Hanwha
Techwin

Solving Problems in the Financial Sector with Object and Attribute Detection

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Agenda & Notes

- Presenter Introductions

- Introduction to Hanwha Group and Hanwha Techwin

- Next Level Cyber Security

- Advanced Analytics Powered with Object Classification and Attributes

- Analytics and AI Demonstration

- Popular Devices for Common Problems

- Questions, Q&A, and Close

1. This webinar is being recorded and will be available for replay and in pdf format. Please visit
https://www.hanwhasecurity.com/trainings/webinars/ to view past webinars & sign up for future ones.

2. All participants have been put into listen only mode.

3. We will take Q&A time permitting and if time runs out to answer all of the questions, we will reply to you individually afterwards. Please use the Chat Box.

Korean Heritage – Global Reach

Hanwha Group is a proudly Korean company. We are a global conglomerate of subsidiaries and a Fortune Global 500 Entity. Founded in 1952, Hanwha Group is now a $60B+ company with sectors including Defense Manufacturing, Aerospace, Chemicals and Green Energy Alternatives
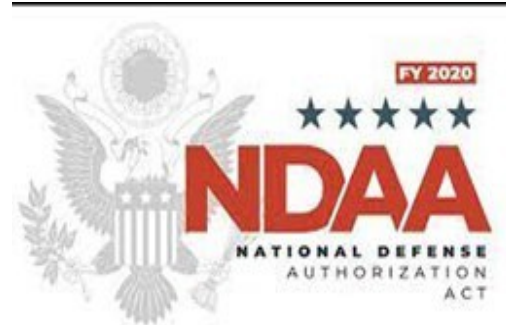
Manufacturing and Supply Chain

Hanwha Techwin has 30+ years of security manufacturing experience in video surveillance

Hanwha Techwin products are manufactured:
- In Hanwha Factories (Korea and Vietnam)
- With Hanwha Employees
- Using Hanwha Precision Manufacturing Equipment
- Powered by Hanwha Q-Cell Solar Power
- Featuring Hanwha designed Wisenet SoC Processors
- Sold under the Wisenet Brand

Cyber Security

Protecting Financial Institutions from Reputational Risk

Enabling IT Risk Management

Cyber Security

- Hanwha Techwin takes pride in having one of the strongest cybersecurity track records in the video surveillance industy.

- Hanwha's cyber security related, long-term firmware support policy includes various firmware improvement activities, vulnerability countermeasures and product security quality improvement activities.

- Additionally, Hanwha operates a security vulnerability response team (S-CERT) to track and monitor unauthorized security breaches from external sources, and to prevent internal security flaws.

- NDAA Compliant (https://www.hanwhasecurity.com/resources/national-defense-authorization-act-ndaa.html)

UL-CAP Certified
Underwriters Laboratories – Cybersecurity Assurance program

Cybersecurity Assurance Program

S-CERT & External Monitoring
Security Vulnerability Response Team Monitoring via CVE, ICS-CERT, KISA

Hardening
Practical setup guide, detailed guide for 4 levels of security implementation

Disclosure
Security Vulnerability disclosure policy. Clear and published policy for sharing vulnerabilities

Cyber Essentials
3rd Party accreditation
UK Government backed accreditation scheme

Other Certificates
TTA Public IP Camera Certificate
KISA Intelligent CCTV Solution Certificate

Next level cybersecurity

<div style="border: 1px solid orange; border-radius: 20px; display: inline-block; padding: 10px;">**TPM 2.0** (FIPS 140-2 certification)</div>

TPM is hardware that creates hard to predict

'actual random numbers' that provides enhanced security compared to software producing

similar random numbers. Also, encryption keys can be saved within TPM for dual protection.

So, TPM can serve as secure storage.

All new X-Plus and PNM cameras have applied FIPS 140-2 certified TPM.

FIPS(The United States 'Federal Information Process Standards) is a security

the standard for cryptographic modules the federal governments in the US, UK, Canada

used to approve whether TPM is securely designed and implemented.

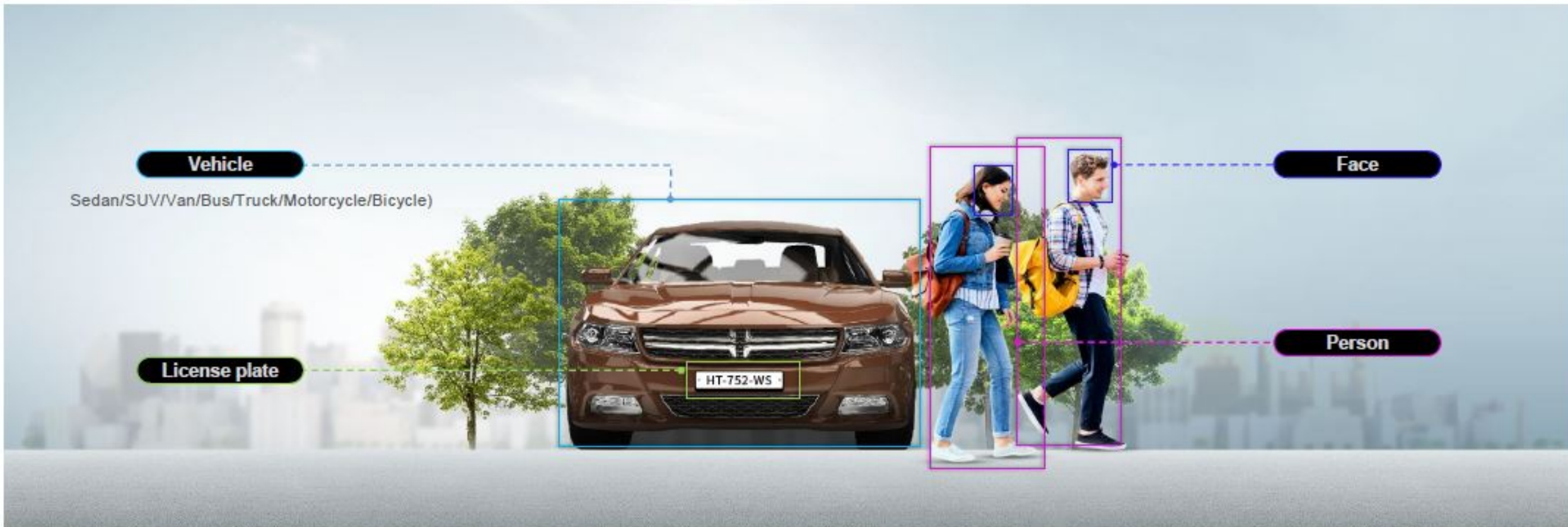With this certified TPM, users are using cameras more securely.

Advanced Analytics with AI

Object Classification – Increased Reliability
Object Attributes – Faster Searches
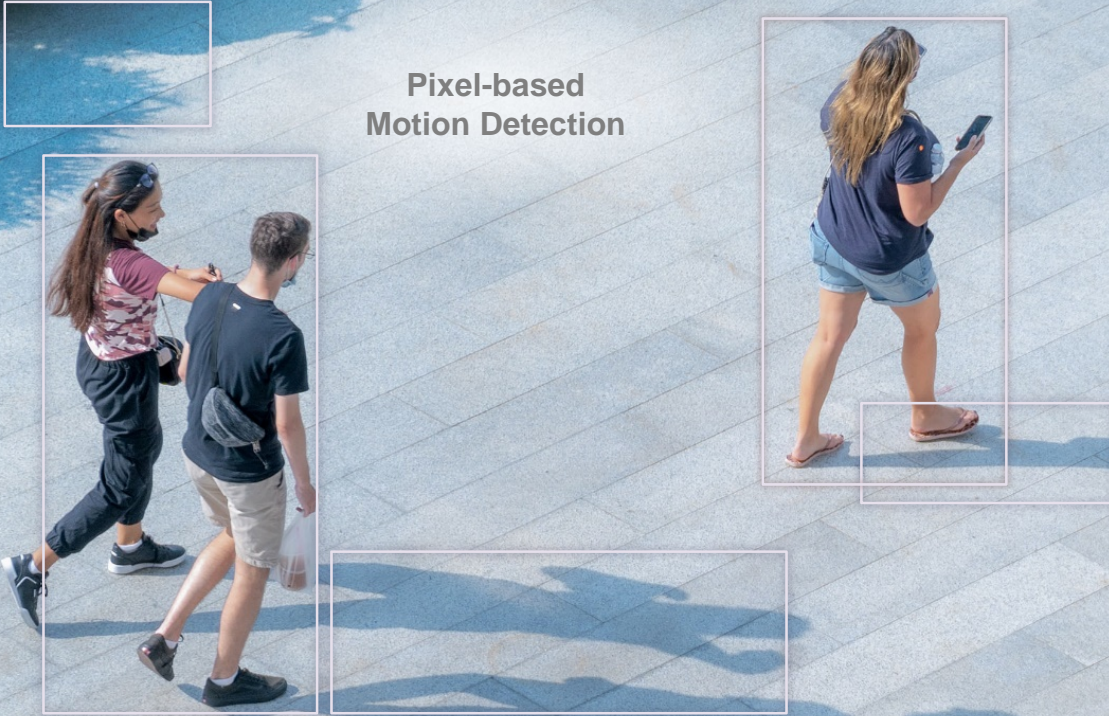
Object Classification

Wisenet X AI can classify People, Vehicle, Face and License plate as well as attributes extraction from the vehicle

Wisenet X AI camera generate metadata that contains the classified object, location as well as the attributes if available
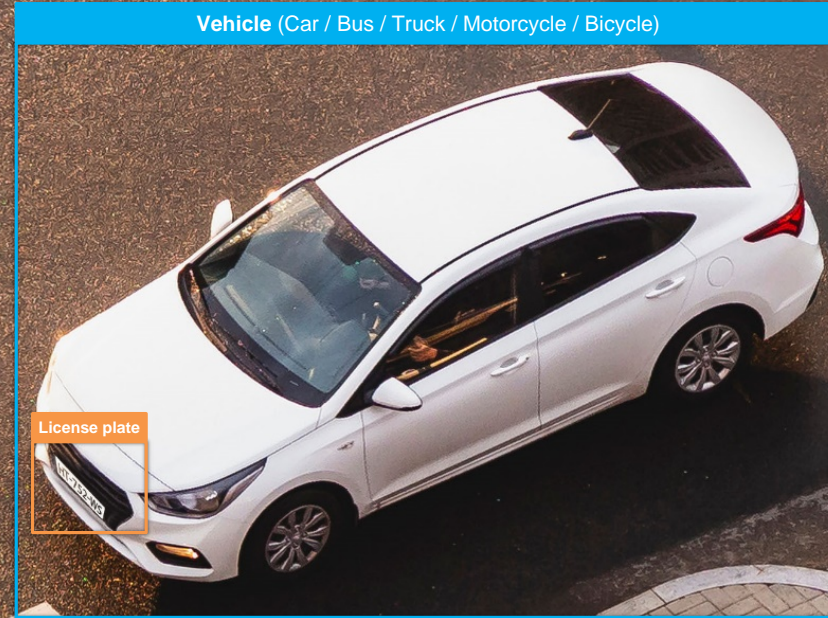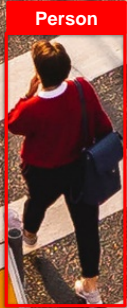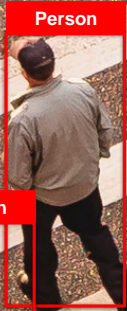
X series meet AI

False alarm reduction and Forensic search

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Pixel-based Motion Detection

AI-based Object Detection & Classification

X AI Camera

The new X AI 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, X AI cameras can help improve operator efficiency.

WISENET

X series meet AI

Object classification based on AI engine

Person
Person
Face
Person
Person
Person
Vehicle (Car / Bus / Truck / Motorcycle / Bicycle)
License plate

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

WISENET

Intelligent Video Analytics – Enhanced by Object Classification

Loitering

Virtual line

Enter / Exit

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Attribute Extraction – Find Evidence Fast

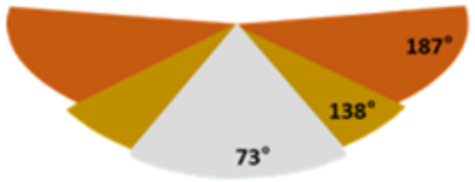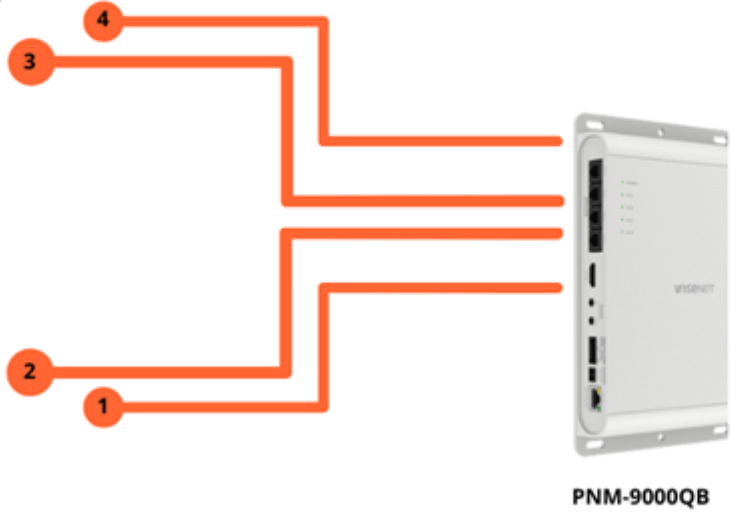| Detected Objects	Attribute Category	Supported Attribute Items
Person	Gender	Female, Male
	Upper garment	(Up to 2 colors simultaneously) Black, Gray, White, Red, Orange, Yellow, Green, Blue, Purple
	Lower garment	
	Bag	Carries a bag, does not carry a bag
Face	Gender	Female, Male
	Age	Young/Adult/Middle/Senior
	Glasses	Wearing glasses, not wearing glasses
	Face mask	Wearing mask, not wearing mask
Vehicle	Type	Car (sedan/SUV/van/etc.), bus, truck, motorcycle, bicycle
	Color	(Up to 2 colors simultaneously) Black, Gray, White, Red, Orange, Yellow, Green, Blue, Purple
License plate	License plate	Presence of a license plate

WISENET

DEMONSTRATION

Cameras for Retail Branch Banking

Connect up to (4) cameras on a single device and a *single VMS license

PNM-9000QB

187°
138°
73°

Fields of view options

Various accessories

Compatible with various lens modules

SLA-T2480A
2.4mm fixed lens

SLA-T2480VA
2.4mm fixed lens

SLA-T4680A
4.6mm fixed lens

SLA-T4680VA
4.6mm fixed lens

SLA-T1080FA
1.6mm fixed lens

Corner mount dome

Dome bracket

Covert Multi-Sensor

PNM-9000QB

- 4CH multi-head camera body
- New WN7 Chipset
- 2MP IP w/ protected lens
- Many compatible accessories
- Optional 49FT cable
- Edge analytics w/ face detection
- 12VDC, POE+

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ATM

ATM Camera Kit

- Ultra compact covert design
- Custom mounting brackets
- 2MP IP w/ analog output
- H,265 / H.264 Support
- Multiple covert lens options
- Micro SD slot 256 GB
- Coming soon, 4-sensor version!
- Bi-directional audio

XNB-6001

XNB-H6240A

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Teller Counter

XNB-H6280B

Lens Housing

Tower Assembly
Optional

Base Plate/Cover
3 Options Included

- Mounts to counter or glass
- 2MP IP w/ analog output
- Modular housing, flexible mounting options
- Capture suspect faces
- Micro SD slot 256 GB

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Mullion and Door Jamb Mounts

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Mullion Mount/Lens

- 2MP (1920x1080) resolution
- 4.6mm Lens, 73° horizontal FoV
- +/- 30 Degree Panning

2 Megapixel Door Jamb Mount/Lens

- 2MP (1920x1080) resolution
- 4.6mm Lens, 73° horizontal FoV
- +/- 30 Degree Panning

SHD-46VDB
(Black)

SHD-46VDB
(Silver)

Model Color Options:
SLA-T4680D: Black
SLA-T4680DS: Silver
SLA-T4680DW: White

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XNB-H6461H Height Strip

2 Megapixel Height Strip

- 3 Lens placement options
- Curved surface w/180º HFOV camera adjustment
- Designed for easy installation
- Fits most standard door frames
- Durable aluminum construction
- Highly visible color coded height levels
- Wrap-around labels visible from side
- 12VDC and POE
- 2MP 1080P camera installed
- 4.6mm Lens, 73° horizontal FoV
- Color or B/W: 0.06Lux
- Maximum framerate 60fps
- WDR (120dB), HLC

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X-Series Plus Cameras

XNV-9083R/8093R/8083R/6083R

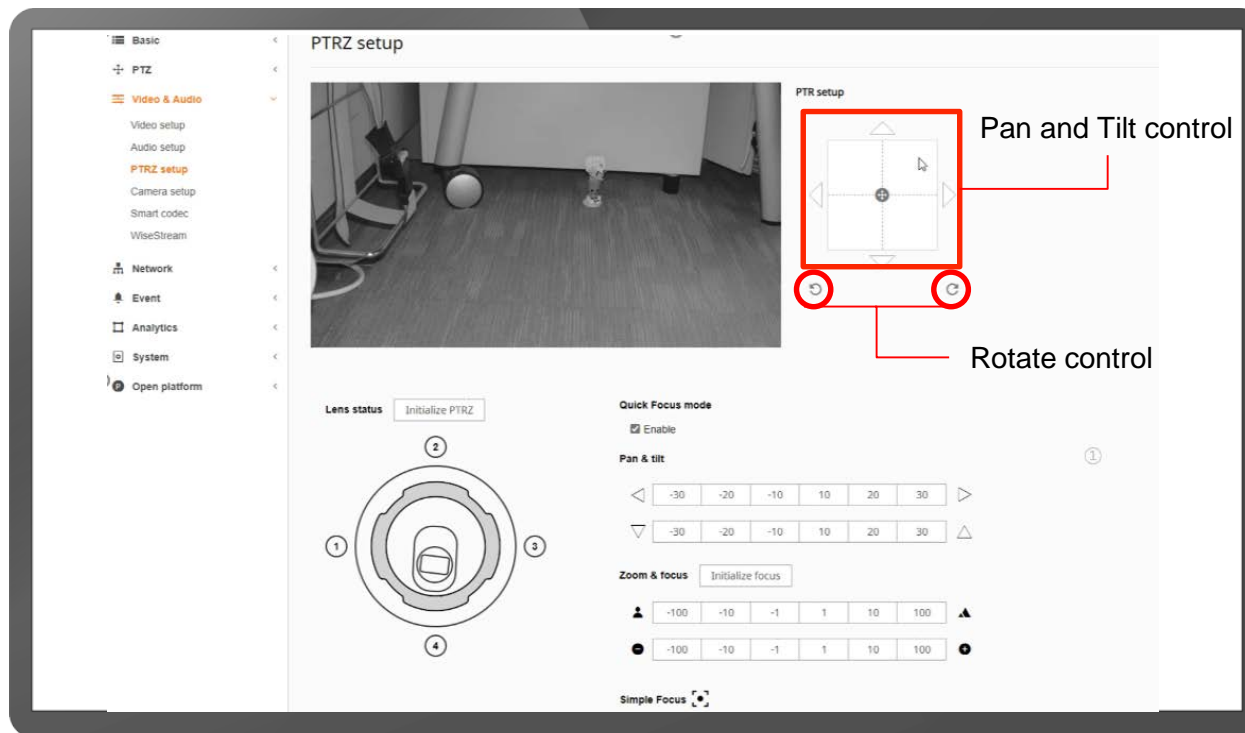| Category	Specification
Resolution	4K / 6MP / 2MP
Lens	2.8~12mm M-VF lens (4.4~9.3mm(4K/6MP), 10.9~29mm(8093R))
Framerate	support2MP@120fps(6083RV), 4K/6MP@30fps
Wide Dynamic Range	extremeWDR 150dB, 120dB(4K/6MP)
IR distance	wiseIR 50m / 70m (8093R)
Analytics	Improve image quality based on AI (WiseStreamIII, WiseNRII, prefer shutter control) Object detection and classification based on AI (Person, Face, Vehicle(Car/Bus/Truck/Bike/Bicycle), License Plate)
Easy Installation	Wi-fi video by USB dongle, CVBS video output
I/O	2 Configurable Alarm I/O (support DC 12V 50ma output) 2 microSD slot(Max. 1TB(512GB x 2ea))
Power Consumption	PoE+/12V DC
Certification	IP66/IP67/IP6K9K, NEMA4X, IK10+
Security	TPM 2.0(FIPS 140-2 certified), Device certificate(Hanwha Techwin Root CA) Secure OS/boot/storage, Verify firmware forgery

X-plus
AI Vandal Dome Camera

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Remote Camera Adjustment

Pan and Tilt control

Rotate control

Pan/Tilt/Rotate range
0~350°/0~85°/0~340°

Motorized PTRZ function

FoV can be remotely adjusted with motorized PTRZ reducing camera installation time.
If the camera FoV needs to be changed, it can be done remotely without an expensive site visit and potential customer distraction.

General Surveillance

Fisheyes

Single Panorama

Double Panorama

XNF-9010RV/8010R&RV

- Compact design
- 12MP and 6MP @ 30fps
- Orig. fisheye view, single pano., double pano., quad view
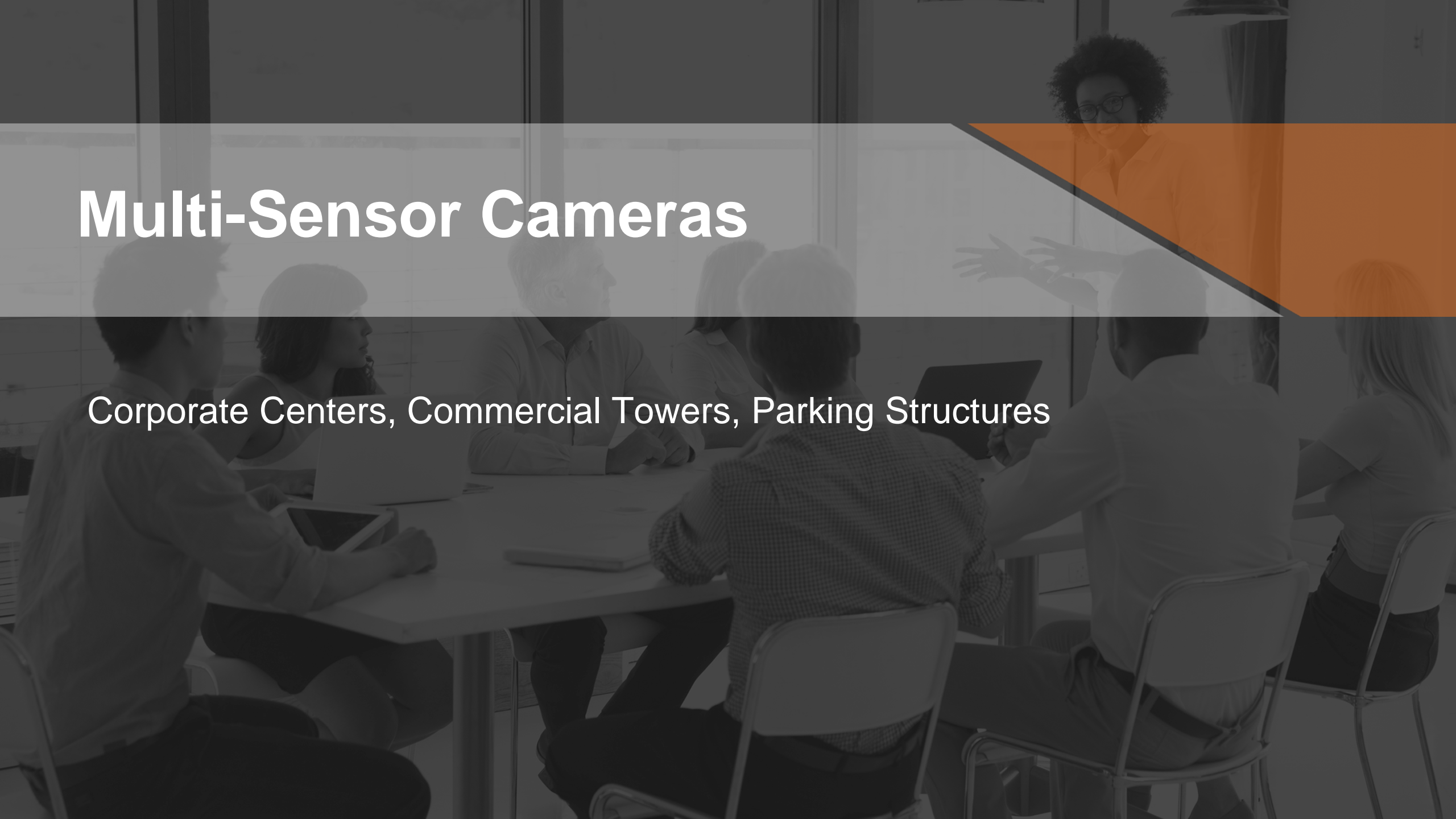- People counting & Heatmap
- Micro SD - 256 GB

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TID-600R

Video Intercom

- 1/2.8" 2MP sensor
- 1.6mm fixed lens : HFoV 180°, VFoV 114°
- IR viewable length 5m
- Built-in mic and speaker : 85dB speaker out at 0.5m
- Echo cancellation and noise reduction
- Touchless call, Built-in tamper switch
- SIP 2.0 support
- MicroSD 1slot, PoE/12VDC
- Max. 550mA relay out with 2A 12VDC adapter
- IP65, IK08, NEMA4X

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Multi-Sensor Cameras

Corporate Centers, Commercial Towers, Parking Structures

Wisenet Multi-Sensor / Multi-Directional Camera Lineup

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**Pan/Tilt/Rotate and Zoom
Multi-Imagers**

**PNM-9084RQZ
PNM-9085RQZ**

**Panoramic
Multi-Imager**

**PNM-9022V
PNM-9031RV**

**Quad-Imager
Multi-Directional**

**PNM-9084VQ
PNM-9085VQ**

PNM-9002VQ

**Quad-Imager
Multi-Directional + PTZ**

PNM-9322VQP

**Tri-Imager
Multi-Directional**

PNM-8082VT

**Dual-Imager
Multi-Directional**

PNM-12083RVD

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Wisenet

PNM-9022V/PNM-9031RV 180⁰ Panoramic Image

Wide Area of Coverage with a Single Camera

PNM-9022V

7/7/2022 1:12:20 PM

Pan/Tilt/Zoom/Rotate

Panning

- More Pixels where they are important
- Easy re-alignment
- License-Free Analytics
- Multi-sensors - save on network ports

Dual Sensor Multi-Directional Cameras with AI

Benefits of 2 Cameras In One:

- Use one camera to replace two cameras, monitor large spaces easily
- Compact body to look in two directions or to get a wide + narrow FoV at the same time
- Easy installation with snap in lens modules and twist-lock install plate
- Use one IP address
- Quicker installation
- Fewer network drops, ports on switch, devices to maintain
- Dual SD card slots – one for each lens
- Individual dome bubble allows for full flexibility for viewing direction

Top VMS Integration Partners for Finance

Questions & Answers

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Thank You!

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