

FOR A MORE INTELLIGENT & MORE SECURE AIRPORT



AIRPORT THREATS AND REQUIREMENTS

Threats In An Airport



Airport Security Solution





- Adopts an all-in-one camera to capture and recognize license plate of vehicles in the airport
- Sends push notifications when illegal, stolen, blocklisted, or other suspicious vehicles are detected



- Combines HD video surveillance with other intelligent analysis including facial attributes extraction, people counting, etc.
- Monitors each area and identifies each passenger in timely manner
- Sends alarm push notifications when a blocklisted individual appears or when an emergency situation occurs

Cargo Management



- Video surveillance and intrusion detection system for cargo warehouses

 Many kinds of detectors can be linked with the PTZ camera including radar detectors,
 thermal detectors, active infrared detectors. and more
- The HD cameras and thermal cameras ensures luggage safety

AIRPORT LAYOUT

Runway

- Monitoring of aircrafts' landing and takeoff
- Video surveillance, thermal detection, long distance viewing, panoramic mode

Duty-free Shop

- Security, loss prevention, and business intelligent
- Video surveillance, POS integration, data visualization, people counting, remote shop patrol, queue management, heat map



Perimeter

- Perimeter surveillance and alarm system
- Video surveillance, thermal detection, alarm system, system linkage

Lounge

- Departure halls, arrival areas and other sensitive zones
- Video surveillance, ultra high definition resolution, intelligent analysis, wireless transmission



Apron

- Monitoring of flights and boarding passengers
- Video surveillance, PTZ camera, panoramic mode



Security Screening

• Human body & luggage security check, contraband detection, dangerous goods detection, generate alarm



Roads to Airport

- Traffic control and vehicle check
- Video surveillance, license plate recognition, suspicious vehicle alarm, information display
- Traffic incident detection



Parking Lots

- Monitoring and control of parking lots and entrances
- License plate recognition, video surveillance, parking guidance, vehicle position

APPLICATION DETAILS

Road to Airport



- The image recognition algorithm automatically recognizes the license plate
- Compares the plate number with those in the blocklist database to find any match
- Sends push notifications to alert police if a match is detected.

Terminal

The terminal is one of the most crucial surveillance zones in the airport due to its constant foot traffic. It normally has retail stores, security screening, duty free shops, passenger lounges, departure/arrival areas, etc.



Intelligent Behavior Analysis

- Combines video analysis, image processing, deep learning and artificial intelligence technology to achieve high protection of the monitored scene
- Detects crucial events including tripwire, intrusion, abandoned/missing object, loitering, direction flow violation, overspeeding, lane changing, crowd gathering, crowd density, and more.



Passenger Identification

- Recognizes passengers through intelligent algorithms
- Allows inputing of personal information and setting up of blocklist in the system
- Allows docking of passenger information from a third-party system
- Triggers the alarm when a passenger matches a blocklisted individual in the database



Fisheye Camera

- One camera can capture a 360° scene with no blind spot
- Shows real-time video with preset calibration for any area
- Multiple dewarping modes: original, panoramic, double panoramic, 1+3, E-PTZ







Elevator Monitoring

- Video surveillance for all kinds of elevators
- Long wireless transmission distance of up to 500m



Business Intelligence

- Line crossing people counting, regional people counting, queue management, heat map
- Reduces OPEX, and increases store operating efficiency.
 Helps enhance profits by analyzing actual foot traffic and transaction data

Airside



Multi-lens Monitor

- Multi-lens with 180° panoramic view and up to 32 MP resolution
- Monitor the airport surroundings with clearer images
- Improves the performance of emergency command and dispatch



Thermal Detection

- One thermal camera to monitor in total darkness, and one visible camera equipped with Starlight technology and motorized lens to capture details
- Thermal sensitivity feature captures more image details and temperature information
- Detects human and vehicle intrusion using thermal technology

Perimeter



- Offers intelligent intrusion analysis to detect human and vehicle intrusion
- Provides visual images and confirms alarm rechecks when sending alarm information to the monitoring center
- Tracks the intruders and their movements in the video image

Cargo Area



- Provides a video surveillance solution to monitor the cargo area at all times
- Starlight camera displays clear images of the monitored scene even under low light condition
- Thermal camera can detect abnormal heat source to prevent fire

Control Center



- The intelligent operation and maintenance system uses a unified management system that includes video surveillance, storage, display, access control, alarm, etc.
- Allows management of all devices including views and playbacks of videos and other daily operations
- Offers an operation and maintenance system based on the information collected, providing better business processes and optimizing system functions

Parking Lot



- Utilizes plate recognition technology to identify vehicles and control entrance areas
- Offers different levels of user authorization to improve security level and management efficiency



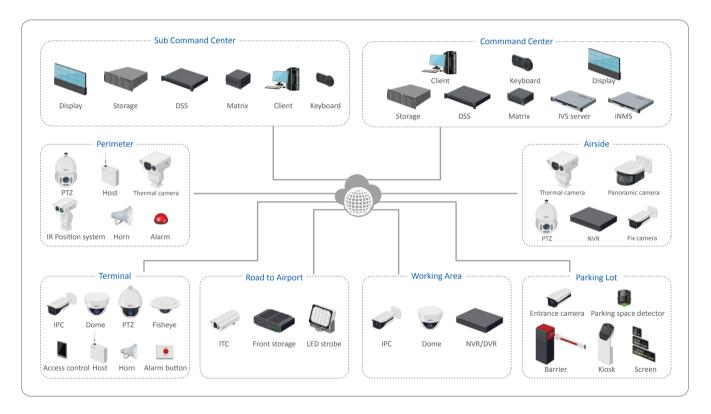
- Detects up to six parking spaces and provides real-time monitoring
- Displays a different color per each parking space status
- Recognizes license plates and uploads vehicle information to the platform

SYSTEM STRUCTURE AND TOPOLOGY

System Topology

Highlights:

- Unified Management: management of vehicles, passengers and luggages at the same time
- High Definition: 4K, panorama, fisheye, thermal, top spot
- Complete Integration: all-in-one platform with M series for display
- Intelligent Functions: license plate recognition, personnel recognition, perimeter intrusion alarm, intelligent behavior analysis, etc.
- Easy to Upgrade: ePOE technology, cost-effective pricing, and easy installation
- Highly Reliable Storage: SD card recording, RAID technology, and N+M hot standby
- Highly Efficient System: e-map, self-diagnosis, and intelligent analysis or records



Highlighted Technology

• Panorama Mode: wider angle of aprons and runways



• 4K Resolution: provides clear and vivid details of targets in terminals and its surrounding areas





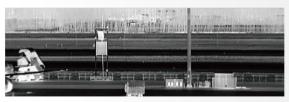
• Long Distance View: covers more areas of the monitored scene



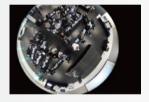


• Thermal Detection: better night images and contrast effects, making it ideal for aprons, cargo areas and perimeter of the airport





• Fisheye Mode: 360° angle with calibration, reducing the number of cameras needed in stores and halls









• Vehicle Management: records license plates, sends alarms when a blocklisted vehicle is detected, locates target vehicles quickly







LPR



Parking Entrance & Exit



Parking Spot Detection

• Passenger Identification: alarms in advanced and locates human targets quickly









• Business Intelligence: reduces OPEX, increases store operating efficiency, and enhances profits



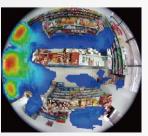
People Counting

Advanced cameras provide People Counting functionality that counts foot traffic at the store entrances and allows exporting of daily, monthly or yearly reports, greatly improving business efficiency through traffic analysis.



Regional People Counting

Understanding how customers move around the store is essential in optimizing product placements and prolong their stay. People Counting cameras can be installed to monitor traffic flow in certain regions inside the store.



Heat Map

A fisheye camera provides heat map function that displays hot and cold areas in the store based on customer flow, aiding further business analysis. Fisheye cameras can provide a 360° image of the store floor.



POS Integration

Video and corresponding POS information can be shown simultaneously in both live and playback mode. The system also supports text search to find bills and their associated video recordings.

DAHUA HARDWARE OPEN PLATFORM

What is DHOP?

Dahua Hardware Open Platform (DHOP) is an open application platform that allows third party applications to be downloaded and installed on Dahua Network Cameras.



Scenarios

DHOP enables the following 3 scenarios:

- Allows third party partners to develop their own applications, eliminating restrictions from Dahua
- Integrators, resellers, and end users may select the most suitable add-on applications developed by third party partners from official channels.
 Comprehensive testing and verification will be performed by Dahua to ensure their interoperability and reliability before official release.
- Third party partners can develop their own webpage/web client to manage their applications.

Development Process



- 1 Online Application
- 2 Certification Assessment
- 3 Award Contract
- 4 Provide SDK
- 5 Application Development
- 6 Test and Verification
- 7 Release

Success Cases

AxxonSoft was the first to develop a solution based on the Dahua Hardware Open Platform. An application installed on the camera collects information about moving objects in the frame, including coordinates, direction of movement, size, speed, color, etc.

The 10 companies below are some of our DHOP partners. End users can upload their analytics application into Dahua cameras.























Benefits of Joining

Joining DHOP has many benefits, including:



- Tested and verified applications will be released on the Dahua website.
- The potential to participate in various marketing activities and be promoted to Dahua global partner networks.
- A free of charge copy protection service to ensure that all partners' applications have a proper license.



For more information, please refer to: https://depp.dahuasecurity.com/openPlatform/332

PRODUCT SHOWCASE

ITC952-AU3F-IRL8ZF1640

9MP All-in-one IR Al Traffic Camera



- GS-CMOS image sensor
- 4096 × 2824@50fps
- Embedded design, built-in algorithms
- Supports ANPR, metadata collection and analysis, traffic data statistics, etc.
- 850 nm IR illumination

IPC-EBW81242-AS-S2

12MP IR Fisheye WizMind Network Camera



- 12MP 1/1.7" CMOS image sensor
- low luminance, and high definition image
- Built-in IR LED, with max. illumination distance of 10mt
- Intelligent monitoring: Intrusion, tripwire, heat map, and people counting
- IP67 and IK10 protection ratings

SD8A840-HNF-PA

8MP 40x Starlight IR PTZ AI Network Camera



- 1/1.8" 8Megapixel STARVIS™ CMOS
- Powerful 40x optical zoom
- Starlight technology
- Perimeter protection, metadata, face detection, auto-tracking
- Smart wiper, IP67

IPC-HFW7442H-Z4

4MP IR Bullet WizMind Network Camera



- 4MP, 1/1.8" CMOS image sensor
- Max output 4MP (2688×1520) @50 fps/60 fps
- Supports people counting, perimeter protection and other intelligent functions based on deep learning algorithms
- Five streams for three-channel HD video
- IP67 and IK10 protection ratings

IPC-HFW5241E-Z12E

2MP IR Vari-focal Bullet WizMind Network Camera



- 2-MP 1/2.8" CMOS image sensor, low luminance
- \bullet Built-in IR LED, with max illumination distance of 180m
- Three switchable intelligent resources: IVS, personnel detection, and people counting
- IP67 and IK10 protection ratings; ePoE

IPC-PFW8840-A180

4×2MP WizMind Multi-Sensor Panoramic Network IR Bullet Camera



- Four 2MP 1/2.8" CMOS image sensor
- Low illuminance, high compression rate, ultra-low bit rate
- Built-in IR LED, max IR distance: 30m
- Intelligent functions: crowd distribution map, vehicle density detection; Supports object tracking
- IP67 and IK10 protection ratings

PRODUCT SHOWCASE

IPC-HDBW7442H-Z

4MP IR Dome WizMind Network Camera



- 4MP, 1/1.8" CMOS image sensor, low illuminance
- Max output 4MP (2688×1520) @50 fps/60 fps
- Supports people counting, personnel detection, perimeter protection and other intelligent functions based on deep learning algorithms
- Five streams for three-channel HD video
- IP67 and IK10 protection ratings

IPC-HDW8341X-3D



- Two 1/2.8" 3Mp STARVIS™ CMOS
- DWDR, Day/Night(ICR), 3DNR, AWB, AGC, BLC
- Max IR LEDs length: 10m
- Micro SD memory, IP67, PoE
- Built-in deep learning algorithms
- People Counting: supports line crossing people counting, and regional people counting

TPC-PT8621C

Thermal Network Hybrid PTZ Camera



- 640x512 VOx uncooled thermal sensor technology
- Athermalized lens (thermal), focus-free
- 2 Megapixel progressive scan CMOS
- Powerful optical zoom lens (thermal & visible)
- Supports fire detection and alarm
- Micro SD memory, IP66

NVR5832-I



- 32-channel IP video access
- Built-in deep learning algorithms
- 16-channel perimeter protection
- 4-channel video stream face recognition
- 24 face pictures/sec processing
- 20 face databases with 100,000 face images in total
- Supports ANPR and POS integration

IVSS7016DR-4M

3U 16HDDs WizMind Intelligent Video Surveillance Server



- Industry embedded micro-controller
- Max 512 Mbps incoming bandwidth
- 256-channel IP video access
- Up to 48-channel AI IVS/video metadata
- Up to 48-channel personnel recognition with normal IPC
- Up to 160-channel personnel recognition with personnel detection IPC
- Up to 50 face databases with 500,000 face pictures in total

EVS7148D

48-bay Embedded Video Storage



- Dual-controller, Active-Active
- 64-bit High-performance multi-core processor
- Max 512-ch IP camera inputs
- Max 1024 Mbps incoming/recording/forwarding bandwidth
- 48 HDDs, SAS, Hot-Swap
- Supports RAID 0/1/5/6/10/50/60, JBOD, Hot spare
- Supports video stream direct storage mode
- Supports Automatic Network Replenishment (ANR)
- Modular and drawer-like design
- 1+1 redundant 80PLUS platinum power supply

PRODUCT SHOWCASE

PTZ85448-HNF-PA

Aircraft Tracking IR Network Positioning System



- 1/1.8" 4Megapixel STARVIS™ CMOS,Starlight technology
- 6.25 mm-300 mm 48× optical zoom
- Intelligent tracking algorithm for aircraft takeoff and landing
- Tripwire; intrusion; climbing fences; people gathering,etc
- IP67;TVS 6000 V lightning proof; surge & voltage transient protection

DHI-M70-4U-E



- Easy and flexible configuration with pluggable card module design
- 80ch@1080P or 320ch@D1 signal encoding
- 80ch@4K or 320ch@1080P or 720ch@720P or 1500ch@D1 signal decoding
- Supports max 60 screen splicing
- 6 RJ-45 gigabit network ports for matrix control, preview and online central storage

LS550UCM-BF

55" FHD Video Wall Display Unit (Ultra Narrow Bezel 3.5mm)



- Industrial level ADS LCD panel, suitable for continuous 24h/7 operation
- Ultra-narrow 3.5mm bezel-to bezel design (2.3mm bezel on the left and top sides and 1.2mm bezel on the right and bottom sides)
- Anti-glare, high contrast ratio and high brightness greatly enhance the video layering, and present the details of the video
- High fidelity digital processing for a clear and vivid video
- Built-in 3D COMB filter and 3D Noise Reduction
- Abundant interfaces HDMI, DVI, VGA, BNC, USB
- Built-in power, low energy consumption, ultra-quiet
- Fast stack installation, professional project design, supports arc-shaped mounting

ITC415-PW6M-IZ-GN

Access ANPR Camera



- Adopts high-performance CMOS image sensor
- Equipped with deep learning algorithm for accurate recognition of vehicles without license plate, as well capturing vehicle attributes such as model, logo, series, color, etc.
- Various signal, data and communication interfaces; Supports connection with extra devices (e.g. barrier)
- Motorized vari-focal lens for easy installation and commissioning
- Integrated design with low power consumption; IP67 protection rating

DHI-ITC414-PH5B-F3-POE



- 4MP 1/3" inch CMOS, 0.01lux min illumination
- Detects when unauthorized vehicles are parked in restricted parking spaces.
- Parking space Indicator supports at least 7 colors
- Detects 3 parking spaces at the same time with a detection rate of over 99.5%.
- RS-485 port is included to connect the external indicators.
- PoE power supply and standard 12 VDC.

DSS Pro



- High Reliability; Supports hot standby for master server
- High Compatibility;
- Connects third-party devices via standard ONVIF protocol
- Dahua devices include network camera, network speed dome, decoder, NVR, DVR, ANPR, IVS-F, IVS-T, etc.
- DSS Pro SDK for third-party platform or mobile development

PRODUCT OVERVIEW

Product	Description	Road to Airport	Terminal	Airside	Cargo Area	Perimeter	Control Center	Parking Lot
ITC952-AU3F-IRL8ZF1640	9MP All-in-One IR AI Traffic Camera	•						
IPC-EBW81242-AS-S2	12MP IR Fisheye WizMind Network Camera		•		•			
SD8A840-HNF-PA	8MP 40x Starlight IR PTZ AI Network Camera	•	•	•	•	•		
IPC-HFW7442H-Z4	4MP IR Bullet WizMind Network Camera		•	•	•		•	
IPC-HFW5241E-Z12E	2MP IR Vari-focal Bullet WizMind Network Camera		•	•	•		•	
IPC-PFW8840-A180	4×2MP WizMind Multi-Sensor Panoramic Network IR		•	•				
IPC-HDBW7442H-Z	4MP IR Dome WizMind Network Camera		•	•	•		•	
IPC-HDW8341X-3D	3MP Dual-Lens People Counting Al Network Camera		•					
TPC-PT8621C	Thermal Network Hybrid PTZ Camera			•		•		

PRODUCT OVERVIEW

Product	Description	Road to Airport	Terminal	Airside	Cargo Area	Perimeter	Control Center	Parking Lot
NVR5832-I	32 Channel 2U Al Network Video Recorder		•	•	•	•	•	
IVSS7016DR-4M	3U 16HDDs WizMind Intelligent Video Surveillance Server		•	•	•	•	•	
EVS7148D	48-bay Embedded Video Storage						•	
PTZ85448-HNF-PA	Aircraft Tracking IR Network Positioning System			•				
DHI-M70-4U-E	Multi-service Video Management Platform						•	
LS550UCM-BF	55" FHD Video Wall Display Unit (Ultra Narrow Bezel 3.5mm)						•	
ITC215-PW4I-IRL	4M HD AI Access ANPR Camera	•				•		•
DHI-ITC414-PH5B-F3-POE	4MP Dual-lens Parking Space Detector							•
DSS Pro	General Surveillance Management Center						•	

SUCCESS CASES



Airport in The Philippines

Dahua provided multiple systems for the terminal and landside of the airport. The whole system includes 1,700+ cameras, AR CCTV surveillance, access control, alarm control, SIMS, display and control products, as well as intelligent analysis services.

- The Security Information Management System integrates relevant security information together, presenting an overall security situation of the airport.
- AR CCTV surveillance, full monitoring coverage, multiple integrated devices in video map, improved command efficiency.



Airport in Venzuela

- Dahua provided a video surveillance system for the entire airport.
- This solution includes more than 800 integrated cameras, storage, wired and wireless networks, software platform, and control center in the airport.



Airport in Germany

- Dahua provided a video surveillance system for Lufthansa New Aviation Center located in Frankfurt Airport. It covers Airbus A380 Aircraft Maintenance Center (for their on-duty A380 fleet in Frankfurt), New Cargo Center, and Technical Training Center.
- Dahua provided video surveillance solutions consist of cameras, storage devices, software platform, control center, etc.



Airport in Chile

Dahua provided a video surveillance soluton for the airport's terminal. The whole system includes front-end cameras, storage devices, and control center.

- \bullet More than 100 IP cameras and 50 IP PTZ cameras were installed.
- 2 NVR6000, control center video platform and video wall system

ENABLING A SAFER SOCIETY AND SMARTER LIVING

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