

Forklift Background and Analysis

1. **Surge demand for forklift:** In 2022, global forklift sales are approximately 1.87 million units.

2. Increasing demand for **AI Security Products**

There are lots of blind spots for forklift drivers, and due to irregular behaviors(fatigue, distraction etc) and operations(overspeed), accidents will easily happen when in operation, causing property damage or human injury. It is a huge cost.

3. Lack of **control and management for the fleets**

Operations of Illegal drivers



02 Hardware



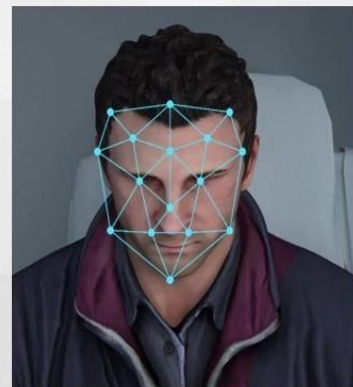
Smart Forklift Solution

Richmor Dedicated AI video
terminal+VMS



Authorized Operation Face Recognition

Face recognition are required before operation. Computer image processing technology is used to extract portrait feature points from the video for intelligent analysis to prevent drivers from skipping work and other unregistered drivers from operating the vehicle.





03 Core Function



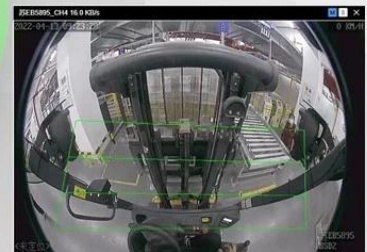
Driver Monitoring Status Analysis

Dangerous behaviors will be detected by DMS camera such as Fatigue(eye close, yawn), distraction, smoking and calling, also will send voice alarms to drivers and alarms will be uploaded into the operation center.



Blind Spot Detection

BSD camera is optional. People in blind spot area can be detected. When people are detected in blind area, there will be different level alarms including sound and lamp. Once people are in the impact zone, The forklift automatically brakes to stop (with throttle controller)



Safety Seatbelt Monitoring

After installing the seat belt warning device, the vehicle will not be started if the seat belt is not fastened.



- Real-time monitoring of non-fastening of seat belts and alarm reminders will be carried out.
- Violation alarms will be uploaded to the platform for statistical analysis to ensure the safety of forklift operators.



Speed Sensor and Alarm Reminder (R-WATCH)

Speed perception will be carried in a field without positioning. It also provides voice and beep sound prompts for speeding, and can display alarm type and vehicle speed



Other Functions

Data recording

Switching time and working time, loading time and mileage



Accident recording

Driver identity information, time of occurrence, location and other information



Reminder function

Forklift maintenance, annual inspections, operator certificate and equipment expiry reminders



Vehicle dispatching system

Reasonable calls based on resource conditions, avoiding uneven distribution of resources





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04 VMS



Vehicle Management Software(VMS)

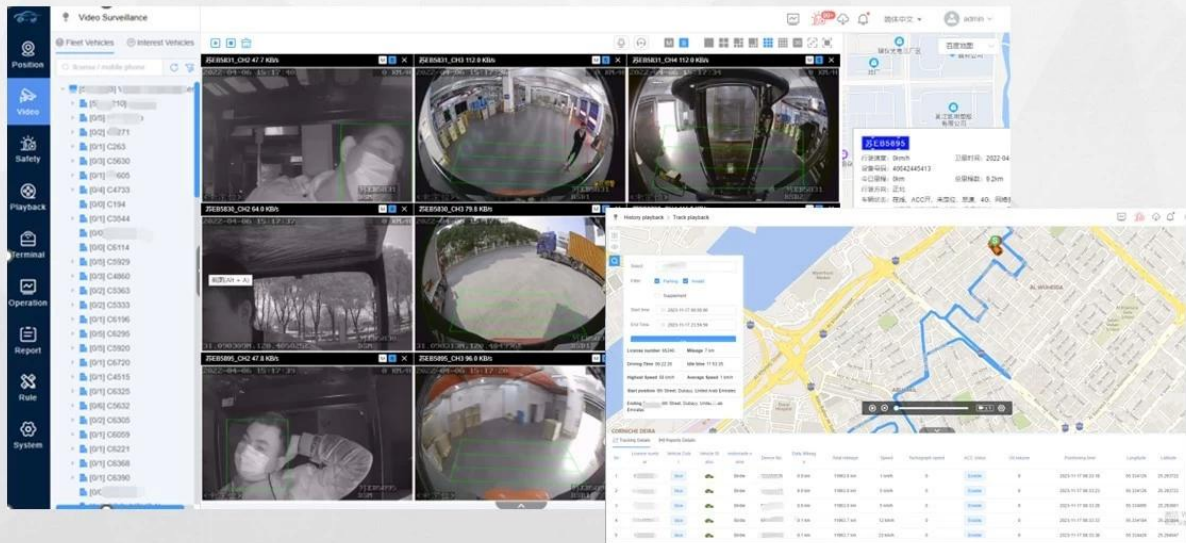
VMS is the key of whole monitoring system.

Management and scheduling: All vehicle videos, GPS information, alarm information, video management, user management, etc. all are operated and managed by the system platform.



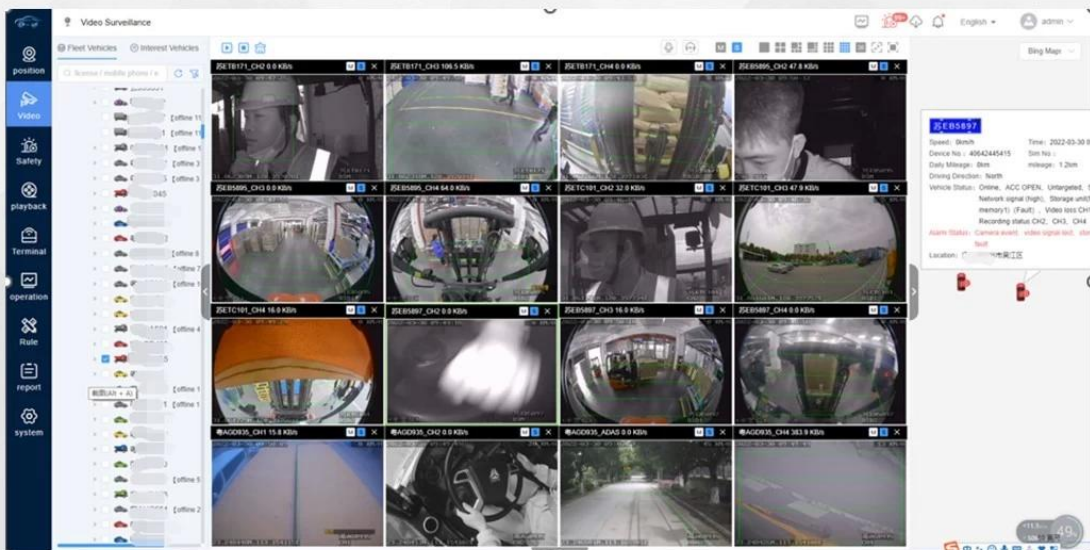
Video and Track Playback

Including GPS tracking, video playback, alarm attachments etc



Live Video

Real-time video browsing, supports simultaneous browsing of multiple screens, vehicle location information, equipment status, GPS map display, etc.



Operation Management

Evidence query such as video loss, offline, GPS abnormal and other vehicle information

The screenshot displays the 'Vehicle Monitoring Center' interface for 4538 vehicles. The left sidebar contains navigation options: Position, Video, Safety, Playback, Terminal, Operation (selected), Report, and Rule. The main area shows a table of vehicle data with columns for Sn, vehicle number, license plate, fleet/company, Device No., SIM number, driver, online status, vehicle status, installation time, service expiration time, and operation. The table lists 7 vehicles, all with 'offline' status and 'normal' vehicle status. The bottom of the interface shows a pagination bar with 'Total 4538' and a page number of 1.

Sn	vehicle number	license plate	fleet/company	Device No.	SIM number	driver	online status	vehicle status	installation time	service expiration time	operation
1		without		120128			offline	normal	2023-11-16		
2		without		120127			offline	normal	2023-11-16		
3		without		120126			offline	normal	2023-11-16		
4		without		120125			offline	normal	2023-11-16		
5		without		120124			offline	normal	2023-11-16		
6		without		120123			offline	normal	2023-11-16		
7		without		120122			offline	normal	2023-11-16		



05 Advantages

