



Empowering verticals with leading AI technology





Precise



Reliable



Comprehensive



Wiz Mind

"To cope with ever escalating complexity of security challenges involving huge flows of people and vehicles, weneed something like the fabled omniscient guard, which fortunately has materialized now thanks to deep-learning AI.According to IHS report 2019, the total market value of Professional Video Surveillance Equipment grows toUS\$27,199.1 million in 2023. In the last couple of years, the market share of AI in the security industry isbecoming increasingly remarkable.

Dahua Technology, with its award-winning deep-leaning algorithms, proudly releases WizMind, a portfolio of solutions composed of project-oriented products including IPC, NVR, PTZ, XVR, thermal and software platform, delivering precise, reliable and comprehensive AI solutions to verticals including government, retail, energy, finance and transportation."



Wiz Mind

Human Applications

Powered by AI chip and deep learning algorithm, WizMind provides comprehensive human-oriented solutions, making it possible to quickly and accurately act on what matters to you. In addition, it provides effective AI search to locate targets, and various human-based data for business analysis.



Vehicle Applications

WizMind boasts multiple vehicle-based AI solutions, which provide more attributes of vehicles for easy control, quick search and business analysis.

Thermal Applications

WizMind combines deep learning algorithm with thermal imaging technology to help users achieve ultra-long distance monitoring in harsh environments, highly accurate non-contact temperature monitoring , and early detection of fire.

WizMind Ecosystem

The Dahua WizMind series is compatible with major third party technology partners. Besides, the WizMind Ecosystem provides sufficient DHOP and API for our technology partners.

Human Applications

- Face Recognition
- Privacy Protection
- Human Video Metadata
- People Counting
- Heat Map
- Stereo Analysis
- Wide Area Security
- Smart Tracking

Face Recognition

Dahua Face Recognition solutions offer highly accurate detection rate and recognition rate with its advanced AI technology. It provides features such as blocklist alarm, VIP recognition, stranger alarm, AI search, face tracking, statistics etc. to improve user experience.





Through the face recognition's blocklist alarm function, when an unauthorized or target person has been detected in the monitored area, the alarm will be triggered automatically. At the same time, it will also send photos of the target to the portable terminal of security personnel, allowing them to identify the target and act accordingly.

GDPR



Privacy Protection

Based on Deep Learning Algorithm, Privacy Protection supports real-time mosaic masking of human face or human body detected in the monitored scene, protecting people's personal privacy. This function can achieve a targets detection of max. 64 objects/frame with a detection rate of up to 98%.



• Human Body Mosaic



Recoverable Video

Features



Privacy Data Protection

Supports setting of human face or body privacy occlusion in order to meet the different needs of users and help protect customers' personal privacy.



Attribute Extract

Alongside privacy protection, users can also use face and human attributes for business analysis. 6 face attributes 8 body attributes



Video Recovery

The privacy protection system allows users to access recoverable video without the mosaic mask. It can be used as legal evidence in case of an event.

Application





Through the privacy protection system, the witnesses who testify in the witness room are automatically masked with real-time mosaic to protect their privacy and security. It encourages witnesses to testify in court and saves administrator's time from the heavy manual work of privacy masking.

The privacy protection system can help retailers protect consumers' portrait data in order to meet GDPR requirements . At the same time, this system can also aid them to legally analyze the different preferences of different types of consumers through the BI system, so as to provide their customers with more appropriate products.

Human Video Metadata

Human Video Metadata technology with deep learning algorithm can detect, track, and capture images of people. It selects the best images and extracts attributes of targets to locate them immediately.

20+ Attributes

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> Face: 6 Human: 9 Non-motor Vehicle: 6

*More features are coming soon



· Gender

- · Age
- · Glasses
- Mask
- Expression
 Beard
 - Deard



· Gender

· Top Color

· Top Type

· Bottom Color

· Bottom Type

· Age

• Hat

· Bag · Umbrella

Non-motor Vehicle

- \cdot Vehicle Type
- · Vehicle Color
- · Cycling Number
- · Top Color · Top Type
- Helmet
-

Features

Human Video Metadata

It offers up to 20+ human attributes that can pinpoint the appearance of a person. The maximum target it can capture is up to 50 objects per second.

*Features might vary depending on the algorithm version of each product.

Quick Target Search

Admin can search targets using metadata on back-end device or platform and can accurately and quickly locate targets from massive data after events.

Application



Using video metadata, the admin can quickly locate specific targets, thus improving the timeliness of case detection, enhancing the utilization of police resources, and saving almost 90% of time. It makes up for the lack of coverage of face and vehicle cameras, increases the integrity of pedestrian and vehicle evidences, and effectively improves the security personnel's ability to detect cases.

People Counting

Dahua People Counting can track and process moving human body targets to realize accurate statistics of people entering, leaving and currently within the monitored area. This feature provides customers with valuable data for business report analysis. It provides statistics with up to 98% counting accuracy.





The statistics of daily people count is very important for business analysis. It is one of the most important data for the operation manager. This data enables retailers to align staff and customer-to-staff ratio during peak hours using the traffic data. In addition, retailers can also measure the performance of marketing campaigns according to the change in customer traffic.

With the queue management function, when the number of people or the waiting time reaches the preset threshold, it will alert the manager to open additional checkout counters to serve customers without delay. This enables retailers to deliver better in-store experience and reduce labor costs.



With deep learning algorithm and 3-dimensional technology, Dahua Stereo Analysis technology offers various functions that can recognize people's behaviors, including fall detection, violence detection, strand detection, and people approach. These features generate alarm signals and trigger linkage alarm.



Fighting

Application



It provides 24-hour intelligent monitoring, greatly improve the monitoring efficiency. When the abnormal behavior occurs, real-time alarm be sent to the security, and the police force can be dispatched in time.

Heat Map

With deep learning technology, Dahua's new heat map function demonstrates two types of heat map charts based on the number of people and average strand time. Being widely used in retail shops, this feature enables business owners to easily analyze customers' preferences.

Traditional Heat Map



Heat map based on motion detection output



Disadvantages

- 1. Unrecognizable objects
- 2. Low accuracy

I Heat Map



Heat map based on people counting output



Advantages

1. Focus on people 2. High accuracy based on two dimensions: the number of people and average strand time.

Application



Traditional retailers rely on the experience of operations managers to make adjustments, and it is difficult to check the adjusted results intuitively. The heat map feature helps retailers to optimize the layout of supermarkets. It also enables retailers to discover which products draw more attention based on the time the customers stay in an area.

Wide Area Security

Through multi-sensor automatic stitching technology, Dahua Panoramic Surveillance realizes 360° monitoring with high-speed PTZ camera. It considers both panoramic and detail images to ensure that customers will not miss other targets on the panoramic view while looking at the details of the target's behavior on the PTZ camera.

Features



Application



Using this system, when a sudden flow of traffic occurs, the security departments or the management departments are alerted in time, so that they can immediately initiate the response plan, avoiding accidents caused by unexpected traffic events or reducing the efficiency and experience of passengers.



Smart Tracking

Aside from detecting humans entering a restricted area, smart tracking also automatically track objects all the time. According to different scenarios, Dahua provides different tracking solution with accuracy rate of up to 90%.



Features

Auto Tracking

Track any human who enters restricted areas, capture their details and find out the direction of their movements



Panoramic and detail views can be utilized simultaneously. The detail camera focuses on humans who are in the monitored area.



Fully achieve 24/7 monitoring – Radar detects intruders, and PTZ tracks and captures details. RCS technology solves false alarm issues of traditional video surveillance.

Application



Smart tracking technology can monitor 24/7 without missing any details. At the same time, the system can also automatically warn off intruders which can help reduce the number of maintenance personnel in the border, saving manpower and investment of customers.

Vehicle Applications

ANPR

Vehicle Video Metadata

Vehicle Illegal Parking

ANPR

With deep learning algorithm, Dahua ANPR (Automatic Number Plate Recognition) technology can recognize the number plate information of vehicles from 58 countries. This system can also be used to provide higher security in restricted area.



Open the Gate



Trigger the Alarm

Features

Blocklist Alarm

Sends early warning if a Blocklisted car has been detected, protecting safety in the monitored area.



VIP Recognition

Can be used in company or residential area entrance to effectively provide VIP customers and individuals with excellent service in advance.

Q)

Quick Search

The target can be searched using Plate No., time and location, making it easy to locate and catch suspicious car in time.

Application



The ANPR function can be used in the entrance and exit points of a residential community to conduct vehicle control. With its Blocklist and Allowlist functions, the ANPR can help protect the safety of the community, and provide a more efficient service for its residents. In addition, the video recordings can also be restored and searched quickly in case of an event.

Vehicle Video Metadata

Vehicle video metadata includes vehicle attributes information extracted from a target that can be used for data retrieval. With the detection rate of up to 99%, this system can be used to locate targets quickly and efficiently.



Features

Vehicle Video Metadata

Vehicle video metadata includes Plate No., Plate Color, Car Color, Car Type, Sunshield, and Ornament, which provide users with more details of every passing vehicle. It can be used in safe city solution, and can also provide valuable information to the police. Q

Quick Target Search

It can help users to accurately and quickly locate the target from massive amount of data after an event. For vehicles, targets can be quickly searched using plate number, color, type etc., thus saving a lot of time.

Application



There are lots of traffic accidents on city roads everyday. In case of a hit and run, some drivers manage to escape the scene by covering their vehicle's number plate. In addition, using traditional method, the policemen have to watch a lot of CCTV recordings to find some clues that can solve the case, consuming time and even manpower. The video structuring technology increases the efficiency of case investigation by providing additional details of the target vehicle. It can also obtain more vehicle attribute for further surveillance.

Illegal Parking Detection

When a vehicle enters the monitored area, the Dahua Parking Detection technology based on CNN deep learning will capture its images and save metadata. It helps security personnel to ensure smooth traffic, and reduce accidents and property losses caused by illegal parking.









Illegal parking composite graph



*Illegal parking duration can be set according to demand



Illegal parking detection

Detects illegal parking on specific roads, and records illegal parking time, location, duration, number plate, etc.



Supports linkage with speaker alarm to warn off vehicles when illegally parked vehicle is detected.



Statistic analysis

Based on statistical data of this technology, reports can be generated to prevent illegal incidents and promote road safety.

Application



Vehicles parked on and off the road increase the risk of traffic congestion and accidents. Through the deployed camera, 24/7 detection of violation behavior can be achieved, significantly improving monitoring efficiency. At the same time, when an illegal parking has been detected, the alarm linkage can be used to remind the driver to leave on time, thus ensuring traffic safety on the road.

Thermal Application

Long Distance Monitoring
 Temperature Monitoring
 Fire Prevention

Long Distance Monitoring

With deep learning and thermal technology, this camera can realize long distance monitoring that can easily recognize human or vehicle even from far distance. In addition, it is also not affected by environmental factors, enabling it to provide a highly accurate thermal image of the scene.



• Ultra long range detection up to 20km



• Tested in foggy weather

Features



Long Distance Detection

With Dahua leading thermal imaging technology, it has ultra long distance detection capability to spot vehicles (20 km) and human target (8 km) with fine details.



False Alarm Filter

It only receives infrared radiation, and is not affected by environmental factors. It is equipped with built-in deep learning algorithm, and only focused on alarms triggered by human or vehicle, providing users with more accurate alarms.

Application



National borders are often in remote areas with complex environments and poor lighting. Traditional video surveillance cannot cover the monitored area in a large scale, nor adapt to all weather conditions. Thermal imaging technology can identify people or vehicles over long distance and determine in time whether they are intruding the border perimeter.

Temperature Monitoring

There is a corresponding relationship between radiation energy and temperature. The different gray value can represent the different temperature in order to achieve an effective temperature monitoring function.



Features



Industrial Temperature Monitoring

Industrial temperature monitoring distance is as far as 50 meters, which meets the requirements for 24/7 real-time monitoring of multiple devices.

Human Body Temperature Monitoring

This non-contact body temperature monitoring offers quick screening, wide coverage and multi-person detection. The accuracy can reach ± 0.3 C with the blackbody.

Application





With the virus outbreak, airports, railway stations and subway stations are becoming important areas of epidemic prevention, which means human body temperature monitoring in these sites is essential in preventing the spread of the virus. The heavy passenger flow in transport hubs and the traditional temperature measurement methods can cause congestion and have hidden safety hazards. Thus, a more secure and effective way of temperature monitoring needs to be applied.

There are lots of high-voltage equipment in a substation, which require maintenance work. Under most situations, electrical equipment failure indicates rising temperature. Before the staff get into the substation, it is required to cut off power. Substations are usually located in suburban areas so it requires a lot of time and cost for travelling. Without automatic inspection, the staff have to use handheld equipment which is very time-consuming. Thermal imaging technology can help managers to remotely monitor the operation status of equipment and locate the defective equipment in time.

Fire Prevention

Thermal cameras can detect mild differences in temperature change. This feature allows thermal camera to detect objects with a temperature difference compared to the average temperature of the scene. As fires usually have much higher temperature than the surrounding environment, Dahua thermal cameras are able to detect the presence of fire in the scene.



Thermal camera can prevent the fire before it occurs

Features



Advanced Fire Detection

Dual-channel monitoring allows thermal cameras to detect early the source of the fire, and visibly track it in the system. Accurate detection of the fire source through temperature changes to avoid false positives generated by the environment.



Real-time Alarm

Millisecond rapid response, timely push the accurate fire alarm information to the platform, inform the administrator to take the corresponding plan, effectively solve the problem of difficult fire patrol in a large area.

Application



Forest is a large area covered with trees and underbrush. It is prone to fires during hot weather and thunderstorms. Early detection of forest fire is also difficult to achieve in time. By detecting temperature changes in the forest environment, the thermal imaging cameras can spot fires in time to prevent them from growing out of control and to keep minimal damage as much as possible through timely intervention.

WizMind Ecosystem

The Dahua WizMind series is compatible with major third party technology partners. Besides, the WizMind Ecosystem provides sufficient DHOP and API for our technology partners.

Good Compatibility

Compatible with main video management system, like Milestone, Genetec, Axxon, Avigilon, ISS, Qognify, Luxriot, etc.

Supports advanced features with Milestone, Qognify, Network Optix, Luxriot and others, such as face recognition, people counting, perimeter protection, and heatmap.

Milestone Verified, Dahua heat map, metadata, people counting, face recognition, and plugin is tested and verified by Milestone team.

DHOP

Dahua Open Platform(Wizmind IPC and thermal), allows you to customize the camera based on your actual needs

More than 10 existing partners





Sufficient API

Sufficient API provided by Dahua, which allows any technology partners to communicate with Wizmind products.

Complete SDK demo and API document available in our website, with strong customer support.

Protects Network Security and Prevents Privacy Disclosure

Privacy Protection Follows GDPR, protects personal privacy

Video Encryption

Encryption protection of video data throughout its whole life cycle

Security Alarm

Monitors and records security anomalies in real time, and notifies users for timely response

CA/KMS

Offers CA management, and KMS that securely manages device keys

Trusted Protection

Provides trusted firmware protection throughout its whole life cycle

Defense against Attacks

Configures a defense strategy based on the scenario to proactively safeguard against external attacks

WizMind IPC-Panoramic Series



WizMind IPC Dual-lens Series





WizMind IPC-7 Series



- IP67, IK10, ePoE, Heater
- Five streams for three-channel HD video
- 12V DC power output, max. current 165mA
- -FR: Face Recognition, 5 group face libraries with 200,000 face images in total



• 12V DC power output, max. current 165mA

WizMind IPC-5 Series



WizMind IVSS & NVR



WizMind XVR-8 Series



WizMind PTZ



- PTZ8 Series
- Powerful 40/48/60x optical zoom
- Starlight technology
- IR distance up to 400mLaser distance up to 1000m
- Optical defog
- Optical fiber
- Optical I
- IP67





WizMind Thermal





• Smart linkage with strobe light & audio



- Powerful 45X optical zoom
- Support tripwire, intrusion
- Support cold/hot spot trace

WizMind Software

DSS Pro	
	 Face Recognition: face database alarm, face type alarm, records searching, face tracking, visual reports
	 Flow Analysis: people counting in an area, people counting for line crossing, heat map
280	Object Detection: object detection for human, motorized vehicles, and non-motor
	vehicles, records searching, visual reports
	• Al Alarm: strand detection alarm, people approach alarm, fall detection alarm, number
	of people error detection alarm, violence detection alarm, etc.
	 ANPR: real time vehicle recognition, records searching, vehicle tracking
For Kecogniton Frider For Kecogniton	• Entrance: overview of entrance and exit information, parking lot editing, configuration
	of barrier control rules
	 Traffic: traffic flow statistics, violation searching, speed measurement
ANR Deemal	 Thermal: real-time temperature display, temperature alarm, fire alarm
	• Smart Tracking: smart track with fisheye, smart track with bullet, smart track with radar
	 Alarm Linkage: pop up, snapshot, record, PTZ, alarm output, door, e-mail, etc.

DMSS



- Thermal: real-time temperature display, temperature alarm, fire alarm
- Face Recognition: FR Alarm, FD Alarm

ENABLING A SAFER SOCIETY AND SMARTER LIVING

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* Design and specifications are subject to change without notice.

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