Enterprise Park Solution

Helping Keep your Industrial Premises Secure

UK & IRELAND

CONTENTS

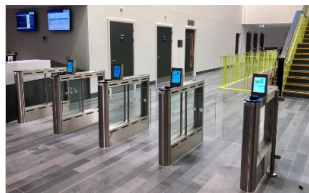# CURRENT ISSUES & OBJECTIVES

CURRENT ISSUES

Security Management	Entrance & Exit Management	Office Operation Management	System Management

- How to enhance security management inside the enterprise park?
- How to improve the access efficiency?
- How to improve satisfaction for daily office operations?
- How to reduce the cost of maintaining your security system?

SECURITY MANAGEMENT

Entrance & Perimeter	Office & Warehouse	Key Areas

Artificial Defence: Not everything is under control.
High False Alarm Rate: Non-visible alarm system may cause high false alarm rates, which causes extra work for security guards and is costly.
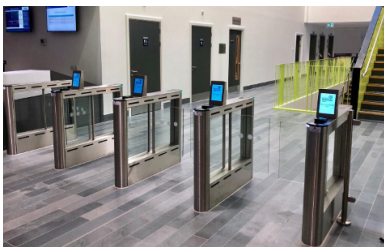**Difficult to find evidence:** How to quickly locate the information required.

Low Efficiency

High Cost

ENTRANCE & EXIT MANAGEMENT

| Entrance & Perimeter	Office & Warehouse	Key Areas

Low Efficiency: Traffic jams are common during rush hour and is not good for the reputation and image of the enterprise park.
Bad Experience: Lost identity and access cards create a bad experience.
Inconvenient: Finding a car parking space is not easy sometimes and forgetting where your car is located can be very inconvenient.
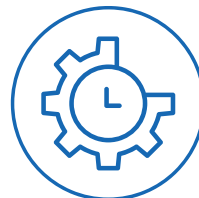
Low Efficiency

Bad Experience

OFFICE COLLABORATION
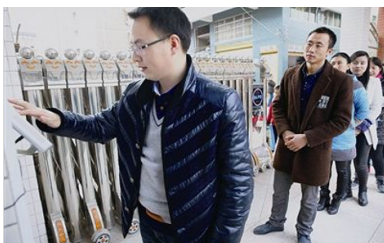
Attendance	Meeting Room	Communication
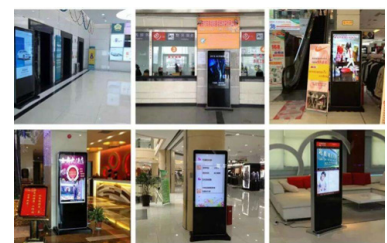
Low Efficiency: Single line queues cause delays in entering a building for workers, and eliminating false attendance is not easy.
Bad Experience: Traditional projectors with poor heat dissipation and low performance, meeting minutes or sensitive information left on white boards.
Various Media Scenarios: Difficult to maintain various forms of media information and media scenarios.

Inconvenient

SYSTEM MANAGEMENT

Systems	Information	Data

Multiple systems: It is inconvenient and costly to operate and manage disparate systems with different interfaces by other manufacturers, and also increases training costs.

Isolated information: Systems working in isolation cannot integrate and data collected cannot be shared making enterprise parks inefficient and costly to run and manage.

Decisions without supported data: Daily operations without supported data make it hard for managers to make informed decisions.

Isolated

Inconvenient

SOLUTION TARGET

AI

By using AI technology security management is improved with quicker response times, improving the overall experience.

IoT

Applying IoT technology to different scenarios enables the relationship between people, vehicles and objects with data being used for different applications.

Big Data

Collecting data from application systems helps build a big data platform, integrating multiple data sources to produce more consistent, accurate and useful information.

Improved Security

Improved Efficiency

Enhanced Experience

Cost Reductions

World Leading Video-Centric Smart IoT Solution & Service Provider

SOLUTION DESIGN

By utilising the latest technology, Dahua provides a solution to satisfy end-user needs.

Facial Access

Facial Recognition

Lift Control

E-whiteboard
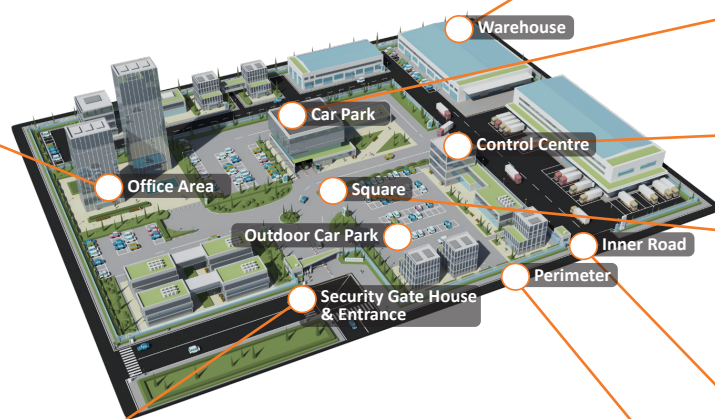
Releasing Information

Panoramic

Facial Barrier

ANPR

Visitor Terminal

Fire Detection

Parking Detector

Vehicle Locator

Video Wall

Panoramic

Unauthorised Parking

Speeding Detection

Intrusion Alarm

Warehouse

Car Park

Control Centre

Office Area

Square

Outdoor Car Park

Inner Road

Perimeter

Security Gate House & Entrance
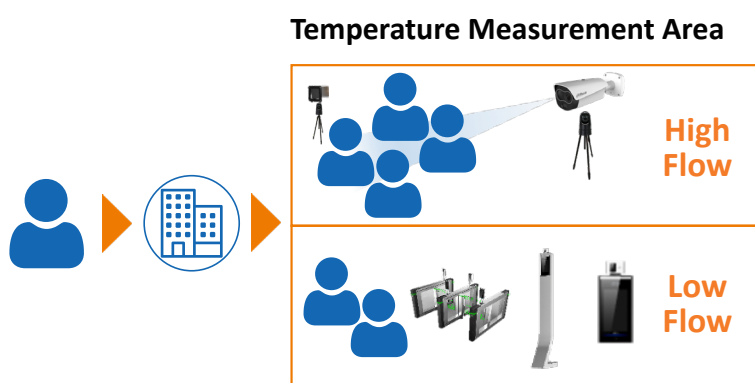
RE-OPENING BUSINESSES

TEMPERATURE DETECTION

Countries are emerging from lockdown after the epidemic. They now need to comply with regulations and take relevant measures to ensure the health and safety of employees to help prevent a second outbreak.
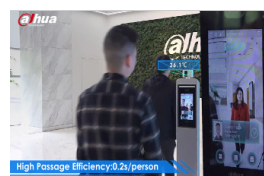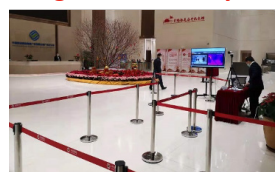
Process

Temperature Measurement Area

High Flow

Low Flow

For external sites a tent is required for greater accuracy.

Multi-targets
(30 people at a time)

High Access Efficiency: 0.2s/Person

Values

High Efficiency
Multi-targets
(30 people at a time)
High Access Efficiency: 0.2s

High Accuracy
±0.3°C
(with blackbody)

Flexible
Can be used in both high and low flow scenarios

Easy to Retrofit
Just purchase the access control terminal to complete the retrofit

Reusable
After the pandemic devices can be re-used for fire prevention, access control and time attendance

VISUAL MANAGEMENT

1. The data from both the camera and access control terminal.
2. Flow control statistics currently only support a single area.
3. Displays the latest snapshot from both the camera and access control device.
4. All event statistics will be set up using DSS Pro.
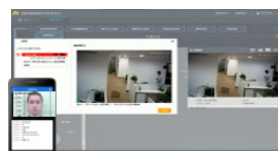**5.** Displays the latest event records.

Click "…" in the upper right hand corner of the module for more details.

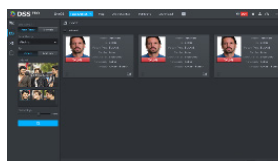Visual data status of employee is provided to managers to make decisions.

INTELLIGENT SECURITY

AI PROTECTION

AI technology helps enterprise parks to manage all objects captured on video, including people and vehicles.

Snapshot by Camera

Image Import

Library Issued

Face Library

Result Feedback

NVR/IVSS

DSS Pro

Application

27 Attributes
Face: 6
Human: 7
Non-motor Vehicle: 5
Motor Vehicle: 9

Gender
Age
Glasses
Face Mask
Facial Expression
Facial Hair

Gender
Top Colour
Top Type
Bottoms Colour
Bottoms Type
Hat
Bag

Bike Type
Bike Colour
Number Plate
Top Colour
Top Type

Plate Colour
Car Colour
Car Type
Sun Visor
Ornament
Phone Calling
Seatbelt
Inspection Sticker
Smoking

Receive real-time alarms if a blacklisted person or stranger enters the enterprise park.
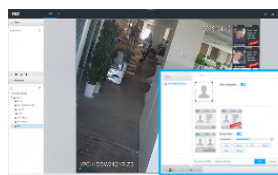
Search for captured face images from within the library to confirm if a target has been present in the enterprise park.
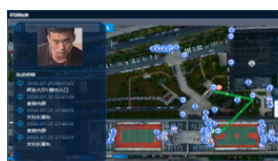
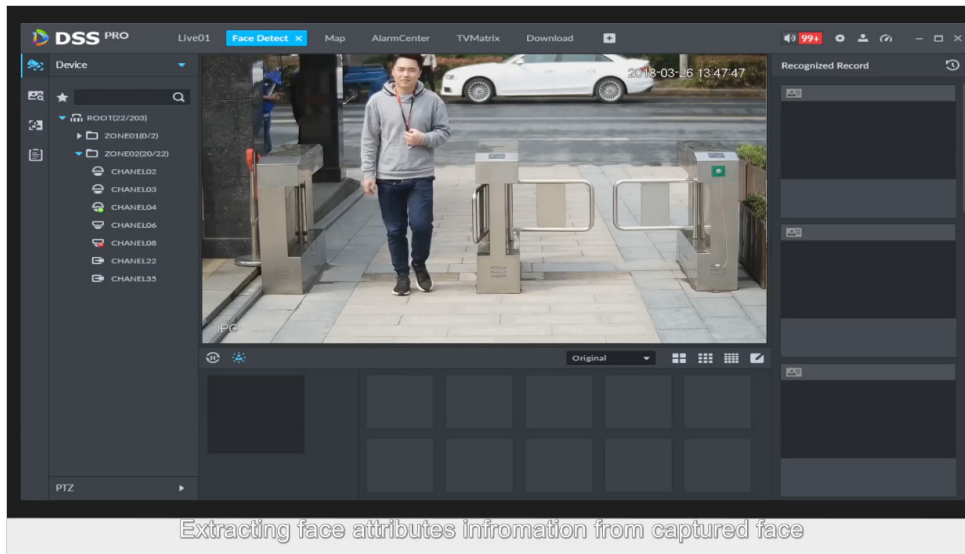Track using face image to discover where the target has been.

Dahua provides the metadata for big data analysis.

Metadata search enables users to search recordings by features making the analysis quicker. (Specific features need to be confirmed before the project starts)
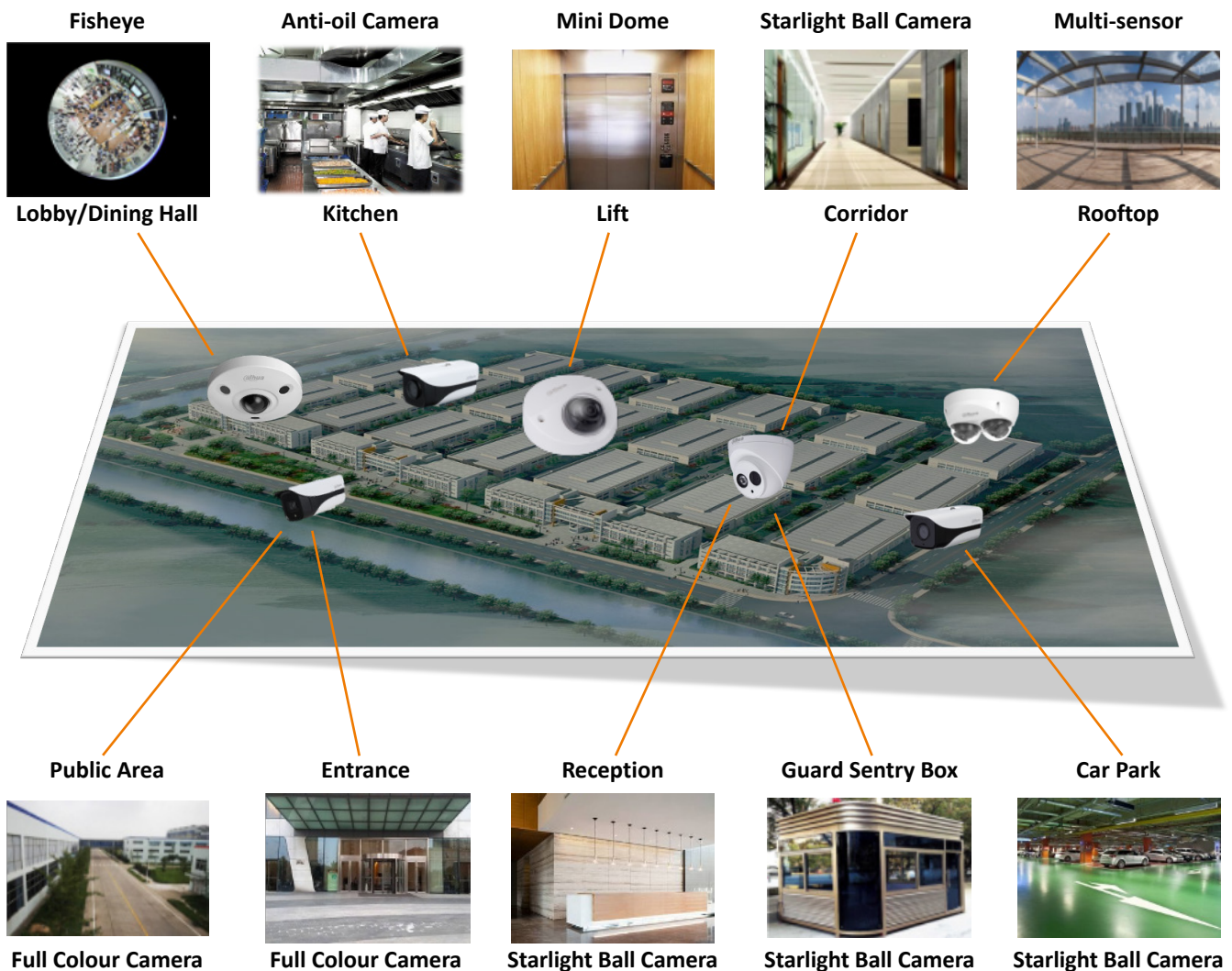
VISUAL MANAGEMENT

Solution Value: Saves up to 90% of time by improving efficiency.

1. Recognises when a person passes back ID card and triggers alarm through blacklist configuration.

2. Searches for target using captured face.

3. Supports the ability to track the path of target using face image.

SCENARIO MONITORING

Fisheye
Lobby/Dining Hall

Anti-oil Camera
Kitchen

Mini Dome
Lift

Starlight Ball Camera
Corridor

Multi-sensor
Rooftop

Public Area
Full Colour Camera

Entrance
Full Colour Camera

Reception
Starlight Ball Camera

Guard Sentry Box
Starlight Ball Camera
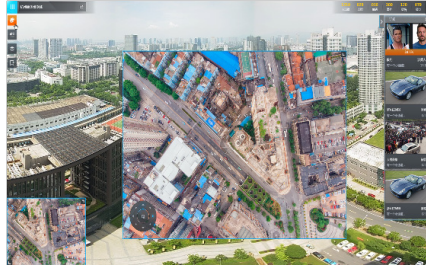
Car Park
Starlight Ball Camera

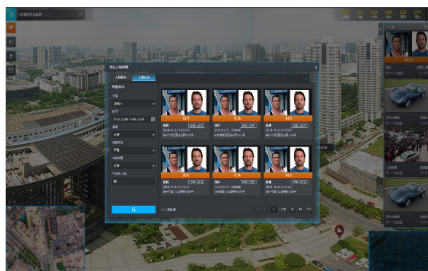# AUGMENTED REALITY SURVEILLANCE

Panoramic Live View

Picture-in-Picture

Multi-Target Tracking

Person & Vehicle Information Display

Alarm Information Visible
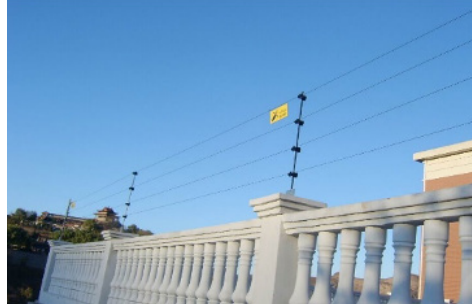

Label Selection Display

PERIMETER PROTECTION

Infrared Beam   **Electric Fence**

Traditional Protection:
- Invisible and inefficient verification
- High deployment costs
- High false alarms
- Difficult to check what happened

Video Perimeter
- Visible both day and night
- Easy deployment
- Intelligent filter: Filters out animals, leaves and light to reduce false alarms by 95%
- Built-in active deterrence
- Target classification retrieval makes it easy to search recorded video

Thermal Perimeter
- Works in conditions where there is smog, rain, snow, zero light etc.

PERIMETER PROTECTION - SYSTEM INTEGRATION

Real-time Alarms in the Control Room

Real-time Alarms for both Client and Mobile Client

Hundreds of different event alarms supported.

Multiple integrated sub-systems helps to quickly confirm alarm.

Alarm event processing

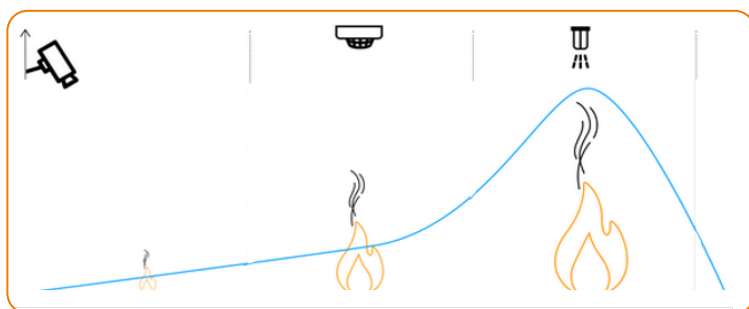Easy to search alarm history including records and operational content.

Alarm history can be exported for further analysis.
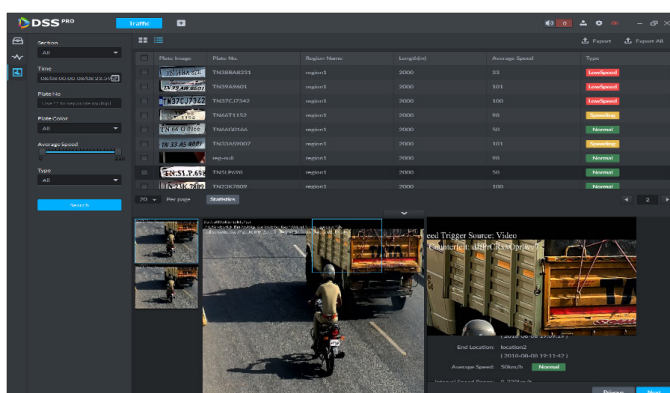
WAREHOUSE - FIRE & THEFT PREVENTION

- **Advanced fire detection algorithm**
- **Supports alarm integration – white light and loudspeaker**

Thermal camera detection detects fire in first instance to save lives and property.

Using the IVS function detects criminal activity at the same time.

VEHICLE MANAGEMENT

Speed Measurement

Dahua provides the capability to detect a speeding vehicle inside the enterprise park, and records the vehicle as it passes the camera.

Unauthorised Parking Management

Easy configuration to show available parking time and automatically receive alerts for unauthorised parking, which helps improve the response time, efficiency and management of the traffic.
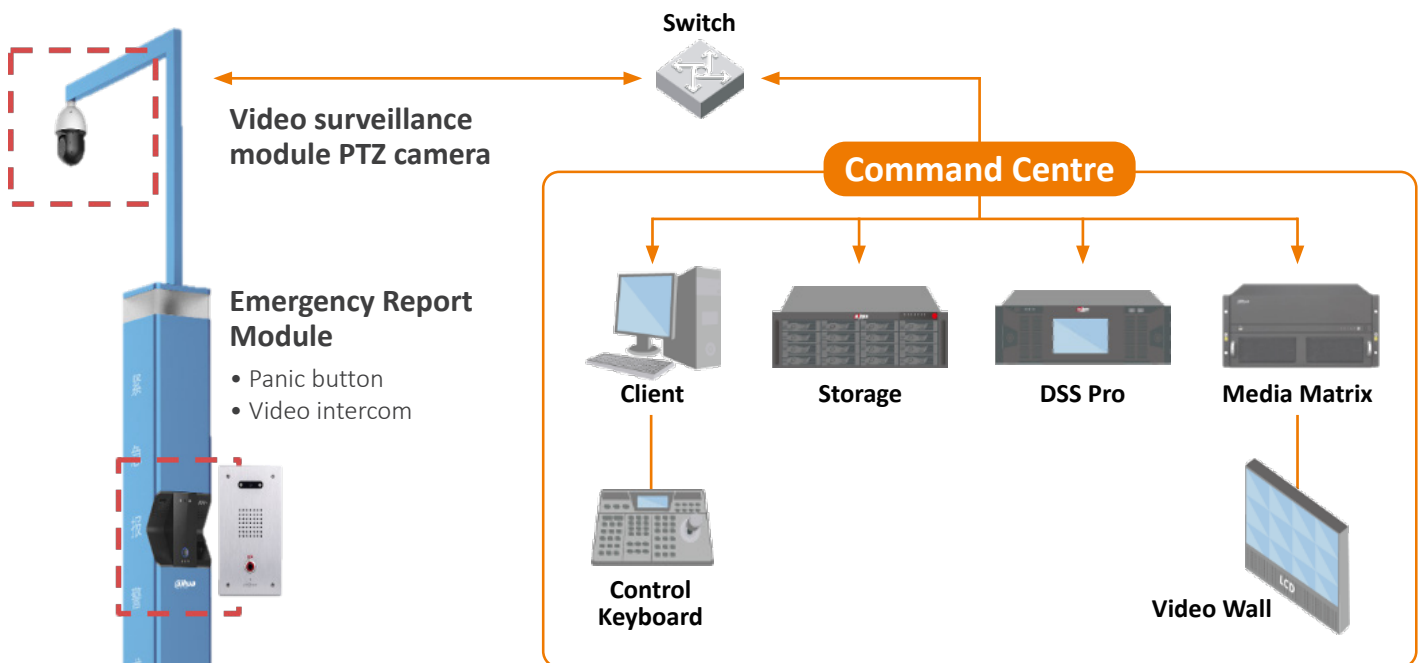
HARDHAT DETECTION

Automatically detects when a hardhat is missing in dangerous areas reducing the potential risk.


- Real-time alarm notifications to remind the person or management of any risks.
- Automatic and accurate detection to reduce staff costs.
- Historical records to support event search and export.

EMERGENCY ALARM POLE

Switch

Video surveillance module PTZ camera

Command Centre

Client

Storage

DSS Pro

Media Matrix

Control Keyboard

Video Wall

Emergency Report Module

- Panic button
- Video intercom

When an emergency happens:

- Push the panic button
- Communicate with control room
- Security guard checks video to see what happened
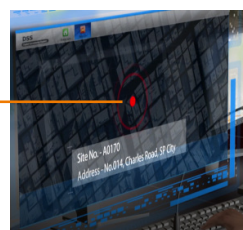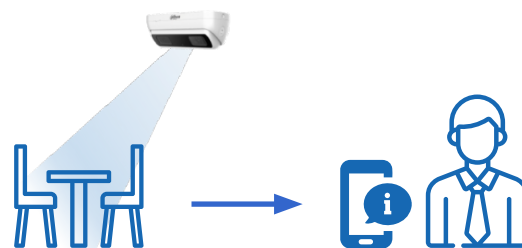
Solution Value

- Provides a direct and immediate line of communication between employee and security manager
- Security manager able to see what really happened on site and can respond immediately

OFF-DUTY DETECTION

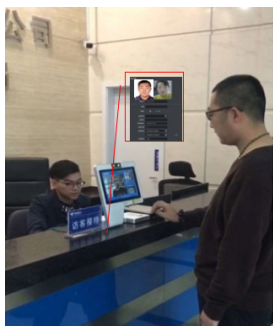Automatically detects the status of the person on duty to improve the management efficiency.

- Rule configuration
- Real-time event detection
- Alarm search and export

EFFICIENT ACCESS

PERSONNEL CONTROL

1. Face Registration   **2. Main Entrance**   **3. Key Entrance Areas**
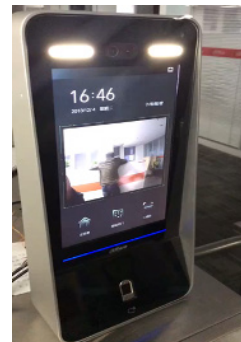

Solution Values

- Single registration available to gain multiple access.

- Face detection solution improves the accuracy and also the security.

- All access history is searchable and recorded, making it easier for management.

✔ **Unauthorised Entry Alarm**   ✔ **Live Detection**

VISITOR MANAGEMENT

Visitor

Reception reservation

Employee reservation from OA

Visitor reservation from website

Dahua provides three visitor management processes based on different levels of security

After meeting, visitors leave directly

Security Manager

Visitor permission configuration

Visitor information and access history can be searched

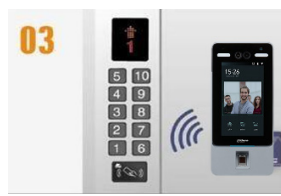Reservation information and visitor history can be exported

LIFT MANAGEMENT

1. Call Lift

01

2. Enter Lift

02

3. Permission Authenticaition

03

4. Choose Floor

04

Lift Control sets the permissions to specific floors. For example showroom, CEO floor, document archive floor, etc.

Lift Management
Supports online lift management, lift name and floor configuration.

Permission Management
Supports permission setting by group and by floor. Changes in permissions can be done manually and it also supports setting schedules.

History Enquiry
Displays the lift control history, including time, name, department and floor, etc.
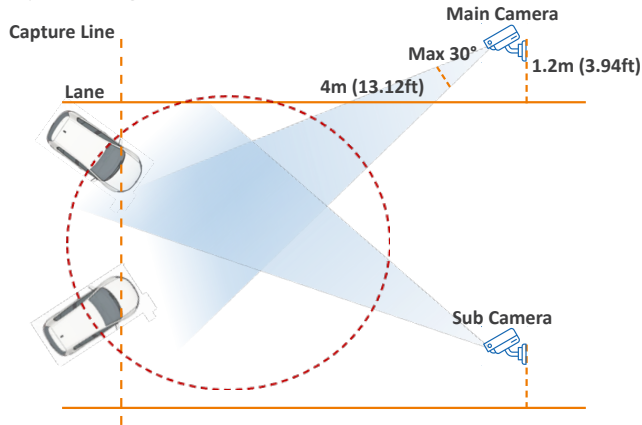
VEHICLE MANAGEMENT - ENTRANCE & PARKING

Before Entrance

Entrance Process

Car Parking

Car Locating

Exit Process

1. Shows Available Parking Spaces

- Displays the parking space on each floor

2. No Stopping

- Fast response barrier opening
- Anti-fall radar

3. Parking Guidance

- Precise guidance
- Car space reservation

4. Car Locator

- Show the best route from the ticket machine to the vehicle

5. Efficient Exit

- False tolerance
- No staff on site

Solution Value: Not having to stop improves efficiency and visitor experience.
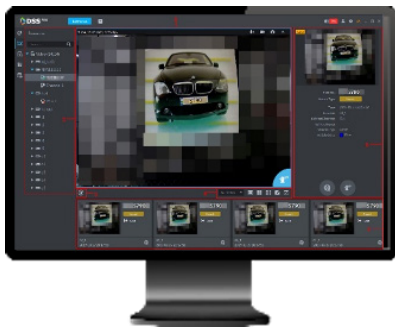
WIDE LANE NUMBER PLATE RECOGNITION

Pain Points

- In some residential areas the lanes are very wide and it is difficult to divide into two lanes.
- The driving direction of the vehicle is unknown and the front of the vehicle will tilt to the left or right, resulting in the failure of the number plate recognition.

Main Camera
Capture Line
Max 30°
1.2m (3.94ft)
Lane
4m (13.12ft)
Sub Camera

Recognised

Recognised

- Wider recognition area
- Suitable for multiple driving directions

## Number Plate Recognition

Search Results

Precise Recognition Missing Nothing

- When a vehicle passes by, as long as the recognition result of one of the two ANPR cameras matches the white list, the system will open the barrier automatically. [Barrier open time <0.5s]
- Based on a physical connection, camera A and camera B are able to take pictures synchronously.

No Duplicate Records

- Only one instance of passing-by will be recorded.

EXTERNAL PARKING

5 Series 4MP   IVSS7008   PMS
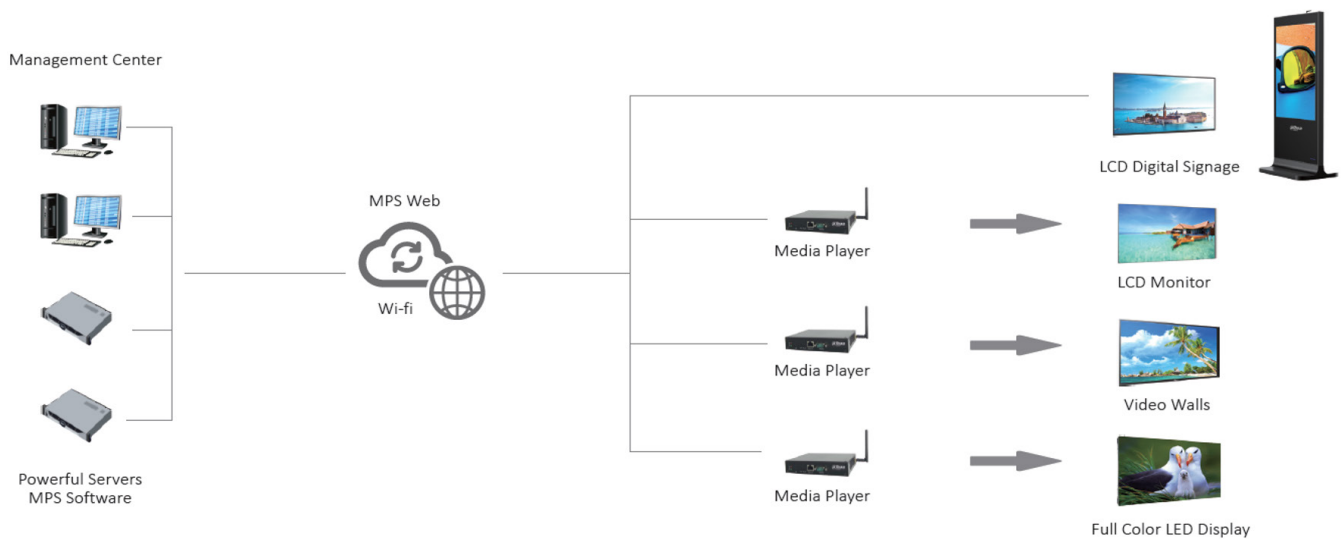
Area Guidance   Road Guidance
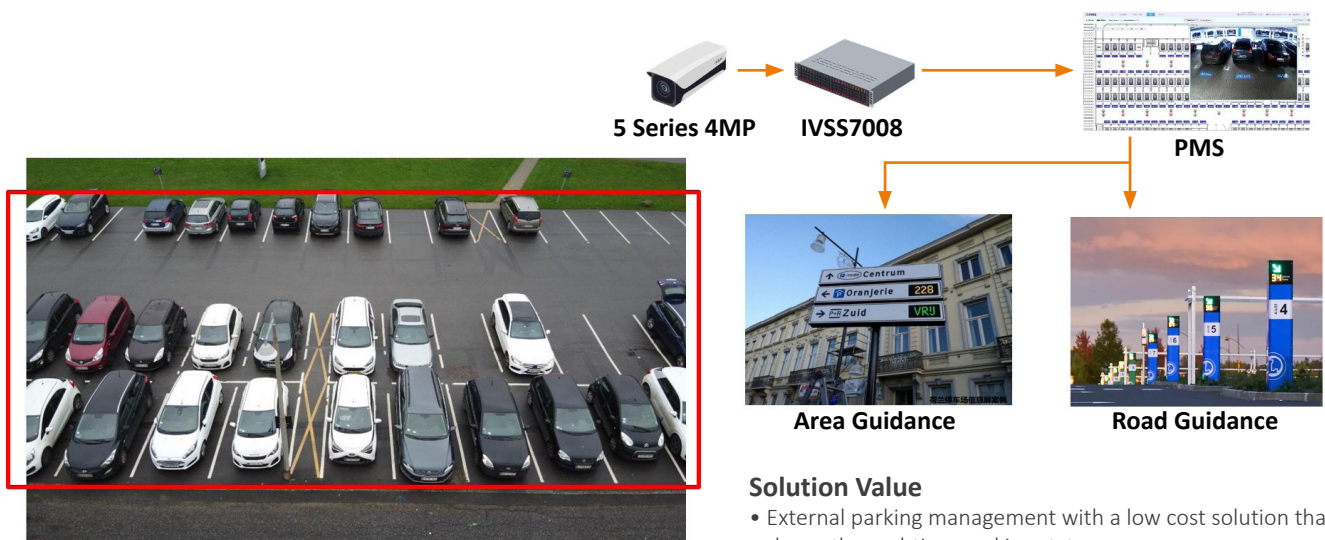
Solution Value

- External parking management with a low cost solution that shows the real-time parking status.

SMART OPERATION

MEDIA RELEASE MANAGEMENT

Management Center

Powerful Servers
MPS Software

MPS Web

Wi-fi

Media Player

Media Player

Media Player

LCD Digital Signage

LCD Monitor

Video Walls

Full Color LED Display

External

Outdoor LED

Public
Advertisement
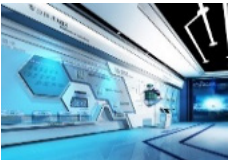Notice

Office

Floor Standing

Facial
Attendance
Advertisement

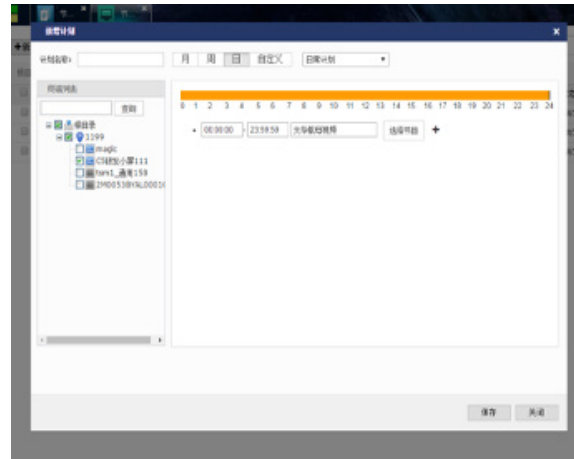**Exhibition Room**

Small Pixel LED

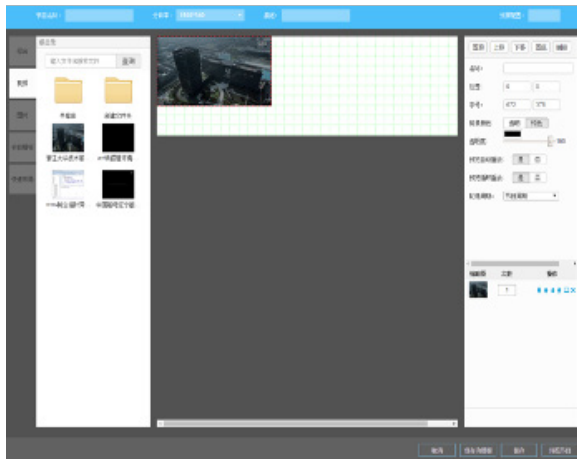Promotional
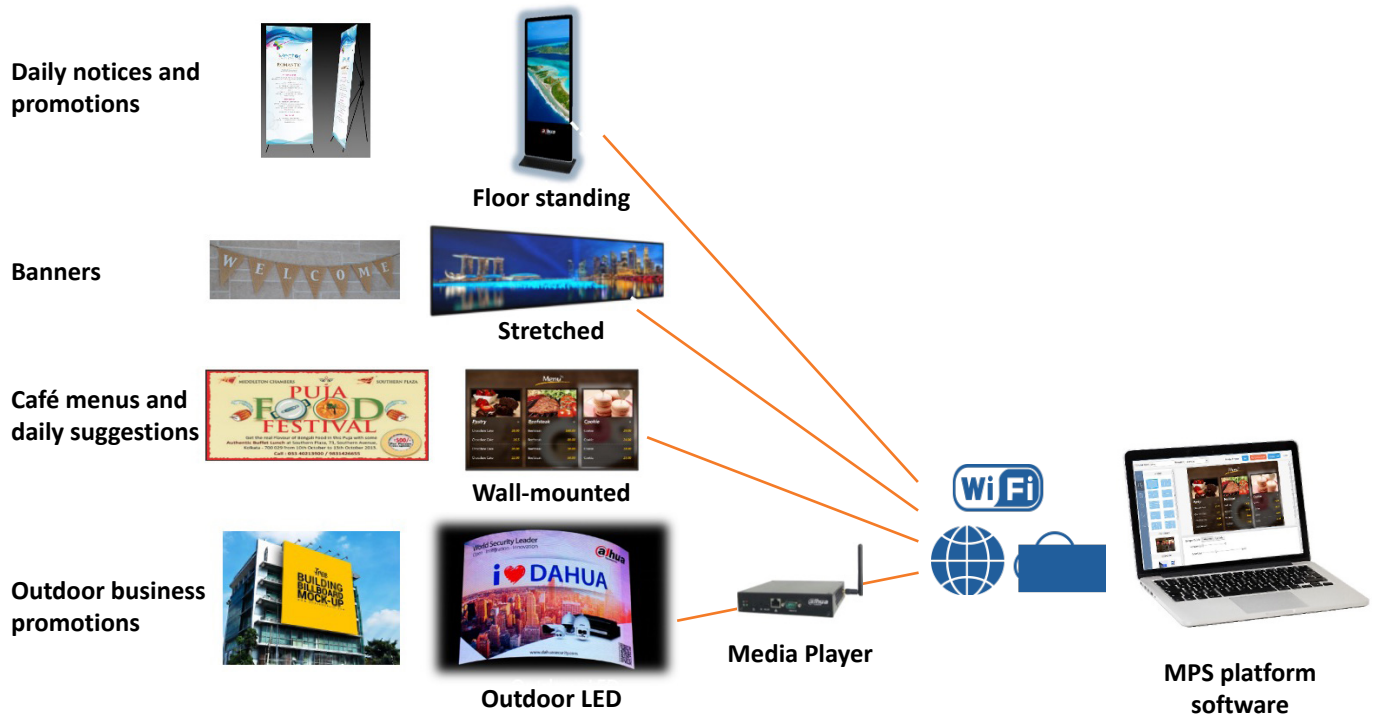Video

Cafeteria

Stretched Digital Signage

Advertisement

Solution Value: Provides various products according to different scenarios, also enables the unified management of media releases and messages.

MEDIA RELEASE MANAGEMENT

Daily notices and promotions

Floor standing

Banners

Stretched

Café menus and daily suggestions

Wall-mounted

Outdoor business promotions

Outdoor LED

Media Player

MPS platform software

Cost Savings
Instead of purchasing new material, with digital signage you just need to publish the new programme remotely.

Management Centre
Use platform to manage all the terminals from different locations. Programme approval process makes media more reliable.

Digital Experience
Digital signage improves the experience.

Solution Value: Provides various products according to different scenarios and also offers unified management of media releases and messages.

MEETING MANAGEMENT

| Smart Whiteboard | Wireless Projector | Remote Interaction | Voice Transcribing | Face Login | Resource Management |

UHD Display

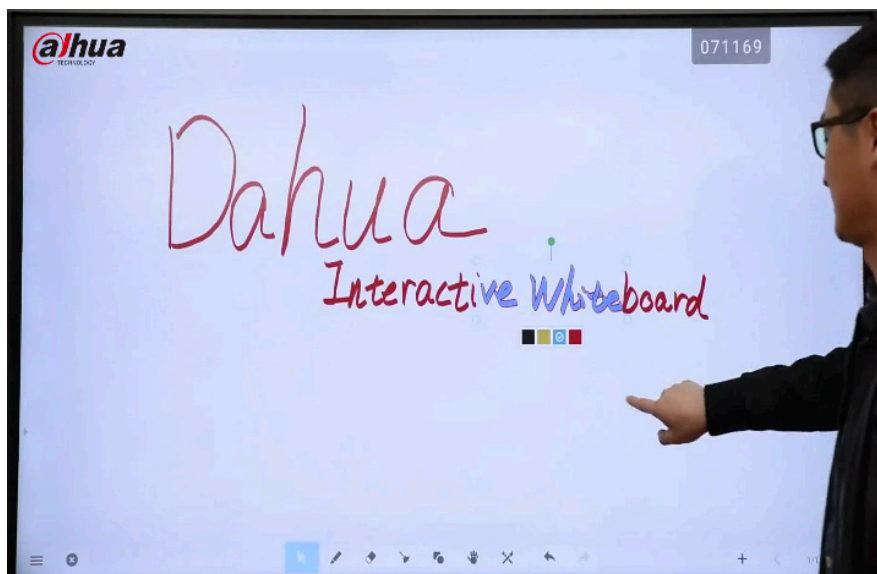Dual Android and Windows system

10 Writing Points and 20 Touch Points

Wireless Projector and Interaction

Compatible with Various Video Conferencing Systems

Solution Value: Compared to traditional whiteboards, smart whiteboards provide an efficient digital meeting solution.

MEETING MANAGEMENT

Before Conference

Conference Reservation

Multi-channel Notifications

Data Sharing

Regular Reminders

During Conference

Smart Whiteboard

Wireless Projection

Remote Interaction

Voice Transcribing

Face Login

Resource Management

After Conference

Automatically generate meeting minutes

QR code scanning to access written content

Records one click forwarding

Real-time feedback of project progress

Solution Value: Compared to traditional whiteboards, smart whiteboards provide an efficient digital meeting solution.

ATTENDANCE MANAGEMENT

Deployable Attendance Point

Main Gate

Office Turnstile

Fixed Attendance Point
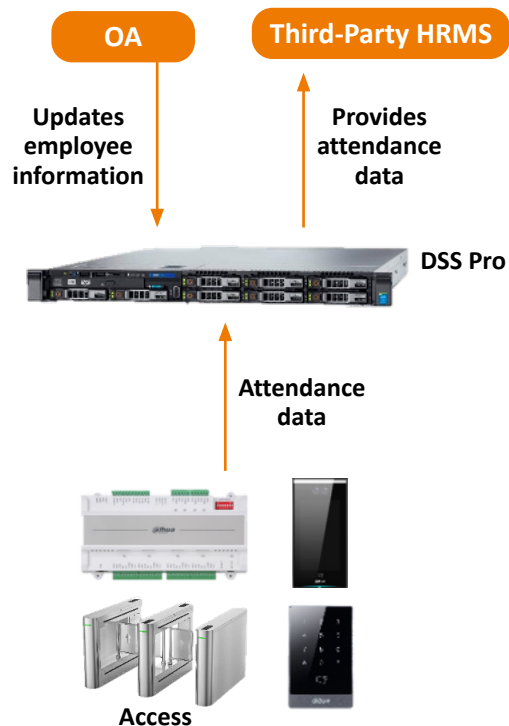

If the attendance report from the DSS Pro software cannot meet the requirement, DSS Pro is able to integrate with HRMS to enable further customisation.


OA

Updates employee information

Third-Party HRMS

Provides attendance data

DSS Pro

Attendance data

Access

Solution Value:

- Fast: No stopping facial recognition makes attendance process simple and efficient.
- Flexible: Multiple attendance/access points are supported.
- Real: Facial recognition eliminates false attendance, supports verification with the person's image after they have arrived.
- Open: Supports standard interface for third-party platform integration and automatically updates the attendance data.

PARKING CHARGE MANAGEMENT

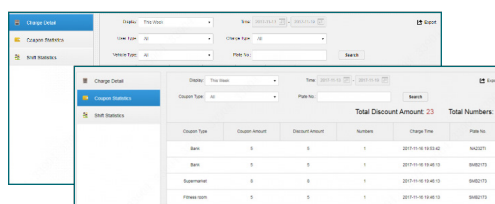**Payment Desk and Centre Charges**
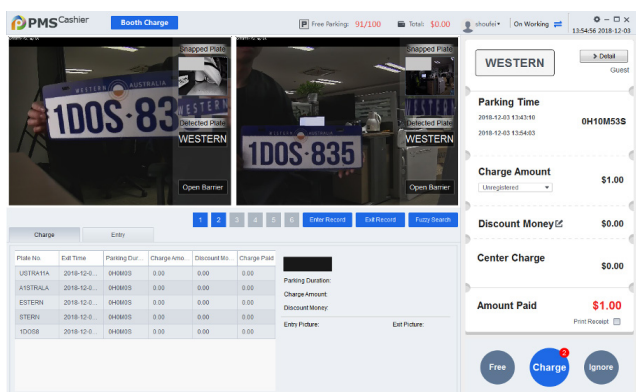
Payment Desk and Centre Charges

Manage different drivers

Third-party payment machine integration

Supports charging history which can be exported by the administrators, helping avoid missing any parking charges.

CONTROL ROOM INSTALLATION

LED Display

LCD Display

The Control Room is the final part of the system and a good control room improves the quality and efficiency of the solution. Dahua is an end-to-end solution provider able to provide a solution from design to maintenance, which saves time and costs for end-users.
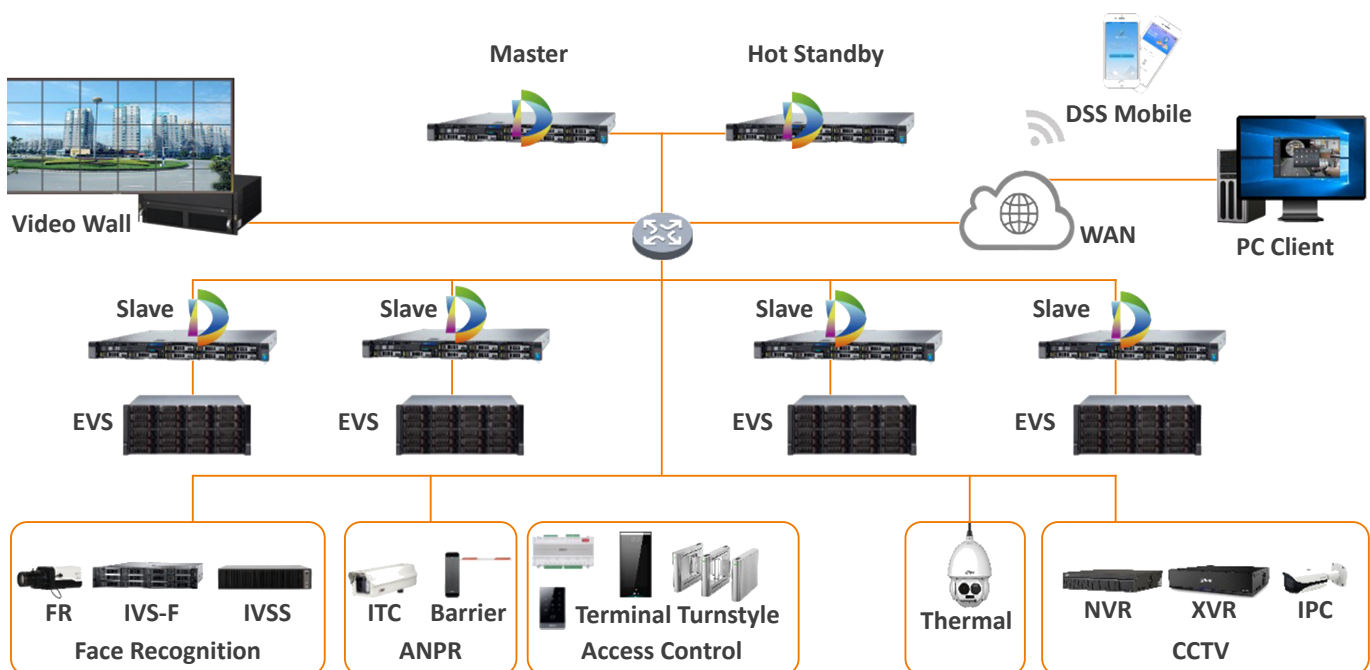
Design ▶ **Deployment** ▶ **Maintenance**

Security Visualisation

Simplified Operation

SYSTEM TOPOLOGY

ADVANCED STRUCTURE

Single Platform

Most Dahua devices can be connected to DSS Pro. Dahua provides an integrated and scalable platform.

One Datacentre

Related data can be shared between different subsystems. Platform data is managed using one database.
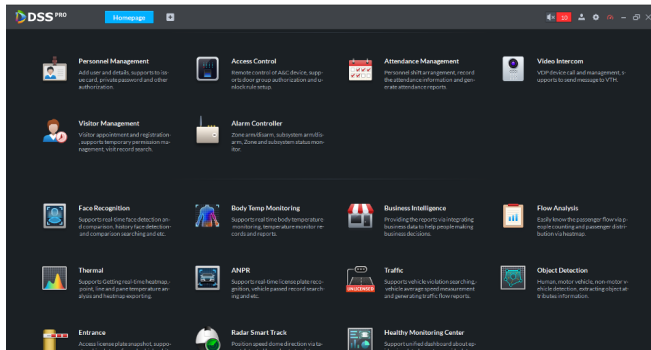
20 Distributed

All Dahua devices can be connected to DSS Pro. Dahua provides an integrated and scalable platform. Up to 20,000 channels can be supported.
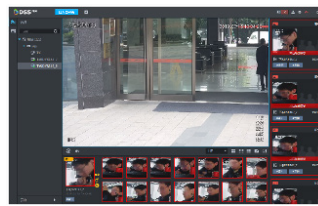
N Application

DSS Pro provides hundreds of functions to meet the demand of an enterprise park, also new applications can be updated when new versions are released.
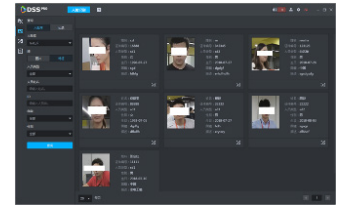
INTEGRATED SYSTEM

Entrance Attendance

Facial Recognition

Vehicle Management
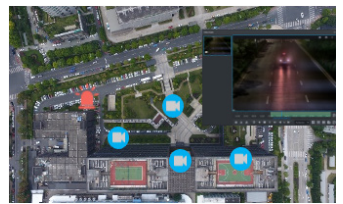
E-map Display
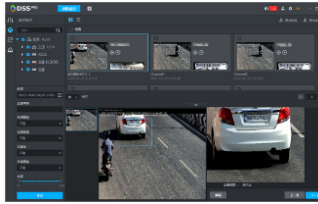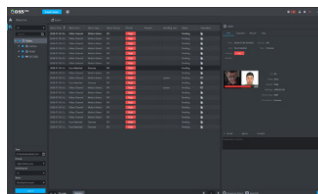

Event Records

Data Statistics
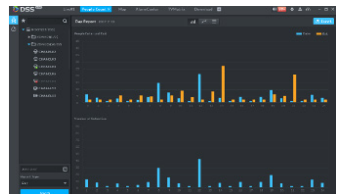
- Professional platform supports 24/7 monitoring
- Unified platform operation with sub-system integration
- Powerful performance supports the management of thousands of devices
- Easy to expand system and open to integration with third-party systems

EASY MAINTENANCE - DASHBOARD

- Supports automatic health check status of the server: devices connected, recordings and bandwidth.
- Supports searching and exporting the log by time, key words, including system log and operation log

- With thousands of devices, how do you maintain them?

- How do I know if the status of the system is functioning properly or not?

- If there are system statistics, how can I use them in my report?
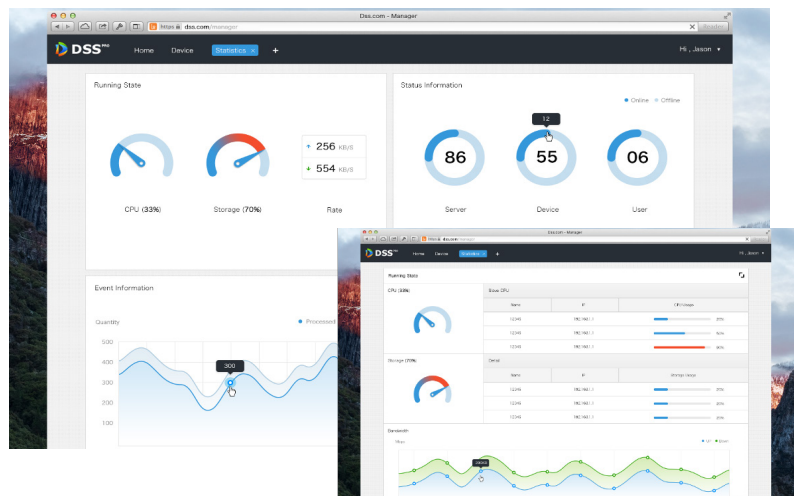
HIGHLIGHTS - CONCLUSION

Super HD
See clearer, more detailed images

Intelligent
AI makes the system smarter

Simple Operation
Easy to operate system with simple UI

Easy to Deploy
Fast deployment

End-to-End
Dahua provides an end-to-end solution

Major Brand
World-leading video-centric smart IoT solution & service provider

CASE STUDIES

HAIER
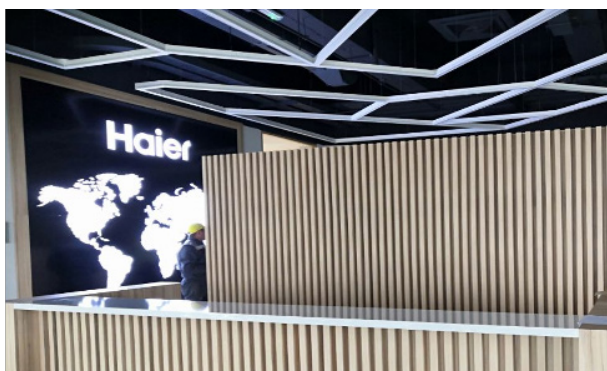
Background

Haier China created a new overseas enterprise park covering a total area of approx. 124.9 hectares with a perimeter of approx. 9 kilometres. The park's plan is to build 11 factories for different products, a large warehouse and office buildings, including an R&D building.

Solution
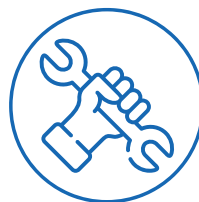
Dahua provided a system based on a centrally managed platform, including comprehensive monitoring, perimeter protection using active deterrence cameras, vehicle entrance and exit using ANPR, facial access and attendance and a control room with video wall.

Value

By installing Dahua's solution, Haier have been able to create a secure environment within the enterprise park that's able to detect and handle an emergency as it happens. They have also improved the efficiency of being able to respond to any events and increased the speed at which people have been able to access the park.

GAC

Background

GAC New Energy Automobile enterprise park covers an area of 5,000,000m² and has received more than 6 billion USD in investment. The park's focus on "Smart Manufacturing+ Innovation Development+ Eco-town", has led to GAC trying to create the 'Silicon Valley' of alternative energy vehicle production.

Solution

Dahua provided a smart solution combined with the different processes in the enterprise park using new technologies such as AI, big data and IoT. This has improved the security management of the park and created a more efficient access control system. Visual manufacturing offers real-time production information and smarter operations, which has all helped facilitate the digital upgrade of GAC.

Value

Dahua provided a HOC smart industrial estate solution, combining AI and product manufacturing processes into daily operations to help improve the security, efficiency and management which has also led to a decrease in costs for the end-user.

FOXCONN

Background

The rapid growth of Foxconn has presented a large risk/challenge for the security of the production lines. The traditional surveillance system was not fit for purpose and lacked many features.

Solution

Based on CCTV and cloud storage, Dahua provided a cascade video system, 30PB cloud storage, control room video wall, smart maintenance, including more than 60,000 management channels. This has enabled the integrated management, protection and security of the Foxconn Enterprise Park.

Value

With the development of AI, Dahua provided people counting, facial access control, facial visitor management for each factory, reducing staff and management costs by 50%. Dahua's system integrates with Foxconn's human resource system, so automatically updates employee details, improving the efficiency of the HR department.

ALIBABA

Background

With branches in Silicon Valley and London, plus an international HQ located in Hong Kong and domestic HQ based in Hangzhou, Alibaba is the biggest E-commerce website business in the world. They are the first e-commerce website to have more than 2.1 million merchants, and was named as the "Most Welcoming B2B Website".

Solution

For the project Alibaba Xixi Park, Dahua provided a solution including video surveillance, perimeter alarm system, control centre video wall system and part of an access control system.

Value

Dahua helped enable an integrated and intelligent management and control system, improving the efficiency of the park's management.

KEY PRODUCTS

DSS PRO
Comprehensive and Expandable Dahua VMS

• Easily expandable
• Highly reliable
• Highly compatible

PMS
Parking Management System

• Up to 1000 Channels input (includes parking spot detector/VTO/IPC/LED)
• Up to 10 Exit/Entrance Channels input
• Up to 200 Online Users

ASI7223X-A
Face Recognition Terminal

• 7-inch LCD display with resolution of 1024 × 600
• Can hold 100,000 users, 100,000 face images, 100,000 password, 50 administrators and 300,000 records
• Supports face and password unlocking and unlocking through a combination of both.

ASI3213G-MW
Face Recognition Access Controller

• 4.3 inch LCD touch screen; resolution 480 × 272
• With 2 MP wide-angle dual lens, white fill light, IR light
• Supports face, card and password unlock; unlock by period
• User data can be stored at the access controller; can hold 1500 face 7-inch

ITC215-PW6M
Access ANPR Camera

- Embraces deep learning algorithm for accurate recognition of vehicles
- Built-in LED illuminator for simplified installation
- Motorised vari-focal lens, easy for installation and commissioning

ITC314-PH2A-TF Series
3MP Dual-Lens Parking Space Detector

- 3 MP 1/2.8"inch CMOS, 0.01lux min illumination
- Dual-Lens design, simultaneously detect up to 6 spaces
- Indicator supports at least 7 colours
- Interactive design with parking space indicator

IPC-HFW5541TP-AS-PV
5MP WDR IR Bullet WizMind Network Camera

- 1/2.7" 5Megapixel progressive scan CMOS
- ROI, SMART H.264+/H.265+, flexible coding, applicable to various bandwidth and storage environments
- 20 fps@2592 × 1944, 50/60 fps@1080P (1920 × 1080)

SDT5X405-4F-WA
4MP Starlight+ IR WizMind Network Dual-PTZ Camera

- Dual-PTZ system
- 1/1.8" 4Megapixel CMOS
- Powerful 5x optical zoom
- Starlight+ technology
- Max. 25/30fps@4M
- Deep-learning-based auto tracking and perimeter protection

DHI-ASEH21
Elevator Control Host

- Manages lift control for up to 128 floors
- Supports 4 Wiegand RS-485 card readers
- Supports 200,000 cards and 150,000 card swiping records

DHI-ASHZ503A
10-inch Dual Screen Visitor Terminal

- Dual screen 10-inch display
- 2MP CMOS camera, supports 0~180 degree adjustment
- USB port, dual Ethernet port supported

LS550UEM-EG
55'' Full-HD Video Wall Display Unit

- Industrial level IPS LCD panel, suitable for continuous operation
- Ultra-narrow 0.88mm bezel-to bezel design
- High contrast ratio and high brightness enhances the video layering and displays the details of the video

M70-4U-E
Multi-service Video Management Platform

- 19" standard 4U ATCA industry box
- Easy and flexible configuration with pluggable card module design
- 80ch@1080P or 320ch@D1 signal encoding (fully configured)

Address & Telephone

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facebook
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You Tube
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Dahua UK & Ireland

Driving Innovation to an AIoT Future

* AIoT is the convergence of Artificial Intelligence (AI) and the Internet of Things (IoT) where connected devices meet human interface. This is enabling unlimited possibilities through the integration of connected devices and security solutions.

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