

Database Encryption
Firmware Encryption
User Authentication
Backdoor Removal

WISENET 7

A New World of Cyber Security

Exceptional cyber protection from the latest generation SoC

- Secure Boot Verification
- Secure OS
- Anti-Hardware Clone
- Secure JTAG
- Secure UART



hanwha-security.eu

Hanwha Techwin Europe

Heriot House, Heriot Road, Chertsey, Surrey, KT16 9DT, United Kingdom
Tel : +44.1932.57.8100
Fax: +44.1932.57.8101
www.hanwha-security.eu

Updated July 2020

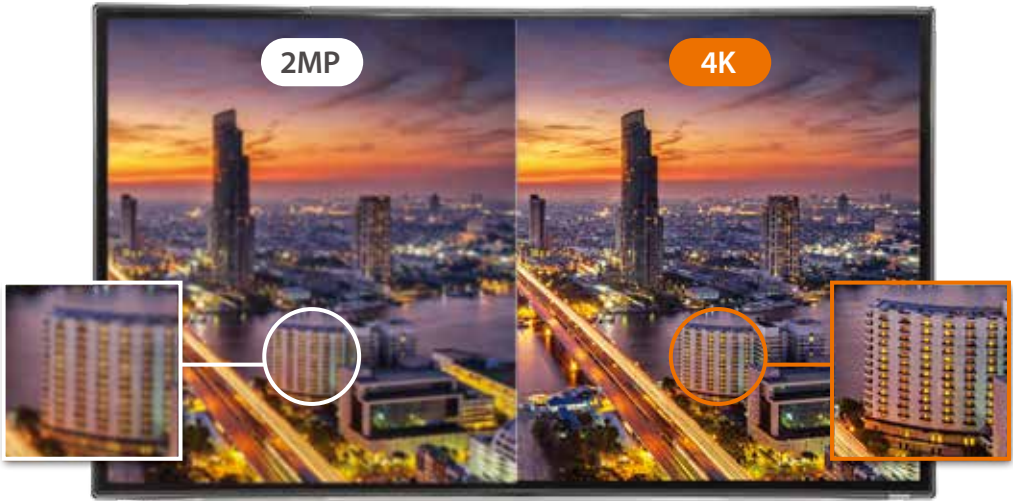
© 2020 Hanwha Techwin Co., Ltd. All rights reserved.

DESIGN AND SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE
Under no circumstances, this document shall be reproduced, distributed or changed, partially or wholly, without formal authorization of Hanwha Techwin Co., Ltd.
* Wisenet is the proprietary brand of Hanwha Techwin, formerly known as Samsung Techwin.

FIRST EDITION 12-2019 (M.H)

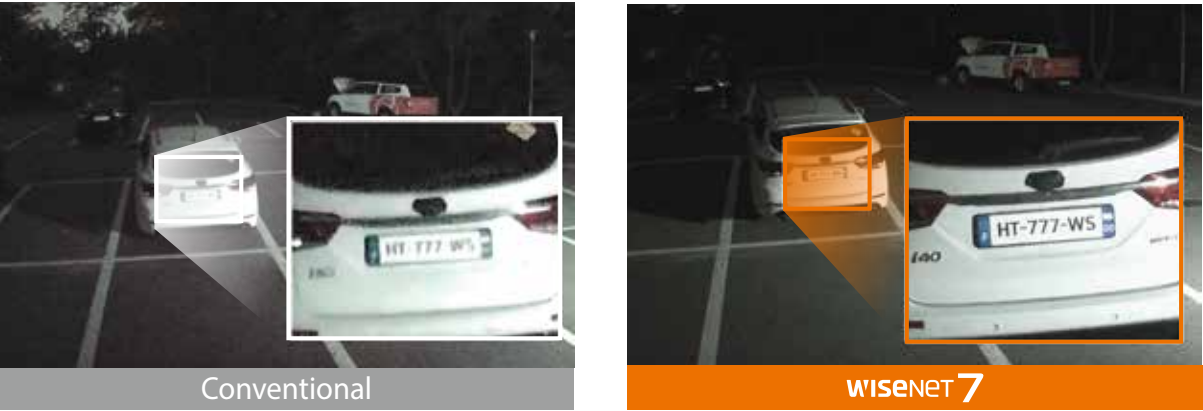
Exceptional 4K Resolution

Wisenet7 camera devices provide clear and vivid images in resolutions of up to 4K suitable for forensic search applications.



Sharper images with enhanced noise reduction technology

Wisenet7 lineup minimizes motion blur and artifacts in low-light environments. Hanwha Techwin’s outstanding noise reduction technology significantly reduced video noise compared to conventional cameras. Maximized expression of edges and colours allows identification of object details even in low-light environments.



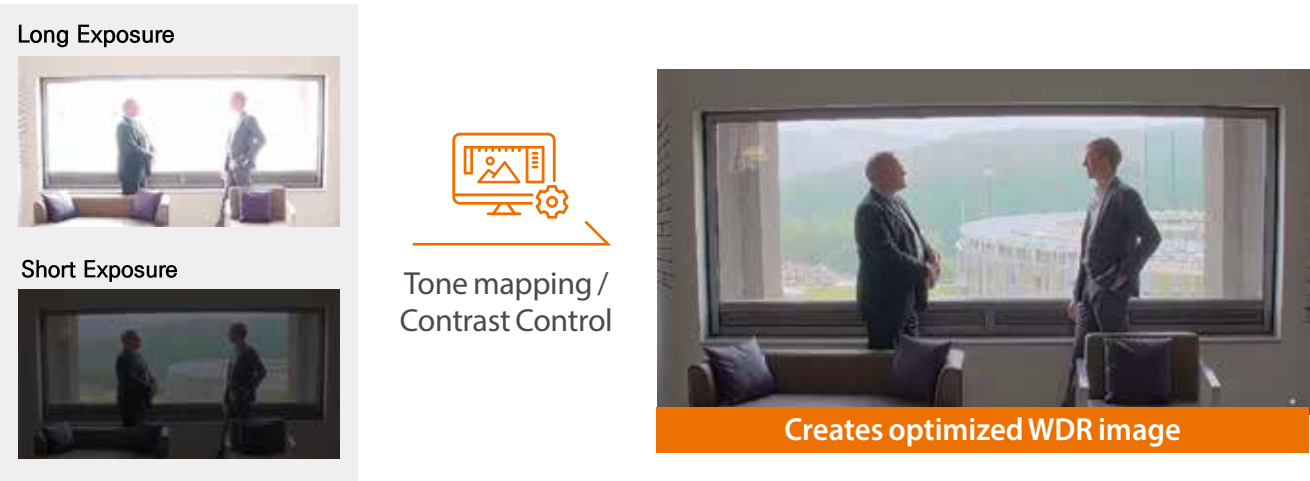
extreme WDR's enhanced noise reduction technology

Wisenet7 lineup applied improved local contrast enhancement technology to provide a clearer and sharper image. Overcoming limitations that may occur from the existing multi-frame integration method, it optimizes contrast so that objects can be clearly identified even in the environments with strong backlight.



extreme WDR produces the most optimized image

Wisenet7’s newly adopted Scene Analysis technology helps the camera produce optimized WDR images. When integrating the frames, Wisenet7 analyzes the frames then manages dynamic range and refines the overall tone.



Realistic image without image distortion

Wisenet7 lineup perfectly corrected wide-angle lens distortion to overcome the limitations of conventional cameras. It generates advanced images as seen by the human eye, without lens distortion, despite being equipped with a wide-angle lens.



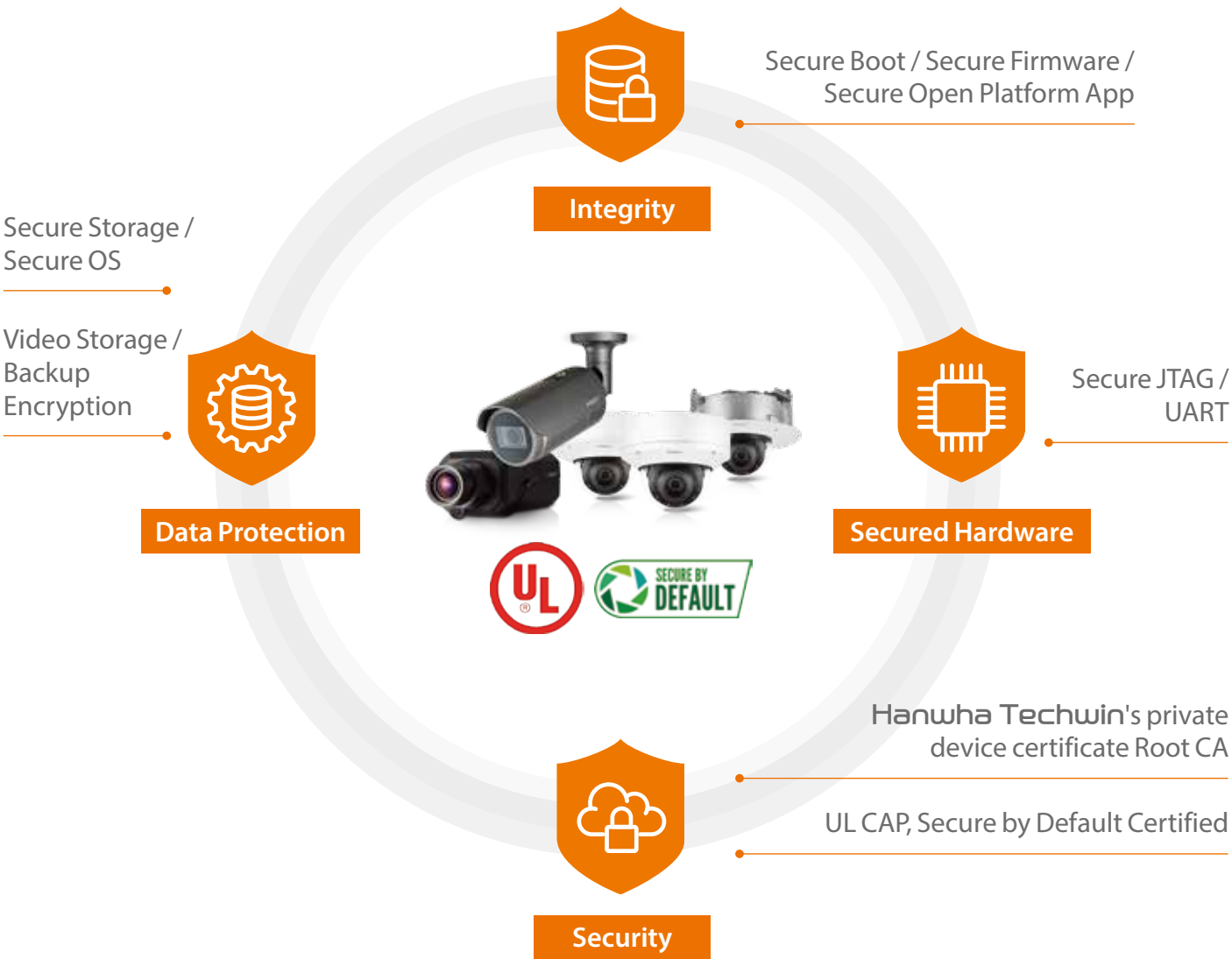
DIS with built-in gyro sensor

Advances in Wisenet image stabilization technology allow for the reduction of motion blur caused by wind or vibration. A gyroscopic sensor plus DIS technology is specifically designed and engineered into select Wisenet7 cameras resulting in sharp, stable images.



End-to-End Cybersecurity

Wisenet7 lineup offers next level Cybersecurity with the industry's highest levels of Cybersecurity policy which satisfies the stringent UL CAP standards and Secure by Default. Hanwha Techwin established its own device certificate issuing system, Root CA, to embed certificates into the product not only in the development progress but also in the manufacturing progress. Possessing the world's best in-house chip development and design technology, Hanwha Techwin maintains a differentiated and innovative policy.



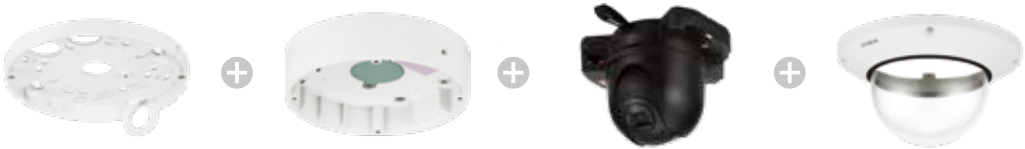
Vector-based OSD

Wisenet7's use of vector graphics for its on screen display delivers crisp text overlays, regardless of image resolution, and offers the ability to choose from an unlimited range of display colours and other options. It also allows the usage of custom logos and images to be overlaid on live or exported video.



Easy to install modular design

Wisenet7 cameras use the same innovative modular camera design as the X series PLUS for easy and hassle-free camera installation and maintenance.



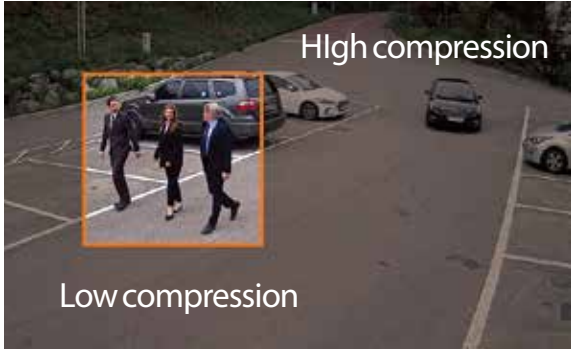
Convenient USB Wi-Fi Installation

Using a USB Wi-Fi adaptor, technicians can quickly connect to Wisenet7 camera devices via the Wisenet Installation app on their mobile device to check and modify camera focus and field of view, greatly reducing the setup time needed for each device.



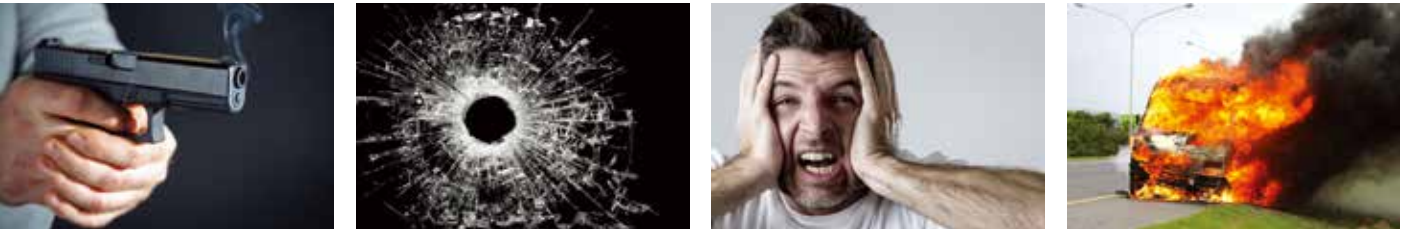
Lower bandwidth and storage requirements with WiseStream II

Hanwha Techwin's WiseStream II technology, when combined with H.265 compression, reduces bandwidth and storage needs by up to 75% compared to current H.264 technology, without sacrificing image quality.



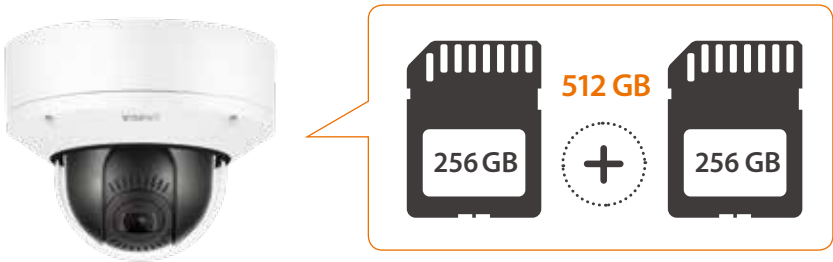
License-free Onboard Video and Audio Analytics

Wisenet7's onboard video and audio analytics suite is completely license-free and includes face and torso detection, intelligent motion analytics, and audio classification for gunshots, explosions, screams, and breaking glass. Analytics events can be used to trigger alarms as well as audio playback as a response.



Dual microSD slots

The dual microSD slots on Wisenet7 camera devices allow up to 512GB of recorded video to be saved onboard, keeping data safe in the event of a network failure.





XNO-9082R



XNV-9082R

Imaging Device	1/2.8"CMOS	1/2.8"CMOS
Min. Illumination	Colour: 0.05Lux (F1.2, 1/30sec) B/W: 0Lux (IR LED On)	Colour: 0.05Lux (F1.2, 1/30sec) B/W: 0Lux (IR LED On)
Video Output	Micro USB Type B	Micro USB Type B
Focal Length	2.8 ~ 8.4mm (3x) motorized varifocal	2.8 ~ 8.4mm (3x) motorized varifocal
Angular Field of View	H: 114° (Wide) ~ 40.2° (Tele) / V: 62.0° (Wide) ~ 22.5° (Tele) / D: 133.0° (Wide) ~ 46.3° (Tele)	H: 114° (Wide) ~ 40.2° (Tele) / V: 62.0° (Wide) ~ 22.5° (Tele) / D: 133.0° (Wide) ~ 46.3° (Tele)
Pan / Tilt / Rotate	-	0°~360° / -45°~85° / 0°~355°
IR Viewable Length	40m (131.23ft)	40m (131.23ft)
Day & Night	Auto (ICR)/Colour/BW/ External/Schedule	Auto (ICR)/Colour/BW/ External/Schedule
Wide Dynamic Range	extreme WDR	extreme WDR
Digital Noise Reduction	SSNRV	SSNRV
Digital Image Stabilization	Support (built-in gyro sensor)	Support (built-in gyro sensor)
Analytics	Intelligent analytics Audio detection Sound classification Audio Playback Shock detection Face/upper body detection	Intelligent analytics Audio detection Sound classification Audio Playback Shock detection Face/upper body detection
Business Intelligence	People counting, Queue management, Heatmap	People counting, Queue management, Heatmap
Alarm I/O	2 configurable I/O ports	2 configurable I/O ports
Audio I/O	Selectable (mic in/line in) / Line out	Selectable (mic in/line in) / Line out
Video Compression	H.265, H.264, MJPEG	H.265, H.264, MJPEG
Resolution / Max. Frame Rate	4K/30fps	4K/30fps
WiseStream	WiseStream II	WiseStream II
Streaming	Up to 10 profiles	Up to 10 profiles
Edge Storage	Micro SD/SDHC/SDXC 2slots(512GB)	Micro SD/SDHC/SDXC 2slots(512GB)
Application Programming Interface	ONVIF Profile S/G/T SUNAPI (HTTP API) Wisenet open platform	ONVIF Profile S/G/T SUNAPI (HTTP API) Wisenet open platform
Operating Temperature	-50°C~+60°C (-58°F ~ +140°F) / Less than 95% RH (non condensing) * Start up should be done at above -30°C	-50°C~+60°C (-58°F ~ +140°F) / Less than 95% RH (non condensing) * Start up should be done at above -30°C
Certification	IP66/IP67, IK10, NEMA4X	IP66/IP67/IP6K9K, IK10+, NEMA4X
Power Consumption	PoE : typ 10.5W, max 12.95W 12VDC : typ 9.4W, max 12.5W 24VAC : typ 11.2W, max14.5W	PoE : typ 10.7W, max 12.95W 12VDC : typ 9.0W, max 11.5W 24VAC : typ 11.0W, max13.5W
Dimensions (WxHxD / Weight)	Ø91 x 368.6mm (Ø3.85" x 14.51") 2.2kg (4.85lb)	Ø180 x 125mm (Ø7.09" x 4.92") 1.9kg (4.18lb)



XND-9082RF



XND-9082RV



XNB-9002

1/2.8"CMOS	1/2.8"CMOS	1/2.8"CMOS
Colour: 0.05Lux (F1.2, 1/30sec) B/W: 0Lux (IR LED On)	Colour: 0.05Lux (F1.2, 1/30sec) B/W: 0Lux (IR LED On)	Colour: 0.05Lux (F1.2, 1/30sec) B/W: 0.005Lux
Micro USB Type B	Micro USB Type B	Micro USB Type B
2.8 ~ 8.4mm (3x) motorized varifocal	2.8 ~ 8.4mm (3x) motorized varifocal	-
H: 114° (Wide) ~ 40.2° (Tele) / V: 62.0° (Wide) ~ 22.5° (Tele) / D: 133.0° (Wide) ~ 46.3° (Tele)	H: 114° (Wide) ~ 40.2° (Tele) / V: 62.0° (Wide) ~ 22.5° (Tele) / D: 133.0° (Wide) ~ 46.3° (Tele)	-
0°~360° / -45°~85° / 0°~355°	0°~360° / -45°~85° / 0°~355°	None
40m (131.23ft)	40m (131.23ft)	None
Auto (ICR)/Colour/BW/ External/Schedule	Auto (ICR)/Colour/BW/ External/Schedule	Auto (ICR)/Colour/BW/ External/Schedule
extreme WDR	extreme WDR	extreme WDR
SSNRV	SSNRV	SSNRV
Support (built-in gyro sensor)	Support (built-in gyro sensor)	Support (built-in gyro sensor)
Intelligent analytics Audio detection Sound classification Audio Playback Shock detection Face/upper body detection	Intelligent analytics Audio detection Sound classification Audio Playback Shock detection Face/upper body detection	Intelligent analytics Audio detection Sound classification Audio Playback Shock detection Face/upper body detection
People counting, Queue management, Heatmap	People counting, Queue management, Heatmap	People counting, Queue management, Heatmap
2 configurable I/O ports	2 configurable I/O ports	2 configurable I/O ports
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) Supply voltage: 2.5VDC (4mA), Input impedance: 2K Ohm
H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG
4K/30fps	4K/30fps	4K/30fps
WiseStream II	WiseStream II	WiseStream II
Up to 10 profiles	Up to 10 profiles	Up to 10 profiles
Micro SD/SDHC/SDXC 2slots(512GB)	Micro SD/SDHC/SDXC 2slots(512GB)	Micro SD/SDHC/SDXC 2slots(512GB)
ONVIF Profile S/G/T SUNAPI (HTTP API) Wisenet open platform	ONVIF Profile S/G/T SUNAPI (HTTP API) Wisenet open platform	ONVIF Profile S/G/T SUNAPI (HTTP API) Wisenet open platform
-25°C ~ +60°C (-13°F ~ +140°F) / Less than 95% RH (non condensing)	-25°C ~ +60°C (-13°F ~ +140°F) / Less than 95% RH (non condensing)	-10°C ~ +55°C (+14°F ~ +131°F) / Less than 95% RH (non condensing)
IP52, Plenum rate, IK10	IP52, IK10	-
PoE : typ 10.7W, max 12.95W 12VDC : typ 9.0W, max 11.5W	PoE : typ 10.7W, max 12.95W 12VDC : typ 9.0W, max 11.5W	PoE : typ 8.2W, Max 12.95W 12VDC : typ 7.5W, Max 11.5W 24VAC : typ 8.9W, Max 13.5W
Ø205 x 163mm (Ø8.07" x 6.42") 1.95kg (4.29lb)	Ø160 x 125mm (Ø6.30" x 4.92") 1.6kg (3.52lb)	W81 x D165 x H67mm (W3.19" x D6.48" x H2.64") 0.88kg (1.94lb)



XNO-8082R



XNV-8082R

Imaging Device	1/2.8"CMOS	1/2.8"CMOS
Min. Illumination	Colour: 0.05Lux (F1.2, 1/30sec) B/W: 0Lux (IR LED On)	Colour: 0.05Lux (F1.2, 1/30sec) B/W: 0Lux (IR LED On)
Video Output	Micro USB Type B	Micro USB Type B
Focal Length	2.8 ~ 8.4mm (3x) motorized varifocal	2.8 ~ 8.4mm (3x) motorized varifocal
Angular Field of View	H: 114° (Wide) ~ 40.2° (Tele) / V: 62.0° (Wide) ~ 22.5° (Tele) / D: 133.0° (Wide) ~ 46.3° (Tele)	H: 114° (Wide) ~ 40.2° (Tele) / V: 62.0° (Wide) ~ 22.5° (Tele) / D: 133.0° (Wide) ~ 46.3° (Tele)
Pan / Tilt / Rotate	-	0°~360° / -45°~85° / 0°~355°
IR Viewable Length	40m (131.23ft)	40m (131.23ft)
Day & Night	Auto (ICR)/Colour/BW/ External/Schedule	Auto (ICR)/Colour/BW/ External/Schedule
Wide Dynamic Range	extreme WDR	extreme WDR
Digital Noise Reduction	SSNRV	SSNRV
Digital Image Stabilization	Support (built-in gyro sensor)	Support (built-in gyro sensor)
Analytics	Intelligent analytics Audio detection Sound classification Audio Playback Shock detection Face/upper body detection	Intelligent analytics Audio detection Sound classification Audio Playback Shock detection Face/upper body detection
Business Intelligence	People counting, Queue management, Heatmap	People counting, Queue management, Heatmap
Alarm I/O	2 configurable I/O ports	2 configurable I/O ports
Audio I/O	Selectable (mic in/line in) / Line out	Selectable (mic in/line in) / Line out
Video Compression	H.265, H.264, MJPEG	H.265, H.264, MJPEG
Resolution / Max. Frame Rate	6MP/30fps	6MP/30fps
WiseStream	WiseStream II	WiseStream II
Streaming	Up to 10 profiles	Up to 10 profiles
Edge Storage	Micro SD/SDHC/SDXC 2slots(512GB)	Micro SD/SDHC/SDXC 2slots(512GB)
Application Programming Interface	ONVIF Profile S/G/T SUNAPI (HTTP API) Wisenet open platform	ONVIF Profile S/G/T SUNAPI (HTTP API) Wisenet open platform
Operating Temperature	-50°C~+60°C (-58°F ~ +140°F) / Less than 95% RH (non condensing) * Start up should be done at above -30°C	-50°C~+60°C (-58°F ~ +140°F) / Less than 95% RH (non condensing) * Start up should be done at above -30°C
Certification	IP66/IP67, IK10, NEMA4X	IP66/IP67/IP6K9K, IK10+, NEMA4X
Power Consumption	PoE: typ 10.5W, max 12.95W 12VDC: typ 9.4W, max 12.5W 24VAC: typ 11.2W, max14.5W	PoE: typ 10.7W, max 12.95W 12VDC: typ 9.0W, max 11.5W 24VAC: typ 11.0W, max13.5W
Dimensions (WxHxD / Weight)	Ø91 x 368.6mm (Ø3.85" x 14.51") 2.2kg (4.85lb)	Ø180 x 125mm (Ø7.09" x 4.92") 1.9kg (4.18lb)



XND-8082RF



XND-8082RV



XNB-8002

1/2.8"CMOS	1/2.8"CMOS	1/2.8"CMOS
Colour: 0.05Lux (F1.2, 1/30sec) B/W: 0Lux (IR LED On)	Colour: 0.05Lux (F1.2, 1/30sec) B/W: 0Lux (IR LED On)	Colour: 0.05Lux (F1.2, 1/30sec) B/W: 0.005Lux
Micro USB Type B	Micro USB Type B	Micro USB Type B
2.8 ~ 8.4mm (3x) motorized varifocal	2.8 ~ 8.4mm (3x) motorized varifocal	-
H: 114° (Wide) ~ 40.2° (Tele) / V: 62.0° (Wide) ~ 22.5° (Tele) / D: 133.0° (Wide) ~ 46.3° (Tele)	H: 114° (Wide) ~ 40.2° (Tele) / V: 62.0° (Wide) ~ 22.5° (Tele) / D: 133.0° (Wide) ~ 46.3° (Tele)	-
0°~360° / -45°~85° / 0°~355°	0°~360° / -45°~85° / 0°~355°	None
40m (131.23ft)	40m (131.23ft)	None
Auto (ICR)/Colour/BW/ External/Schedule	Auto (ICR)/Colour/BW/ External/Schedule	Auto (ICR)/Colour/BW/ External/Schedule
extreme WDR	extreme WDR	extreme WDR
SSNRV	SSNRV	SSNRV
Support (built-in gyro sensor)	Support (built-in gyro sensor)	Support (built-in gyro sensor)
Intelligent analytics Audio detection Sound classification Audio Playback Shock detection Face/upper body detection	Intelligent analytics Audio detection Sound classification Audio Playback Shock detection Face/upper body detection	Intelligent analytics Audio detection Sound classification Audio Playback Shock detection Face/upper body detection
People counting, Queue management, Heatmap	People counting, Queue management, Heatmap	People counting, Queue management, Heatmap
2 configurable I/O ports	2 configurable I/O ports	2 configurable I/O ports
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) Supply voltage: 2.5VDC (4mA), Input impedance: 2K Ohm
H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG
6MP/30fps	6MP/30fps	6MP/30fps
WiseStream II	WiseStream II	WiseStream II
Up to 10 profiles	Up to 10 profiles	Up to 10 profiles
Micro SD/SDHC/SDXC 2slots(512GB)	Micro SD/SDHC/SDXC 2slots(512GB)	Micro SD/SDHC/SDXC 2slots(512GB)
ONVIF Profile S/G/T SUNAPI (HTTP API) Wisenet open platform	ONVIF Profile S/G/T SUNAPI (HTTP API) Wisenet open platform	ONVIF Profile S/G/T SUNAPI (HTTP API) Wisenet open platform
-25°C ~ +60°C (-13°F ~ +140°F) / Less than 95% RH (non condensing)	-25°C ~ +60°C (-13°F ~ +140°F) / Less than 95% RH (non condensing)	-10°C ~ +55°C (+14°F ~ +131°F) / Less than 95% RH (non condensing)
IP52, Plenum rate, IK10	IP52, IK10	-
PoE: typ 10.7W, max 12.95W 12VDC: typ 9.0W, max 11.5W	PoE: typ 10.7W, max 12.95W 12VDC: typ 9.0W, max 11.5W	PoE: typ 8.2W, Max 12.95W 12VDC: typ 7.5W, Max 11.5W 24VAC: typ 8.9W, Max 13.5W
Ø205 x163mm (Ø8.07" x 6.42") 1.95kg (4.29lb)	Ø160 x125mm (Ø6.30" x 4.92") 1.6kg (3.52lb)	W81 x D165 x H67mm (W3.19" x D6.48" x H2.64") 0.88kg (1.94lb)