Hanwha Techwin

WISENET

SOLUTIONS & CASE STUDIES

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Solutions and Cases

As customer needs has been diversified and sophisticated, the video surveillance industry matches changes by customizing the products. Rather than general-purpose products, the market requests exclusive security solution per vertical.

Hanwha Techwin analyzed customer pain points and needs based on the accumulated business assets from technologies, products and customers, then offers customized video surveillance solutions per each vertical.

With technological expertise spanning hardware design and manufacturing to software development, Hanwha Techwin is able to reliably offer vertical solutions through product reliability and systematic global services.

City Surveillance   **Transportation**   **Retail**   **Banking**

CONTENTS

Security Guard for the Smart City

Cities represent the very centers of economic vitality and public life. The right use of effective communication and information technology helps cities get smarter. By connecting various kinds of data collecting devices such as sensors, cameras and so on, cities can manage its infrastructure, resources and urban planning.

In Smart City, video surveillance goes far beyond simple monitoring. Video surveillance now acts as analytical tools as well as indicators for city operations. To meet the new challenges in the changing times, Hanwha Techwin presents the most optimized solutions for wide area surveillance and data analysis.

City Surveillance Solution Features

City-dedicated product line-ups

- Multi-directional and super high resolution cameras for wide coverage capturing even the smallest details.
- Efficient operation with intelligent video and audio analytics.
- Optimized mobile and wireless solutions.

Public safety & Traffic management

- Deter crimes with its presence and through recorded footage for later investigations.
- Detect traffic violations as well as identify and track vehicles used in crimes through intelligent ANPR system.
- Remote monitoring from central control center.

Improved operational efficiency

- Intelligent video analytics increase the level of security and simplify day-to-day workloads.
- Smart Search can significantly reduce your time searching for crime scene or suspects.

Safety, Efficiency, and Smart

City and Urban Area : Reliable Operation 24/7

Basic and essential for safer city

• Cameras installed at high traffic areas can deter pickpocketing, shoplifting, and violent crimes with their presence as well as their footage for later investigations.

• Full HD to 4K ultra high resolution cameras deliver crystal clear video. Darker or high contrast areas are also prone to criminal activities, therefore, high resolution cameras with IR and WDR should be used for round the clock monitoring.

• Vandal resistant housings can endure various conditions of outdoor environments. 37x zoom Full HD IR outdoor PTZ helps you identify a person who is in farther than 350 meters and in complete darkness. It can also track any person entering high crime areas automatically any time of the day.

Efficient omnidirectional monitoring in details

• With the exception of PTZ type, most surveillance cameras are typically static. Even with wider viewing angle, close to 180°, it creates blind spots where most crimes take place.

• Hanwha Techwin offers various types of multi-sensor, multi-directional and fisheye cameras with up to 360° coverage. Based on the different types of installation sites, you can choose the best products that fit your preferred viewing types.

Identifying threats through audio analytics

• To secure cities, visual information is important but this alone is insufficient. Thus, there is a growing need for audio analytics that can target possible threat.

Related Product

• 4K/IR PTZ camera (PNP-9200RH, XNP-6370RH)

• Multi-directional, Multi-sensor, Fisheye camera (PNM-9000VQ, PNM-9030V, XNF-8010RV etc...)

• Vandal proof dome & bullet camera (XNV6080R, XNO-6010R etc...)

Enhanced mobility in the City

Urban living is convenient for many with its easy access to shops, schools and facilities. However, its high density impairs mobility and the most common disadvantage of living in the city is heavy traffic and a lack of parking space. Thus, many city governments try to increase mobility by managing traffic, ultimately enhancing the overall productivity of the city.

Traffic and parking area management

• Monitoring moving or parked vehicles in the city is one of the most important aspects to deter crimes. With intelligent ANPR and high resolution camera, it could help monitoring traffic status and parking areas, while also identifying the location of specific vehicle.

• The intelligent ANPR system detects traffic violations to automatically issue tickets, and identifies and tracks vehicles used in crimes by automatically reading the license plate to enable easy access control. In addition, ANPR-installed cameras eliminate the need for separate system installation, helping you to achieve cost-saving infrastructure as well as efficient traffic management.

Optimized for mobile & wireless environment

• Necessary infrastructure for city surveillance, such as interim data control center, is readily available in urbanized areas. However, in suburbs, such infrastructure is rare, making it difficult to transfer data to the control center. In addition, increased city mobility requires enhanced level of security in onboard situations, such as in buses or trains.

• Hanwha Techwin's answer to this is network/GPS module-embedded cameras and recorders. Our mobile and wireless solutions enable data to be transferred to anywhere it needs to be. Cameras and recorders optimized for onboard situations also allow real-time monitoring while the vehicle is in operation by offering internal images as well as its location information.

Related Product

• Mobile camera & NVR (XNV-6022RM/6013M, TRM-1601M/1610S etc...)   • PTZ & Zoom Camera (PNP-9200RH, XNP-6320H, XNZ-6320 etc...)

• Vandal proof dome & bullet camera (XNV6080R, XNO-6010R etc...)   • ANPR S/W (Open Platform)

Effective Operation

From Wisenet cameras to Wisenet SSM, a total management software, Hanwha Techwin provides customized end-to-end security solutions to suit various needs of any installation sites. Wisenet SSM is designed to deliver easy use for everyone with its intuitive UI. Features that are tailored for city surveillance, such as federation and clustering, give control centers more expanded range of access. Our product guarantees reliable and stable monitoring as well as security system under various circumstances while reducing the total operational cost.

Related Product

• SSM
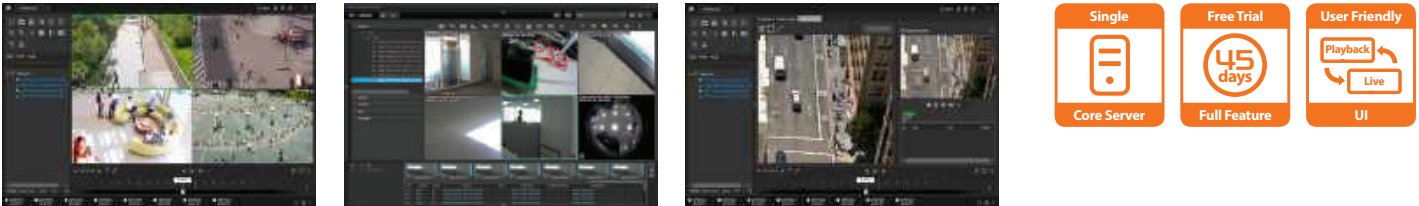
King City - US

Helping King City police reduce violence and improve safety

Task

King City of California, United States, had to address the growing problem of youth homicide per capita rate as the city had become a point of contention in a turf war between rival Latino gangs. The city formed a committee of community members charged with producing a plan to reduce youth violence. The committee came up with a strategic plan, and one of those points was to install video surveillance cameras throughout the city.

Result

Hanwha Techwin's 93 PNM-9081VQ cameras have been mainly deployed at intersections the police department determined to be a high priority for traffic flow and points of activity. The police department would be able to capture video of anyone coming into or going out of town. This was important because most of the shootings were perpetrated by people from outside the city.
The PNM-9081VQ is a 20megapixel multi-directional camera providing 360° view at once. This multi-directional camera with four 5megapixel sensors simultaneously monitors multiple angles to eliminate any blind spots. It also offers WiseStream II, Hanwha Techwin's unique video compression technology with the triple codec H.265/H.264/MJPEG support which makes it able to provide ultimate storage management without sacrificing image quality.

Unique Solution

PNM-9081VQ

• 20MP Multi-sensor, multi-directional camera
• Provides 360° view at once
• WiseStream II provides ultimate storage
• Management without sacrificing image quality

Spec

4ch x 5MP Multi-directional Camera	
• Max 20MP @ 30fps, 5MP X 4 sensors using one IP address	• Loitering, directional detection, fog detection, tampering, motion detection, object enter or exit an area
• Motorized vari-focal 3.6 ~ 9.4mm (FOV: 102.5° ~ 38.7°)	• Hallway view
• Triple codec: H.265, H.264 and MJPEG multiple streaming	• SD cards (each channel has its own)
• WiseStream II compression technology	• Built-in gyro sensor for digital image stabilization
• WDR 120dB @ 20MP @30fps	• Power : HPoE (HPoE adaptor is included) or 12VDC

Talking Points

"We've been working to change things, and the Wisenet cameras are working wonders. Last year, we had 32 shootings and three homicides. But since the cameras were installed, we've only had one shooting since the start of the year"

Robert Masterson, Police Chief said.

The City of Airdrie - Canada

Assisting in crime prevention and crime solving via crystal-clear images

Task

The City of Airdrie Corporate Security Department is charged with protecting everything the city of 70,000 citizens owns – from the city's water reservoirs to fire trucks to lockers in the recreation center. When law enforcement approached the Corporate Security department to obtain video surveillance footage to aid in the investigation of a crime, Corporate Security Advisor, Matt Cameron, and his team weren't able to produce video evidence.

Result

The city developed a strategy to improve their video surveillance coverage which included adding Hanwha multi-directional cameras to their security solution. They chose a mix of Hanwha PNM-9081VQ 20 megapixel and PNM-9080VQ 8 megapixel cameras.
The Hanwha PNM-9081VQ 20 megapixel provides four sensors with 5 megapixel resolution each and the PNM-9080VQ 8 megapixel provides four sensors with 2 megapixel each. They offer triple codec H.265/H.264/MJPEG combined with WiseStream II compression technology for ultimate bandwidth reduction without sacrificing image quality. Now, when the police request footage for an incident, if it is in an area where the Hanwha cameras are installed, The city will have the video they are looking for and the quality images they will need to aid in the investigation.

Unique Solution

PNM-9081VQ/9080VQ

• Providing four sensors with 5 megapixel resolution each
• Triple codec H.265/H.264/MJPEG
• WiseStream II for ultimate bandwidth reduction without sacrificing image quality

Spec

4ch x 5MP Multi-directional Camera		4ch x 2MP Multi-directional Camera	
• Max 20MP @ 30fps, 5MP X 4 sensors using one IP address	• Loitering, directional detection, fog detection, tampering, motion detection, object enter or exit an area	• Max 8MP @ 60fps, 2MP X 4 sensors using one IP address	• Loitering, directional detection, fog detection, tampering, motion detection, object enter or exit an area
• Motorized vari-focal 3.6 ~ 9.4mm (FOV: 102.5° ~ 38.7°)	• Hallway view	• Motorized vari-focal 2.8~ 12mm (FOV: 119.5°~27.9°)	• Hallway view
• Triple codec: H.265, H.264 and MJPEG multiple streaming	• SD cards (each channel has its own)	• Triple codec: H.265, H.264 and MJPEG multiple streaming	• SD cards (each channel has its own)
• WiseStream II compression technology	• Gyro sensor for digital image stabilization	• WiseStream II compression technology	• Gyro sensor for digital image stabilization
• WDR 120dB @ 20MP @30fps	• Power : HPoE (HPoE adaptor is included) or 12VDC	• WDR 150dB @ 8MP @30fps, 120dB @8MP @60fps	• Power : PoE+ or 12VDC

Talking Points

"A dumpster fire did $30,000 in damage and we were able to supply police with crystal clear images of the perpetrators. The camera paid for itself and then some within 45 minutes of installing it."

Matt Cameron, Corporate Security Advisor, said.

The City of Bologna - Italy

Assisting in building a smart traffic management system via crystal-clear images and analytics features

GreenStreet - US

Protecting property and monitoring visitors through comprehensive remote security system while saving time

GreenStreet, Houston, TX completed high level of video surveillance capable of easy expansion for future city growth

Task

Bologna is the seventh most populous city in Italy and has always invested in traffic control and monitoring systems with the aim to make travel easier and faster for its citizens. The city wanted to invest in a video surveillance solution which would allow the monitoring of 12 vehicle access gates to the city in order to provide authorities with reliable real-time information about urban mobility.
The purpose was to provide a tool to allow authorities to take strategic planning measures and optimally redistribute the traffic load on the road network.

Task

The large crowds that regularly flock to downtown Houston, Texas, known as GreenStreet, call for heightened security measures. However, the 570,000-square-foot mixed-use center needed to balance a high level of security while maintaining an open and inviting environment that accommodates numerous businesses, delivery drivers, service providers and others who need open access to the property. With an eye towards improving both security and efficiency, the property's owners decided it was time for a system upgrade. Hanwha Techwin was selected based on its quality, functionality, versatility and expandability of the products.

Result

88 Wisenet cameras were installed in the city. Among them, 24 of the cameras installed are Wisenet XNO-6120R/TD bullet cameras (customized) equipped with Traffic Data, an edge-based application developed in cooperation with Sprinx Technologies. 24 of the other cameras installed are Wisenet XNO-6120R/FNPs(customized). These feature Roadway License Plate Recognition application which is able to help the local authority's control room operators detect illegally parked vehicles and other traffic infringements. Effective with all European number plate formats, the application has more than a 95% recognition accuracy whatever the environmental conditions, even when vehicles are moving at speeds of up to 150 km/h.

Result

Hanwha Techwin's Smart Security Manager video management software allowed security staff to monitor live and recorded video, control PTZ cameras and communicate via two-way audio from a central command center. They also employed multiple Hanwha Techwin 'SNV-5080R' dome cameras, 'SNV-6084R' IR dome cameras and 'SNP-5200H' PTZ dome cameras. NVRs are located in a server room and are connected directly to cameras for recording and to SSM for video playback. Video is transmitted across GreenStreet's network via hybrid fiber, connecting the multi-site buildings to distribution switches, which also provide PoE to the Hanwha Techwin cameras, implemented by Today's Integration, Inc. providing a turn-key solution. The system has also proven effective in assisting the Houston Police Department, which requests video from time. Best of all, the Hanwha Techwin video surveillance solution is easily scalable, allowing more cameras and NVRs to be added as GreenStreet continues to grow and expand.

Unique Solution

XNO-6120R/TD	• Traffic Data, an edge-based application developed in cooperation with Sprinx Technologies

XNO-6120R/FNP	• Roadway License Plate Recognition application has more than a 95% recognition accuracy

Unique Solution

SSM	• Remote control and communication support through SSM improve management efficiency reducing time and cost. • Event recording is simple and easy, providing detailed daily events. Easy record of daily event in detail.

XNV-6080R	• IR LED light support enables monitoring at pitch-dark night environment(0Lux), recognizing an object up to 50m
※ SNV-5080R discontinued	

Spec

2MP IR bullet camera	
• Max. 2Megapixel (1920 x 1080) resolution	• IVA, Fog Detection, Sound Classification, Tampering
• 5.2 ~ 62.4mm (Optical 12X) Optical Lens	• Motion Detection, Handover
• Max. 60fps@all resolutions (H.265 / H.264)	• SD / SDHC / SDXC 2 Slot (Max. 512GB)
• H.265, H.264, MJPEG Codec Supported, Multiple streaming	• Hallway View, WiseStream II Support
• Day & Night (ICR), WDR (150dB), Defog	• IR Viewable Length 70m (229.66ft)

Spec

Total Management Software		2M Vandal-Resistant IR Dome Camera	
• Centralized management	• Flexible system integration	• Max.2M resolution	• Tampering, Loitering, Directional/ Defocus/Fog/Audio/Motion/Face detection, Virtual line, Enter/Exit, (Dis)Appear, Sound classification, Handover, Hallway view
• Distributed computing architecture	• Efficient monitoring	• 2.8~12mm(4.3x) motorized V/F lens	
• Extended scalability	• Powerful search engine	• Max.60fps@2M	• SD/SDHC/SDXC, NAS, Local PC
• Guaranteed reliability		• H.265, H.264, MJPEG	• PoE, 24V AC, 12V DC
		• True D&N(ICR), WDR(150dB)	• IP67, IP66, NEMA 4X, IK10
		• IR viewable length 50m	

Talking Points

"Our control room operators have been particularly impressed with the exceptional clarity of the images captured by the cameras and the data analytics capabilities of the system, which are enabling them to accurately visually verify what may be occurring and quickly take appropriate action."

Alberto Nuzzo, Head of Office 'Digital Infrastructure and Telecommunications', at Comune di Bologna said.

Talking Points

"By allowing security staff to remotely view and interact with individuals requesting access to bay doors, SSM has saved GreenStreet a great deal of time and money, and has eased the burden placed on security staff. Because they no longer need to make the trek to physically open these doors, they can focus on ensuring safety and security at the property."

Howard Manson, CEO of Today's Integration, said.

Kocaeli Metropolitan Municipality - Turkey

High resolution monitoring of greater metropolitan areas regardless of weather, time and location

Wisenet watches over the metropolitan city 24/7 through all seasons by efficiently managing massive data

Task

With its long history dating back to 1320, Kocaeli's fast expanding economy is developing to be one of the 10 largest municipalities in Turkey with a population of 1.8 million people. They decided to adopt city surveillance solution in order to protect local authority and government buildings located throughout the Kocaeli Metropolitan Municipality in Turkey.

Result

Over 1,800 video surveillance cameras supplied by **Hanwha Techwin** were installed throughout the city. Among the installed cameras, about 140 of them were Wisenet Q series(QND-7080R, QNO-7080R) which offer 4 megapixel high resolution and IR support. These are also packed with innovative features such as H.265 compression along with WiseStream. When WiseStream is combined with H.265 compression, bandwidth efficiency can be improved up to 75% compared to H.264 technology, enabling Kocaeli Metropolitan Municipality to benefit from one of the most bandwidth friendly camera series available. **Hanwha Techwin** also supplied 12CH NVR(XRN-1610S) and 32CH NVR(XRN-2011) which support 12 megapixel high resolution video recording and max. 4TB storage capacity. They ensure evidence of any suspicious activity is recorded for either instant playback or stores for later use. Besides, Wisenet Lite series were installed providing smart features including motion detection, privacy masking zones, audio support, etc.

Unique Solution

QNO-7080R/QND-7080R	

• 4megapixel full HD support enables clear video monitoring.

• IR support night time monitoring, making 24 surveillance available.

XRN-2011/1610S	

• Support 12megapixel camera monitoring with max. 4TB storage capacity.

• Instant live monitoring and recorded image playback support, ensuring any suspicious activity is recorded as evidence.

Spec

4M Network IR Bullet/Dome Camera		32CH 12M NVR	16CH 12M NVR with PoE
• Max.4M resolution	• Defocus/Motion detection, Tampering, Lens distortion correction, Hallway view	• Max.12M camera supported	• Max.12M camera supported
• 2.8~12mm(4.3x) motorized V/F lens	• Micro SD/SDHC/SDXC, NAS	• 256Mbps recording	• 180Mbps recording
• Max.20fps@4M, Max.30fps@2M	• PoE, 12V DC	• 4K HDMI monitor video out	• WiseStream, H.265, H.264, MJPEG
• H.265, H.264, MJPEG	• IP66, IK10(QNO-7080R)	• Dual monitor video out	• Plug & play by 16 PoE/PoE+
• True D&N(ICR), WDR(120dB)		• WiseStream, H.265, H.264, MJPEG	• Max.4HDDs, e-SATA storage
• IR viewable length 30m/20m			

Talking Points

"Hanwha Techwin was selected because of its reliability. Their products can be trusted 24/7, through all seasons, even in the snow, by the sea, at the slaughterhouse and in our training units. Each of the 1,800 cameras were carefully selected to ensure effective operation and high quality images in their respective installation sites, regardless of the environmental or lighting conditions."

Murat Sandalci, Information and Communication Technologies Manager, Kocaeli Metropolitan Municipality, said.

Izmir City - Turkey

Resolving city traffic by monitoring traffic and applying custom signal system

Wisenet monitors even in wireless condition throughout the whole Izmir city

Task

Izmir is the 3rd largest city in Turkey with a population of around 4 million, the second biggest port after Istanbul, and a hub for transportation. The city hosts tens of thousands of university students, scientists, artists, business leaders and academics. It is a rapidly growing city on the Central Aegean coast of Turkey. As a consequence, the city suffers from traffic congestion. Besides improving the coordination of subways, buses and urban ferries, the city of Izmir decided to invest in its road infrastructure. To assist, **Hanwha Techwin** has deployed cameras in support of a full adaptive traffic management system.

Result

Hanwha Techwin's SNP-6320H' featured with 2 megapixel high resolution and 32x optical zoom were placed in Izmir. Its intelligent auto tracking function lets the camera recognize and follow moving objects, so that users can monitor strange object in detail without the need for operator, giving them the freedom to manage other cameras in the vicinity. Its high-speed pan/tilt rotation(700°/sec) assists in the instant monitoring of an area triggered by alarm presets, making it ideal for monitoring cities, airports and ports. It is also designed to reliably function in the extreme environments. It fully operates in a wide range of temperature from -50° to 55°, in rains or in high humidity. Also vandal-resistant casing can protect against external stimulus. 64CH full HD recording device 'SRN-4000' is able to simultaneously record and multi-stream the transmission of images at a high bandwidth speed of 400Mbps. When recording 64CH in 2MP, it can record up to 108 days, via 12 internal hard drives.

Unique Solution

SNP-6320H	
※ Latest model XNP-6320H	

• Max.32x optical zoom captures distant objects clearly, making it able to monitor traffics and vehicles on roads in order to provide the real time signal adjustment.

• Intelligent auto tracking follows moving objects so that users can monitor strange object in detail without the need for operator, freeing them up to manage other cameras in the vicinity

PRN-4011	
※ SRN-4000 discontinued	

• Max.400Mbps real-time recording support city traffic monitoring and management

• Hot Swap ensures stable video data storing and power supply with alarm

Spec

2M Network 32x PTZ Camera		64CH 12M NVR	
• Max.2M resolution	• Tampering, Audio/Motion/Face detection, Virtual line, Enter/Exit, (Dis)Appear, Auto tracking	• Max.64CH, 12M resolution	• WiseStream, H.265, H.264, MJPEG
• 4.44~142.6mm(32x) optical zoom lens	• SD/SDHC/SDXC, NAS	• 400Mbps recording	• Max.12 internal HDDs(96TB)
• Max.60fps@2M	• PoE+, 24V AC	• 4K HDMI monitor video out	• RAID 5/6, ARB&Failover(N+1)
• H.265, H.264, MJPEG		• Dual monitor video out	
• True D&N(ICR), WDR(120dB)			

Talking Points

"Wisenet plays as a smart communicator on the road even in wireless condition, watching over the all traffic flows and signals, providing the best real-time adjustment to minimize the traffic congestion while creating safe environment for parking areas with auto-tracking function. In total,1,500 buses as well as 100 ambulances and 164 fire trucks will wirelessly communicate with signalized crossroads and their movements will be monitored with the help of the speed domes, as part of a traffic priority system."

A source at EDS Elektronik, said.

Transportation Visibility

Whether they go through the usual commute or extreme conditions, public transportation operators constantly face challenges as they strive to create positive passenger experience through safe and clean stations/vehicles, and as they ensure the systems continue to run safely, efficiently, and on-time. Most often, these challenges arise from "blind spots" with limited or inadequate visibility.

For proactive, budget-conscious transport operators and security leaders, visibility is critical to identify what is working, and what is not. To secure a sound level of visibility, they look to the world-class features of Hanwha Techwin's video surveillance solutions: cost-effective, high performance, and efficient infrastructure that provides necessary visibility for any operations or areas including passengers and even trackside.

To deliver satisfactory user experience, all equipment must be built to last – and so must the company that provides them. Hanwha Techwin, a manufacturer of lifecycle-ready solutions, stands behind a full lifecycle of the equipment, and promises to serve in all future phases.

Transportation Solution Features

Transportation-dedicated Solution

• Transportation-specific standards acquired

• Real-time monitoring of railroad car location and status

• Automated video backup over wireless networks

• End-to-end solution of cameras, storage devices, and VMS

Traffic management & Public monitoring

• Failover and recovery capabilities

• Flexible system expansion via hierarchical configuration

• Interface with other systems (access control, fire alarm, etc.)

For operations, safety, security, and ridership

Onboard Mobile : Real-time Tracking and Remote Monitoring

Cameras are mounted both inside and outside the buses and trains to check for passengers at the last stop before moving to depot. Special vibration and EMC requirements must be met.

• Our network cameras and video recorders are EN 50155 and EN 50121-x compliant, and they are specially designed for onboard security.

• The PoE switch is embedded in our network video recorders to make your onboard security system installation simpler, and the M12 connector on the camera can make the system more stable against vibrations.

High visibility of passengers inside the carriage under various lighting conditions

• High performing WDR feature and multi-megapixel image resolution ensure clear image inside the trains even with intense sunlight or artificial light backlighting.

• High resolution fisheye cameras eliminate blind spots and allow for fewer cameras per carriage

Real-time location tracking and remote-handling of emergency situations using digital maps

• Storage devices in trains en route update GPS data and status information to a central control center via mobile communications networks. Locations of the vehicles can be tracked in real-time at the central control center using digital maps of the traffic control software, and footage can be checked in case of emergencies.

Related Product
• Mobile camera (XNV-6022RM, XNV-6013M/6012M etc...)
• Fisheye camera (XNF-8010RVM, PNF-9010RVM)
• Mobile NVR (TRM-1601M/1610S)

Station Areas and Platforms : Monitor Passenger Safety

Monitoring passengers and tracking abnormal behaviors by capturing the face for evidence in cases of violence, gate jumping and theft at ticketing area and ticket barrier.

• With up to 150dB outstanding WDR performance and day/night filter, our cameras and recorders capture suspicious activities in great details even under challenging light conditions.

• High resolution cameras stream clear views of the platform under various light conditions for indoor and outdoor environment.

• Gain important situational awareness even in low light with fewer cameras using the 5MP 360 degree camera.

Monitoring passenger safety at all hours, and detecting unauthorized access to restricted areas/ Camera view for operator to monitor platform area for safety when loading and unloading passengers/ Call boxes, help points, or sensors trigger live alert for a timely response.

• Embedded video analytics can detect when a person enters restricted zone in the station triggering an alarm to the security center, which will operate a pre-defined PTZ to monitor the area.

Virtual Line detects unsafe line crossing to ensure safety near the tracks

• Embedded video analytics can be used for detecting unexpected and dangerous situations such as overcrowding or objects left behind, and alert the responsible security operators.

Related Product
• Multi-directional camera (PNM-9320VQP, PNM-9000VQ etc...)
• PTZ camera (XNP-6370RH, PNP-9200RH)
• Dome, Bullet camera (XNO-6085R, XNV-6085 etc...)

Depots and Stabling Areas : Property Protection and Management

Automatic backup for transportation vehicle video feeds via short-range wireless networks

• Due to the small capacity of storage devices installed in vehicles, data needs to be periodically backed up at designated yards using mass-storage devices to enable long-term storage. When a car arrives at a designated yard, it will automatically start the data backup process to a mass-storage device via Wi-Fi. In case of unexpected stop, the process can resume automatically at the next designated rail yard.

Vandalism and any property theft, such as carriages, parts, or tools, in the yard and depot areas occur surprisingly often and the damages are highly costly. All assets and areas are secured with 24/7 remote visibility. Long-range IR PTZ to cover large areas more efficiently.

• 37x zoom IR outdoor PTZ helps you to clearly identify a suspicious person from 350m away even at night, tracking the person automatically. IR correction technology provides clear images even when both IR and visible light are present

• 5 megapixel IR vandal dome and IR bullet camera can provide 24/7 security with complete details of the monitored areas.

• In addition to embedded IR on the cameras, high performing WDR function enables you to observe your depot and yards under challenging and changing lighting conditions.

• The cutting edge H.265 codec reduces video bandwidth significantly compared to traditional technology saving the storage space.

Efficient vehicle stitching system

• Wisenet's Vehicle Stitching System allows you to see the vehicle's whole image entering the port at one glance. Recorded images go through a stitching process and provide one seamless and all-around view of the vehicle. This Stitching System eliminates the need for operators to monitor each vehicle passing through a lane.

Related Product
• PTZ camera (XNP-6370RH, PNP-9200RH)
• IR Bullet camera (XNO-8080R, XNO-6085R etc...)
• Mobile NVR (TRM-1601M/1610S)

Security Center : Integrated Control

Monitor multiple stations from a control center

• Integrate and monitor multiple video security systems in a target zone from a control center via a hierarchical system configuration. System redundancy can be configured between stations for system failure recovery, and an integrated control environment can be built through compatibility with other systems such as fire detection and access control systems.

Small station : A 16-channel recorder is placed at the station in order to store necessary video footage. Remote access from the regional security center is provided.

• XRN-1610S is an option for small size stations having 16 or fewer cameras with embedded PoE/+ switch, 4 HDD slots and built-in monitor port.

• Save money by eliminating the need for additional network switches and monitoring software/PC.

**Large station : Enterprise recorder ensures all areas are properly monitored and recorded. Resilient recorders are needed to ensure 24/7 operations.**

• PRN-4011 can be an option for medium and large scale stations with 400Mbps recording performance, dual power supplies, 12 hot-swappable HDD slots and RAID level 5/6 redundancy option. Strong partnership with major VMS companies with complete compatibility with our cameras can enable you to have wider range of choices for your systems.

With Smart Search, users can quickly and easily search for the specific video footage of interest from the storage device regardless of how the event recording is set up. Users can either set up to monitor the moving directions of the vehicle or passenger, or easily apply a motion searching filter for the Region of Interest. Smart Search enables the users to obtain video footage without manually looking through a large amount of recorded video, which can significantly reduce the time to identify possible crime scenes or suspects.

Related Product
• SSM, SSM Transportation
• NVR (PRN-4011, TRM-1610S)
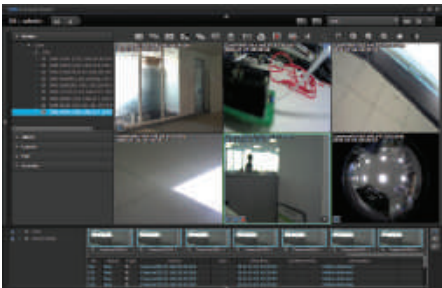
London Midland Station - UK

360° wide monitoring, creating a safe environment while securing important evidence of possible anti-social events

Wisenet creates safe environment for train passengers and personnel across London Midland Stations

Task

London Midland, a train operating company, provides transport for over 60 million passengers each year. This company needed the latest generation of network video surveillance technology in order to maintain a safe environment for passengers and staff at fourteen of its stations throughout cities in UK.

Result

A combination of 'SNB-5004' box, 'SNV-5084' dome and 'SNF-7010VM' 360° fisheye cameras were installed at each of the fourteen stations throughout UK to ensure that there are no blind spots. They collectively assisted security personnel and operations managers in their endeavors to ensure compliance with London Midland's operational procedures, designed to ensure the safety of passengers and staff. Depending on the number of cameras installed, **Hanwha** 'SRN-1000' or 'SRN-1670D' NVRs were also supplied for each station. Working together with SSM(Smart Security Manager), a one-stop management software platform that maximizes the efficiency of Wisenet products, enabled operators to quickly retrieve and manage recorded video of any incidents.

Unique Solution

XNF-8010RVM

※SNF-7010VM discontinued

- Max. 6megapixel high resolution and IR support provide clear and accurate video monitoring regardless of light condition of stations
- 360° viewing angle leave no blind spot, perfect for open and complex area like a station platform

SSM

- Simple, easy, and fast searching among massive data
- Centralize data monitoring and management of which the data sent from multiple cameras at each station

Spec

6M Network IR Fisheye Camera	
• Max.6M resolution • Fisheye, Single/Double panorama, Quad view • Max.30fps@2048x2048 • H.265, H.264, MJPEG • True D&N(ICR), WDR(120dB) • IR viewable length 15m	• Tampering, Loitering, Directional /Audio/Motion detection, Virtual line, Enter/Exit, (Dis)Appear, Sound classification, Heatmap, People counting, Queue management, Handover • SD/SDHC/SDXC, NAS, Local PC • PoE, 12V DC • IP66, IK10, M12 Connector

Total Management Software	
• Centralized management • Distributed computing architecture • Extended scalability • Guaranteed reliability	• Flexible system integration • Efficient monitoring • Powerful search engine

Talking Points

"In addition to helping create a safe environment, the new video surveillance systems installed at each of the stations are also assisting security personnel to detect anti-social behavior and other forms of criminal activity. I am pleased to report that a number of successful prosecutions have taken place as a direct result of the availability of the evidence grade images captured by Wisenet."

Anthony Sykes, Construction Engineering Manager for Babcock, said.

Istanbul City Lines Ferries - Turkey

Monitoring safety even in high seas, waves and other extreme conditions at sea

Wisenet keeps passengers and ferries safe and secure without a blind spot at sea

Task

With over 166 years of history with its seaports, ships and ferries, City Lines offer comfortable and safe sea transportationservices to tourists and those who live in Istanbul. Having decided to offer a new ferry service between Istinye and Cubuklu, City Lines needed video surveillance cameras that could help keeping passengers and ferries safe and secure. And these cameras would also be required to cope with sea conditions as well as capture high resolution images day and night.

Result

250 Wisenet cameras were installed in 20 City Lines ships. In addition to keeping a close eye on passengers, the cameras were also used to monitor the movement of 2,000 vehicles that are transported daily. They are also used as a valuable navigational tool for captains, as they leave no blind spots enabling for captains to see things that could not be seen before. The majority of the installed cameras were Wisenet 'QNO-7080R's, part of the Wisenet Q series.
The 4 Megapixel bullet camera has built-in IR illumination and is packed with innovative features such as H.265 compression and WiseStream, a complementary compression technology which dynamically controls encoding, balancing image quality and compression, according to movement in the image.

Unique Solution

QNO-7080R

- 4megapixel high resolution support clear monitoring of event and activities occur in ferries
- IR support night time monitoring at sea environment
- IP66, IK10 prove that they are strong enough to deal with demanding conditions such as salty water vapor and high level of vibration and heavy wind

Spec

4M Network IR Bullet Camera		
• Max.4M resolution • 2.8~12mm(4.3x) motorized V/F lens • Max.20fps@4M, Max.30fps@2M • H.265, H.264, MJPEG	• True D&N(ICR), WDR(120dB) • IR viewable length 30m • Defocus/Motion detection, Tampering, Lens distortion correction, Hallway view	• Micro SD/SDHC/SDXC, NAS • PoE, 12V DC • IP66, IK10

Talking Points

"One of the biggest factors in choosing Wisenet cameras is they do not have any problems in the environments we operate. Equally important, whilst we did not want to compromise on quality, we needed cameras which had a high price/performance ratio. Wisenet came ahead of many other camera brands in respect of price, performance and technology."

Cuneyt Danaci, IT Specialist for City Lines, said.

Domodedovo Moscow International Airport - Russia

Wisenet cameras, the Best Tools to deter and detect any suspecious activity in airport area

Wisenet perfectly meets the demanding specifications of an international airport and help it to be one of the best airports in Eastern Europe

Task

Domodedovo International Airport in Moscow is visited by over 30 million passengers every year. All passengers have to pass though the customs area of the airport to ensure that import duties are paid and no one is entering or leaving with restricted or forbidden goods. In order to provide employees of the State control bodies with the best possible tools to allow them to deter and detect any criminal activity, the construction and operations of the State Border Facilities of the Russian Federation decided to replace existing CCTV system with network-based video surveillance solution that provides the advantage of the latest generation of high definition cameras.

Result

Over 400 Wisenet network cameras were installed. The images from all the cameras were monitored live 24/7 from a control room and were recorded in real-time onto a server-based system.
The Wisenet cameras installed in the customs area include 'SNP-5300H' network PTZ domes, which have a 30x optical zoom capability that provide operators with the opportunity to observe close-up detail of far away people or objects without pixilation. Other installed models include the 'SND-7061' 3 megapixel full HD network dome cameras, the 'SND-5061' 1.3 megapixel network internal dome camera and the 'SNV-6084' Wisenet 2 megapixel full HD network vandal-resistant dome camera, which is designed to be resistant to physical attack.

Unique Solution

XNP-6320H
※ SNP-5300H discontinued

• 32x optical zoom allows clear and detail monitoring at corners of the airport
• 150dB WDR balances out the lights between outside and inside condition, providing clear image to monitor

SNV-6084
※ Latest model XNV-6080

• Tampering sends an alarm to user when camera angle is changed or view is blocked due to outside cause
• IP66, IK10 ensures its durability, making it strong enough to endure physical damage

Spec

2M Network 32x PTZ Camera	
• Max.2M resolution	• Tampering, Loitering, Directional /Defocus/Fog/Audio/Motion/
• 4.44~142.6mm(32x) optical zoom lens	Face detection, Virtual line, Enter/Exit, (Dis)Appear, Sound
• Max.60fps@2M	classification, Auto tracking
• H.265, H.264, MJPEG	• SD/SDHC/SDXC, NAS, Local PC
• True D&N(ICR), WDR(150dB)	• PoE+, 24V AC
	• IP66, IK10

2M Network Vandal-Resistant Dome Camera	
• Max.2M resolution	• Tampering, Audio/Face detection, Virtual line, Enter
• 3~8.5mm(2.8x) motorized V/F lens	/Exit, (Dis)Appear, P-Iris,
• Max.60fps@2M	Defog
• H.264, MJPEG	• SD/SDHC/SDXC, NAS
• True D&N(ICR), WDR(120dB)	• PoE, 24V AC, 12V DC
	• IP66, IK10

Talking Points

"In partnership with Hanwha Techwin, we were able to design a system that was competitively priced, but also able to perfectly meet the demanding tender specifications. The price/performance ratio of the Hanwha Techwin cameras are such that we could demonstrate to the client that there was no need to compromise on quality, whilst offering a highly affordable solution."

Alexey Savin, CTO, TELROS Integration, said.

Ambergate Railway Site- UK

Minimized site walkouts while ensuring compliance with its health & safety regulations

Wisenet live streams enable oversight of progress at multiple locations at low operating power consumption

Task

Network Rail is a railway company owned by the government of the United Kingdom. Ambergate site, one of their railways located in Derbyshire needed an improvement work in order to keep providing convenient service. They required several site monitoring systems with live video streams while improvement is being processed. With the rail improvement work being carried out in remote locations, this was an interesting as well as a challenging project to work on in as the system needed to be sufficiently robust to be able to work in tough track side conditions, and the camera systems also required standalone power sources without any reliance on generators.

Result

Hanwha Techwin's XNP-6040H cameras were installed throughout the Ambergate site, working within 48 hours of the commencement of the project. The XNP-6040H, a vandal-resistant and weatherproof camera features auto-tracking PTZ support which enables operators to monitor close up detail of any site activity. This ensures that Network Rail can remotely control the systems and focus on different areas of site that they need to see. Its built-in gyro sensors offer more accurate image stabilization if they are disturbed by wind or vibration, whilst built-in SD memory card slots enable the short term storage of video in the event that there is any network disruption. Also, its H.265 combined with WiseStream II, Hanwha Techwin's own video compression technology dramatically reduced data bandwidth, saving up to 75% compared to H.264, resulting minimizing power consumption.

Unique Solution

XNP-6040H

• Built-in gyro sensors for image stabilization allow reduction of motion blur caused by wind or vibration.
• WiseStrem II reduces bandwidth about 75% compared to current H.264
• Dual SD slots allow up to 512GB to be saved automatically to the camera, keeping data safe in the event of an unstable network.

Spec

2M Network 4.3x PTZ Camera		
• Max.2M resolution	• True D&N(ICR), WDR(150dB)	• SD/SDHC/SDXC, NAS
• 2.8~12mm(4.3x) optical zoom lens	• Tampering, Loitering, Directional/Defocus/Fog/	• PoE, 12V DC
• Max.60fps@2M	Audio/Motion/Face detection, Virtual line, Enter/	• IP66, IK10
• H.265, H.264, MJPEG	Exit, (Dis)Appear, Sound classification,	
	Auto tracking	

Talking Points

The systems are battery powered, and by utilizing the existing site structures it minimized the installation time and cost. The live video streams captured by the XNP-6040H are being transmitted to the control room, with secure logins, authorized personnel are able to remotely access the video via their smartphones, tablets and laptops. "These live streams would be used by Network Rail to attain a better oversight of progress, asses safety on site, and reduce site walkouts."

Jay Dale, Project Manager of Inside Out Group, said.

Sight to Business intelligence

In the traditional retail businesses, the most critical aspect was providing goods and services according to consumers' demands at a reasonable price, and the main role of security cameras was protection of property, i.e. safeguarding products from theft and deterring other illegal activities.

However, the priority of modern day retail business is to provide customers with pleasant experience, and to identify and meet their rapidly changing needs and preferences. In essence, modern day consumers require a completely new approach for retail businesses to get their attention, and identify their needs and preferences.

Hanwha Techwin's retail solutions not only meet the basic requirements of safety and security, but also necessary intelligence data for businesses to thrive, such as consumers' store traffic through heatmap and visitor count.

Retail Solution Features

Specialized for retail and integrated surveillance

- Effective and affordable coverage options, including 360° fish-eye and various basic cameras
- Cameras with high-resolution and WDR for loss prevention and real-time evidence
- Efficient centralized management and mobile monitoring

Analytics for business intelligence

- Store management using built-in analytics; people counting and heatmap
- Better customer service with checkout queue management
- Deep insight gathering from Wisenet BI Solution

Effective store visibility and information

Alabama Subway Franchises - US

Wisenet plays the best protector for retail store assets

Blocking possible employee theft and robbery through effective live remote monitoring

Store Floor and Warehouse Area

A safe store for customers and staff, and a secure store for in-store property

• Hanwha Techwin's retail solution provides cost-effective monitoring using 360° fish-eye camera and low-cost cameras.

• And creates more sophisticated surveillance environment thanks to video analytics and sound classification and 4K high-res cameras.

• It also comes with SSM, which centrally controls and monitors multiple cameras and devices in store, and a mobile device that supports remote monitoring.

Entrance, Service Counter and Display Stand

Helping the businesses to be more effective and profitable by analyzing user experience from customers' perspective

• Using people counting, our solution identifies the visitor pattern to help with effective staff allocation and appropriate promotion time.

• Queue management monitors the waiting line and manages the time to create the most optimal user experience.

• Heatmap provides visual data to identify the amount and the flow of store traffic, and help the businesses to make the most effective strategic decision regarding the placement of products and display stand.

• In all of these functions, you can search for specific data and download reports, and using Wisenet BI Solution, a separate software, you can also collect data from multiple stores as well as combine with other retail solutions.

Related Product

• Fish-eye camera, X series camera

• NVR

• Smart viewer or SSM, Wisenet mobile

Task

For small business profitability, it's the little things that make a difference. According to Subway franchise in Alabama owner Kim Jordan, "The greatest loss to my business is employee theft." While she knew that video surveillance would help, the infrastructure for security systems would have been burdensome from a financial and management perspective. After evaluating a number of manufacturers, she decided to install Hanwha Techwin's video surveillance system as she is fully convinced that it is the best solution for preventing the theft and robbery plaguing the restaurant.

Result

Through 'SNV-6013' 2 megapixel vandal-resistant cameras and 'SND-L6013R' 2 megapixel Wisenet Lite dome cameras, the store owner became able to view live video remotely or from individual store locations, and easily review the footage at any time because of its system flexibility integrated with mobile monitoring. For greater reliability and redundancy, recording is also performed on site using SD card capability integrated into the cameras. The remote viewing capability has proven to be a major benefit by putting even more "eyes" on multiple locations to watch what goes on and in some cases take action to address issues.

Unique
Solution

SNV-6013
※ Latest model XNV-6011

• People counting, tampering and other various VA features detect event quickly and send alarms to users for immediate action taking

• Clear object and people recognition through 2 megapixel high resolution image and WDR support

SND-L6013R
※ Latest model QND-6010R

• SD storage support helps securing video data from memory loss

• 2 megapixel high resolution image quality and IR support make sure of 24 hour day/night monitoring

Spec

2M Network Vandal-Resistant Dome Camera	
• Max.2M resolution	• Tampering, Virtual line, Enter/Exit, (Dis)Appear, Face detection, People counting, Zone analyzing, Defog
• 2.8mm fixed lens	
• Max.60fps@2M	
• H.264, MJPEG	• SD/SDHC/SDXC, NAS
• WDR(120dB)	• PoE
	• IP66, IK10

2M Network IR Dome Camera	
• Max.2M resolution	• Tampering, Motion detection, Lens distortion correction, Hallway view
• 3.6mm fixed lens	
• Max.30fps@2M	• Micro SD/ SDHC, NAS
• H.264, MJPEG	• PoE
• IR viewable length 15m	

Talking
Points

"After we had the cameras installed, robbery and employee theft really decreased. The cost of the cameras was peanuts compared to what we were losing because of employee theft and robbery. Each of the video systems we've installed has definitely paid for itself and then some."

Kim Jordan, Vice President, Poore and Company Inc. DBA Subway, also a owner of six subway franchises said.

The Hyundai Pangyo Store - Korea

Pleasant shopping environment with real-time safety monitoring

Wisenet enables quick response through real-time monitoring of the accident-prone areas near elevators and escalators

Meydan Shopping Mall - Turkey

Creating the best reputation by successfully transferring from analog to network system

Meydan Shopping Mall is upgraded with the Wisenet network solution to become a truly safe shopping center for customers and sellers

Task

The Hyundai Pangyo Store, which opened in August 2015, has the largest sales area in the metropolitan. At the time of the grand opening, it strived to build a security system that met the premium image of being the largest department store in the metropolitan area. As there is a risk of theft and accidents in areas such as department stores and supermarkets, the challenge was to continuously monitor the area to cope with potential injuries or property loss and to enable customers to shop worry-free by minimizing these concerns. In addition to such needs, a quick response capability befitting of the standing of the department store was also crucial.

Task

The 128,000-square meter Meydan Shopping Mall is one of Turkey's largest shopping center, with approximately 25 million visitors every year who can shop at over 70 national and international brand stores, as well as enjoy the Mall's numerous restaurants, cafes and a state-of-the-art 2,500-seat movie theatre. The Mall has won a number of awards for its architectural design and sustainability, and is LEED (Leadership in energy and environmental-friendly design) certified.
Following the appointment of new management, a decision was made to replace an old analogue CCTV system with an IP network video surveillance system that could take advantage of the very latest advances in technology.

Result

1,110 cameras were installed in the Hyundai Pangyo Store. 'SND-6084' were installed to enable clear, high-resolution video monitoring. In particular, its advantage is that it provides a P-Iris and allows its users to see clear video of objects at both short and long distances. 'SND-6011R' was also installed in the elevators to monitor confined space with lose lights. On the roof, network IR PTZ cameras (SNP-6200RH) were installed for monitoring the outside perimeter. At the Control Center of the Hyundai Pangyo Store, rack-installed 'SRN-4000' units operated at full performance. The 'SRN-4000' is a network recorder capable of storing up to 64 channels of full HD video in real-time. Such outstanding recording performance is crucial for monitoring the recorded data. The cameras installed for security within the store are also used to monitor accidents in nearby areas.

Result

350 of **Hanwha Techwin**'s Wisenet 2 megapixel network cameras including 'SNB-6004P', 'SNV-6084R' and 'SNP-6200RH' were installed at the shopping mall. Images from every camera are recorded onto 'SRN-4000' NVRs which incorporate hot-swappable hard drives that support RAID5 and RAID6. Operators could view both live and recorded images with the help of **Hanwha techwin**'s SSM(Smart security manager), a central management software. The solutions for the project had to be built by a single source in order to have integrated management system for improved effectiveness in all. With Wisenet, **Hanwha Techwin** successfully changed into into IP network video surveillance and is now armed with the latest technology.

Unique Solution

SND-6084	
※ Latest model XND-6080	

- 2 megapixel high resolution offers clear monitoring over high risky area such as elevator, escalator and other internal spaces
- Clear object recognition at both long and short distance through P-Iris

XNP-6370RH	
※ SNP-6200RH discontinued	

- 37x optical zoom offers outside accident monitoring near the monitoring area
- Stable monitoring even in extreme weather condition through IR LED and IP66/IK10

Unique Solution

SNV-6084R	
※ Latest model XNV-6080R	

- Improved image quality through WDR and 2 megapixel high resolution support
- Effective event monitoring over dangerous area through intelligent video analytics

XNP-6370RH	
※ SNP-6200RH discontinued	

- 37x optical zoom enables close monitoring of accidents or crimes in and outside the shopping mall
- Stable monitoring even in extreme weather condition through IR LED and IP66/IK10

Spec

2M Network Dome Camera	
• Max.2M resolution	• Tampering, Virtual line, Enter/Exit, (Dis)Appear, Audio/Face detection, P-Iris, Defog
• 3~ 8.5mm(2.8x) motorized V/F lens	
• Max.60fps@2M	• SD/SDHC/SDXC, NAS
• H.264, MJPEG	• PoE, 12V DC
• True D&N(ICR), WDR(120dB)	

2M Network 37x IR PTZ Camera	
• Max.2M resolution	• Tampering, Crossing, Enter/Exit, (Dis)Appear, Audio detection, Defog, Auto tracking
• 6~222mm(37x) optical zoom lens	
• Max.60fps@2M	• SD/SDHC/SDXC, NAS, Local PC
• H.265, H.264, MJPEG	• 24V AC
• True D&N(ICR), WDR(120dB)	• IP66, IK10
• IR viewable length 350m	

Spec

2M Network Vanda-Resistant IR Dome Camera	
• Max.2M resolution	• Tampering, Virtual line, Enter/Exit, (Dis)Appear, Audio detection, P-Iris, Defog
• 3~8.5mm(2.8x) motorized V/F lens	
• Max.60fps@2M	• SD/SDHC/SDXC, NAS
• H.264, MJPEG	• 24V AC
• True D&N(ICR), WDR(120dB)	• IP66, IK10
• IR viewable length 15m	

2M Network 37x IR PTZ Camera	
• Max.2M resolution	• Tampering, Crossing, Enter/Exit, (Dis)Appear, Audio detection, Defog, Auto tracking
• 6~222mm(37x) optical zoom lens	
• Max.60fps@2M	• SD/SDHC/SDXC, NAS, Local PC
• H.265, H.264, MJPEG	• 24V AC
• True D&N(ICR), WDR(120dB)	• IP66, IK10
• IR viewable length 350m	

Talking Points

"We are closely monitoring escalators to deal with safety and instances in which items are lost and we are very satisfied with the quality of Hanwha Techwin cameras. Sometimes, the police visit to find recordings of accidents that took place near the store. I was told that the high-quality image we shared provided a lead in solving a case."

A Safety Manager, Hyundai Department store, Pangyo, said.

Talking Points

"An old analogue CCTV system was replaced with an IP network video surveillance system that could take advantage of the very latest advances in technology."
The project gained a recognition as a successful case in the industry, and all contributors involved in the project ended the project with positive mutual reputation at the project completion.

Trustworthy Banking

Security has always been highly regarded in the banking and finance sector, to which video surveillance systems were introduced relatively early. Because older analog systems are still installed and operating in a great number of bank branches, the need to transition to the latest in network-based, high-definition video surveillance systems is increasing.

Hanwha Techwin offers a wide range of surveillance products so that customers can easily switch from an old system to a state-of-the-art system. In addition to surveillance products, we also offer flexible systems with outstanding scalability that can be used to integrate with other security systems used by banks. Our products provide excellent manageability through tools for quickly and easily managing equipment installed at a number of branches.

Banking Solution Features

Complete Visibility for Safety

• Cameras with high-resolution and WDR for real-time evidence and crime deterrence

• Thorough monitoring in any surroundings without disharmony

• Efficient operations with intelligent video and audio analytics

Central Management & Data Integrity

• Large-scale equipment management

• Failover and recovery capabilities

• Interface with bank IT infrastructures

• Trustworthy network security

Protection in Trust and Values

Entrance and Teller Counter

Entrances and teller counters are the most important areas in banks and call for the highest level of visibility.

• Video surveillance devices can deter crimes just by being existent and it can be further enhanced by clear visual data. X and P-series cameras, which support 150dB WDR images and 4K resolution even during nighttime and with backlight can provide clear images with thorough details of people and objects.

• X-series cameras are embedded with sound classification function, which distinguishes abnormal sounds, such as gunshots, shattering glass, screams and explosion, so that the users can respond to emergency situations fast.

ATM and Lounge

ATM and lounge areas are often crowded, so close observation and safety are necessary. These areas particularly require a lot of attention since the use of excessive surveillance device can cause people discomfort.

• To make the cameras' visual presence minimum, remote head cameras are recommended as well as fish-eye cameras, which can monitor 360° degrees with just one camera. With these cameras, the customers are less intimated while closely monitoring the surrounding areas and the visitors.

Restricted Zone and Security Room

Restricted zones, such as safe and data center, require 24/7 monitoring as well as guaranteed data stability, while effectively managing multiple monitoring spots.

• Our cameras and storage devices were put through an extensive quality assurance process, and can transfer and store high-resolution image data without interruption. The failover and ARB (Auto Recovery Backup) function of our storage devices minimize data loss in case of any external disruption.

• Our software and hardware provide seamless interface with the existing IT infrastructure and our users can centrally manage all of the devices in different locations.

• Additionally, all of our products are put through diagnosis and analysis process under the guidance of Security-Computer Emergency Response Team (S-Cert) creating the cyber security our customers can trust.

Related Product

• Vandal-resistant and indoor camera (Wisenet X and Q series camera), Encoder
• NVR (PRP-4000H8/5000H16, XRN-3010, Etc)
• SSM, Wisenet BI Solution

Columbia Bank - US

Ensuring the safety of their customers and assist law enforcement should incidents occur in areas surrounding their branches

Task

Columbia Bank, a Northwest community bank headquartered in Tacoma, Washington, sought to upgrade their video surveillance solution to improve image quality and retention time. They also wanted to maximize field of view to deliver a more forceful and expansive – yet, less intrusive – solution. Community banks are charged with keeping employees, customers and assets safe, but also need to present a warm and inviting environment since they are often a hub of civic activity.

Result

Columbia Bank chose to install a mix of Hanwha Techwin models including Wisenet P series PNM-9000VQ multi-directional outdoor vandal-proof dome cameras with 5 megapixel lens modules and Wisenet X series XND-8020F 5megapixel indoor flush mount dome cameras. The video cameras serve as part of an overall physical security plan and are positioned to provide expansive coverage of bank interiors including teller lines, exteriors - including parking lots and surrounding areas - and ATM machines. So far, Columbia Bank has provided video evidence to help law enforcement investigate a variety of incidents including drive-by shootings, traffic accidents, and arson.

Unique Solution

PNM-9000VQ	• Multi-directional outdoor vandal resistant dome cameras provide expansive coverage of sights. • 5-megapixel lens modules

XND-8020F	• 5MP indoor flush mount dome cameras

Spec

4ch x 2MP / 5MP Multi-directional camera	
• Exchangeable 4ea x 2MP / 5MP lens modules 8MP to 20MP resolution depend on the combination of lens modules • Max. 60fps@2M, Max. 30fps@5M (H.265 / H.264) • WDR 150dB with 2MP lens module, 120dB with 5MP lens module	• 2.4mm, 2.8mm, 3.6mm, 6mm fixed lens (2MP module) • 3.7mm, 4.6mm, 7mm fixed lens (5MP module) • H.265, H.264, MJPEG codec, Multi streaming support • Video analytics, WiseStream II • IP66, IK10, SD / SDHC / SDXC memory 4 slots

5MP Indoor Flush Mount Compact Dome Camera	
• 5MP @ 30fps • Triple codec H.265/H.264/MJPEG • 3.7mm fixed lens • Wide dynamic range 120dB • On-board analytics (business/audio and video)	• Digital image stabilization • Magnetic cover and a built-in mic • Built-in retail business intelligence analytics • USB for easy installation

Talking Points

"Hanwha Techwin has been a phenomenal partner for us and that's what I look for in a security provider – a long-term partnership."

Ross A. Armstrong , Vice president of physical security at Columbia Bank, said.

UKRGASBANK - Ukraine

Searching time reduced by max. 92% by installing centralized network system

Wisenet built a centralized security management even from complex analog systems with multiple sources

Task

JSB "UKRGASBANK" is a universal bank with a focus on green finance. Established in 1993, 95% of the Bank's share capital belongs to the State of Ukraine represented by the Ministry of Finance of Ukraine. UKRGASBANK services around 900 thousand individuals, and over 46 thousand corporate and SME customers.
However, all bank departments were equipped with analog cameras from 5 different manufacturers, and the system had been extended for many years and investigating incidents usually consumed a lot of time. To optimize video surveillance system for future, having central video surveillance system with IP camera was essential for the bank.

Result

1,166 'SND-L6083R' dome cameras and 127 'SNO-L6083R' bullet cameras were installed. 'SND-L6083R' camera was ideal for video surveillance in cash zones and customers' service areas, and hallway view and barrel distortion correction functions were most appreciated. High performance of built-in infrared lighting allowed for us to monitor at night at max 15m in distance. WDR allowed to carry out full-time surveillance in high quality. 'SNO-L6083R' cameras delivered the same satisfaction even outdoors. Selected cameras delivered high resolution video images without sacrificing the obtained data. As a result, the speed of customer service and incident response to incident responding time have improved. It has become possible to view centralized monitoring 24/7 in both live and recorded video mode, making monitoring and support much easier.

Unique Solution

SND-L6083R	
※ Latest model QND-6070R	• Broad/open/narrow space monitoring is possible through hallway view feature perfect for lobby and ATM area monitoring
	• LDC support improve image quality and provides fair image quality at corners

SNO-L6083R	
※ Latest model QNO-6070R	• 24/7 detail monitoring supports even at night time through IR support
	• IP66, IK10 certified, enabling outdoor monitoring even under extreme weather

Spec

2M Network Dome Camera	
• Max.2M resolution	• IR viewable length 15m
• 2.8~12mm(4.3x) V/F lens	• Motion detection, Tampering, Lens distortion correction, Hallway view
• Max.30fps@2M	• Micro SD/SDHC, NAS
• H.264, MJPEG	• PoE
• True D&N(ICR)	

2M Network IR Bullet Camera	
• Max.2M resolution	• IR viewable length 20m
• 2.8~12mm(4.3x) V/F lens	• Motion detection, Tampering, Lens distortion correction, Hallway view
• Max.30fps@2M	• Micro SD/SDHC, NAS
• H.264, MJPEG	• PoE
• True D&N(ICR)	• IP66, IK10

Talking Points

"The average event searching time with previous system was about 2 hours, and now, with the new system by Hanwha Techwin, it is done within 10 minutes. The comprehensive solution fully met our expectations and allowed us to build a solid foundation for the security systems in future."

Konovalov Ihor Viktorovich, Director of Security Department, UKRGAZBANK, said.

Garanti Bank - Turkey

Offering high quality image to prevent any bank criminal activities

DVRs with customized firmware offering the best user-friendly recording solution; easy to install, configure, and operate

Task

Established in 1946, Garanti Bank is Turkey's second largest private bank with consolidated assets of US$ 103.1 billion as of 31st March, 2016. Purchasing Manager for Garanti Bank, said that the safety of their customers and staff is of paramount importance. He also emphasized that it is essential that they are able to reliably record images captured by the 8,000 cameras installed at their branches and ATM's. Therefore, they decided to invest in new DVRs to ensure they could, when necessary, pass on high quality video evidence to the police to help them investigate any criminal activity and also to use for themselves for any potential inside situations.

Result

Garanti Bank has invested in 960H and new 1280H DVRs supplied by Hanwha Techwin, in order to monitor and record activity at 300 of its branches and 2,800 ATMs.
The DVRs have been installed as replacements for outdated video recorders that were increasingly proving to be unreliable and expensive to maintain. Depending on the number of cameras, either four or sixteen channel 960H/1280H series DVRs have been installed at each location. All are able to simultaneously record high resolution images in real time, across all their channels. To comply with Garanti Bank's operational requirements, as well as legal obligations, Hanwha Techwin design engineers provided customized firmware for the DVRs which, working together with their centralized management software (SSM), included the ability to support the Bank's MSSQL database system.

Unique Solution

SRD-1656D	
※ Latest model HRD-1642	• Clear video output in high resolution in live and recorded image monitoring
	• Improved personal data protection through privacy masking support

Wisenet SSM	
	• Support centralized monitoring and efficient data management which are spread out at each branch

Spec

16CH 1280H Coaxial DVR	
• 16CH 1280H (950TVL) non real-time DVR	• VGA, HDMI for full HD (1080p) resolution
• H.264 supported	• Max. 4 internal HDDs
• Privacy masking support for each channel (4ea)	• Digital video spot (2ea), USB (2ports) back up
• Convenient with strong network monitoring	• Up to 16CH/1CH audio inputs/output

Total Management Software	
• Single core server for easy installation	• Max.4 monitors, 100CH real-time monitoring(single monitor – max.64CH)
• New UI	• Camera connection for multiple server domains(NVR, DVR max 10,000CH, SSM server max.1,024CH)
• Easy and fast conversion of live and playback	
• Various Intelligent video analytics	
• Quick response through rule-based event action	

Talking Points

"We were attracted to DVRs as they have a very user-friendly Graphical User Interface which meant that our engineers found them simple to install and configure, and on a day-to-day basis, our managers at each location have found them easy to operate." Hanwha Techwin design engineers provided customized firmware for the DVRs in order to comply with Garanti Bank's operational requirements, as well as legal obligations.

İlker Çetin, Purchasing Manager, Garanti Bank, said.

Other Cases

Education
Washington Township School - US
Beykent University - Turkey
Davis School District - US
Manchester Metropolitan University - UK

Hospital
New Cross Hospital - UK
Samsung Medical Center - Korea

Hotel/Residence
Geoje Belvedere - Korea
Hillstate Apartment Complex - Korea
The Shilla Seoul - Korea
Radisson Blu Edwardian Hotel - UK

Entertainment
Luzhniki Stadium - Russia
Adventure Island - UK
Manchester Jump Nation - UK

Commercial
CJ Logistics' mega hub terminal - Korea
Seoul Finance Center(SFC) - Korea

Public
National Park of Veľká Fatra - Slovakia

Washington Township School - US

Strengthening the safety of students and employees with a reliable preemptive measure to protect schools from serious threats of violence

Task
Washington Township School, New Jersey, is a comprehensive community public school district comprised of 11 schools from kindergarten to twelfth grade. The district is well prepared to combat threats of violence. The Washington Township board has always worked hard to enhance security and finally decided to establish the most technologically advanced security system for student and employee safety.

Result
XNV-6020R IR vandal dome cameras were installed on exterior doors, while XNF-8010RV IR fisheye cameras, boasting complete wrap-around view, were set up along the building's exterior. Its IR support provided clear image monitoring 24/7 even during the darkest of nights, and the X series also boast incredible onboard analytics such as intelligent video analytics and sound classification in conjunction with the video management system (VMS). PNM-9020V multi-sensor panoramic cameras have also been installed along the building's exteriors. It enables 180° monitoring with the use of just one camera. QNV-7080R, QND-7080R IR cameras have also been added around the school district, enabling monitoring that boasts clear images and the support for the innovative hallway view.

Unique Solution

XNV-6020R	• Providing clear image monitoring 24/7 Onboard analytics in conjunction with the video management system (VMS)

QNV-7080R/QND-7080R	• Providing clear images • Supporting innovative hallway view

Spec

2MP IR Outdoor Dome Camera	
• Built-in 4mm fixed lens • Max. 60fps@all resolutions (H.265/H.264) • H.265, H.264, MJPEG codec, Multiple streaming • Day & Night (ICR), WDR(150dB),Defog • Handover, SD/SDHC/SDXC memory slot (Max. 512GB)	• Loitering, Directional detection, Fog detection, Audio detection, Digital auto tracking, Sound classification, Heatmap, People counting, Queue management, Tampering, Hallway view, WiseStream II support, IP67/ IP66, IK10

4MP IR Vandal Resistant Camera	
• Max. 4M resolution • 2.8 ~ 12mm (4.3x) motorized varifocal lens • Max. 20fps@4M, Max.30fps@ 2M all resolutions • H.265, H.264, MJPEG codec supported, Multiple streaming • Day & Night (ICR), WDR (120dB)	• Motion detection, Tampering, Defocus detection • micro SD (128GB) memory slot, PoE / 12V DC • IR viewable length 30m, IP66, IK10 • Hallway view support • LDC support (Lens Distortion Correction)

Talking Points
"Our school board and I were most impressed with Hanwha's X series cameras because of the robust analytics they offer, including an important gunshot detection feature. In-camera audio analytics like gunshot and glass break detection are unique to Hanwha technology. We are very secure compared to most schools."

Keith Neuhs, the superintendent of Washington Township said.

Beykent University - Turkey

Security system going beyond safety and is used as an educational tool

Wisenet 5 megapixel high resolution video data widely opened lab accessibility to medical students

Task

Medical students at Beykent University in Istanbul, Turkey need to take lab exercises including audiometry and advanced simulation. However, in audiometry lab, the silent cabin could only hold 3 out of 20 students and there was no way for the students waiting outside to access the cabin. Also, patient simulation by students needed to be reviewed more closely while and after performing the exercise for educational purpose.

Result

About 450 **Hanwha Techwin** cameras were installed at multiple campuses of the university. Especially 5 megapixel high resolution cameras 'SND-6084R' and 'XNO-8080R' were installed in labs to support medical students' education. In the audiometry lab, Wisenet cameras installed inside the cabin enabled the remaining students standing outside to observe what is happening when hearing tests are being carried out. For the advanced simulation lab, Wisenet cameras were installed to transfer images and sounds of the exercise performance collected from 3 simulation rooms to 1 observation room, making it possible for students to observe the mistakes as well as the good examples on projection or television screens throughout the campuses.

Unique Solution

XNO-8080R	
• 5 megapixel high resolution video monitoring supports live and recorded monitoring of whole lab practice	• Recorded images are transferred into monitoring room for educational monitoring for student

SND-6084R	
※ Latest model XND-6080R	
• 2 megapixel at 60fps high speed recording supports detail monitoring of students' movement	• Wisenet III reduces bandwidth about to 70%, and supports recording of large video data from long lab experiment

Spec

5M Network IR Bullet Camera	
• Max.5M resolution • 3.7~9.4mm(2.5x) motorized V/F lens • Max. 30fps@5M • H.265, H.264, MJPEG • True D&N(ICR), WDR(120dB) • IR viewable length 50m	• Tampering, Loitering, Directional/Defocus/Fog/Audio/Motion/Face detection, Virtual line, Enter/Exit, (Dis)Appear, Sound classification, Handover, Hallway view • SD/SDHC/SDXC, NAS, Local PC • PoE, 24V AC, 12V DC • IP67, IP66, IK10, NEMA 4X

2M Network IR Dome Camera	
• Max.2M resolution • 3~ 8.5mm(2.8x) motorized V/F lens • Max.60fps@2M • H.264, MJPEG, Multiple streaming • H.264, MJPEG • True D&N(ICR), WDR(120dB)	• IR viewable length 15m • Tampering, Audio/Face detection, Virtual line, Enter/Exit, (Dis)Appear, P-Iris, Defog • SD/SDHC/SDXC, NAS • PoE, 12V DC

Talking Points

"The most important reason for us to choose Wisenet products was the efficient and smooth way they operate with software applications. Their ability to ensure continuity of the project has been a major benefit to us. As a result, we will be continuing to install Wisenet cameras in other locations throughout the University and are planning to have about additional 700 installed by the end of the project."

Barkin Oktem, IT manager at Beykent University, said.

Davis School District - US

High resolution video surveillance safeguards students throughout the school campus

Enhanced video surveillance system with cutting-edge technology to prevent firearm accidents in schools

Task

Each school day, 3,200 students attend Jeff Davis County schools in Hazelhurst, Georgia. The high school and middle school had video surveillance systems installed in an effort to provide security protection. Unfortunately, these systems were deployed using very different equipment from different vendors. The result was two separate video systems consisting of a mixture of hardware. Given the poor video quality and coverage issues at both schools, it became obvious that both systems needed to be replaced.

Result

The district chose **Hanwha Techwin** Wisenet cameras for the surveillance system upgrades and video management. The district used three models of **Hanwha Techwin** cameras: 'SNV-6012' cameras for indoor use; 'SNV-6084R' cameras used both indoors and outdoors; and 'SNO-7082R' cameras used outdoors. Thanks to the high-resolution imaging provided by the **Hanwha Techwin** cameras, the district could resolve a much higher percentage of incidents than in the past. Additionally, overall student behavior has improved with the known presence of the cameras. Each school is monitored by its own cameras locally in accordance with the access hierarchy system design. And if an incident needs to be reported to the law enforcement, the district can provide clear, usable footage right away.

Unique Solution

SNV-6084R	
※ Latest model XNV-6080R	
• Support for keeping student safety by detecting abnormal sound, and sending event alarms for immediate action taking	• 2 megapixel high resolution monitoring

QNO-7080R	
※ SNO-7082R discontinued	
• Supports clear and detailed monitoring with 4 megapixel high resolution	• IP66, IK10 support outdoor installation providing stable monitoring

Spec

2M Network Vandal-Resistant IR Dome Camera	
• Max.2M resolution • 3~8.5mm(2.8x) motorized V/F lens • Max.60fps@2M • H.264, MJPEG • True D&N(ICR), WDR(120dB) • IR viewable length 15m	• Tampering, Virtual line, Enter/Exit, (Dis)Appear, Audio detection, P-Iris, Defog • SD/SDHC/SDXC, NAS • 24V AC • IP66, IK10

4M Network IR Bullet Camera	
• Max.4M resolution • 2.8~12mm(4.3x) motorized V/F lens • Max.20fps@4M, Max.30fps@2M • H.265, H.264, MJPEG • True D&N(ICR), WDR(120dB) • IR viewable length 30m	• Defocus/Motion detection, Tampering, Lens distortion correction, Hallway view • Micro SD/SDHC/SDXC, NAS • PoE, 12V DC • IP66, IK10

Talking Points

"When parents send their children to school, they expect and demand that they will be safe, so it's our duty to provide a secure environment. That means using the best of the best in terms of technology, and the Hanwha Techwin cameras certainly fit that bill. These cameras have exceeded our expectations, so parents can be confident that their children are safe at school."

Jeff Davis, County Board of Education, said.

Manchester Metropolitan University - UK

Comprehensive solutions set solid foundation of security system for future

Wisenet's 30x optical zoom, auto tracking always keep an eye over the university for campus safety

New Cross Hospital - UK

One-platform monitoring, making it easy to operate security system

Wisenet fully utilized existing analog and network system via its excellent system compatibility

Task

Manchester Metropolitan University is one of the largest universities in the UK. They wanted to detect any would-be thieves who might be tempted to steal the university's valuable equipment from the teaching rooms and lecture theatres in the new Business School.
Apart from the cost of replacing any items which might be stolen or damaged, the consequential costs in terms of disruption to the teaching process was also something the university was determined to avoid.

Task

New Cross Hospital, run by the Royal Wolverhampton NHS(National Health Service) Trust is located in the Health Town district in the West Midlands, England. It provides various medical services including emergency, maternity and neonatal intensive care, also the Heart and Lung Center opened in 2004 as the United Kingdom's first purpose built specialist heart center. New Cross Hospital's video surveillance system was combined with analog and network cameras which was set many years ago. Their goal is to upgrade their surveillance system with latest technology that satisfies both analog and network cameras while providing large storage capacity, improved image quality, and easy management.

Result

110 **Hanwha Techwin**'s dome cameras have been installed throughout the new building, 95 of them are 'SNV-3080' fixed position dome cameras. The remainder are 'SNP- 3301' PTZ domes which have a 30x optical zoom feature to allow operators to observe close up detail of faraway objects or people. Both models incorporate Day/Night feature and WDR technology which make them ideal for locations where there may be strong contrasting lighting conditions. They also both offer multiple streaming of images with a choice of MJPEG, MPEG-4 and H.264 compression methods, providing the option to simultaneously transmit images to multiple locations at various frame rates up to 25 frames per second, and at different resolutions.

Result

The Wisenet hybrid recording solutions were installed at the New Cross Hospital. Analog recorders 'SRD-1694' and network recorders' XRN-2010' were installed, both have large storage capacity up to 48 terabytes by having 8 HDD slots. One of the biggest benefits of 'SRD-1694' is that its excellent compatibility allows both Wisenet HD+ and other general analog cameras which saves cost from system upgrade by simply adding or replacing cameras without additional cables. The 'XRN-2010' offers 4K UHD high resolution monitoring and dual display which allows for users to monitor in different resolution conditions. Finally, **Hanwha Techwin**'s Smart Security Manager helped building an one platform video management by having flexible system integration and centralized data management with powerful search engine.

Unique Solution

XNV-6080	
※ SNV-3080 discontinued	• Clear monitoring with 2 megapixel high resolution
	• ICR Day&Night and WDR support clear object/person recognition
	• Detect abnormal movement including loitering

XNP-6320H	
※ SNP-3301 discontinued	• 32x optical zoom recognize object/ person in clear view
	• Auto tracking follows a moving object automatically

Unique Solution

XRN-2010	
	• In the case of network disconnect, ARB function stores the image data onto an SD card first, which is then restored to NVR when the network is reconnected, preventing any data loss.
	• Cost for operation and maintenance is reduced by effectively compressing high-res image data (max. 75% of the bandwidth)

Wisenet SSM	
	• Configure one-platform video monitoring system by integrating DVR/NVR systems that were separated before
	• Easy video search among massive data via Smart Search

Spec

2M Network Vandal-Resistant Dome Camera	
• Max.2M resolution	• Tampering, Loitering, Directional/ Defocus/Fog/Audio/Motion/Face detection, Virtual line, Enter/Exit, (Dis)Appear, Sound classification, Handover, Hallway view
• 2.8~12mm(4.3x) motorized V/F lens	• SD/SDHC/SDXC, NAS, Local PC
• Max.60fps@2M	• PoE, 24V AC, 12V DC
• H.265, H.264, MJPEG	• IP67, IP66, IK10, NEMA 4X
• True D&N(ICR), WDR(150dB)	

2M Network 32x PTZ Camera	
• Max.2M resolution	Face detection, Virtual line, Enter/Exit, (Dis)Appear, Sound classification, Auto tracking
• 4.44~142.6mm(32x) optical zoom lens	• SD/SDHC/SDXC, NAS, Local PC
• Max.60fps@2M	• PoE+, 24V AC
• H.265, H.264, MJPEG	• IP66, IK10
• True D&N(ICR), WDR(150dB)	
• Tampering, Loitering, Directional /Defocus/Fog/Audio/Motion/	

Spec

32CH 12M NVR	
• Max.32CH, 12M resolution	• WiseStream, H.265, H.264, MJPEG
• 256Mbps recording	• Max.8 internal HDDs(48TB)
• 4K HDMI monitor video out	• ARB&Failover(N+1)
• Dual monitor video out	

Total Management Software	
• Single Core Server for easy installation	• Max.4 monitors, 100CH real-time monitoring(single monitor – max.64CH)
• New UI	• Camera connection for multiple server domains(NVR, DVR max 10,000CH, SSM server max.1,024CH)
• Easy and fast conversion of live and playback	
• Various Intelligent video Analysis	
• Quick response through rule-based event action	

Talking Points

"The teaching rooms and lecture theatres in the new Business School will be equipped with the very latest IT equipment, projection and audio equipment, security personnel will be relying on Hanwha Techwin's security system to help maintaining a safe and secure environment."

Mark Shutt, Security Manager for Manchester Metropolitan University, said.

Talking Points

"We looked long and hard for a suitable solution of integrating our older systems with newer network systems on the site. For the first time in years we are now able to view our entire system on one platform that is functional and easy to operate. I look forward now to the next stage which will be to replace end-of-life cameras for the much more technologically advanced kit, which will enable us to use the smarter functions of the Wisenet software."

Paul Smith, Security Manager, Royal Wolverhampton NHS Trust, said.

Samsung Medical Center - Korea

Being together as a security partner over 20 years by offering reliable customer service system

With its various lineups, Wisenet takes charge of the entire security of a large hospital

Task

Since its opening in 1994, 'Samsung Medical Center (SMC)' has been the leader in all fields of medicine, and the pioneer of medical advancement in Korea. The hospital had nearly 7,800 employees, 1,979 beds and an daily average of nearly 8,000 outpatients as of 2016. As SMC is a massive facility where various emergencies may occur and a large number of patients and visitors come and go, continuous inspection of its systems and periodic system renewal were mandatory. Therefore their top priority was to select a partner capable of providing outstanding performance as well as a reliable customer service system.

Result

Hanwha Techwin's products were installed in every building of SMC. Each product was installed to monitor the safety of visitors and patients and to manage various facilities. In hallways, waiting rooms, treatment rooms and wards, which compose the majority of space in each building, dome cameras in the Wisenet lineup, 'SND-6084' and 'SND-L6083R' are installed. Both models are small, interior dome-type cameras that do not clash with the interior design or make patients or visitors uncomfortable.
'SND-L6083R' includes a hallway view function that optimizes monitoring performance even in narrow passages such as hallways that connect treatment rooms and wards. 'SNP-6320' and 'SNP-6320RH' were also installed at hospital entrances and lobbies for fast monitoring of large areas with high population

Unique Solution

SND-L6083R
※ Latest model QND-6070R

- 9:16 ratio viewing function provide effective monitoring of hallway and treatment room
- Detailed monitoring with 2 megapixel high resolution

SNP-6320/6320RH
※ Latest model XNP-6320/6320RH

- 32x optical zoom and pan/tilt features can monitor areas with high population such as front door, swing door, and lobby
- IR LED enable low light environ ment monitoring leaving almost no blind spot (6320RH)

Spec

2M Network IR Dome Camera	
• Max.2M resolution	• IR viewable length 15m
• 2.8~12mm(4.3x) V/F lens	• Motion detection, Tampering,
• Max.30fps@2M	Lens distortion correction,
• H.264, MJPEG	Hallway view
• True D&N(ICR)	• Micro SD/SDHC, NAS
	• PoE

2M Network 32x PTZ Camera	
• Max. 2M resolution	• Tampering, Audio/Face detection,
• 4.44~142.6mm(32x) optical	Virtual line, Enter/Exit, (Dis)Appear,
zoom lens	Defog, Auto tracking(6320RH)
• Max.60fps@2M	• SD/SDHC/SDXC, NAS
• H.264, MJPEG	• PoE+(6320RH), 24V AC
• True D&N(ICR), WDR(120dB)	• IP66, IK10(6320RH)
• IR viewable length 150m(6320RH)	

Talking Points

"We've been using Hanwha Techwin's security products since the hospital's opening. As Hanwha Techwin has a product lineup with various products and a reliable customer service system, it is one of the first companies we consider when a system renewal is required."

A staff of Samsung Medical Center, said.

Geoje Belvedere - Korea

Safeguarding Guests and Resort Facilities

Task

Located in Geoje, Gyeongsangnam-do province, South Korea, 'Geoje Belvedere' is a premium hotel & resort established by Hanwha Hotels & Resorts. Its name Belvedere means 'beautiful view' in Italian. Befitting its premium brand, the resort hoped to build a reliable security solution for day & night monitoring to guarantee round-the-clock security for its guests without damaging the hotel's elegant interior design.

Result

430 units of Wisenet cameras were installed across the resort, including 300 XND-6080 dome cameras providing 2MP high resolution monitoring. Designed to perfectly blend into surrounding interiors and exteriors, this network dome camera is equipped with a Hallway View, providing effective monitoring for the resort's long corridors without any image cutoffs. Additionally featuring the 150dB Wide Dynamic Range (WDR), the dome device supports clear, clean video monitoring in all circumstances. Also, around 40 units of XNO-6080R IR bullet cameras with intelligent video and audio analytics were installed in the hotel's gardens, outdoor parking lots, and gateways. A total of 20 units of XNP-6330RH cameras, featuring 33x optical zoom, were also installed. The built-in IR LED clearly identifies subjects up to 350m away, even in light-deprived areas, providing effective image monitoring even in the dark.

Unique Solution

XND-6080V

- Providing 2MP high resolution monitoring
- Equipped with a Hallway View without any image cutoffs
- 150dB Wide Dynamic Range (WDR)

XNO-6080R

- Providing intelligent video and audio analytics

Spec

2MP Indoor Dome Camera	
• Max. 2 megapixel resolution	digital auto tracking,
• 2.8 ~ 12mm (4.3x) motorized	sound classification, tampering
varifocal lens	• Motion detection, Handover
• Max. 60fps@all resolutions	• SD/SDHC/SDXC memory slot
(H.265/H.264)	(Max. 512GB)
• H.265, H.264, MJPEG codec	• Hallway view, WiseStreamII support, IK08
supported, multiple streaming	• LDC support
• Day & Night (ICR), WDR (150dB),	(Lens Distortion Correction)
Defog	• PoE / 12V DC, Bi-directional audio
• Loitering, directional detection,	support, built-in microphone
fog detection, audio detection,	

2MP IR Bullet Camera	
• Max. 2 megapixel resolution	digital auto tracking,
• 2.8 ~ 12mm (4.3x) motorized	sound classification, tampering
varifocal lens	• Motion detection, Handover
• Max. 60fps@all resolutions	• SD/SDHC/SDXC memory slot
(H.265/H.264)	(Max. 512GB)
• H.265, H.264, MJPEG codec	• Hallway view, WiseStreamII support, IK08
supported, multiple streaming	• LDC support
• Day & Night (ICR), WDR (150dB),	(Lens Distortion Correction)
Defog	• PoE / 24V AC, 12V DC, Bi-directional
• Loitering, directional detection,	audio support, built-in microphone
fog detection, audio detection,	

Talking Points

"We can focus more on other important security tasks as the monitoring workload is reduced thanks to the Wisenet's innovative security solutions. In addition, its reliable data storage enables us to handle guest complaints, protect valuable hotel assets and increase our credibility among visitors."

Security Manager of Geoje Belvedere said.

Hillstate Apartment Complex - Korea

Clear and easy identification of vehicle and foot traffic   inside the apartment complex

Providing Security& Safety solution for a large apartment complex in Gangnam, Hanwha Techwin gained residents' satisfaction and trust

Task

The 1st complex of Hillstate Apartments located in Seoul's Gangnam District, comprises 17 buildings with 1,114 housing units. To respond to the growing importance of security and safety for the complex and prevent crimes, it was decided in 2015 that a new network camera system would be installed to improve the video quality of the existing analog CCTV and to integrate the cameras with the security system. One of the key issues in installation was how to save time and money by making use of the existing coaxial cables for the old analog cameras as much as possible. In 2015, they decided to install about 500 security devices by Hanwha Techwin to replace the existing low-resolution cameras and to establish a security system that can interface with the infrared security sensors installed on outside wall surface of the lower floors of the apartment buildings.

Result

To ensure the residents' safety, Hanwha Techwin installed the 'SNO-6011R' and it reinforced security by interfacing with the infrared security sensors to trigger an event alarm in the event of trespassing. 'SNB-6004' network cameras were installed on the roof to track vehicle movements across the entire complex and 'SNO-6084R' network IR cameras were installed in dark and confined spaces to ensure close monitoring. All cameras in the complex were linked to Hanwha Techwin's integrated management software, allowing remote access to live and recorded images and enhancing monitoring and searching efficiency. Hanwha Techwin also utilized network transmitters and receivers to fully use the existing coaxial cables. This effort was able to cut costs and installation time, thus minimizing the requirements to modify the existing facilities

Unique Solution

SNO-6084R	
※ Latest model XNO-6080R	• IR function enables object detection in dark condition, perfect for monitoring confined space such as elevator and underground parking lot

SSM	
	• Easy and fast search for massive data
	• Excellent system integration makes it easy to monitor, search and manage video data

Spec

2M Network IR Bullet Camera	
• Max.2M resolution	• Tampering, Audio/Face detection, Virtual line, Enter/Exit, (Dis)Appear, P-Iris, Defog
• 3~8.5mm(2.8x) motorized V/F lens	
• Max.60fps@2M	• Micro SDSDHC/SDXC, NAS
• H.264, MJPEG	• 24V AC
• True D&N(ICR), WDR(120dB)	• IP66, IK10
• IR viewable length 30m	

Total Management Software	
• Centralized management	• Flexible system integration
• Distributed computing architecture	• Efficient monitoring
• Extended scalability	• Powerful search engine
• Guaranteed reliability	

Talking Points

"I'm very satisfied as the upgraded security system not only tracks the overall vehicle and foot traffic inside the complex, but also allows us to monitor all the areas in high resolution. The event alarm feature makes us able to respond promptly, which has increased the residents' level of satisfaction and trust."

Heo Young-sik, Security Manager, Hillstate Apartment 1st Complex Security Manager, said.

The Shilla Seoul - Korea

Ensuring comfortable and worry-free stay through perfectly-fitting solution

Wisenet provides excellent system integrations to the premium hotel with analog & network cameras and storage devices

Task

As a member of LHW (Leading Hotels of the World) along with the world's best hotels, the Shilla Seoul has been the leader in Korea's service industry by successfully hosting numerous state guests and international events. However, it was in need of replacing its existing analog systems with network-based systems as it was crucial to prevent any inconveniences to the guests while preparing against potential human or property losses and minimize risks to ensure comfortable and worry-free stay for the guests. To achieve this goal, their highest priority was to establish an integrated management solution that integrates and manages the existing system as well as high-resolution video quality through a network.

Result

PTZ cameras 'SNP-6200' and 'SNP-6201H' were installed inside and outside of the hotel to facilitate monitoring large number of people and vehicles entering and leaving the hotel. Thanks to full HD high-resolution video quality and max. 20x zoom ratio, 'SNP-6200/6201H' offer accurate monitoring of the area even from long distance. The compact, interior dome-type 'SND-6084' were installed inside the hotel, including corridors, to blend with hotel's decor and structure and minimize discomfort for the guests.
'SND-6084' were also installed in the hotel lobby, an area that posed a challenge as objects were not clearly distinguished in backlit situations caused by outside lights. 'SNO-6084R' were installed in the parking lots and areas that required monitoring at night as it is equipped with IR LED for providing clear picture even in low light or dark conditions.

Unique Solution

QNP-6230H	
※ SNP-6201H discontinued	• Fast and accurate monitoring of high floating population at the hotel lobby through 2 megapixel high resolution and 23x optical zoom support
	• One camera can act as 4 cameras by providing pan/tilt support enabling 360° monitoring

SND-6084	
※ Latest model XND-6080	• Compact dome camera design does not interfere with hotel's interior design, preventing possible discomfort of the visitors
	• WDR corrects backlight providing clear and accurate image of lobby area

Spec

2M Network 23x PTZ Camera	
• Max.2M resolution	• Tampering, Motion detection, Defog
• 4.44~102.2mm(23x) optical zoom lens	
• Max.30fps@2M	• SD/SDHC/SDXC, NAS, Local PC
• H.265, H.264, MJPEG	• PoE+, 24V AC
• True D&N(ICR), WDR(120dB)	• IP66, IK10

2M Network Dome Camera	
• Max.2M resolution	• Tampering, Virtual line, Enter/Exit, (Dis)Appear, Audio/Face/ detection, P-Iris, Defog
• 3~8.5mm(2.8x) motorized V/F lens	
• Max.60fps@2M	• SD/SDHC/SDXC, NAS
• H.264, MJPEG	• PoE, 12V DC
• True D&N(ICR), WDR(120dB)	

Talking Points

"We are very satisfied with Hanwha Techwin's high-resolution network cameras which provides improved image quality. Its integrated monitoring software also allowed us to easily manage existing analog systems, new network cameras, and storage devices together without any compatibility issues. Hanwha Techwin's products and solutions will surely be on top of our list for any future upgrades."

Director of Security Department, The Shilla Seoul, said.

Radisson Blu Edwardian Hotel - UK

Offering professional, expert and objective advice designing camera installation for every location

Wisenet brought system upgrade and fulfilled the safety level for the guests of five star luxury hotels in London

Task

Edwardian Hotels London collection of hotels include, 11 Radisson Blu Edwardian hotels ranging in style from bijou boutique, to large-scale five star luxury. This luxury hotel's main priority is to ensure the safety of its guests and staff. They are constantly challenging themselves to upgrade to the latest camera and video recording technologies.

Result

Professional security consultants executed various performance tests in their own R&D facility, and they found satisfactory result in Wisenet cameras, achieve the objective of capturing evidence grade, high definition images 24/7 in all locations throughout the various hotels, with just 3 different types of Wisenet IP network based 2 megapixel full HD cameras. These were the WisenetIII 'SNV-6084' vandal-resistant dome, Wisenet Lite 'SND-L6013R' IR dome and Wisenet Lite 'SNO-L6083R' weatherproof network IR bullet camera, which is equipped with a varifocal lens. There are approximately 1,100 cameras currently installed throughout the Edwardian Hotels London estate. In particular, the compact 'SND-L6013R' dome is popular with Edwardian Hotels London's design team from an aesthetic point of view.

Unique Solution

SND-L6013R	
※ Latest model QND-6010R	• Excellent low light performance and IR function balance out light conditions between inside and outside, providing corrected image for clear monitoring • Hallway view perfectly supports narrow area monitoring such as staircase, corridors and hallway covering all edges

SRN-1673S	
※ Latest model XRN-1610S	• PoE reduces installation cost by providing both plug and play in one • Plug and play automatically recognizes a camera by inserting the cable, makes it easy to operate without requiring complex setting

Spec

2M Network IR Dome Camera	
• Max.2M resolution • 3.6mm fixed lens • Max.30fps@2M • H.264, MJPEG • IR viewable length 15m	• Tampering, Motion detection, Lens distortion correction, Hallway view • Micro SD/ SDHC, NAS • PoE

16CH 8M NVR with PoE Switch	
• Max.16CH, 8M resolution • 80Mbps recording • HDMI monitor video out • H.264, MJPEG	• Max.4 internal HDDs • Plug&play by 16 PoE/PoE+ ports • HDD removable(Easy install)

Talking Points

"Our decision to continue to work closely with Hanwha Techwin has many benefits which include receiving expert, objective advice on the correct camera model for every location. We will ask further advice from Hanwha Techwin on how we can best take advantage of the open platform technology built into Wisenet III cameras."

Mohamed Elsebahy, Group CCTV Manager, Edwardian Hotels London, said.

Luzhniki Stadium - Russia

Over 2,000 Wisenet completes an impenetrable security system at a national stadium in Russia

Outstanding PTZ and stainless cameras ensures public safety and prevents potential threats to a national stadium

Task

Luzhniki Stadium, Russia's national stadium, has a seating capacity of 81,000, making it one of the largest in Europe. As the main stadium in Russia where international matches are held, creating safe environment for public was a must. The Wisenet cameras were installed in the stadium as part of the phased reconstruction. "Following our extensive research and evaluation of cameras from a number of leading video surveillance solution brands, we were confident in choosing Hanwha Techwin as the single source of all necessary cameras," said a source from Mosinzhproekt, one of Russia's largest engineering, construction and project management companies.

Result

A combination of 10 different Wisenet cameras including X series were installed. Wisenet X cameras are super-charged by the most powerful Wisenet 5 SoC(System on Chip), equipped with the world's best 150dB Wide Dynamic Range (WDR) and the world's best motorized varifocal F0.94 low light lens. The 'XNP-6370RH's, 37x IR PTZ camera, were installed for online monitoring of tribune fans in the stadium. Its powerful zoom features even spot objects invisible to human eye. It can also detect subject at a max. distance of 350m even in the dark through IR LED function. The 'XNV-6080RS's, stainless IR camera, were installed at the gateway outside the stadium. It has high durability even withstanding shock and external environments by obtaining NEMA 4X, IK10+ and IP66. In addition, its loitering function helps preventing crime by proactively identifying suspicious movement in monitoring area.

Unique Solution

XNP-6370RH	
	• 37x optical zoom detects an object in long distance, enabling detailed monitoring for possible threats and events in the stadium • IR detects an object up to 350M at night, enabling 24/7 clear monitoring

XNV-6080RS	
	• IK10, IP66, NEMA 4X certified, providing safe and stable outdoor monitoring even in extreme weather • Stainless steel aesthetically matches with the front gates of the stadium

Spec

2M Network 37x IR PTZ Camera	
• Max.2M resolution • 6~222mm(37x) optical zoom lens • Max.60fps@2M • H.265, H.264, MJPEG • True D&N(ICR), WDR(120dB) • IR viewable length 350m	• Tampering, Crossing, Enter/Exit, (Dis)Appear, Audio detection, Defog, Auto tracking • SD/SDHC/SDXC, NAS, Local PC • 24V AC • IP66, IK10

2M Network Stainless IR Dome Camera	
• Max.2M resolution • 2.8~12mm(4.3x) motorized V/F lens • Max.60fps@2M • H.265, H.264, MJPEG • True D&N(ICR), WDR(150dB) • IR viewable length 50m	• Tampering, Loitering, Directional/Defocus/Fog/Audio/Motion/Face detection, Virtual line, Enter/Exit, (Dis)Appear, Sound classification, Handover, Hallway view • SD/SDHC/SDXC, NAS, Local PC • PoE, 24V AC, 12V DC • IP66, IK10+, NEMA 4X, SUS316L

Talking Points

"The cameras are competitively priced, but also have all the features required to allow security personnel to view both live and recorded images in high definition and this gave Hanwha Techwin the edge against a stiff competition. The comprehensive range of Wisenet cameras enabled us to work with the Hanwha Techwin's pre-sales team to identify the ideal camera for each of the 2,000 locations." Football fans who were fortunate to have been able to be at the Luzhniki Stadium, were kept safe with the help of more than 2,000 Wisenet cameras.

A source from Mosinzhproekt, said.

Adventure Island - UK

Entertainment park catches each movement of rides via 360° live monitoring

Adventure Island guards with Wisenet's latest technology for loss prevention and anti-social behavior detection

Manchester Jump Nation - UK

Wisenet solution tightly monitors an extreme sport arena, backs-up for possible injury claims

Safety policy is being well supported by highly reliable security solution

Task

Adventure Island is a nine acre free entry fun park, offering more than 40 rides and attractions for all families, plus a number of restaurants. Their mission statement is to provide high quality entertainment for families within a safe and secure environment. Greg Allen, Systems Administrator who has worked for twelve years at Adventure Island, knows more than most about the challenges facing a fun park which is free to enter. Adventure Island decided to invest in the latest video surveillance technology in order to ensure that they could monitor in real-time the movement of people throughout the park and in particular, keep a very close eye on what is happening at each of the rides.

Task

Visitors to Jump Nation located at Trafford Park, Manchester, have the opportunity to enjoy 139 trampolines which are all connected together to form one huge arena. While providing a fun experience to customers, it was also important to provide safe experience because trampolines is an inherently dangerous activity and is categorized as an extreme sport. For this reason, they needed a video surveillance system which can verify that customers have complied with its safety rules and if necessary, help it to resolve any claims for injury. As it is legally possible for injury claims to be made up to three years after an incident, it is essential that Jump Nation is able to store video evidence for the same length of time.

Result

Hanwha Techwin's 'SNF-8010' 360 degree cameras were installed immediately above some of the more thrill-seeking rides. It has a digital PTZ feature which allows users to electronically pan, tilt and zoom in on specific areas for a more detailed view, whilst at the same time continue to monitor the whole 360-degree view. 'SND-5084' domes and 'SNO-6084R' bullet cameras were also installed, with images captured by all forty cameras recorded onto a 'SRN-4000' NVR. To ensure there are no blind spots, they installed a dedicated fiber network to support the cameras. This has allowed them to take full advantage of the superb quality images captured by the Wisenet III cameras and also made them to simultaneously view live and recorded images at full frame rates without any latency or loss of image quality.

Result

8 of Hanwha Techwin 'SNV-6084R', 2 megapixel full HD network dome cameras were installed at key locations throughout the arena. Three of the 'SNV-6084Rs' were able to collectively cover the entire trampoline area and it was the images from these cameras which are stored for a three year period. The 'SRN-4000' NVR installed at Jump Nation had been equipped with 11 internal 4TB hard drives which are hot-swappable and support RAID5 and RAID6 recording, to provide protection against unrecoverable read errors, as well as whole HDD failure. The five other 'SNV-6084R's were installed in non-critical areas such as the café and reception areas, and images from these cameras were installed on a Hanwha Techwin 'SRN-1670' NVR which had been configured to store images from all of the cameras for up to 31 days.

Unique Solution

XNF-8010R
※ SNF-8010 discontinued

• 360 degree view support effective monitoring of open, wide or broad area like an entertainment park

• Digital PTZ automatically follows a moving object in monitoring area, sends an alarm when an event occurs

XND-6080
※ SND-5084 discontinued

• WDR corrects image in backlight condition, providing clear and improved image quality for monitoring

• Various Intelligent video analytics supports such as Fog detection, Sound classification, Motion detection etc.

Unique Solution

SNV-6084R
※ Latest model XNV-6080R

• High resolution, WDR, and IR deliver clear and improved image quality even in low light condition

• Detects abnormal sounds and sends alarms to users for immediate action taking in order to secure visitors' safety

PRN-4011
※ SRN-4000 discontinued

• Hot-swap provide stable video recording without missing a moment while exchanging HDD slots

• Easy searching among massive data through Smart Event Search function

Spec

6M Network IR Fisheye Camera	
• Max.6M resolution	• Tampering, Loitering, Directional/ Audio/Motion detection, Virtual line, Enter/Exit, (Dis)Appear, Sound classification, Heatmap, People counting, Queue management, Handover
• Fisheye, Single/Double panorama, Quad view	
• Max.30fps@2048x2048	
• H.265, H.264, MJPEG	
• True D&N(ICR), WDR(120dB)	• SD/SDHC/SDXC, NAS, Local PC
• IR viewable length 15m	• PoE, 12V DC

2M Network Dome Camera	
• Max.2M resolution	• Tampering, Loitering, Directional/ Defocus/Fog/Audio/Motion/Face detection, Virtual line, Enter/Exit, (Dis)Appear, Sound classification, Handover, Hallway view
• 2.8~12mm(4.3x) motorized V/F lens	
• Max.60fps@2M	
• H.265, H.264, MJPEG	
• True D&N(ICR), WDR(150dB)	• SD/SDHC/SDXC, NAS, Local PC
	• PoE, 12V DC
	• IK08

Spec

2M Network Vandal-Resistant IR Dome Camera	
• Max.2M resolution	• Tampering, Virtual line, Enter/Exit, (Dis)Appear, Audio/detection, P-Iris, Defog
• 3~8.5mm(2.8x) motorized V/F lens	
• Max.60fps@2M	
• H.264, MJPEG	
• True D&N(ICR), WDR(120dB)	• SD/SDHC/SDXC, NAS
• IR viewable length 15m	• 24V AC
	• IP66, IK10

64CH 12M NVR	
• Max.64CH, 12M resolution	• WiseStream, H.265, H.264, MJPEG
• 400Mbps recording	• Max.12 internal HDDs(96TB)
• 4K HDMI monitor video out	• RAID 5/6, ARB&Failover(N+1)
• Dual monitor video out	

Talking Points

"We can use the recorded video as a training aide. We are also using both the live and recorded images for loss prevention purposes and to detect any socially alarming behavior. In the future we intend to try the People Counting feature that can be run on WisenetIII cameras in order to gain a greater understanding of people who visit the park."

Greg Allen, Systems Administrator for the Stockvale Group of Companies

Talking Points

"Since opening our doors in August 2014, we have been very popular with schools and birthday parties, as well as the regular public who want to get fit or just have fun. Safety is the number one priority and we are therefore very pleased to have peace of mind in knowing that our safety policy is being well supported by a highly reliable video surveillance solution."

Matthew Ball, Managing Director, Jump Nation, said.

CJ Logistics' mega hub terminal - Korea

Safeguarding every corner of terminal including vehicles, parcels, and personnel not to mention indoor and outdoor spaces

Task

Korea's No.1 logistics service provider CJ Logistics opened Asia's largest mega hub terminal in Gonjiam, Gyeonggi-do, South Korea. The terminal consists of two buildings with four floors, occupying nearly 300,000 - almost the size of 40 football stadiums -, with its total length of conveyer belts reaching almost 43km, as long as a full-course marathon. CJ Logistics looked for a top-notch surveillance solution that can match the terminal's grand scale and the state-of-the-art automated facilities.

Result

1,660 Wisenet cameras were installed throughout the terminal. IR PTZ cameras XNP-6330RH were installed along the building exteriors, providing periphery monitoring 24/7. Inside the buildings, around 1,400 Hanwha Techwin's Wisenet Q series cameras were set up on the ceilings and the walls. The cameras can detect any problems occurring to the automated conveyer systems with a total length of nearly 43km and a mass flow of parcels on them. Wisenet X series cameras, XNO-6120R and XNP-6120H, were also installed at indoor staircases and corridors of the office building. It offers intelligent video analytics and sound classification features to help create a safe environment that enables swift responses to detected events.

Unique Solution

XNP-6330RH	• Providing periphery monitoring 24/7
XNO-6120R	• Intelligent video analytics and sound classification features
XNP-6120H	• Intelligent video analytics and sound classification features

Spec

2MP 33x IR PTZ Camera		2MP IR 12x Bullet Camera	
• Max. 2 MP(1920 x 1080) with 1/1.9 type COMS • 60 fps (H.264) live image transmission based on full HD • 33x (6 to 198mm) optical zoom, 16x digital zoom • H.265, H.264, MJPEG dual codec; Smart codec • Lowest luminance 0Lux (IR LED On), 350m viewing distance at night	• Defog, Day & Night (ICR), WDR (120 dB) • Supports 400˚, tilt300˚ speed, auto tracking per second, azimuth display, obtain IP66/IK10 specification • Housing integral (fan/heater), operating temperature -50℃ to 55℃ • Built in gyro sensor	• Max. 2 megapixel (1920 x 1080) resolution • 12X optical zoom (5.2 ~ 62.4mm) (54.58º ~ 5.30º) • Max. 60fps@all resolutions (H.265/H.264) • H.265, H.264, MJPEG codec supported, multiple streaming • Day & Night (ICR), WDR (150dB), Defog	• Loitering, directional detection, fog detection, audio detection, digital auto tracking, sound classification, tampering • Motion detection, handover • SD/SDHC/SDXC memory slot (Max. 512GB) • Hallway view, WiseStream II support • IR viewable length 70m, IP67/IP66, NEMA 4X, IK10

Talking Points

"Thanks to Hanwha Techwin's Wisenet security solution, we were able to build a safe video surveillance system that can match the size and the cutting-edge facilities of 'Asia's largest logistics terminal. Now we can safeguard every corner of our terminal including vehicles, parcels, and personnel not to mention indoor and outdoor spaces."

An official at CJ Logistics' mega hub terminal said.

Seoul Finance Center(SFC) - Korea

High resolution, multi-directional camera watches over high foot traffic

SFC installed Wisenet to meet the stringent security standards set by global finance companies

Task

SFC, Seoul Finance Center, is a premium office building located in Jung-gu, Seoul. The building, completed in 2001, boasts 38 stories with 30 stories above the ground and 8 underground levels. High-end restaurants and stores are located in the underground mall while the Embassy of the Republic of Singapore along with many financial offices have taken space above the ground, all of which require rigorous evaluation based on strict security requirements. To meet such needs and guarantee the safety of its visitors and residents,
SFC has decided to upgrade its security system by replacing the existing low-resolution cameras with the latest version of high-resolution cameras.

Result

About 260 Hanwha Techwin's high resolution cameras were installed in and out of the building to replace the existing low resolution cameras. SFC was pleased with 'XNF-8010R' that provides omnidirectional surveillance with small, flat and discreet design.
It was installed in areas with high foot traffic such as entrances, corridors as well as the ground floor, providing total surveillance without any blind spots. The ground floor lobby is installed with 'PNM-9080VQ' and it provides the benefits of multiple cameras with a single camera. Its four lenses monitor left and right gates, the information desk and the security gate. The main gate has a revolving door, thus, 'XNP-6040H', a PTZ camera, was installed in a discreet location to monitor visitors and vehicles regularly, also to provide extra security to VIP guests by keeping account of people's flow and outside situations. The images received by cameras are sent to the control center, which monitors through SSM, Techwin's Smart Security Manager, completing a fail-proof security system and further enhancing the values of SFC.

Unique Solution

| XNF-8010R | • Provides omnidirectional surveillance with small, flat and discreet design, perfect for installation at areas with high floating population such as entrances and corridors
• Heatmap provides effective move ment management of population at particularly crowded area |
| PNM-9080VQ | • One device provides four camera monitoring with max. 8 megapixel resolution directing multiple angles
• Simplified installation steps and easy maintenance of device compared to having multiple cameras |

Spec

6M Network IR Fisheye Camera		8M Multi-directional Camera	
• Max.6M resolution • Fisheye, Single/Double panorama, Quad view • Max.30fps@2048x2048 • H.265, H.264, MJPEG • True D&N(ICR), WDR(120dB) • IR viewable length 15m	• Tampering, Loitering, Directional/Audio/Motion detection, Virtual line, Enter/Exit, (Dis)Appear, Sound classification, Heatmap, People counting, Queue management, Handover • SD/SDHC/SDXC, NAS, Local PC • PoE, 12V DC	• Max.8M resolution(2Mx4ea) • 2.8~12mm(4.3x) motorized V/F lens • Max.60fps@2M • H.265, H.264, MJPEG • True D&N(ICR), WDR(150dB) • IR viewable length 15m	• Tampering, Loitering, Directional/Defocus/Fog/Motion detection, Virtual line, Enter/Exit, (Dis)Appear, Hallway view, P-Iris, Defog • SD/SDHC/SDXC, Local PC • PoE+, 12V DC • IP66, IK10

Talking Points

"We pay extra attention to security, fire hazard and general safety of the building because many of our residents are financial companies. They conduct a series of preliminary evaluation based on their stringent security requirements and only sign a rental contract after receiving satisfactory results. The high resolution image security system from Hanwha Techwin has enabled us to meet our customers' needs. I am very satisfied that we can now provide the security system our residents can trust."

Goonsik Yoo, Security Director, SFC(Seoul Finance Center, said.

National Park of Veľká Fatra- Slovakia

Giving opportunity to watch animals in their natural environment as well as playing a life saver

Wisenet enables animal lovers and students to remotely observe the behavior and hear the sound of birds, bears, boars and foxes in the wild

Task

The Slovakian National Park, Veľká Fatra carried a project called 'Kukaj.sk,' with PROFI-NET,s.r.o, one of the fastest growing network and infrastructure specialists. The purpose of the project was to provide opportunity to observe animals in their natural habitat, and they believed that the project will enrich people's lives with valuable experiences, tracking animals' behavior and the ethology of species, and ultimately contributing to the positive perception of large beasts in the Great Fatra.

Result

Wisenet PNO-9080R and XNB-6000 cameras have been deployed in carefully chosen locations throughout a migration trail for large beasts. Some of the cameras are permanently sited, but others are regularly moved around to reflect the changing seasons and when, for example, storks leave their nests.

PNO-9080R, 4K bullet camera features built-in IR and digital auto tracking which enables to detect moving animals during times of low activity like night time. Its defocus detection and lens distortion correction(LDC) deliver optimized image quality.

XNB-6000, 2 megapixel full HD cameras were also installed. It offers color images even in extremely low light condition(0.01Lux@F1.2) while delivering clear image with 150dB WDR support. Its defogging feature makes corrections to blurry images in foggy conditions, and built-in gyro sensors offer necessary stabilization which comes into effect when a camera is disturbed by wind or vibrations, creating more stable images.

Unique Solution

PNO-9080R
- Exceptional image quality of 4K Ultra HD
- Digital auto tracking is ideal for tracking movement in low traffic areas

XNB-6000
- Its extreme low light performance provides clearer, sharper images in dark environment
- WiseStrem II reduces bandwidth about 75% compared to current H.264

Spec

4K Network IR Bullet Camera		2M Network Box Camera	
• Max.12M resolution	• SD/SDHC/SDXC, NAS	• Max.2M resolution	• Tampering, Loitering, Directional/Defocus/Fog/Audio/Motion/Face detection, Virtual line, Enter/Exit,(Dis)Appear, Sound classification, Handover, Hallway view
• 4.5~10mm(2.2x) motorized V/F lens	• PoE, 12V DC, 24V AC	• Max.60fps@all resolutions	
• H.265, H264, MJPEG	• IP66, IK10	• 0.01Lux(Color), 0.001Lux(B/W)	• SD/SDHC/SDXC, NAS
• True D&N(ICR), WDR(120dB)		• H.265, H264, MJPEG	• PoE, 12V DC, 24V AC
• Tampering, Virtual line, Enter/Exit, (Dis)Appear, Handover, Auto tracking, Hallway view		• True D&N(ICR), WDR(150dB)	

Talking Points

"The Wisenet cameras stood above the others with its reliable performance in varying light and weather conditions. The camera's audio support enhanced the visitors' experience by enabling them to hear background bird sounds."
"Wisenet recently helped us save the life of a man who got lost whilst wandering around over the park. Our operators spotted him with the help of the camera. He was lucky that a bear was found only 30 meters away!"

Ivan Darani, network engineer of PROFI-NET,s.r.o., said.

WISENET 7

Hanwha Techwin Next Generation SoC

Enhanced Cybersecurity

Object Classification based on AI

Super High Resolution Quality

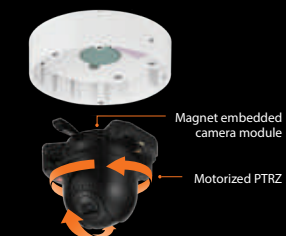Hanwha Techwin

WISENET 7

Designed in Korea

WISENET X PLUS

2MP/5MP NW Modular Camera

**Faster installation
x Reduced costs**

**Advanced performance
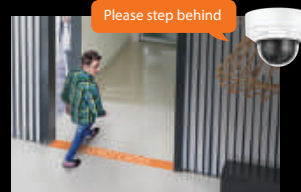x Multiplied values**

The X Plus cameras feature a modular design that makes installation and maintenance simpler than ever. With extended tilt range, motorized PTRZ and optional skin covers, you will soon discover why X Plus is one of the most versatile camera lines on the market.

Magnet embedded camera module

Motorized PTRZ

**Modular structure
And motorized PTRZ**

X PLUS
Tilt 85°

Conventional
Tilt 67°
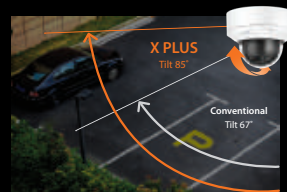
**Extended tilt range for
greater flexibility**

Please step behind

Audio playback on event

Weather Cap   Black & Ivory Skin Cover

Optional accessories

WISENET X series

Multi-frame WDR(150dB)

Conventional WDR captures images by taking 2 frames taken at different exposures, whereas Wisenet X series cameras utilize 4 frame capture at different exposure levels to create a combined image. With the development of cutting-edge WDR technology, Wisenet X series cameras address a limitation found in conventional WDR cameras while producing clear and vivid images.
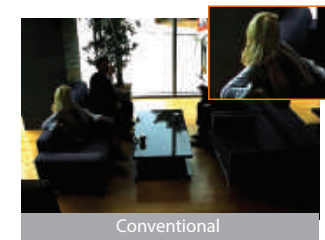
Conventional | Wisenet X series

※150dB WDR only available in 2MP X series

Digital Image Stabilization(DIS) with built-in Gyro sensor

Advances in Wisenet image stabilization technology allows the reduction of motion blur caused by wind or vibration. A gyroscopic sensor plus DIS technology is specifically added to the Wisenet X series cameras for more accurate stabilization.
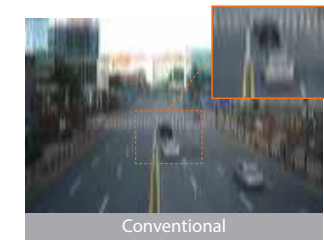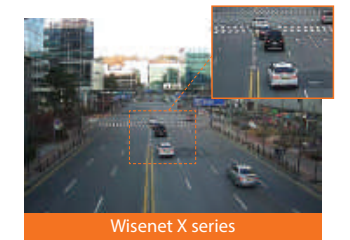
Conventional | Wisenet X series

extraLUX provides clear and colored images, even in low-light environments

Wisenet X series achieves optimal performance in low-light conditions by producing crystal-clear and true-color images without IR LEDs, regardless of the environment or time of day. The extraLUX series (XNO-6085R, XND/XNV-6085(V)) feature outstanding F0.94 lens with the 1/2" CMOS sensor, capturing vivid color images even in low-light environments.

Conventional | extraLUX(XNV-6085)

Improve bandwidth by up to 75% using WiseStream II

Using WiseStream II, Hanwha Techwin's original video compression technology, the Wisenet X series reduces data by up to 99% compared to current H.264 technology, when combined with H.265 compression. System costs are also greatly reduced without comprising image quality.

Low movement | Medium movement

High Compression   Low Compression
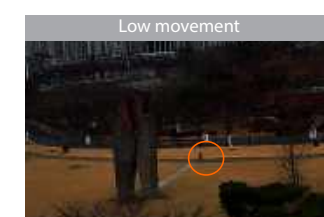
WiseStream II OFF : 7160kbps
WiseStream II ON : 74kbps

WiseStream II OFF : 7260kbps
**WiseStream II ON : 1817kbps**

WISENET X series

More convenient installation with USB

Using the USB port, the installer can easily connect Wisenet X series cameras and mobile devices through Wi-Fi. Viewing and adjusting camera angles can be done immediately after installation by using a smartphone. No additional devices are required, saving both time and money.

Dual SD slots

Dual SD slots allow up to 512 GB to be saved automatically to the camera, keeping data safe in the event of an unstable network. Obviously this allows to record more video footage than single SD slot.

512 GB

256 GB (+) 256 GB
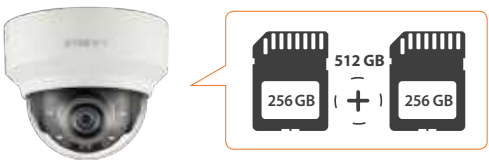
Handover to PTZ

The handover feature allows a PTZ camera* to receive an alarm(motion detection) from Wisenet X series camera operating on the same IP video surveillance system. Once the notification is received, the PTZ camera will zoom into the assigned camera pre-set location. ※PNP-9200RH / XNP-6370RH

Alarm notification to PTZ

Motion detected

PTZ zooms into pre-set location
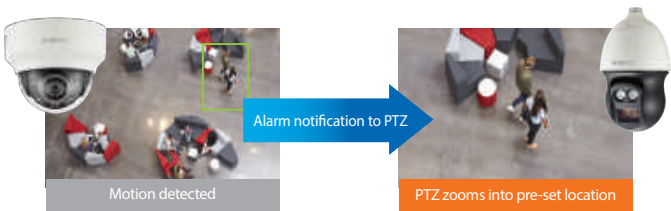
Fog detection

Wisenet X series delivers outstanding image quality in foggy weather with Fog detection. Any change in an image is automatically detected with the defog function to provide a clear image.

Detect fog

Activate Defog(Auto/Manual)

Enhanced Video / Audio Analytics

Wisenet X series support a variety of exclusive Video and Audio Analytics, providing enhanced monitoring solutions and market intelligence.
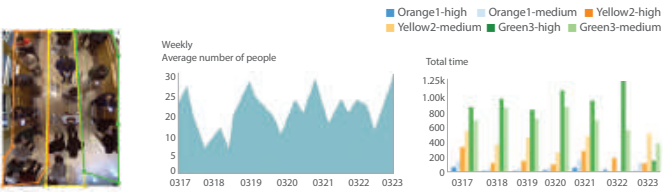
Loitering detection

This feature detects when an object remains in a designated area longer than the time threshold set by the user.

Queue management

This feature provides statistical analysis and measurement for average dwell time and number of people in a queue. This insight is critical for businesses to manage their operations more efficiently, while providing the insight necessary to manage campaigns, displays and promotions throughout retail locations.

■ Orange1-high ■ Orange1-medium ■ Yellow2-high
■ Yellow2-medium ■ Green3-high ■ Green3-medium

Weekly
Average number of people

Total time

Sound classification

Wisenet X series cameras help users respond immediately in dangerous situations, by classifying sounds such as gunshot, glass breakage, scream and explosion.

Gunshot   Glass breakage   Scream   Explosion
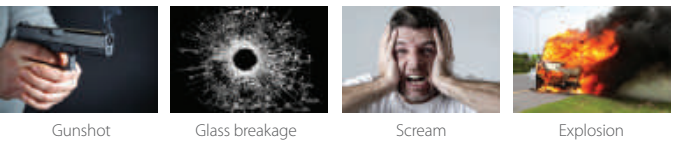
WISENET P series

Premium cameras with the most advanced technology

Wisenet P series, the ultimate premium cameras designed with the most advanced technology, delivers users an outstanding video surveillance solution.
From bullet cameras to multi-sensor cameras, the P series have a wide range of products optimized for applications which require extreme details and wide area coverage.

4K Premium Cameras

Exceptional Image Quality of 4K Ultra HD

The Wisenet P series provides an enhanced surveillance system by producing superior 4K Ultra HD image quality. 4K Ultra HD has four times the resolution of standard 1080p, which means it is able to show more detail.

4K UHD

PNO/PND/PNV-9080R, PNP-9200RH

Multi-Sensor Cameras

Cover wide areas with multi-sensor cameras

Wisenet P series multi-sensor cameras are equipped with multiple sensors, which means that it can effectively monitor wide areas with just one camera.

Multi-directional Cameras

The four sensors move independently on top of the tracks enabling users to monitor a complete 360° view without any blind spots.

Panoramic Cameras

52°

220°

Panoramic cameras provide a wide panoramic view within a single camera instead of installing 4 cameras. It offers a seamless single image by merging 4 images from each sensors.
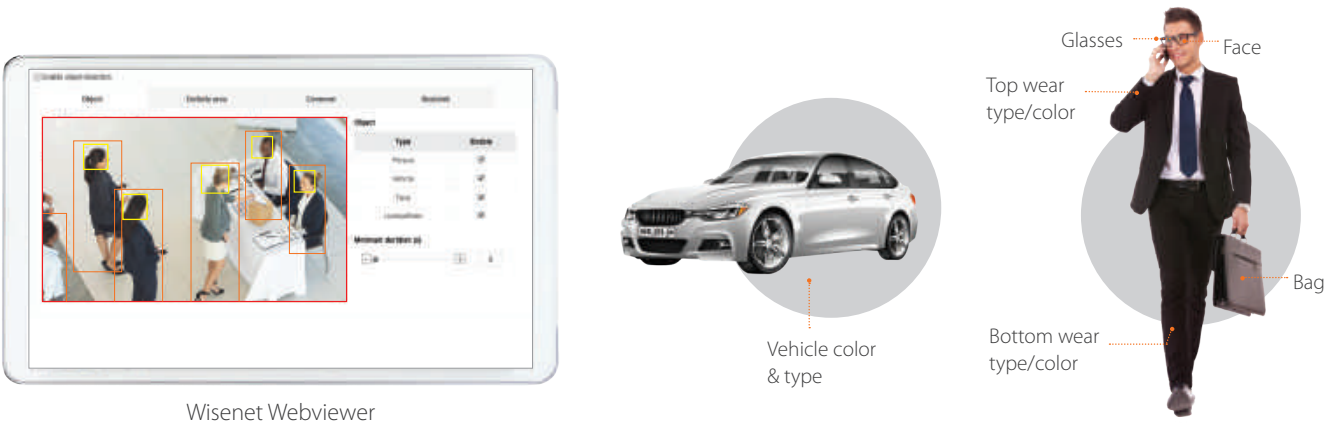
WISENET P series

The never-ending rush of urban living translates into constant waves of people and vehicles surging through city streets at all hours. As surveillance cameras grow along with the cities, an operator begins taking in too much information to handle. Conventional motion-based detection generates too many event alarms so that operators are under great strain to verify each one and it causes to delay to response on time. Now, AI algorithms built into Wisenet P series AI cameras are allowing for more effective operation and to enhance work efficiency per an operator.

Pixel based motion detection

AI based on object classification
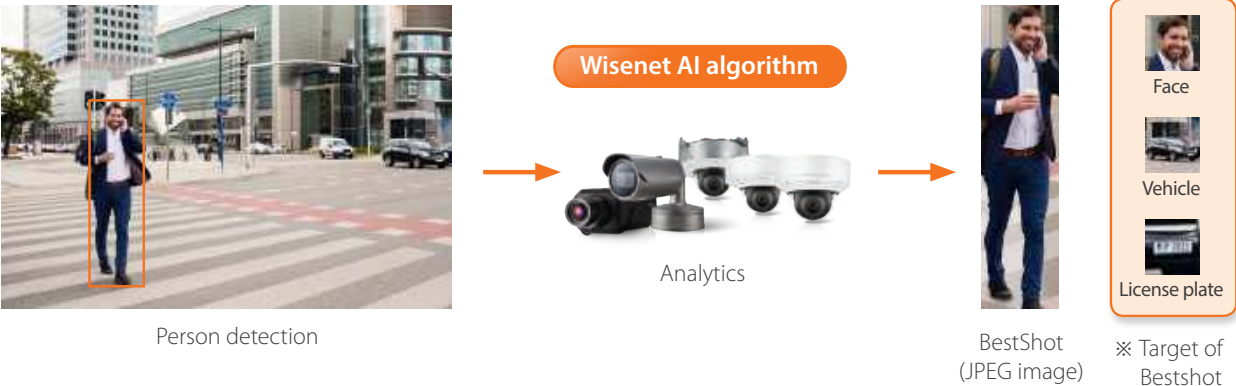
Classify Target Objects with Attributes

Wisenet P series AI cameras distinguish what it sees into broad categories such as "Person,""Face,""Vehicle," and "license plate."
Diving a bit deeper, Wisenet AI algorithms are quickly and accurately able to identify the different attributes of what the camera sees. For example, the camera sees a person and immediately detects the color of clothing. it is also intelligent enough to distinguish whether the person is wearing glasses or holding a bag. These attributes are then saved as metadata alongside the footage.

Wisenet Webviewer

Glasses · · · · · · · · · · · · · · · Face
Top wear type/color
Vehicle color & type
Bottom wear type/color
Bag

WISENET P series

BestShots for objects, Metadata for attributes, saving storage and bandwidth

Wisenet P series AI cameras offer the BestShot in JPEG format for classified objects which can be up to cropped 4K image quality, with metadata tagged with attributes. Users can set the 2MP for a full video streaming and the BestShot in 4K high resolution for less storage and bandwidth. The extracted data helps to examine forensic search as well as accurately discriminating objects' detailed information.

Wisenet AI algorithm

Analytics

Face
Vehicle
License plate

Person detection

BestShot (JPEG image)

※ Target of Bestshot

Wisenet SSM the best partner for AI smart search

Using Wisenet's own Video Management System called SSM, SSM is fully compatible to Wisenet P series AI cameras to filter through the metadata from the cameras to find the results that best match operators' search queries more quickly.

Wisenet AI Camera
Detect and classify objects real-time

Attributes, BestShot

* Person, face, vehicle, license plate

Wisenet SSM AI Search
Quickly search based on attributes

WISENET Q series

Compact Cameras with Essential Qualities

This affordable product line delivers professional quality, ideal for securing small to medium sized applications. The Q series has the ability to create a secure environment with its complete lineup, saving both installation costs and time.

WISENET Retail Insight

Business Intelligence for your retail shops

- Advanced BI functions
- User friendly UI (Card type view & detail button)
- People counting (age, gender)
- Heatmap (time laps feature added)
- Queue management
- Customizable dashboard and report
- Compatible all Wisenet cameras (applied BI function)

Q Basic Cameras

High quality cameras offering cost effective solutions

The Q series cameras are affordable products that offer essential features in creating a safe and secure environment. The Q series delivers sharp and clear image quality in 5MP and 2MP, ideal in securing small to medium sized applications such as retail, banking and offices.

- Compact design with affordable price
- 5MP & 2MP resolution
- Framerate Max. 30fps
- WDR 120dB
- WiseStream II
- Intelligent video analytics
- IR viewable length up to 30m
- Hallway view (Rotate 90°/270°)
- Micro SD/SDHC/SDXC memory slot
- Video output CVBS, PoE

Q mini Super-compact Cameras

Small yet powerful

Super-compact design fits everywhere

Wisenet Q mini line-up is designed as 99mm(3.9in) super-compact sized, about 40% smaller than its predecessor. Thanks to this feature, Wisenet Q mini series perfectly blends into any environment while facilitating an effortless installation anywhere.

only **99** mm

Business Intelligence for smarter retail

99mm super-compact sized Q mini cameras have a business intelligence function such as people counting that offers retailers data to help them run their stores more effectively. By integrating the cameras with 'Retail Insight' software, users can analyze data collected from multiple stores and gain insight for successful store operation and resource investment.
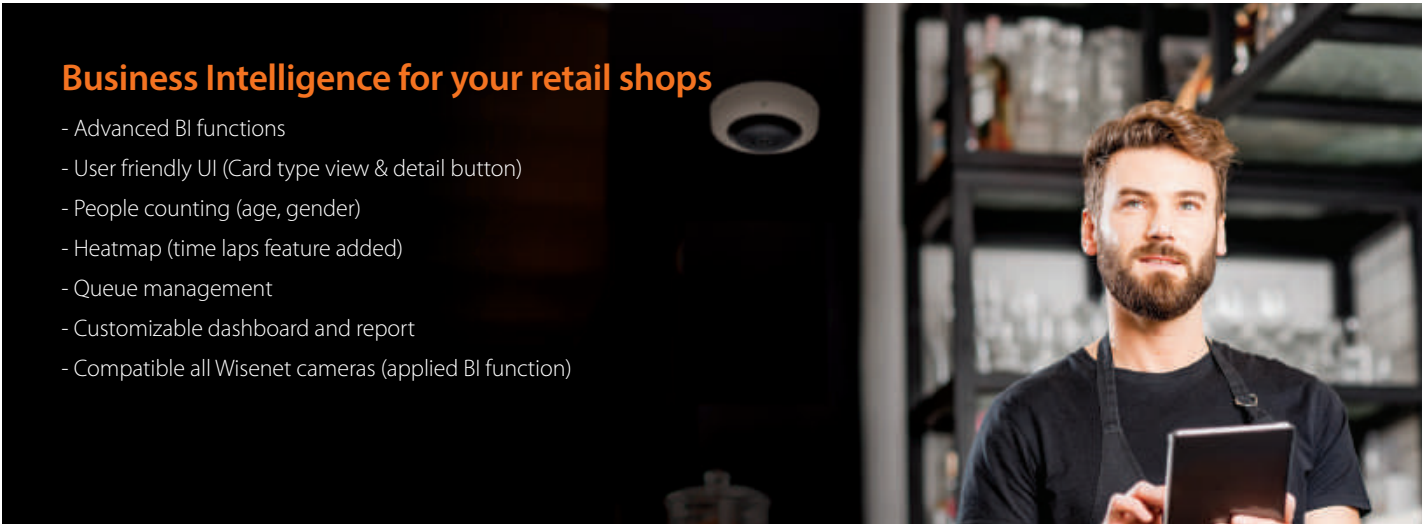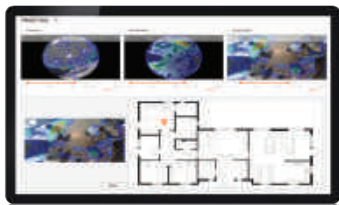
People Counting   Retail Insight S/W

People counting (age, gender)
Wisenet Retail Insight not only counts the number of visitors in real time but also offers age & gender analysis, providing insightful information to store owners. Owners can use this information to build sales strategies.

Heatmap (Time laps)
Heatmap feature measures and tracks customers dwell-time in certain locations, providing information on popular/unattractive products. Owners can configure the time duration to collect data at certain times.

Queue management
Queue management is crucial for large retailers. The feature captures long waiting lines in real time and manages the queues in an efficient way, reducing customer complaints.

User friendly UI
The content is presented in the user-friendly form. It's easy to configure with multi tab function. Users can get information they want in a quick overview and click detail buttons for more information. Users can easily edit or delete. And it also provides weather information and the shop is open or not.

Regular automatic report
Wisenet Retail Insight offers reports on a daily, weekly, or monthly basis. Users can configure reports wit the units they want, taking full advantage of the vast size of database and gaining information crucial in running retail stores.

WISENET T series

8K camera for stadiums

The camera is ideally suited for stadiums, airports and similar large spaces where installing multiple cameras may be impractical or cost prohibitive. Support for EF (Electro Focus) mount lenses, with remote focus, gives customers exceptional flexibility in lens options and low light performance.

8K resolution

TNB-9000 represents the highest performing, highest resolution camera to date of Wisenet lineup. The ability to digitally zoom in to any area of an image without losing detail provides a powerful alternative to traditional multi-camera installations.

Focal length and aperture

The TNB-9000 EF lens mount accommodates any Canon EF mount lenses, allowing for a wide variety of options for focal length and aperture. The TNB-9000 camera view angle can be remotely adjusted, both vertically and horizontally, without reducing pixel density. This potentially reduces the costs associated with post installation service.

• Auto focus for EF lenses
•Triple codec support including the H.265 main 10 profile
•Built-in fiber connectivity
•SFP slot
•HDMI output for 1080p adjustment at the camera
•PoE+ or 12Vdc

Specialized Cameras for Challenging Conditions

T series offers explosion proof and thermal cameras which ensure a reliable video surveillance system even in the most challenging conditions.
The explosion proof cameras can be used in heavy industrial facilities where a single spark may cause an explosion, while the thermal cameras are suitable for detecting people and objects in difficult weather conditions.
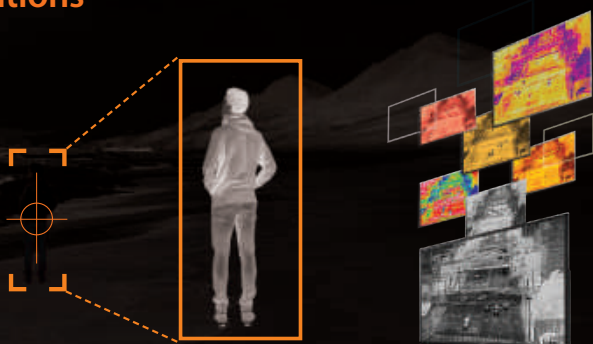
Explosion-proof Cameras

For hazardous environments

Heavy industrial facilities such as gas pipelines, petrochemical plants or oil refineries are potentially explosive because of flammable gases and dusts emitted. Therefore, it is important that a video surveillance system used in heavy industrial facilities is not the cause of explosions whilst still delivering high quality images.

ATEX

TNU-6320E   TNO-6320E

T series explosion proof cameras are designed to be safely operated in hazardous areas with the special enclosure made of stainless steel 316L housing. The ATEX certified enclosure has the ability to contain any internal explosions or prevent sparks from escaping the device which may lead to a disaster.

Thermal Cameras

Detect people and objects 24/7

Wisenet thermal imaging technology provides high contrast images based on temperature differences between the object and background, enabling users to detect incidents more easily in challenging environments.
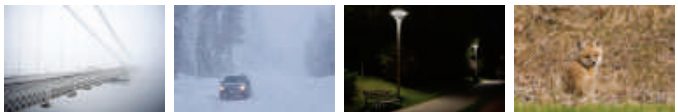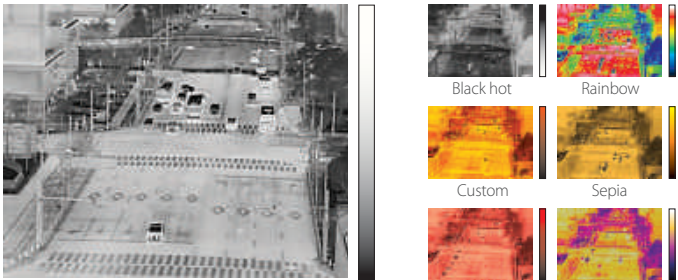
Fog   Snow   Darkness   Camouflage

Wisenet thermal cameras provide seven different types of color palette for users to select the best image in various situations. Each color palette has a specific set of colors which change according to the temperature range of the scene.

Black hot   Rainbow

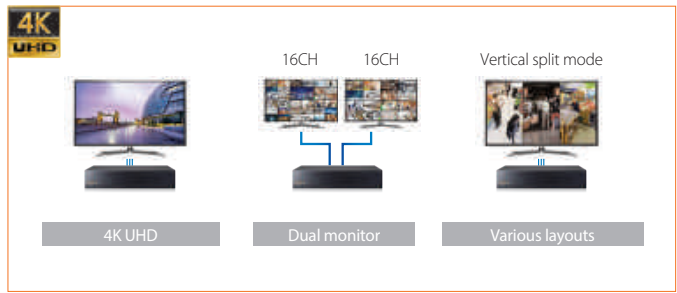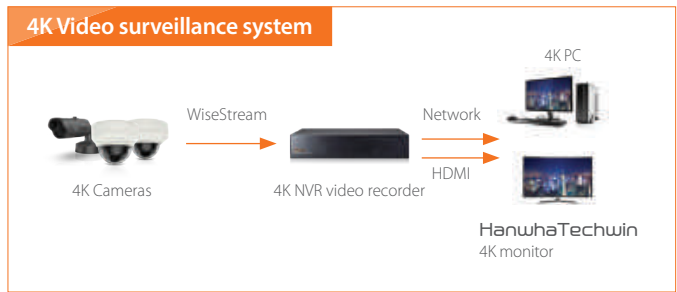Custom   Sepia

White hot   Red   Iron

Reliable Recording solution, Wisenet NVR

Up to 4K resolution recording and dual monitor

Wisenet NVR lineup supports recording video with clear images at 4K resolution from 4K cameras. It also provides dual monitor and various layouts. So user can select set the display as wants with dual monitor.

4K Video surveillance system

WiseStream
Network
4K PC
4K Cameras
4K NVR video recorder
HDMI
HanwhaTechwin
4K monitor

16CH   16CH   Vertical split mode

| 4K UHD | Dual monitor | Various layouts |

Easy to install with QR code, Wisenet mobile app

User doesn't need a complex network configuration for monitoring with just downloading Wisenet mobile application. It can work just scanning the QR code of the product. Wisenet app not only provides remote monitoring but also event alert by push notifications for instant response.

① ② ③

Device ID : XXXXXXXXXX

Wisenet mobile

Mobile NVR for transportation

TRM-1610S / 810S / 410S

Wisenet Mobile NVR, TRM lineup can be installed on vehicles, such as cars and vehicles, to record stable video while driving. GPS antennas can be installed to identify the location of the car, enabling immediate action in the event of an accident.

16 / 8 / 4CH Mobile Network Video Recorders

• Up to 4K resolution and storage efficiency with H.265 codec
• Reliable recording video, locations and event
• Robust operation in low temperature environments
• Easy to control with integrated control box

High resolution video recording with H.265 codec

For storage efficiency, TRM-1610S provides video compression with H.265 codec in 4K resolution. (TRM-810S/410S supports up to 8MP)

COMPRESSION...

Video search based on GPS

TRM lineup allows users to search video footage with GPS location from the backup server. So user can identify the situation based on the exact location.


Reliable recording with RAID and Hot swap feature

It supports reliable recording with RAID 5 and hot swap to prevent HDD failure. User never miss the recorded data in case HDD failed.

Automatic back up when connecting Wi-Fi

When a vehicle arrives at the vehicle base or at the bus stop / railway station where Wi-fi can be connected, all the recorded video during operation are automatically backed up.
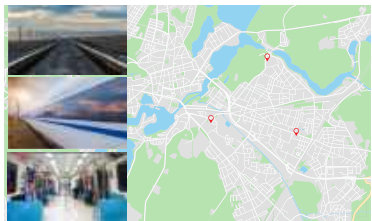
WISENET Transportation Appliance

As the transportation market changes, various requirements arise in this vertical.
Real time remote monitoring of the location and route of
vehicles is a very important requirement.
TAW-4000H16 is an appliance equipped TMS(Transportation Monitoring System)
software, which can be installed in a train, bus and ship, records the surrounding
video in real time. It provides vehicle's location and its route based on GPS.
User can also set the area in the map and search only the video in specific area.

TAW-4000H16

Appliance installed TMS S/W

TAW-4000H16 is an appliance installed TMS S/W. No need to purchase additional
server to operate.

Clustering

It offers up to 28 server clustering providing convenient system scalability and efficient
to manage large sites(Up to 10,000 cameras)

Recorder back-up

It can back up and manage up to 128 Wisenet mobile NVRs with only single TAW-
4000H16.

Area Search

To identify the vehicle's location in which the incident occurred, user can set the area
on the map and search recorded video from mobile NVRs of that area.

Automatic backup

When a vehicle returns to cargo or platform(train) where can connect with Wi-Fi, it
automatically back up the video from the mobile NVR.

Reporting

It offers valuable information such as speeding and working hours of driver, driving
time and

System concept

GPS Satellite

GPS Signal

Wi-Fi

TMS Console   TMS Server
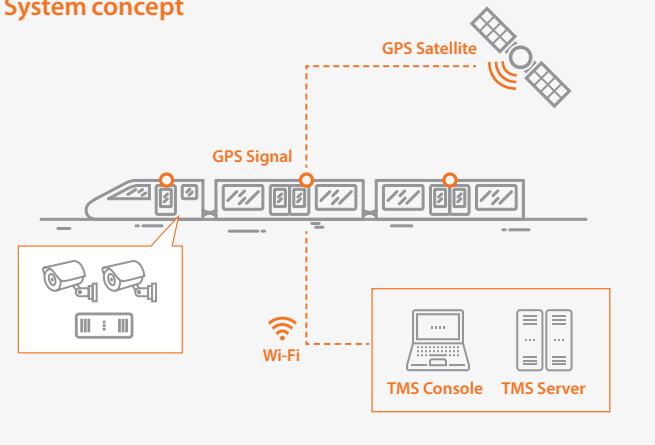
Search & Playback of route (based on GPS)

Search & playback from cameras footage   Route search

Memo