

### Wiz Mind

Empowering Verticals With Leading AI Technology



### Wiz Mind

Dahua WizMind is a full portfolio of solutions composed of project-oriented products including IPC, NVR, PTZ, IVSS, thermal and software platform that adopts industry-leading deep learning algorithms. Focusing on customer's requirements, WizMind provides precise, reliable and comprehensive AI solutions for vertical markets including government, retail, energy, finance and transportation.



Smart City





Retail

Building Energy

**E**1

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Finance

E



Transportation



WizMind Ecosystem

The Dahua WizMind series is compatible with major third-party platforms. Its partner ecosystem provides sufficient DHOP and API, enabling excellent integration with our technology partners.

### **Human Applications**

WizMind can search for targets and analyze human-based data. Both security and privacy of users are protected by powerful AI algorithms and advanced fusion technologies.





### **Vehicle Applications**

WizMind captures attributes of vehicles for easy management, quick search and efficient business analysis. Various scenarios including roads, waters and parking spaces are covered completely.



### **Thermal Applications**

WizMind offers ultra-long range surveillance even in harsh environments through effective utilization of thermal technology. It is also equipped with intelligent AI functions such as Industrial Temperature Measurement and Boat Detection.



## Human Applications

- Privacy Protection +
- PPE Detection NEW
- NEW
- Panoramic Surveillance 2023

People Counting

### Privacy Protection +

With deep learning algorithm and compliance with the GDPR, the Dahua Privacy Protection Technology is designed to protect user privacy with real-time mosaic. In 2023, Dahua launched Privacy Protection+ that combines a variety of deep learning algorithms with Privacy Protection Technology, making it suitable for more complex scenarios.

### Highlights

### Full Time S Full Cover S Full Process The Dahua privacy protection Dahua continuously Dahua provides complete solution supports the use of optimizes and improves its privacy protection solutions privacy protection functions Privacy Protection algorithm including video capturing, during video capturing of the to ensure that the Privacy back-end storage and IPC, ensuring the encryption Protection function is platform management, and protection of personal suitable for a variety of covering all scenarios in the information from the source indoor and outdoor scenes, industry. of the video, and avoiding maintaining its leading exposure of portrait informaposition in the industry. tion in any way. **Features** Privacy Protection + Free Mosaic on Irregular Black Front-end **Real-time Mosaic** AI Functions Selected Targets Block Masking Applications In nursing homes, sensitive areas such as bedrooms are not suitable for direct monitoring. With the privacy protection solution, these sensitive areas can be masked by camera, which not only protects the safety of the elderly, but also reduces labor costs. **Nursing Home**

privacy.



For retailers, it is very important to manage their business through effective selling and efficient loss prevention. Customers' privacy protection is also a top priority. Dahua's privacy protection solution provides flow data of customer, heat map data, as well as mosaic covering function that complies with

GDPR to help users optimize their business, save labor costs and protect user



### PPE - Personal Protective Equipment

The Dahua PPE Detection technology with deep learning algorithm can detect and capture images of personal protective equipment in the site and can trigger alarms accordingly. Nine attributes can be detected, including hats, work wear, mask etc. It helps reduce the workload of safety management personnel and improve employee safety at work.

### Features



### **Nine Attributes**

Aside from hats, safety vests, clothing color, and masks (by front and back intelligence), the front-end intelligence can also detect other attributes such as apron, gloves, shoe cover, boots, and seatbelt.



### **Custom Training**

PPE supports importing workwear images through IPC/IVSS as the base library for localized modeling, training and comparison.



### **Quick Target Location**

The PPE function can quickly locate specified targets by selecting different attributes, which greatly improves searching efficiency and facilitates immediate response management.

### Applications



A smart building often involves several areas, including smart residential areas, smart office buildings, and parks. These construction sites are full of extra large equipment, and sometimes even hazardous substances. Employees need to wear personal protective equipment at all times to ensure work safety.

There are a number of industrial plants in the energy industry, including refinery plant, chemical plant, and power plant. The Dahua PPE solution can efficiently monitor proper wearing of personal protective equipment such as helmet and work clothes in the factory, greatly reducing the workload of safety management personnel and significantly improving the work safety of employees

### Panoramic Surveillance 2023

The Dahua panoramic system is designed for applications that require a 360°, 270° and 180° view for situational awareness. WizMind offers all-in-one design, up to 8K Ultra High Definition resolution, wider coverage, excellent night view, better image correction, and rich AI functions. It is a perfect surveillance solution that can replace multiple conventional cameras, reduce complexity, and save installation and maintenance costs.

### Features

### **BK** HD Panoramic Image

Delivers vast area coverage with crystal clear images, enabling users to see more hard-to-discover details in large scale scenarios with up to 8K ultra HD resolution.

### AR Panorama

Based on AR technology and resources integration, the AR Panorama achieves a visual, controllable and dispatchable new command mode in a single system.

### 🔍 EPTZ

AR

EPTZ can simultaneously zoom in and track multiple targets when an alarm is triggered, realizing an intelligent function similar to PTZ linkage. In addition to a panoramic view, EPTZ also provides rich details to help users see distant object clearly.





### ☆ AI Features

It is difficult in traditional monitoring to capture details and achieve intelligent application for human and vehicle targets in a large field of view. The Dahua Panoramic solution perfectly solves this problem and effectively captures image details. Dahua has launched several intelligent solutions for different scenes.



### Application



Scenes such as intersections are complex and require multiple traditional cameras. With its all-in-one design, the Dahua panoramic surveillance solution ensures that **the panoramic image does not lose details, and offers cost-effective installa-tion and more application of Al functions.** 



The 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 intelligent function offers customers with valuable data for business report analysis, providing statistics with up to 99% counting accuracy.





For some important jobs, it is necessary to ensure that there are staff on duty. The Dahua People Counting solution can help managers monitor the status of their staff on duty in real time, providing alarms when there's absence of staff on the site and allowing the managers to handle the situation in time.

With the queue management function, when the number of people or the waiting time reaches the preset threshold, the system 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.

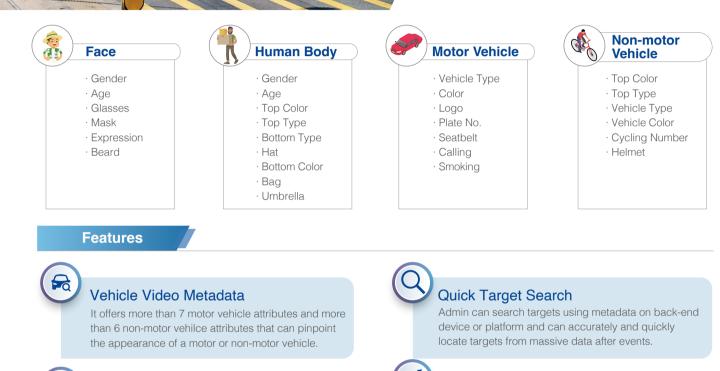
# Vehicle Applications

- Video Metadata
- Hydrological Monitoring
- Illegal Parking Detection



### Video Metadata

The Video Metadata technology of WizMind is equipped with deep learning algorithms that can efficiently locate human and vehicle targets based on attributes analysis. In order to better enhance the value of its functions, Dahua has added targets direction analysis and data statistics technology.



### Human Video Metadata

It offers more than 10 kinds of human attributes that can pinpoint the appearance of a person.

### Applications



Video metadata can be used to analyze the attributes and data statistics of human, motor vehicles and non-motor vehicles on the road. Local departments can utilize these data to efficiently plan better streets. It does not save face image data to protect the privacy of pedestrians and other road users.

**Statistics** 

analysis.

Customers can generate people and non-vehicle

statistics, as well as direction data reports for business



Video metadata can be used to continuously manage employees and vehicles in the office park and search targets through attributes analysis. It helps alleviate the pressure in managing people and vehicles in the premises and improves the safety of employees at work.



### Hydrological Monitoring

Utilizing self-developed algorithms, Dahua's Hydrological Monitoring is mainly used in areas with water resources, including rivers, seas and lakes. Its application includes three parts: water level detection, boat detection and floating objects detection. At present, this solution is mainly used for hydrological management and analysis.

### Features



### Water Level Detection

Water level can be read automatically and precisely all the time. With powerful zoom capability, results can be captured even at long distances. When the level is abnormal, preventive measures can be taken in advance.





### **Boat Detection**

With boat detection algorithm, boats can be located easily. When a boat triggers the alarm, the speed dome camera will quickly zoom in to present clear details of the target.





### **Floating Objects Detection**

In some scenarios such as dam, hydropower station, etc., floating objects can cause barrage and environmental pollution. The Floating Objects Detection function can effectively detect objects floating on the water surface and immediately trigger the alarm.



### Application



Fishing grounds have relatively wide area coverage and remote locations. Traditional manpower patrol cannot efficiently monitor its massive territories. The Hydrological Monitoring PTZ Camera can help detect incoming ships on protected areas and send alarms immediately, providing 24/7 surveillance to protect marine resources.

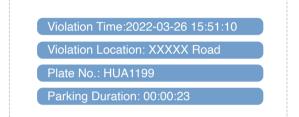


### **Illegal Parking Detection**

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 Example



\*Illegal parking duration can be set according to actual demand

### **Features**



### Warning Sounds NEW Drive Away

When a vehicle parks in an illegal parking area, the illegal parking PTZ can send a warning voice audio through its built-in loudspeaker to warn the vehicle to leave.



Supports capturing of vehicle images, with license plate number and other violation information overlaid on the image as evidence.



Supports displaying of panoramic and detail views simultaneously, with both channels equipped with illegal parking detection to cover a wide detection range.

### 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

- Industrial Temperature Measurement
- Boat Detection

### **Industrial Temperature Measurement**

The Dahua explosion proof camera has explosion proof certifications. It provides online temperature measurement with high accuracy and offers a new method to monitor equipment and pipelines in the plant.

Features

### -Ö- Online Temperature Measurement

Thermal imaging temperature measurement can realize online temperature measurement, which can help discover potential risk in time.





### **O** Intelligent Inspection

By editing the device list on the platform and linking it with the temperature monitoring camera, users can automatically inspect key devices regularly and display device data more intuitively.

### **Ex** Explosion Proof Certification

ATEX and IECEx certified, making it ideal for explosion prone environments. The device also has IP68 protection and stainless steel material that can help prevent ignition sparks.



### **Application**



In oil and gas industries, explosive gas can cause accidents. There are several equipment and pipelines that need to be inspected regularly and require a lot of manpower and time. The online thermal temperature measurement solution can easily monitor the production status and find potential risk in time, greatly enhancing work efficiency.

### **Boat Detection**

Visibility on the sea and rivers is often poor at night, making it difficult for authorities to get a clear image of the boat. Thermal imaging cameras have inherent advantages in such scenarios. Combined with Dahua's advanced AI capabilities, they can automatically detect and identify boats.



• Multiple Data



Anti-corrosion Qualified



• All-weather Monitoring

### Features



### Multiple Data

The Dahua thermal camera can simultaneously capture multiple boat data, including height, length, speed, distance, etc.

### Application



### Anti-corrosion Qualified

With anti-corrosion coating (or 316L stainless steel housing) and thermal lens protection design, it can sustain salt-spray environment and achieve long service life.



### All-weather Monitoring

Under a variety of complex environmental conditions, the Dahua thermal imaging cameras can still effectively detect boats.



Illegal activities often happen near the coast due to limited supplemental lights at night, making it difficult for authorities to monitor boats and other water vessels efficiently. Aquaculture industries suffer from theft during night time as well. The salty environment also cause equipment corrosion easily, which increases maintenance costs. The anti-corrosion thermal camera provides stable boat detection performance under complex environment conditions, helping users to monitor boats in the sea and protect marine resources.

# More Features

WizMind Ecosystem

Cybersecurity

### WizMind Ecosystem

QNAP

A.I. Tech

The Dahua WizMind series is compatible with major third party platforms. In addition, the WizMind Ecosystem provides sufficient DHOP and API, allowing smooth and efficient integration with technology partners.

OXX

advancis

**NetworkOptix** 

AGLE EYE

### **Good Compatibility**

Compatible with global video management system, PSIM, and alarm monitoring software such as AxxonSoft, Digifort, Advancis, SoftGuard, etc.

Supports advanced features with Qognify, Network Optix, Luxriot and others, such as ANPR, People Counting, Perimeter Protection and Heat Map.

Dahua is a full member of ONVIF. All WizMind products passed the ONVIF conformance process.

### DHOP

• The Dahua Hardware Open Platform allows users to customize the camera based on their actual needs.

- More than 15 existing partners
- $\cdot$  More than 18 applications available



Technology

**Partners** 

SoftGuard

**i**Videon

### **Sufficient API**

The sufficient API provided by Dahua allows any technology partners to communicate with WizMind products.

A strong customer support, together with a complete SDK demo and API document, are available in our website.

### **Protects Network Security and Prevents Privacy Disclosure**

### Privacy Protection

Complies with GDPR to protect personal privacy; Face Occlusion

### **Video Encryption**

Video data full life cycle encryption to protect against eavesdropping and tampering

### O WizMind Security O

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### Certificate & Management

CA Certificate Management KMS Key Management FIPS 140-2 Certificate ISO 27001 & 27701 Certificate

### Attack Defense

Match the defense strategies according to the scene; Proactive defense against cyber attacks

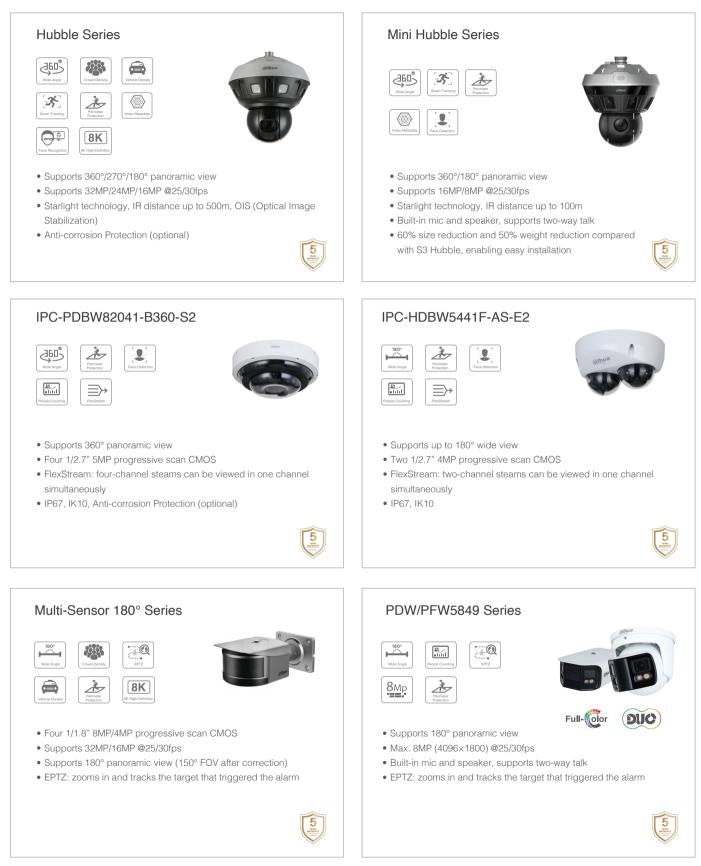
### **Trusted Protection**

Trusted Upgrade, Trusted Boot & Trusted Execution, Anti-tampering, Anti-virus Installation

### **Security Alarm**

Real-time detection of abnormal behaviors; Records the event and notifies users in time

### WizMind IPC - Panoramic Series

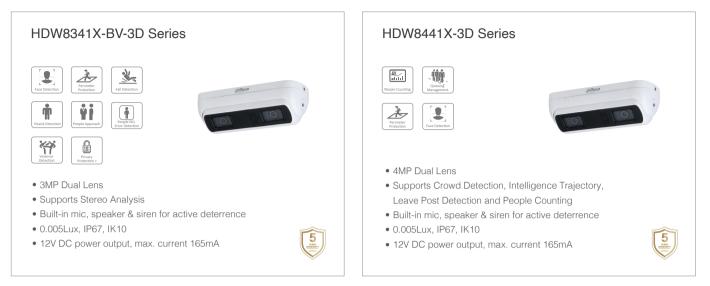


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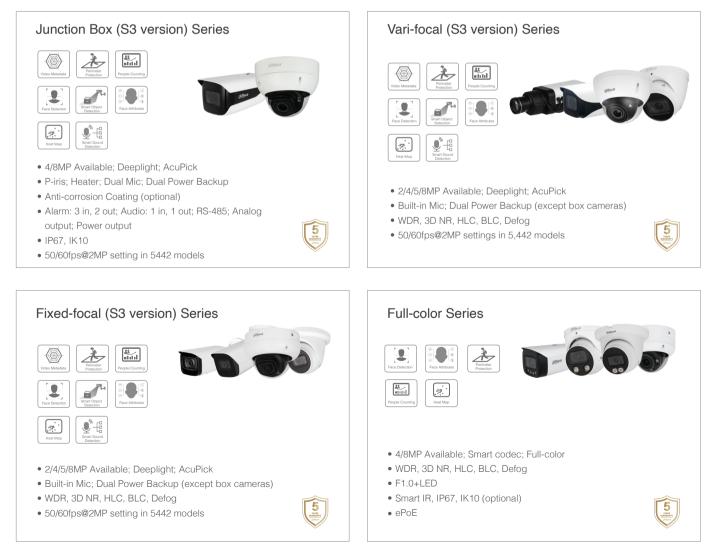
### WizMind IPC – X & 7 Series



### WizMind IPC – Dual Lens Series



### WizMind IPC – S & Full-color Series



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### WizMind – Thermal



### WizMind – PTZ

### SD8A840XA-HNP-WP





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- Max. Resolution: 3840 (H) × 2160 (V)
- Powerful 40x optical zoom, IR distance up to 250 m
- Recognizes standard and virtual water level markers; Triggers an alarm when the water level exceeds any of the limits
- Supports boat detection and boat tracking

### SD8A/8C-PA Series





- Video Metadata: Supports human body, human face, motor vehicle and non-motor vehicle image capture, attributes extraction
- Exporting yearly/monthly/daily reports
- 8MP@25/30fps, 4MP@50/60fps
- Supports 40/45/48/60x optical zoom

### WizMind – NVR & IVSS

**NVR6-XI** Series





- 32-channel 1080p self-adaptive decoding capability
- Max. 1024/1024/800Mbps incoming/recording/outgoing bandwidth
- Supports N+M cluster
- Supports Raid 0/1/5/6/10
- Drawer-like chassis design allows for HDD hot swapping
- Al by recorder: 4-channel Face Detection and Recognition;
- 8-channel Video Metadata; 24-channel Perimeter Protection; 32-channel SMD Plus

### **IVSS7-M Series**







- Up to 256-channel IP video access
- Up to 24-channel 1080p@30fps decoding
- Up to 512/384/128Mbps incoming/recording/transmission network bandwidth
- Up to 16 AI chips that satisfy various project requirements
- Up to 12-channel Face Recognition/12-channel Al IVS/12-channel Video Metadata (One Al Chip)



SD8A840FA Series	-
Regal Parting Detection	
<ul> <li>Supports illegal parking detection</li> </ul>	H
• Powerful 40x optical zoom, IR distance up to 500m	
<ul> <li>Supports smart wiper to keep the view clear</li> </ul>	
Anti-corrosion Coating (optional)	

### SDT5X Series



SD8A440FA Series



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- Video Metadata: Supports human body, human face, motor vehicle and non-motor vehicle image capture, attributes extraction, counting targets
- Exporting yearly/monthly/daily reports
- Dual-PTZ System, the angle of monitoring can be adjusted flexibly both panorama and detail

### NVR5-I/L Series

- Up to 4-channel Video Metadata
- Up to 12-channel Perimeter Protection, SMD Plus
- Up to 4-channel Video Stream Face Recognition
- Up to 16 face pictures/sec processing
- Up to 20 face databases with 200,000 face images in total

### **ENABLING A SAFER SOCIETY AND SMARTER LIVING**

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\* Design and specifications are subject to change without notice.

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