camera – 2CH (Up to 10CH)	Analog Camera – 4CH(1Vp–p 75ohm, BNC) Network Camera – 2CH (Up to 6CH)	Analog Camera – 4CH(1Vp–p 75ohm, BNC) Network Camera – 2CH (Up to 6CH)
Record Rate	(Main Stream, NT/PAL) 8M 8/8fps, 5M 12/12fps, 4M 15/12fps, 2M 30/25fps, 720p 30/25fps, Under 960H 30/25fps/CH (Sub Stream) 720p/CH or Higher : 640x368 Full fps, SD : up to SD Full fps * The maximum recording framerate depends on the frame rate of the input camera.				
HDD Slot	SATA 8ea(Max. 48TB)	SATA 2ea(Max. 12TB)	SATA 4ea(Max 24TB)	SATA 2ea(Max 12TB)	SATA 1ea(Max 6TB)
Viewer Software	SSM, Webviewer, Wisenet Mobile, Wisenet Viewer				
Local Display	1x HDMI, 1x VGA (Dual monitor) HDMI: 3840 x 2160, 2560x1440, 1920x1080, 1280x1024, 1280x720 VGA: 1920x1080, 1280x1024, 1280x720, 1024x768	1x HDMI, 1x VGA (Dual monitor) HDMI: 3840 x 2160, 2560x1440, 1920x1080, 1280x1024, 1280x720 VGA: 1920x1080, 1280x1024, 1280x720, 1024x768	1x HDMI, 1x VGA (Dual monitor) HDMI: 3840 x 2160, 2560x1440, 1920x1080, 1280x1024, 1280x720 VGA: 1920x1080, 1280x1024, 1280x720, 1024x768	1x HDMI, 1x VGA (simultaneous output) HDMI: 3840 x 2160, 2560x1440, 1920x1080, 1280x1024, 1280x720 VGA: 1920x1080, 1280x1024, 1280x720	1x HDMI, 1x VGA (simultaneous output) HDMI: 3840 x 2160, 2560x1440, 1920x1080, 1280x1024, 1280x720 VGA: 1920x1080, 1280x1024, 1280x720
Audio In/Out	16 Line in (RCA 4 Line, Option : Audio Extension Cable) / 1 Line line out	4 Line in / 1 Line out	8 Line in (RCA 4 Line, Option : Audio Extension Cable) / 1 Line line out	4 Line in / 1 Line out	4 Line in / 1 Line out
Alarm In/Out	In 16EA, Out 4EA –Relay Out1(NO/NC/COM) –Relay Out2~4(NO/COM)	In 16EA, Out 4EA –Relay Out1(NO/NC/COM) –Relay Out2~4(NO/COM)	In 8EA, Out 4EA –Relay Out1(NO/NC/COM) –Relay Out2~4(NO/COM)	In 4EA, Out 2EA –Relay Out1(NO/NC/COM) –Relay Out2(NO/COM)	In 4EA, Out 1EA –Relay Out1(NO/NC/COM)
N/W Camera Support	SUNAPI, ONVIF				
Additional Features	–				

LED Monitor



SMT-4343
43" LED Monitor



SMT-3240
32" LED Monitor



SMT-2740
27" LED Monitor

Screen Size	43"	32"	27"
Max. Resolution	3840 x 2160	3840 x 2160	3840 x 2160, 60Hz (UHD)
Brightness	300 cd/m²	300 cd/m²	300 cd/m²
Contrast Ratio	1000:1	1000:1	1200:1
Aspect Ratio	16:9	16:9	16:9
Viewing Angle(H/V)	178° / 178°	178° / 178°	178° / 178°
Response Time	8ms	14ms	14ms
Interface	HDMI (1), DP (1)	HDMI 2.0(1), DP1.2(1)	HDMI 2.0(2), DP1.4(1), two windows PIP/PBP
Audio In/Out	- / 1	- / 1	- / -
Built-in Speakers	Yes	Yes	Yes
VESA Mount(mm)	100*100/400*200	100*100	100*100
Power	100V ~ 240V AC	100V ~ 240V AC	100V ~ 240V AC
Stand	Optional	Yes	Yes
Tempered Glass Screen	-	-	-
Additional Features	Remote Controller	-	-



SMT-3215
31.5" LED Monitor



SMT-2710
27" LED Monitor



SMT-2431
24" LED Monitor



SMT-2212
22" LED Monitor

Screen Size	31.5"	27"	24"	22"
Max. Resolution	1920 x 1080, 60Hz (FHD)	1920 x 1080, 60Hz (FHD)	1920 x 1080	1920 x 1080
Brightness	300cd/m²	250 cd/m²	250 cd/m²	250 cd/m²
Contrast Ratio	3000:1	4000:1	4000:1	3000:1
Aspect Ratio	16:9	16:9	16:9	16:9
Viewing Angle(H/V)	178° / 178°	178° / 178°	178° / 178°	178° / 178°
Response Time	20ms	6.5ms	14ms	6.5ms
Interface	VGA (1), HDMI 1.4(1), DP 1.2(1)	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	- / -	- / -
Built-in Speakers	Yes	Yes	-	-
VESA Mount(mm)	100*100	100*100	100*100	100*100
Power	100V ~ 240V AC	100V ~ 240V AC	100V ~ 240V AC	DC 12V 5A
Stand	Yes	Yes	Yes	Yes
Tempered Glass Screen	-	-	-	-
Additional Features	-	-	-	-

Controller



SPC-7000
System Controller



SPC-2010
PTZ / DVR System Controller



SPC-2001
PTZ / DVR System Controller



SPC-1010
PTZ Control Keyboard

Features	• 5" TFT Touch LCD • Network Camera / SSM / Analog Camera / DVR Control • User-Friendly Design and Easy-to-Use Keypad • 3 Axis Joystick to Control PTZ Function • Detachable Joystick / Jogshuttle for Universe Use (Right / Left Hand Use) • USB Interface Support (1 ea for SSM, 1 ea for Image Snapshot / Upgrade) • Fast Camera- Tile Mapping, Config Import / Export	• 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	• 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	• Control up to 255 PTZ Cameras • Multi Protocols Supports • OSD Menu, 3D Joystick Control • RS-485 and RS-422 Interface
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Lens

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

MEMO

MEMO

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