



June 2024 New Product Introduction

06.03.2024

Dual Sensor BCR Camera

TNS-9050IBC



1. Why Hanwha BCR?

- 1-1. World First - Dual Sensor BCR Camera
- 1-2. Single Device & One Source Information
- 1-3. Integration with all S/W
- 1-4. Total Value Proposition

2. Key features

- 2-1. Dual Sensor BCR Camera
- 2-2. New Design for Dual Lens Camera
- 2-3. Detachable LED Module
- 2-4. Reinforced Durability
- 2-5. AI based Barcode Recognition
- 2-6. WiseBCR Application
- 2-7. Install Design Tool SW

3. Specification and Installation

- 3-1. Specification
- 3-2. Installation
- 3-3. Model naming rule of BCR camera

1. Why Hanwha BCR?

- 1-1. World First - Dual Sensor BCR Camera
- 1-2. Single Device & One Source Information
- 1-3. Integration with all S/W
- 1-4. Total Value Proposition

1-1. World First - Dual Sensor BCR Camera

Mono and color sensors are integrated into one camera to efficiently track, package, and accurately read the Barcode.

“ Single Device for Logistics Solution ”

**Barcode
Recognition**

Mono



**Package
Tracking**

Color

1 Why Hanwha BCR?

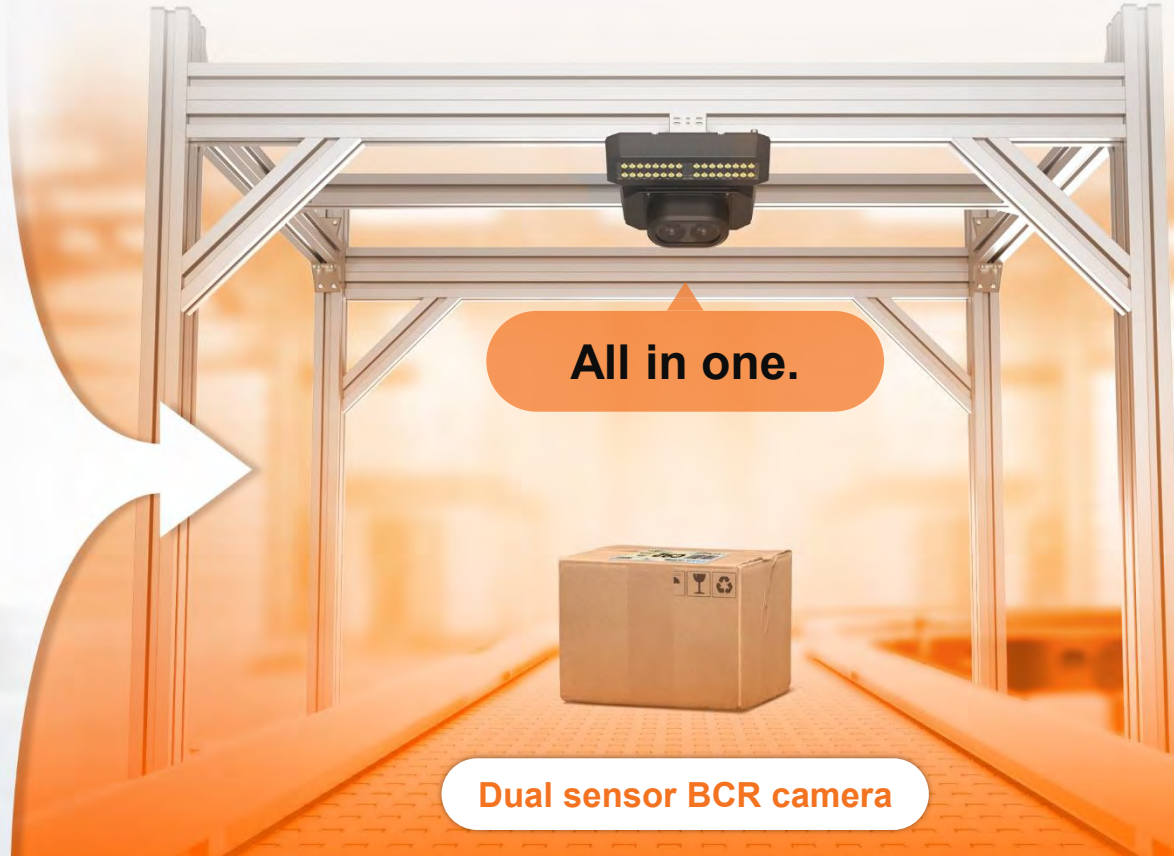
1-1. World First - Dual Sensor BCR Camera

Hanwha Vision's new Barcode Reader Camera (BCR) offering barcode recognition and video capture in a single device.



Separate BCR and CCTV devices

High installation and maintenance costs



BCR and CCTV Integrated System

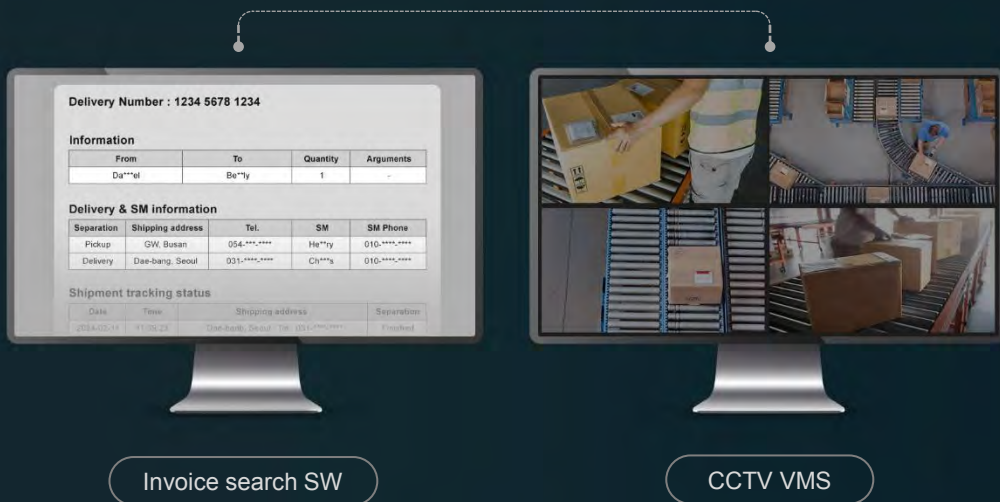
Simplify installation and reduce maintenance costs

1 Why Hanwha BCR?

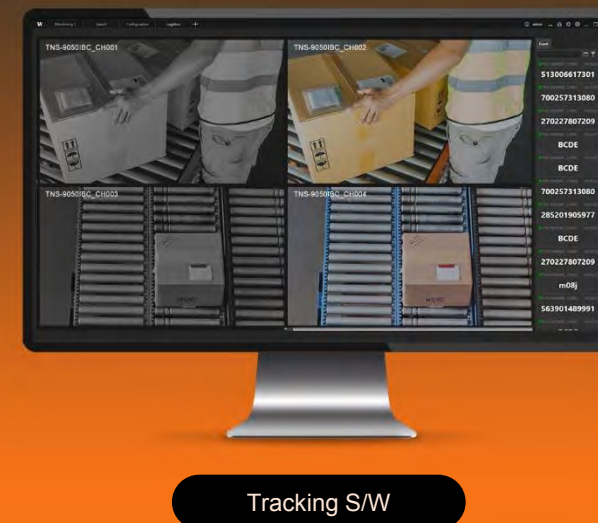
1-2. Single Device & One Source Information

With one camera, you can match CCTV footage with barcodes to monitor and retrieve items in real-time to serve as evidence for customer claims. Report uncontrollable parcels (lost/stolen/damaged) and C/S can search for the reported parcel and track what happened in layout mode.

Two System



One System



Uses separate package tracking SW
Difficult to link and track between the invoice and the cargo
Low success rate tracking package incidents for resolution

SW with integrated search and tracking
Image-based package tracking to improve operational effectiveness and efficiencies including incident detection

1 Why Hanwha BCR?

1-3. Integration with all S/W

Open App API (TCP), video information (RTSP), and AI plugins to synchronize, search, and track barcodes and videos.

Support barcode(TCP), video(RTSP)



milestone

available in September, 2024

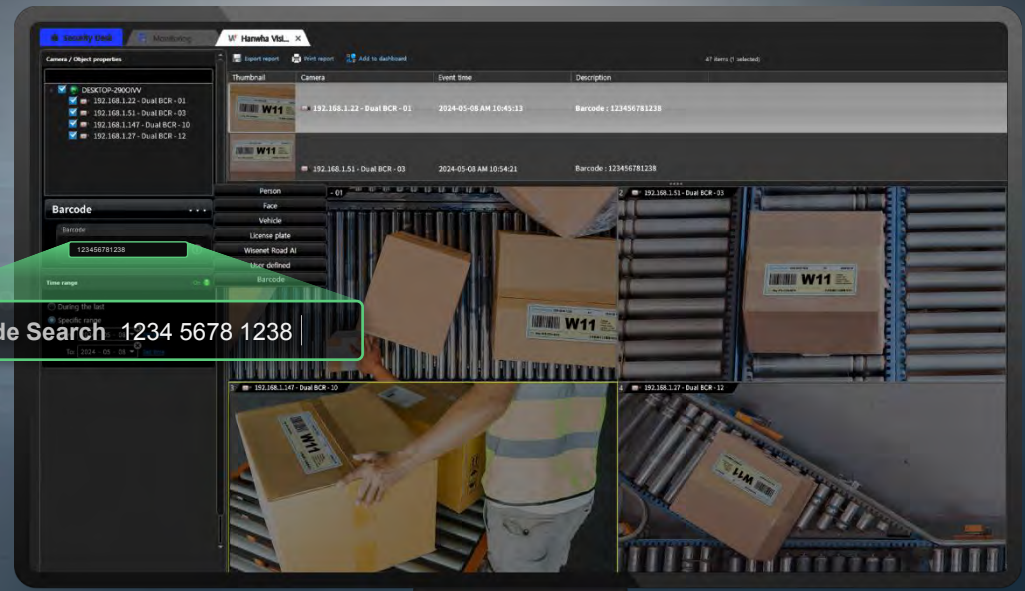
Genetec

available in August, 2024

with Hanwha's Plugin



Barcode Search 1234 5678 1238



1-4. Total value proposition

Product simplification (BCR+CCTV integration), installation simplification (cable/mount/frame installation, etc.), and maintenance simplification (existing BCR, A/S voucher purchase and extension separately -> basic A/S 3-year guarantee) compared to existing solutions

Conventional Solution

Big Total Cost

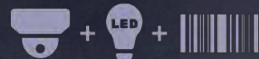
After Service
(1year+@)



Install



Purchase
(CCTV+LED+BCR)



Hanwha Vision Solution

Small Total Cost

After Service
(3year)

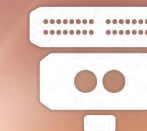


Install



All in one.

Purchase



2. Key Features

- 2-1. Dual Sensor BCR Camera
- 2-2. New Design for Dual Lens Camera
- 2-3. Detachable LED Module
- 2-4. Reinforced Durability
- 2-5. AI based Barcode Recognition
- 2-6. WiseBCR Application
- 2-7. Install Design Tool SW

2-1. Dual Sensor BCR Camera

Conventional



Monitoring & barcode reader cameras

Barcode/monitoring separately

Narrow FoV / DoF

Requires installation of multiple BCR cameras

Need additional LED

Purchase separately

Complex software settings

Barcode/Video SW Individual Settings

Dual sensor BCR camera



Integrated dual lens camera

Barcode/Monitoring Integration

Secure Wide FoV

4K Mono & 4K Color (Optional Lens : 16mm/35mm)

Detachable LED module

Basic 32 LEDs (Add/Remove)

Easy settings

With Camera Web Viewer

Vs.

2-2. New Design for Dual Lens Camera

The new BCR Camera(TNS-9050IBC) apply the mount plate to provide an intuitive installation guide and screw hole for corresponding an aluminum frame. All installation screws are unified with Torx T20.



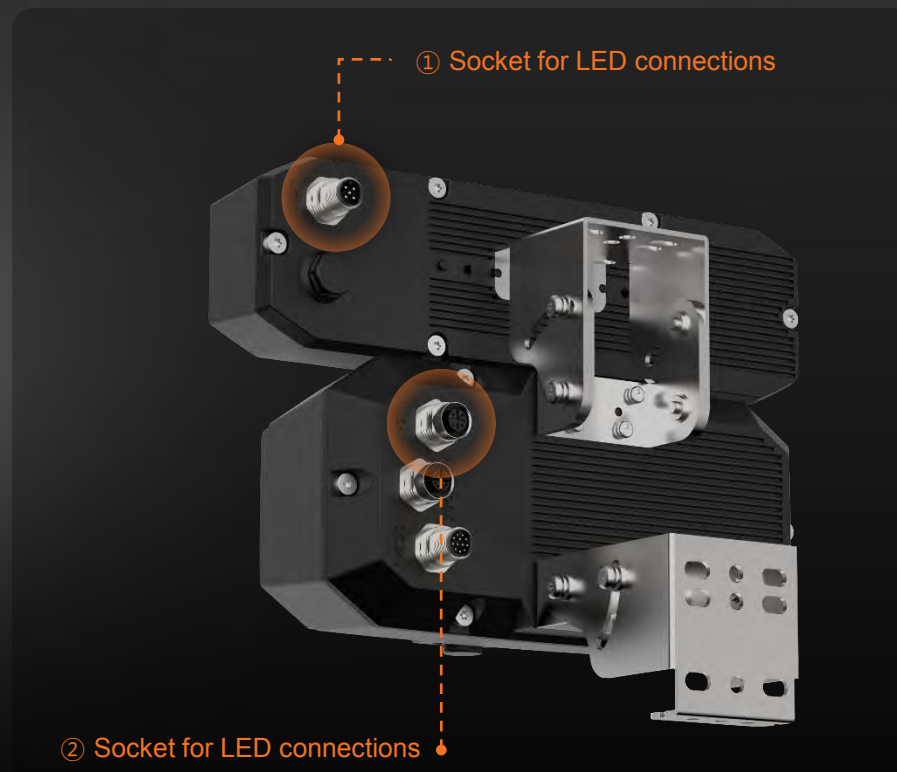
Dual Lens
4K MONO & 4K COLOR

Torx T20
All installation screws are unified with Torx T20.

Window : Gorilla Glass 3

2-3. Detachable LED Module

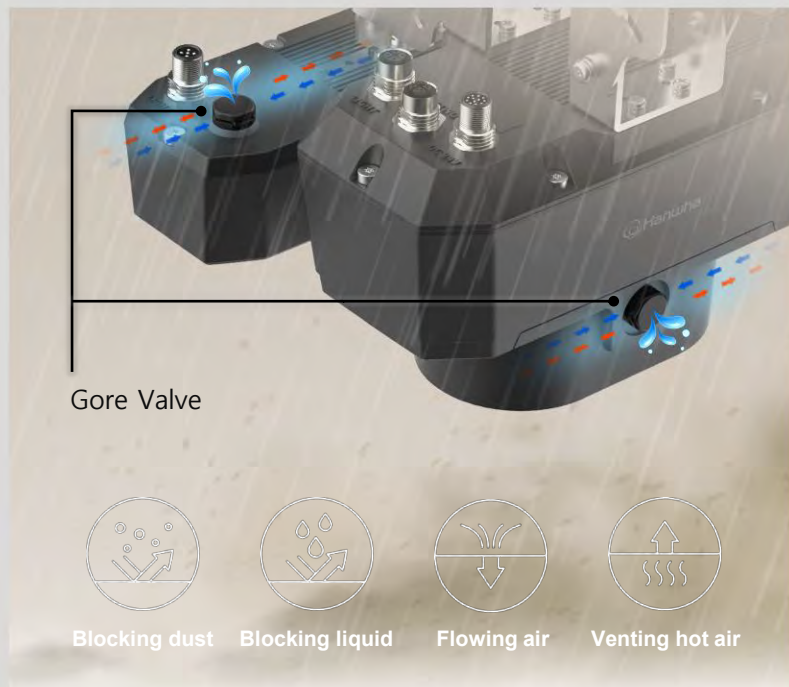
The BCR camera's LEDs is detachable, so can be used with other lights.



※ CAUTION ※

Network cameras installed around LED lights may produce horizontal line noise (flickers). In this case, set the flicker prevention function of the network camera to <ON>. If the horizontal line noise occurs even if the flicker prevention function is set to ON, please set the LED light so that the angle of view of the surrounding network camera does not overlap.

2-4. Reinforced Durability



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.

IP66,67/IK10

It has IP66,67 and IK10 protection level, which can help protect against impact, water and dust.

※ EN 60068-2-6 (vibration resistance), EN 60068-2-27 (shock resistance)

- IP67 : Fully dust tight and temporary immersion ready
- IK10 : Protected against 20 joules of impact (the equivalent to the impact of a 5kg mass dropped from 400mm above the impacted surface)

Operating temperature

- 40°C ~ 55°C

Ensure performance in adverse conditions
※ Normal Barcode Reader/Scanner : 0~40 degrees

2-5. AI based Barcode Recognition

Conventional

AI barcode location search

Faster scan times & barcode recognition

Dual sensor BCR camera



2-6. WiseBCR Application

WiseBCR, Pre-installed Barcode application can support to check real-time barcode information/history and adjust detailed settings. Hanwha Camera's unique open platform Edge Device configuration, No additional PC software required

The screenshot shows the 'Barcode Setup' configuration page. On the left is a sidebar with 'Barcode setup', 'Backup & Restore', and 'Log'. The main area is divided into sections: 'Barcode type' with checkboxes for Code 128, Codabar, and Interleaved 2 of 5; 'Properties' with checkboxes for Barcode de-duplication, Short quiet zone, and Low height codes; 'Code size' with a table for Code128, Codabar, and Interleaved2of5, including 'Any size' and 'Minimum code size' (3) and 'Maximum code size' (40); 'Number of barcodes' (0); 'Allow partial results' (checked); and 'Decode settings' with options for 'Don't read the same code twice in a row', 'Don't re-read the last N codes' (0), 'Delay mode' (Last read), and 'Code re-read delay time' (1000 ms).

The screenshot shows the 'Barcode scan history' page. At the top, a scanned barcode is displayed with a green box around it. Above the barcode, the text '2024-02-15 14:59:16 Code128 123456781234' is shown. Below the barcode, the text '2024-02-15 14:59:16 Code128 123456781235' is shown. The main area contains a table with the following data:

Time	Barcode characters	Type	Decoding time (ms)
2024-02-15 14:59:16	123456781234	Code128	46
2024-02-15 14:59:16	123456781235	Code128	48
2024-02-15 14:57:48	123456781236	Code128	46
2024-02-15 14:57:01	123456781237	Code128	47
2024-02-15 14:56:13	123456781239	Code128	47

3. Specification and Installation

3-1. Specification

3-2. Installation

3-3. Model naming rule of BCR camera

3-1. Specification



Dual Lens BCR Camera

TNS-9050IBC

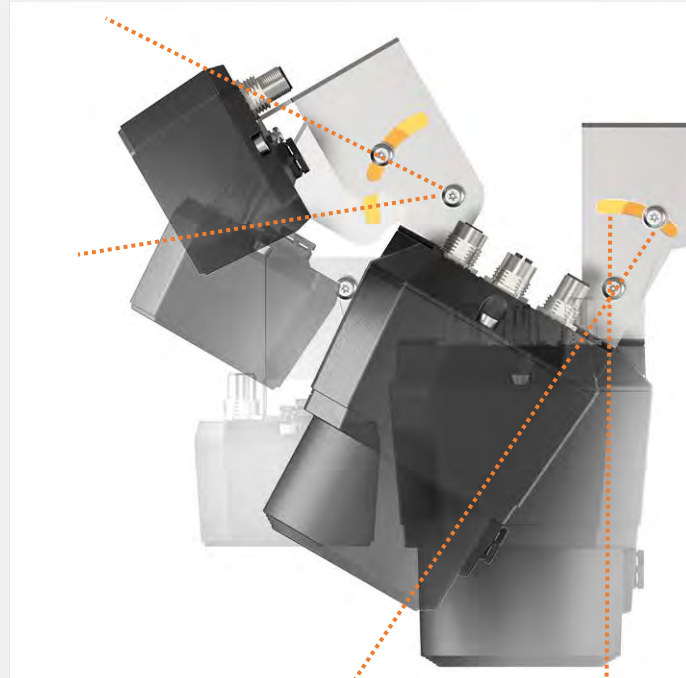
- **Dual Global Sensor for Barcode Reading and Video Monitoring**
MONO 4K 1" + COLOR 4K 1"
- **Replaceable LENS design based on installation site**
Default: 25mm machine vision lens
Option: 16mm, 35mm (Available in October.2024)
- **Removable and replaceable LED module (32 LEDs module is default)**
(48 LEDs module, Available in October.2024)
- **Max. 15/18/20fps@4K MONO/COLOR each**
- **24VDC Power**
- **AI technology**
Track barcodes on high speed conveyor belt moving at 2m/s (6.5ft/s)
PreInstalled WiseBCR App support Barcode recognition
Currently 1D Code is available(Code128 / Codabar / Interleaved 2 of 5)
- **Reinforced durability**
IP67, IK10, M12 8pin Ethernet connect, Humidity control with AIR vent
EN 60068-2-6 (vibration resistance), EN 60068-2-27 (shock resistance)
Operating temperature -40°C~+55°C
- **Caution**
Network cameras installed around LED lights may produce horizontal line noise (flickers).
In this case, set the flicker prevention function of the network camera to <ON>.
If the horizontal line noise occurs even if the flicker prevention function is set to ON, please set the LED light so that the angle of view of the surrounding network camera does not overlap.

3-2. Installation



1. Installing & Cabling

Connect power/network after installing the camera to the frame



2. Adjustment LED & Lens

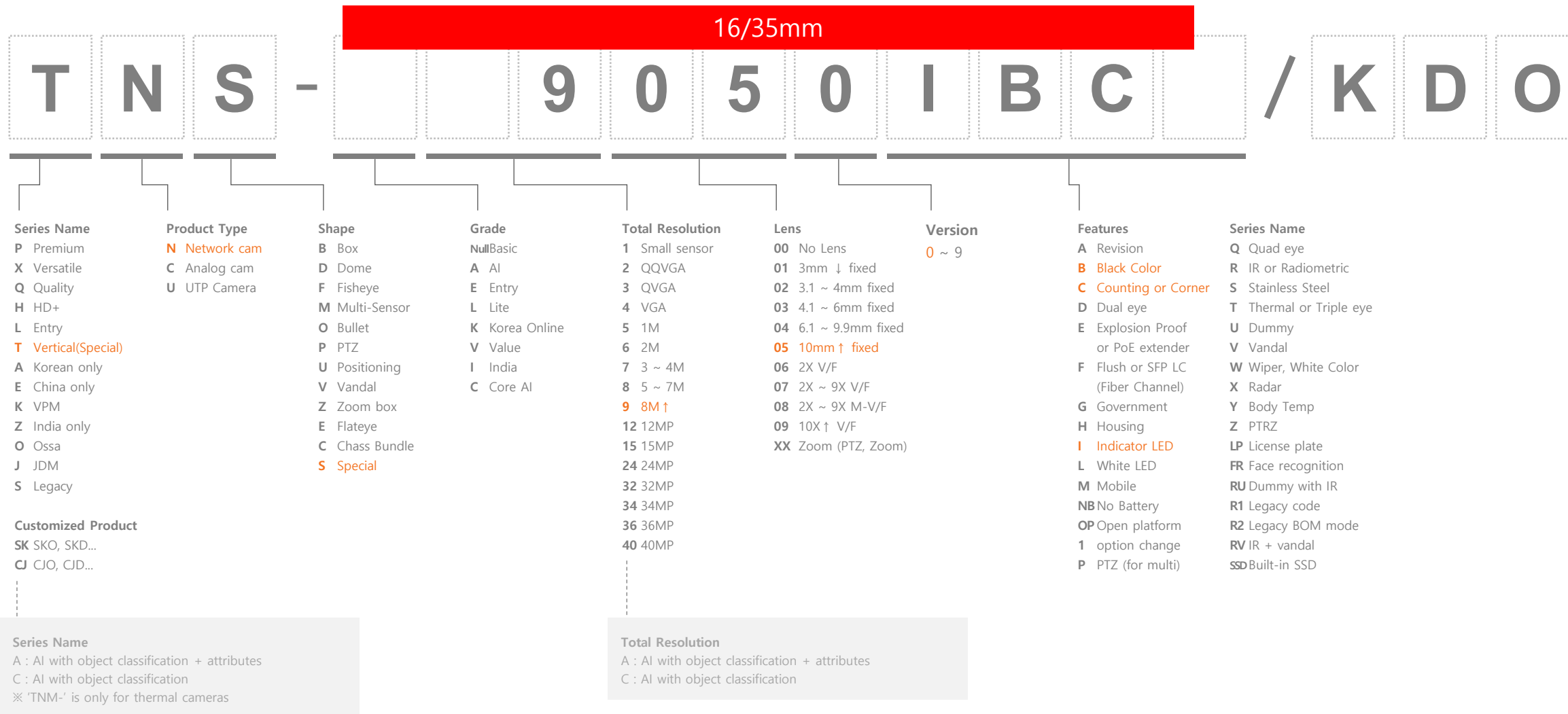
Adjust the angle to match the direction of barcode recognition



3. Lens Focusing & Installing window

Open the lens cover to adjust focus manually

3-2. Model naming rule of BCR camera

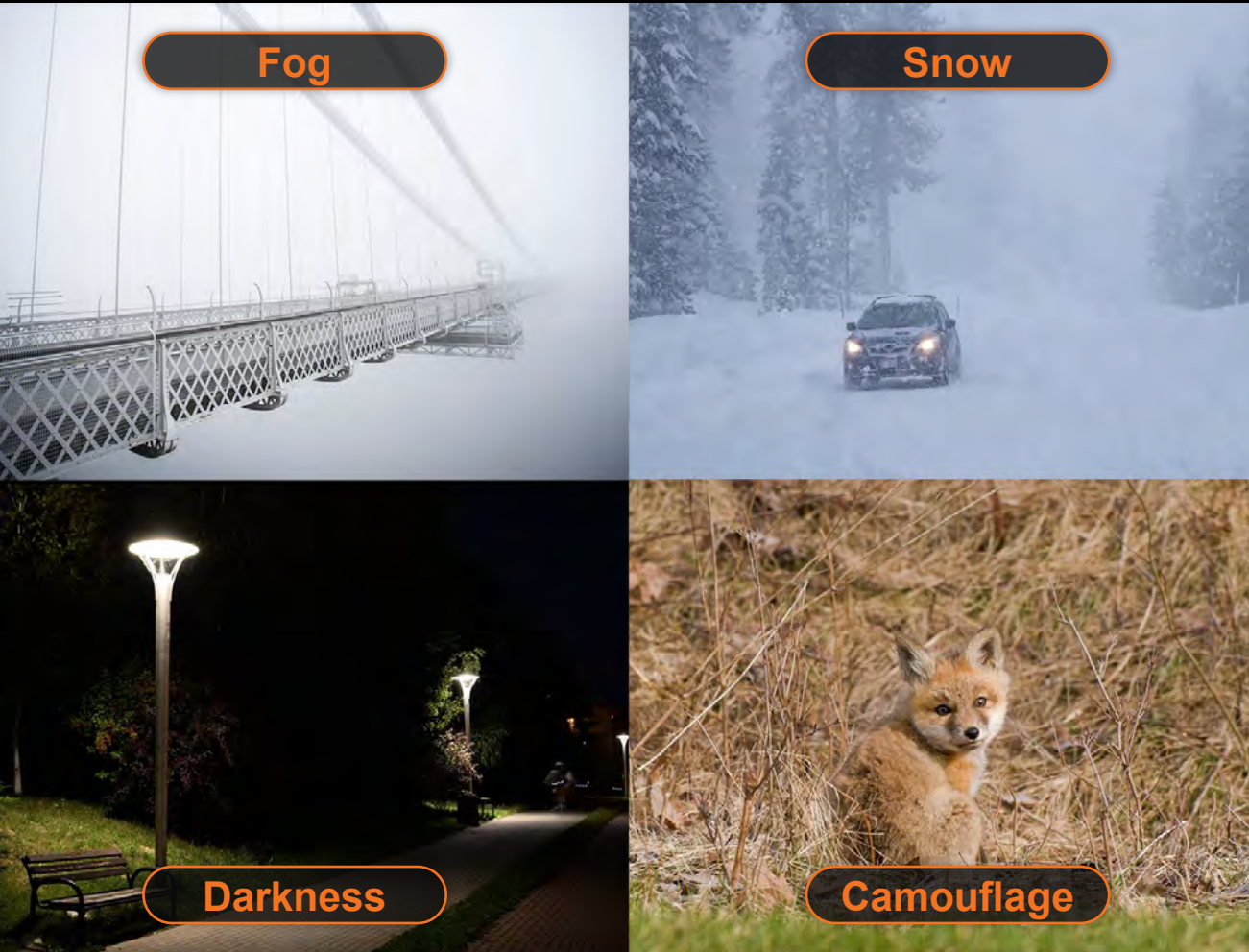


Bi-Spectrum AI Radiometric Thermal Cameras

TNM-C3620TDR / C3622TDR
TNM-C4940TDR / C4942TDR



Thermal camera

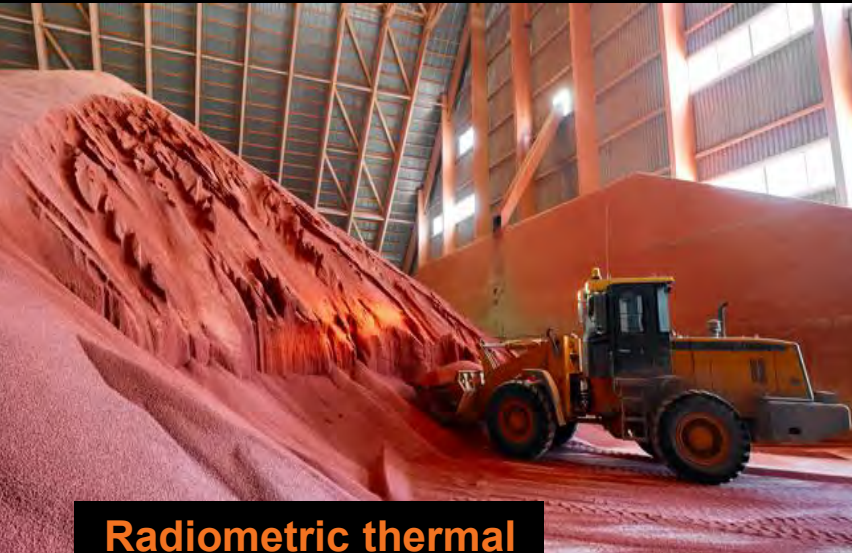


Detect people and objects 24/7 with thermal cameras
In challenging weather (fog, rain, snow) or lighting conditions (complete darkness, backlight), it can be difficult to distinguish people or objects in a complex background with a visible camera or a human eye. For accurate monitoring purposes, a professional surveillance system is required. Thermal cameras are the excellent choice : they provide high contrast images based on temperature differences between the object and background, so that users can detect incidents more easily. The advanced thermal imaging technology provides high contrast to make the unseen details visible without additional lighting.

Thermal camera usage Applications

Secure a wide variety of applications

Thermal cameras are a powerful tool in monitoring applications where there is very little light, due to their ability to create images based on heat. Radiometry thermal cameras are especially applicable in manufacturing and industrial facilities, air and seaports, and mining areas.



Radiometric thermal

Surveillance thermal

Radiometric & surveillance thermal

Condition monitoring & early fire prevention

- Data centers
- Industrial facilities
- Warehousing & logistics
- Manufacturing plants
- Fuel storage facilities
- Fertilizer warehouses

Perimeter detection & traffic monitoring

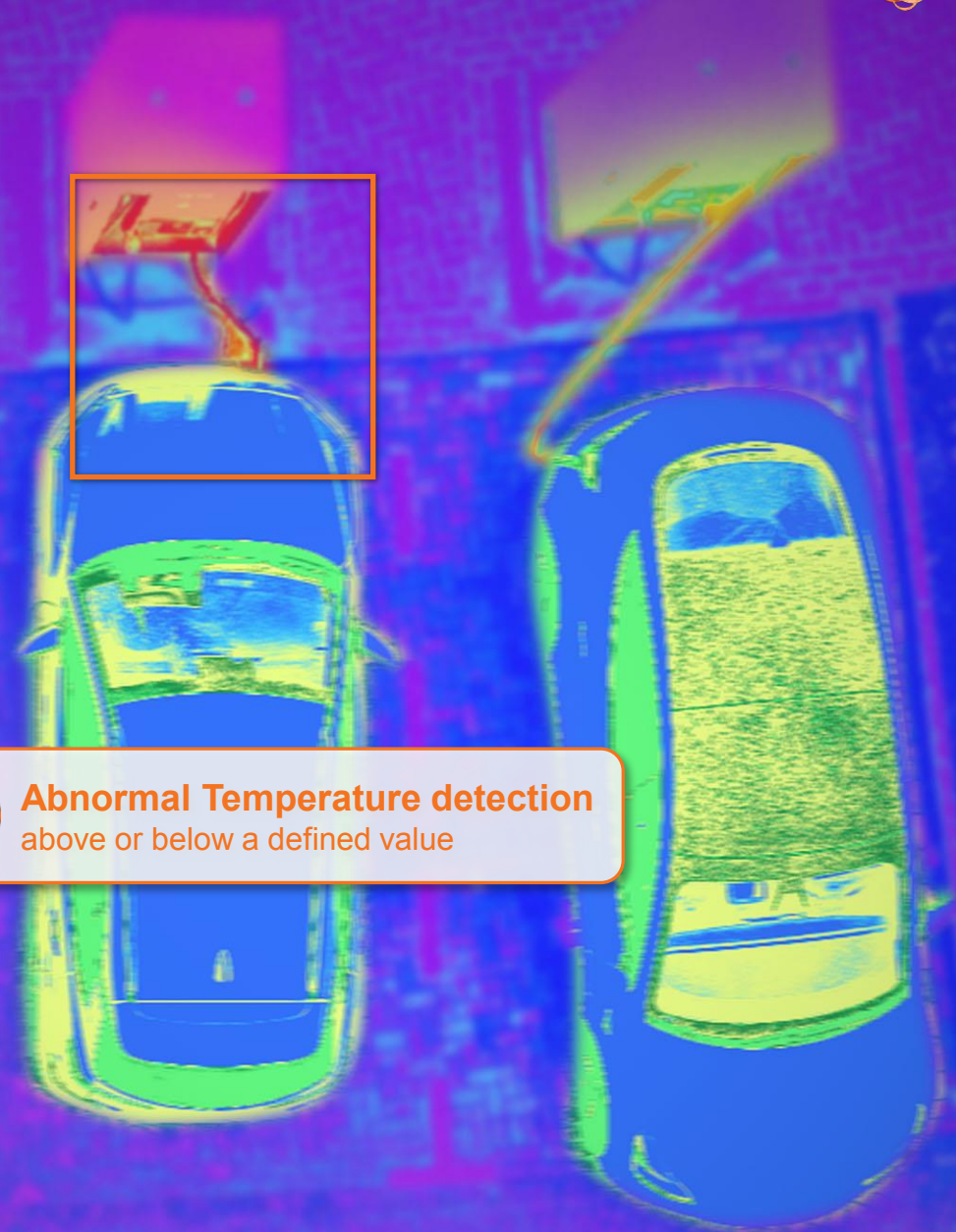
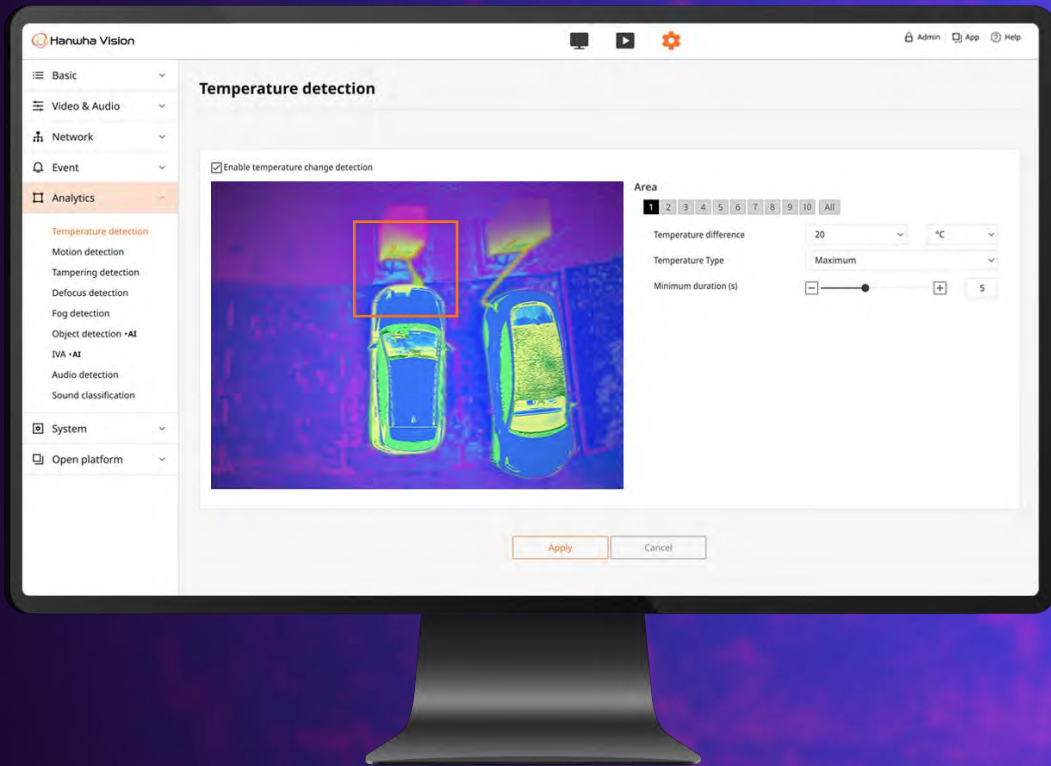
- Seaports
- Airports
- Dams/water treatment
- Tunnels & bridges
- Highways

Complex site

- Utilities
- Mining site

Radiometric thermal camera

Radiometric thermal cameras provide visual monitoring of the degree of heat in an object using palette features, as well as measuring temperature data. These features allow users to see issues that may be caused by the heat of objects of interest and prevent them from progressing into larger problems.



 **Abnormal Temperature detection**
above or below a defined value

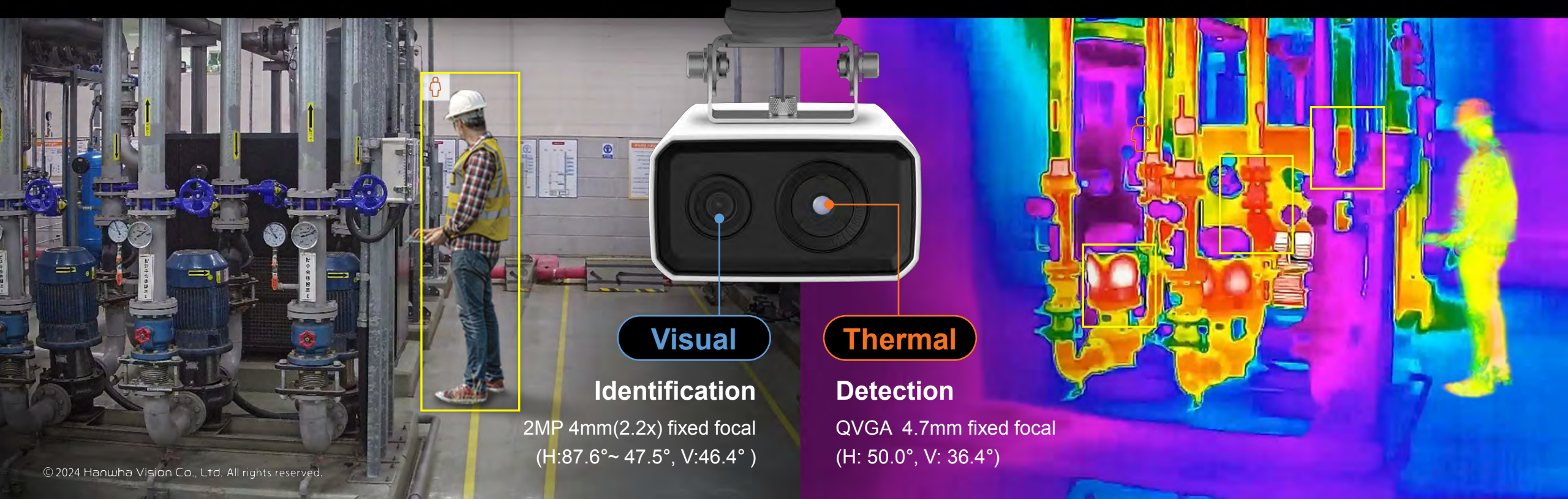
AI Bi-spectrum Radiometric for Indoor Environments

indoor

Simultaneous visual and thermal radiometric monitoring

With the ability to monitor both visible and thermal images simultaneously, bi-spectral cameras can be used reliably monitor equipment that needs regular inspection, as well as facilities or processes that are potentially at risk from heat sources. With the ability to remotely monitor not only visible changes in appearance, but also invisible issues such as internal temperature changes as a result of wear and tear on aging equipment, it is the optimal solution for proactively preventing heat-related equipment failures, process gaps and potential fires.

Bi-spectral cameras also support continuous monitoring with thermal video, even in situations where visible video monitoring is not possible, such as complete darkness, fog, and other conditions, enabling 24/7 continuous monitoring in any environment.



Visible channel AI support

With the ability to monitor both visible and thermal images simultaneously, bi-spectrum cameras can remotely monitor equipment that needs regular inspection, as well facilities or processes that are potentially at risk from heat sources.



MD event alarm
Person



No alarm



No alarm



Compact size is ideal choice for indoor environments

Small and lightweight, the TNM-C3000 series thermal radiometric cameras are ideal for installation into areas with limited space.



Visible lens

2MP 4mm fixed focal lens

Thermal imaging lens

Normal : -20 °C~ +130°C

QVGA 4.7mm fixed focal lens

Create, Label and Alert up to 6 Zones

The new AI Bi-spectrum Radiometric indoor cameras provide users with a variety of useful data. Users can create up to 6 temperature regions of interest (ROIs). Each ROI is a quadrangle that can have up to 4 user-specifiable points and a user-defined name. Users can trigger events based on high and low temperatures. Min/max and average temperature metadata is provided for each ROI.



6 temperature regions



Quadrangle shapes

up to 4 points



Trigger events

Based on High and Low temperatures



Temperature metadata

Min/max and average



AI Bi-spectrum Radiometric for Outdoor Environments

outdoor

Supports AI based Identification on both Channels

With the ability to monitor both visible and thermal images simultaneously, bi-spectral cameras can be used reliably monitor equipment that needs regular inspection, as well as facilities or processes that are potentially at risk from heat sources. With the ability to remotely monitor not only visible changes in appearance, but also invisible issues such as internal temperature changes as a result of wear and tear on aging equipment, it is the optimal solution for proactively preventing heat-related equipment failures, process gaps and potential fires.

Bi-spectral cameras also support continuous monitoring with thermal video, even in situations where visible video monitoring is not possible, such as complete darkness, fog, and other conditions, enabling 24/7 continuous monitoring in any environment.

Identification – Visible Image

8MP 4.4~9.3mm(2.2x) motorized varifocal
(H:112.1°~ 47.5°; V:58.0°~ 26.6°)



Detection & Identification – Thermal Image

VGA 9.1mm fixed focal
(H: 50.0°, V: 37.0°)

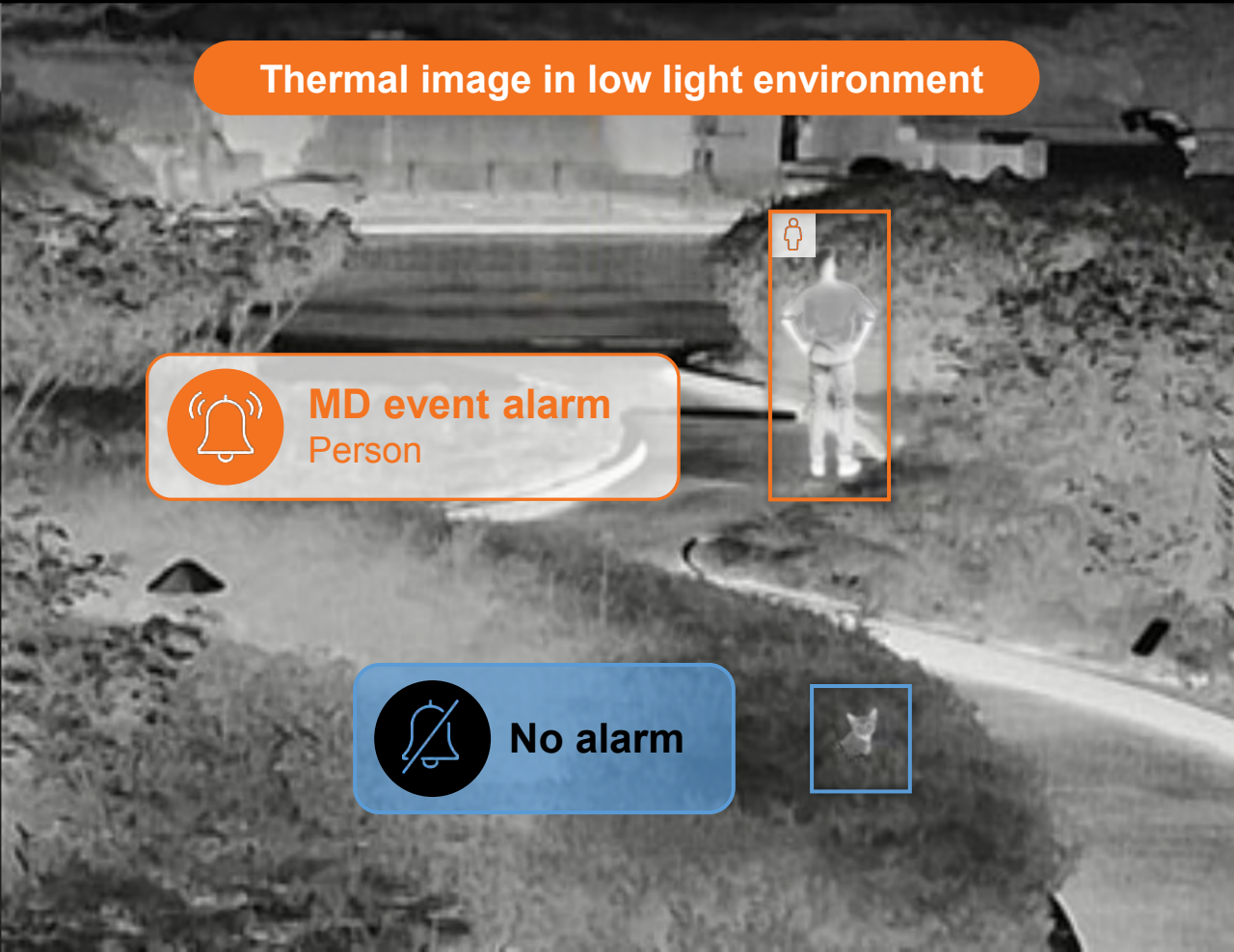


AI based object classification(person, vehicle), Motion Detection

AI Bi-spectrum Radiometric outdoor cameras can be used for both surveillance as well as temperature monitoring purposes. With the enhanced performance of AI-based thermal object detection and classification, these cameras can operate in challenging lighting and weather conditions and detect objects that aren't visible to visual cameras.



Visible image in low light environment



Thermal image in low light environment

 MD event alarm
Person

 No alarm

AI based analytics

The intelligent video analytics on the camera utilize AI object detection to automatically trigger events when objects such as persons or vehicles are detected entering/exiting, intruding or loitering in user defined virtual areas within specified a specified time duration.

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



Create, Label and Alert up to 10 Zones

The new AI Bi-spectrum Radiometric outdoor cameras provide users with a variety of useful data. Users can create up to 10 temperature regions of interest (ROIs). Each ROI is a polygon that can have up to 8 user-specified points and a user-defined name. Users can trigger events based on high and low temperatures. Min/max and average temperature metadata is provided for each ROI.

[10]

10 temperature Regions



Free polygonal shapes

up to 8 points



Trigger events

Based on High and Low temperatures



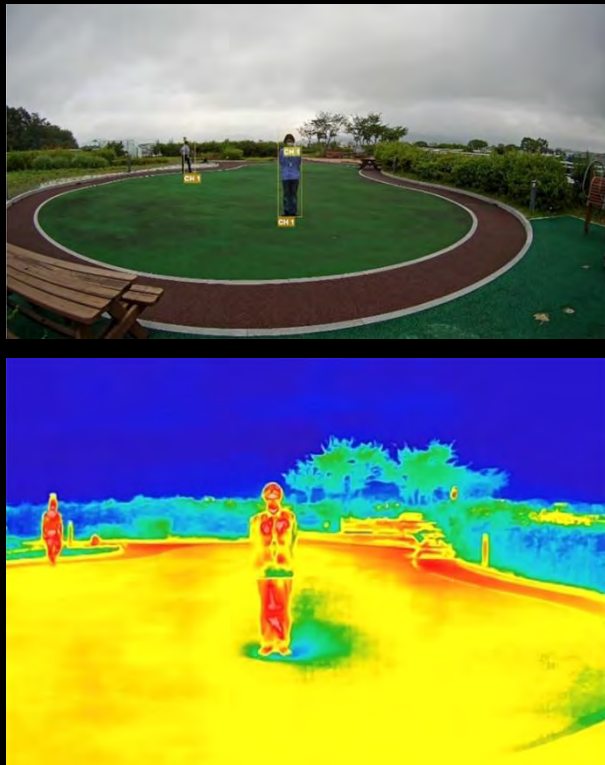
Temperature metadata

Min/max and average



Calibration and metadata sharing

Hanwha Vision Bi-spectrum thermal cameras generate the AI Metadata, and it can be shared between 2 channels after the calibration is configured.



How to setup for metadata sharing

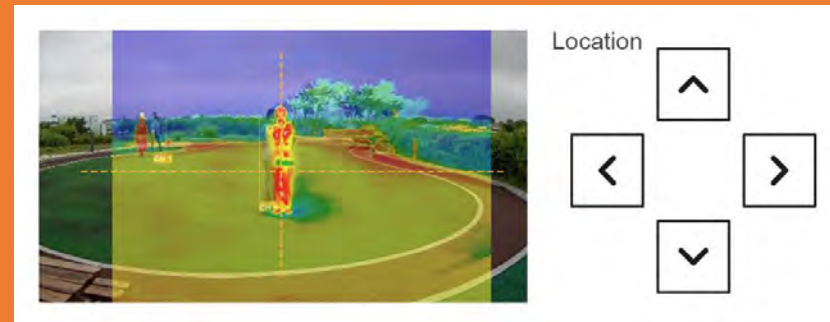
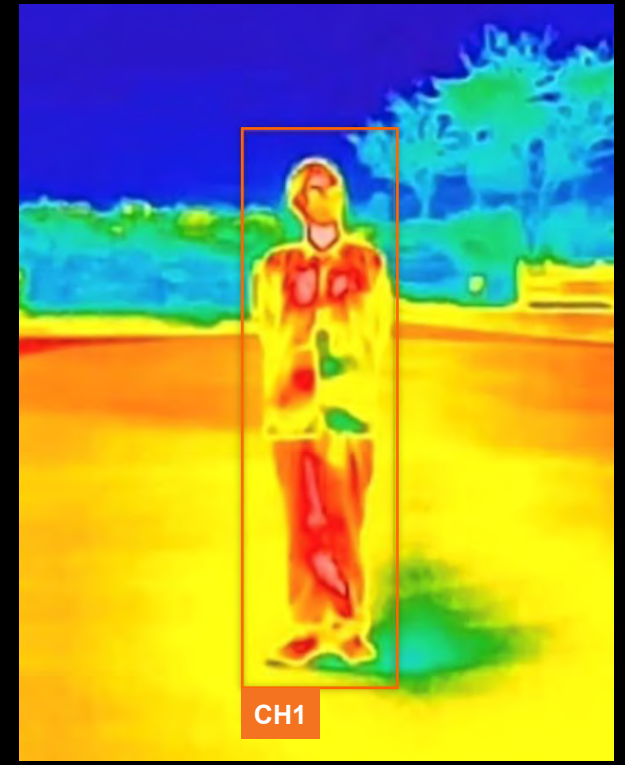


Image Calibration

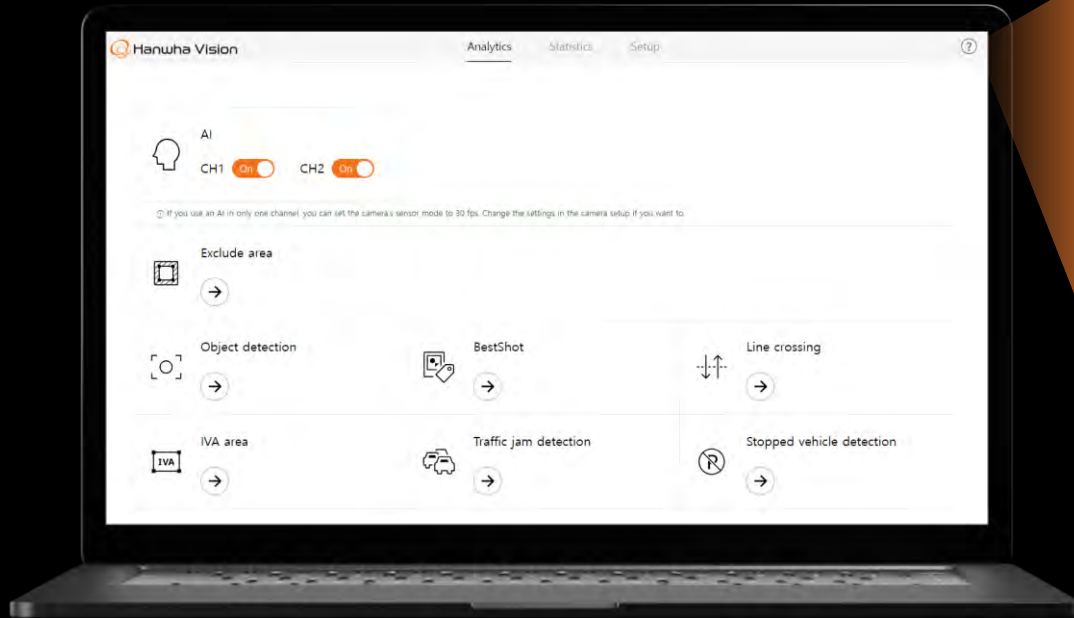
Coordinate calibration of two channels by adjusting the location of an object on the thermal image to overlay on the visible image.

⇒ After calibration is applied, metadata share can be chosen enable (default Off)



Operating AI Channels & Frame Rate

To enable all the AI functions of all channels, set the sensor mode to 15fps. When enabling AI functions on one channel only, you can set the sensor mode to 25fps or 30fps. To change the sensor mode, click [Setup] > [Video & Audio] > [Camera setup] on the web viewer.



AI

You can enable or disable all AI functions by channel.

When you switch the toggle button to the [Off] state on one channel, the AI functions of the channel will be disabled. When you switch it to [On], the AI functions will be initialized, disabling the AI functions expect for object detection functions. Regardless of the state of the toggle button, the detailed settings of AI functions (e.g., line settings, area settings) will be kept intact.

Note

- To enable all the AI functions of all channels, set the sensor mode to 15fps. When enabling AI functions on one channel only, you can set the sensor mode to 25fps or 30fps. To change the sensor mode, click [Setup]>[Video & Audio]>[Camera setup] on the web viewer.

AI function	CH1(Visible)	OFF	ON	OFF	ON
	CH2(Thermal)	OFF	OFF	ON	ON
Max fps		30	30	30	15

Common features of Bi-spectrum Radiometric Cameras

Remote Temperature Monitoring

Temperature monitoring between $-4^{\circ}\text{F} \sim 266^{\circ}\text{F}$ ($-20^{\circ}\text{C} \sim 130^{\circ}\text{C}$)

The new Radiometry AI Bi-Spectrum cameras can detect temperatures ranging from $-4^{\circ}\text{F} \sim 266^{\circ}\text{F}$ (-20°C to 130°C). Users can create multiple Regions of Interest (ROIs). Alarms are generated and sent to users when the temperature of any of the ROIs is above or below a defined value, or the temperature increases/decreases beyond the preset range.

Using hybrid color palettes, the selected temperature range of the monitored image can be displayed in vivid colors, making it easier for users to distinguish temperature differences in the monitored areas. Temperatures of objects that are outside of the defined range are displayed in white, allowing the user to monitor scenes and quickly find any temperature abnormalities.

* Accuracy of $\pm 5^{\circ}\text{C}$ ($\leq 100^{\circ}\text{C}$), $\pm 20\%$ ($> 100^{\circ}\text{C}$) * This temperature accuracy is based on testing the minimum object distance (MoD) at room temperature as a reference value.



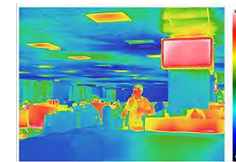
We provide 8 palettes



White hot



Black hot



Rainbow



Custom



Hybrid



Sepia



Red



Iron

Compatibility with various Software

Radiometric thermal cameras offers seamless integration with VMS (Video Management Software) from Milestone (with Hanwha's Plugin), Genetec (with Hanwha's Plugin), Wisenet SSM and Wisenet WAVE. Operators can search AI events.



with Hanwha's Plugin



with Hanwha's Plugin

Wisenet WAVE NVR

* Pixel temperature reading from WisenetWAVE will be supplied from 2025.



Temperature data reading using SUNAPI

Using SUNAPI protocol, users can see the temperature data of a single-pixel which is clicked in the VMS system, and also can get the temperature data of set ROI areas as Metadata. The data would have Min / Max / Average temperature value of the ROI areas and each coordinate of the value.

```

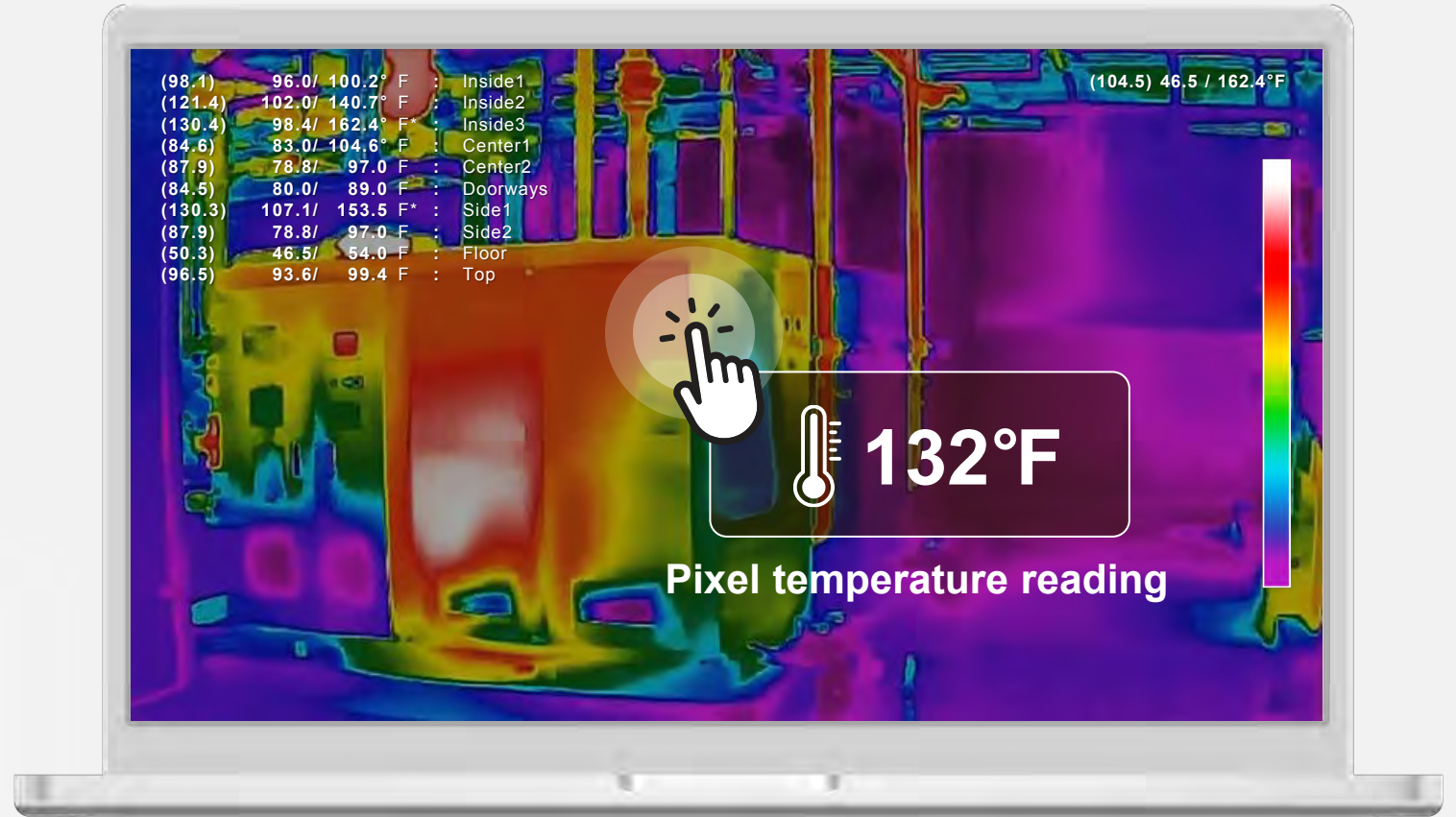
Meta
  Files
  Metadata details
  -<!--MetadataStream-->
  -<!--Event-->
  -<!--NotificationMessage-->
  -<!--Topic-->
  -<!--Message-->
  -<!--Message UtcTime-->
  -<!--Source-->
  -<!--Message UtcTime-->
  -<!--SimpleItem Name-->
  -<!--SimpleItem Name-->
  -<!--SimpleItem Name-->
  -<!--Data-->
  -<!--SimpleItem Name-->
  -<!--Element Item Name-->
  -<!--Box Temperature Reading ItemID="A" AreaName="Area-1" MaxTemperature="429.0"
    MaxTemperatureCoordinatesX="319" MaxTemperatureCoordinatesY="37"
    MinTemperature="428.0" MinTemperatureCoordinatesX="206"
    MinTemperatureCoordinatesY="53" AverageTemperature="428.3"/>
  -<!--Data-->
  -<!--Message-->
  -<!--NotificationMessage-->
  -<!--Event-->

```

```

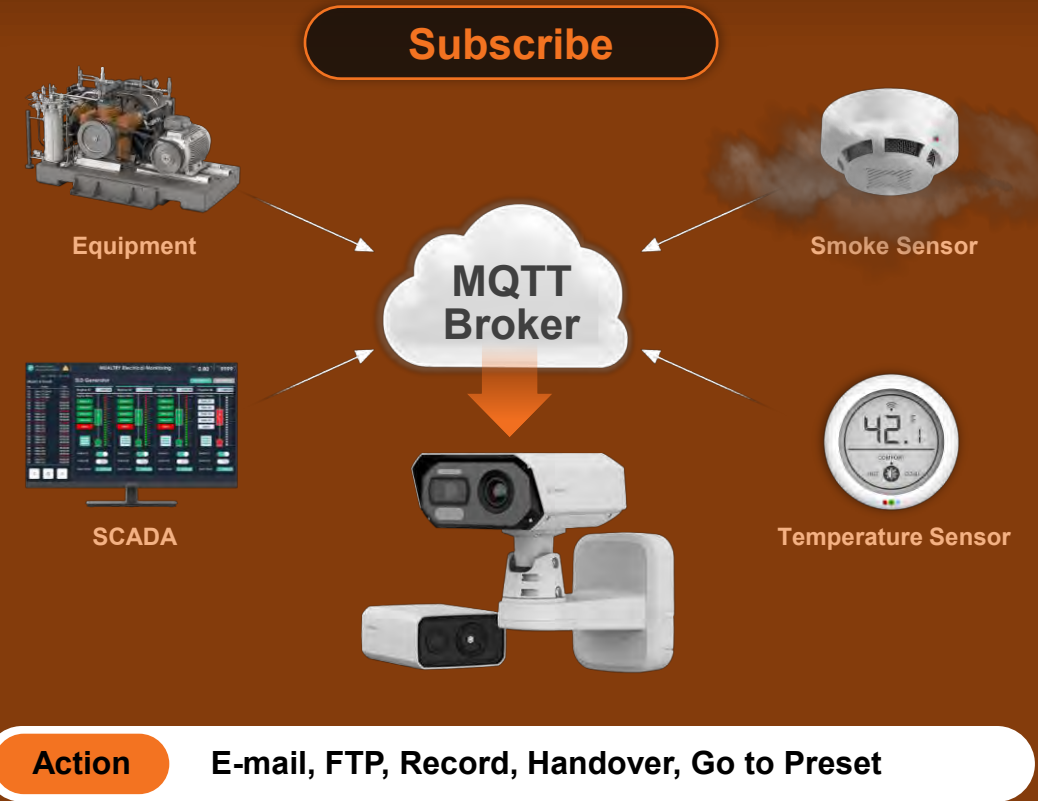
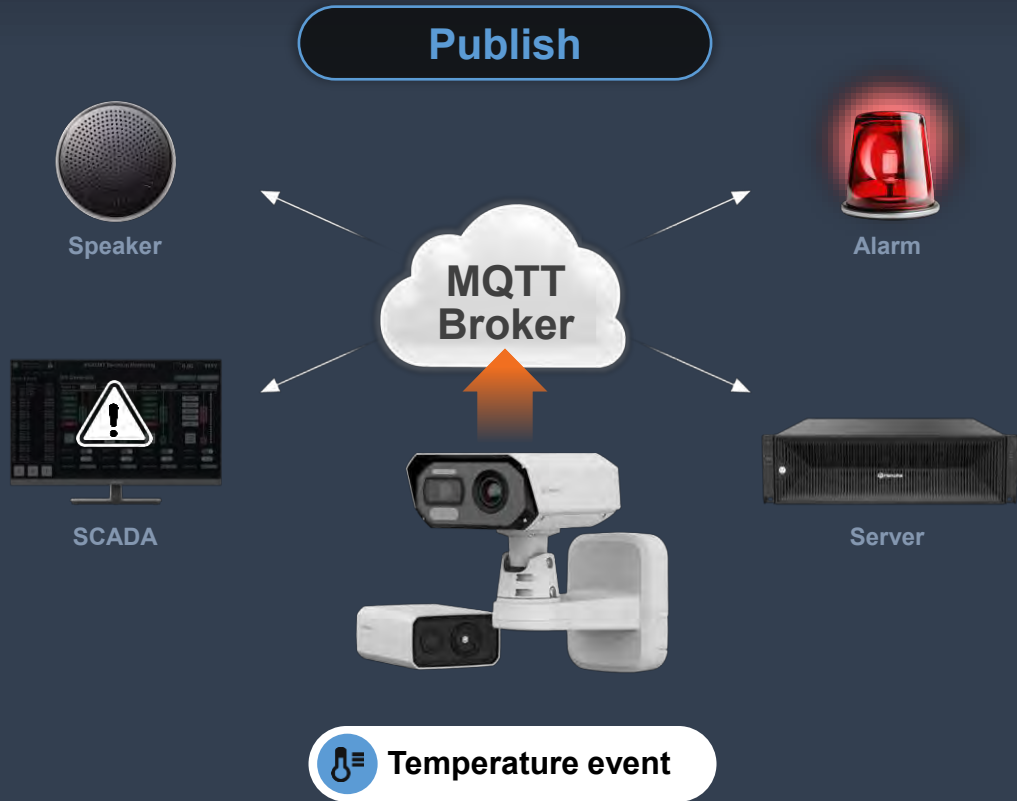
<tr: BoxTemperatureReading ItemID="A" AreaName="Area-1" MaxTemperature="429.0"
MaxTemperatureCoordinatesX="319" MaxTemperatureCoordinatesY="37"
MinTemperature="428.0" MinTemperatureCoordinatesX="206"
MinTemperatureCoordinatesY="53" AverageTemperature="428.3"/>

```



MQTT protocol for SCADA system

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. Communicating through the MQTT protocol enables the camera to easily send and receive data to and from multiple devices. MQTT allows you to link with SCADA systems.



Installation solutions for indoor environments



TNM-C3620TDR/C3622TDR

<p>Ceiling Mount SBP-142CMW</p>	<p>Ceiling Mount Base SBP-140CMB</p>	<p>Ceiling Mount Base SBP-180CMB</p>	<p>Ball Head Ceiling Mount Base SBP-180CMS</p>	<p>Ceiling Mount Pipe SBP-150CMP/300CMP/900CMP</p>	<p>Ceiling Mount Coupler SBP-C15P</p>	<p>Ceiling Mount (Assembly) SBP-150CMI / 300CMI</p>	<p>Ceiling Mount (Assembly) SBP-300CMW1 / 900CMW</p>	<p>Ceiling Mount (Telescopic) SBP-300CMTW</p>
<p>Ball Head Ceiling Mount (Telescopic) SBP-300CMTS</p>	<p>Wall Mount Base SBP-300BW1</p>	<p>Wall Mount SBP-142WMW</p>	<p>Pole Mount SBP-300PMW2</p>	<p>Corner Mount SBP-300KMW1</p>	<p>Parapet Mount SBP-300LMW</p>	<p>Parapet Mount (Telescopic) SBP-156LMW1</p>	<p>Cabinet SBP-300NBW</p>	<p>Tripod Mount STB-4150V</p>

Installation solutions for outdoor environments



Wall

The TNM-C4940TDR/C4942TDR cameras can be mounted on a wall without any additional accessories.



Pole

The TNM-C4940TDR/C4942TDR cameras can be mounted on a pole using the SBP-060S or SBP-150S stainless steel straps.



SBP-060S or
SBP-150S



Corner Mount

The TNM-C4940TDR/C4942TDR cameras can be mounted on a corner using the SBP-156WMW bracket.



SBP-156WMW



Q series AI cameras

QNV-C9083R/C8083R/**C6083R**

QNV-C9011R/C8011R/C8012

QNO-C9083R/C8083R/**C6083R**

False alarm reduction

WiseMD **NEW**

Pixel-based Motion Detection



It's a cat, not a thief!

AI-based Motion Detection



The new Q series AI 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 series AI cameras are able to help improve operator efficiency even with conventional motion detection.

SECURITY

Object classification based on AI engine



The new Q series 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

AI based analytics



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 when an object crosses the virtual line based on the user configuration.

Enhanced resolution

The new Q series AI cameras 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.

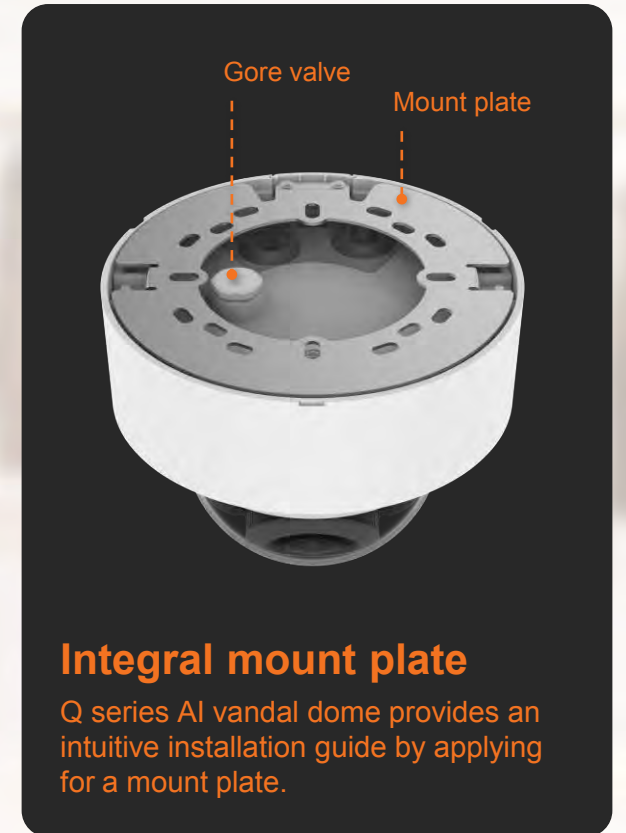
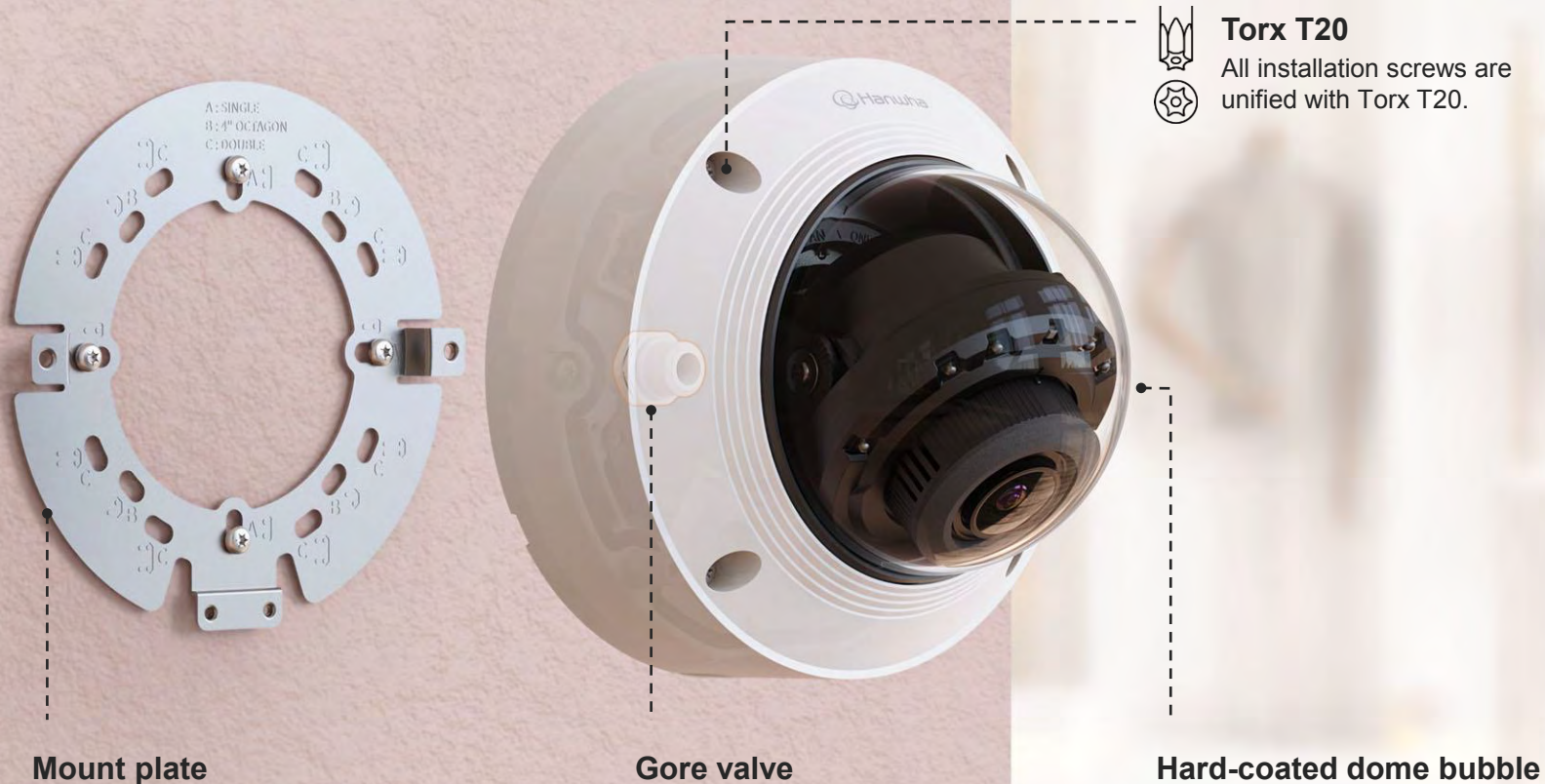
Full HD 1920X1080	QHD 2560X1440	WQHD 3440X1440	4K UHD 3840X2160
NEW			NEW
2MP	4MP	5MP	8MP
Q series AI cameras		Q series AI cameras	
Conventional Q Series			

New design for the vandal dome camera

Intuitive camera installation

NEW

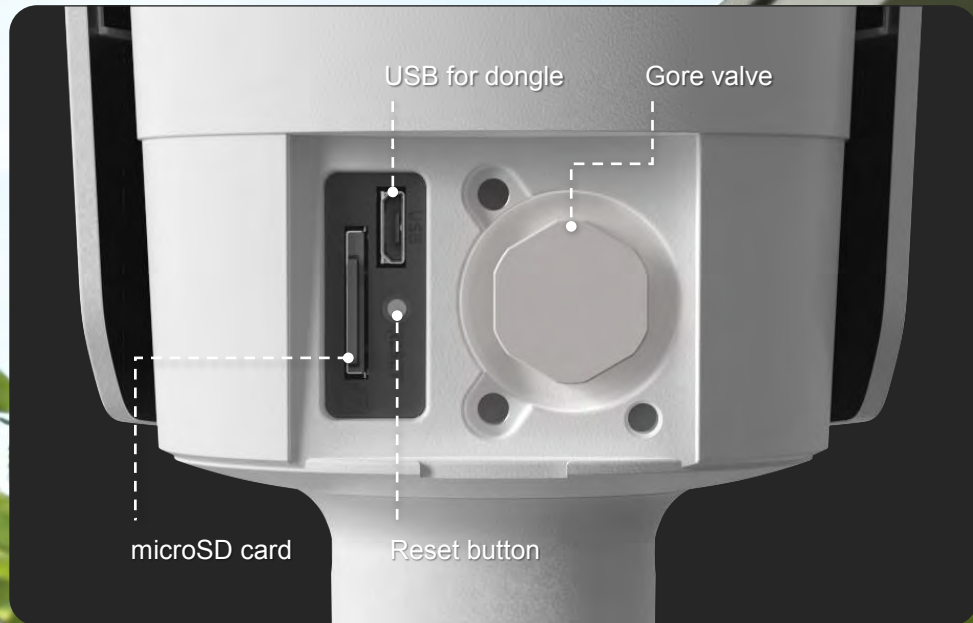
The new Q Series AI vandal dome(QNV-C9083R/C8083R/C6083R) apply the mount plate to provide an intuitive installation guide and screw hole for corresponding an electric box (gangbox). All installation screws are unified with Torx T20.



New design for the bullet camera

Q series AI bullet(QNO-C9083R/C8083R/C6083R) 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.

Dynamic range

Light and dark discrimination

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

Conventional



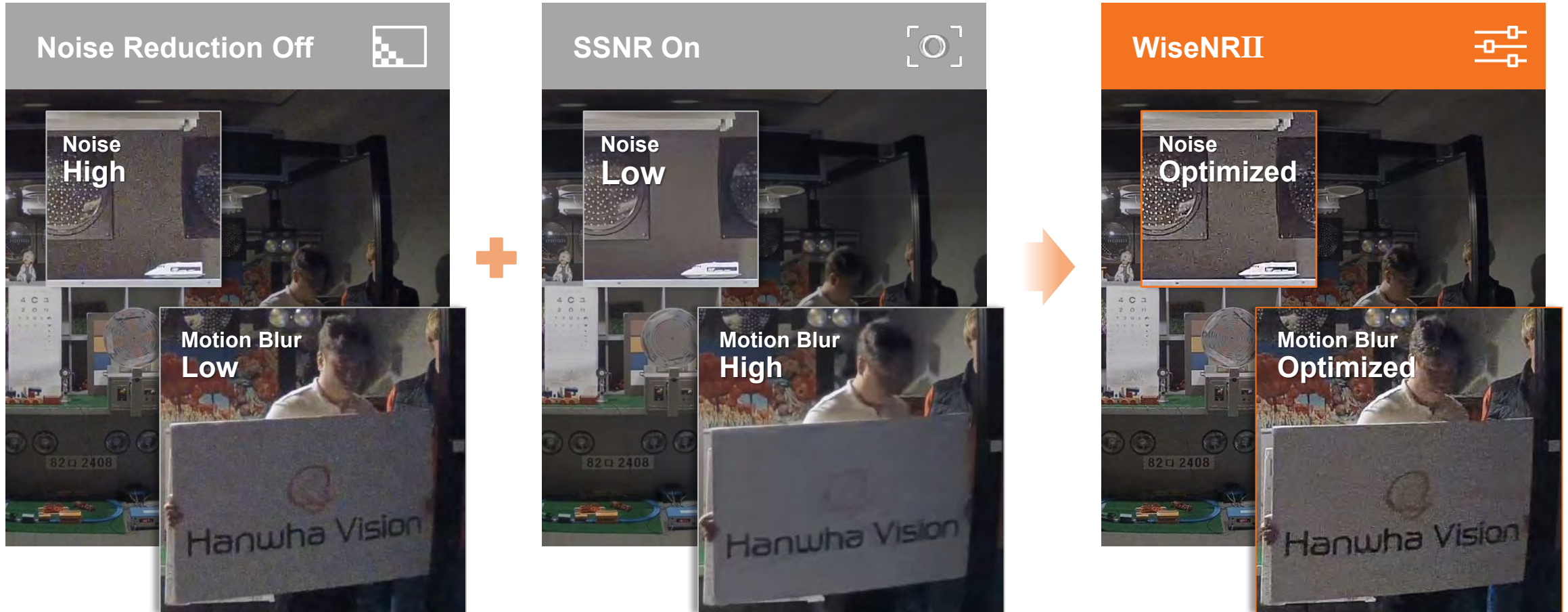
Q series AI cameras



Improved noise reduction

WiseNR II

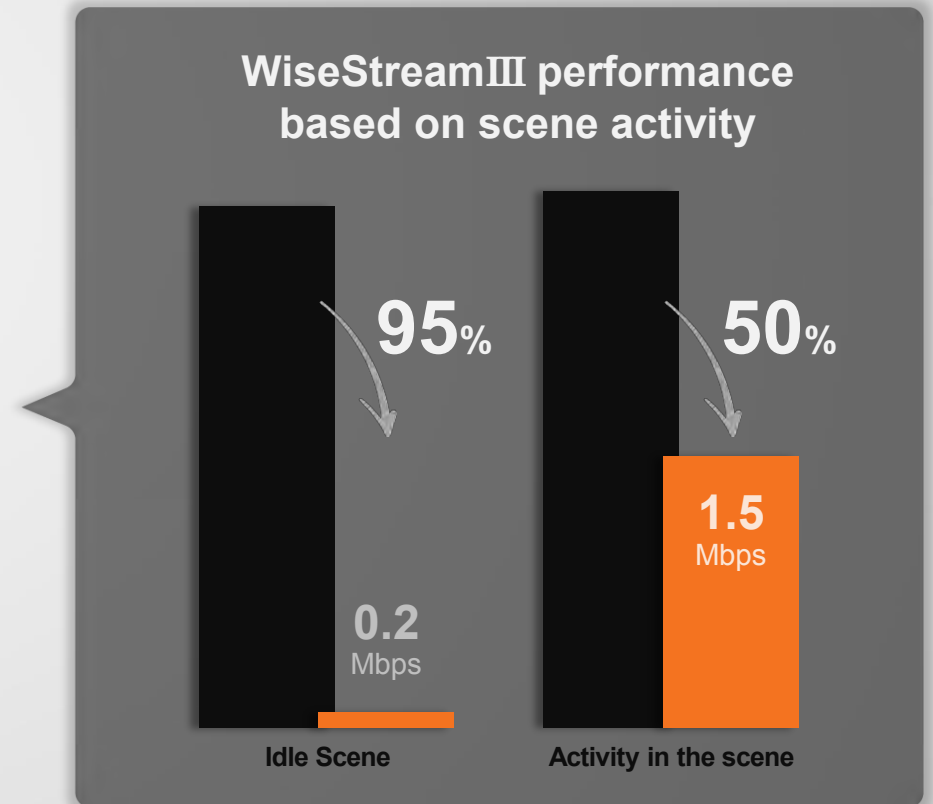
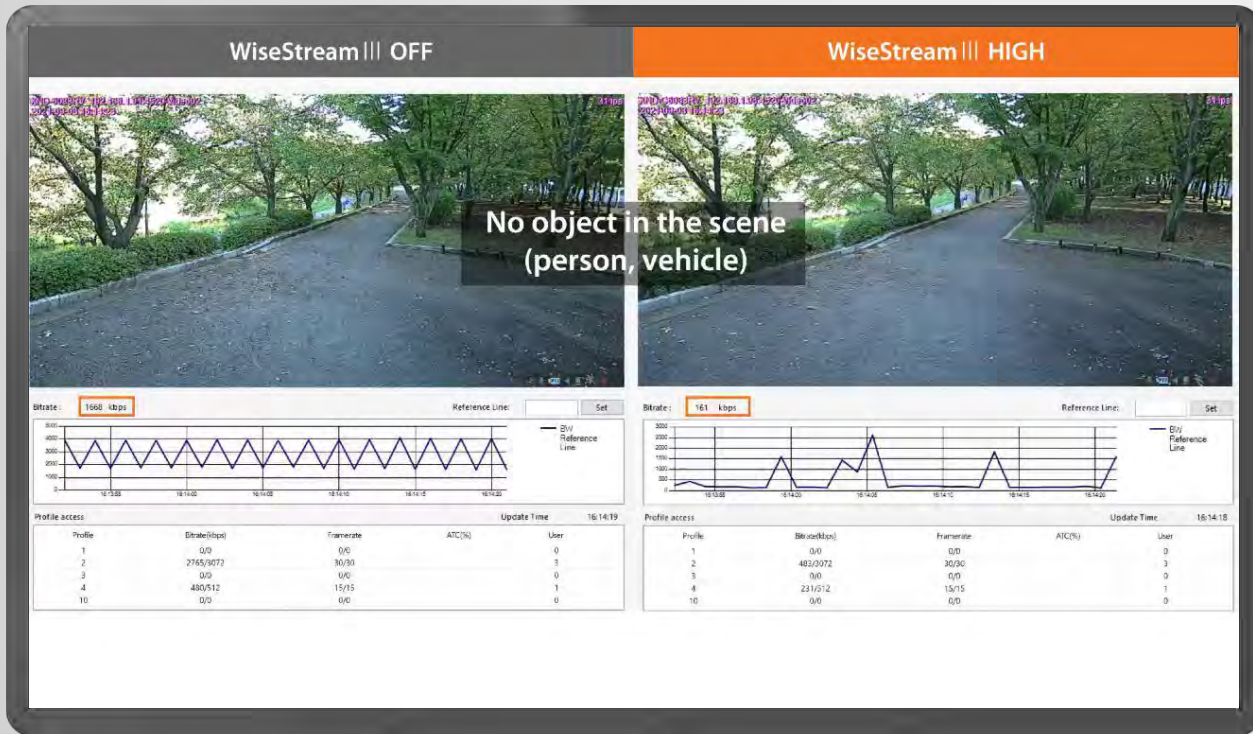
The newly applied noise reduction technology, WiseNR II, functions based on AI object detection allows for optimization of image noise and motion blur depending on object movement (person / vehicle).



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

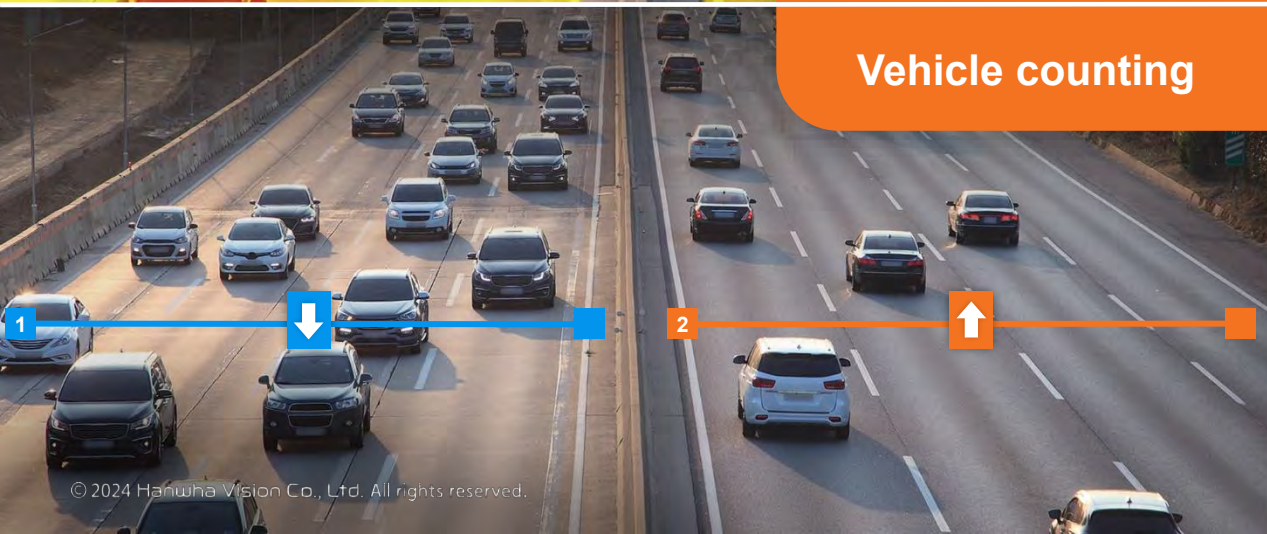
Wisenet Q AI cameras overcome the inconvenience and added expense of installing additional cameras for Business Intelligence (People counting and Heatmap). Wisenet AI cameras can detect people at any angle without additional cameras being installed.



Heatmap



People counting



Vehicle counting



Queue management

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 series AI cameras



Next level cybersecurity

The cybersecurity of the new Q series 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/C6083R



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)

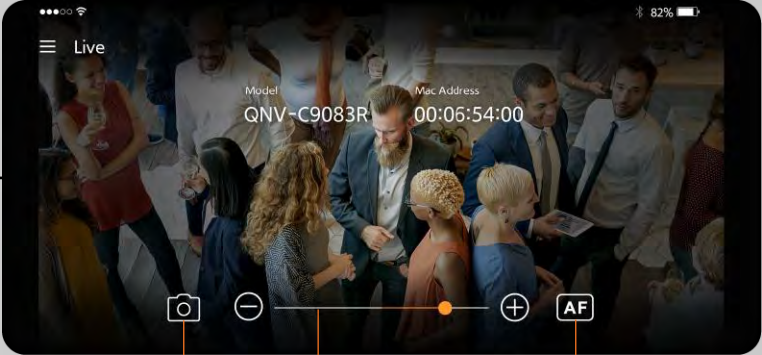


Image capture

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.

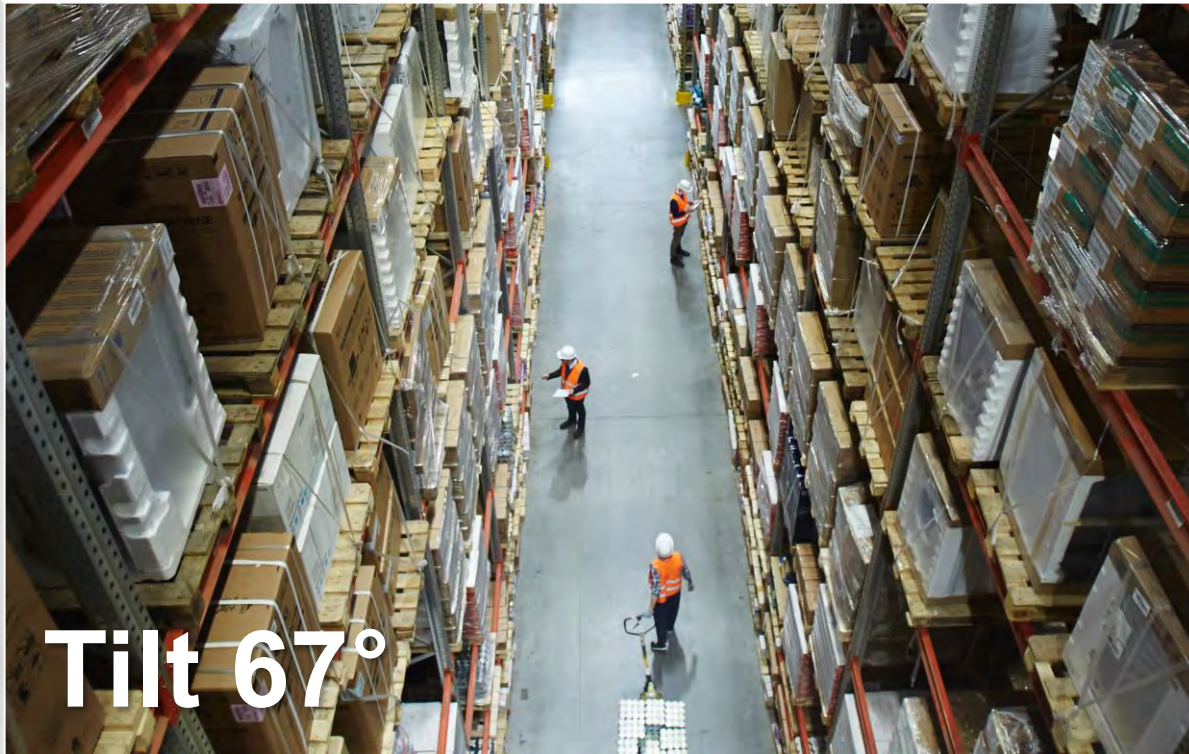
※ You can find the notification function in the Handover



Extended tilting angle

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

Conventional



Q series AI cameras



HDMI video out (only QNV-C6083R)

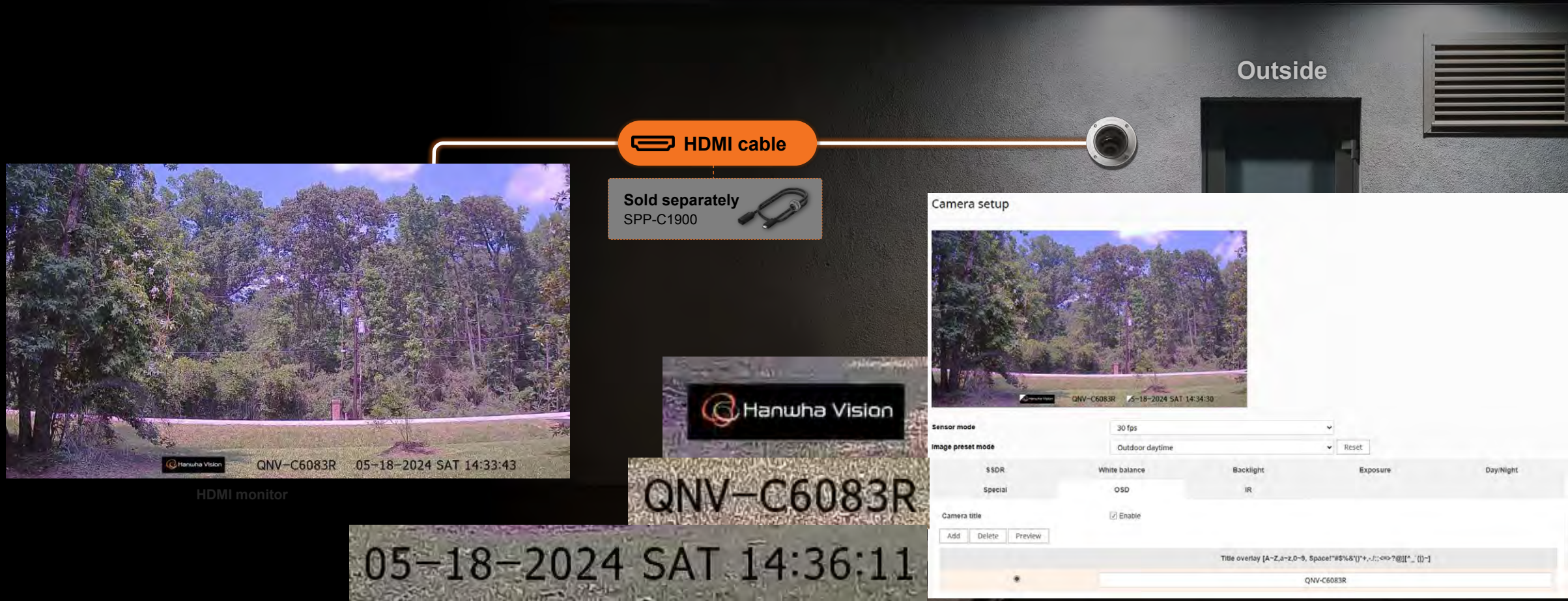
Live video monitoring is available using the HDMI out without network connection. It can be used to check the situation around the entrance or inside the store. ※ Supported through an optional cable(SPP-C1900). Simultaneous installation of audio/alarm and HDMI cable is not possible.



Key features

HDMI video out (only QNV-C6083R)

OSD info is also shown on HDMI Out



Compatible VMS

Compatible software

The new Q series AI cameras offers seamless integration with VMS(Video Management Software) from Milestone(with Hanwha's Plugin), Genetec(with Hanwha's Plugin), Wisenet SSM and Wisenet WAVE. Operators can search AI events.



with Hanwha's Plugin



with Hanwha's Plugin

Wisenet WAVE NVR





※ NVR can support only Event search. (Only vehicle type can support in AI search)



Compatible cloud service

The new Q series AI cameras offers seamless integration with cloud base solutions from Hanwha and Genetec.

※ The integration with Genetec Security Center SaaS will be completed in the second half of 2024.

 Hanwha Vision	 OnCloud	Direct-to-cloud video management system
	DMPro	Remote multi-site surveillance system monitoring
	SightMind	Real-time analytics dashboard
 Genetec	 Security Center SaaS	Genetec Security Center SaaS



Specification



Q series AI Vandal Dome Camera

QNV-C9083R/C8083R/C6083R

Category	Specification
Resolution	4K / 5MP / 2MP
Lens	3.2~10.2mm M-VF lens
Wide Dynamic Range	120dB
IR distance	30m (QNV-C9083R/C8083R) / 40m (QNV-C6083R)
Analytics	<p>[Analytics events] - Defocus detection, Tampering, Virtual area (Appear/Disappear)</p> <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) HDMI out (QNV-C6083R only) *Supported through an optional cable(SPP-C1900)
Power Consumption	PoE
Certification	IP66, IK10
Security	Device certificate (Hanwha Private Root CA), Secure boot, Signed firmware, Firmware encryption

Specification



Q series AI Bullet Camera

QNO-C9083R/C8083R/C6083R

Category	Specification
Resolution	4K / 5MP
Lens	3.2~10.2mm M-VF lens
Wide Dynamic Range	120dB
IR distance	30m (QNO-C9083R/C8083R) / 40m (QNO-C6083R)
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

3 Specification and Installation

3-4. 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/C6083R



Dome cover



Camera module



Mount plate



Quick guide



Cap installer

Sold separately



Audio & Alarm Cable



HDMI Cable

Micro vandal

QNV-C9011R/C8011R/C8012



Dome cover



Camera module



Water proof
RJ45 cable ACC



Quick guide

Bullet

QNO-C9083R/C8083R/C6083R



Bullet camera



Sunshield



Sunshield knob



Quick guide

























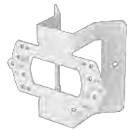













Water proof
RJ45 cable ACC

3 Specification and Installation

3-5. Installation solution of QNV-C9083R/C8083R/C6083R






























For Ø140 Vandal V/F

 Hanging Adaptor SBP-140HMW	 Ceiling Mount Base SBP-140CMB	 Ceiling Mount Base SBP-180CMB	 Ball Head Ceiling Mount Base SBP-180CMS	 Ceiling Mount Pipe SBP-150CMP/300CMP/900CMP	 Ceiling Mount Coupler SBP-C15P	 Ceiling Mount (Assembly) SBP-150CMI / 300CMI	 Ceiling Mount (Assembly) SBP-300CMW1 / 900CMW	 Ceiling Mount (Telescopic) SBP-300CMTW
 Ball Head Ceiling Mount (Telescopic) SBP-300CMTS	 Ceiling Mount (Tile Grid) SBP-140CMT	 Plenum In-Ceiling Mount SHD-1400FPW	 In-Ceiling Mount SHD-1400FW	 Wall & Pole Mount SBP-250WMW	 Wall & Pole Mount SBP-400WMW	 Wall Mount Base SBP-300BW1	 Wall Mount SBP-300WMW	 Wall Mount SBP-300WMW1
 Wall Mount SBP-390WMW2	 Wall & Pole Mount SBP-140WMW	 Wall & Pole Adaptor SBP-115PFA	 Pole Mount SBD-140PMW	 Pole Mount (Lite) SBD-140PMB	 Pole Mount SBP-300PMW2	 Corner Mount (Lite) SBD-140KMB	 Corner Mount SBP-300KMW1	 Corner Mount SBP-156KMW
 Parapet Mount SBP-300LMW	 Parapet Mount (Telescopic) SBP-156LMW1	 Cabinet SBP-300NBW	 Back Box SBV-140BW	 Tilt Mount SBV-140TMW	 Dome Cover SPB-VAN82W	 Audio & Alarm Cable SPP-C7400	 Conduit Adaptor SBP-060BA	 HDMI Cable (for QNV-C6083R) SPP-C1900

3 Specification and Installation

3-5. Installation solution of QNO-C9083R/C8083R/C6083R

※ Essential Model for additional Compatibility ※

 <p>Gang Plate SBO-090GP</p> <p>Back Box SBO-140BW</p>		+	 <p>Hanging Adaptor SBP-140HMW</p>		 <p>Ceiling Mount Base SBP-140CMB</p>		 <p>Ceiling Mount Base SBP-180CMB</p>		 <p>Ball Head Ceiling Mount Base SBP-180CMS</p>		 <p>Ceiling Mount Pipe SBP-150CMP/300CMP/900CMP</p>		 <p>Ceiling Mount Coupler SBP-C15P</p>				
 <p>Ceiling Mount (Assembly) SBP-150CMI / 300CMI</p>			 <p>Ceiling Mount (Assembly) SBP-300CMW1 / 900CMW</p>		 <p>Ceiling Mount (Telescopic) SBP-300CMTW</p>		 <p>Ball Head Ceiling Mount (Telescopic) SBP-300CMTS</p>		 <p>Wall Mount Base SBP-300BW</p>		 <p>Wall & Pole Mount SBP-250WMW</p>		 <p>Wall & Pole Mount SBP-400WMW</p>		 <p>Wall Mount SBP-300WMW</p>		 <p>Wall Mount SBP-300WMW1</p>
 <p>Wall Mount SBP-390WMW2</p>		 <p>Wall & Pole Mount SBP-140WMW</p>		 <p>Wall & Pole Adaptor SBP-115PFA</p>		 <p>Tilt Mount SBV-140TMW</p>		 <p>Pole Mount SBD-140PMW</p>		 <p>Pole Mount (Lite) SBD-140PMB</p>		 <p>Pole Mount SBP-300PMW2</p>		 <p>Corner Mount (Lite) SBD-140KMB</p>		 <p>Corner Mount SBP-300KMW1</p>	
 <p>Corner Mount SBP-156KMW</p>		 <p>Parapet Mount (Telescopic) SBP-156LMW1</p>		 <p>Parapet Mount SBP-300LMW</p>		 <p>Cabinet SBP-300NBW</p>											

Installation solutions



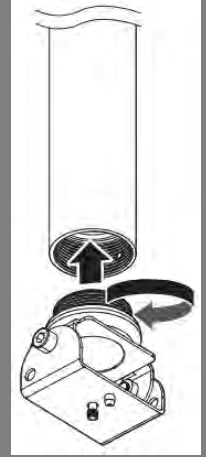
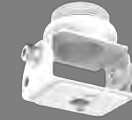
Installation solution

SBP-142CMW

Ceiling Mount
compatible with TNM-3620TDY, TNM-C3620TDR/C3622TDR



Included



SBP-142WMW

Wall Mount
compatible with TNM-3620TDY, TNM-C3620TDR/C3622TDR



Included



Installation solution

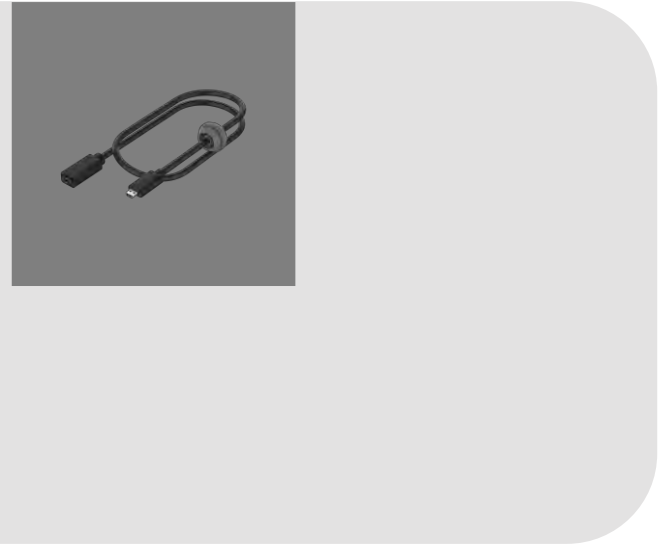
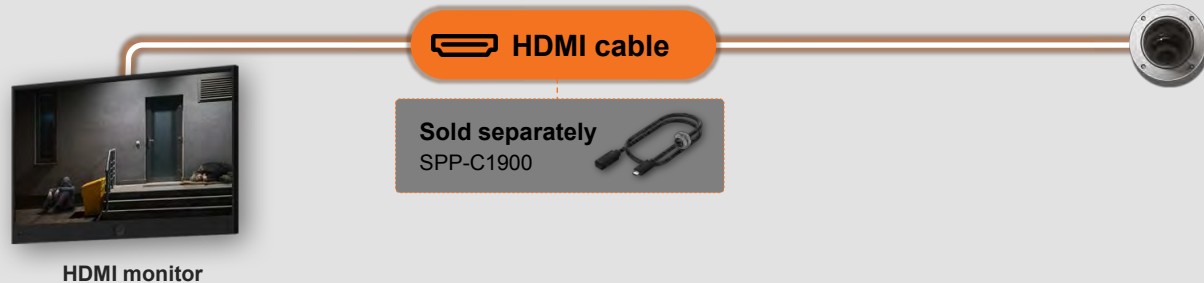
SPB-VAN82W

Smoke Dome Cover
compatible with QNV-C6083R/C8083R/C9083R



SPP-C1900

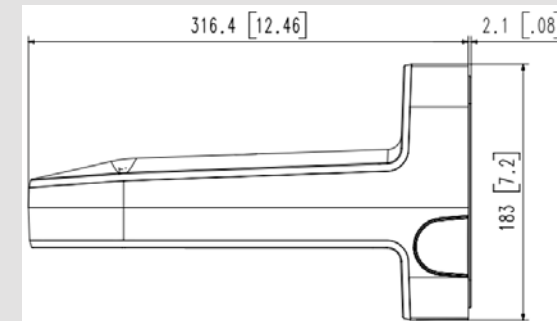
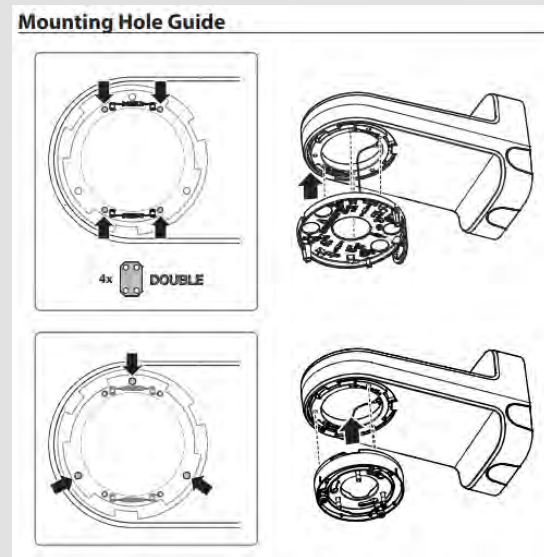
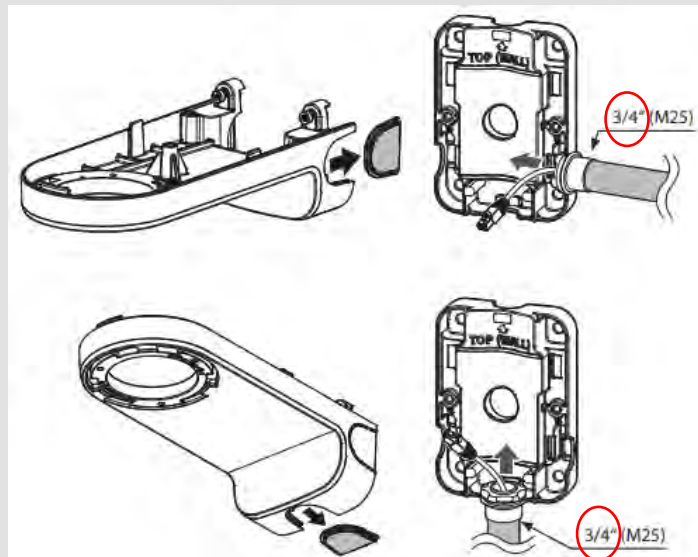
HDMI Cable
Pack of 3 compatible with QNV-C6083R



Installation solution

SBP-250WMW

Wall & Pole Mount Compatible with SBP-200C, SBP-250C & SBP-315C
SBP-115PA for PTZ Plus and SBP-115PFA for Hanging Adaptor
Compatible with white hanging caps
Camera Direct mount compatibility with double gang mounting



Length from wall/base is 12.46"



Installation solution

SBP-250WMW vs SBP-300WMW1 + Hanging Cap/Adapter

The SBP-300WMW1 will still be available



Short version	Old (SBP-300WMW1)	New (SBP-250WMW)
Enclosure	X	X
3/4" Conduit connectivity	X	3 (from bottom and side)
Installation Site	Wall	Wall & Pole
Certification	X	X
Camera installation	Hanging cap mandatory	Direct assembly supported MDC can use with adaptor
Compatibility range	Not supporting MDC	All



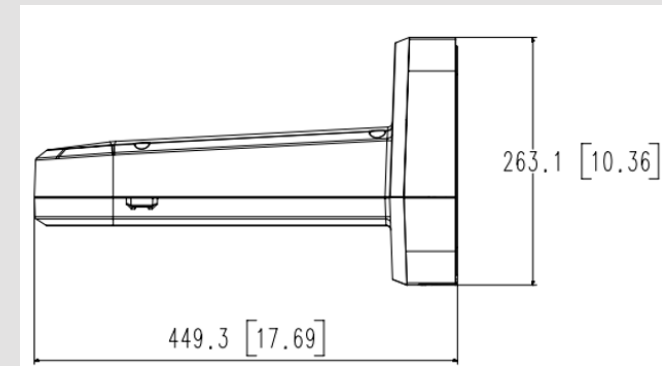
Installation solution

SBP-400WMW

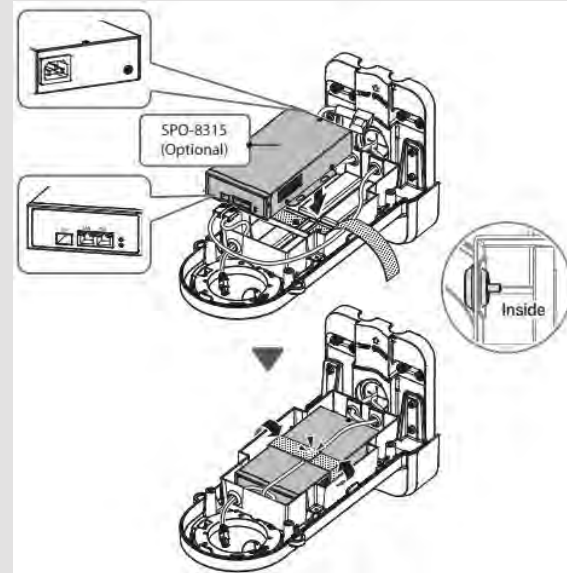
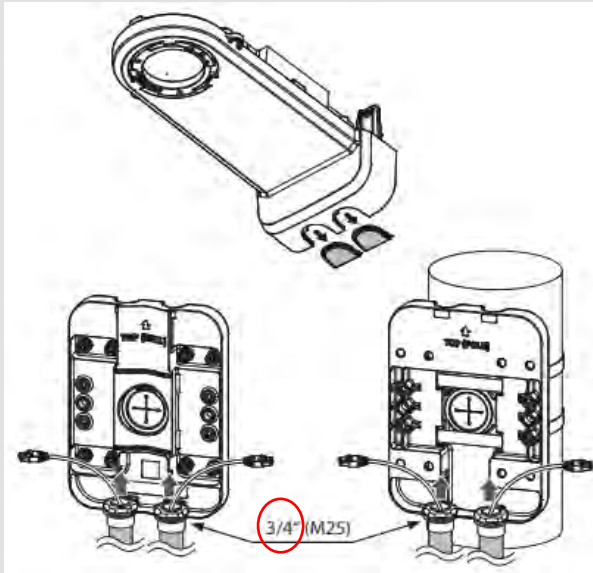
Wall & Pole Mount Compatible with
SBP-200C, SBP-250C & SBP-315C
SBP-115PFA & SBP-115PA

Compatible with white hanging caps

Camera Direct mount compatibility with double gang mounting
SPO-8315 & SPO-6011



Length from wall/base is 17.69"



Optional Accessory



Steel Strap:
SBP-060S (600mm)
SBP-150S (1500mm)

Installation solution

SBP-400WMW vs SBP-390WMW2 + Hanging Cap/Adapter

The SBP-390WMW2 will be discontinued later this year



Long version	Old (SBP-390WMW2)	New (SBP-400WMW)
Enclosure	X	O (up to 83W HPoE injector)
3/4" Conduit connectivity	2pcs (from side), Thread type	2 (from bottom), Cap hole type
Installation Site	Wall	Wall & Pole
Certification	X	IP66, NEMA 4X
Camera installation	Hanging cap mandatory	Direct assembly supported PTZ and MDC can use with adaptor
Compatibility range	All	All



Installation solution

SBP-115PFA

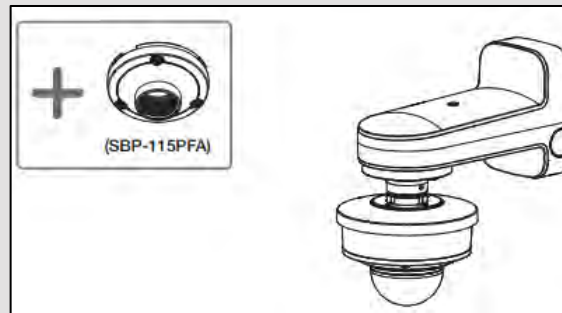
Pack of 3

(SBP-250WMW/SBP-400WMW)

Compatible with

SBP-180HMW1/200HMW/

215HMW/250HMW/315HMW



SBP-115PA

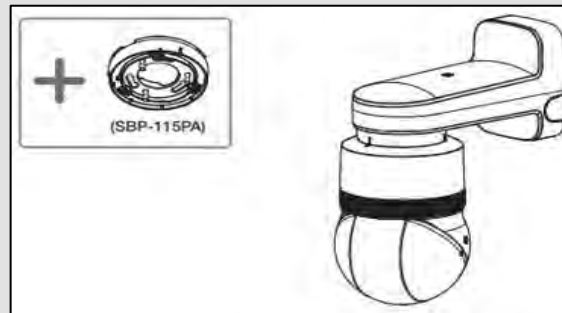
Pack of 3

(SBP-250WMW/SBP-400WMW)

Compatible with XNP-C7310R/C9310R,

XNP-C6403/C8253/C9253,

XNP-6400/8250/9250

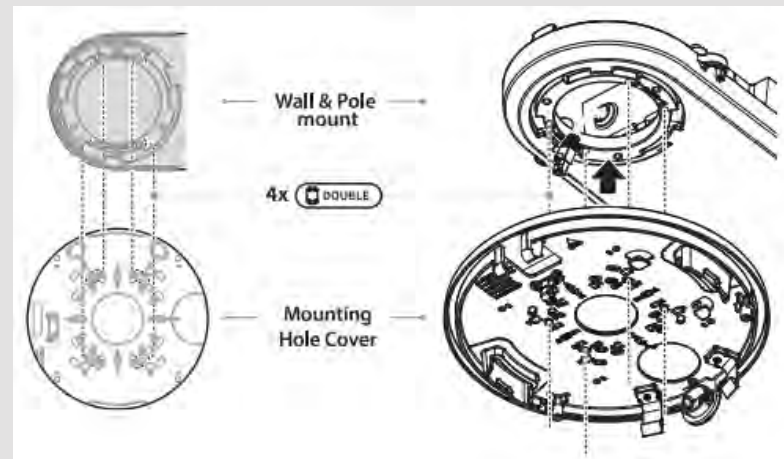
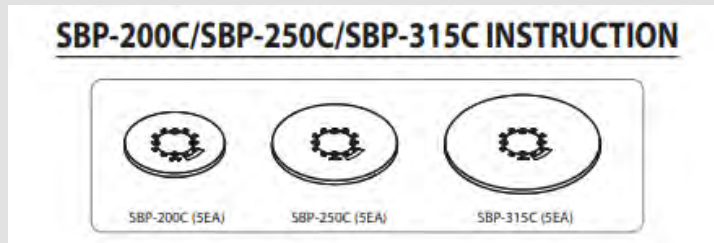


Installation solution

SBP-200C Mount Plate **Pack of 5** for SBP-250WMW & SBP-400WMW compatible with PNM-C16013RVQ

SBP-250C Mount Plate **Pack of 5** for SBP-250WMW & SBP-400WMW compatible with PNM-C16083RVQ/C32083RVQ, PNM-8082VT, PNM-9084QZ/QZ1, PNM-9022V, PNM-C9022RV, PNM-9031RV

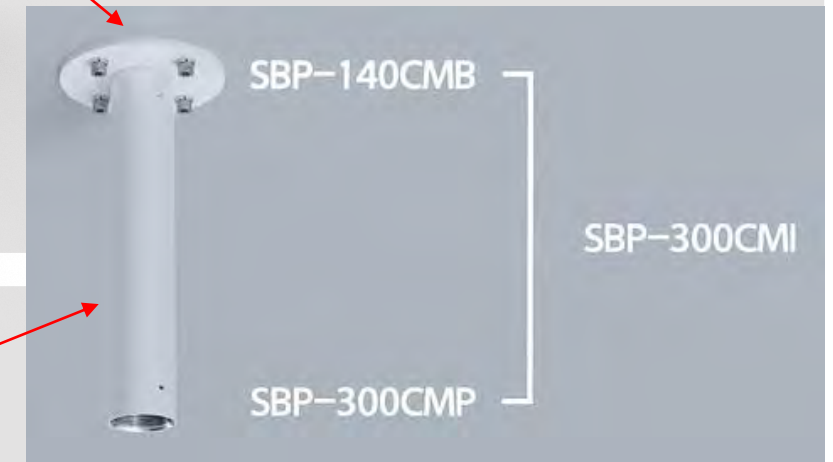
SBP-315C Mount Plate **Pack of 5** for SBP-250WMW & SBP-400WMW compatible with PNM-9084RQZ/RQZ1, PNM-9085RQZ/RQZ1



Installation solution

SBP-140CMB replacement for SBP-302CMAW

Ceiling mount base (w/o conduit holes), compatible with extension pipes: SBP-C15H, SBP-150CMP/300CMP/900CMP, SBP-C15P



Example – Extension Pipe to SBP-140CMB



Installation solution

SBP-150CMP replacement for SBP-302CM-06W

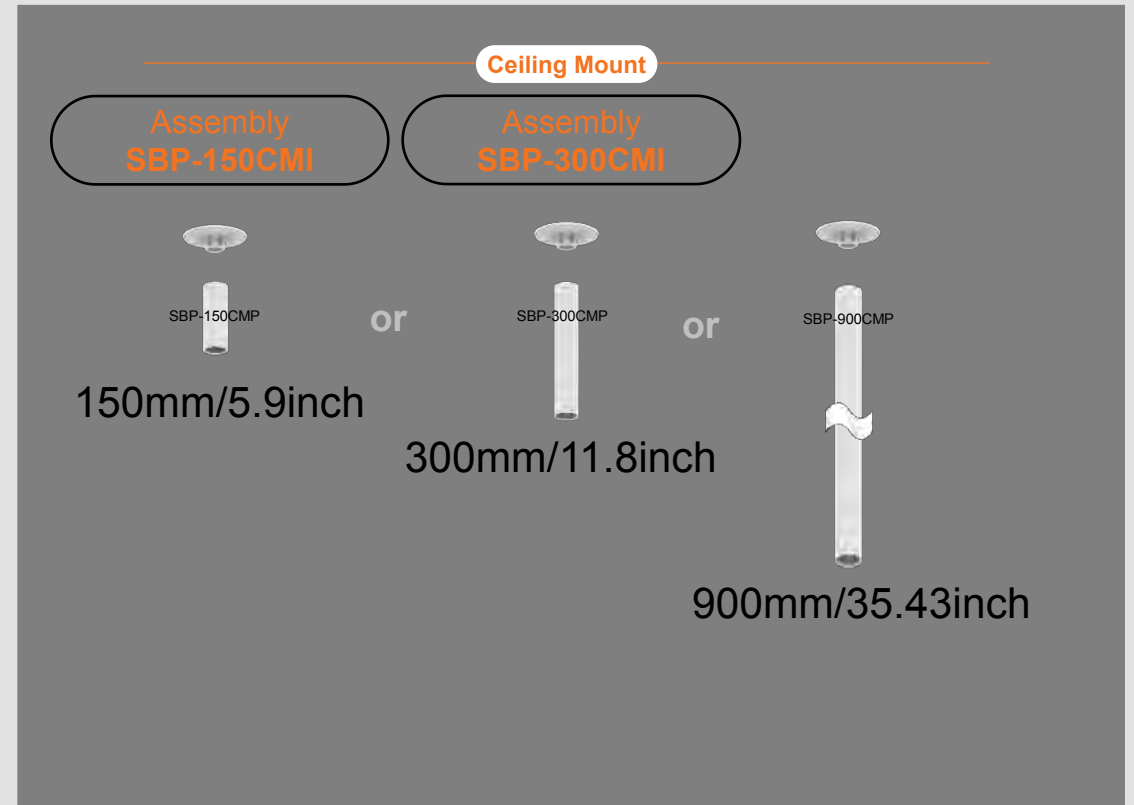
Ceiling mount pipe (150mm/5.9inch),
 Compatible with: SBP-140CMB, SBP-180CMB and Pipe extension: SBP-C15P, SBP-150CMP/300CMP/900CMP

SBP-300CMP replacement for SBP-302CM-12W

Ceiling mount pipe (300mm/11.8inch),
 Compatible with: SBP-140CMB, SBP-180CMB and Pipe extension: SBP-C15P, SBP-150CMP/300CMP/900CMP

SBP-900CMP replacement for SBP-302CM-36W

Ceiling mount pipe (900mm/35.43inch),
 Compatible with: SBP-140CMB, SBP-180CMB and Pipe extension: SBP-C15P, SBP-150CMP/300CMP/900CMP



Installation solution

SBP-C15H replacement for SBP-HCFW

1.5" Coupler (White) **Pack of 4** compatible with
Ceiling mount SBP-140CMB, SBP-180CMB, SBP-180CMS
Hanging Adaptor SBP-099HMW, SBP-120HMW, SBP-
140HMW, SBP-160HMW1,
SBP-180HMW1, SBP-200HMW, SBP-250HMW, SBP-
315HMW, SBP-156HMW

