



July 2023 New Product Introduction

Hardware PM Team

07.07.2023



Q-AI Cameras

QNV-C9083R/C8083R

QNV-C9011R/C8011R/C8012

QNO-C9083R/C8083R

False alarm reduction

WiseMD **NEW**

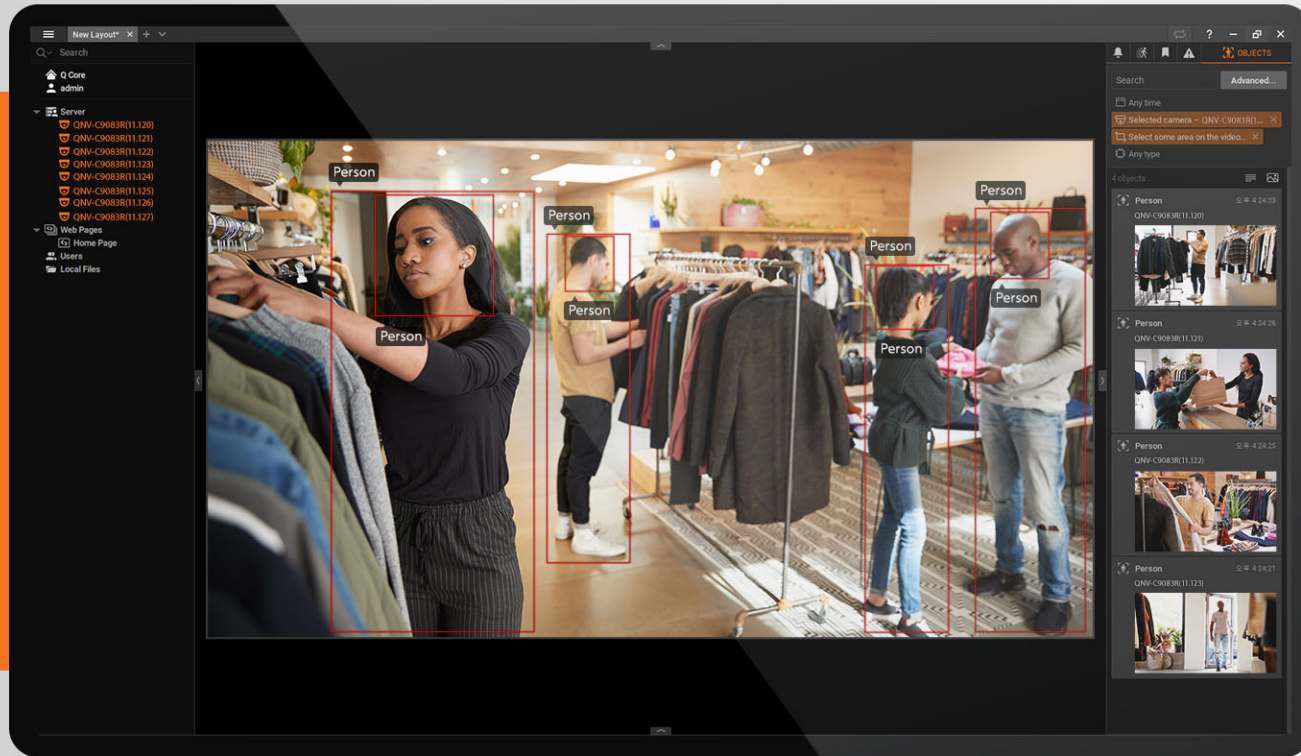


It's a cat, not a thief!



The new Q-core cameras detect and classify people, vehicles in real time, greatly enhancing the accuracy of video analytics. AI algorithms can discern person as distinct objects separate from their surroundings such as waving trees, shadows, or animals. Q-core cameras are able to help improve operator efficiency even with conventional motion detection.

Object classification based on AI engine



The new Q AI cameras generates metadata that includes object type (Person/Vehicle(car/bus/truck/motorcycle/bicycle)), which is sent to the VMS/NVR to be used for forensic search. Forensic search dramatically enhances the search efficiency and reduces time spent looking for events.



Object classification items

Person

Car

Bus

Truck

Bicycle

Upgraded Q-core series

AI based analytics

Hanwha Vision



Loitering **NEW**

The intelligent video analytics on the camera utilizes AI object detection to trigger events like loitering which trigger an event if an object remains in the virtual area for more than the time limit set by the user.



Line crossing **NEW**

The intelligent video analytics on the camera utilizes AI object detection to trigger events like a virtual line which triggers an event when an object crosses the virtual line based on the user configuration.

Enhanced resolution

The new Q-core supports up to 4K resolution. The expanded lineup allows you to make the right choice for your business.

Q series offers a variety of resolutions.
Choose the product that's right for you.

Full HD 1920X1080

2MP

QHD 2560X1440

4MP

WQHD 3440X1440

5MP

4K UHD 3840X2160

8MP

NEW

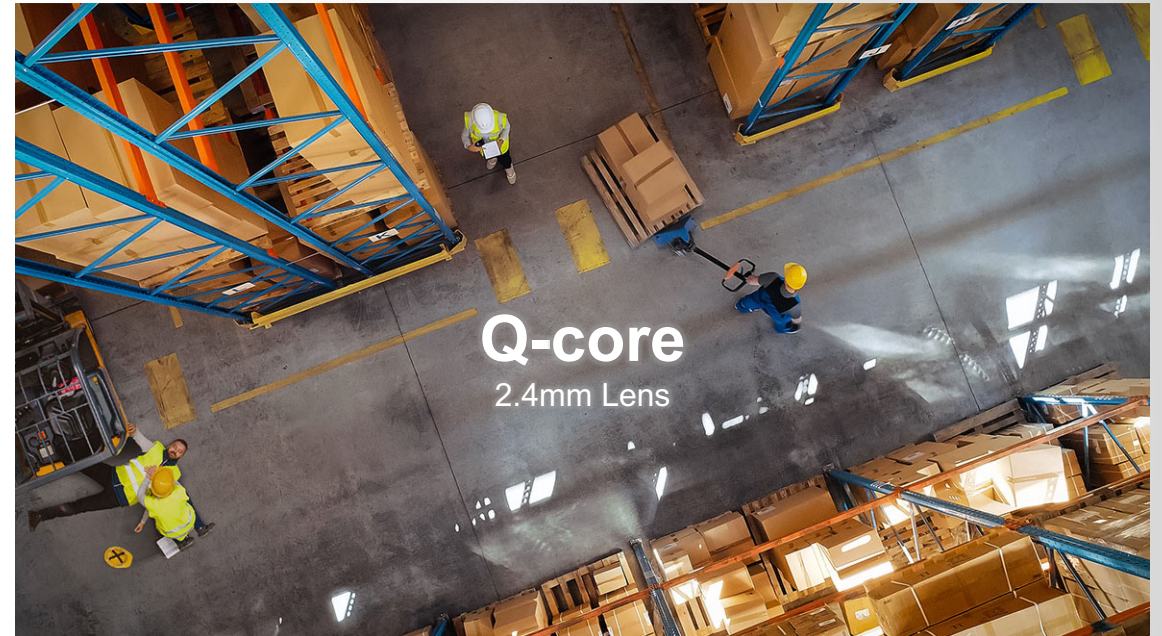
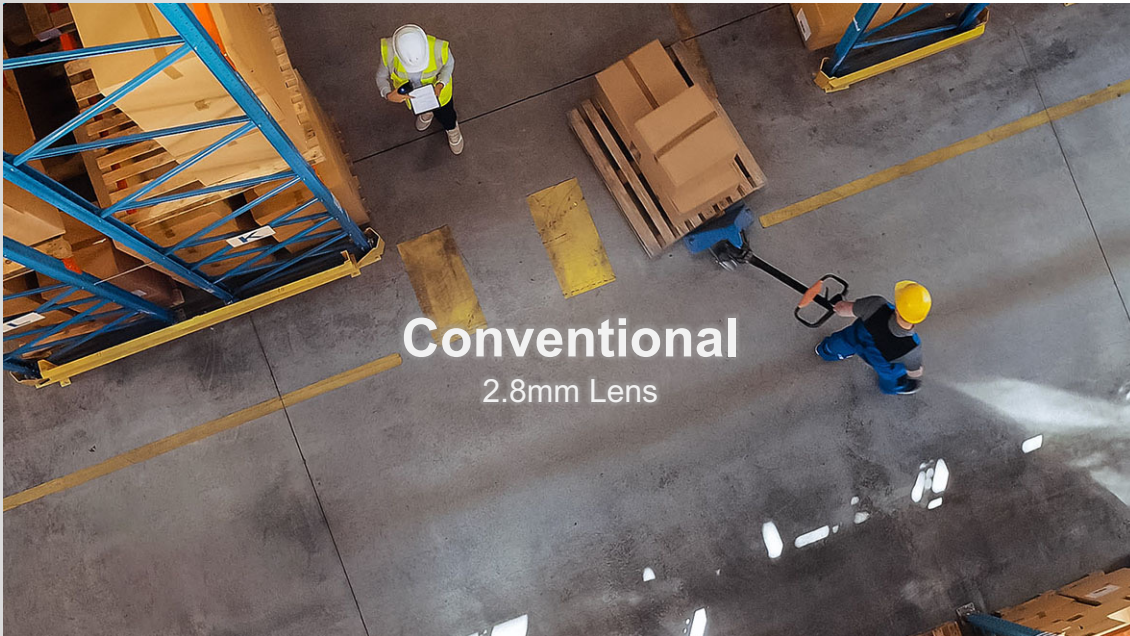
Q-core series

Conventional Q series

Q-core Fixed Lens expansion

Conventional Q series support 2.8mm Lens, but Q-core Micro Vandal support 2.4mm Lens.

A wider field of view that saves lives.

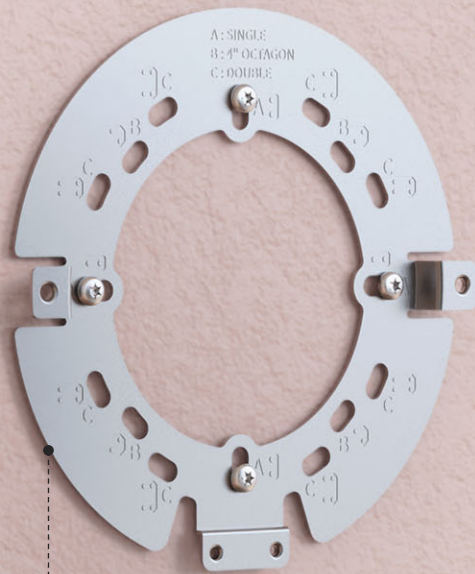


New design for the vandal dome camera

Intuitive camera installation



Q-core vandal dome(QNV-C9083R/C8083R) apply the mount plate to provide an intuitive installation guide and screw hole for corresponding an electric box (gangbox). All installation screws are unified with Torx T20.



Mount plate



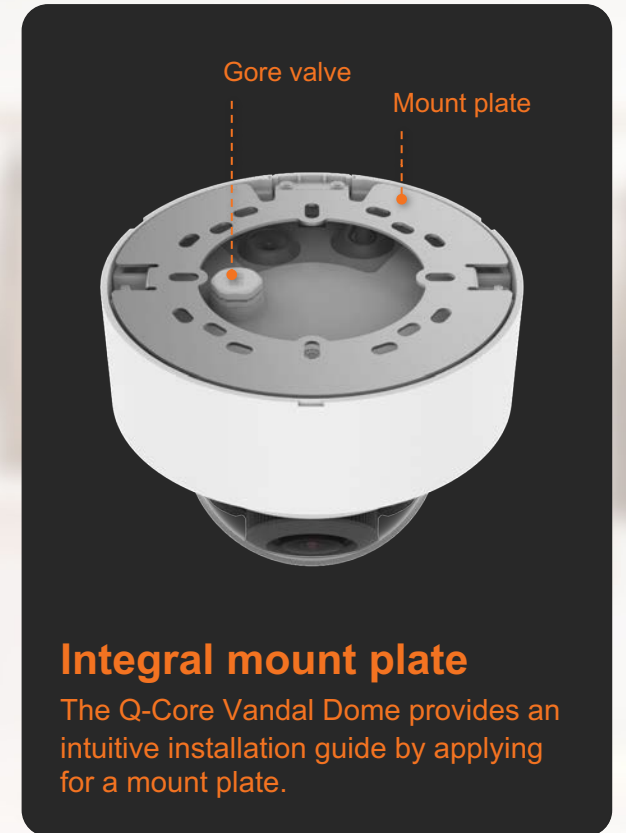
Gore valve



Torx T20

All installation screws are unified with Torx T20.

Hard-coated dome bubble



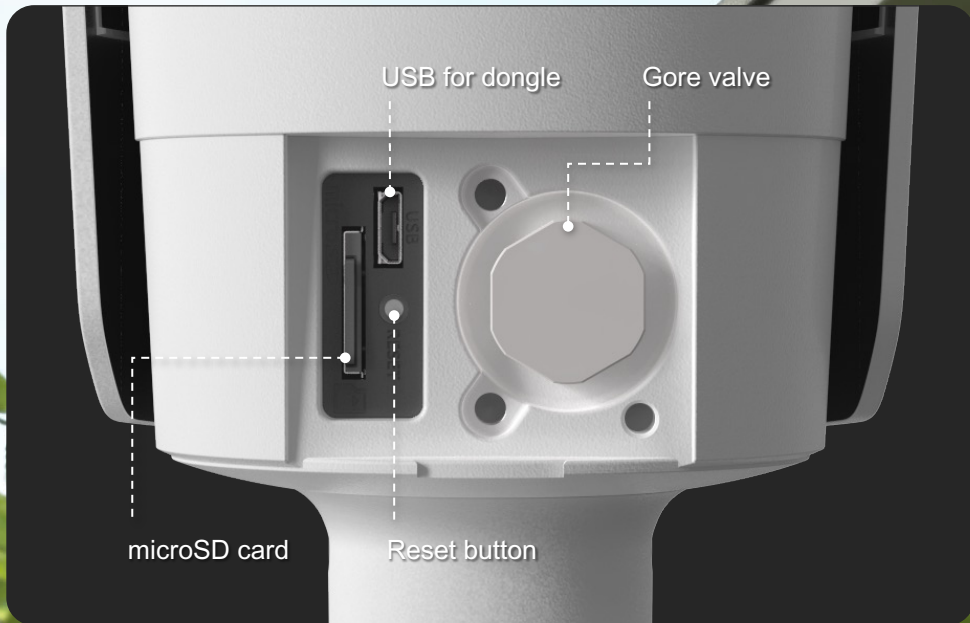
Integral mount plate

The Q-Core Vandal Dome provides an intuitive installation guide by applying for a mount plate.

New design for the bullet camera

Q-core bullet(QNO-C9083R/C8083R) provide an intuitive installation through the external lid. SD card and reset button are supported by unscrewing one cover. (Bullet only)
All installation screws are unified with Torx T20.

Intuitive camera installation



Torx T20

All installation screws are unified with Torx T20.

Upgraded Q-core series

New design for the micro vandal dome camera

Intuitive camera installation **NEW**

Q-core micro vandal (QNV-C9011R/C8011R/C8012) apply the screw hole for corresponding an electric box (gangbox).
All installation screws are unified with Torx T10.



Gore sheet
The built-in air vent prevents condensation and maintains performance of long-term use and storage through water vapor control.



 **Torx T10**
All installation screws are unified with Torx 10.

Hard-coated dome bubble

Support IR

Dynamic range

Light and dark discrimination

Improved WDR 'Light and dark discrimination' versus Legacy Q series. Improved color reproducibility.

Conventional



Q-core



Improved noise reduction

WiseNRII

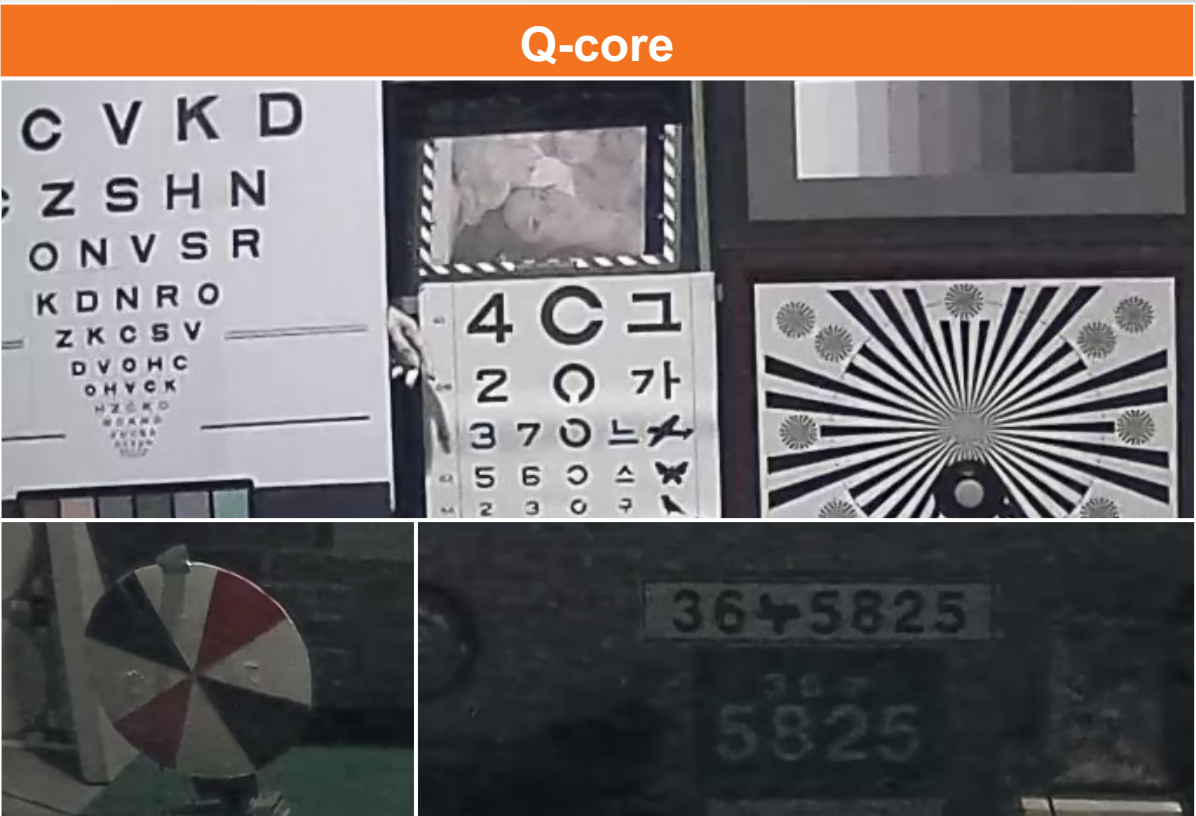
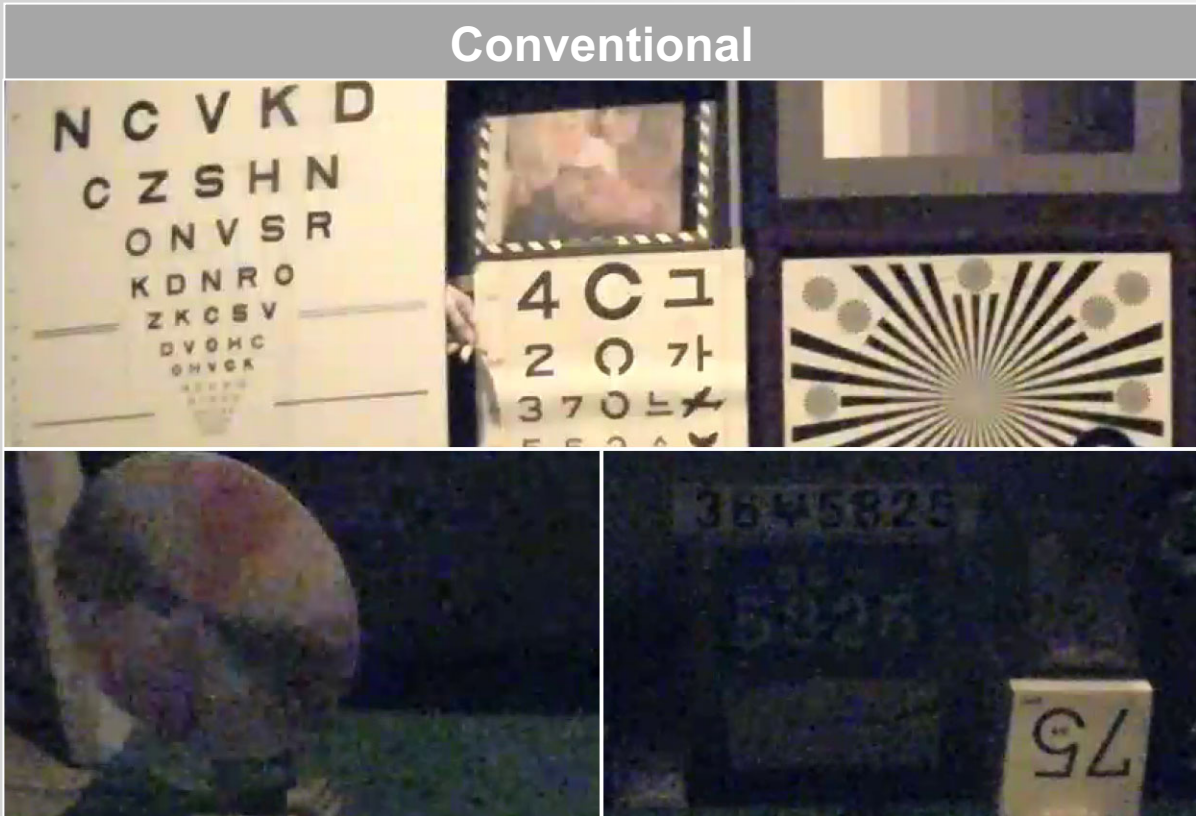
The newly applied noise reduction technology, WiseNRII, functions based on AI object detection allows for optimization of image noise and motion blur depending on object movement (Person/Vehicle).



Improved noise reduction

Low light noise suppression

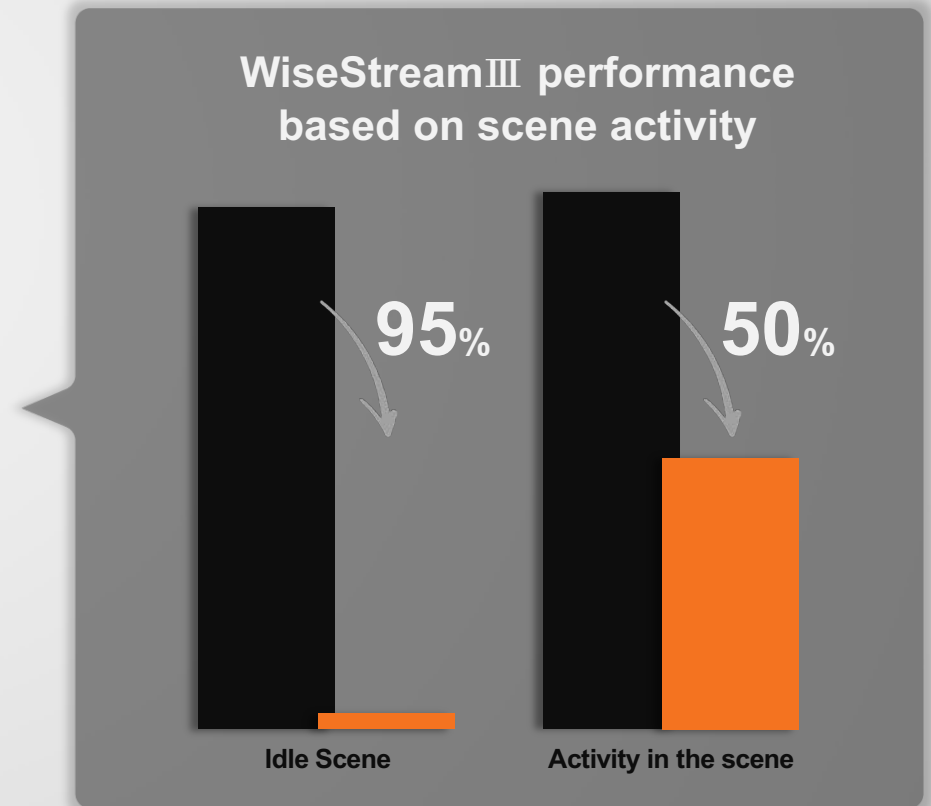
Low light (1lux) Color condition, Noise suppression versus Q 5M series.
Light & dark discrimination is better.



AI based bandwidth reduction

WiseStreamIII

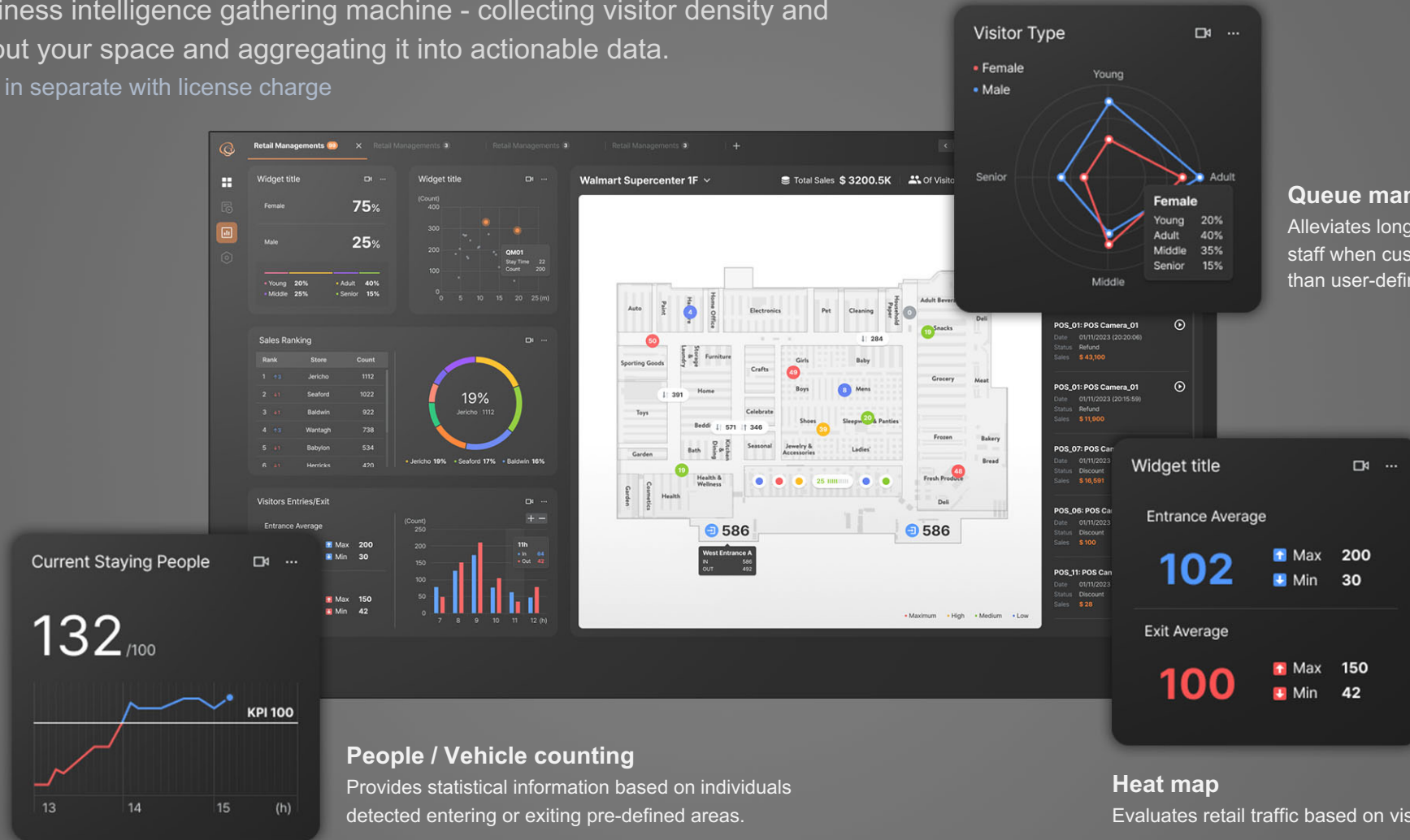
A new cutting edge video compression technology WiseStreamIII operates based on the object detection accomplished by AI algorithms. When combined with the H.265 compression technology, bandwidth can be reduced by up to 80% without compromising the video quality, enabling efficient video management.



Business intelligence

Every camera equipped with our license-free, built-in business analytics suite is a dual-purpose surveillance and business intelligence gathering machine - collecting visitor density and movements throughout your space and aggregating it into actionable data.

* BI software will be sold in separate with license charge



Queue management

Alleviates long check-out lines by alerting staff when customers are waiting for longer than user-defined amounts of time.

People / Vehicle counting

Provides statistical information based on individuals detected entering or exiting pre-defined areas.

Heat map

Evaluates retail traffic based on visitor density and length of stay.

Key features

Advanced LDC

Lens distortion correction

The LDC function supports Fill/Stretch mode to correct distorted images. The operator can select mode depending on the monitoring environment.



Conventional

Q-core



Next level cybersecurity

The cybersecurity of the new Q AI cameras validates the boot process, securely stores key information, and preempts hacking risk with unauthorized access blocking. Our cameras also have been certified Secure by default certification and including device certificate Root CA. As a result, we can provide industry-leading end-to-end cybersecurity to the customer.



OS/Firmware Protect

- Secure boot
- Signed firmware
- Firmware encryption



User Authentication

- Digest Authentication
- Prevent brute-force attack



Network Authentication

- 802.1X Authentication (EAP-TLS, EAP-LEAP, EAP-PEAP, MSCHAPv2)



Secure Communication

- HTTPS
- SRTP
- WSS(WebSocket secure)



Access Control

- Access control based on IP address



Data Protect

- Authentication information encryption
- ZIP compression encryption



Audit

- User Access/System/Event log management



Device ID

- Device Certificate (Hanwha Private Root CA)



Secure Storage

- SD card partition encrypt



Security Certificate

- Secure by default

Reinforced durability



Hard-coated dome bubble

Hard-coated dome bubble provides better resistance to scratches from external stimuli (sand, worker's hand, etc.). Also, the degradation of resolution due to scratches is minimized.



IP66/IK10

It has IP66 and IK10 protection level, which can help protect against impact, water and dust.

- IP66 : Dust-tight and protected against strong jets of water * Micro vandal: NEMA 4X
- IK10 : Protected against 20 joules of impact
(the equivalent to the impact of a 5kg mass dropped from 400mm above the impacted surface)

Reinforced durability

Humidity control with AIR vent **NEW**

The built-in Gore valve and Air sheet prevents condensation and maintains performance of long-term use and storage through water vapor control. Also, it can prevent sealing damage through pressure equilibrium in the product.

QNV-C9011R/C8011R/C8012



QNV-C9083R/C8083R



Blocking dust



Blocking liquid



Flowing air



Venting hot air

User convenience

Easy connection with camera via Wi-Fi direct

Wisenet installation app by Hanwha Vision and Wi-Fi dongle can connect camera directly.

Installer can check the monitoring position along and configure the zoom in/out, simple focus, screen capture, flip/mirror/hallway view.

※ Wisenet installation app can be downloaded from the app store (Wi-Fi dongle and USB-b type cable not included)



Wi-Fi dongle

Image capture

Zoom in/out

Simple focus

Event notification

Variety event action

An event action has been added that uses HTTP/HTTPS/TCP to give notifications to other devices when an event occurs.

※ You can find the notification function in the Handover



Extended tilting angle

The wider tilt angle allows you to monitor areas that have not seen on conventional cameras.

Conventional



Q-core



Specification



Q-core AI Vandal Dome Camera

QNV-C9083R/C8083R

Category	Specification
Resolution	4K / 5MP
Lens	3.2~10.2mm M-VF lens
Wide Dynamic Range	120dB
IR distance	30m
Analytics	<p>[Analytics events]</p> <ul style="list-style-type: none"> - Defocus detection, Tampering, Virtual area (Appear/Disappear) <div style="border: 1px dashed gray; padding: 5px;"> <p style="text-align: center;">Based on AI engine</p> <ul style="list-style-type: none"> • Classified object type : Person/Vehicle • Attributes: Vehicle (Type : Car/Bus/Truck/Motorcycle/Bicycle) <p>[Support Detection Shot]</p> <p>[Analytics events]</p> <ul style="list-style-type: none"> - Motion detection*, Object detection, Virtual line*(Crossing/Direction), Virtual area*(Loitering/Intrusion/Enter/Exit) <p>* Some of the video analytics only works with people and vehicle detection</p> </div>
Easy Installation	Wi-Fi video by USB dongle
I/O	Alarm I/O *supported through an optional cable (SPP-C7400)
Power Consumption	PoE
Certification	IP66, IK10
Security	Device certificate (Hanwha Private Root CA), Secure boot, Signed firmware, Firmware encryption

Specification



Q-core AI Micro Vandal Camera

QNV-C9011R/C8011R/C8012

Category	Specification
Resolution	4K / 5MP
Lens	3.0mm (QNV-C9011R/C8011R), 2.4mm (QNV-C8012)
Wide Dynamic Range	120dB
IR distance	20m (QNV-C9011R/C8011R), N/A (QNV-C8012)
Analytics	<p>[Analytics events]</p> <ul style="list-style-type: none"> - Defocus detection, Tampering, Virtual area (Appear/Disappear) <div style="border: 1px dashed gray; padding: 5px;"> <p style="text-align: center;">Based on AI engine</p> <ul style="list-style-type: none"> • Classified object type : Person/Vehicle • Attributes: Vehicle (Type : Car/Bus/Truck/Motorcycle/Bicycle) <p>[Support Detection Shot]</p> <p>[Analytics events]</p> <ul style="list-style-type: none"> - Motion detection*, Object detection, Virtual line*(Crossing/Direction), Virtual area*(Loitering/Intrusion/Enter/Exit) <p>* Some of the video analytics only works with people and vehicle detection</p> </div>
Easy Installation	Wi-Fi video by USB dongle
I/O	N/A
Power Consumption	PoE
Certification	IP66, IK10, NEMA4X
Security	Device certificate (Hanwha Private Root CA), Secure boot, Signed firmware, Firmware encryption

Specification



Q-core AI Bullet Camera

QNO-C9083R/C8083R

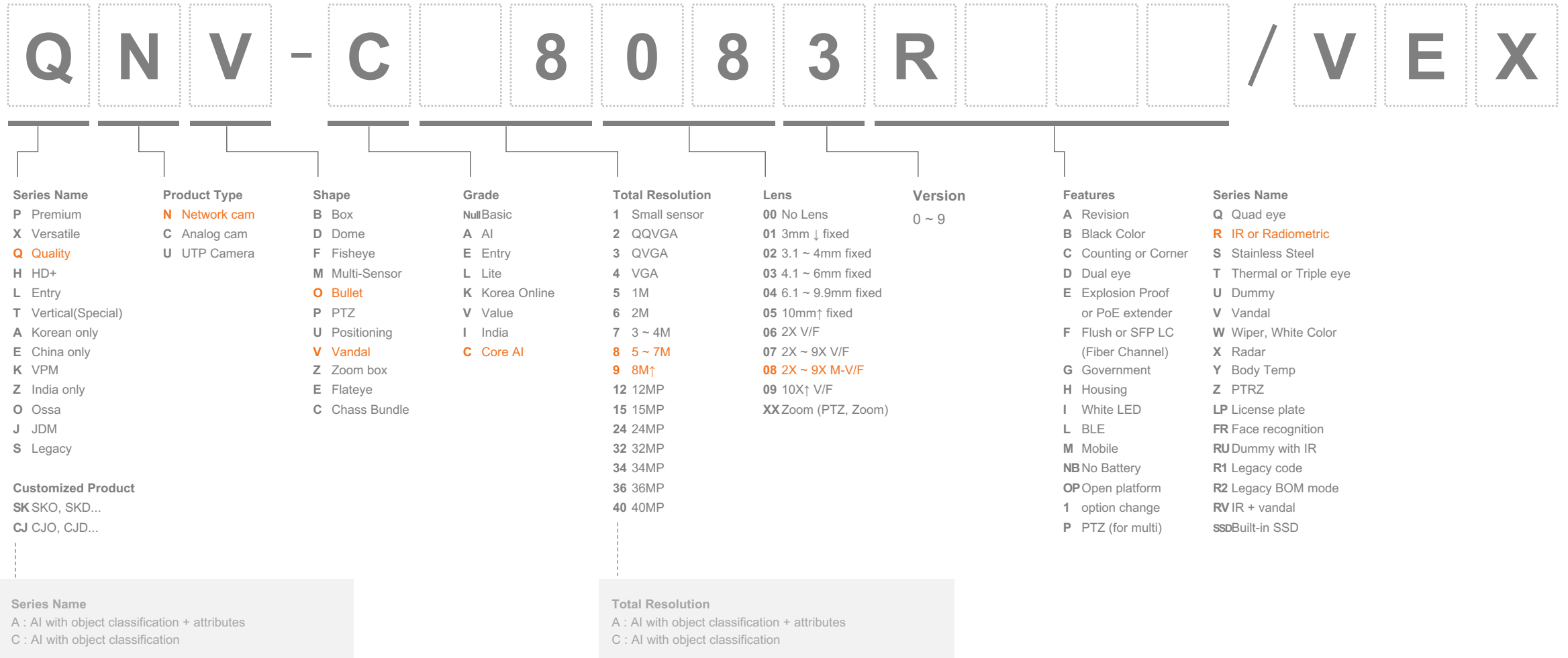
Category	Specification
Resolution	4K / 5MP
Lens	3.2~10.2mm M-VF lens
Wide Dynamic Range	120dB
IR distance	30m
Analytics	<p>[Analytics events]</p> <ul style="list-style-type: none"> - Defocus detection, Tampering, Virtual area (Appear/Disappear) <div style="border: 1px dashed gray; padding: 5px;"> <p style="text-align: center;">Based on AI engine</p> <ul style="list-style-type: none"> • Classified object type : Person/Vehicle • Attributes: Vehicle (Type : Car/Bus/Truck/Motorcycle/Bicycle) <p>[Support Detection Shot]</p> <p>[Analytics events]</p> <ul style="list-style-type: none"> - Motion detection*, Object detection, Virtual line*(Crossing/Direction), Virtual area*(Loitering/Intrusion/Enter/Exit) <p>* Some of the video analytics only works with people and vehicle detection</p> </div>
Easy Installation	Wi-Fi video by USB dongle
I/O	Alarm I/O
Power Consumption	PoE
Certification	IP66, IK10
Security	Device certificate (Hanwha Private Root CA), Secure boot, Signed firmware, Firmware encryption

Model description

Q-core cameras

Type	Model name	Description
Vandal Dome	QNV-C9083R	4K, 3.2~10.2mm M-VF lens, WDR(120dB), IR 30m, 1 microSD slot, Object detection/IVA/wiseMD (Based on AI), Wi-Fi video by USB dongle, Alarm I/O(supported through an optional cable(SPP-C7400)), PoE, IP66/IK10, NDAA compliant
	QNV-C8083R	5MP, 3.2~10.2mm M-VF lens, WDR(120dB), IR 30m, 1 microSD slot, Object detection/IVA/wiseMD (Based on AI), Wi-Fi video by USB dongle, Alarm I/O(supported through an optional cable(SPP-C7400)), PoE, IP66/IK10, Modular design, NDAA compliant
Micro Vandal	QNV-C9011R	4K, 3.0mm Fixed lens, WDR(120dB), IR 20m, 1 microSD slot, Object detection/IVA/wiseMD (Based on AI), Wi-Fi video by USB dongle, PoE, IP66/IK10/NEMA4X, NDAA compliant
	QNV-C8011R	5MP, 3.0mm Fixed lens, WDR(120dB), IR 20m, 1 microSD slot, Object detection/IVA/wiseMD (Based on AI), Wi-Fi video by USB dongle, PoE, IP66/IK10/NEMA4X, NDAA compliant
	QNV-C8012	5MP, 2.4mm Fixed lens, WDR(120dB), 1 microSD slot, Object detection/IVA/wiseMD (Based on AI), Wi-Fi video by USB dongle, PoE, IP66/IK10/NEMA4X, NDAA compliant
Bullet	QNO-C9083R	4K, 3.2~10.2mm M-VF lens, WDR(120dB), IR 30m, 1 microSD slot, Object detection/IVA/wiseMD (Based on AI), Wi-Fi video by USB dongle, Alarm I/O, PoE, IP66/IK10, NDAA compliant
	QNO-C8083R	5MP, 3.2~10.2mm M-VF lens, WDR(120dB), IR 30m, 1 microSD slot, Object detection/IVA/wiseMD (Based on AI), Wi-Fi video by USB dongle, Alarm I/O, PoE, IP66/IK10, NDAA compliant

Model naming rule of Q-AI Cameras



At a glance and components

The installer-friendly packaging allows for easy camera pre-configuring before shipping it to the installation site.

Vandal Dome QNV-C9083R/C8083R



Dome cover



Camera module



Mount plate



Quick guide



Cap installer

Micro vandal QNV-C9011R/C8011R/C8012



Dome cover



Camera module



Water proof
RJ45 cable ACC



Quick guide

Bullet QNO-C9083R/C8083R



Bullet camera



Sunshield



Sunshield knob



Toothed washer



Water proof
RJ45 cable ACC



Quick guide

Installation solution

SPP-C7400

Q-AI cameras do not come with an Audio and Alarm cable, but it can be purchased separately

Compatible models:

TNV-C7013RC,
QNV-C8083R/9083R,
XNV-C6083R/C7083R/C8083R/C9083R,
XND-C6083RV/C7083RV/C8083RV/C9083RV

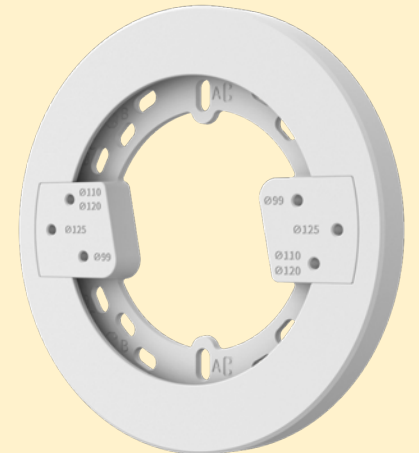


SBD-110GP1

Gangbox adaptor adaptor plate for Single, Double, 4" Octagon,

Compatible with all models and new:

QNV-C8011R/C8012/C9011R,
QND-6011/21, 8011/21,
QND-6012R/22R, 7012R/22R
QNE-8011R/21R,
QNF-8010, 9010,
LND-6012R/22R,
QNE-8011R/21R,
ANE-L6012R, L7012R



Replacement for S
BD-120GP

AI PTZ Plus Cameras

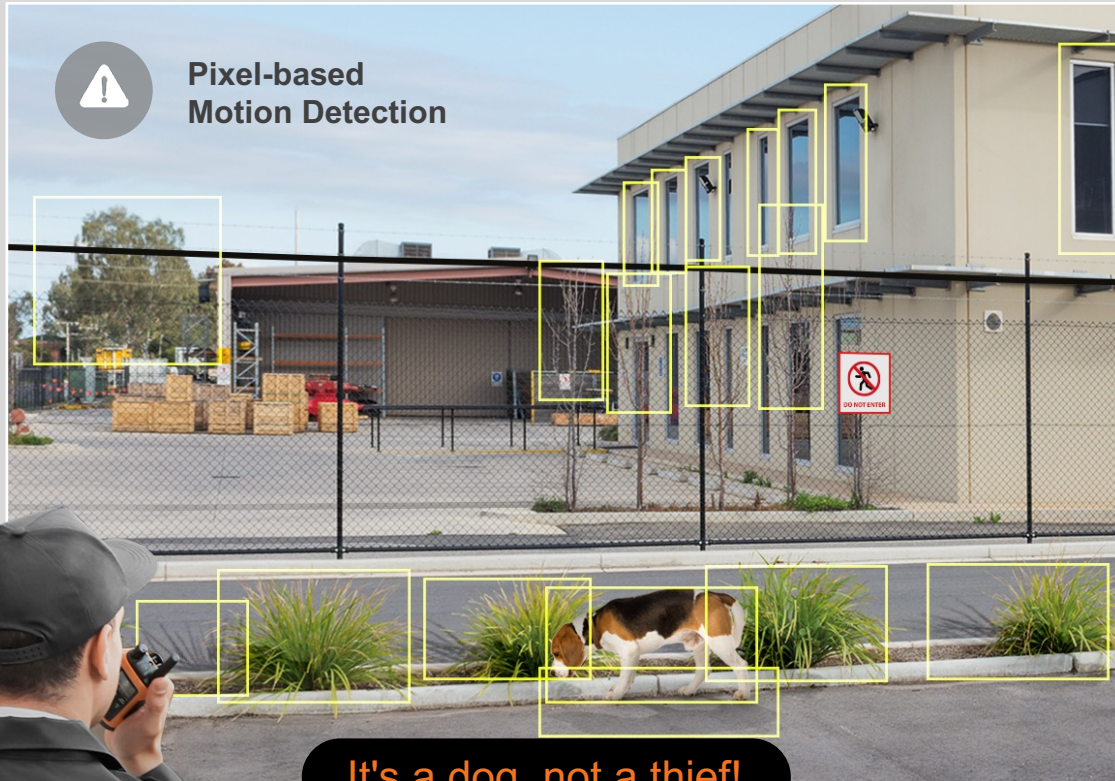
XNP-C6403RW/C8303RW/C9303RW

XNP-C6403R/C8253R/C9253R

XNP-C6403/C8253/C9253



False alarm reduction



It's a dog, not a thief!



The new AI PTZ Plus cameras detect and classify people, vehicles, faces, and license plates in real time, greatly enhancing video analytics accuracy and allowing forensic search during playback. AI algorithms can distinguish classified objects and separate them from their surroundings, such as waving trees, shadows, or animals. Thus, Multi-directional AI cameras can help improve operator efficiency.



Object classification based on AI engine

Object classification **NEW**

The camera generates metadata that includes object type (Person, Face, Vehicle, License plate), which is sent to the VMS/NVR to be used for forensic search. Forensic search dramatically enhances the search efficiency and reduces time spent looking for events.

※ Support vehicle type classification (Car/Bus/Truck/Motorcycle/Bicycle)

Object classification items

- Person
- Face
- License plate
- Car
- Bus
- Truck
- Motorcycle
- Bicycle



AI based Virtual area

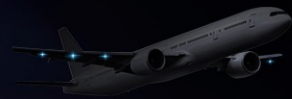
Loitering Detection **NEW**

The intelligent video analytics on the camera utilizes AI object detection to trigger events. The virtual area setup enter/exit, intrusion, loitering triggers of detected AI objects with duration time.

※ Support object type and vehicle classification selection for event trigger.



Loitering Detection
Time + Person



AI based Virtual line

Line crossing **NEW**

The intelligent video analytics on the camera utilizes AI object detection to trigger events. The virtual line setup allows for creation of virtual lines that can trigger on detected AI objects crossing in the specified direction.

※ Support object type and vehicle classification selection for event trigger.



 **Line crossing alarm**
Direction + Car

Enhanced AI based Auto Tracking

AI PTZ Plus supports AI-based Auto Tracking, which performs much better than MD-based Auto Tracking, but further improves Auto tracking performance from PTZ Plus.



Items	AI based (AI PTZ Plus)	MD based
Small Object detecting	Good	Good
Continuous tracking	Very good	Bad
Malfunction	Good	Bad
Target Locking	Supported	Not Supported

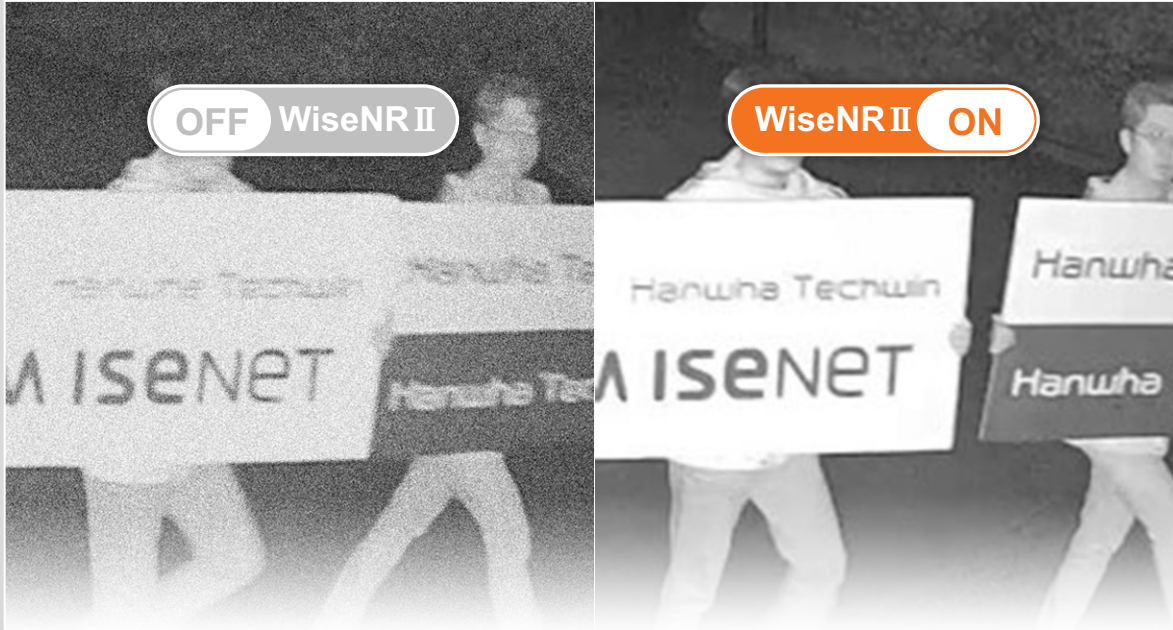


Design Identity



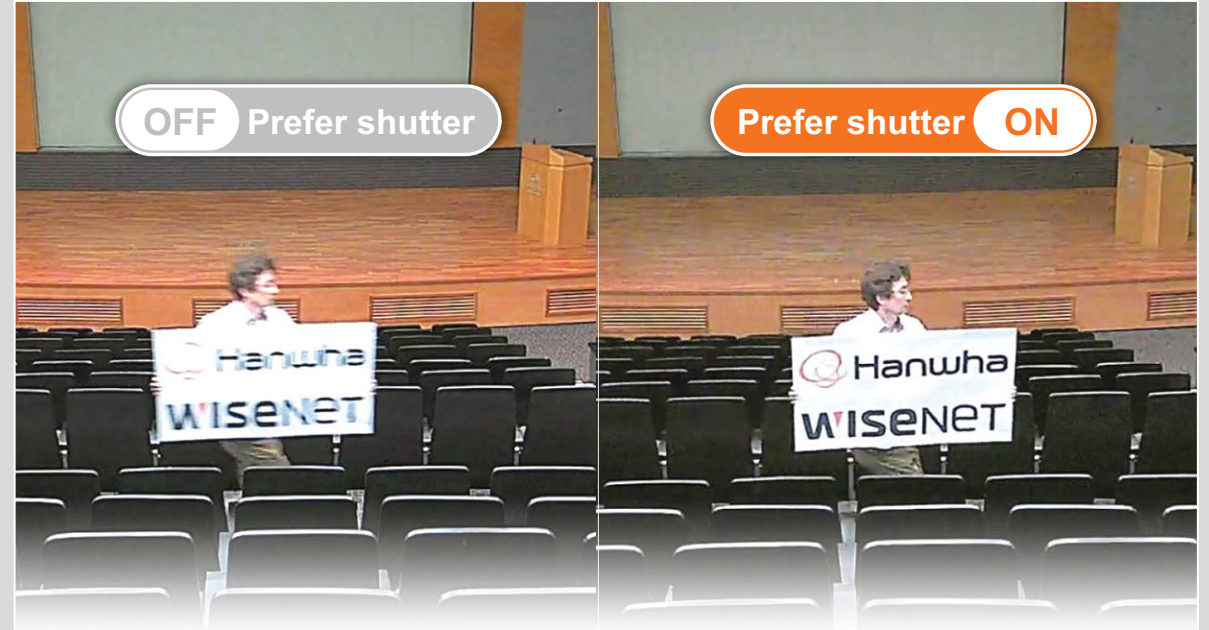
IR Ink applied and **UV deterioration** Issue Has been Improved.

Improved noise reduction, motion blur reduction



WiseNR II

The newly applied noise reduction technology, WiseNR II, functions based on AI object detection allows for optimization of image noise and motion blur depending on object movement (person / vehicle).



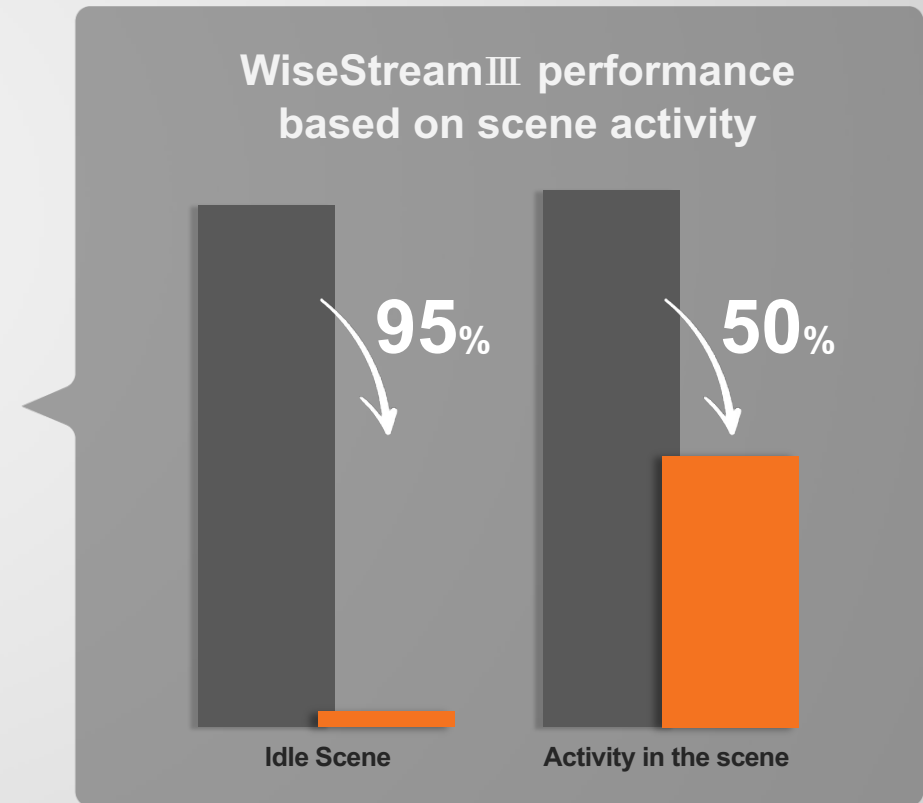
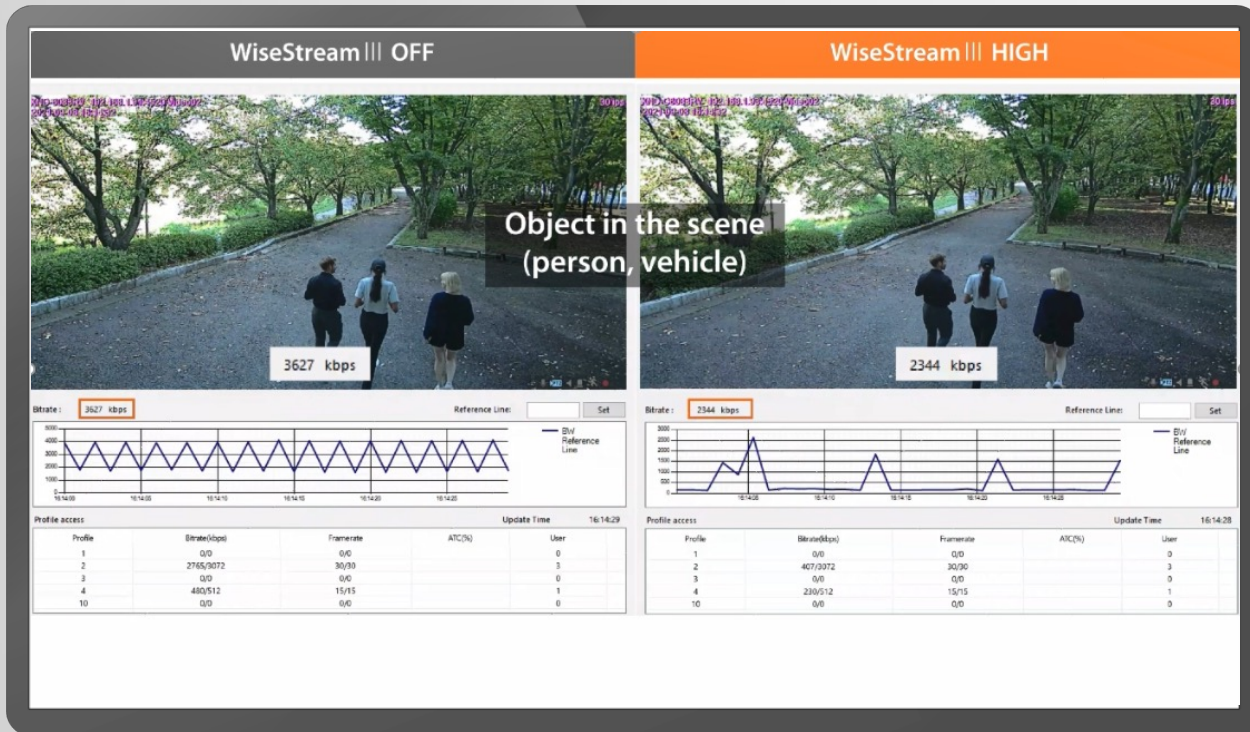
Prefer shutter control

The Prefer Shutter Speed feature uses the latest AI technology to identify the appearance and movement of objects and readjusts the Prefer Shutter value to an optimal level to reduce motion blur effects during a fast moving object.

AI based bandwidth reduction

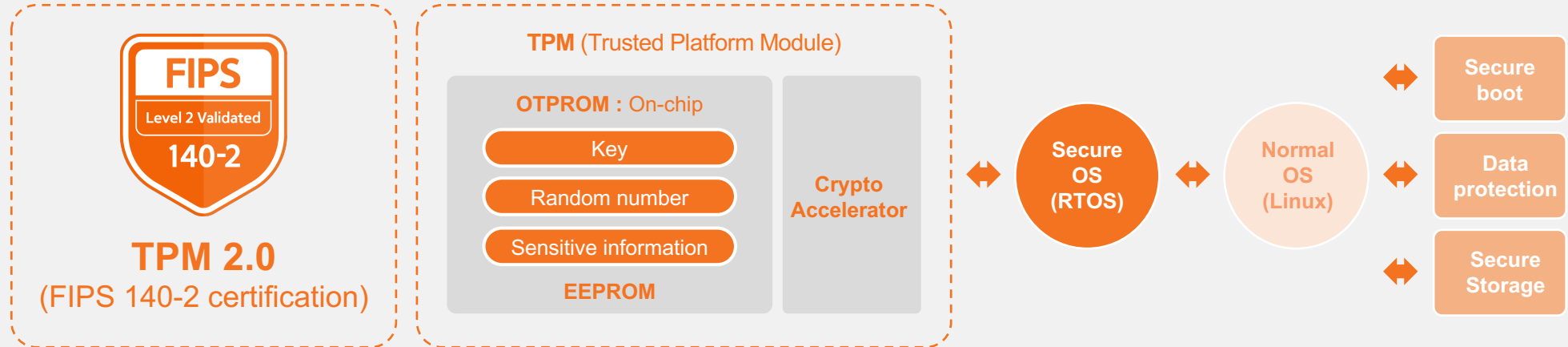
WiseStreamIII

A new cutting edge video compression technology WiseStreamIII operates based on the object detection accomplished by AI algorithms. When combined with the H.265 compression technology, bandwidth can be reduced by up to 80% without compromising the video quality, enabling efficient video management.



Next level cybersecurity

The cybersecurity of the new AI PTZ Plus camera validates the boot process, securely stores key information, and preempts hacking risk with unauthorized access blocking. Our cameras also have been certified Secure by default certification and including device certificate Root CA. As a result, we can provide industry-leading end-to-end cybersecurity to the customer.



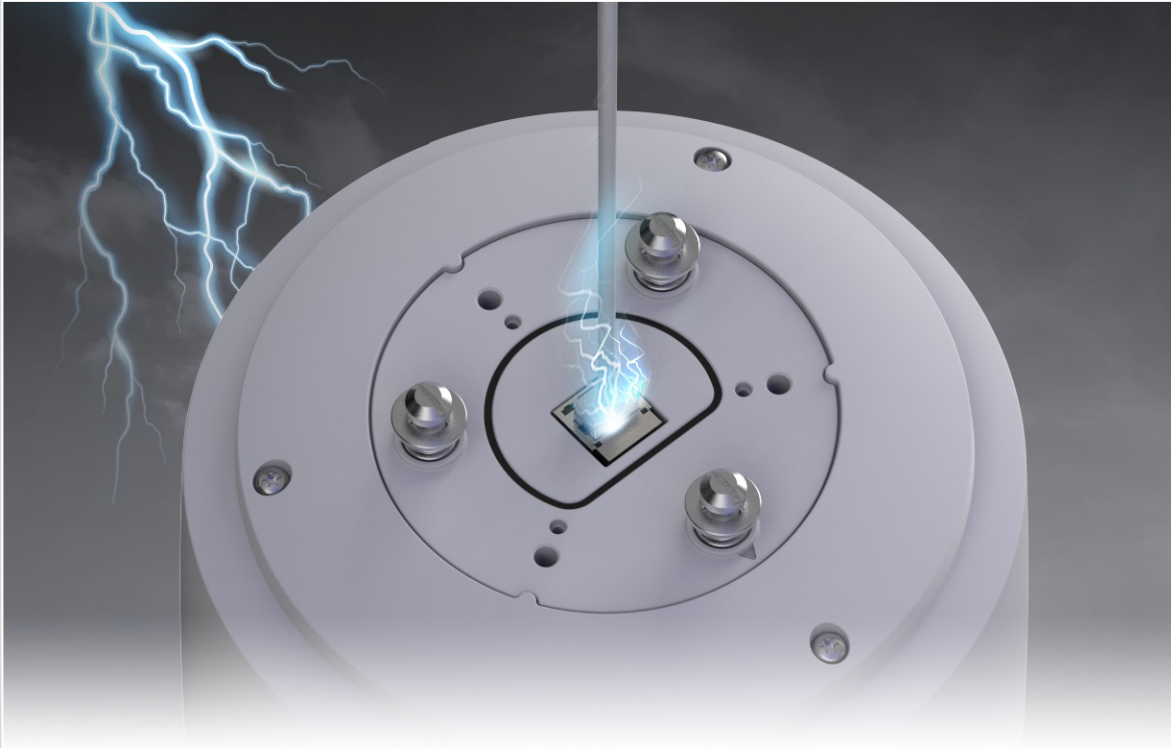
- ✓ **Data Protection**
 - Secure storage/OS

- ✓ **Improved security**
 - TPM 2.0(FIPS 140-2 level2), Secure by default certified
 - Device certificate (Hanwha private Root CA)

- ✓ **Integrity**
 - Secure boot
 - Secure Open platform App
 - Signed firmware

- ✓ **Secured Hardware**
 - Secure JTAG

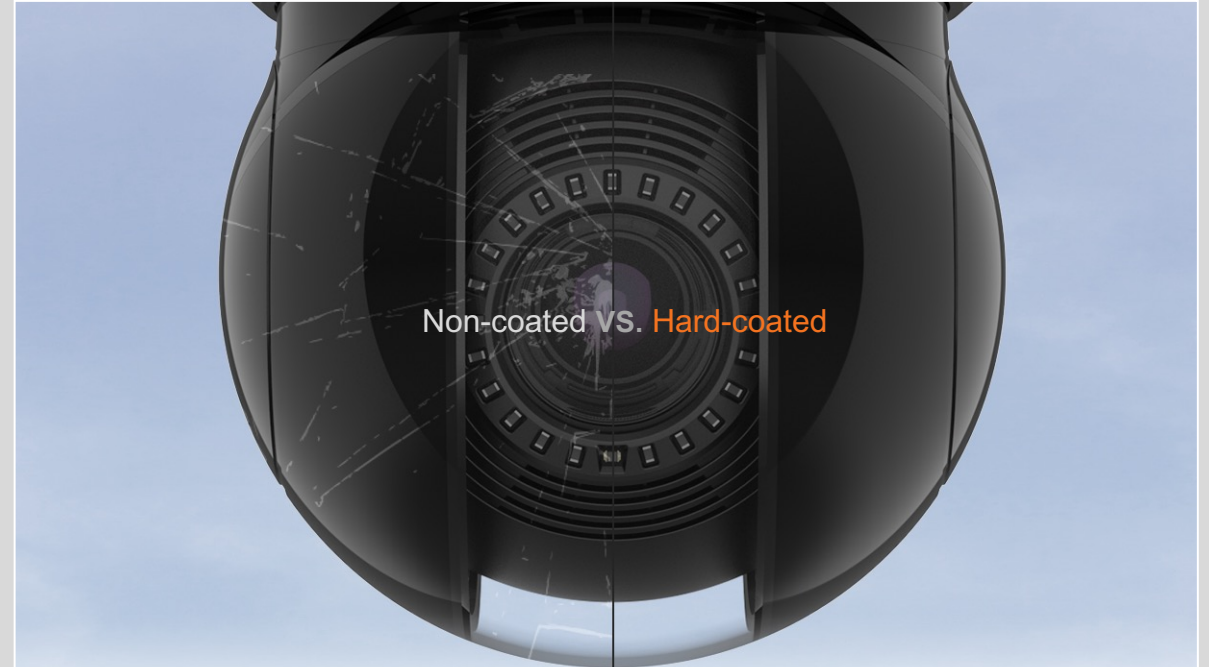
Reinforced durability



Metal shielded RJ-45

Metal-shielded RJ-45 terminal and enhanced grounding frame structures can protect the camera from transient voltage (lightning, static electricity).

※ Using STP (shielded twisted pair) cabling is recommended.



Hard-coated dome bubble

Hard-coated dome bubble provides better resistance to scratches from external stimuli (debris, service handling, etc.).

This allows for prolonged visual clarity as abrasions are minimized.

Improved environmental protection

1 cable structure and Flexible bush makes easy and perfect waterproof.



Conventional

AI PTZ Plus Cameras

Need extra waterproof

- ① Reclamping
- ② Applying lubricant
- ③ Teflon tape
- ④ Silicon on wall

No extra process required other than Flexible bush

One cable

Simple connection

The PTZ Plus connects only one RJ45 terminal, making it easy to connect by plugging in one cable. Refer to the following page for instructions on how to use additional features such as audio and alarms.



Legacy
5 ports, 5 cables, complicated

New
AI PTZ
Plus



1 port, 1 cable, Easy

I/O Box compatibility

AI PTZ Plus cameras are compatible with Network I/O Box.
To enable I/O and Audio functionality,
the SPM-4210 needs to be registered with the camera.



Event notification

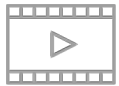
Variety event action

An event action has been added that uses HTTP/HTTPS/TCP/MQTT to give Notifications to other devices when an event occurs

※ You can find the notification function in the Handover



WHEN EVENT OCCURRED



Record



Alarm out



FTP
Image



E-mail
Notification/Image



HTTP, HTTPS, TCP
Notification



MQTT
Notification



MQTT



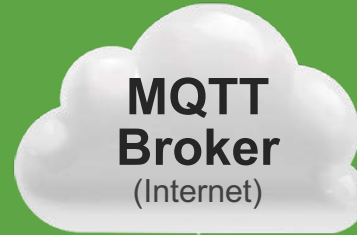
MQTT (Message Queueing Telemetry transport) is a messaging protocol based on Publication/Subscription. As it is designed to transmit lightweight messages, it is ideal for connecting remote devices that require a small code space or minimal network bandwidth.



MQTT

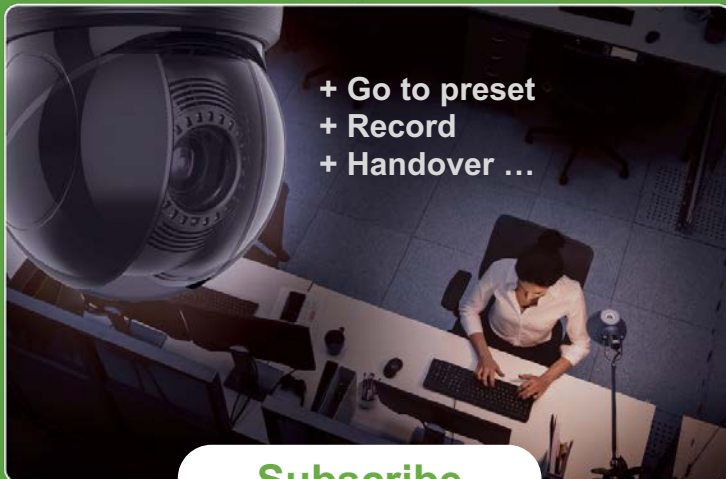
Example - Subscribe Mode **NEW**

Communicating through the MQTT protocol enables the camera to easily send and receive data to and from multiple devices.



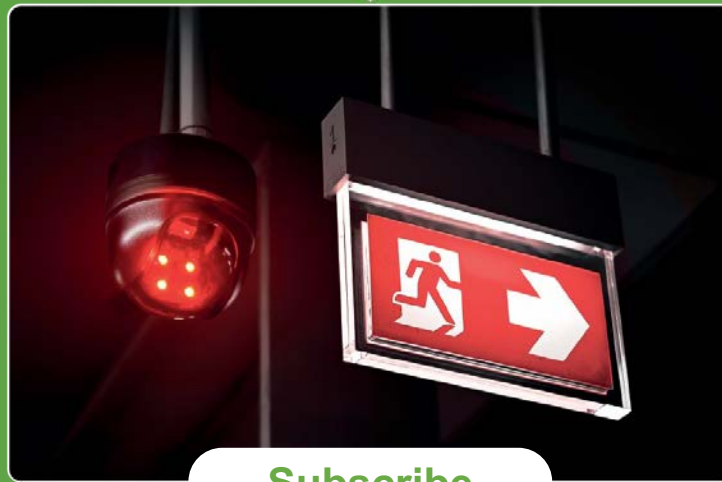
Publish

Wired input is not Required

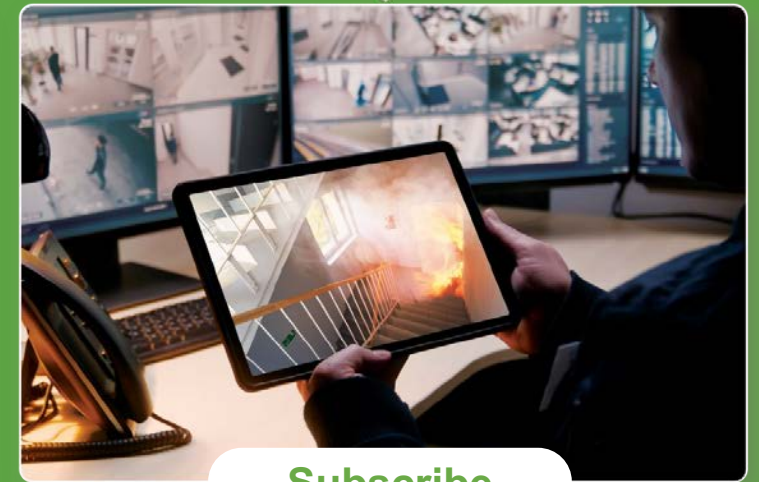


- + Go to preset
- + Record
- + Handover ...

Subscribe



Subscribe



Subscribe

Key features

MQTT

Communicating through the MQTT protocol
Enables the camera to easily send and receive data to and from multiple devices.

Example - Publish Mode **NEW**

Publish

Tampering or Shock detection
Event Occurs
(Wired output is not Required)

**MQTT
Broker
(Internet)**



Subscribe



Subscribe

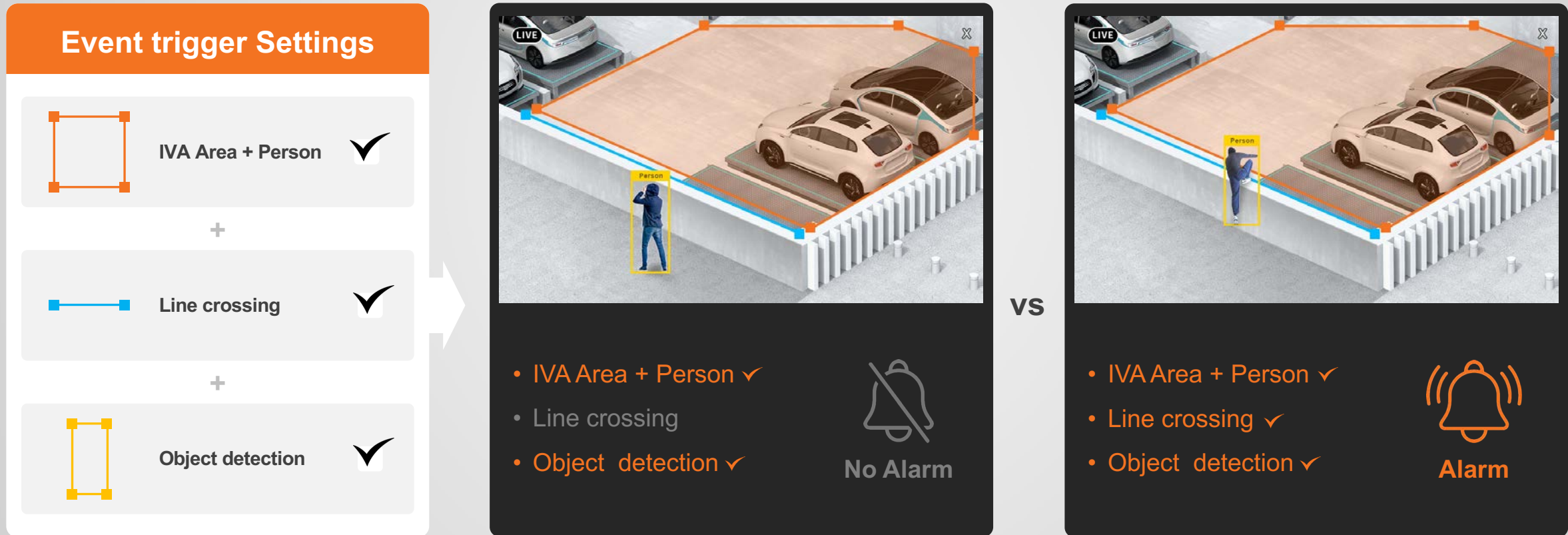


Subscribe

Event rule

Boolean logic

Newly added Boolean Logic rule to AI PTZ Plus cameras opens up new possibilities when setting up event action. In order to generate single Event action, up to 3 Event triggers can be grouped together.



Key features

Adaptive IR

AI PTZ Plus provides the best IR performance with Adaptive IR application. Adaptive IR can optimize IR light intensity and angle for zoom magnification. Supports night visibility up to 200m.



Clear image 200m away using built-in IR



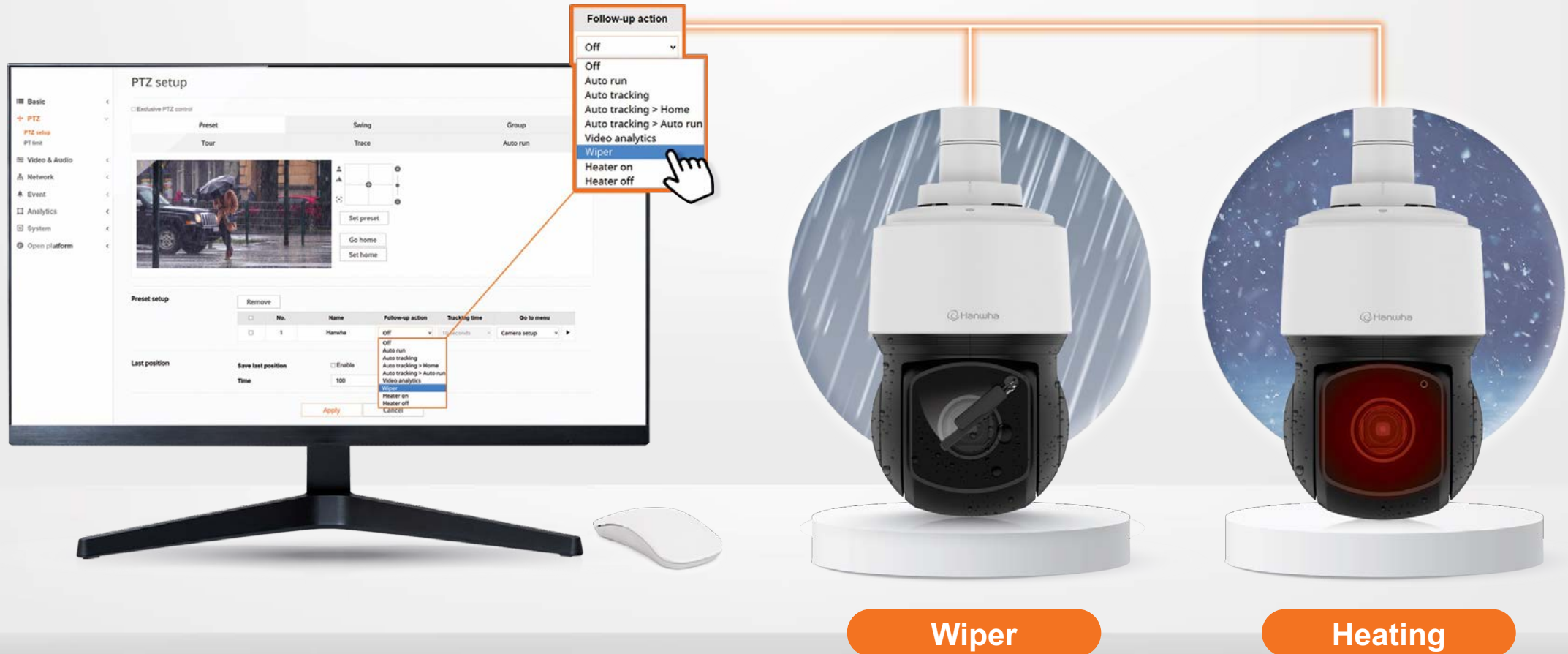
Expanded tilting range

Tilt angles of 110° ((-20°~ to 90°)) enable efficient monitoring of objects higher than the camera or in an inclined environment.



Easy executing by Preset

Wiper, heater for removing water, spin dry can be executed by Preset. Plug-in for wiper is no more needed on VMS



GPS coordinates

GPS coordinates with the latitude and longitude can be saved and camera can be shown on Map application
With the information

Location setup

Direction indicator Enable direction indicator

Indicator Enable

Azimuth Enable

Text Max 12 characters

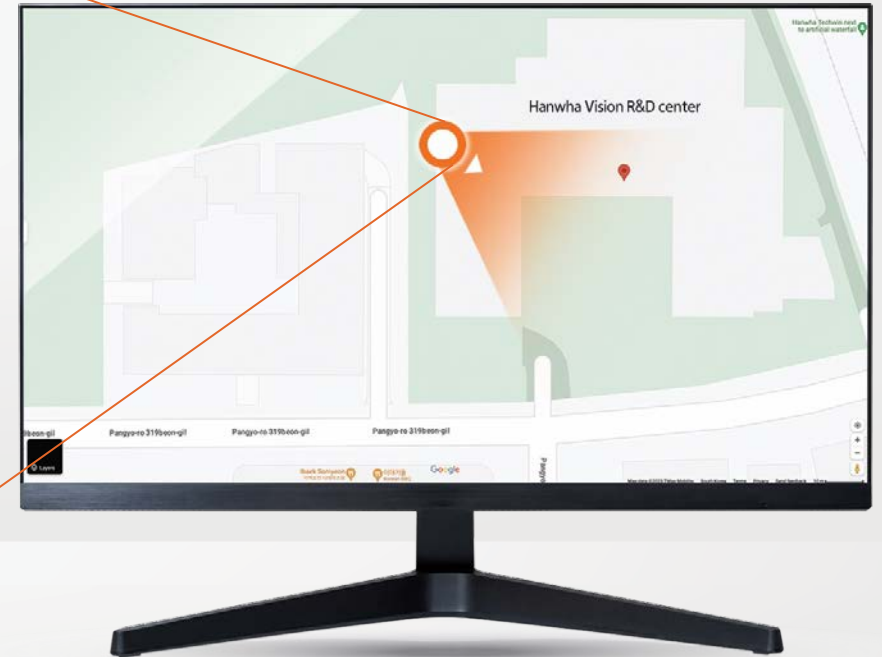
ⓘ Changing the setup of the OSD size or language will initialize the values of the direction indicator.
(The OSD size and color can be set on the [Camera setup] page, and language setup on the [Product information] page.)

X

Y

Longitude

Latitude



Specification



AI PTZ PLUS Wiper PTZ

XNP-C6403RW/C8303RW/C9303RW

Category	Specification
Resolution	· 4K / 6MP / 2MP
Lens	· 4K / 6MP : 5~150mm (x30) · 2MP : 4.25~170mm (x40)
Wide Dynamic Range	· 4K / 6MP : 120dB · 2MP : extremeWDR 150dB
IR distance	· 200m
Analytics	<ul style="list-style-type: none"> · Improve image quality based on AI (WiseStreamIII, WiseNRII, prefer shutter control) · Object detection and classification based on AI (Person, Face, Vehicle(Car/Bus/Truck/Motorbike/Bicycle), License Plate)
I/O	· Configurable Alarm I/O, Audio I/O with SPM-4210
Power Consumption	· HPoE (PoE Injector included in package)
Water Removal	· SWiper, Heater
Certification	· IP66, IK10
Security	· TPM (FIPS 140-2)

Specification



AI PTZ PLUS

Dome IR PTZ

XNP-C6403R/C8253R/C9253R

Category	Specification
Resolution	· 4K / 6MP / 2MP
Lens	· 4K / 6MP : 5~125mm (x25) · 2MP : 4.25~170mm (x40)
Wide Dynamic Range	· 4K / 6MP : 120dB · 2MP : extremeWDR 150dB
IR distance	· 200m
Analytics	· Improve image quality based on AI (WiseStreamIII, WiseNRII, prefer shutter control) · Object detection and classification based on AI (Person, Face, Vehicle(Car/Bus/Truck/Motorbike/Bicycle), License Plate)
I/O	· Configurable Alarm I/O, Audio I/O with SPM-4210
Power Consumption	· HPoE (PoE Injector included in package)
Water Removal	· Spin dry, Heater
Certification	· IP66, IK10
Security	· TPM (FIPS 140-2)

Specification



AI PTZ PLUS Dome non-IR PTZ

XNP-C6403/C8253/C9253

Category	Specification
Resolution	· 4K / 6MP / 2MP
Lens	· 4K / 6MP : 5~125mm (x25) · 2MP : 4.25~170mm (x40)
Wide Dynamic Range	· 4K / 6MP : 120dB · 2MP : extremeWDR 150dB
IR distance	-
Analytics	<ul style="list-style-type: none"> · Improve image quality based on AI (WiseStreamIII, WiseNRII, prefer shutter control) · Object detection and classification based on AI (Person, Face, Vehicle(Car/Bus/Truck/Motorbike/Bicycle), License Plate)
I/O	· Configurable Alarm I/O, Audio I/O with SPM-4210
Power Consumption	· PoE + (PoE Injector not included in package)
Water Removal	· Spin dry, Heater
Certification	· IP66, IK10
Security	· TPM (FIPS 140-2)

Model description

AI PTZ Plus

	Wiper PTZ			Dome PTZ					
	IR			IR			Non-IR		
Model Name	XNP-C9303RW	XNP-C8303RW	XNP-C6403RW	XNP-C9253R	XNP-C8253R	XNP-C6403R	XNP-C9253	XNP-C8253	XNP-C6403
Resolution	4K	6MP	2MP	4K	6MP	2MP	4K	6MP	2MP
Max. Frame Rate	30fps	30fps	60fps	30fps	30fps	30fps	30fps	30fps	30fps
Focal Length	5~150mm	5~150mm	4.25~170mm	5~125mm	5~125mm	4.25~170mm	5~125mm	5~125mm	4.25~170mm
WDR	120dB	120dB	150dB	120dB	120dB	150dB	120dB	120dB	150dB
IR Viewable Range	200m	200m	200m	200m	200m	200m	-	-	-
PoE	HPoE	HPoE	HPoE	HPoE	HPoE	HPoE	PoE+	PoE+	PoE+
Security	TPM 2.0(FIPS 140-2 certified)								
Analytics	Object detection / IVA(Based on AI engine)								
Edge Storage	2 microSD slot								
Certification	IP66, IK10, NEMA 4X								

Comparison - AI PTZ Plus vs. PTZ Plus



Resolution	4K / 6M / 2M	4K / 6M / 2M
Focal Length (Zoom Ratio)	x40(2M), x30(6M/4K Wiper PTZ), x25 (4K / 6MP Dome PTZ)	x40(2M), x30(6M/4K Wiper PTZ), x25 (6M/4K Dome PTZ)
Analytics	<ul style="list-style-type: none"> · Classified object type : Person/Face/Vehicle/License plate · Attributes : Vehicle(Type: car/bus/truck/motorcycle/bicycle) Support DetectionShot · Analytics events based on AI engine <ul style="list-style-type: none"> - Object detection - Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit) · Analytics events <ul style="list-style-type: none"> - Motion detection, Tampering, Fog detection, Shock detection, Virtual area (Appear/Disappear) *Audio detection, Sound classification(with NW I/O Box) 	<ul style="list-style-type: none"> · Analytics events <ul style="list-style-type: none"> - Face Detection - Virtual line (Crossing/Direction), Virtual area (Loitering/Intrusion/Enter/Exit), Motion detection, Tampering, Fog detection, Shock detection, Virtual Area (Appear/Disappear) *Audio detection, Sound classification(with NW I/O Box)
Auto Tracking	AI Object auto tracking(Person/Vehicle), Target lock tracking	
Protocol	IPv4, IPv6, TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP,RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour, LLDP, SRTP, NTCIP, MQTT	IPv4, IPv6, TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP,RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour, LLDP, SRTP, NTCIP
Security	HTTPS(SSL) Login Authentication Digest Login Authentication IP Address Filtering User access log 802.1X Authentication(EAP-TLS, EAP-LEAP) Device certificate(Hanwha Root CA) TPM (FIPS 140-2)	HTTPS(SSL) Login Authentication Digest Login Authentication IP Address Filtering User access log 802.1X Authentication(EAP-TLS, EAP-LEAP) Device certificate(Hanwha Root CA) Cyber security assurances program UL CAP(UL 2900-1)
Location Information	Latitude / Longitude / Azimuth	Azimuth
Product Dimensions / Weight	Φ184.9x318.8mm(7.28x12.55")/5.4kg(11.90lb)(Wiper PTZ), Φ158x293.3mm(6.22x11.55")/3.2kg(7.05lb) (Dome PTZ)	

TNV-C7013RC

Corner mount camera

CORNER



MOUNT



Main Use-Cases with enhanced design



Correctional Facilities

This camera is widely used in Correctional facilities as it provides a safer way to monitor and manage inmates.

It provides 24/7 monitoring and recording of the inmates while reducing the risk of physical harm to both the inmates and guards.



Mental Health

This camera is also used in mental health facilities as some of those patients have a high risk of self hurting, and they need to be monitored 24/7 for a fast response time if such an injury happens.

Anti-Ligature design

Enhanced design

Introducing Hanwha Vision's new corner mount camera. This product is a specialized product tailored to facility-specific requests such as Correctional facilities and hospitals, and in particular, it is a product that optimizes customer requirements by applying a design for Anti-Ligature. It is specially designed so that it cannot be used for hanging objects from the camera or hiding objects behind or near the camera.

Anti-Ligature

The main use-case is Correctional and Mental health facilities where people are getting monitored 24/7. And there is the risk of self-harm, which is why anti-ligature is a must-have requirement.



No blind spots

Enhanced design

For installation in corners in a specific room, it supports omnidirectional monitoring without distinction between up/down/left/right. No blind spots, so the camera must cover the whole room with no chance of blind spots where something can happen without being captured on video or remotely monitored. "128° x 100°"



Conventional



TNV-C7013RC

New corner mount camera for special purpose

non-visible IR design

The new corner mount camera use 940nm IR, which is Non-visible. The person is being monitored can get really agitated, frustrated, or manic at night when noticing that the camera has a red glow (monitoring them). This can be easily fixed by using our product.



940nm IR

The person is being monitored can get really agitated, frustrated, or manic at night when noticing that the camera has a red glow (monitoring them). This can be easily fixed by using 940nm IR

False alarm reduction

The New corner mount camera detects and classify people, vehicles, faces, and license plates in real time, greatly enhancing video analytics accuracy and allowing forensic search during playback. AI algorithms can distinguish classified objects and separate them from their surroundings, such as waving trees, shadows, or animals. Thus, New corner mount camera can help improve operator efficiency.



Class time
10:10

Class time
10:10

Object classification based on AI engine

Object classification

The camera generates metadata that includes object type (person, face, vehicle, license plate), which is sent to the VMS/NVR to be used for forensic search. Forensic search dramatically enhances the search efficiency and reduces time spent looking for events.

※ Support vehicle type classification (Car/Bus/Truck/Motorcycle/Bicycle)



AI based Virtual area with Clothing color detection

Loitering Detection

The intelligent video analytics on the camera utilizes AI object detection to trigger events.
The virtual area setup enter/exit, intrusion, loitering triggers of detected AI objects with duration time.

※ Support object type and vehicle classification selection for event trigger.

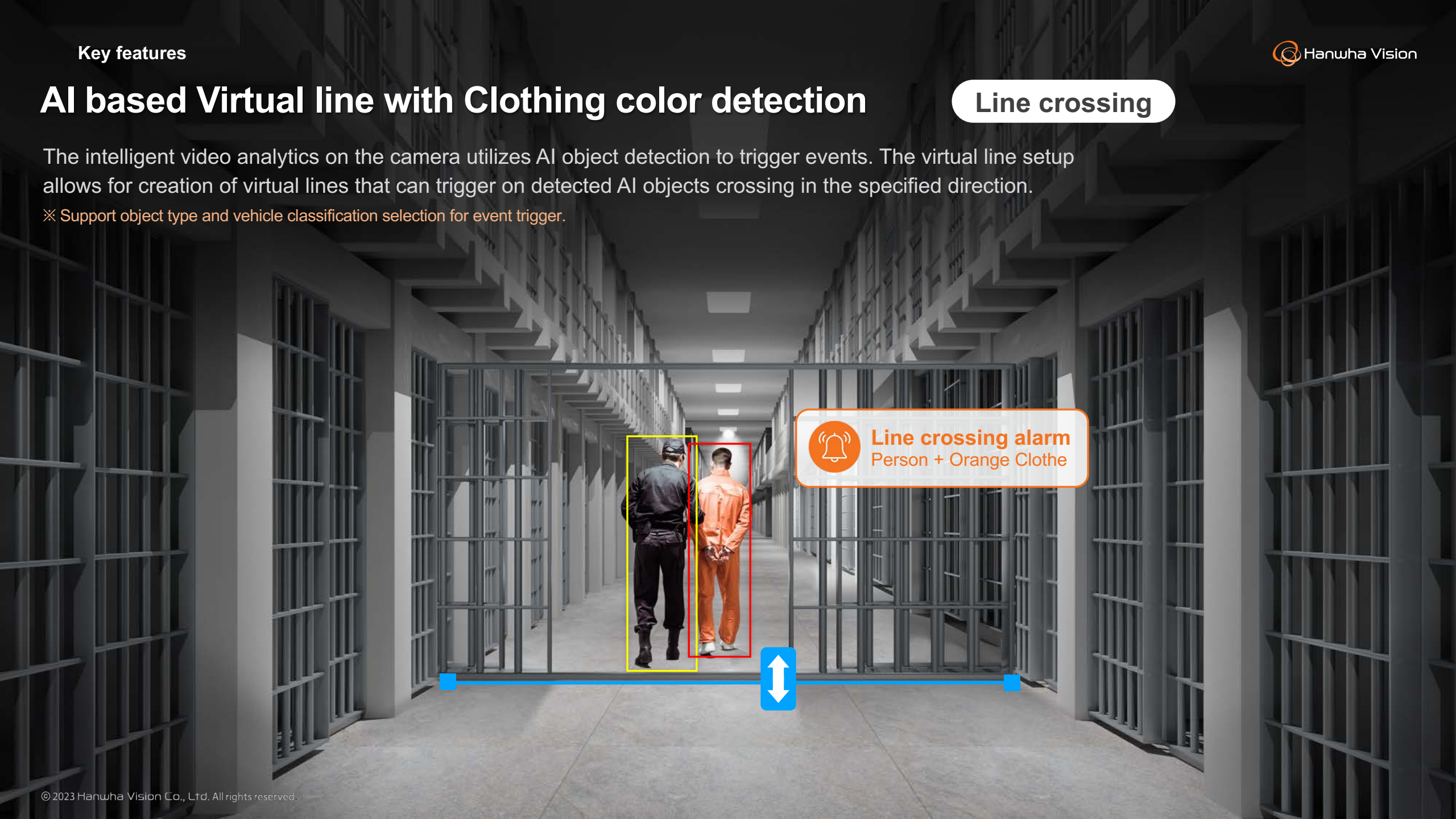


AI based Virtual line with Clothing color detection

Line crossing

The intelligent video analytics on the camera utilizes AI object detection to trigger events. The virtual line setup allows for creation of virtual lines that can trigger on detected AI objects crossing in the specified direction.

※ Support object type and vehicle classification selection for event trigger.



 **Line crossing alarm**
Person + Orange Clothe

Advanced image quality

Image Quality

The new corner mount camera utilizes the Wisenet7 SoC and other technologies to deliver improved image quality during the day and at night.



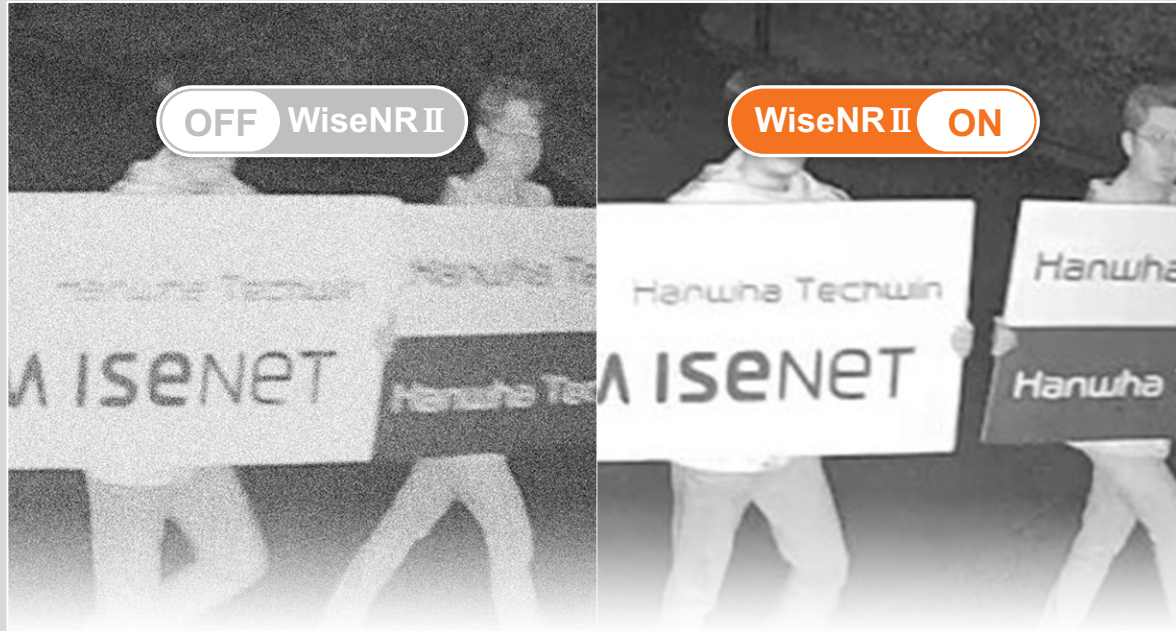
Day



Night

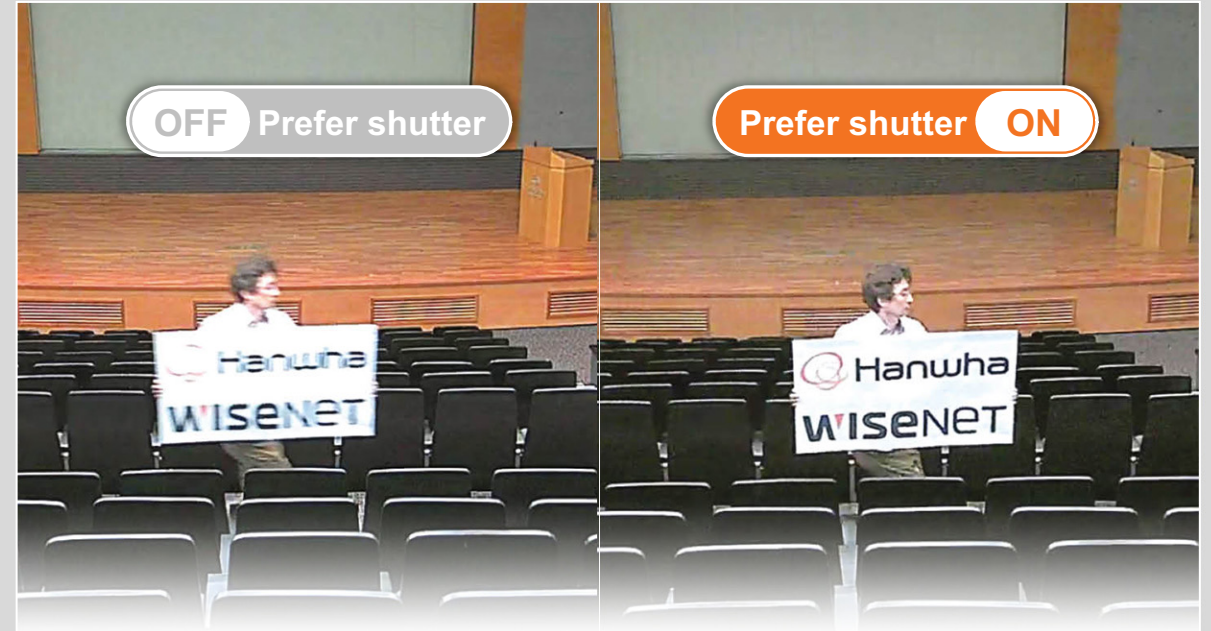


Improved noise reduction, motion blur reduction



WiseNR II

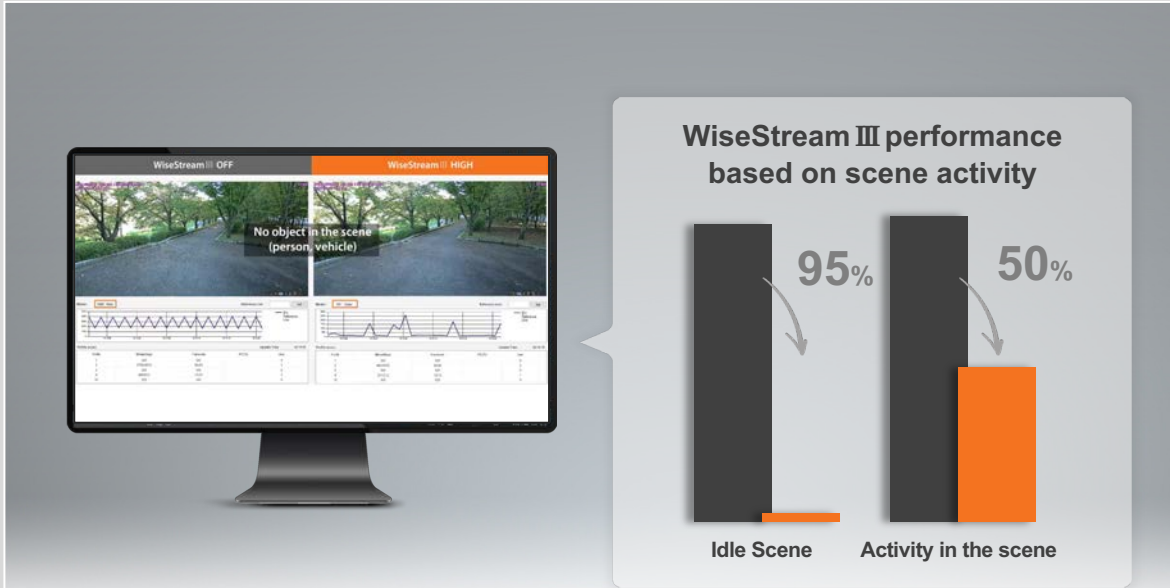
The newly applied noise reduction technology, WiseNR II, functions based on AI object detection allows for optimization of image noise and motion blur depending on object movement (person / vehicle).



Prefer shutter control

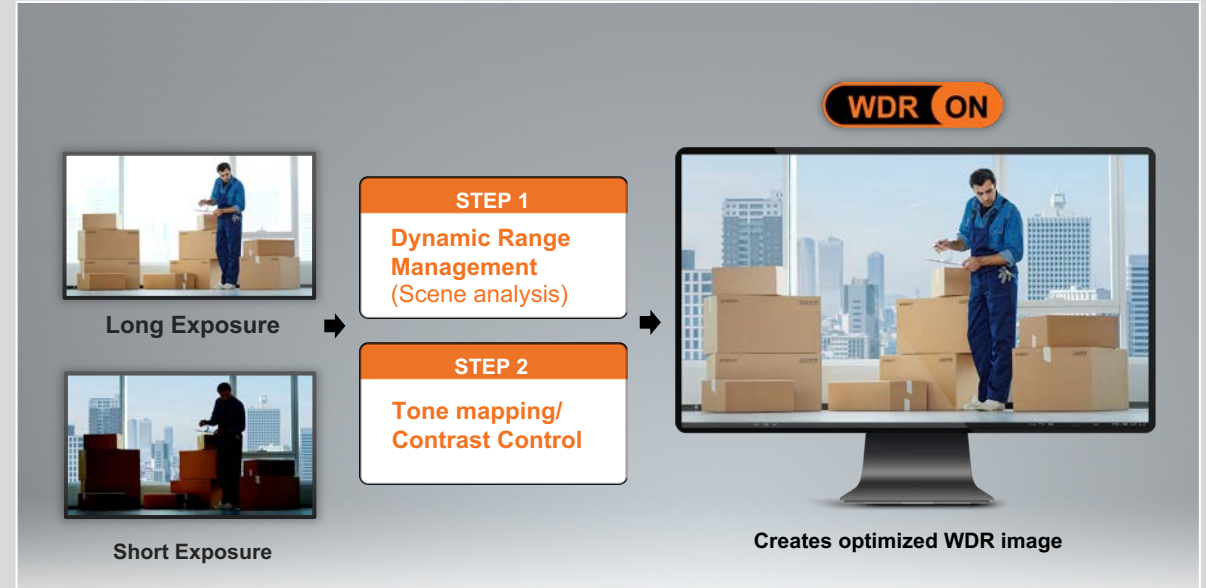
The Prefer Shutter Speed feature uses the latest AI technology to identify the appearance and movement of objects and readjusts the Prefer Shutter value to an optimal level to reduce motion blur effects during a fast moving object.

AI based bandwidth reduction, Improved WDR



WiseStreamIII

A new cutting edge video compression technology WiseStreamIII operates based on the object detection accomplished by AI algorithms. When combined with the H.265 compression technology, bandwidth can be reduced by up to 80% without compromising the video quality, enabling efficient video management.

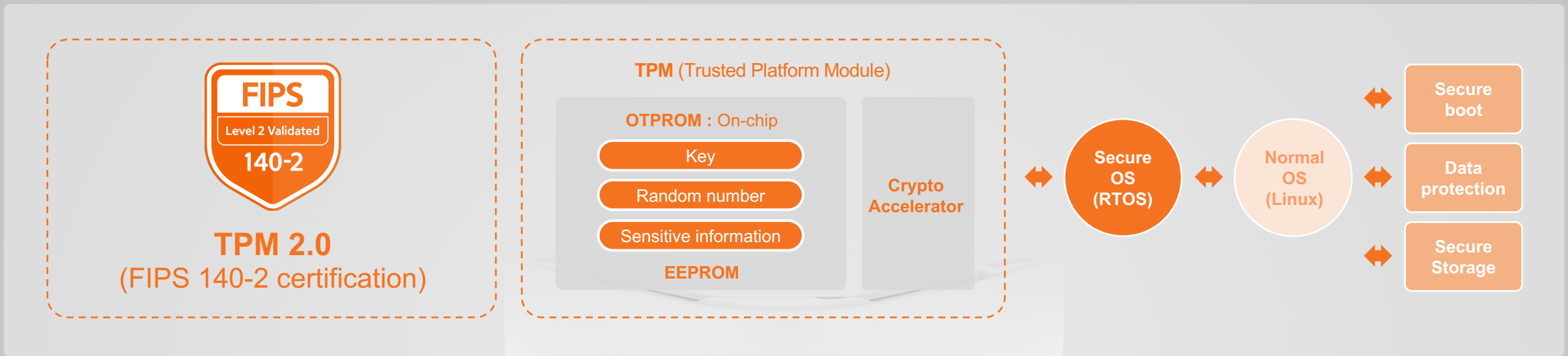


extremeWDR

extremeWDR uses scene analysis technology to minimize motion artifacts by optimizing differences such as tone and contrast during frame synthesis. In addition, local contrast enhancement technology, which emphasizes hazy(or blurred) areas step by step, improves the detail and clarity of images.

Next level cybersecurity

The cybersecurity of the new The new corner mount camera validates the boot process, securely stores key information, and preempts hacking risk with unauthorized access blocking. Our cameras also have been certified Secure by default certification and including device certificate Root CA. As a result, we can provide industry-leading end-to-end cybersecurity to the customer.



✓ **Data Protection**

- Secure storage/OS

✓ **Improved security**

- TPM 2.0(FIPS 140-2 level2), Secure by default certified
- Device certificate (Hanwha private Root CA)



✓ **Integrity**

- Secure boot
- Secure Open platform App
- Signed firmware

✓ **Secured Hardware**

- Secure JTAG

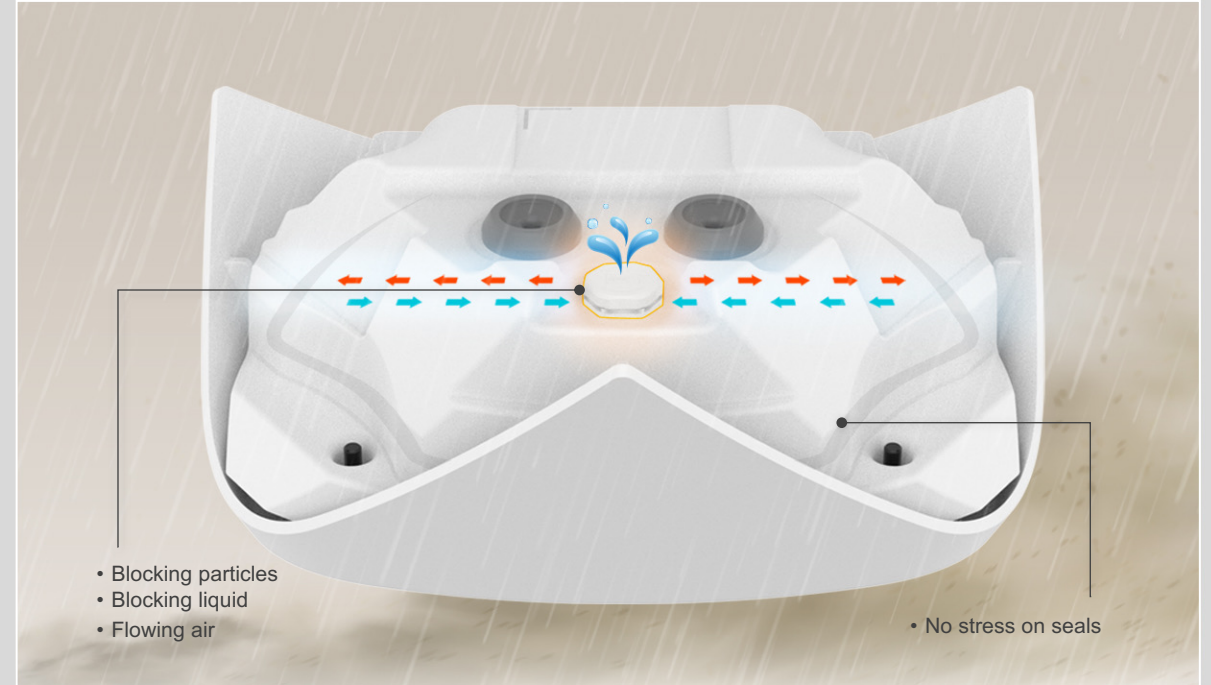
Reinforced durability



Metal shielded RJ-45

Metal-shielded RJ-45 terminal and enhanced grounding frame structures can protect the camera from transient voltage (lightning, static electricity).

※ Using STP (shielded twisted pair) cabling is recommended.



Humidity control with AIR vent

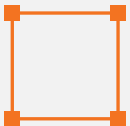


The built-in air vent prevents condensation and maintains performance of long-term use and storage through water vapor control. Also, it can prevent damage and stress on the seals and internal components through pressure equilibrium in the product.

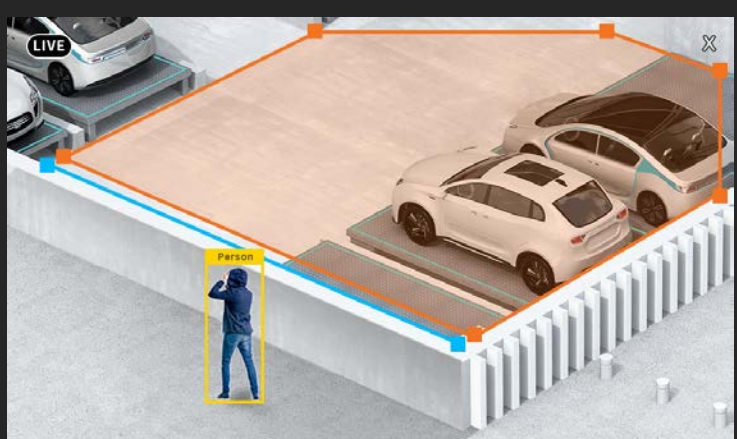
Event rule

Boolean logic


Newly added Boolean Logic rule to our fisheye cameras opens up new possibilities when setting up event action. Up to 3 Event triggers can be grouped together to generate a single event.

Event trigger Settings

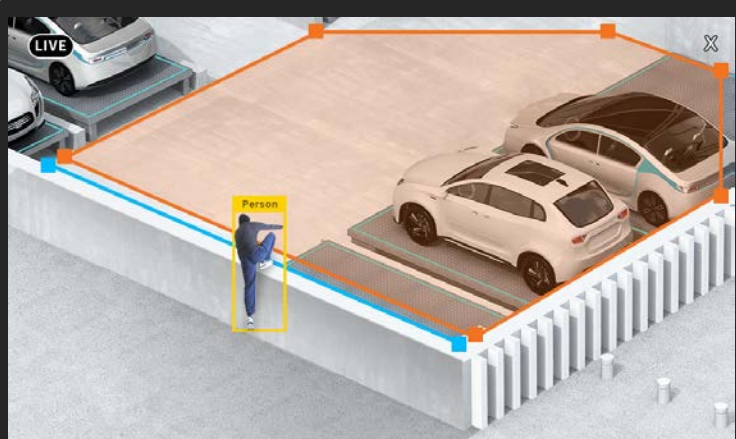
-  IVA Area + Person ✓
- +
-  Line crossing ✓
- +
-  Object detection ✓




- IVA Area + Person ✓
- Line crossing
- Object detection ✓

 No Alarm

VS



- IVA Area + Person ✓
- Line crossing ✓
- Object detection ✓

 Alarm

Event notification

Variety event action

An event action has been added that uses HTTP/HTTPS/TCP to give notifications to other devices when an event occurs.

※ You can find the notification function in the Handover



WHEN EVENT OCCURRED



Record



Alarm out



FTP
Image



E-mail
Notification/Image



HTTP, HTTPS, TCP
Notification



MQTT
Notification

Specification

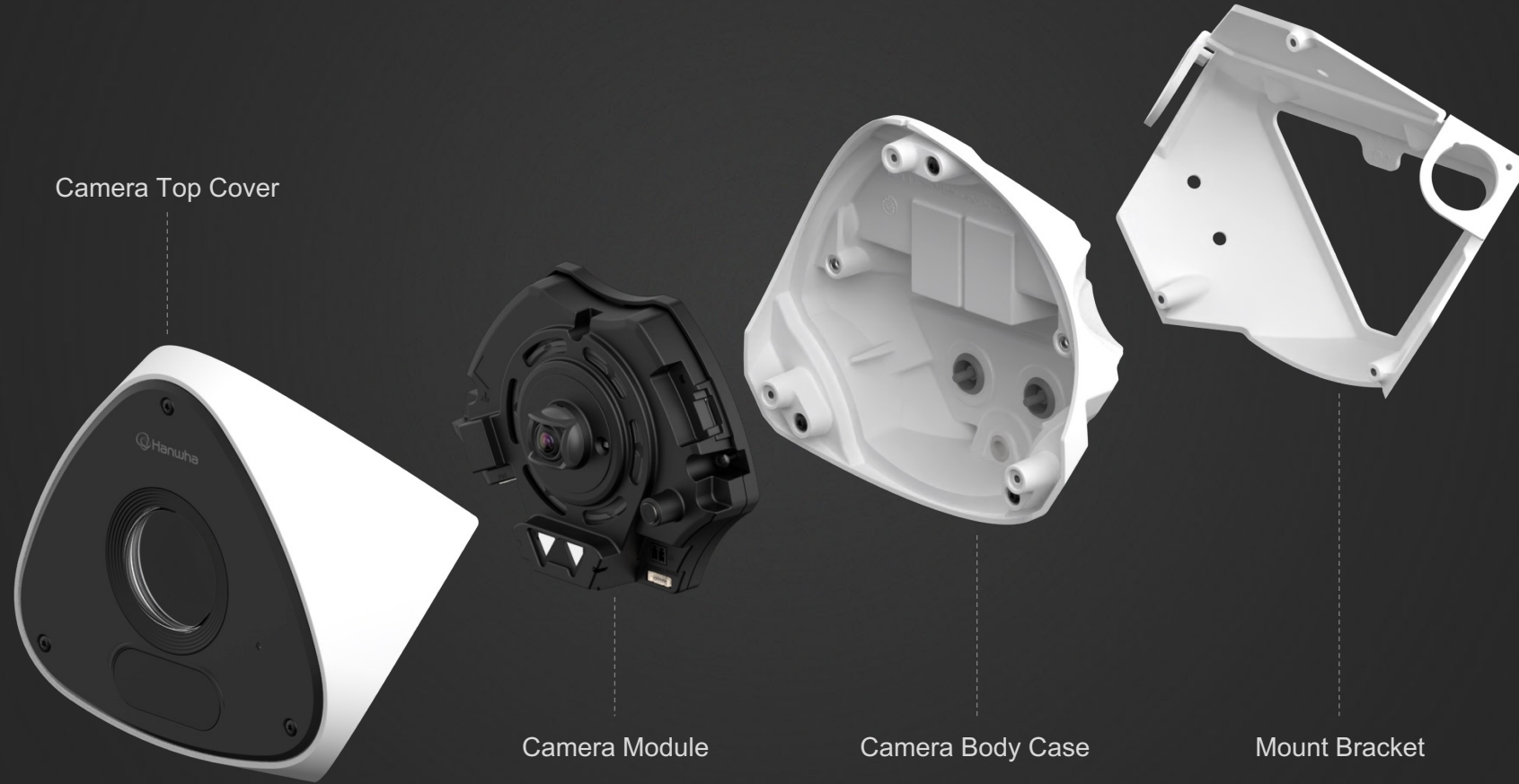


AI Corner mount Camera

- **New Anti-Ligature design for Correctional Facilities, Mental Health**
- **Cover the whole room with no chance of blind spots**
Field of View : Horizontal 128° Vertical angle 100°
- **3MP(2048x1536), 2.39mm fixed focal lens**
- **940nm non-visible IR LED, WiseIR & IR distance: 15m**
- **Max. 30fps@3MP**
- **AI technology**
Classified object type: Person/Face/Vehicle/License plate
Attributes: Vehicle(Type: car/bus/truck/motorcycle/bicycle)
Support DetectionShot
Object detection - Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit)
- **Improved image quality**
Extreme WDR by Scene Analysis and Local contrast enhancement
WiseNR II , Auto prefer shutter control based on AI
- **WiseStream III based on AI**
- **Next level cybersecurity**
Device Certificate(Hanwha Root CA, pre-installed)
TPM 2.0(FIPS 140-2 certified), Secure OS/boot/storage, Verified FW forgery
- **Micro SD/SDHC/SDXC 1 slot: Max. 1TB**
- **Reinforced durability**
IP66, IP6K9K, IK10+, Metal shielded RJ-45, Humidity control with AIR vent
- **Additional accessory**
Conduit hole dome cover

Easy installation

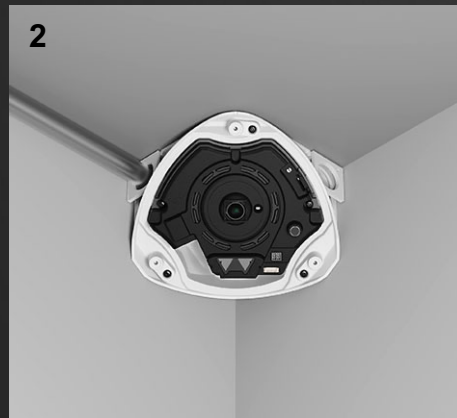
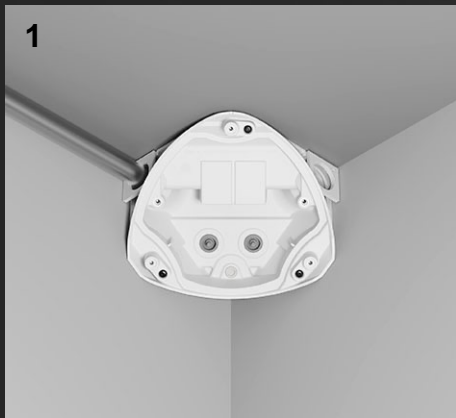
New Corner mount camera is specially designed so that it cannot be used for other purposes by hanging objects from the camera or easily removing the cover.



Additional accessory for conduit-hole installation

New Corner mount camera, SPG-VAN13W allows easy connection to the conduit hole as long as you change the top cover sold separately. It can be installed in the desired direction regardless of the left and right directions.

Additional Dome cover SPG-VAN13W





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