



Lighting Up Your Business by Analytic Insights

Dahua Smart Retail Operation Solution



Comprehensive Insights



Data Visualization



Chain Store Operation



Challenge

For brick-and-mortar stores, the lack of effective, accurate and real-time store data always poses challenges, especially in improving store performance. In addition, as shopping experience plays a vital role in establishing consumer loyalty, creating a great shopping environment to attract more customers and ensuring all shoppers are satisfied have also been the major concerns of shop owners.

- What is the real reason behind poor performance?
- Where is the hottest region in the store?
- What captures customers' attention?



- How to display the right ads at the right time?
- How to reasonably optimize staff service?
- How to reduce queuing time of shoppers?

What we offer

The Dahua Smart Retail Operation Solution provides deeper business insights into in-store data and shopper's behavior. The system collects various in-store data and presents this information visually, aiding users in decision-making and implementing changes to improve customer experience and business performance including staff optimization, store layout adjustment, etc.

Solution Overview



Customer Operation

- Accurate customer traffic
- Queue management
- VIP management
- Conversion rate (customized)
- Targeted audience



Merchandise Operation

- Customer traffic heatmap
- Dwell time heatmap
- Heatmap fusion
- Merchandise popularity analysis
- Smart replenishment



Marketing Operation

- One-click release ads plan
- Targeted advertising
- Advertisement effect evaluation



Parking Lot Management

- Entrance control
- Parking guidance
- VIP reservation (customized)
- Vehicle location



Chain Stores Operation

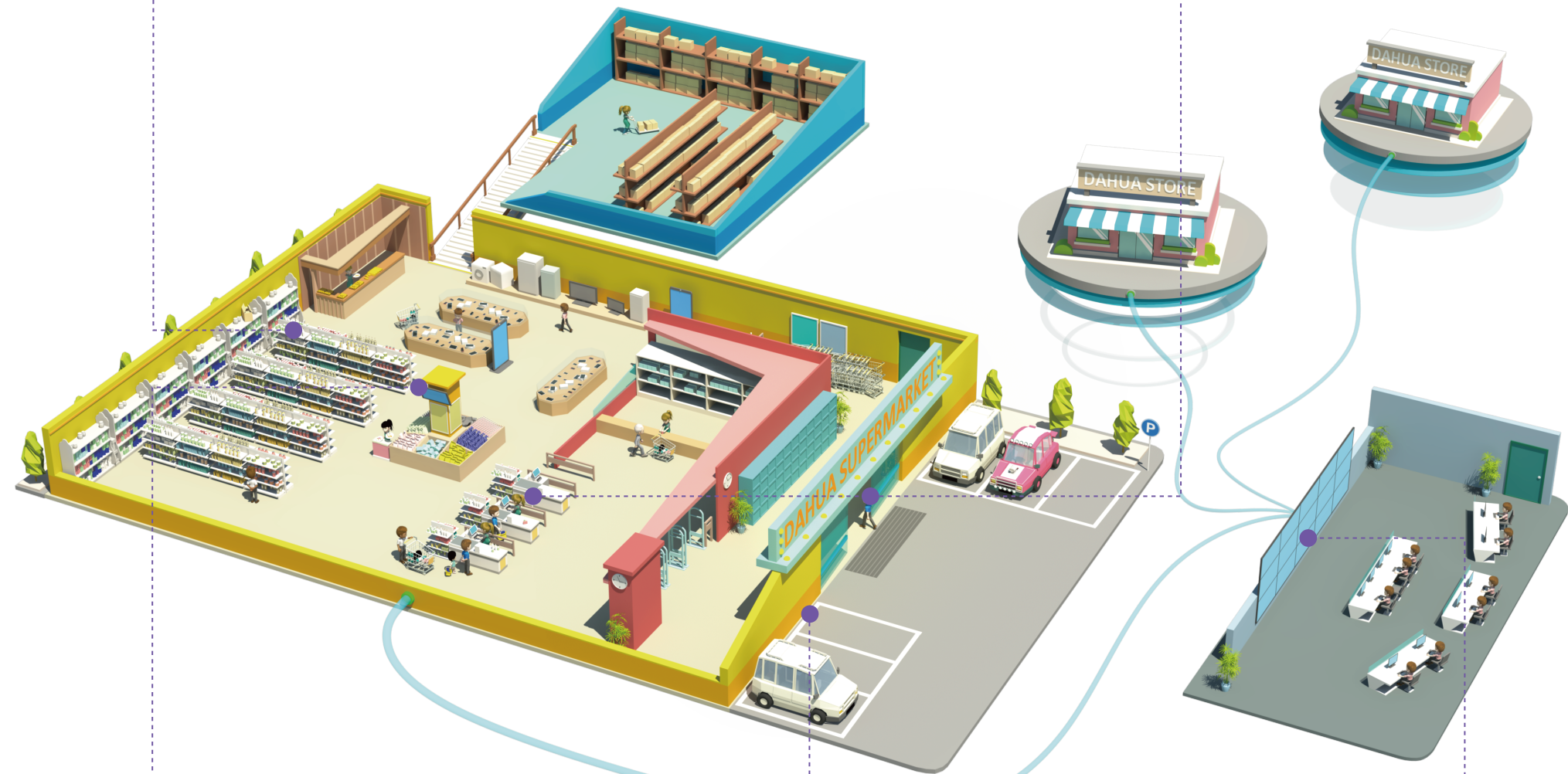
- Center management
- Remote access by DSS Client
- Data wall
- Top 5 people flow

Merchandise Operation

- Dwell time: 3 minutes
- Number of people: 105
- Customer traffic heatmap
- Dwell time heatmap
- Most Popular Zone: XXX

Customer Operation

- Total traffic: 1,182
- Gender: 56% Female, 44% Male
- Age: 60% Youth
- ...
- Gender: Male
- Age: 30-39
- ...
- Waiting time alarm
- Number of people alarm
- Queue 1: 13 people
- ...



Marketing Operation

- Manage all digital signage
- Display the right ads at the right time according to gathered data

Parking Lot Management

- Quick passage
- Guidance for available parking spaces
- Find your car easily
- Average parking time: 1.5 hours

Chain Stores Operation

- Manage all stores
- Access to in-store data anytime, anywhere
- Data visualization

Solution Introduction

Web based BI module

Users can access the platform anywhere and anytime to view data, and thus manage the stores and make operation adjustments in real time.

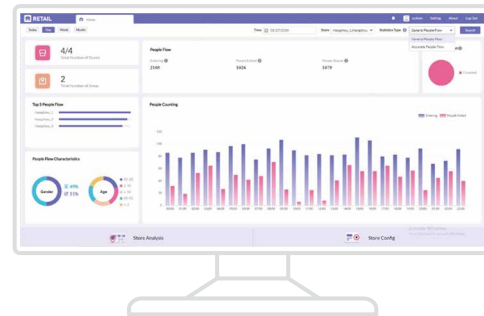
BI module also supports three types of data export, including XLSX, CSV and ODS.

Web Interface Access



The retail module can be easily accessed on the DSS Web interface.

Homepage of DSS Retail

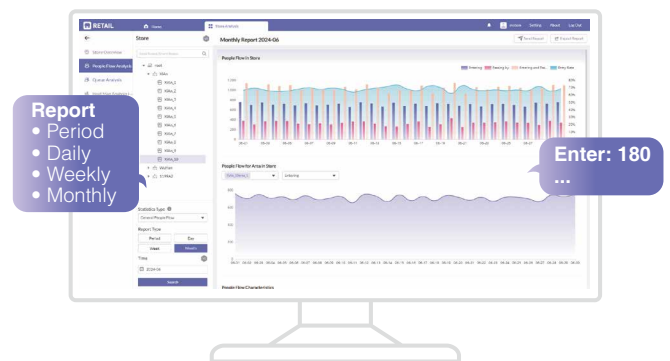


Different sectors can be accessed via the homepage of DSS Retail.

Customer Traffic Analysis

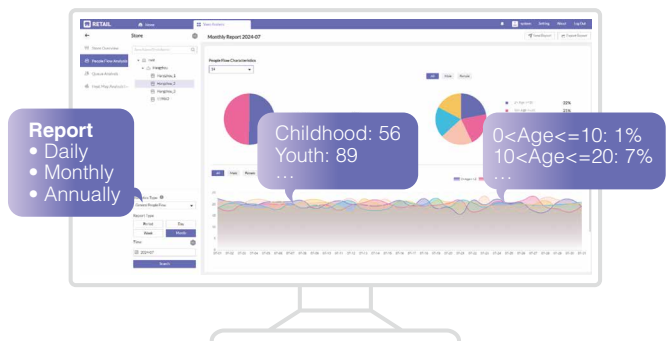
Customer traffic analysis enables store managers to identify traffic cycles based on periodic, daily, weekly and monthly reports, and allows for historical comparisons between two periods or two stores.

This allows managers to reasonably assign staff according to customer traffic to provide better service. It is an effective way to boost sales because conversion potential increases when there is a spike in customer traffic. Moreover, the manager can measure marketing campaign performance by monitoring the number of people who enter a retail store after a marketing campaign is released.



Customer Demographics Analysis

Knowing more about customer demographics can help managers develop more effective marketing strategies. This solution's customer demographic analysis provides deep insights into customer profiles including time they entered the store. It allows store managers to be more agile in meeting customer expectations by adjusting merchandise or digital displays.



Lighting Up Your Business by Analytic Insights

Dahua Smart Retail Operation Solution

Heatmap Analysis

• AI Heatmap

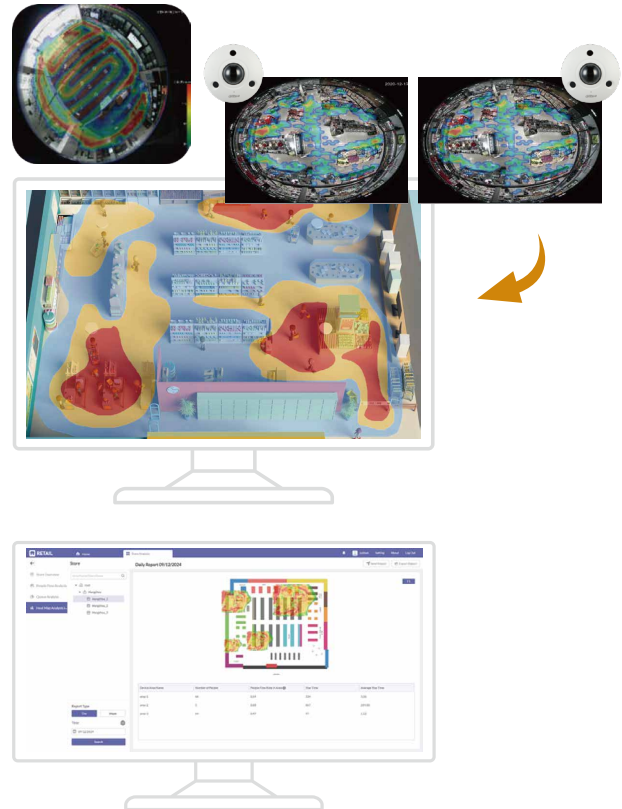
Understanding the hot and cold zones in the store can help formulate business strategies. The heatmap function of this solution indicates the areas where most customers pass by and where customers stay longer.

• Heatmap Fusion

The system can generate the heatmap of the entire store using heatmap fusion technology. It provides an intuitive view of the "hottest" areas in the whole store, which can help in the optimization of the store's layout to improve sales. In addition, it can also help identify the areas in the store that are ideal for advertisements and promotions.

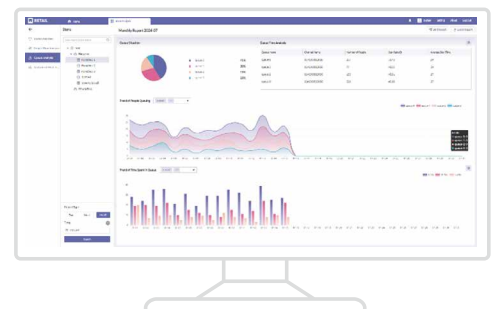
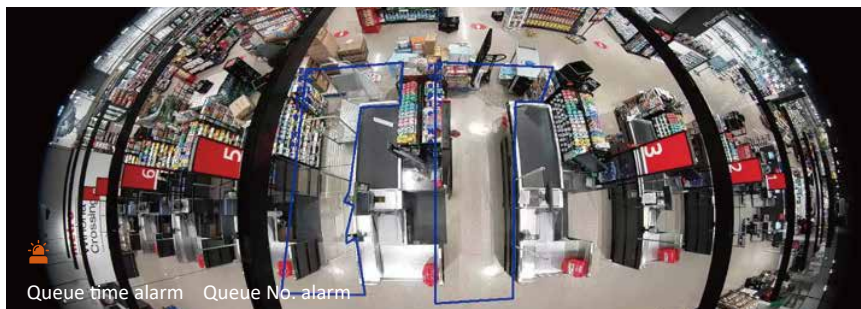
• Global Heatmap

Heatmaps from multiple independent cameras can be spliced into a global heat-map of the entire store.



Merchandise Popularity Analysis

Aside from heatmap, the system can also generate a merchandise popularity analysis report, which includes the number of customers and their dwell time at each area. It provides significant insights into which products attract more attention, and shows the effectiveness of advertising and promotion strategies by determining how long visitors stay in particular locations.



Queue Management

Long and crowded queue lines can lead to sales loss and bad shopping experience. Customer satisfaction is of paramount importance in building long-term relationships with shoppers.

• Queue Monitoring

With our queue management solution, the manager can receive alarms in time when the number of people in a queue or the waiting time exceeds the preset value. This will prompt staff to open up additional checkout counters to provide service without delay.

• Queue Analysis Report

The queue report shows the dwell time and the number of people in each queue. It can significantly help the manager to evaluate staff performance. It can also enable managers to optimize staff scheduling based on data history.

| Success Case



BAKKEN AMUSEMENT PARK (Klampenborg, Denmark)

"It is a solution that we expect to make much more use of since the data and statistics provided creates a lot of other potential business and marketing possibilities for us."

- Niels Erik Winter, CEO of Bakken

• Challenge

Bakken, the world's oldest amusement park owned by the Danish government since 1583, was facing strict restrictions from the government in order to reopen the park for visitors.

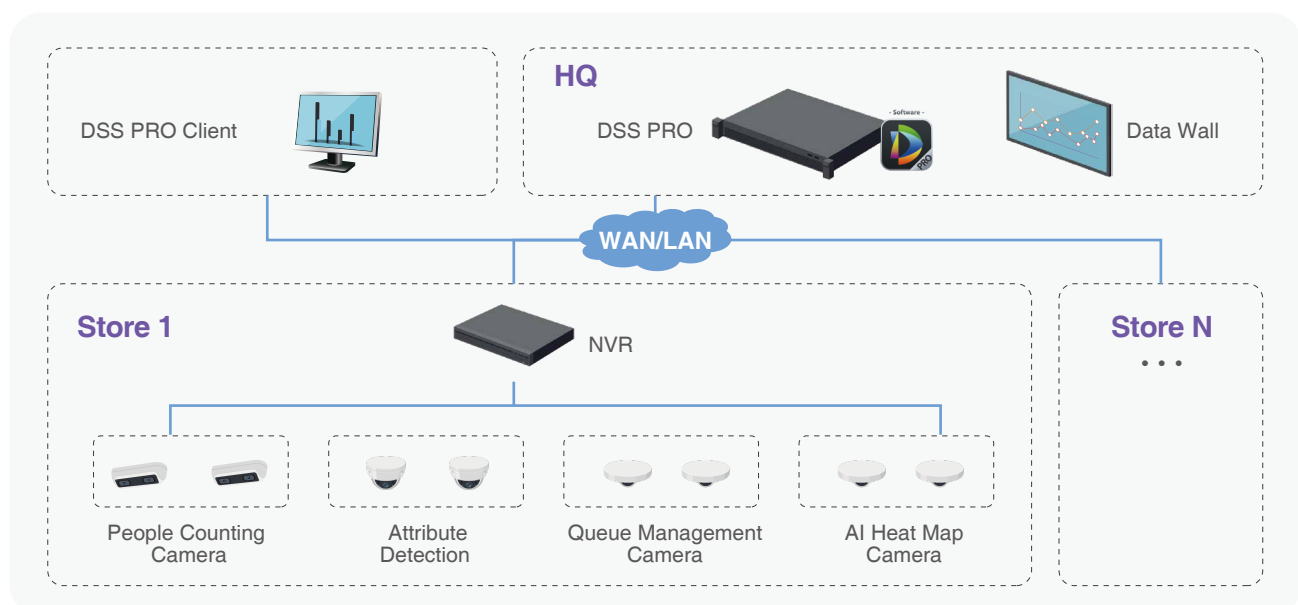
• Solution

Equipped with people counting and flow control, the Dahua Technology's PCFC Solution turned out to be the perfect choice for Bakken Park. It consists of seven HFW5442E-ZE, five PFS3110-8ET-96, and DSS Pro License 64 Channels + BI Module, covering 5 open entrances of the park. The Dahua AI-based People Counting Camera (HFW5442E-ZE) with its 140 db WDR function and large image sensor achieves an astonishing counting accuracy of 97.5%, even under difficult outdoor environment with lots of shadows.

• Result

The DSS PRO+BI made it possible to export valuable counting data for future business opportunities such as traffic flow during peak hours, the impact of weather and temperature on customer flow, etc., thus increasing the park's appeal to its customers. In addition, the park can even conduct marketing campaigns based on the amount of visitors coming in at specific entrances and at specific timeslots.

| Solution Topology



| Recommended Products

DH-IPC-HDBW7442E1-Z-X

4MP IR Dome WizMind Network Camera

- General and accurate people counting
- People portrait analysis



DH-IPC-EBW81242P-AS-S2

12MP IR Fisheye WizMind Network Camera

- AI heatmap analysis
- Multi-area-area people counting
- Queue management



DH-IPC-HDW8441X-3D

4MP WizMind Dual-Lens Network Camera

- Queue management
- Entry / exit / pass number counting



DH-IVD51-I Series

Intelligent Video Device

- Video metadata
- People Behavior Analysis
- AI Search & AcuPick



DSS PRO V8.6 (Retail Version)

- Professional visual BI Module for the retail industry
- Access to chain store's data through the DSS web anytime, anywhere
- Comprehensive and expandable Dahua VMS



Ver. 1, Jun. 2025

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YouTube



LinkedIn



Partner App



Website

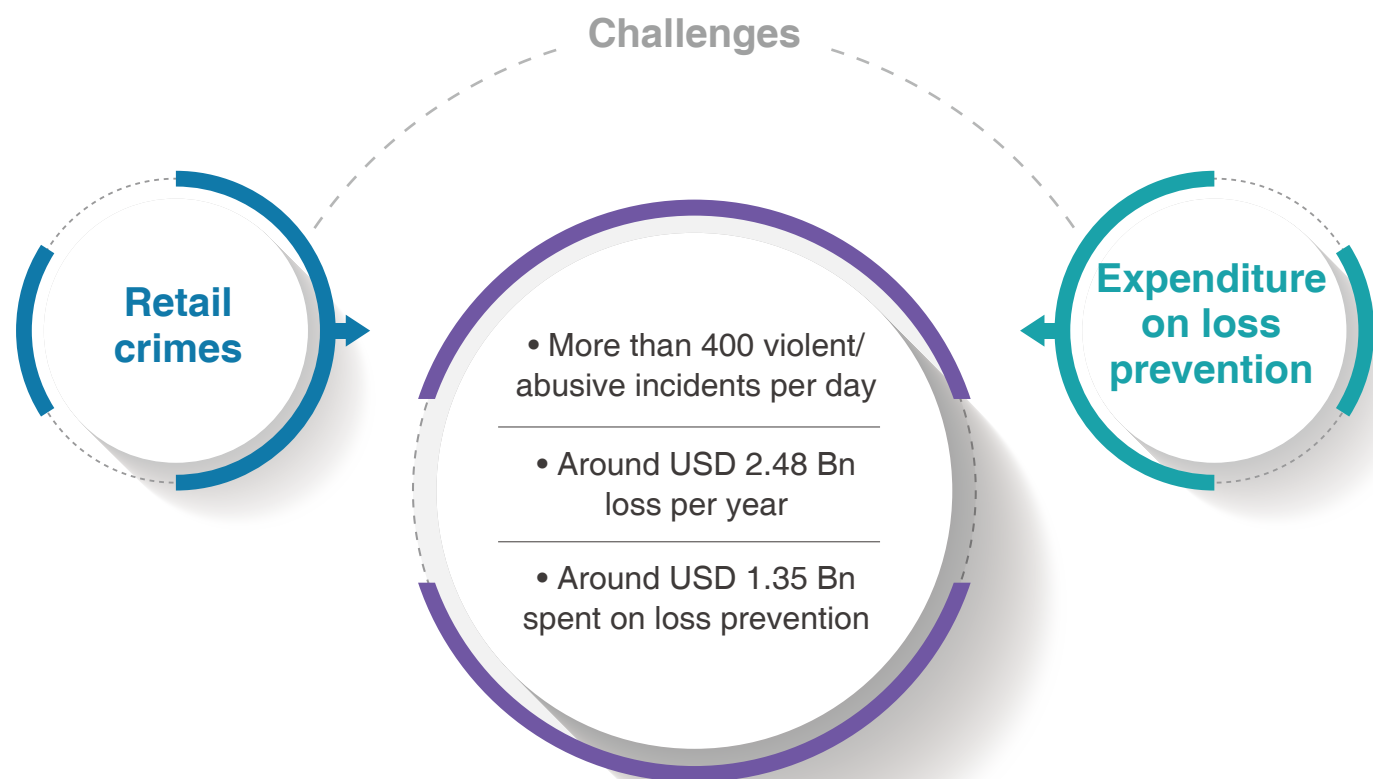


Protect Profits With Advanced Security & Surveillance Solutions

Dahua Retail Loss Prevention Solutions



| Background



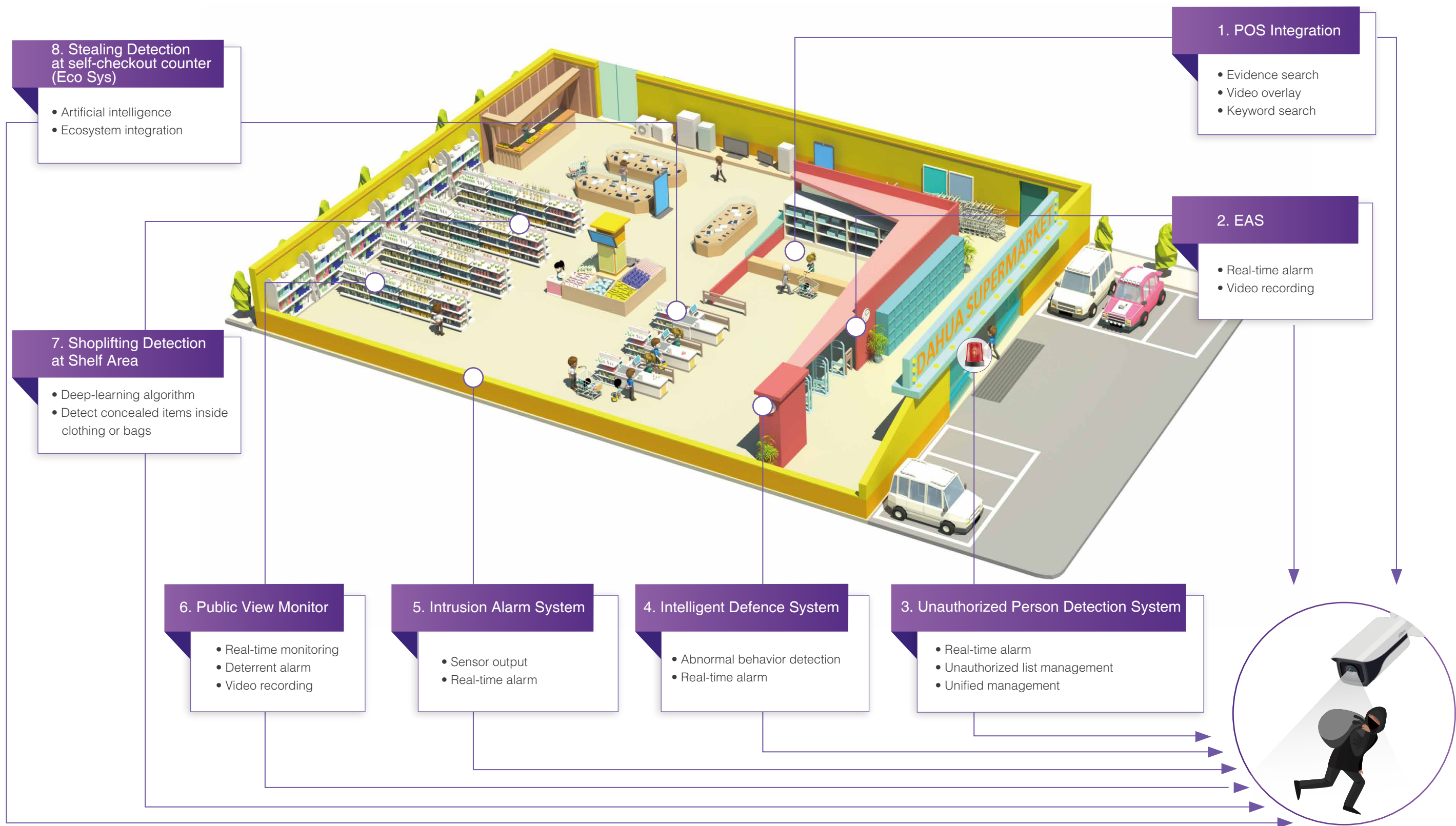
Definition

Retail Loss Prevention is a set of practices employed by retail companies to preserve profits. Common strategies such as security system installment, inventory tracking, and cash payment minimization aim to prevent fraud, shoplifting, waste, vandalism, employee misconduct, etc.

What we offer ?

Dahua Retail Loss Prevention Solutions combine traditional security and surveillance with advanced AI technology to provide all-round protection of retailers' assets. Our solutions include POS integration, EAS, Unauthorized Detection System, Intelligent Defense System (IDS), Intrusion Alarm System, Public View Monitor, and shoplifting detection, supporting proactive alarms, in-process management and post-evidence search at the same time.

| Analysis of Retail Loss Prevention Scenarios

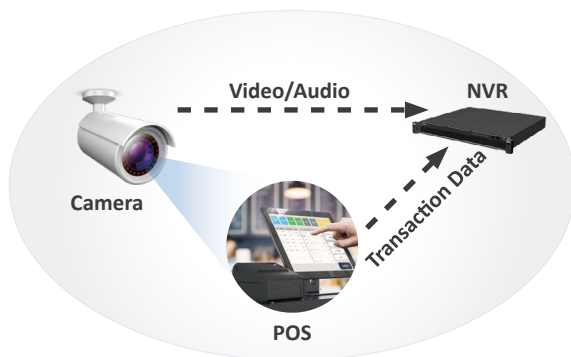


| Overview of Dahua POS Video Loss Prevention System

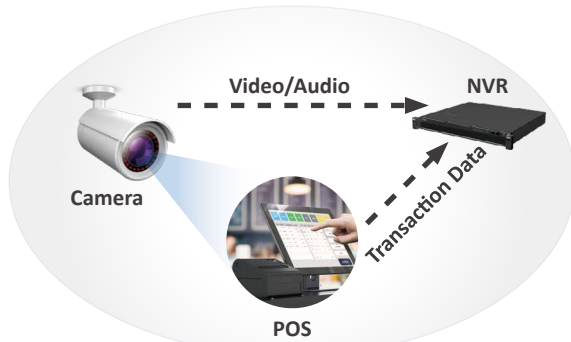


Network Topology

Store 1



Store N



NETWORK

Value:

- Overlay of receipt and video
- Video recording and playback of abnormal events
- Receipt information query



Overview of Dahua EAS Loss Prevention System

High Detection Rate

Low False-Positive Rate

Highlights

Strong Anti-interference

Long Detection Range



For small retailers such as individual stores, it enables single-store EAS access for timely alarm messages.



EAS

For medium and large retailers such as supermarkets, shopping malls and chains stores, it enables access to EAS and other relevant surveillance products to send timely alarms on the platform and mobile devices.



Video



Capture



Evidence



Platform Alarm



Mobile Alarm

APP



DSS Pro



NVR



IPC



EAS



IPC



Network cable

Signal cable

| Unauthorized Person Detection System

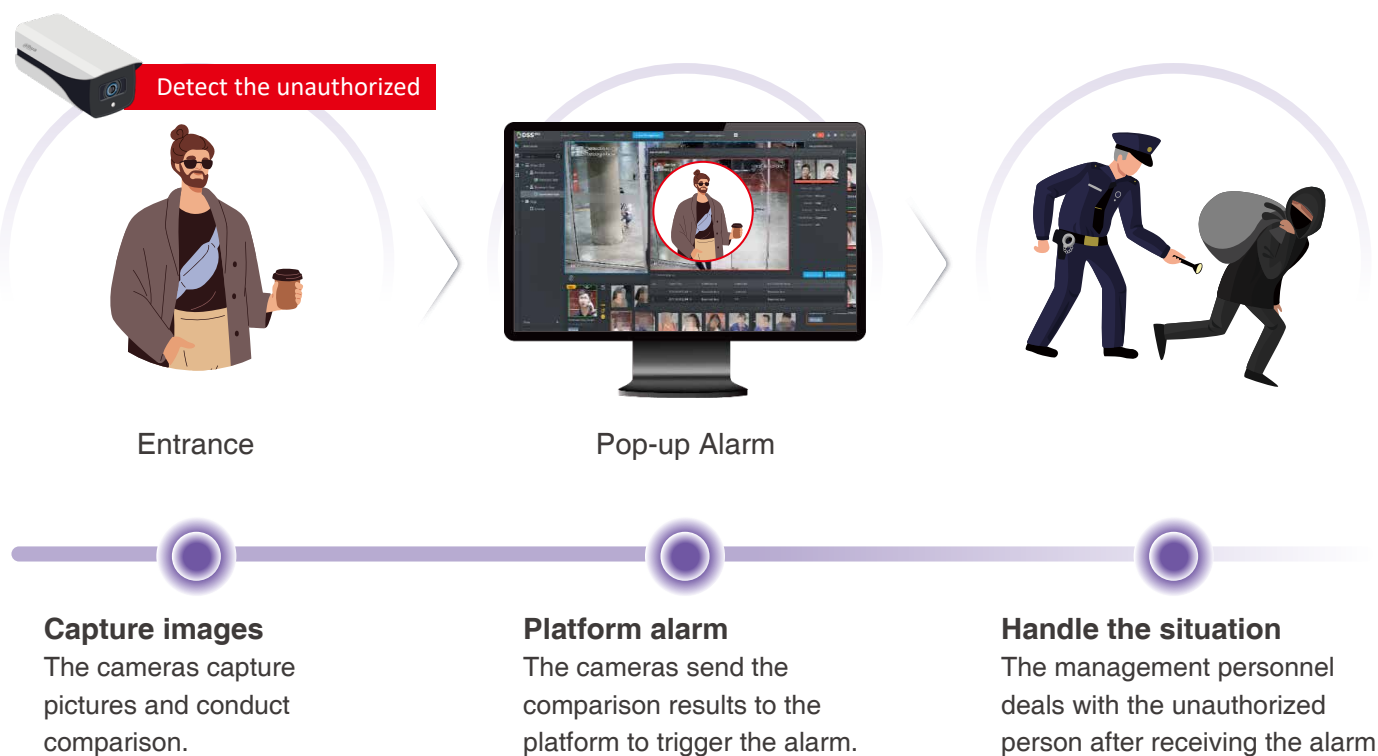
Value:

Information
sharing

Unauthorized
person
identification

Cross-store
prevention

Process



Centralized Management

It offer a unified list management of unauthorized individuals to avoid secondary losses in all stores.

Real-time Alarm

The alarm will be triggered when a person in the unauthorized list appears in the monitored scene.

| Overview of Dahua Intelligent Defence System (IDS)

Based on deep learning algorithms, this application can detect and classify the targets in the video, and then track these targets to form a continuous tracking trajectory. By comparing the trajectory with preconfigured information, it then outputs alarm information.



Gathering

Fights and other violent behaviors can take place during an argument, which can cause people gathering. Some people may take advantage of this situation to steal.



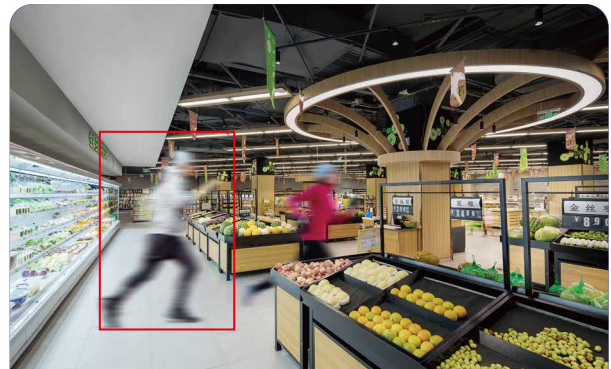
Intrusion

After business hours, intruders can attack an establishment that has proper monitoring system in place.



Loitering

Loitering refers to people hanging around inside or outside the store without buying anything. It can lead to severe problems such as deterring customers from coming in, damaging properties, and even crimes (vandalism, fighting, stealing, and shoplifting), which can drastically affect the revenue of the store.



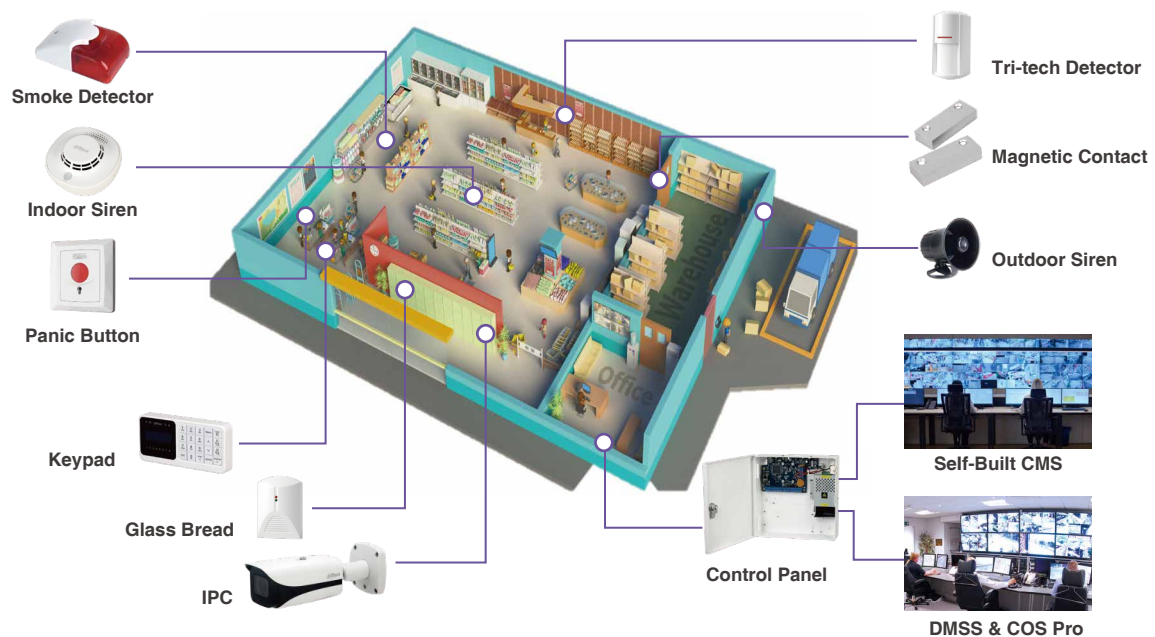
Fast Movement

Abnormal fast movements in the store such as chasing and running can cause injuries to customers and staff as well as damage to properties.

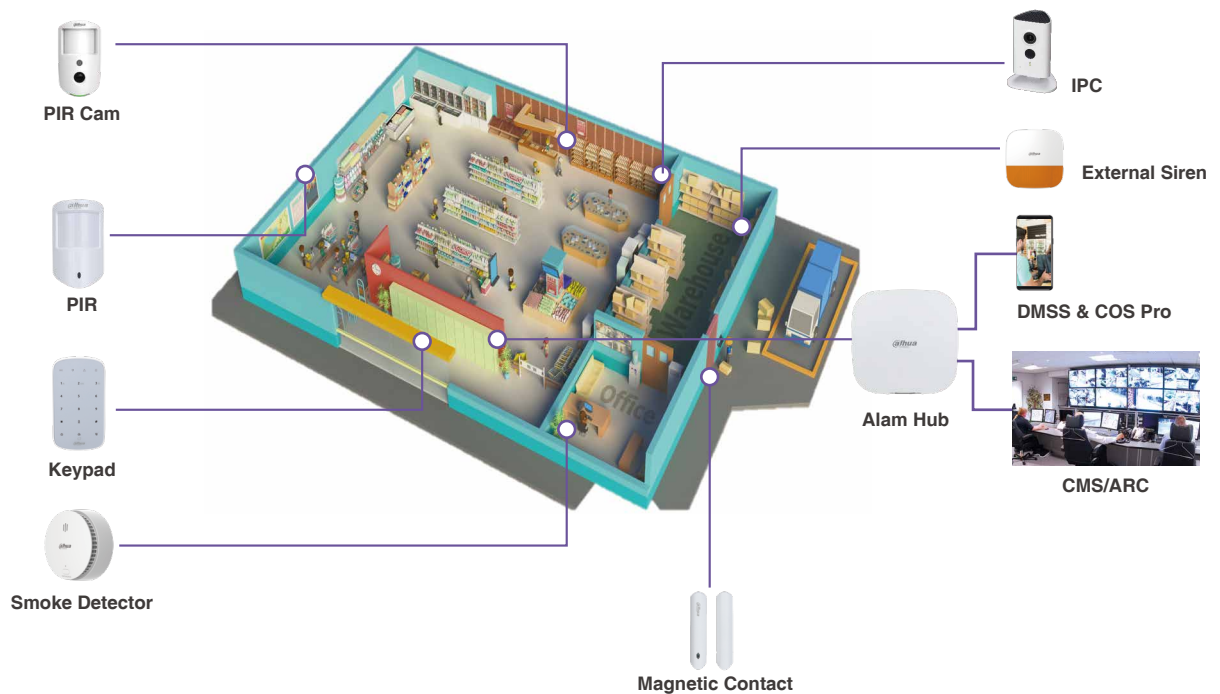
| Overview of TiOC Alarm

Alarm signals of all sensors in the store can be transmitted in real time.

Wired System



Wireless System



I Public View Monitor



Public View Monitor

Using a public view monitor in shelf areas or at the entrance is an effective way to tell the public that your store is under constant surveillance. This can effectively reduce theft and fraud issues.

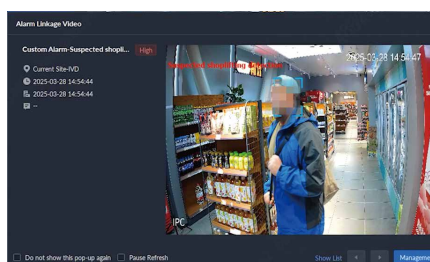
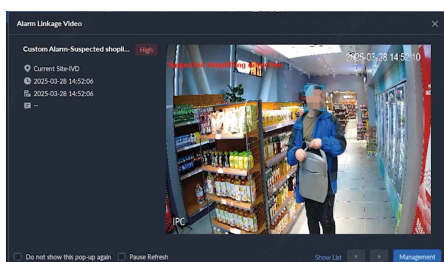
- Shows the live view of the scene
- Records video footages
- Displays ads

I Overview of Dahua Shoplifting Detection System

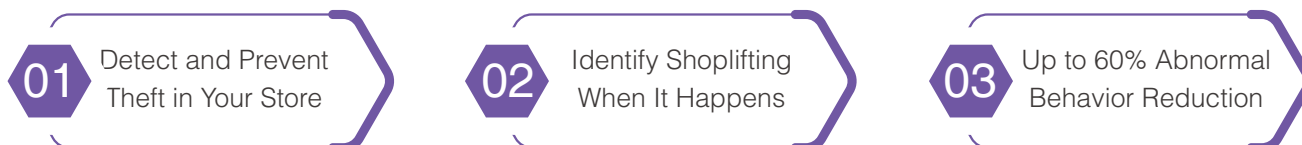
What types of suspected shoplifting behaviors can be detected?

- Concealing goods inside clothing
- Concealing goods inside bags, such as backpacks, handbags, shopping bags, etc

Anti-Shoplifting Pop-Up Alarm



Solution Value:



Core Products



DHI-IVD5XXX-I
Intelligent Video Device

- Suitable for Small and Medium-sized Stores



DHI-IVSS5XXX-I
Intelligent Video Surveillance Server

- Suitable for Large Stores

ENABLING A SMARTER SOCIETY AND BETTER LIVING

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Ver. 1, Aug. 2025

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