Hanwha Techwin

Solutions
Built for Corrections

WISENET

Solutions **Built for Corrections**

Hanwha Techwin meets the unique challenges facing correctional facilities with high value end-to-end surveillance solutions. These solutions include innovative and reliable camera devices in a multitude of form factors, license-free intelligent video and audio analytics and an easy to use video management system with full feature integration with popular third party hardware and software applications.

Wisenet WAVE VMS: Simple. Scalable. Powerful.

Hanwha Techwin's lightweight, scalable, and feature rich video management is capable of supporting up to 128 IP video streams per server and is fully integrated with Wisenet NVRs and IP camera video and audio analytics.

WISENET WAVE

WAVE Sync   Desktop   Mobile   Server

- ☑ **Easy setup** – complete system install and configuration in minutes
- ☑ **Flexibility** – drag and drop interface with resizable viewing panes for intuitive navigation
- ☑ **Compatibility** – full integration with SUNAPI 2.0 Wisenet device features and advanced analytics and other popular 3rd party security solutions
- ☑ **Reliability** – robust server hive architecture ensures continuous system uptime
- ☑ **Portability** – accessible from anywhere via WAVE Sync with mobile client applications
- ☑ **Accessibility** – add an unlimited number of users to a single system, each with custom or preset roles

SUPPORTED BROWSERS	SUPPORTED DESKTOP OS	SUPPORTED MOBILE OS	SUPPORTED SERVER OS
Chrome	Windows	Android	Windows
Firefox	Ubuntu	Apple	Ubuntu
Opera	Apple		
Edge			
Safari			

Painless setup and installation

Wisenet WAVE VMS server and client software is free to download, installs in minutes, and is also available in several preconfigured server and client appliances.

☑ **Small Form-factor Client Workstations**
- 2 and 4 Output Versions
- Automatic Camera Call-Up
- Flexible Layouts
- Can be integrated with 3rd party control systems

☑ **WAVE Servers and NVRs**
- Rack Mountable, tower, and NVR form factors
- RAID 5/RAID 6 Configurations available
- Preloaded with WAVE VMS Professional Recording Licenses (4)
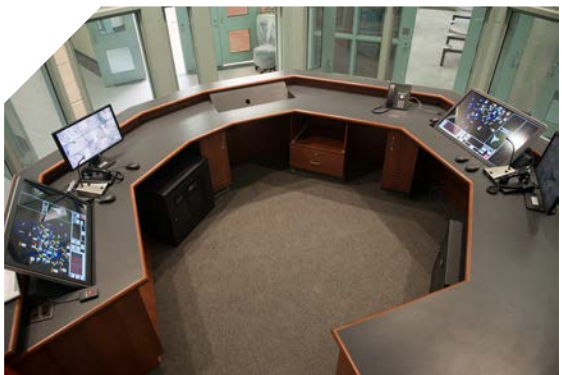
Easy PLC/HMI integration

Through the use of Wisenet WAVE VMS's license-free SDK and API, users can easily integrate custom communications with many popular third party automation devices and software suites.

- ☑ **No additional licenses or fees required for custom integrations**
- ☑ **UART Bridge**
  - Simple serial ASCII communications
  - No complicated VMS rules to set up

Some compatible HMI and PLC integrations:

Wonderware®   InduSoft

ALLEN·BRADLEY   GE FANUC   Modicon PLC

OMRON

Wisenet P series AI cameras

Hanwha Techwin high-resolution 4K cameras have been equipped with AI-based analytics with attribute extraction that can accurately identify both humans and vehicles. Being able to differentiate and identify objects as humans or vehicles leads to faster and more efficient forensic searches as well as a reduction in bandwidth and storage through metadata tagging.

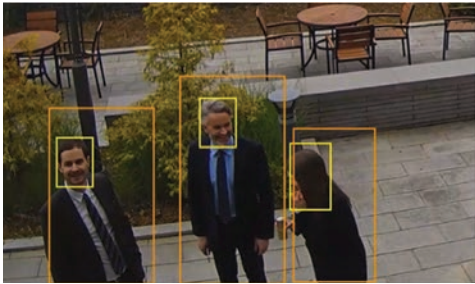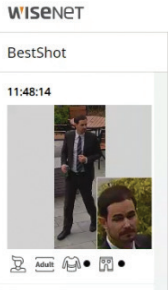| Indoor Vandal Dome	Outdoor Vandal Dome	Indoor Flush Mount Dome	Bullet	Box
PND-A9081RV	PNV-A9081R	PND-A9081RF	PNO-A9081R	PNB-A9001

The AI camera BestShot feature

All extracted attributes are presented in real time via Hanwha Techwin's BestShot feature, which displays a still image of a detected object for easy identification along with any attributes detected.

Detected Objects	Attribute Category	Supported Attribute Items
Person	Gender	Female, Male
	Upper garment	(Up to 2 colors simultaneously)
	Lower garment	Black, Gray, White, Red, Orange, Yellow, Green, Blue, Purple
	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 7 powered X series cameras

The Wisenet 7 SoC is our latest and most advanced chipset to date, featuring recording resolutions of up to 4k, license-free video and audio analytics, eXtreme WDR with scene analysis, and best-in-class cybersecurity measures. Powering the updated line of Wisenet X series cameras, these capabilities are available in a variety of form factors that meet the challenges of even the toughest environments.

Vivid 4K Resolution

Hanwha Techwin's F1.2 varifocal lens is implemented into the Wisenet 7 4K camera lineup, allowing the most light into the camera's sensor and producing clear and vivid images.

xtreme WDR with Scene Analysis technology

Hanwha Techwin's improved multi-frame WDR technology lets you take full advantage of image contrast to see detailed objects clearly even in environments with strong backlight conditions.

Conventional

Wisenet 7

Integrity   Security   Data Protection   Secured Hardware

End-to-end Cybersecurity

Hanwha Techwin security policies begin at the factory, with our own device certification issuing system embedding certificates and encryption keys into each chip.

UL CAP Certified: Our latest network video surveillance cameras equipped the Wisenet7 SoC acquired the UL CAP (Cybersecurity Assurance Program) certification, meeting all UL evaluation cybersecurity criteria: network penetration, access control, encryption and software updates.

The result: a fully secure end-to-end surveillance workflow, assuring all video is securely stored, encrypted and accessible only by authorized users.
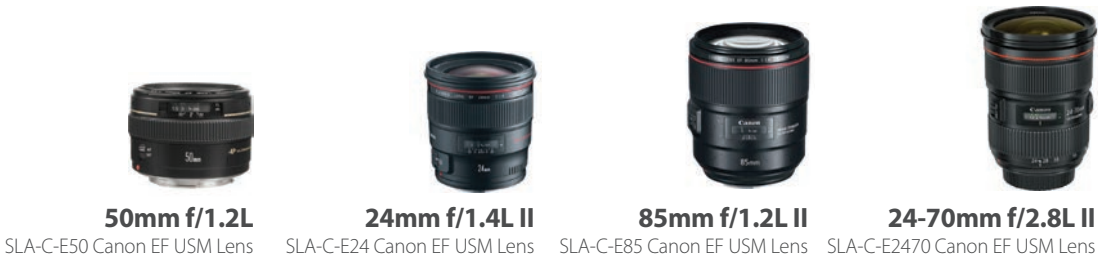
The world's first 8k surveillance camera

The TNB-9000's 8k ultra high resolution easily replaces the need for several conventional cameras in a single location while capturing images in full detail. Its compatibility with many Canon EF mount lenses makes it easy to capture wide fields of view from even greater distances.

- ✓ 43.3mm full-frame CMOS Image Sensor
- ✓ Compatible with several Canon EF mount Lenses
- ✓ License-free AI based object detection and classification video analytics
- ✓ Efficient video streaming with H.265 with WiseStream II
- ✓ 100/1000Mbps Network connectivity via RJ-45 & SFP slot for long distance cable runs
- ✓ RS-485 for pan and tilt mount controls
- ✓ Simple Focus & MicroUSB port allows for easy and perfect focus control remotely

8K 4320P

Available Lenses and Accessories:

50mm f/1.2L
SLA-C-E50 Canon EF USM Lens

24mm f/1.4L II
SLA-C-E24 Canon EF USM Lens

85mm f/1.2L II
SLA-C-E85 Canon EF USM Lens

24-70mm f/2.8L II
SLA-C-E2470 Canon EF USM Lens

Outdoor Housing
SHB-D-9000H

70-200mm f/2.8L IS III
SLA-C-E70200 Canon EF USM Lens

Anti-ligature cameras

The TNV-7010RC and TNV-8010C corner mount cameras were specifically designed for use in correctional facilities, mental health institutions, holding cells and other applications that require a secure and hardened camera installation.

- ✓ Max. 5MP resolution (TNV-8010C)
- ✓ Anti-ligature design deters individuals from reaching or attaching to the camera
- ✓ Tamper-resistant hardware securely mounts the camera to prevent removal
- ✓ Invisible 940nm IR provides round-the-clock visibility without a visible glow (TNV-7010RC)
- ✓ Two-way audio support allows remote interaction or recording of important audio evidence
- ✓ License-free intelligent video analytics including shock detection
- ✓ Built-in microphone (TNV-7010RC)
- ✓ Stainless steel body kit available (TNV-8010C)
- ✓ Ideal for elevators and other confined spaces (TNV-8010C)
- ✓ Designed to be mounted directly to a corner

Anti-ligature Cameras

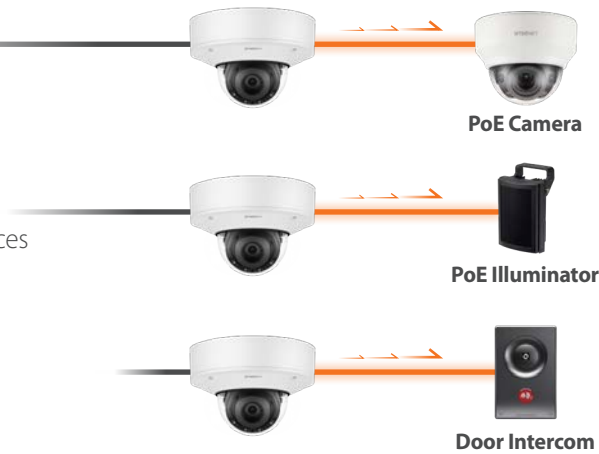TNV-8010C   TNV-7010RC

Wisenet X series PoE extender cameras

Each Wisenet X series PoE extender camera is equipped with a secondary network port, allowing you to power and connect an additional PoE or network device at distances of up to 260 feet away - saving you time and money on long cabling and installation runs traditionally associated with connecting additional devices to your network. Power and connectivity to the secondary network port can then be monitored and controlled in real time from the camera's web user interface.

Example PoE connections

- ✓ Available in 2MP or 5MP resolution
- ✓ Power and connect an additional PoE device
- ✓ Cost savings in running additional cabling for new devices
- ✓ Modular design for easy upgrade and maintenance

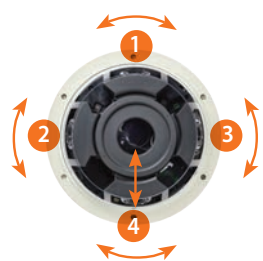**PoE Camera**

PoE Illuminator

Door Intercom

Easy to Use Innovation: Multi-sensor Camera Devices

Hanwha Techwin multi-sensor/multi-directional and multi-sensor/panoramic cameras allow you to monitor wide-open areas without blind spots or hallways and intersections with a single device. Cameras with replaceable lens modules allow you to customize the camera to meet your specific needs while PTRZ (Pan/Tilt/Rotate/Zoom) equipped devices can be adjusted remotely without physically accessing the unit. All multi-sensor devices use a single network cable and IP address for quick installation and configuration and can be recorded using a single camera recording license for Wisenet WAVE VMS and most popular video management systems.
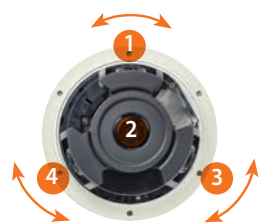
- ☑ Eliminate the need for multi-camera installations
- ☑ Require only a single network cable and IP address for installation
- ☑ Record all sensors using a single camera recording license for popular VMS solutions
- ☑ PTRZ models reduce maintenance costs when camera readjustments are needed
- ☑ License-free onboard intelligent video analytics for each sensor
- ☑ Center Mode to remove blind spots below the camera

Quad Mode

Center Mode

Panoramic

Multi-directional + PTZ

Our Multi-directional + PTZ camera is equipped with targeted 2MP or 5MP sensors and a single center-mounted 2MP PTZ. The addition of the onboard PTZ camera allows operators to take advantage of Hanwha Techwin's exclusive Advanced PTZ Handover and Smartzoom features.

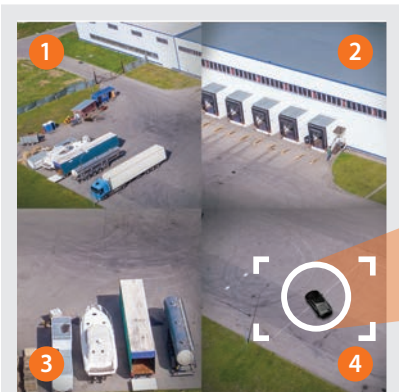**Installation base with built-in 100/1000 SFP slot**

4CH Multi-directional camera
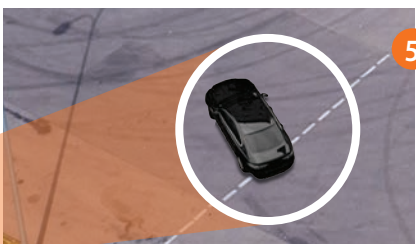
5 PTZ
2MP 32x PTZ camera

Smartzoom

5 PTZ

Once Smartzoom is fully calibrated, users are able to operate the onboard 2MP PTZ camera by selecting any area visible within any of the four 2MP or 5MP sensors with the click of a button.

Advanced PTZ Handover

5 PTZ

The Advanced PTZ Handover is a quick and simple to program function that triggers camera presets and automatic target tracking based on detected events.

UL CAP certified cybersecurity

Hanwha Techwin security products offer the highest cybersecurity possible with unique certificates embedded into every device during each phase of the manufacturing process. This results in a cybersecurity policy that satisfies stringent UL CAP standards as well as our own requirements for product reliability and design innovation.

Secure Boot / Secure Firmware / Secure Open Platform App

Integrity

Secure Storage / Secure OS

Video Storage / Backup Encryption

Secure JTAG / UART

Data Protection

Secured Hardware

Security

Hanwha Techwin's private device certificate Root CA

UL CAP, Secure by Default Certified

WiseStream II + H.265 compression technology

Our proprietary compression technology, when used with the H.265 codec enables storage and bandwidth savings of up to 75% when compared to the use of H.264 video compression alone.

7168kbps

WiseStream II off

72kbps

WiseStream II on

Hanwha Techwin IP camera features and onboard advanced video and audio analytics

Hanwha Techwin's license-free intelligent video and audio analytics technology operates on the edge, alerting operators to abnormal activities in real time. This increase in situational awareness can help to prevent or minimize damage or harm during an event by prompting a rapid and efficient response.

Camera Features	Intelligent Video & Audio Analytics
Tamper detection - Detects when a camera's direction is changed due to impact, sudden loss of focus, painting or blockage	**Face detection** - Identifies key features of a human face and issues an alert when a face is present
Image stabilization - Cameras can detect shaking or vibration and digitally stabilize the image	**Virtual line crossing detection** - Objects crossing a designated virtual line can be detected
Fog detection - Cameras can detect the presence of fog or steam and automatically improve image quality	**Loitering detection** - Objects appearing and resting in a designated virtual zone will trigger an event
DIS with gyro sensor - An internal gyroscopic sensor is used to detect vibration in an image and work to stabilize the affected image	**Intrusion detection** - Triggers an event when movement is detected in a designated virtual zone
HLC - Low light feature that blocks sources of intense light such as vehicle headlights in order to maintain a clear image	**Appear/disappear** - Detects the presence or loss of an item in a designated virtual zone
PTZ handover - Strategically placed cameras can be used to trigger PTZ presets, patrol patterns, and target tracking based on detected events	**Enter/exit detection** - Detection of objects entering or exiting a designated area
Open platform - This policy allows 3rd party software and applications to run on the edge in parallel with normal camera operations, adding utility to your IP camera device beyond surveillance functions	**Audio detection** - Detects and identifies the sound of explosions, gunshot, screams, and breaking glass

Gunshot   Glass Break   Scream   Explosion

Camera features and analytics vary by model

For more information visit us at

HanwhaSecurity.com

Hanwha Techwin

Hanwha Techwin America