INTELLIGENT SECURITY SOLUTIONS FOR GAS STATION

- Safe
- Smart
- Reliable

dahua TECHNOLOGY

Fire Detection & Alarm
- Temperature measurement
- Above-threshold alarm

Equipment Failure Detection
- Thermal imaging
- Facility overheating
- Oil & Gas leakage

Vandalism Prevention
- Intelligent video analytics
- LPR & Blacklist alarm
- Access control

Operation Efficiency
- Integrated platform
- Multi-system linkage

INDUSTRY CHALLENGES

Industry Challenges

Read more ▶

Supervision Difficulties
Numerous, scattered gas stations makes remote supervision of staff and service evaluation difficult.

Business Disputes
No valid evidence to resolve refueling and purchase disputes.

Leave Without Paying
There is always a risk drivers could leave without paying, resulting in damages.

Vandalism & Terrorist Attacks
Potential terrorists attacks and vandalism are dangerous and devastating.

Dangerous
Oil & Gas is explosive and flammable which can cause casualties and damage.

OVERCOMING CHALLENGES

1 FIRST

How to reduce the possibility of fire and detect equipment failure?
- Thermal imaging provides temperature measurement capabilities, alerting management if an area gets too hot.
- Thermal imaging can also detect equipment failures.

2 SECOND

How to detect and prevent terrorist attacks & vandalism?
- Intelligent analytics technology, such as tripwire, intrusion, and auto-tracking finds suspicious behavior.
- LPR system for vehicle control and management.
- Access control system for flexible and strict authority management.

3 THIRD

How to detect blacklist vehicle and get peak periods for gas station?
- LPR system detects and recognizes license plates, triggering an alarm if a blacklisted plate is detected.
- Integrated management platform allows display of traffic statistics and peak analysis.

4 FOURTH

How to help operators to get business analysis, improve service experience and turnover?
- People counting monitors flow of foot traffic and outputs data reports.
- Heat maps detect the most active areas.
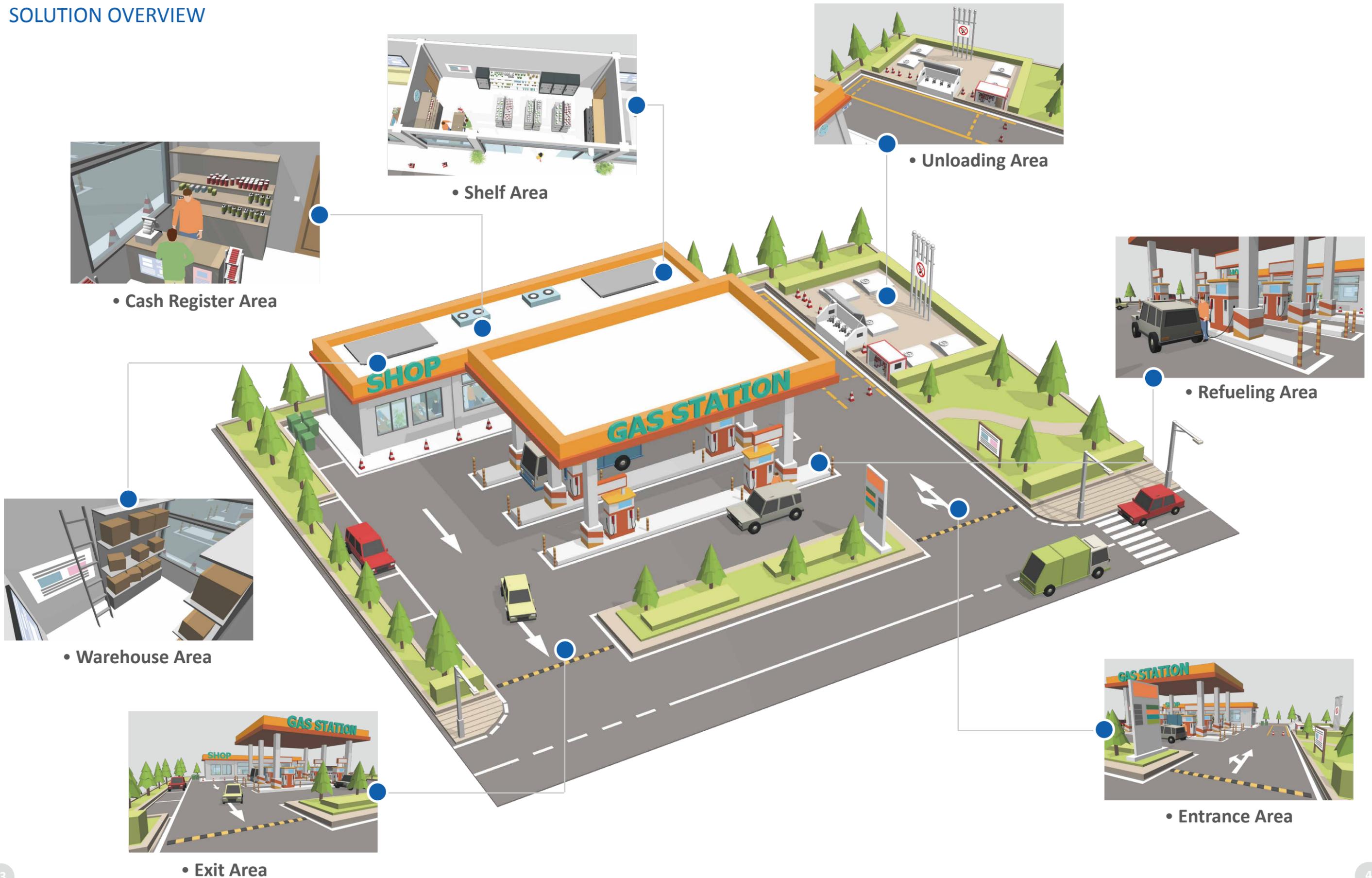- POS integration function to check the amount of goods and sales.

5 FIFTH

How to achieve rapid emergency command and response in the event of an emergency?
- Mobile equipment deployment for getting real-time audio and video data.
- Integrated platform for overall supervision to achieve multi-system integration.

• Shelf Area

• Unloading Area

• Cash Register Area

• Refueling Area

• Warehouse Area

• Entrance Area

• Exit Area

APPLICATION AREA

Entrance & Exit Area

- LRP system for automatic license plate capture and recognition.
- Blacklist function instantly triggers an alarm when illegal vehicles are detected.
- Traffic flow information statistical analysis identifies peak periods, allowing manpower and oil transportation to be effectively managed.
- Instant detection of illegal oil hoarding and terrorist activity.

Refueling Area

• Dangerous Object Abandoned Detection

- Intelligent analytics detect dangerous abandoned objects and keep the refueling area safe.
- Customer refueling behavior is recorded and analyzed in real-time to detect suspicious actions.
- Alarm information is instantly pushed to mobile clients and control centers when triggered.
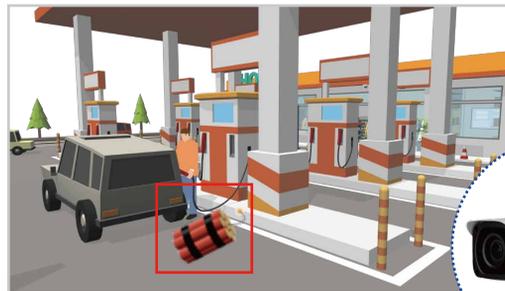
• Thermal Detection

- Thermal imaging system measures facility temperature and triggers an emergency alarm if danger detected.
- Thermal imaging detects overheating, damage, and oil leakage of refueling equipment.
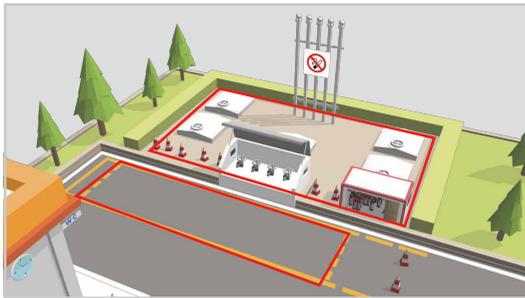
Unloading Area

The unloading area is the most important area in a gas station. Intelligent video surveillance records unloading operations, unloading port details, vehicle details, and provides a panoramic view of the unloading area in real-time. Thermal imaging systems instantly detect device overheating, oil leakage, and other abnormal conditions.

• Illegal Intrusion Detection
• Dangerous Abandoned Object Detection

- Intelligent analytics features such as tripwire and intrusion detection keep the unloading area safe by providing an early warning of illegal activity.
- Abandoned object detection discovers potentially dangerous objects before they can cause harm.
- Alarm information is instantly pushed to mobile clients and control centers when triggered.

• Thermal Detection

- Thermal imaging system measures facility temperature and triggers an emergency alarm if danger detected.
- Thermal imaging detects overheating, oil leakage, and damage of unloading equipment.
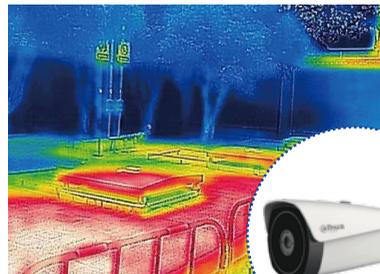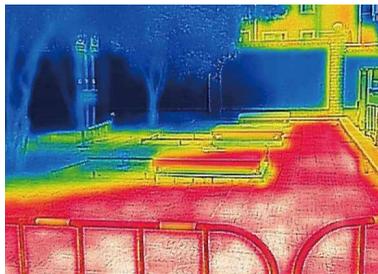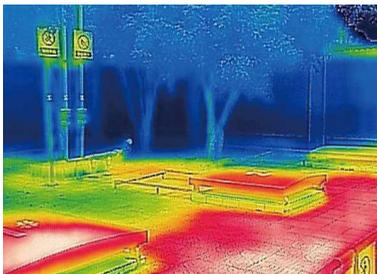
Outdoor Area

• Multi-Lens Panoramic Camera

- Multi-Lens camera with 180 degree panoramic view can achieve real-time monitoring of outdoor area of gas station.
- The details of customer's face and vehicles can be captured effectively with 4K HD resolution camera.

Business Station Area

• Entrance

The WDR camera captures the customer's facial information and various characteristics at the entrances.

Shelf Area

• Fisheye Panoramic Surveillance

The 4K Ultra-Smart fisheye camera provides a 360 degree overview of the area in high definition.
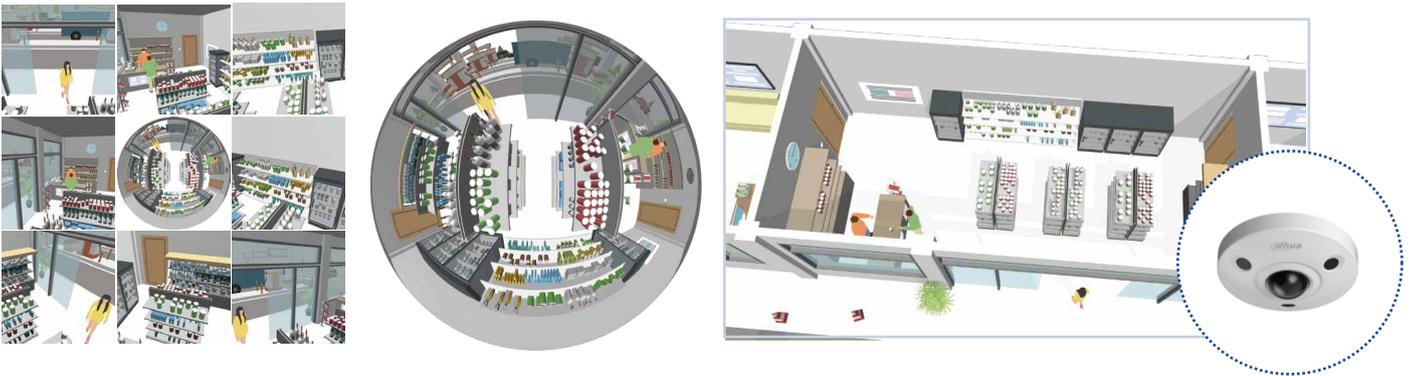
• Heat Map Function

Heat map features find the most active areas and create reports based on customer traffic. This provides valuable information for business and gas station management, allowing operators to enhance customer satisfaction and service.

Cash Register Area

• Audio and Video Evidence

- Monitor the register area including staff transactions and customer behavior in real-time.
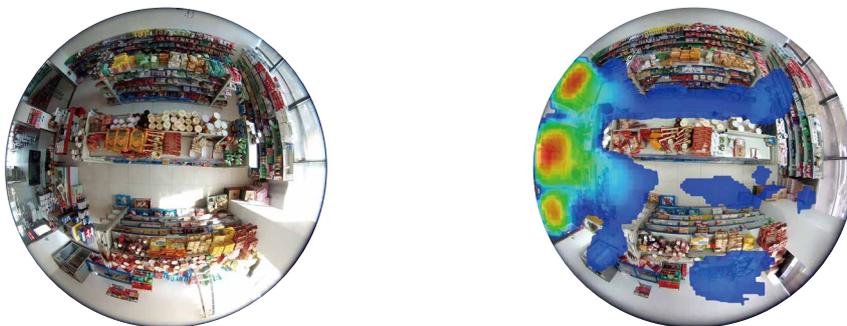- Synchronized audio recordings can provide valid evidence to settle disputes.

• Emergency Alarm

- The emergency alarm system includes a panic button and siren, which trigger an alert in emergencies.

• POS Integration Function

- Video and POS information can be used as evidence when there is a dispute over goods and amounts.
- Video and POS information can be used as evidence when the gas station manager checks the amount of goods and sales.

Warehouse Area

• Low-Light Monitoring

Gas station warehouses are often very dark. Starlight IP cameras work flawlessly in low-light conditions, protecting goods from theft.

General IP Camera | Starlight IP Camera

SYSTEM STRUCTURE

Highlights

• **Strict vehicle control**：The LPR system detects blacklisted vehicles and collects traffic statistics information, identifying peak periods, allowing manpower and oil transportation to be effectively managed.

• **Thermal detection**：Thermal imaging detects overheating, damage, and leakage of refueling equipment.

• **IVS function:** Intelligent analytics detect suspicious objects and personnel to keep the area safe.

• **Panoramic view:** Multi-lens and fisheye cameras provide a panoramic view of the gas station.

• **Business analysis and enhancement:** People counting, heat map, and POS integration functionality help gas station managers engage in business analysis to effectively improve the service experience and turnover.
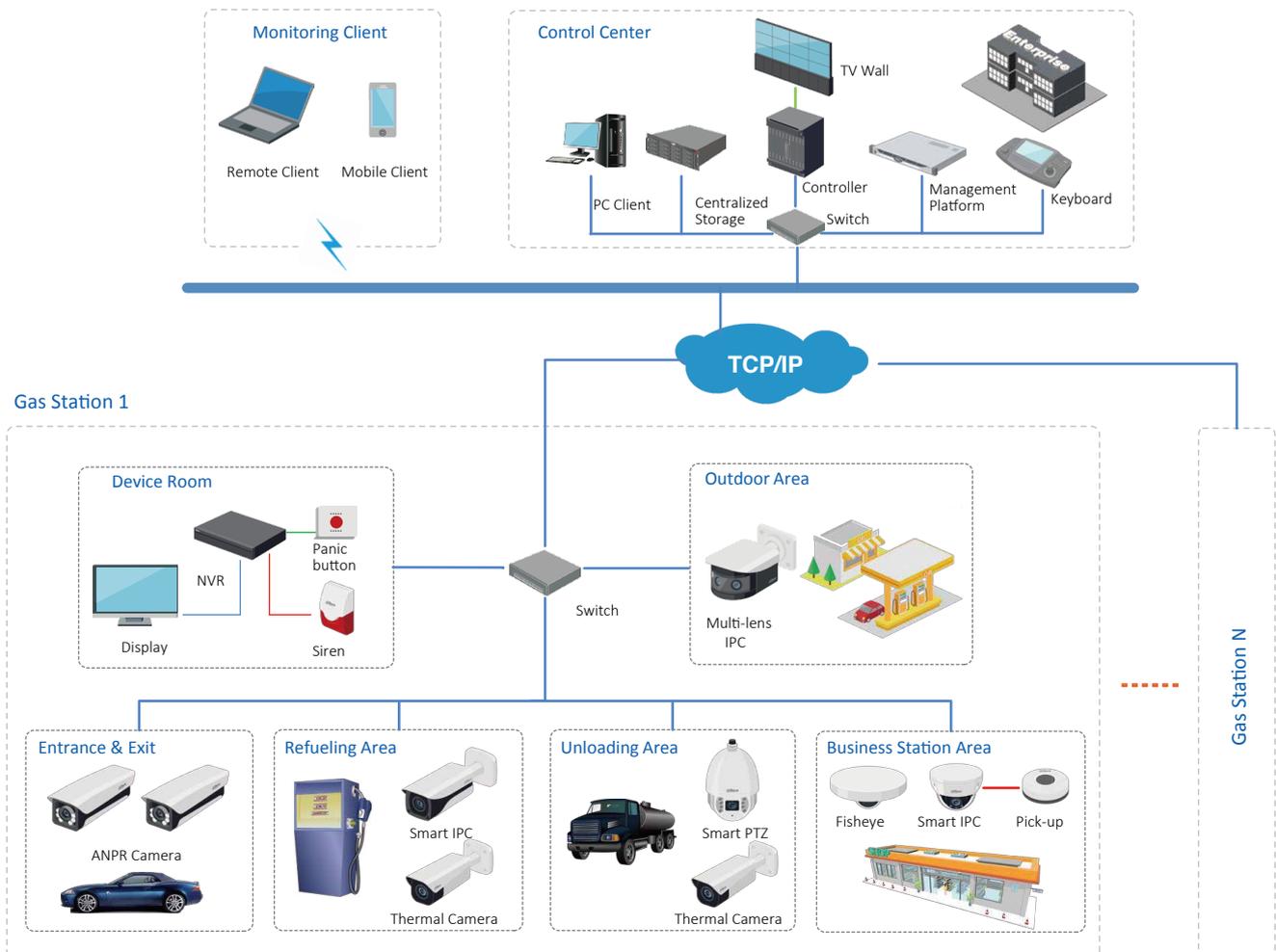
PRODUCT SHOWCASE

IPC-PFW8800-A180

- Four 1/2.8"2Megapixel progressive scan STARVIS™ CMOS
- H.265+/H.264+ triple-stream encoding
- Max 25fps@4096x1800
- Support 180-degree panoramic view
- Day/Night(ICR), 3DNR, AWB, AGC, BLC
- Smart detection, Intelligent Function
- Max. IR LEDs length 30m
- Micro SD memory, IP67, IK10,PoE

ITC237-PU1B-L

- Embedded with LPR algorithm inside the camera.
- Support plate cutout, overview picture snapshot and video recording
- Embedded with whitelist database, barrier control
- Powerful 5-50mm manual lens and white light, ideal for long distance ANPR as far as 40m
- Working temperature-30°C~+60°C, IP66
- True WDR technology

IPC-HFW8231E-Z

- 1/2.8" 2Megapixel progressive scan CMOS
- H.265&H.264 triple-stream encoding
- 50/60fps@1080P(1920×1080)
- WDR(140dB), Day/Night(ICR), 3DNR,AWB,AGC,BLC
- 2.7mm ~12mm motorized lens
- Max. IR LEDs Length 50m
- Micro SD memory,IP67,IK10,PoE

TPC-BF5600-T

- 640*512 VOx uncooled thermal sensor technology
- Athermalized Lens, Focus-free
- Support temperature measurement-40°C ~+550°C
- Support ROI, Motion Detection, Color Palettes
- Tri-Mode for video output :IP/HDCVI/Analog
- IP66, PoE,-40°C~+60°C

IPC-HDBW8231E-Z

- 1/2.8"2Megapixel progressive scan CMOS
- H.265&H.264 triple-stream encoding
- 50/60fps@1080(1920×1080)
- Smart Detection supported
- 2.7mm ~12mm motorized lens
- Max. IR Length 50m
- IP67, IK10, DC12V/AC24V/PoE

IPC-EBW8630

- 1/1.8" 6Megapixel progressive scan STARVIS™ CMOS
- H.265/H.264 triple-stream encoding
- Max 25/30fps@6M(3072x2048)
- Multiple de-warp Mode
- Day/Night(ICR), 3DNR, AWB, AGC, BLC
- Intelligent Function
- Max. IR LEDs length 10m
- Micro SD memory, IP67, IK10,PoE

PRODUCT SHOWCASE

SD6AE230F-HNI

- 1/1.9" 2Megapixel CMOS
- Powerful 30x optical zoom
- Starlight technology
- Max. 25/30fps@1080P and 50/60fps@720P
- Auto tracking and IVS
- Support Hi-PoE
- IR distance up to 200m
- IP67 , IK10

NVR608-32-4KS2

- Intel Processor
- Max 32 IP Camera Inputs
- Max 384Mbps Incoming Bandwidth
- Up to 12MP Resolution for Preview and Playback
- Supports RAID 0/1/5/6/10/50/60
- Smart Tracking and Intelligent Video

DSS4004

- Support single input of 300Mbps, forwarding of 300Mbps, and storage of 100Mbps
- Max support 500-ch input / 200-device input for surveillance camera
- Max support 50-device input for LPR camera
- Hot stand-by mode, N+M redundancy
- Highly open, good compatibility

EVS7024D-R

- Dual Controller architecture
- Max 768 IP Camera Inputs
- Max 1536Mbps Incoming/recording Bandwidth
- 24 HDDs, SAS, Hot-Swap
- Supports RAID 0/1/3/4/5/6/10/50/60/JBOD, Hotspare
- iSCSI and Mini SAS for Expanded Storage Space
- Support standard iSCSI Protocol Storage
- Modular&Cableless Design

DHL32-F600

- Industrial level DID LCD panel, suitable for extensive 7×24 continuous works
- 5ms response time, no image ghosting
- Built-in speaker
- 31.5", Resolution 1920×1080
- Brightness/Luminance 300 cd/m2
- Contrast 1200:1
- VGA(D-Sub)×1 ,HDMI×2 ,Audio×1

DHL460UCH-ES

- 3.5mm Ultra-narrow side LCD patchwork, make better spicing effect
- 5ms response time, no image ghosting
- Viewing angle 178°/178°(Horizontal/Vertical)
- 46", Resolution 1920×1080
- Brightness/Luminance 800 cd/m2
- Contrast 4800:1
- CVBS(BNC)×2, VGA(D-Sub)×1 , DVI-D×1 ,HDMI×1

PRODUCT OVERVIEW

Product	Description	Outdoor	Entrance & Exit	Refueling Area	Unloading area	Business Station Area	Device Room	Control Center
IPC-PFW8800-A180	4x2MP Multi-Lens Panoramic Network IR Bullet Camera	●						
ITC237-PU1B-L	2MP Full HD WDR Access ANPR Camera		●					
IPC-HFW8231E-Z	2MP WDR IR Bullet Camera			●				
TPC-BF5600P-T	Thermal Network Bullet Camera			●	●			
SD6AE230F-HNI	2MP 30x Starlight IR PTZ Network Camera				●			
IPC-HDBW8231E-Z	2MP WDR IR Dome					●		
IPC-EBW8630	6M Full HD Vandal-proof IR Fisheye Camera					●		
DH-HAP200	Pickup					●		

PRODUCT OVERVIEW

Product	Description	Outdoor	Entrance & Exit	Refueling Area	Unloading area	Business Station Area	Device Room	Control Center
DH-ARD812	Panic Button					●		
HC-103	Indoor Siren					●		
NVR608-32-4KS2	32 Channel Ultra 4K H.265 NVR						●	
DHL32-F600	31.5" LCD Monitor						●	
DSS4004	Management platform							●
EVS7024D-R	24-HDD Enterprise Video Storage							●
DH-NKB3000	Keyboard							●
DHL460UCH-ES	46" High Brightness LCD Display Unit(3.5mm)							●

SUCCESS STORIES

Shell & BP Gas Stations in The UK Ireland

• Shell and BP are multinational oil and gas companies with gas stations situated across the United Kingdom.
• Dahua was tasked with upgrading outdated analogue systems throughout Shell and BP gas stations. Dahua secured their gas stations with an IP system. A total of over 1600 cameras (3MP IP Camera) were used across 140 sites.

Statoil ASA (Norway) Gas Station

• Statoil ASA is one of the world's largest oil companies in Northern Europe and in Norway with more than 25,000 employees. As one of the world's largest net oil sellers and a major supplier of natural gas to the continent, Statoil operates 2,000 gas stations in nine countries.
• Dahua provides a full range of video surveillance solutions, including a full set of HDCVI (HCVR+HAC 2MP Camera) products to ensure the daily operation of gas station security.

China National Petroleum Corp. (CNPC) Gas Station

• PetroChina is one of the largest producers and sellers of petroleum products in China with a total of 20714 gas stations. In 2015, sales of refined oil in China reached 116.25 million tons of which retail volume of 80.54 million tons accounted for 69.3%.
• Since 2013, Dahua has built more than 3,000 gas station video surveillance systems(2MP IP Camera+5 series NVR+DSS) all over China.

Sinopec Corp. Gas Station

• Sinopec oil sales market covers the whole of China with 30,121 gas stations. In 2015, the company's domestic refined oil sales reached 151 million tons, with an increase of 7.6%.
• From the beginning of 2014, Dahua undertook the construction of video surveillance systems(2MP IP Camera+5 series NVR+DSS) in many provinces including Jiangsu, Shanghai, Hunan, Hebei, Guangdong and Guizhou. The total number of gas stations exceeds 3000.

QUALITY BY DESIGN