FT Vision User Manual

Content

1 FT VISION SCENARIO DESCRIPTION 4

2 DETAILS OF FT VISION FUNCTION MODULES 5

2.1 BASIC DATA 5

2.1.1 Fleet management 5

2.1.2 Vehicle management 8

2.2 REAL-TIME MONITORING 10

2.2.1 Real-time video 11

2.2.2 Single-vehicle convoy 14

2.2.3 Device playback 17

2.2.3.1 Components 18

2.2.3.2 Function Description 20

2.2.3.3 Introduction to Each Module 21

2.2.3.4 Edit 26

2.2.4 Track playback 28

2.2.4.1 Component 29

2.2.4.2 Function description 30

2.2.4.3 Introduction to Each Module 31

2.2.5 Focus 37

2.2.6 Alarm list 37

2.3 PLAYBACK CENTER 39

2.3.1 Device playback 39

2.3.2 Video library 39

2.4 INCIDENT CENTER 42

2.4.1 Safety analysis 42

2.4.2 Alarm report 45

2.4.3 Evidence report 53

2.5 DATAFLOW CENTER 55

2.5.1 Dataflow analysis 55

2.5.2 Traffic management 58

2.6 OPERATION CENTER 59

2.6.1 Operational analysis 59

2.6.1.1 Operation data board 59

2.6.1.2 Operational data details 60

2.6.2 Positioning statistics 60

2.6.2.1 Positioning statistics 60

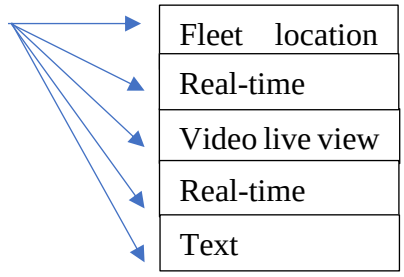
2.6.2.2 Positioning details 61

2.6.3 Online report 61
2.6.3.1 Online report 62
2.6.3.2 Vehicle monthly online detail 62
2.6.3.3 Vehicle online detail 62
2.6.4 Mileage report 63
2.6.4.1 Total mileage statistics 63
2.6.4.2 Mileage details 63
2.6.5 Last status report 64
2.6.5.1 Final GPS status 64
2.6.5.2 Last piece of online information 64

1 FT Vision Scenario Description

Scenarios for the use of FT Vision are classified as the followings:

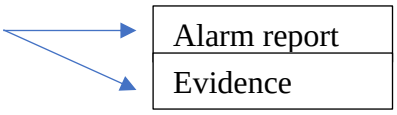
a) Real-time monitoring



b) Post-mortem forensics



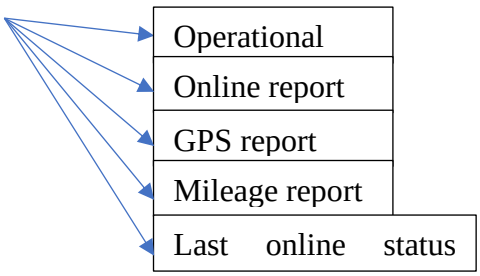
b) Safety management



c) Device traffic management



d) Operation management



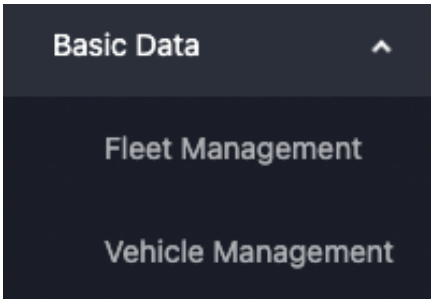
The application of modules and performance of functions and relevant usage scenarios will be described in detail in the next section.

2 Details of FT Vision function modules

2.1 Basic data

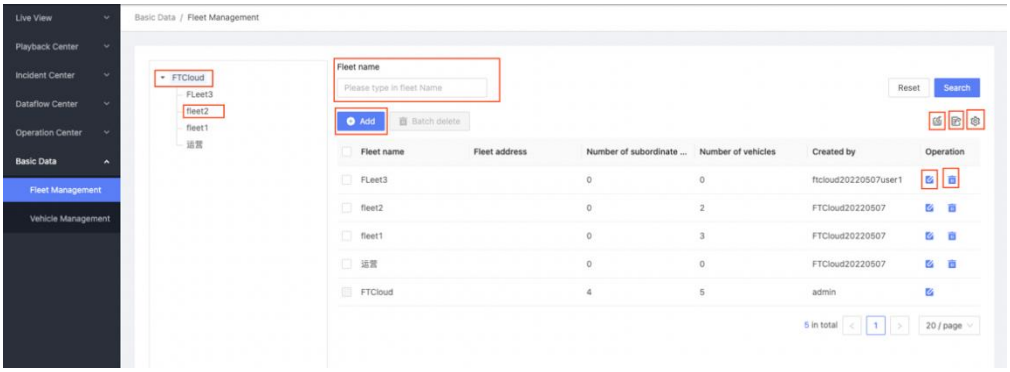
Prior to the operation of FT Vision, users should create a “fleet” and add vehicles for subsequent fleet management.

The module Basic Data is a portal for the unified management of the above-mentioned data (fleet, vehicle, and driver), allowing for quick and easy operations such as adding, deleting, editing, and regrouping. Each type of the data mentioned above is provided with a function module, including: Fleet Management, Vehicle Management, Driver Management.



2.1.1 Fleet management

Users are able to manage the fleet in the module Fleet Management, and the management actions include: Quick search, add and delete fleets, quick edit, and quick import



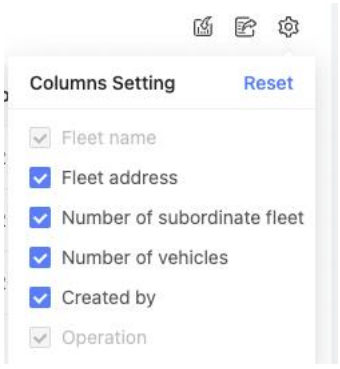
1. Quick search of fleets
    a) On the left side of the fleet directory, users will clearly view the entire fleet organization tree and quickly sort out the relationships between / among fleets (the main fleet and its subordinate fleets).

Note: If there is a drop-down arrow on the left side of the fleet name, it means that the current fleet has one or more subordinate fleets. Users may click on the fleet to show the information of its subordinate fleets.

b) In the field of “Fleet name”, users may type the fleet name for a quick search of fleet.

c) Note: The performance of this search function is subject to the selection of fleets on the left side. If users select the FTcloud, the search will be conducted within the scope of the subordinate fleets under FTcloud; if users select Fleet 2, the search will be conducted within the scope of the subordinate fleets under Fleet 2.

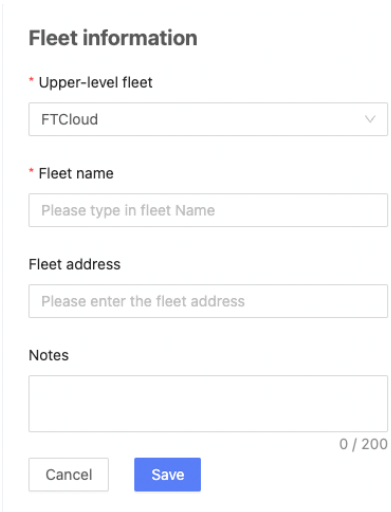
d) With the icon “small gear” on the right side, users can filter or display the fleet information according to actual needs.



2. Addition and deletion of fleets

a) Add fleets: Users may click 

to add a new fleet.



Users need to provide the fleet information, including the upper-level fleet, name, address, and notes, and the fields with a red star in the upper left corner are required.

Note: In the upper-level home page, users may choose to open the organization tree to preview the upper-level fleet of the current fleet. After users select a fleet and click “Add”, the upper-level fleet related to the current add page will automatically default to the

previously selected fleet. Users may also re-select the upper-level fleet according to the actual affiliation.



Example: If the user select the fleet FTcloud in the organization tree on the upper-level page, the fleet successfully added later will become a subordinate fleet under FTcloud by default.

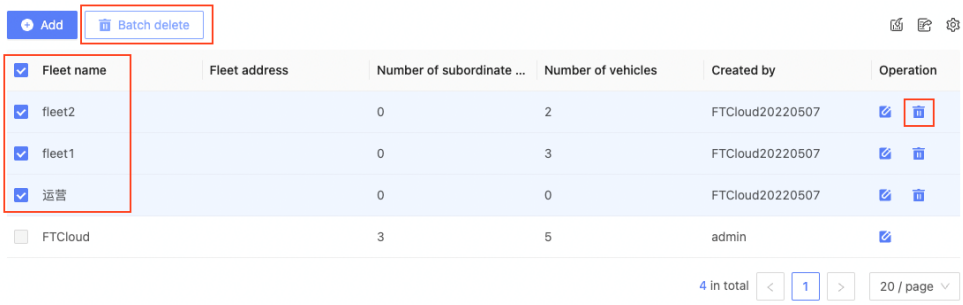
b) Batch addition of fleets

This module enables the batch import of fleet information. Before such import, users need to export the fleet information to get an Excel file. After that, users can fill in the file according to actual needs, and then import the file so as to complete the batch addition of fleets.

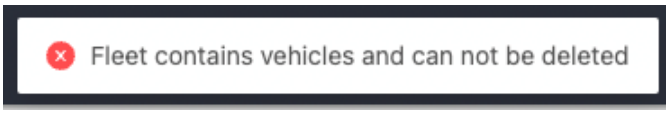


c) Delete fleets

Users can click the button “Trash” on the right side of the fleet information to delete the current fleet, or check multiple fleets for batch delete.



Note: Before deleting a fleet, check if there is any vehicle in the current fleet. If yes, the fleet cannot be deleted. Prompt is as below:



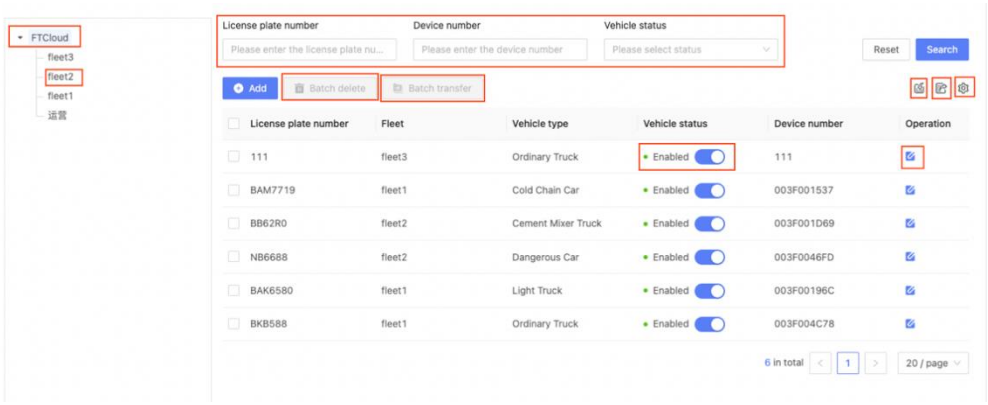
d) Edit fleet information

Users may click the icon “Edit” on the page to edit the fleet information, and the edited information should be exactly the same as that for creating a new fleet.

On this page, the affiliation of the current fleet can be adjusted according to actual needs.

2.1.2 Vehicle management

Users are able to manage the fleet in the module Fleet Management, and the management actions include: Quick search, add and delete fleets, quick edit, and quick import



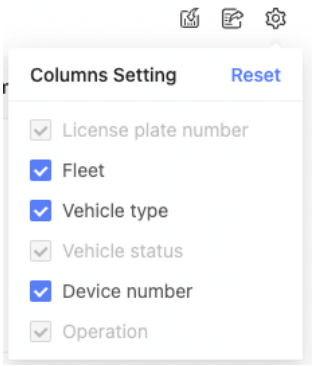
1. Quick search of fleets
   a) On the left side of the fleet directory, users will clearly view the entire fleet organization tree and quickly sort out the relationships between / among fleets (the main fleet and its subordinate fleets).

      Note: If there is a drop-down arrow on the left side of the fleet name, it means that the current fleet has one or more subordinate fleets. Users may click on the fleet to show the information of its subordinate fleets.

   b) Vehicle information can be searched in this module with the followings: License plate number, device number, and vehicle status

      Note: The performance of this search function is subject to the selection of fleets on the left side. If users select the FTcloud, the search will be conducted within the scope of the subordinate fleets under FTcloud; if users select Fleet 2, the search will be conducted within the scope of the subordinate fleets under Fleet 2.

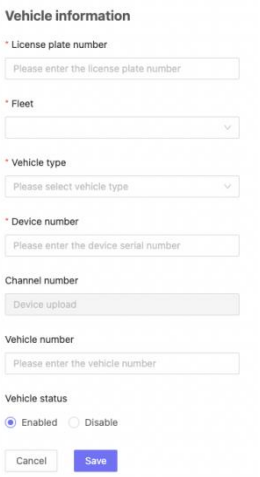
   c) With the icon “small gear” on the right side, users can filter or display the fleet information according to actual needs.



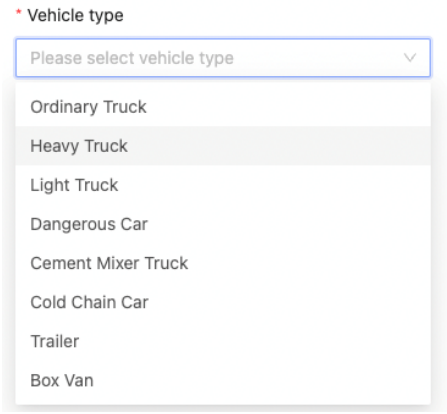
2. Addition and deletion of fleets

a) Add fleets: Users may click 

to add a new fleet.



Users need to provide the fleet information, including the license plate number, upper-level fleet, vehicle type and device number, and the fields with a red star in the upper left corner are required.



Users may select a vehicle type according to the actual loading situation. This information will only be displayed in vehicle details and will not affect the data for the time being.

Batch addition of fleets

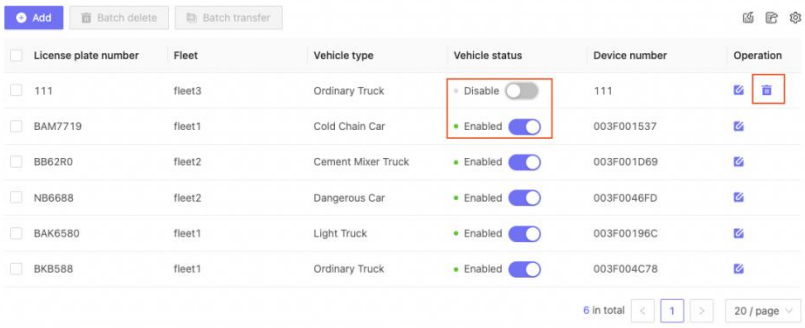
This module enables the batch import of fleet information. Before such import, users need to export the fleet information to get an Excel file. After that, users can fill in the file according to actual needs, and then import the file so as to complete the batch addition of fleets.



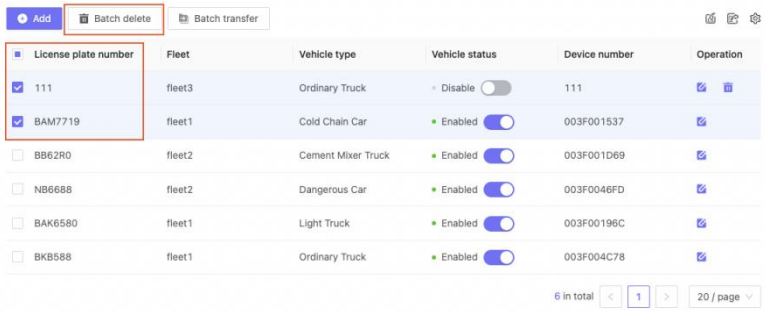
b) Delete fleets

Users can delete individual vehicle. Before such deletion, users need to change the vehicle status from “Enabled” to “Disable” so that the option for deleting the vehicle will be available

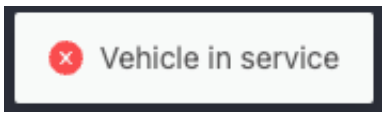
and then relevant deletion can be carried out. If the vehicle status is not changed to “Disable”, the icon for deleting the vehicle will not be available (as shown in the figure below).



Users may also perform batch deletion of vehicles. Before such deletion, users need to change the vehicle status to “Disable” and then check all the vehicles to be deleted. If users click the button “Batch delete”, the checked vehicles will be all deleted.



If any of the device / vehicle to be deleted in bulk is not disabled, the following prompt will be provided.



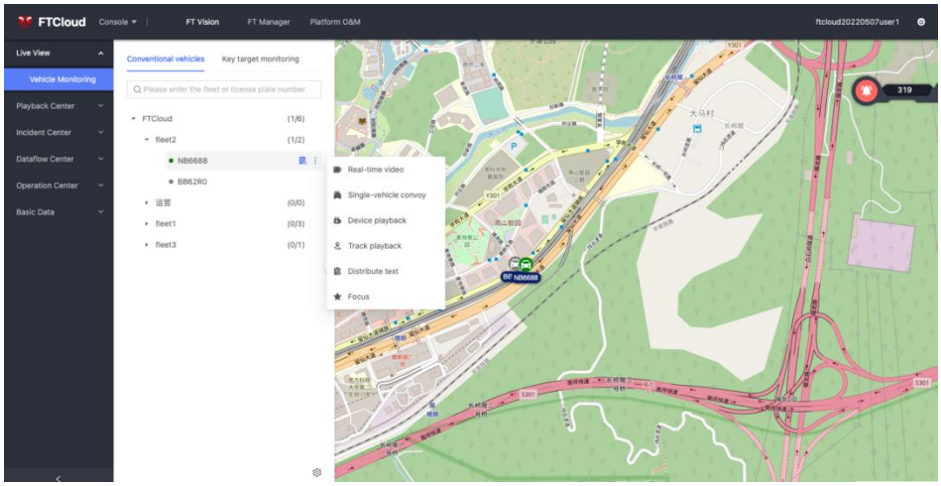
c) Edit fleet information

Users may click the icon “Edit” on the page to edit the fleet information, and the edited information should be exactly the same as that for creating a new fleet.

On this page, the upper-level fleet of the current fleet can be adjusted according to actual needs.

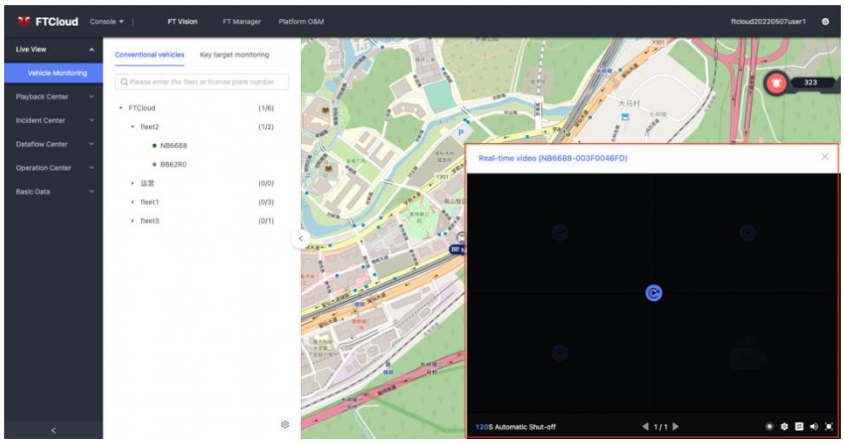
2.2 Real-time monitoring

Functions of this module are mainly for the management of daily monitoring of fleets mentioned in 1.0, enabling the view of real-time fleet information, such as the geographic location, video, alarms, etc. Users can have an overview on and intervene in the operational status of any fleet based on vehicle online status, map information and alarm information.



2.2.1 Real-time video

This function enables users to monitor their vehicles in real time through a quick window, which will pop up in the bottom right corner of the page.



1. Page setup

a) Video length:

The time for watching any live video is 120s by default, which can be set by users in FT Manager according to actual needs. If users, during the countdown, take any actions on the live video interface, the countdown in the lower left corner will automatically refresh to 120s and a new round of countdown will start. If the countdown is over, the channel will be automatically shut off (as shown in the above picture). Users can then click the blue icon “Refresh” in the middle of the screen to enable the video channel again.

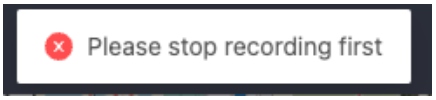


b) Video channel:

The maximum number of channels on a single page of a live video is 4. If the actual number of vehicle channels exceeds 4, users can click the icon “Forward” below to flip the page for multi-channel monitoring.

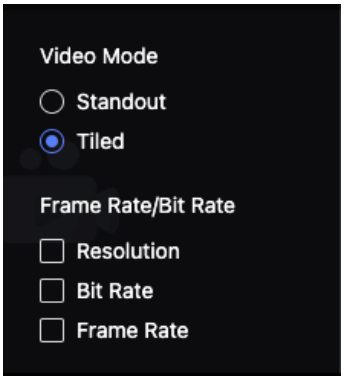
c) Video recording:

While watching any live video, users can click the record button ( ) to record the current video and store it in the video library on the platform. The window of the live video cannot be closed during video recording. If users choose to close the window, the following prompt will be provided.

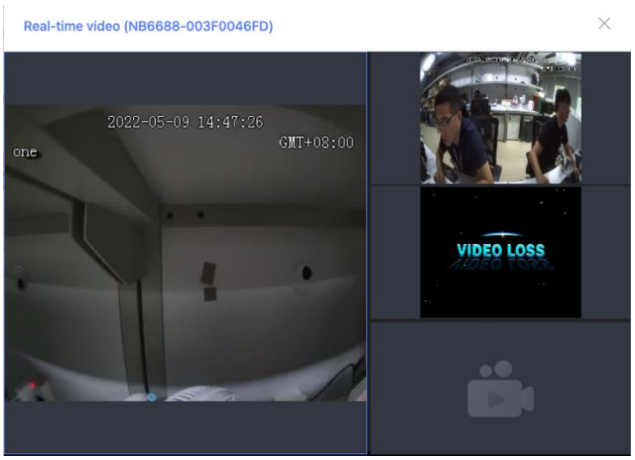


d) Video OSD settings ( )

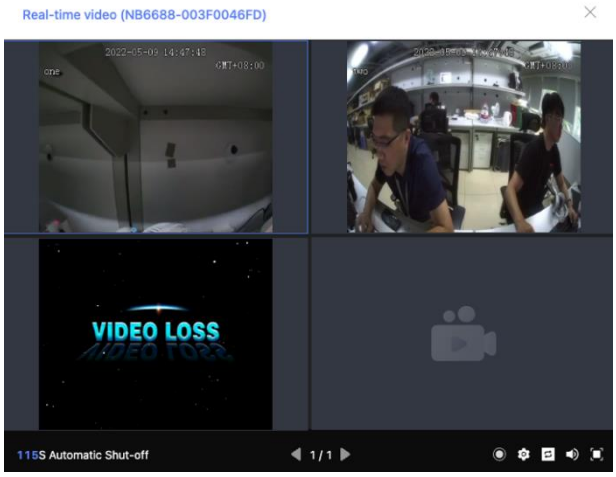
While watching videos, users can choose the data requiring attention according to actual needs



Standout: Standout mode



Tiled: Tiled mode



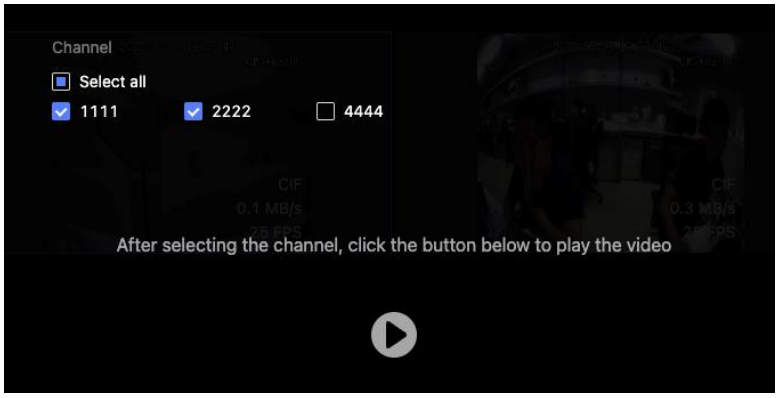
Resolution: Resolution

Bit rate: Bit rate

Frame rate: Frame rate

e) Channel selection ( )

Users can select the main channels to watch according to actual business scenarios. After clicking the icon “Channel selection”, users need to check the channel they are interested in and then click the button “Play” to play the video.



f) Sound settings ( ) and full screen ( )

Users are able to adjust the volume while watching any live video, and to play the video in full screen according to usage habits.

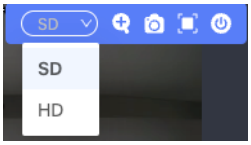
2. Auxiliary functions to live view

A variety of auxiliary functions are available to users when they are watching any live video of vehicle.



a) Picture quality:

Users are able to select the quality for a single-channel video (SD for standard definition resolution and HD for high definition resolution).



b) Zoom in ( )

While watching a live video, users can click the icon “Zoom in” to adjust the specific area in the screen if the area for concerns is too small. After clicking the icon “Zoom in”, users need to select the area to be zoomed in on the screen with a single click. To exit, click the icon “Zoom out”

c) Single-channel full screen and single-channel off (/)

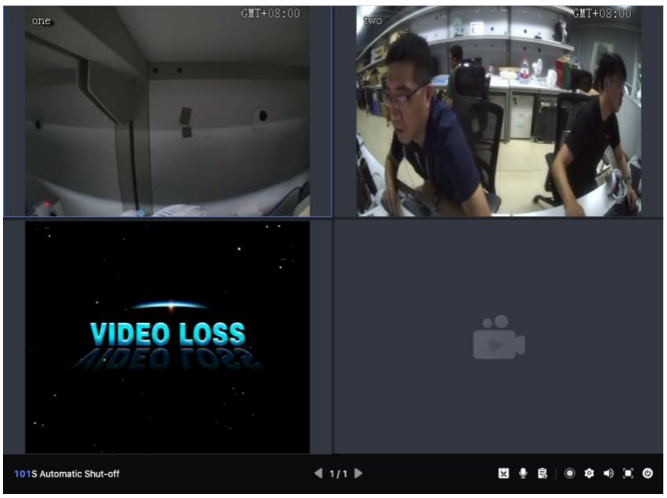
Users can view the current channel in full screen and choose to close a single channel.

2.2.2 Single-vehicle convoy

The single-vehicle convoy function is mainly part of the safety and risk control management. If users notice any dangerous driving behaviors of any driver or vehicle, users are able to perform timely monitoring and risk intervention on the driver through the page of single-vehicle convoy. To enable users to implement multi-dimensional monitoring of drivers, this function page incorporates various information, including basic vehicle information, live view picture, location, speed, and alarm information.

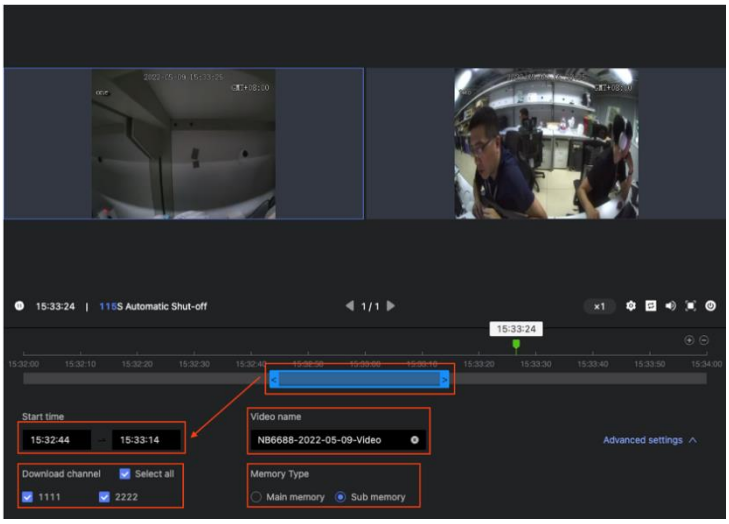
1. Live video

Functions of live video are much the same as those described in 2.2.1. However, in this module there are new features beyond those provided in 2.2.1.



a) Video clip ( )

While watching a live video, users can manually edit the video if they think the current video can be used as an instructional video or warning video.

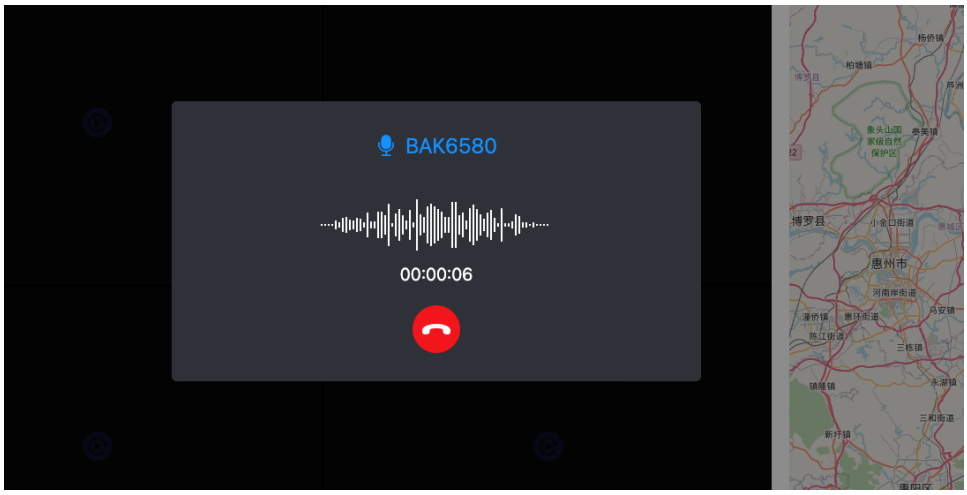


After clicking the icon “Clip”, the video will be automatically positioned at the time of the last alarm. Users will be able to change the start time for clip by changing the time range and adjusting the blue time bar. The blue time bar can be extended or shortened by clicking the arrows on the left and right so as to change the length of video clip. Users can select the channel and video resolution before editing and rename the video so as to quickly locate the video after editing.

b) Two-way communication ()

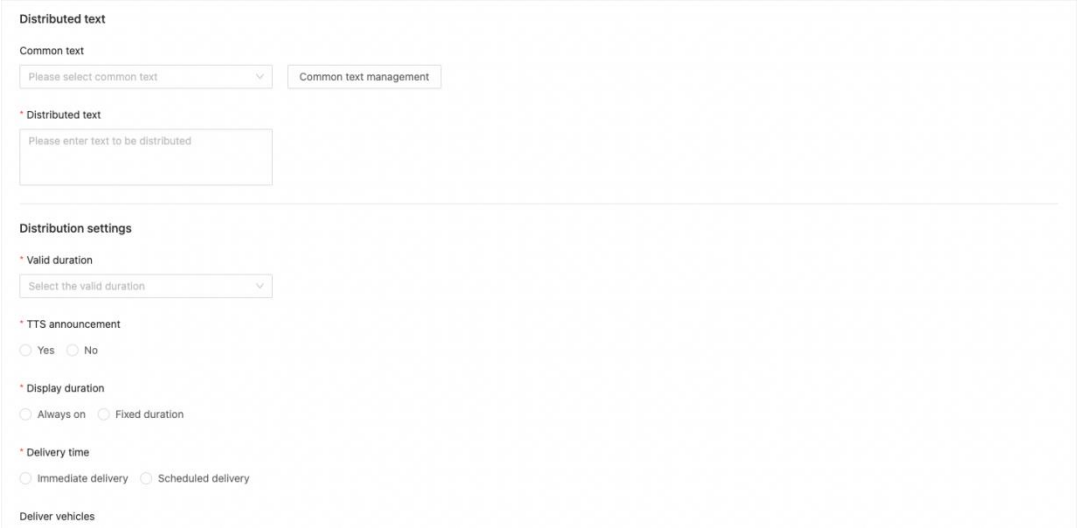
This function enables real-time two-way communication between the ends of PC and device, and users are able to implement timely voice intervention in the event that any dangerous driving behavior is detected.

After users click the icon for two-way communication, the screen will be as below and users will be able to conduct a real-time two-way communication.



c) Distribute text ()

In addition to real-time two-way voice communication which helps achieve timely intervention in dangerous driving behavior, users can also distribute text or voice message to warn the driver against the danger.



i. Common text:

In this field users can select the default text set in advance in FT Manager to complete rapid text distribution, or directly enter the text to be distributed in the field “Distributed text” below. If users want to add default text at this time to facilitate quick text distribution later, they can click “Common text management” for editing and adding the default text. For details about this function module, please refer to the FT Manager User Manual.

ii. Valid duration:

Refer to the valid duration of task, and in this phase there are three options: Five minutes, one hour, and one day. After any text is distributed, the text and TTS voice will be immediately distributed to the device online. For those offline, the valid duration for relevant text and voice will be subject to the selected duration above. For example: If the market chooses the valid duration of one day, then the device will receive a text message if it is online within the said period. Otherwise, the device will not receive a text message.

iii. TTS announcement:

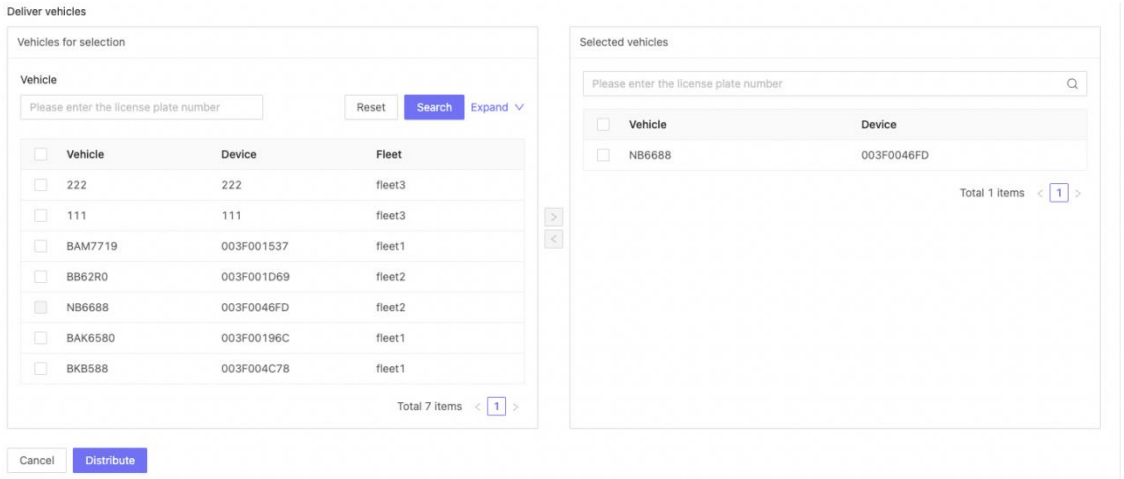
Whether or not the distributed text should be converted to speech at the device side

iv. Display duration:

This function will only be implemented when an external screen is connected at the device side, and users may choose to keep displaying the distributed text on the screen or fix the display duration.

v. Delivery time:

Users can choose the delivery time of text distribution according to actual needs, and two options are available, that is, immediate delivery and scheduled delivery.



After entering the text to be distributed and completing the settings of conditions, users can select additional vehicles to receive text. The vehicles on the left are those available to be added, and the vehicle on the right is the current vehicle of single-vehicle convoy and is included in the list of selected vehicles subject to text distribution by default. If all the settings are completed, users can distribute voice and text to vehicles.

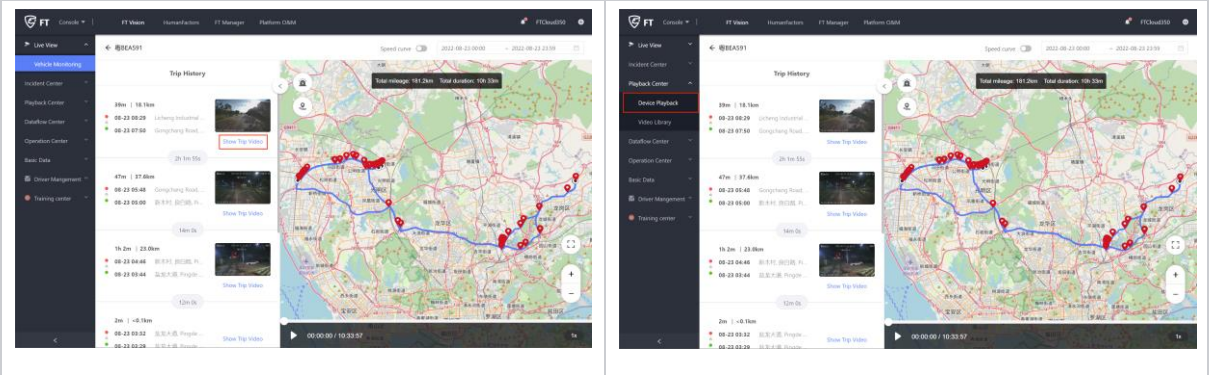
d) Other functions ()

Please refer to Section 2.2.1 for details of the functions in the above chart.

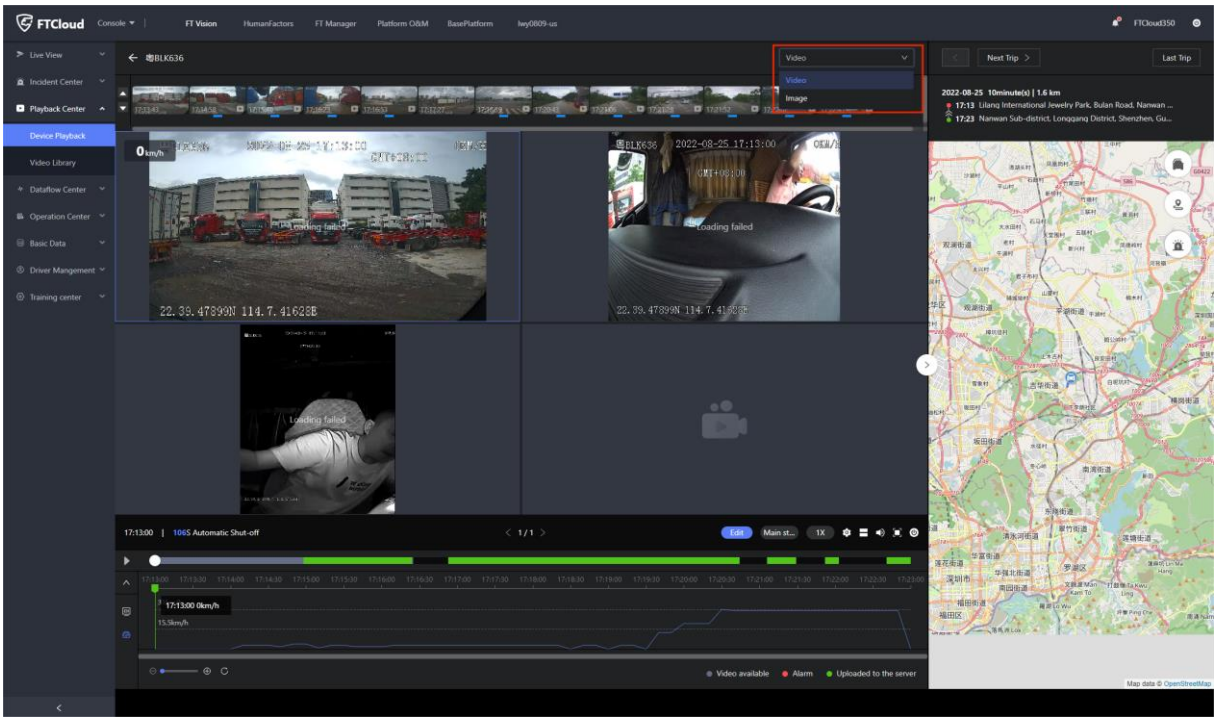
2.2.3 Device playback

1. You can enter the **Device Playback** webpage from **Track Playback** or directly through the menu. On the **Device Playback** page, you can check the videos, the track, the vehicle position, alarm positioning, time, speed, and other data by video playback or snapshot preview.

Enter Device Playback Page from Track Playback	Enter Track Playback Page from the Menu
Click **Track Playback** to open the specific trip card, and click **Show Trip Video** on the card to enter the device playback page.	Click **Playback Center** in the menu, and click **Device Playback** to enter the device playback page. Or, click **Live view** and **Vehicle Monitoring**, select one vehicle to go into **Device Playback**.



2. There are two play modes for device playback, **Video** and **Image**. (See "2.3.1 Difference Comparison" for specific differences between the two).



2.2.3.1 Components

On the left is the overall video area:

① The license plate number and the return button are displayed in the upper left corner. Click the return button to return to the **Track Playback** page (available only when the **Device Playback** page is entered from **Track Playback**);

② The play mode can be selected in the upper right corner, including **Video** and **Image** (if the device is offline, only the **Image** mode is available);

③ The video duration, function buttons, and progress bar are displayed below the video area;

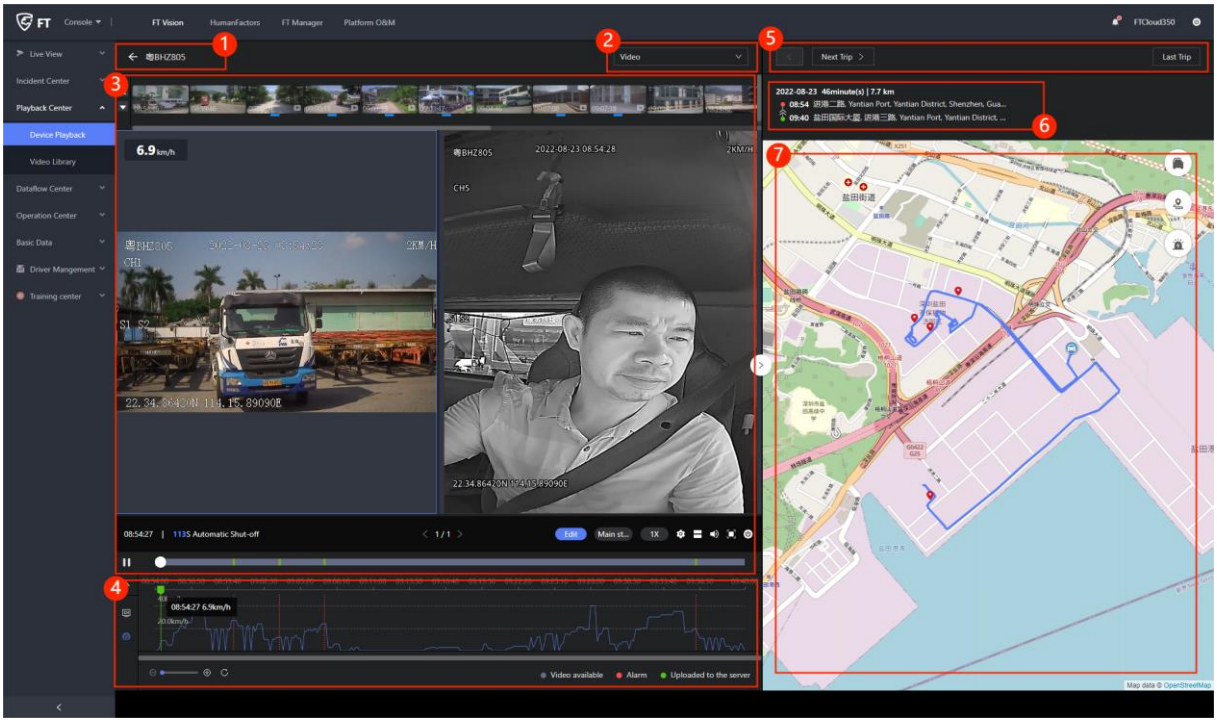
④ You can select to display the channel or the speed curve, zoom in, zoom out, or reset the progress bar, and mark the status on the progress bar with different colors;

On the right is the overall map area:

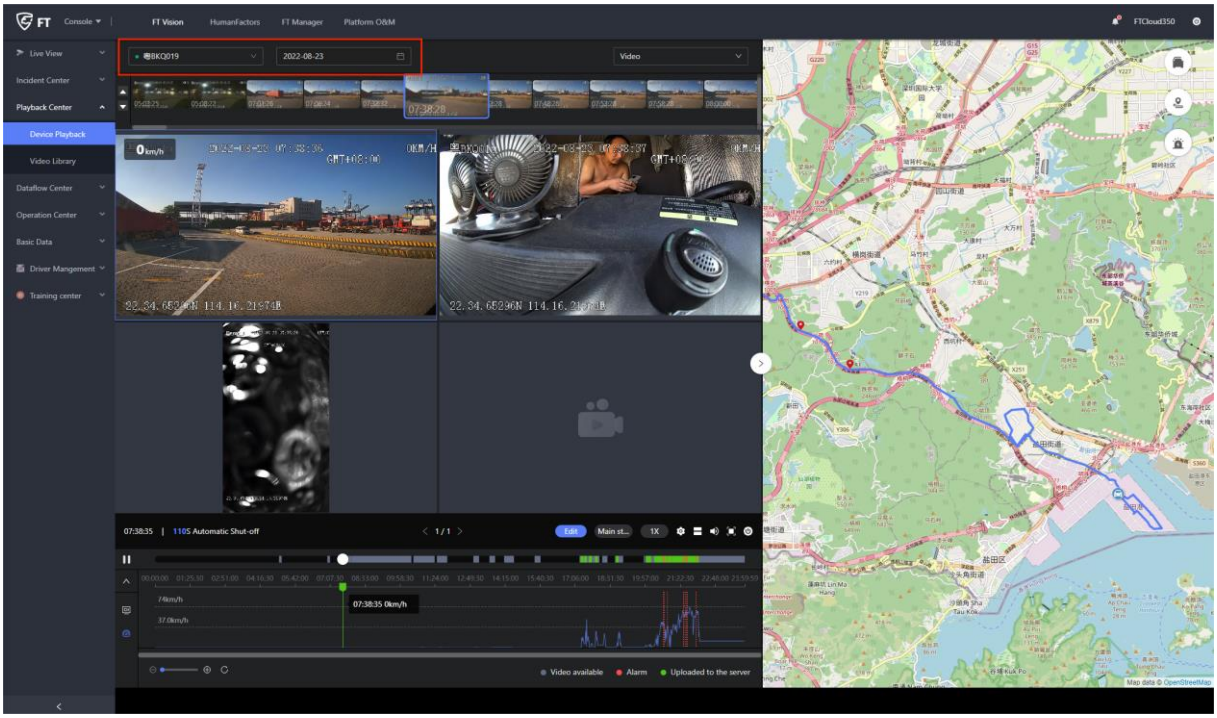
⑤ The buttons to select the previous, next, and last trips are displayed at the top (available only when the device playback page is entered from **Track Playback**);

⑥ Relevant data of the current trip are displayed at the top of the map, i.e. date, duration, distance, start time and position, and end time and position (available only when the device playback page is entered from **Track Playback**);

⑦ The map displays the track of the trip;



⑧ The module to select the device and date is displayed at the top of the video (available only when the device playback page is entered from the menu).



2.2.3.2 Function Description

① For the play mode, **Video** or **Image** can be selected;

② Thumbnails are displayed above the video;

③ Function buttons such as **Edit**, mainstream/sub stream selection, playing speed, and full screen are displayed below the video;

④ Display the progress bar of aggregation status;

⑤ You can click the drop-down button to display the channel or the speed curve;

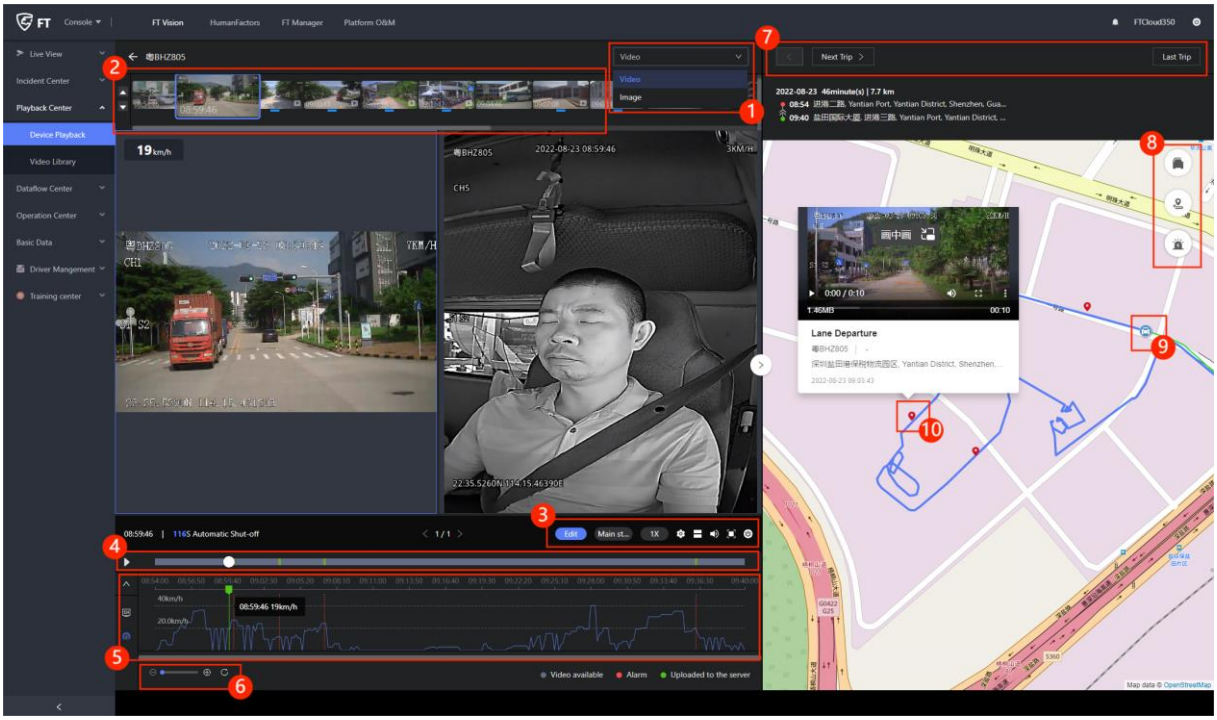
⑥ You can zoom in, zoom out, or reset the progress bar;

⑦ You can click to select the previous, next, or last trips (data switching corresponds to the **Trip History** on the **Track Playback** page);

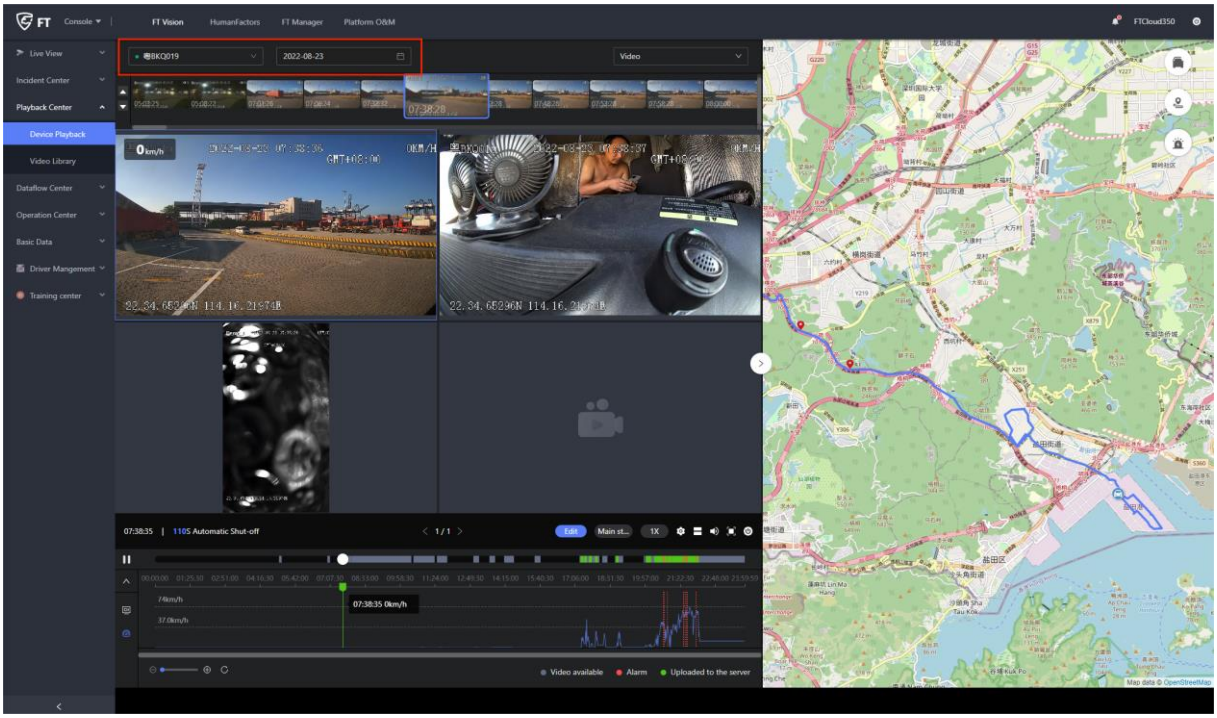
⑧ Map function: Hovering over with your mouse can display the function names, which are viewing the vehicle, exporting the track, and filtering the alarm from top to bottom (the alarm filter function is consistent with the **Track Playback** page);

⑨ Vehicle position (blue car icon) on the track line;

⑩ Filtered alarm point on the track line. Click the alarm point to display the alarm information (It is different from the alarm on the **Track Playback** page. The 10s video of the alarm point can be displayed here);



⑪ You can select the device and date to display the information of the specific device and date.



2.2.3.3 Introduction to Each Module

1. Difference Comparison

   a) Device status

   (Red, gray, and green respectively represent device alarm, offline, and online)

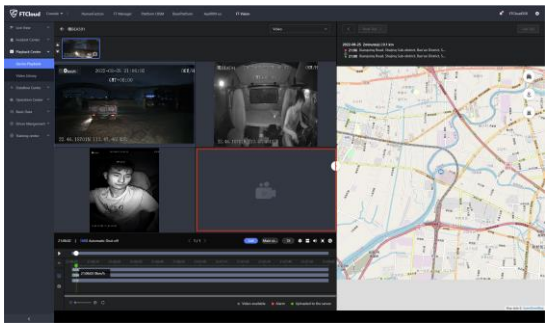
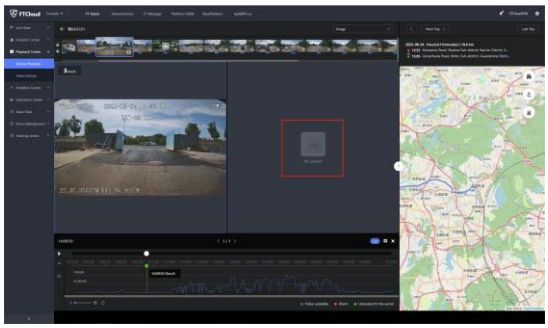
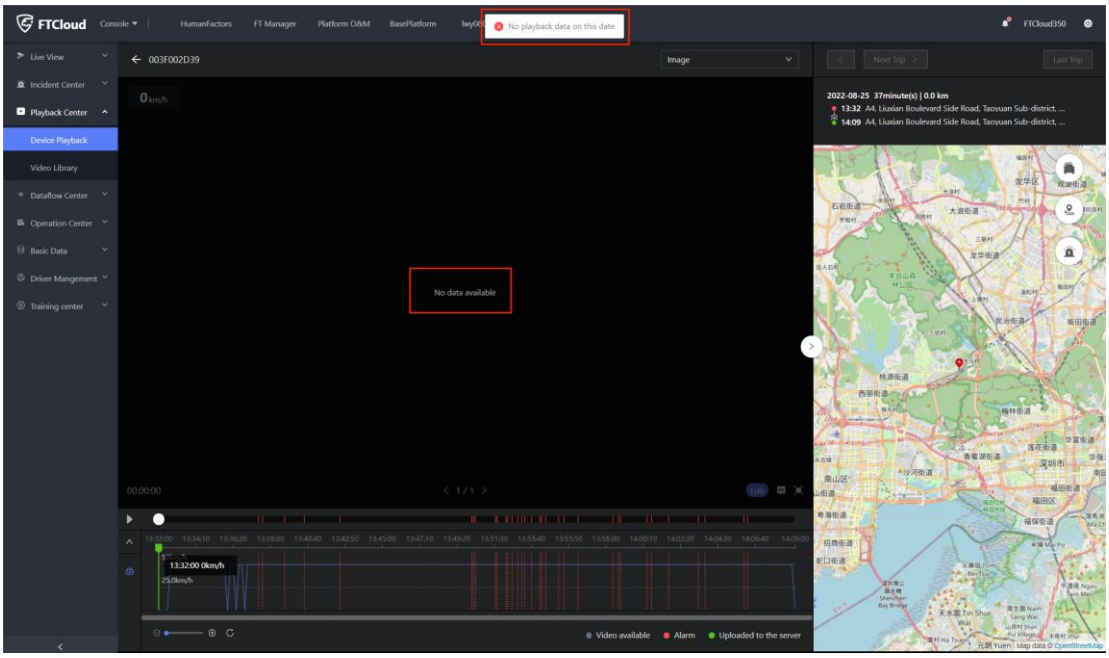
Online Status	At the top of the video, select **Video** from the drop-down options as the play mode	At the top of the video, select **Image** from the drop-down options as the play mode
		
Offline status	Not available	When the device is offline, the default play mode is **Image**.
		

b) Play progress bar

	Video Play Mode	Image Play Mode
Differences	White indicates video available, red indicates alarm, and green indicates that this video has been uploaded to the server.	Only the red alarm points are displayed on the progress bar.
	The video duration, Automatic Shut-off, and function buttons including **Edit**, **mainstream/sub stream selection**, **play speed**, **settings**, and **full screen** are displayed above the progress bar.	**Automatic Shut-off** is no longer displayed above the progress bar, and only the video duration is displayed; for the function buttons, only **Edit**, **channel selection**, and **full screen** buttons are displayed.
	Click the drop-down button below the play button, you can select to display the channel or the speed curve.	Click the drop-down button, only the speed curve is displayed.
		
Si	The timescale is displayed below the progress bar.	

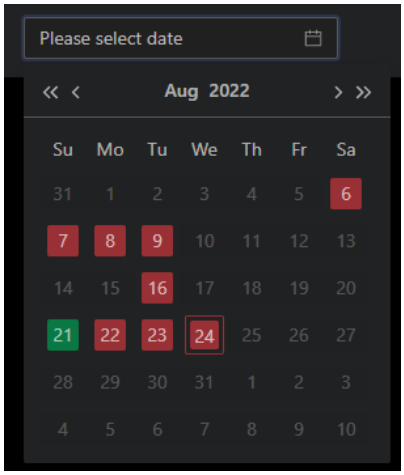
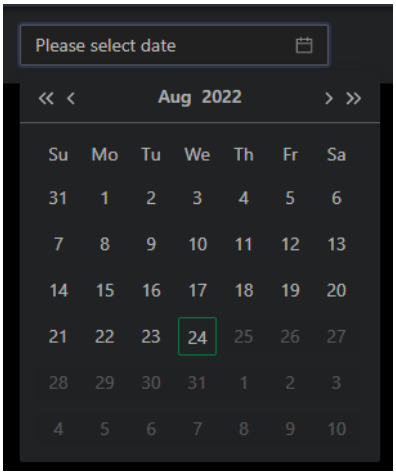
	There are zoom-in, zoom-out, and reset buttons below the progress bar. After zooming in, a horizontal scroll bar appears below the time scale, and you can drag it left or right to view the content within the complete time range; click the **reset** button to return to the initial status.

c) Play

	Video Play Mode	Image Play Mode
Differences	Play the video of each channel. If there is no video channel, the screen is not displayed.	Play all uploaded pictures of each channel at an interval of 3s. If there is no picture, **No pictures** is displayed.
		
Similarities	If there is no video data, the default play mode is **Image**. If there are no uploaded pictures, a pop-up window prompts **No playback data on this date**, and the page displays **No data available**;	
		

d) Device and date selection

(Available only when the track playback page is entered from the menu)

	Video Play Mode	Image Play Mode
Differences	You can select the date with data records. Red indicates that there is an alarm on that day, and green indicates that there is no alarm on that day.	The earliest selectable date can be half a year ago, and each date within half a year can be selected.
		
Similarities	Same vehicle selection function.	
		

2. Others

1) Interaction of functions

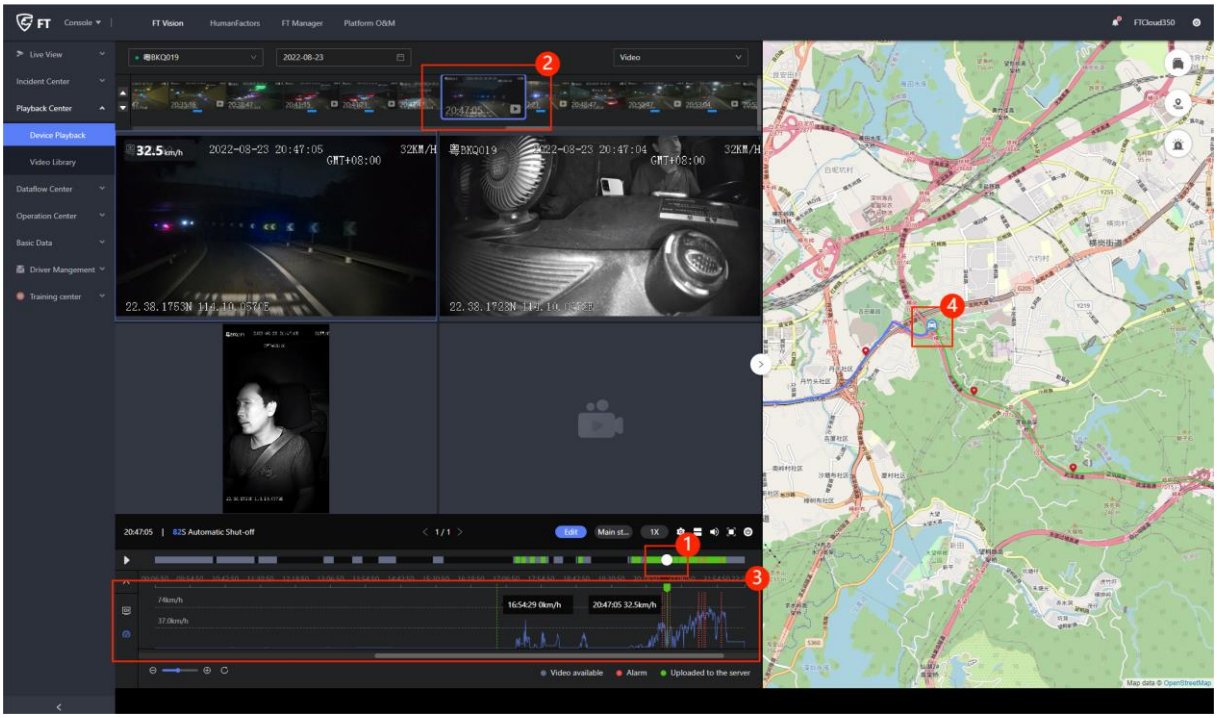
Videos, thumbnail, play progress bar, channel, speed curve, and track on the map is available to be changed along. At the same time:

① The video screen is displayed corresponding to the progress bar;

② The thumbnail is highlighted;

③ Channel and speed curve: Hover over with your mouse to display the baseline, and click the mouse to position the baseline, which is displayed interactively with the video, thumbnail, progress bar, and track line;

④ The moving vehicle position (blue car icon) is displayed interactively with the track line.



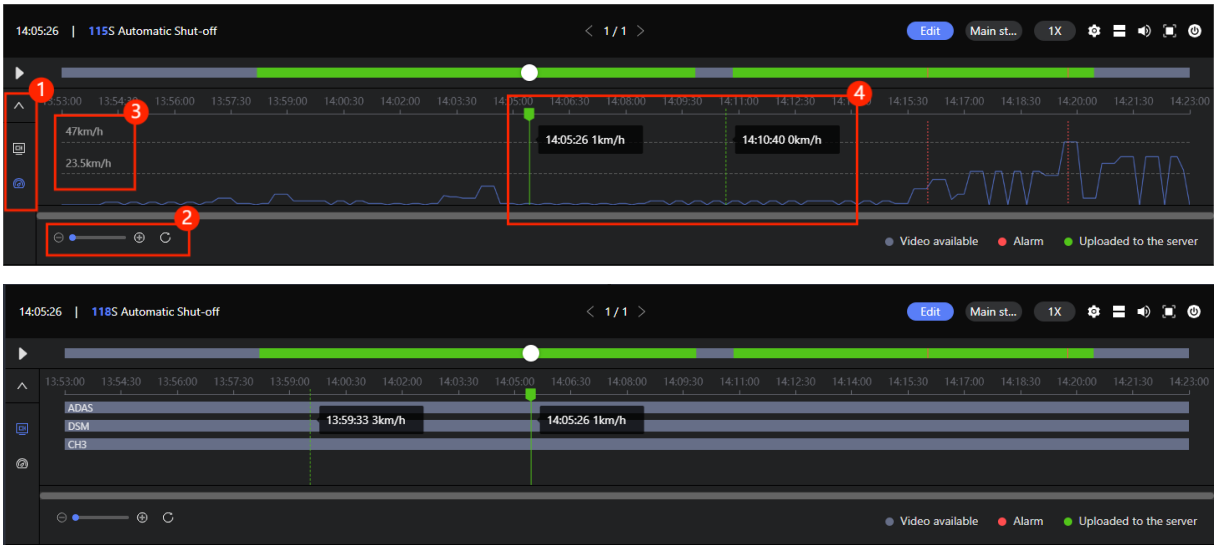
2) Channel and speed curve

① Click the drop-down option and click the channel icon or the speed curve icon to display the channel or the speed curve (when the device is offline, only the speed curve is displayed);

② Click the zoom-in, zoom-out, or reset icons below, and the channel, speed curve, and play bar are zoomed in, zoomed out, and reset together as a whole;

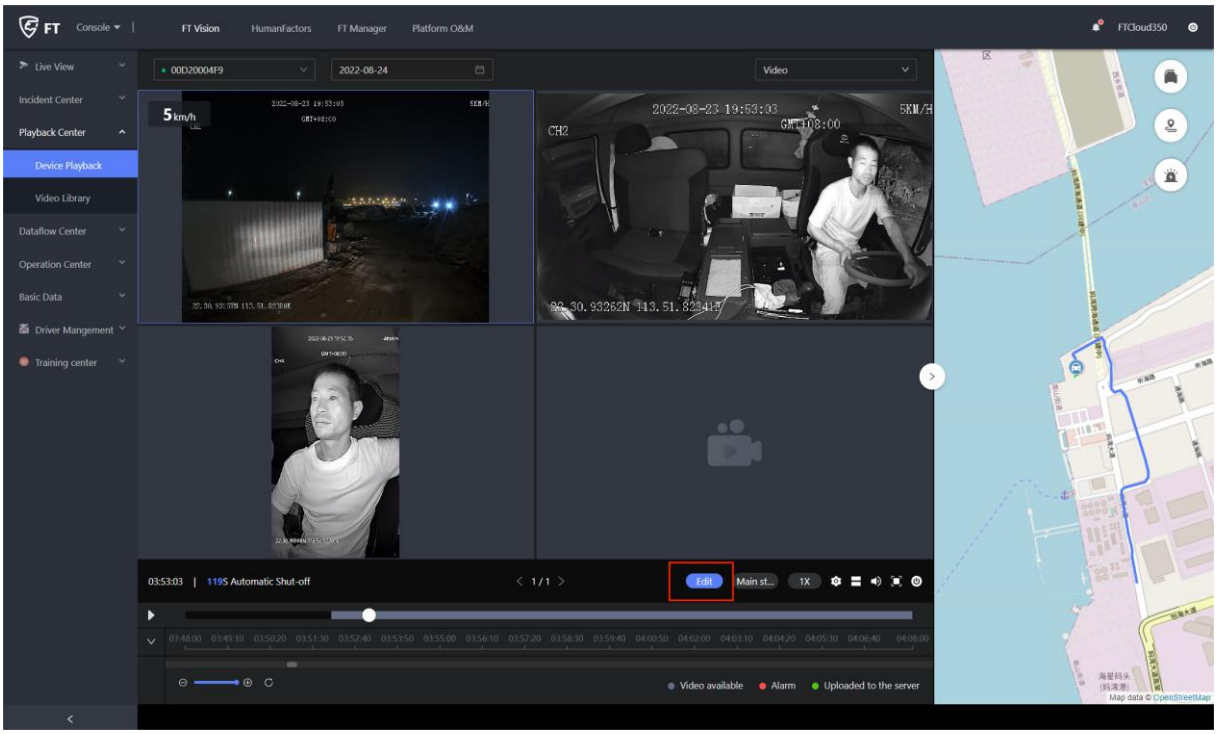
③ The horizontal axis of the speed curve displays the speed values (the maximum speed value and intermediate speed value);

④ When hovering over the channel or the speed curve with your mouse, the alignment line, time, and speed values are displayed. During playing, the baseline and the corresponding values are also displayed.

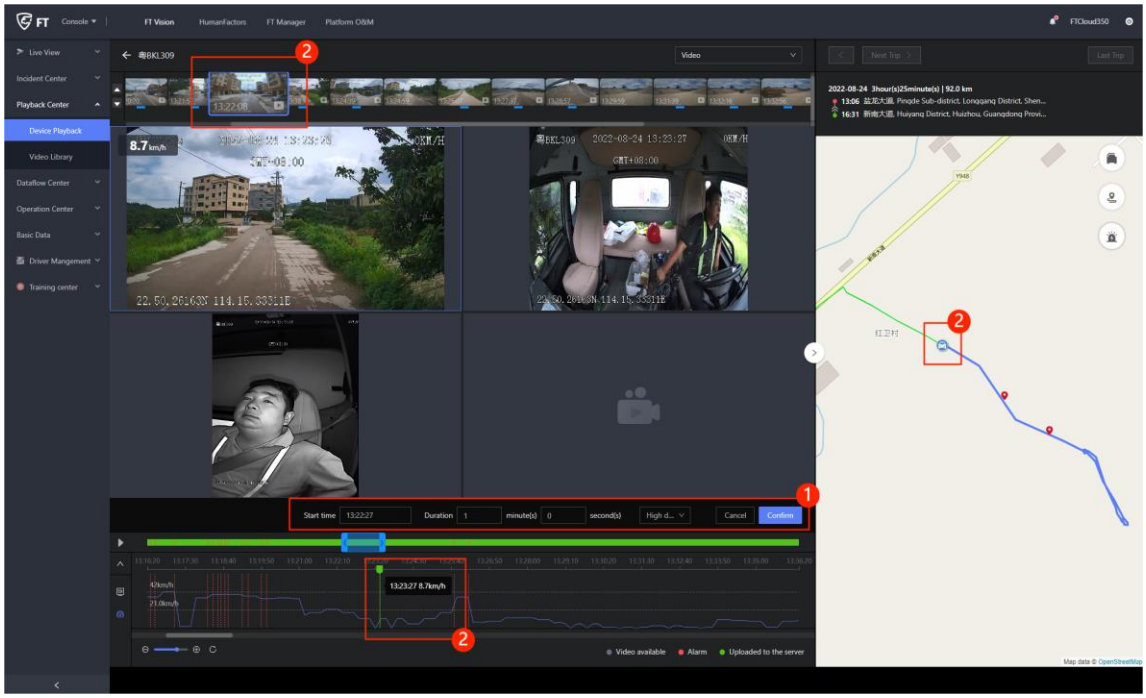


2.2.3.4 Edit

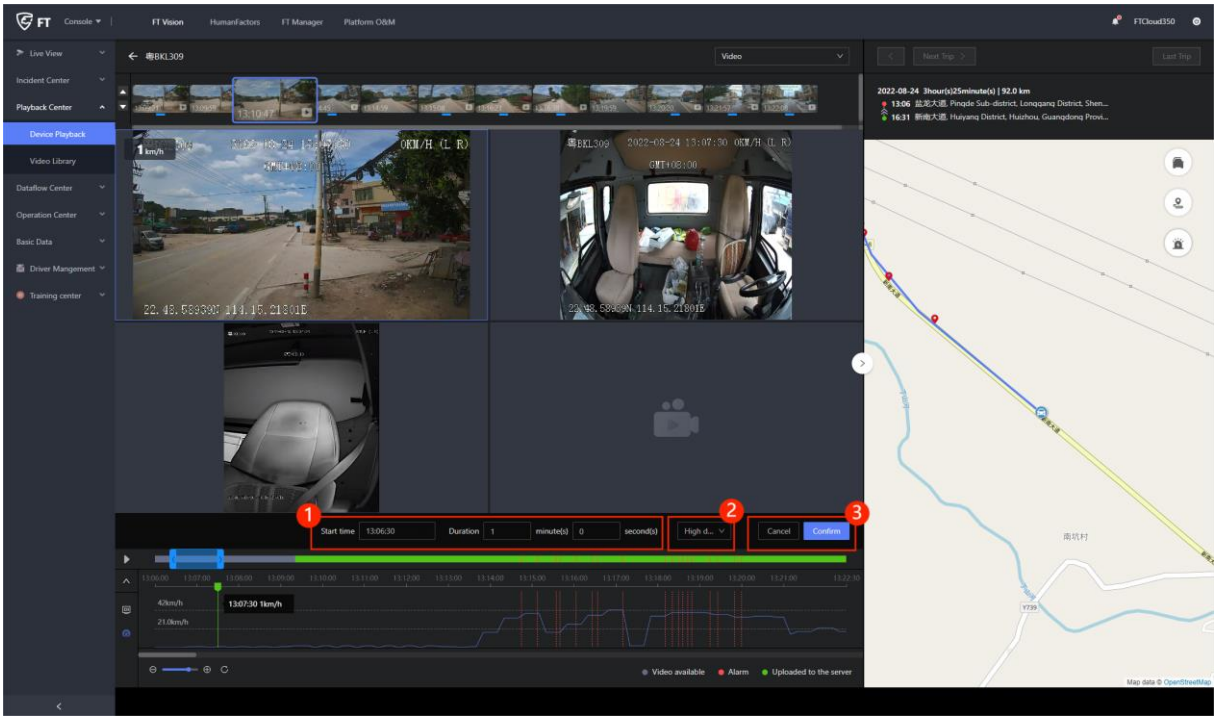
On the **Device Playback** page, click **Edit** to save the clip you need. Both the **Video** play mode and **Image** play mode support the editing function. Under the edit status, the picture of the editing end position is displayed. If there are no pictures of this frame uploaded, **No pictures** is displayed.

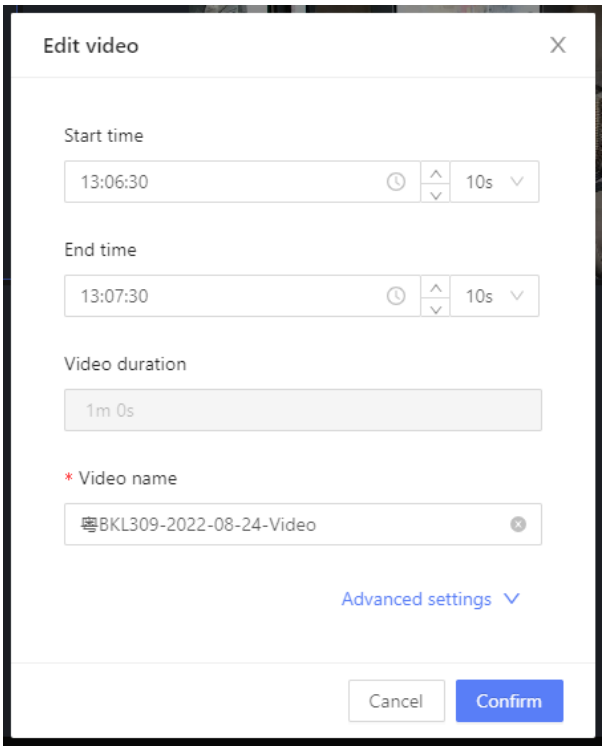


1. Operation Area
   a) Under the edit status, the **Start time**, **Duration**, definition options, **Cancel,** and **Confirm** buttons are displayed above the progress bar;
   b) Under the edit status, the linkage rules remain normal, and all other buttons are disabled.



2. Interaction Rules
   a) The default duration of the edit bar is 1 minute. You can drag left or right between the start and end positions to adjust the duration;
   b) Click any position on the progress bar to locate the edit start position, and the duration is reset to 1 minute;
   c) Under the edit status, the progress bar can also be zoomed in, zoomed out, and reset.
3. Operation Buttons
   a) The start time and edit duration can be modified manually;
   b) Definition selection is supported;
   c) Click **Confirm** to display the pop-up window of saving the edit, and click **Cancel** to return to the original playing status;

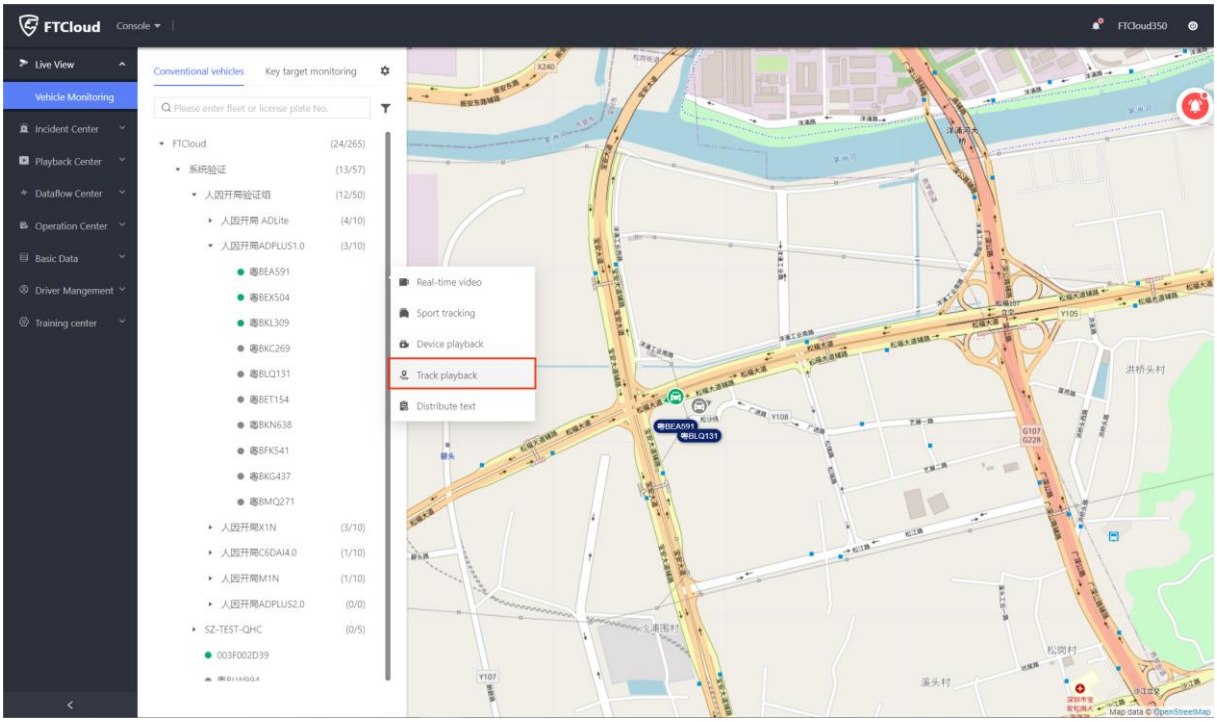




2.2.4 Track playback

On the **Vehicle Monitoring** page, select the specific vehicle, and click **Track playback** to view the trip history of the vehicle. That is, you can view the driving track, driving hours and distance, time and position of start/end point, parking information, speed curve, etc. of the specific vehicle within the

set date, and can also view the information such as the alarm type, time, and vehicle position when the vehicle triggers an alarm.



2.2.4.1 Component

① The return button and the license plate number of the selected vehicle;

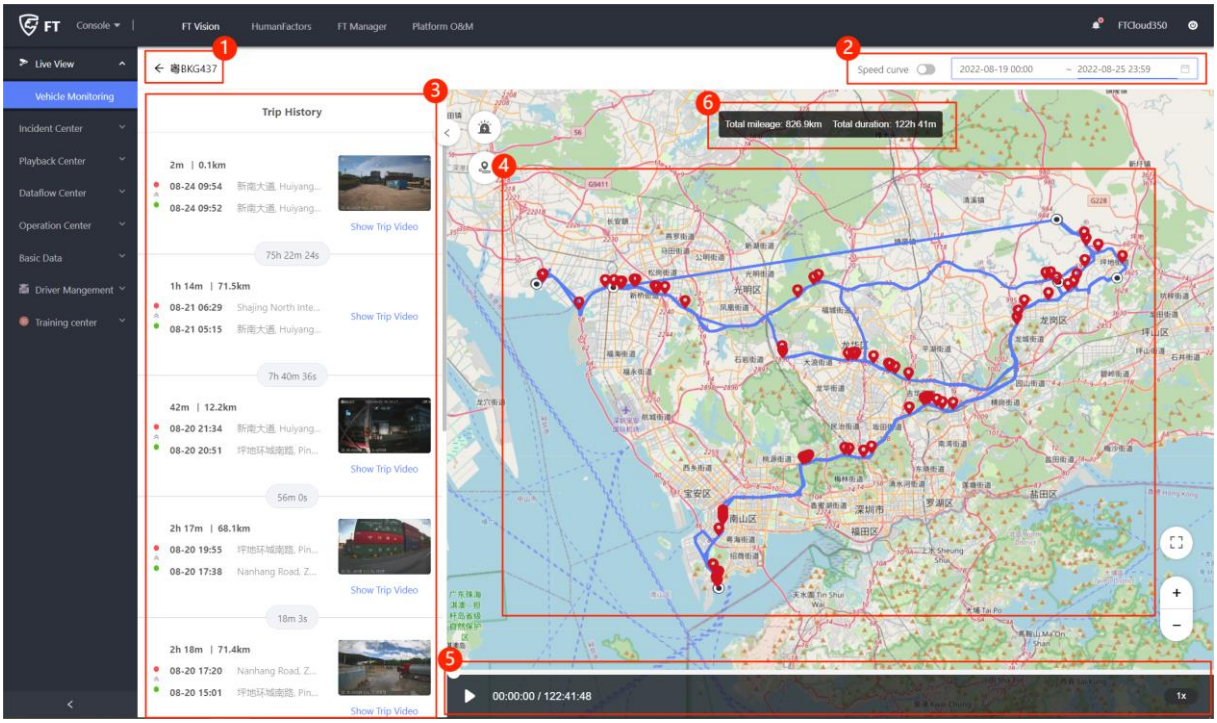
② The **Speed curve** enable/disable button and time filtering;

③ The list of **Trip History**;

④ The tracks of selected trips is displayed on the map;

⑤ The progress bar corresponding to the trip is displayed at the bottom of the map (when there is no trip data, the progress bar is not displayed);

⑥ **Total mileage** and **Total duration** are displayed at the top of the map (only when all the trips have been completed, i.e., there are no ongoing trips).



2.2.4.2 Function description

① The trip card in the list of **Trip History** displays the trip information. Click one trip in the list, the corresponding track will be demonstrated on the map;

② Click the **Show Trip Video** button to display the **Device Playback** webpage of the selected trip;

③④⑤⑥ The track line displays the parking point , the alarm , the current position if the vehicle is online . When playing the track, user can see the vehicle moving along the track .

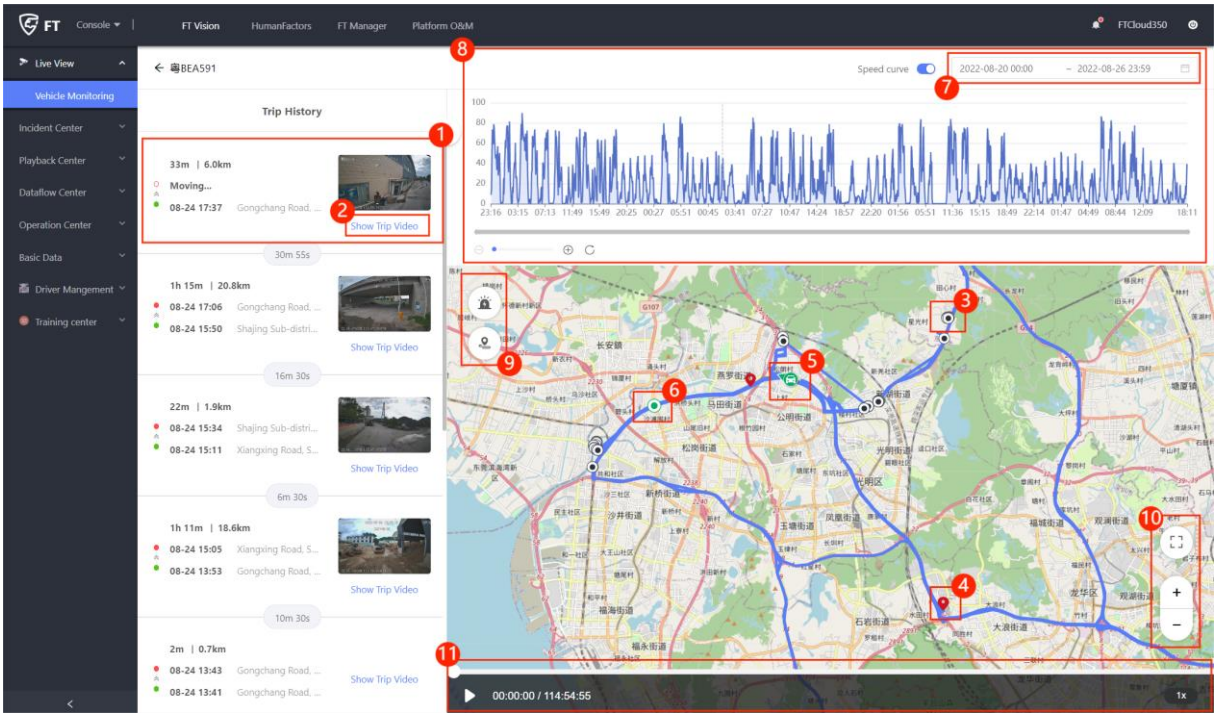
⑦ Time filtering, which can be used to select the start/end date and time of track playback that you want to view, support up to recent 7 days searching;

⑧ Speed curve, which can be displayed of the selected trip, and support to zoom in and out the curve partially;

⑨ Alarm filtering and track export functions. The function names can be displayed if you hover over the icon with your mouse;

⑩ Full screen, zoom-in, and zoom-out functions;

⑪ You can operate the progress bar to play, stop, or terminate the vehicle track of the corresponding trip and adjust the play speed.



2.2.4.3 Introduction to Each Module

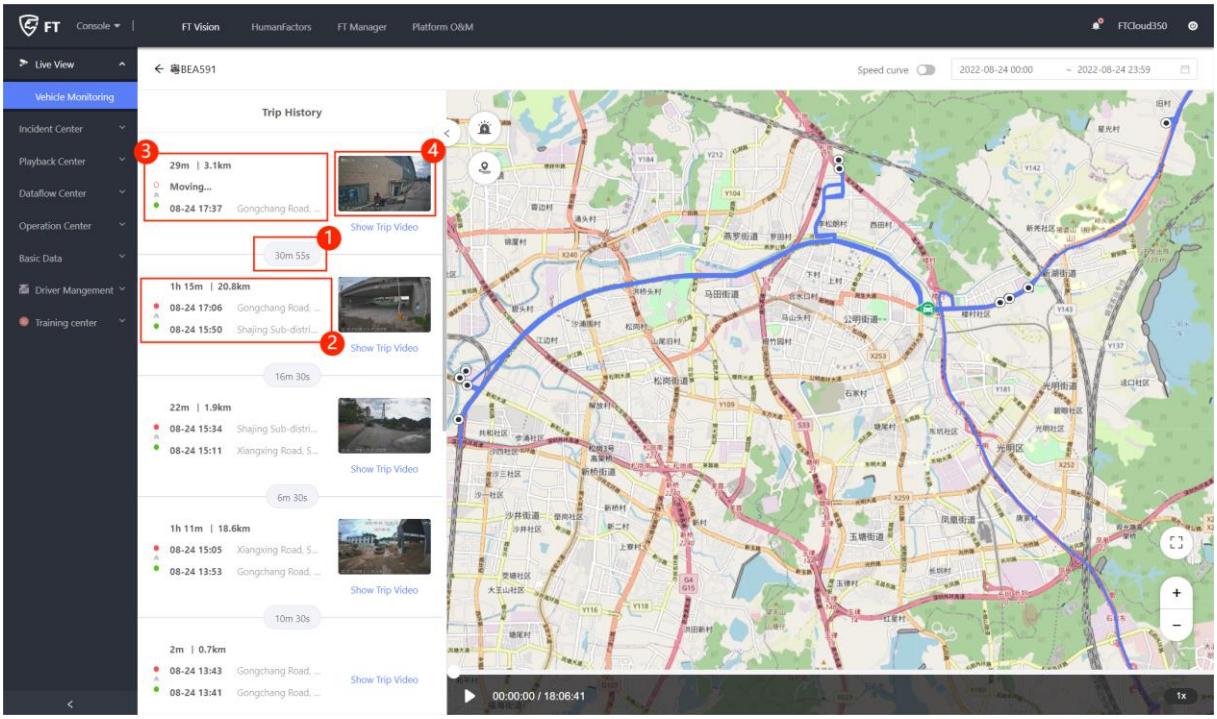
1. Trip Card and Track on the Map

① Parking duration is displayed between every two trip cards.

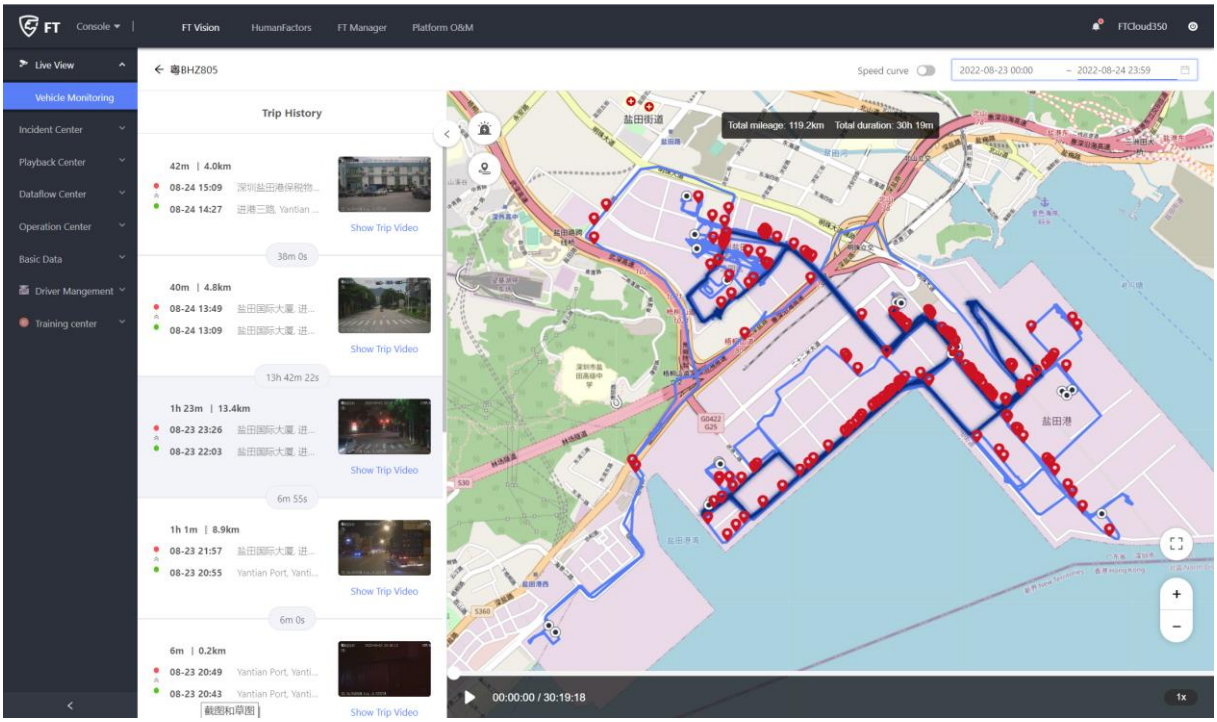
② For a completed trip, the green spot marks the start time of the trip, the red spot marks the end time of the trip, and from bottom to top, the start time and position of the trip, the end time and position of the trip, and the driving hours and distance are displayed in turn.

③ For an ongoing trip, the red circle marks driving status as ‘moving, and the first line displays the driving hours and distance from the start time to the current moment.

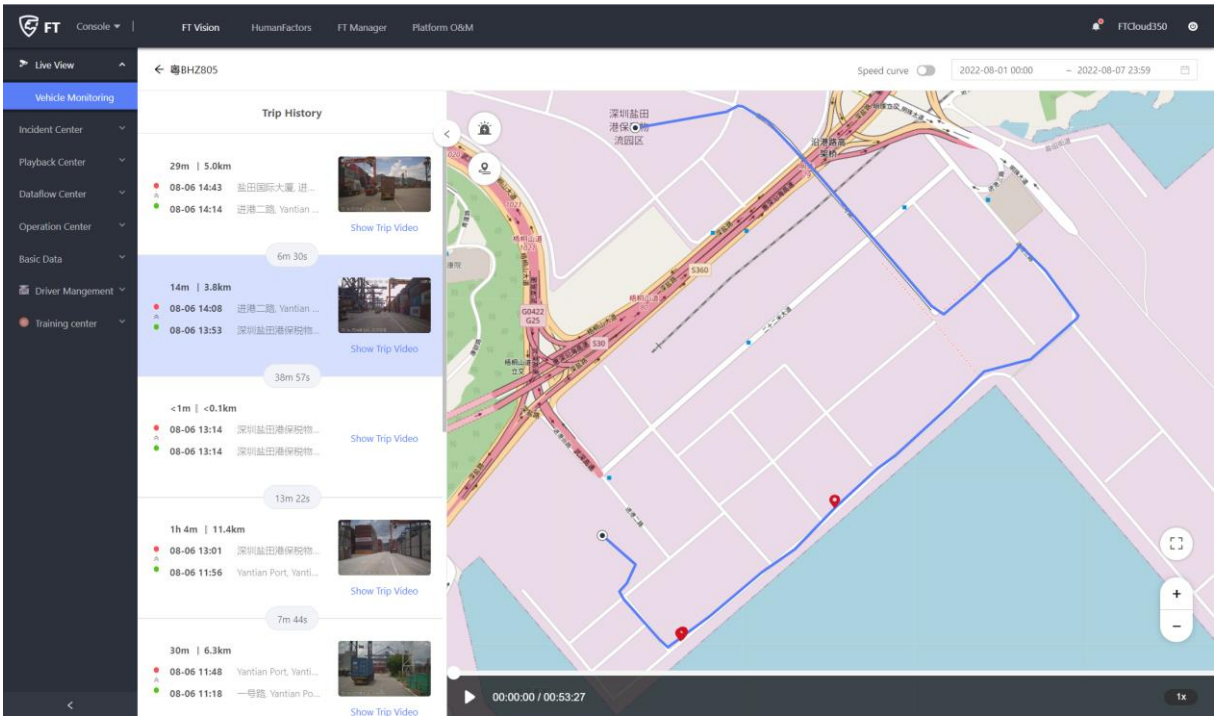
④ The right side of the trip card displays the snapshot of the trip, the parking snapshot will be shown as highest priority, followed by other types of snapshots. If no images are displayed, there are no snapshots uploaded.



⑤ The total trip track is displayed by default. Hovering over the sub-trip with your mouse can identify and distinguish the corresponding track.

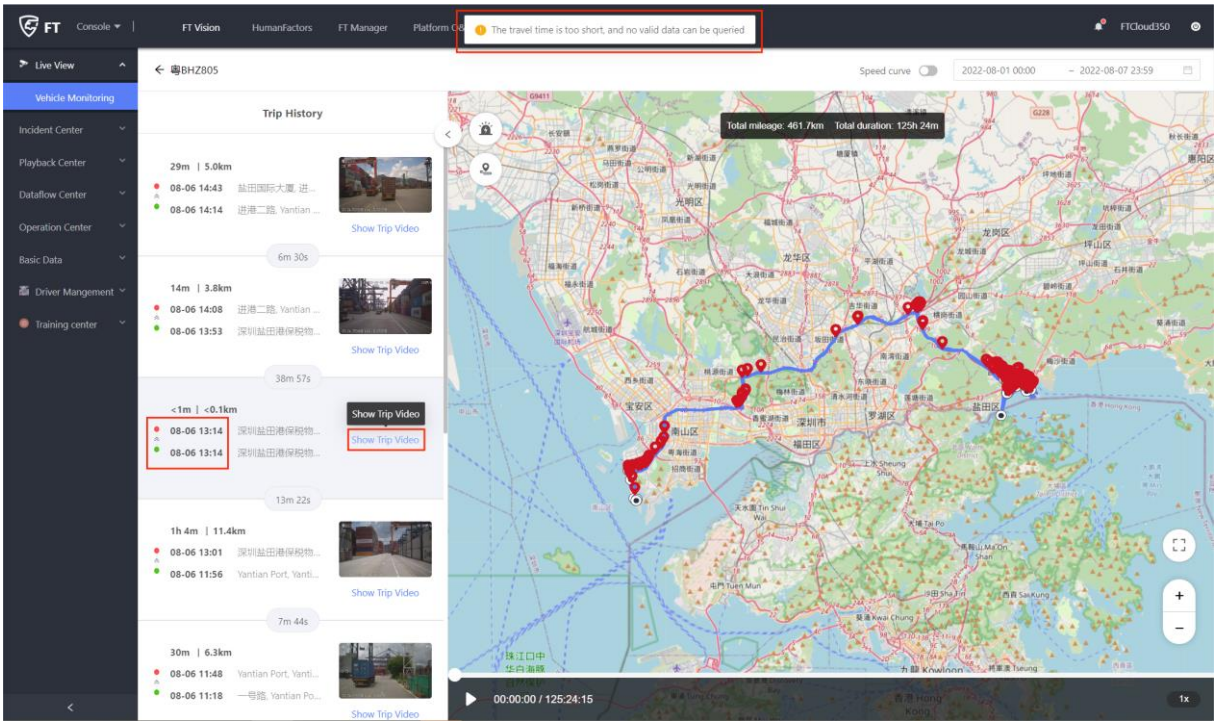


⑥ Click a sub-trip, only the selected trip track is displayed, and the map is appropriately zoomed in so as the trip is in the middle of the map. Click the selected sub-trip again to return to the default status of displaying all the trips of this filtered time period.



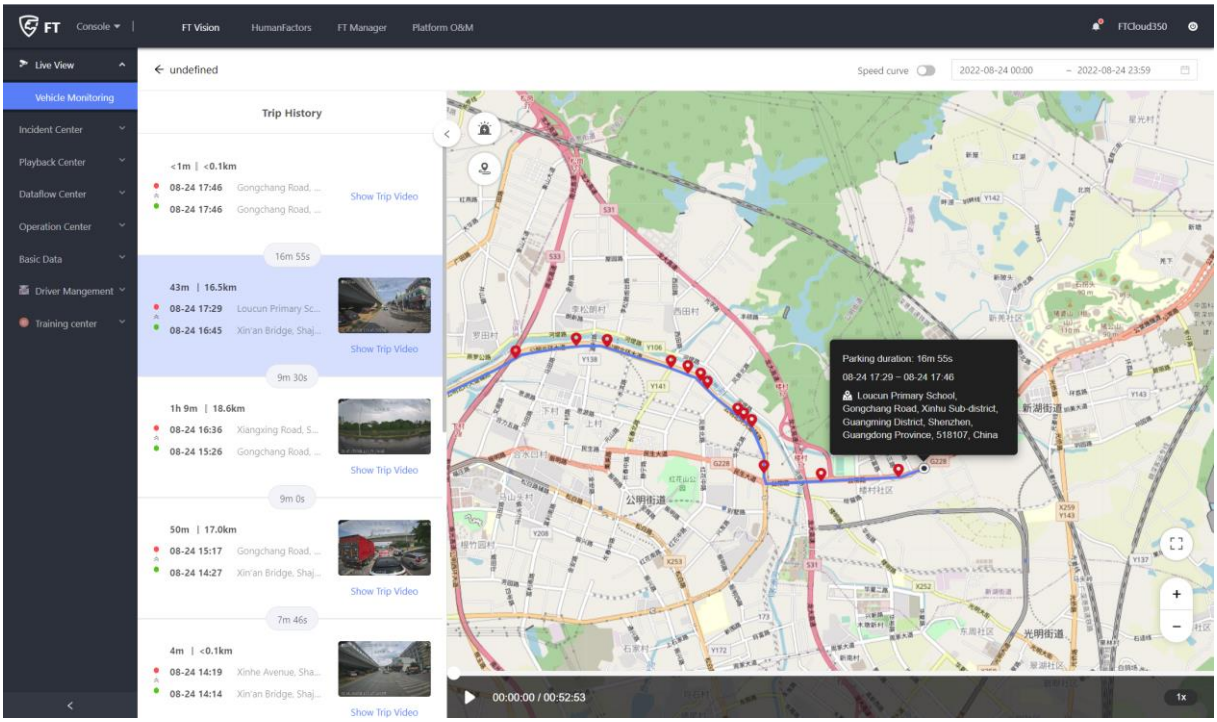
2. View Video Playback

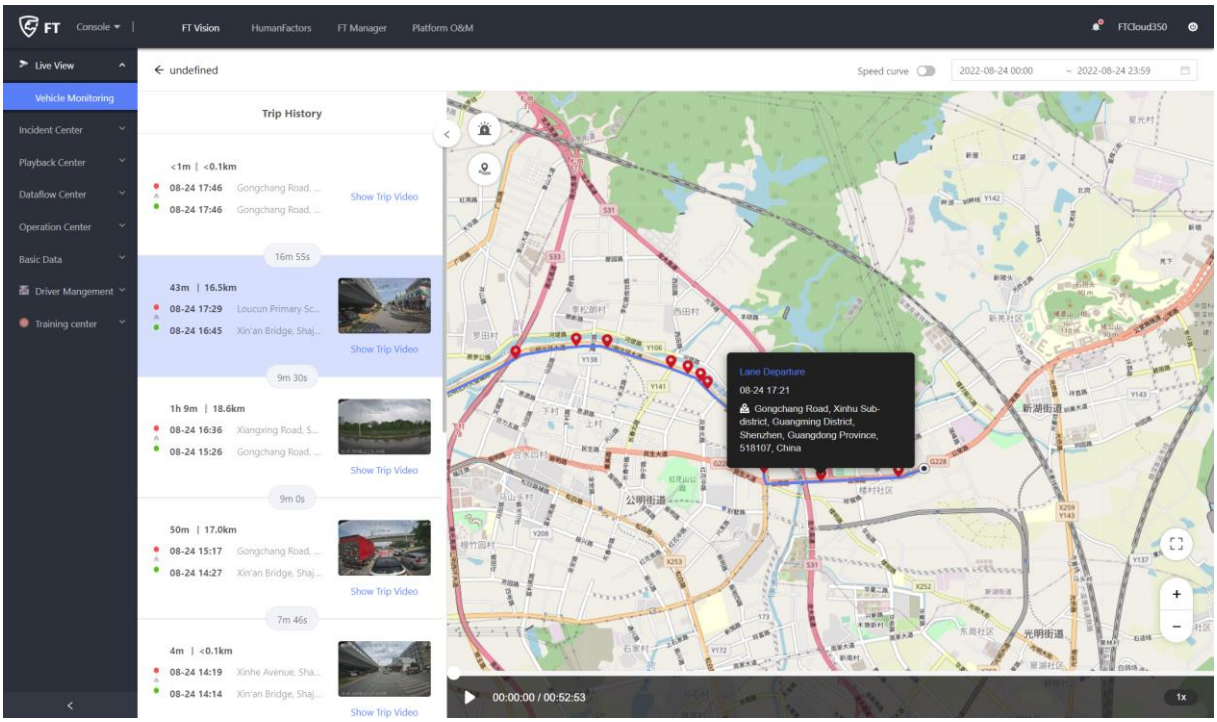
Click **Show Trip Video** to display the **Device Playback** page of the selected vehicle. If the trip start time is the same as the trip end time (i.e., the trip duration is too short), there is no valid data, and a pop-up window prompting **The travel time is too short, and no valid data can be queried** is displayed on the page.



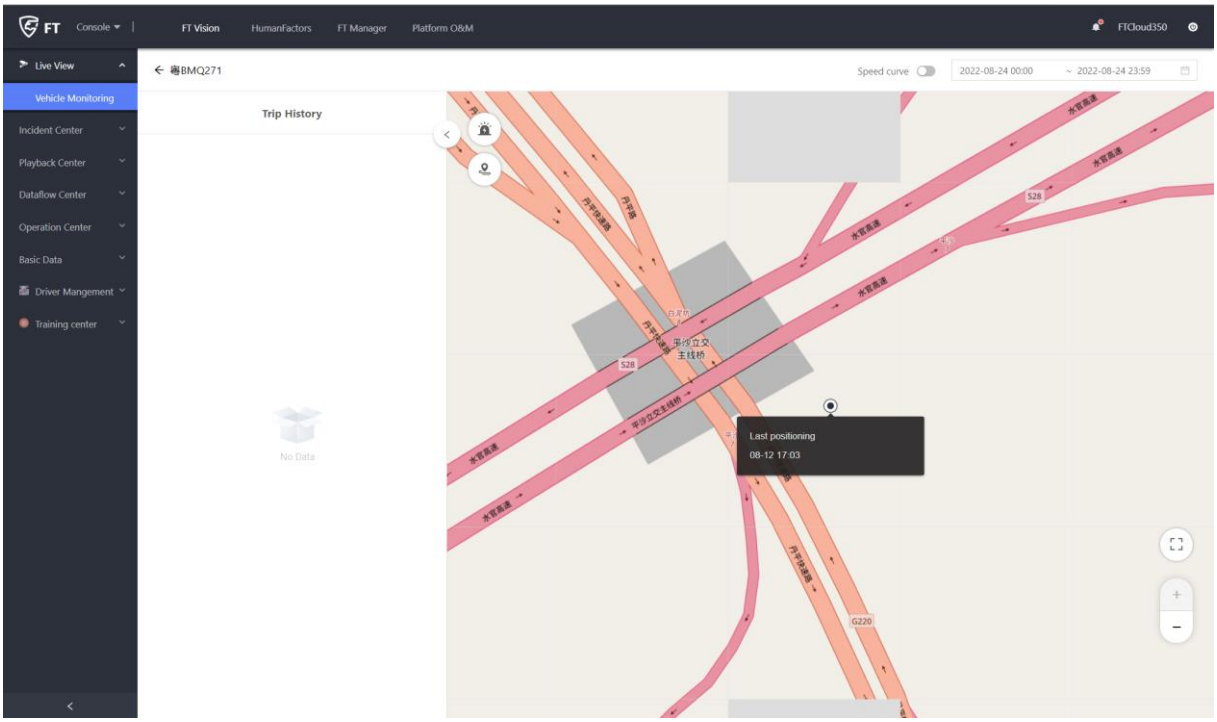
3.Parking Point and Alarm Point

① Click the parking point and the alarm point to display the parking and alarm information.



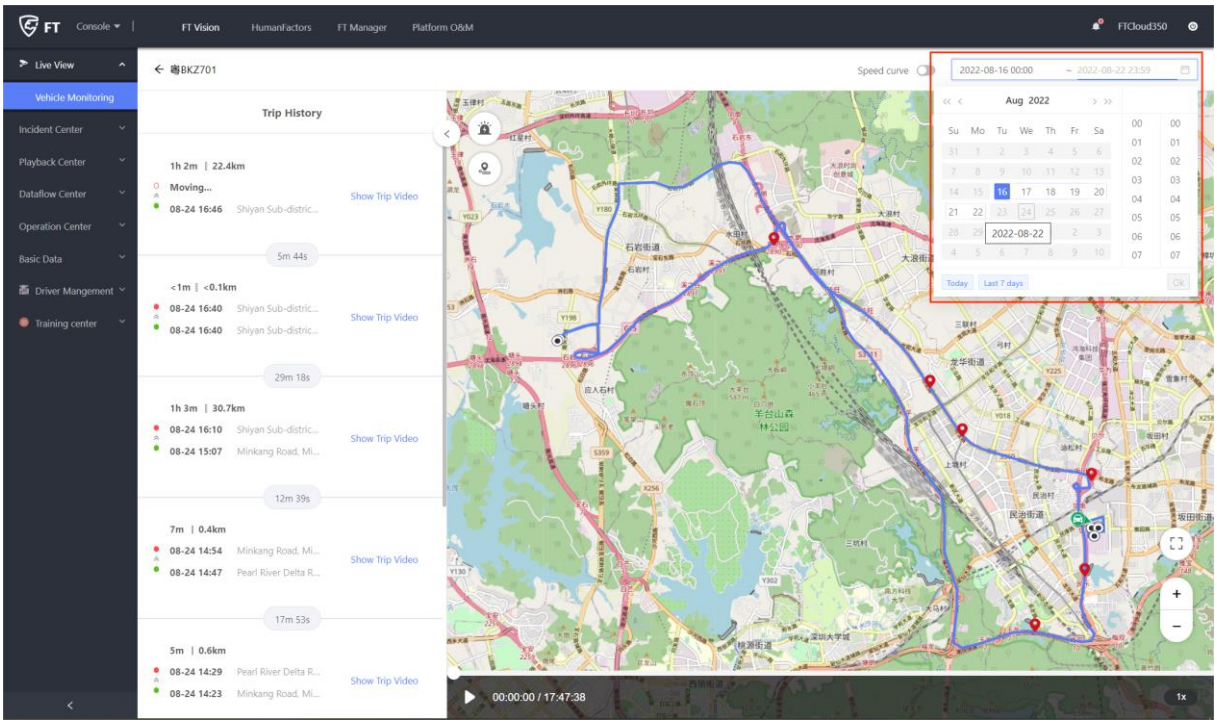


② In case of no trip data for the selected time period, the current date is included, the last positioning information of the vehicle is displayed; if not, the vehicle positioning information is not displayed.



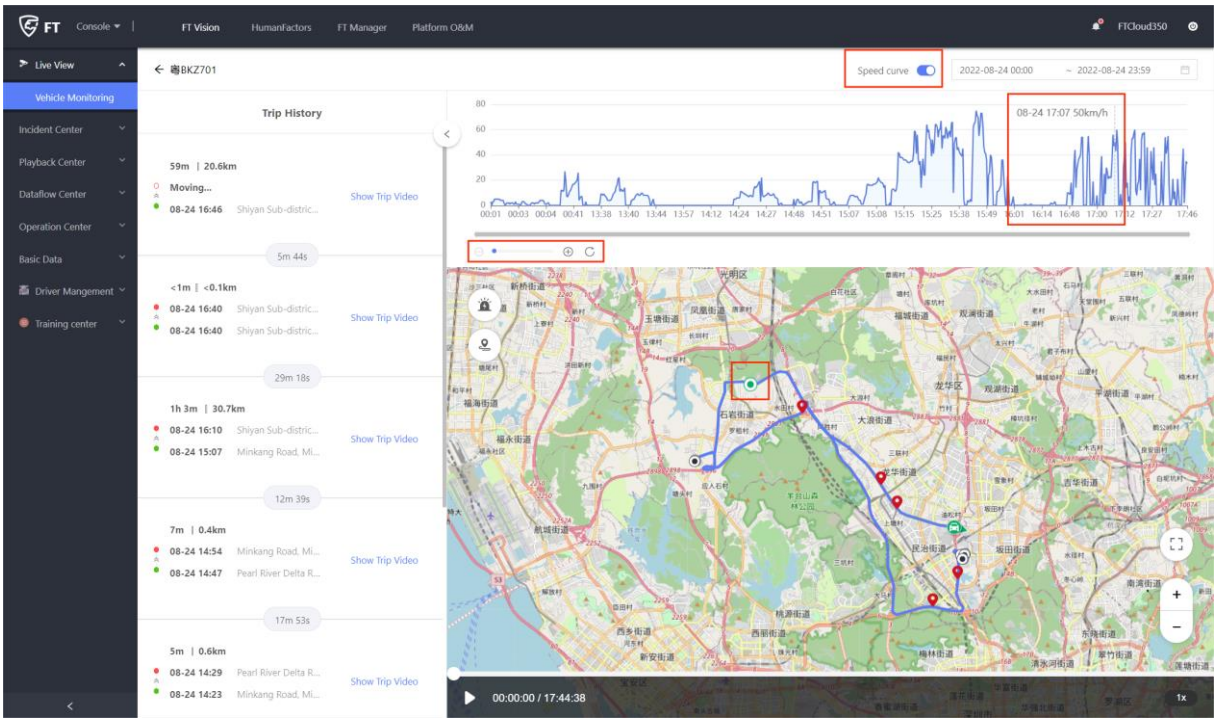
4. Time

Click the time input box, select the start/end time respectively, and click **Ok** to confirm the selection. The current date is selected by default, the start time is 00:00 by default, and the end time is 23:59 by default. The maximum span from the start time to the end time is 7 days.



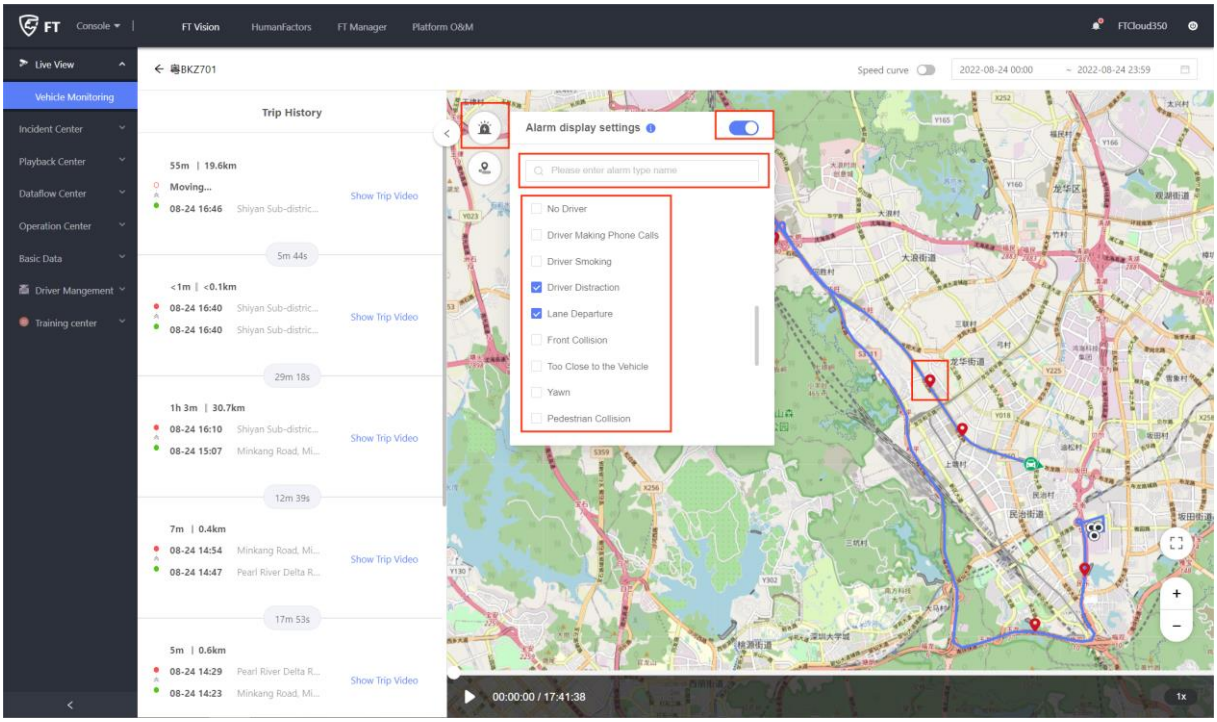
5.Speed Curve

Enable the **Speed curve**, the speed curve will be dropped down, which can be zoomed in and out. Hover over with your mouse to somewhere on the speed curve, the track playing will be jumped to the point consisting with the selected point in the above speed curve.



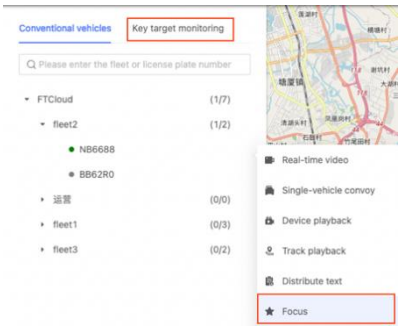
6. Alarm Display Settings

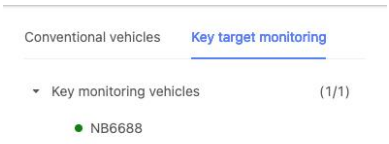
Click the alarm filter button to display the **Alarm display settings** pop-up window. Click the button in the upper right corner of the pop-up window to enable alarm display. When the alarm display is on, you can select the alarm type to be displayed. On the map, the alarm points are displayed as  on the track line, or you can search for the alarm type in the search box.



2.2.5 Focus

Users can focus single vehicle by market it. When any vehicle is included in the special focus list, its information will be synchronized to the “Key target monitoring” above, where users are able to quickly locate the vehicle in focus.





To remove any vehicle from the special focus list, users just need to simply click “Unfocus” at the same place.

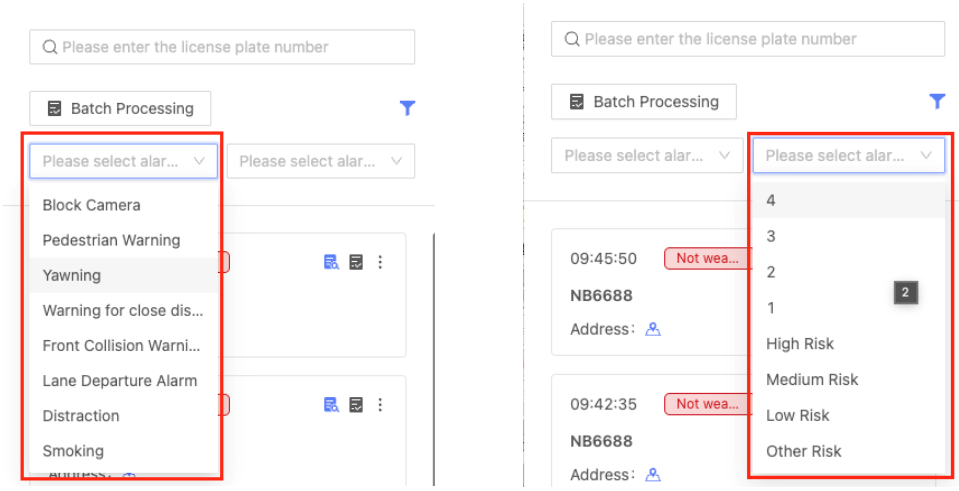
2.2.6 Alarm list

Alarm bell is an important feature in the real-time monitoring scenario, which enables users to perfect the business scenario of safety supervision. The real-time alarm of Alarm bell will help safety supervisors to quickly understand the current safety operation of the fleet. Timely and effective intervention for drivers who frequently engage in dangerous driving behaviors. This function can be used in conjunction with the alarm notice enhancement so that users can quickly identify high-risk drivers.

In the alarm bell list, all newly generated alarms will be updated and shown at the top in a timely manner, with the alarm vehicle, alarm type and address where the alarm occurred. Users may click to process a single alarm or Batch Processing to process all the alarms in the current list.

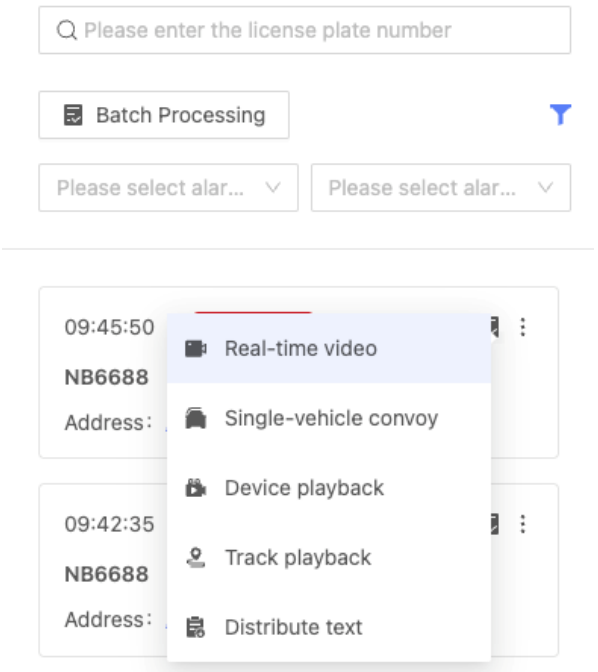
1. Search

Users can implement any search with alarm types and alarm levels to get a targeted view of the alarms related to the fleet.



2. Additional functions

Users may click to obtain the details of alarm, or check other information about the current vehicle with other functions. The functions include real-time video, single-vehicle convoy, device playback, track playback and distribute text.



2.3 Playback center

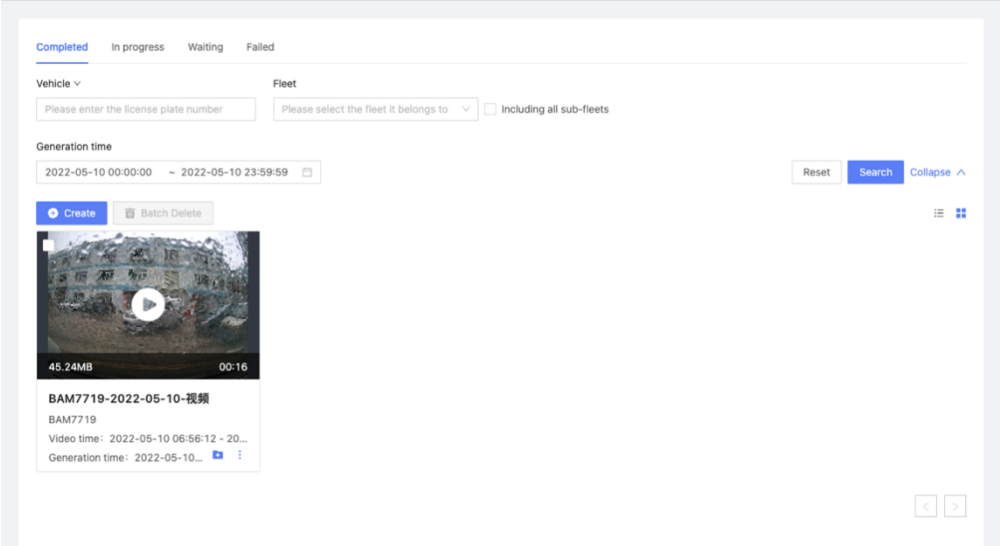
The module Playback Center is mainly used to enable users to remotely watch the history videos of any vehicle and to edit the videos. The edited video can be quickly searched out in the video library and applied to users' business. The edited video can be used for the trainings for drivers, and for accident avoidance. This module is the core scenario of FT Vision.

2.3.1 Device playback

See Section 2.2.3 for details of functions

2.3.2 Video library

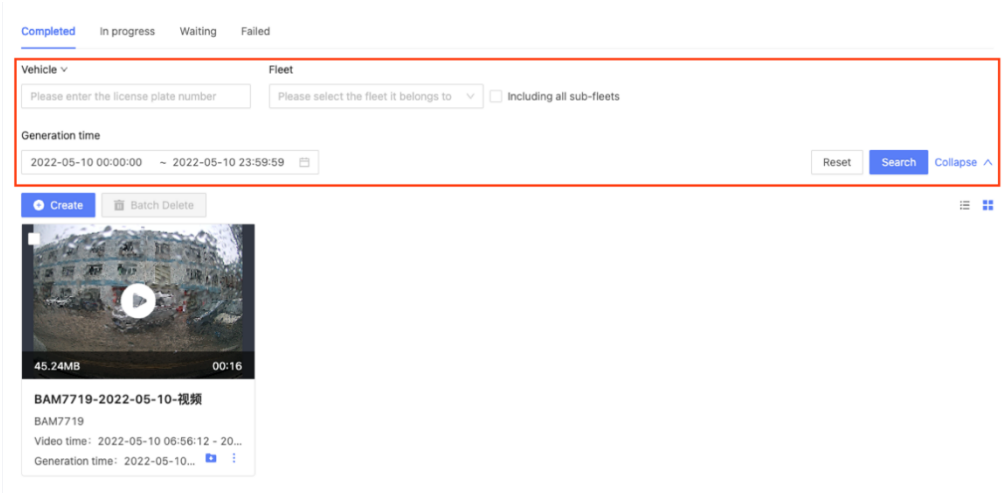
Video library is a library for storing the videos involved in manual request for download. All the videos involved in manual request for download, edited and recorded in real time will be stored in this module.



1. Video search

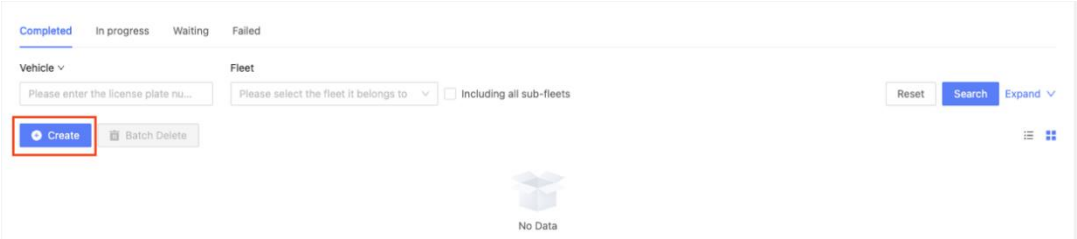
There are three elements in this module which will help users quickly search for the desired videos. Users can search any desired video by vehicle, fleet and time, and then proceed to the next step of the business process.

Note: The date for time range will default to the date of the platform.



2. Video request of off-line device

This function mainly helps users to solve the problem of not being able to get and edit the videos related to any off-line device. Click the 'Create' icon on the page to create a video download task.



After entering the page for creation, users can, according to actual needs, apply for video or black box data of a certain vehicle for a certain short period of time. The two types of information can be checked and downloaded at the same time. The resolution and channels of any video can also be selected according to actual needs. Network mode indicates the network state, in which the device involved in a request for video download should perform the download, including: Wired network, wireless network, and WIFI. Download mode indicates the mode of video download, which is now divided into high-speed download and low-speed download. The two download modes determine the speed of transmitting videos from the device to the platform.

The platform will notify the device to turn off the camera during any high-speed download and all the bandwidth will be allocated for the video transmission to the platform. The camera will resume to work normally after the video transmission is completed.

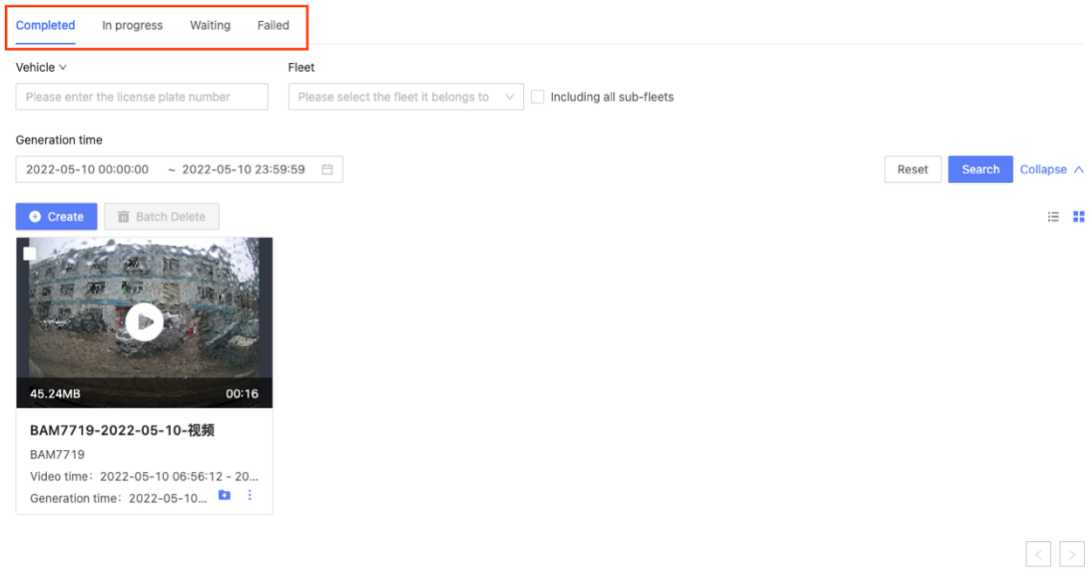
Scenario 1: If users makes a transmission reservation at 8:00 A.M. on Mar. 20, 2022 for the video with a time range of 15:00-16:00 on Mar. 20, 2022, then the device will turn off its camera for video transmission at 16:00. If it takes 10 minutes to complete the transmission, the device will not record from 16:00 to 16:10, and after 16:10 the device will resume the recording.

Scenario 2: If users makes a transmission reservation at 18:00 P.M. on Mar. 20, 2022 for the video with a time range of 15:00-16:00 on Mar. 20, 2022, and the relevant device is offline, then the video

transmission will automatically start when the device is online. The video recording function during transmission will be temporarily not available if the high-speed download mode is adopted. If the low-speed download mode is adopted, the video recording function will perform well.

3. Video request status

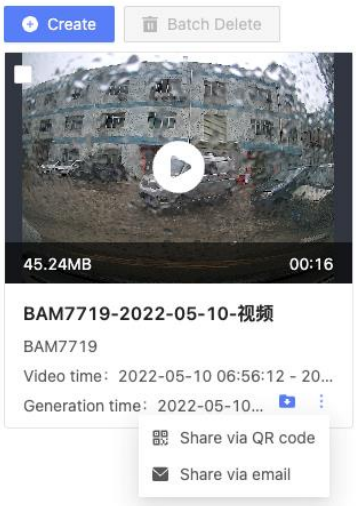
When users manually request a video, or request for download upon completion of video edit, the progress and status of the video download will be classified as: “Completed, In progress, Waiting, Failed”.



4. Auxiliary functions to video library

Videos transmitted completely as requested can also be downloaded to local device for further view or be shared via email and QR code.

Note: Users who want to share videos via email should provide the mailbox and set the template in FT Manager in advance.

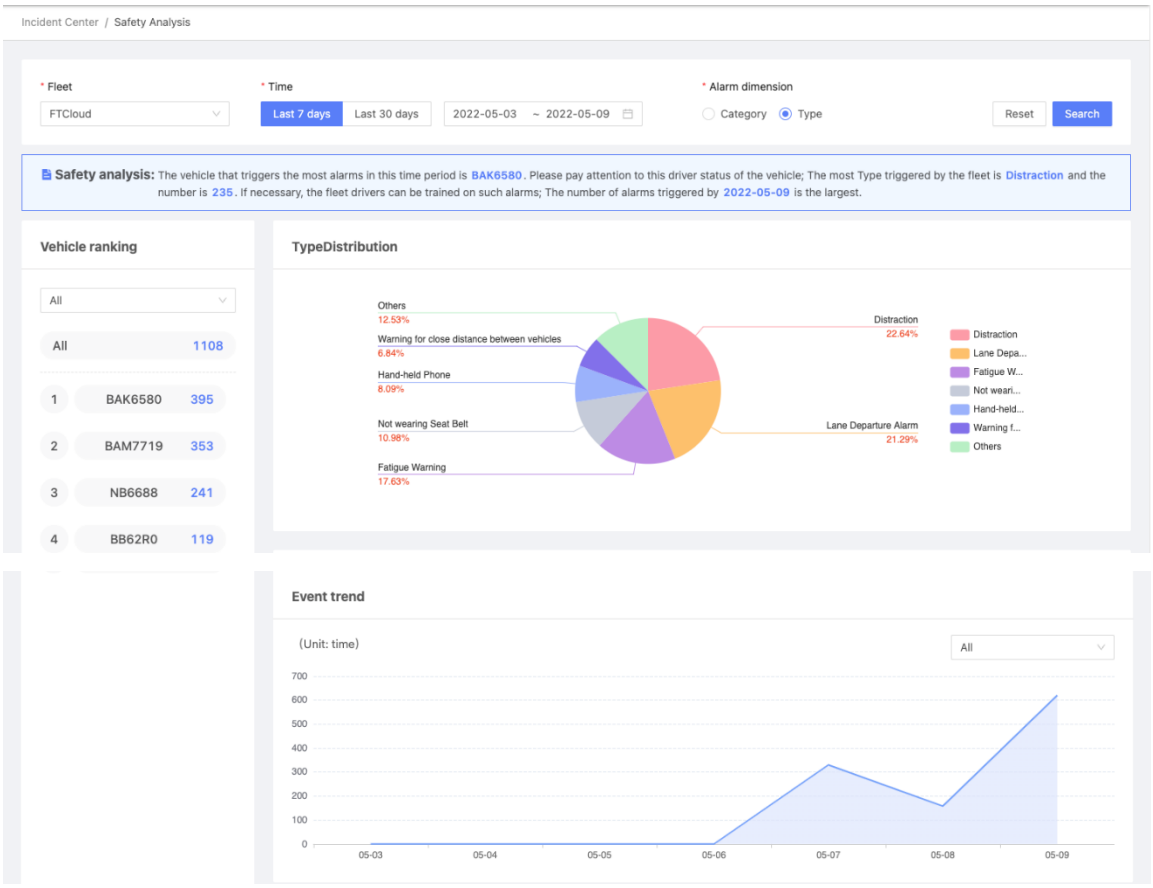


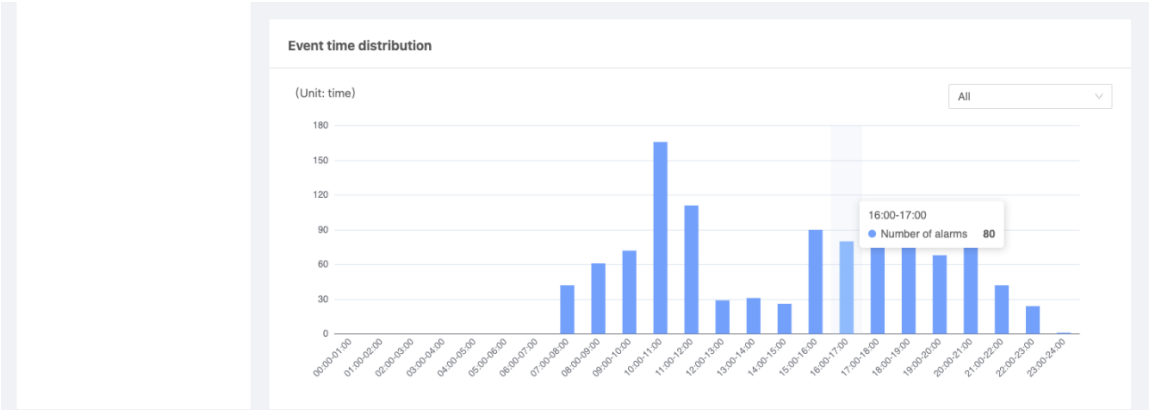
2.4 Incident center

It consists of three main functional modules: Safety Analysis, Alarm Report, Evidence Report. The Center will enable users to quickly and comprehensively understand the operation performance and alarm information of any fleet, and to make take management measures for the safety operations of the fleet.

2.4.1 Safety analysis

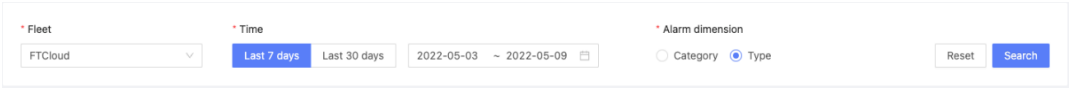
Safety analysis is a module of FT Vision which is critical to the safety operation. Users can preview alarm statistics to understand the safety operation of each fleet and vehicle. Safety operation statistics are divided into the following categories: Vehicle ranking (in terms of the number of alarms), alarm type distribution, alarm category distribution, event trend (by date), event time distribution (daily). All functions in this module will be explained in further detail below.





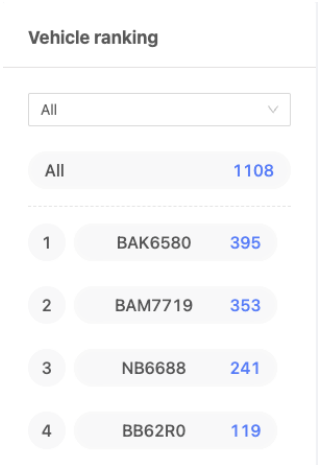
1. Search of operation information

Users can, according to actual business scenarios, search for any safety operation information of different fleets at different time periods. The platform also offers users choices of time range, including “Last 7 days” and “Last 30 days”.

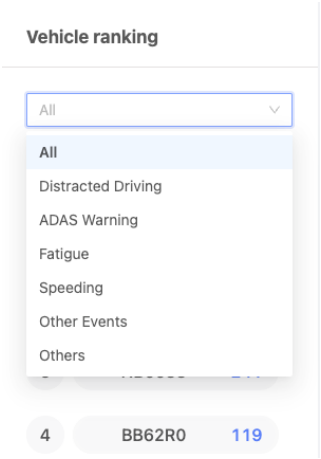


2. Vehicle ranking (in terms of the number of alarms)

After completing a search by time and fleet, users will obtain a ranking result of relevant vehicles in the fleet in terms of the number of alarms. If any vehicle ranks first, it means that the vehicle has triggered the greatest number of alarms during the specific time period, and that the relevant driver or vehicle is of the highest level of safe driving risk in the specific fleet.



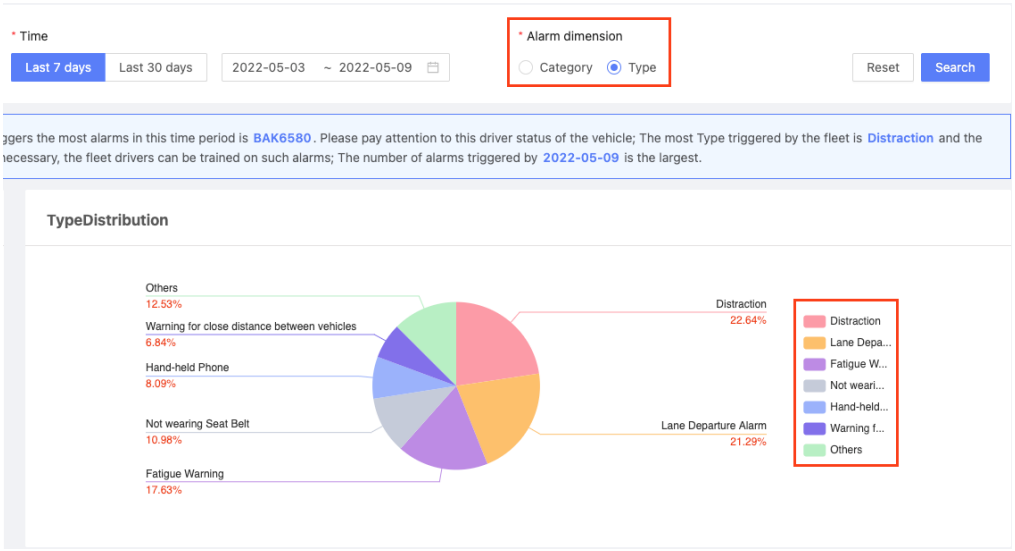
Users are able to define the filtering of alarm types in this module. Upon filtering with a selected alarm type, users will get the number of alarms and overall ranking of all the vehicles in the relevant fleet.



3. Alarm type and alarm user-defined category

User will obtain the distribution of alarm types and alarm categories over a period of time. A pie chart based on the number of alarms in the period will be provided. Users will figure out the main safety focus of relevant fleets based on the quantitative distribution of alarm types and of user-defined alarm categories.

Note: Users need to select the options for search in the red box for retrieval.

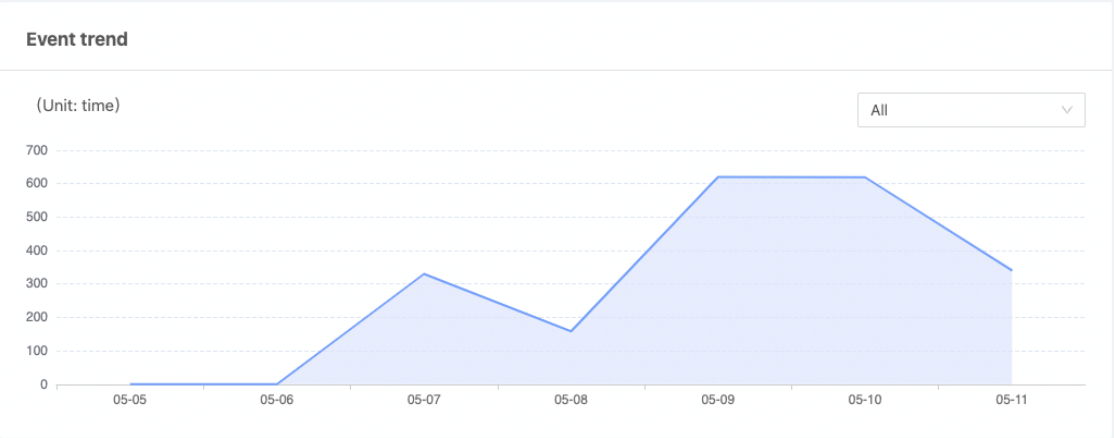


Alarm type: The alarm type is the default alarm name of the platform, and the definition of its name is mainly subject to the industry standard. Alarm types generally include: lane departure, distraction, fatigue warning, etc.

Alarm category: The alarm category is obtained based on the alarm type by users, taking into account the understanding of alarms and actual business scenarios. Users can classify all alarms generated by ADAS into one category and name it, or classify and name the alarms generated by DSM. The setting of alarm categories should be conducted in FT Manager.

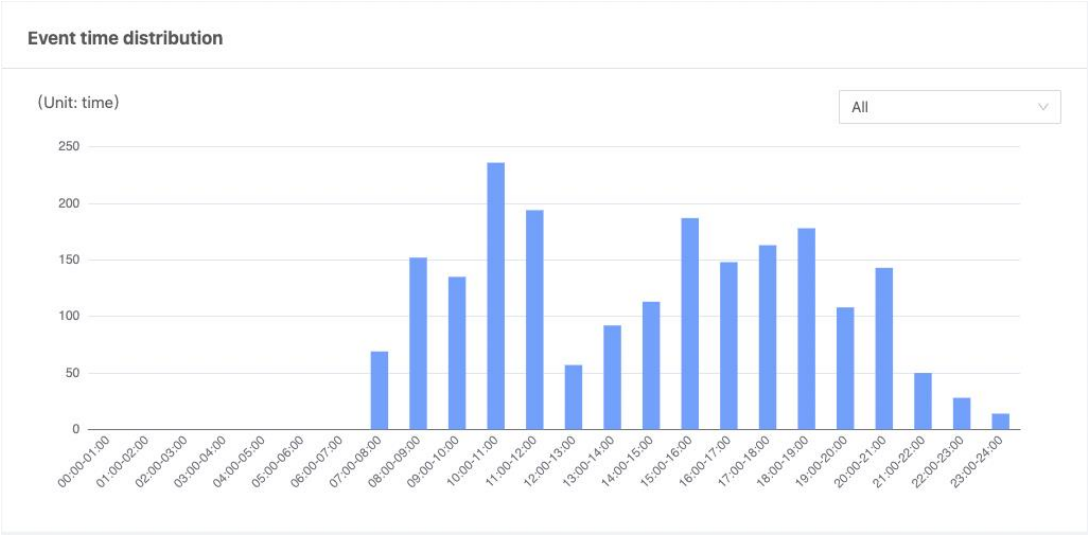
4. Event trend:

Event trend will help customers understand the safety operation trend of relevant fleet over a certain period of time. The graph shows the number of alarms generated per day by current fleet and the overall trend, and users are allowed to define the alarm type or alarm category.



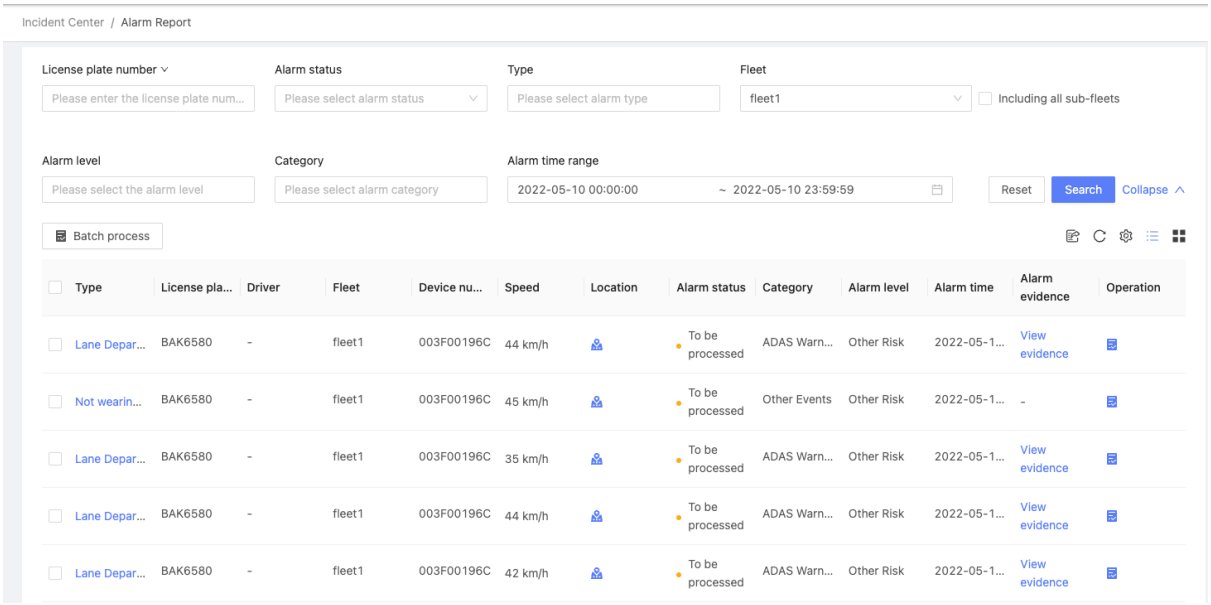
5. Event time distribution

The chart shows the number of alarms generated at different times of a day. It will help users understand at what time of the day drivers are generally at a high risk, and facilitate the reasonable arrangement by users of manpower and resources for safety monitoring. Users are able to customize the alarm type or alarm category.



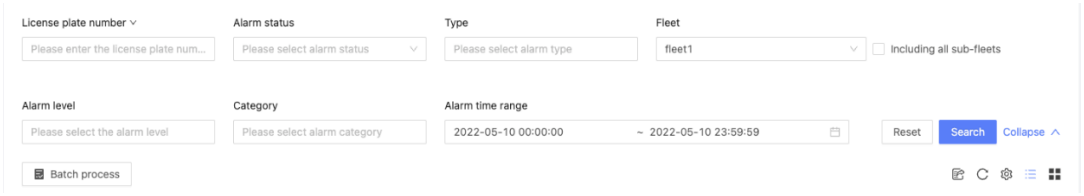
2.4.2 Alarm report

In case of any fault after an alarm, users will be able to quickly search and preview the alarms generated by a fleet within a specific time range. This function module will narrow the search range to a certain vehicle.



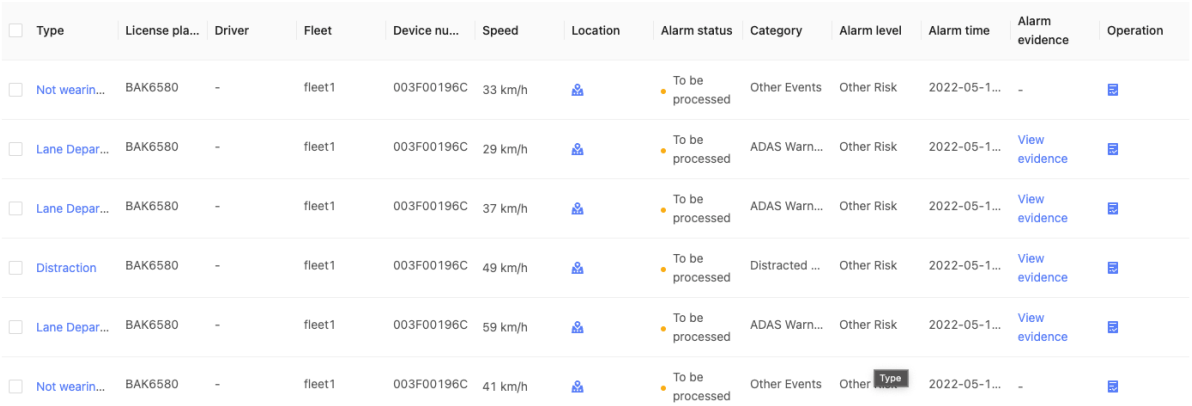
1. Search

The function in this module features great diversity and will help users to get alarm information from different dimensions, such as: License plate number, alarm status, type, fleet, alarm level, category and alarm time range. The date for time range will default to the date of the platform.



2. List

In the list a lot of information related to alarms is included.

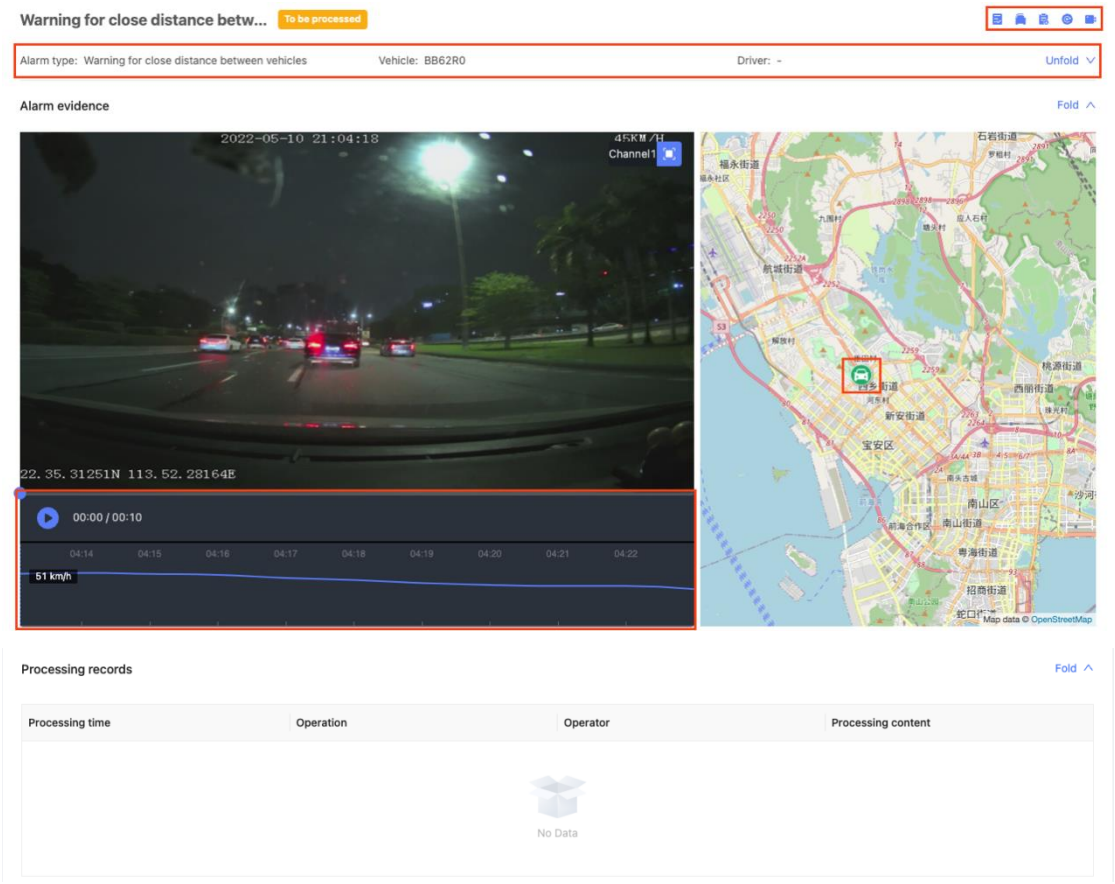


3. Alarm type

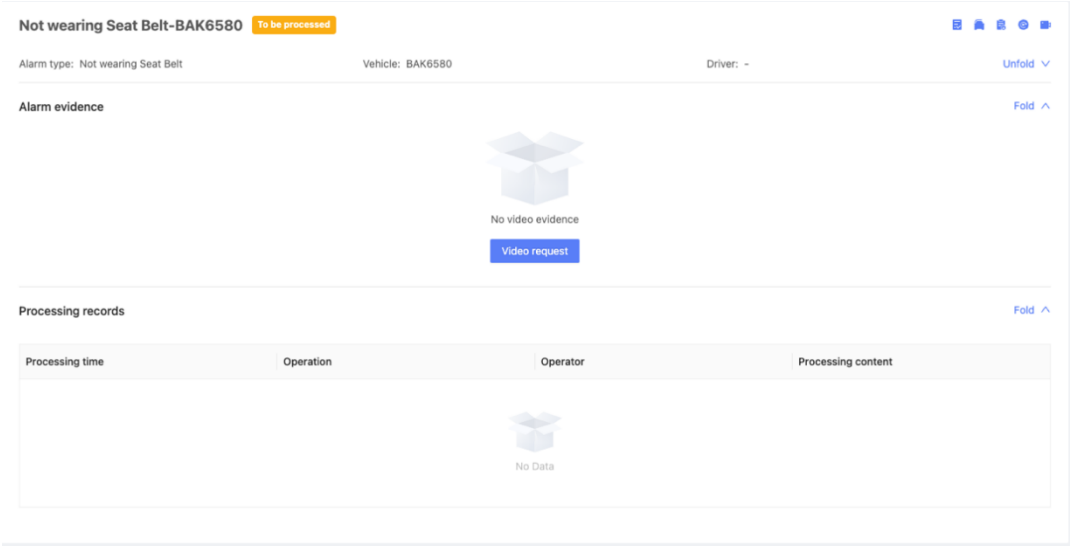
By clicking various alarm types in the column “Type”, users will enter the page for alarm details, and the alarm types available will be displayed in blue.

a) Alarm detail:

The page for alarm detail enables users to check the alarm type, vehicle information, driver information, alarm video, alarm location, and alarm processing details.

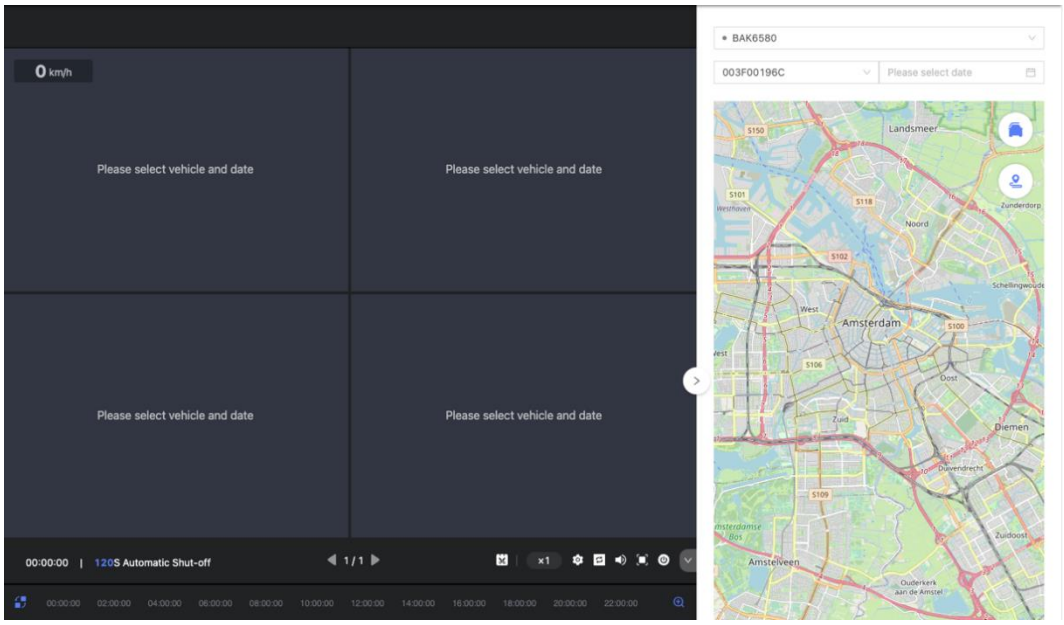


If no alarm upload policy is set for the current alarm, there may be no video or snapshot uploaded, and the alarm details will be displayed as below:



Users may request the alarm video by clicking the button “Video request” in the picture. If the vehicle is online at this time, the progress bar of video playback and video clip will be automatically positioned to the time point when the alarm is triggered. And users are able to define the length of the

alarm video to be downloaded. If the vehicle is offline, the display screen will be as below: If the vehicle is offline, users can go to the home page of alarm report to manually request any video download of off-line device. For details, please refer to Part ② of Section 2.3.2.

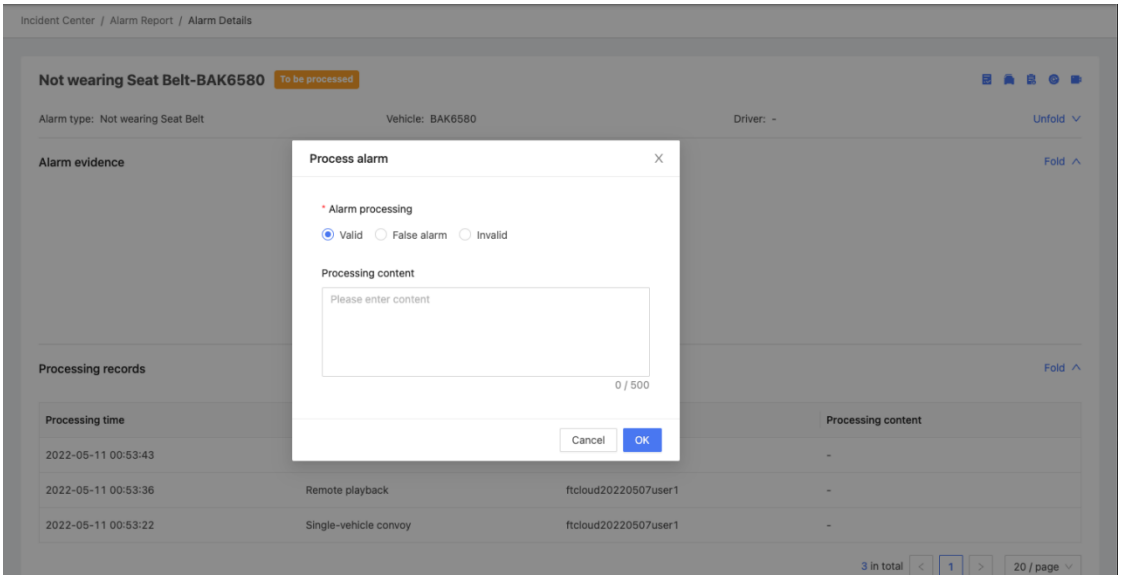


b) Additional functions to alarm detail:

Once the required alarm video and snapshot are obtained, users will be able to take measures for safety management according to the severity of alarms.

i. Alarm processing ( ):

Alarm processing is mainly to facilitate users to quickly classify alarms once identified, and the alarm is classified by default as: Valid, invalid, and false alarm. Valid: An alarm recognized as valid by users, which may help users in terms of safety training. Invalid: An alarm that is recognized as valid by users, and that is not the most important alarm at the moment or has no impact on the driver's safe driving. False alarm: An alarm that is recognized as a false alarm by users. For such alarm, statistics should be made and provided to the service provider. Users may rate or comment on the alarm after it has been classified.



ii. Single-vehicle convoy ( ):

For details of functions, please refer to Section 2.2.2

iii. Distribute text ( ):

For details of functions, please refer to Part ① (c) of Section 2.2.2.

iv. Device remote playback ( ):

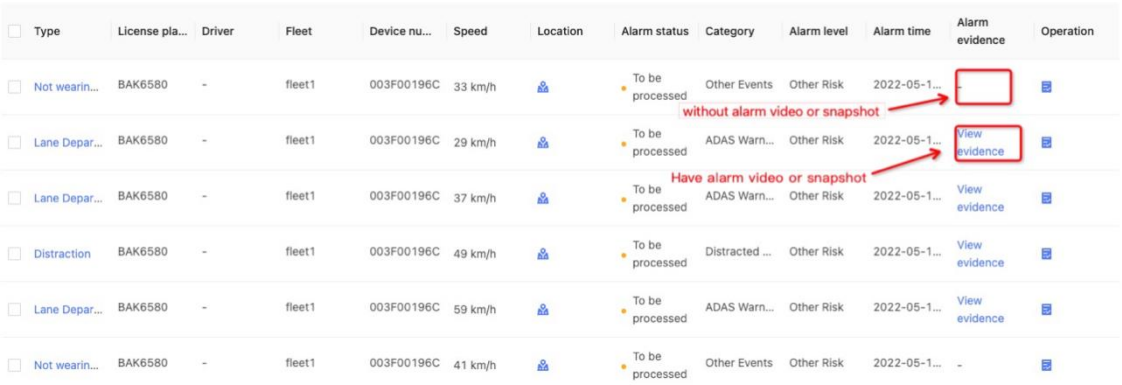
For details of functions, please refer to Section 2.2.3

v. Real-time video ( ):

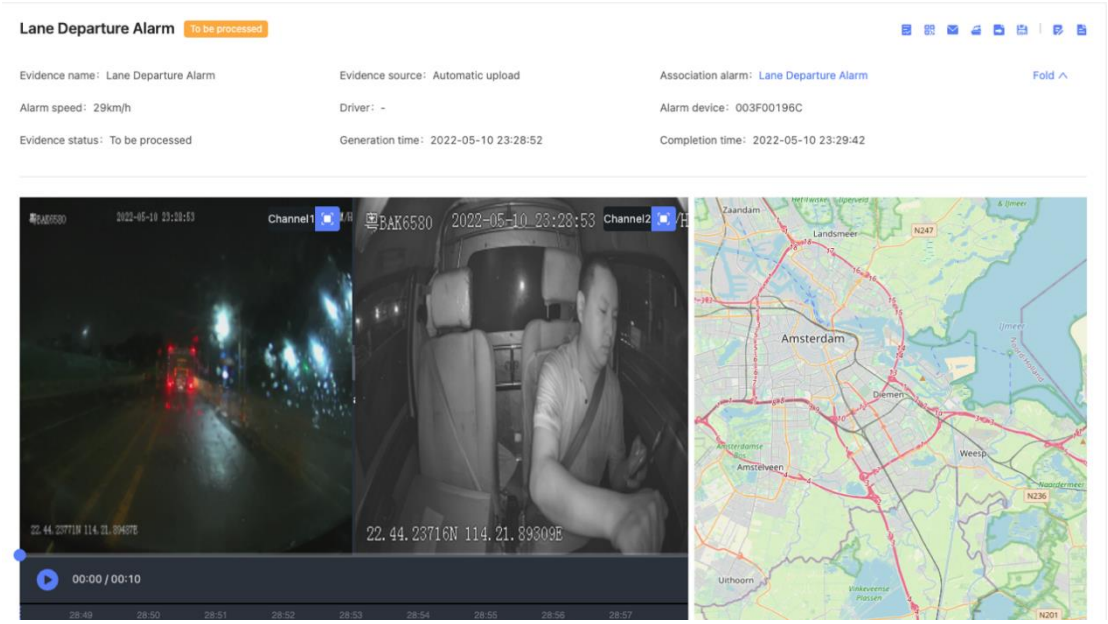
For details of functions, please refer to Section 2.2.1

4. Alarm evidence

The content of alarm evidence is roughly similar to that of alarm detail. The only difference is that any alarm involved in the upload request of alarm video or snapshot will be defined as alarm evidence if users establish the alarm upload policy in FT Manager. Users will be able to determine whether there is any video or snapshot of the current alarm by checking the content in the fields of alarm evidence. If there is no alarm video or snapshot, the content in the fields will be '-'. For videos completely downloaded, not yet completely downloaded, and not available for download, the content in the fields will be 'View evidence', 'Downloading' and 'Download failed', respectively.



Users will be able to click “View evidence” to check the evidence details. The content of evidence detail is roughly the same as that of alarm detail, with some additional functions for users to share an alarm or get an alarm report.

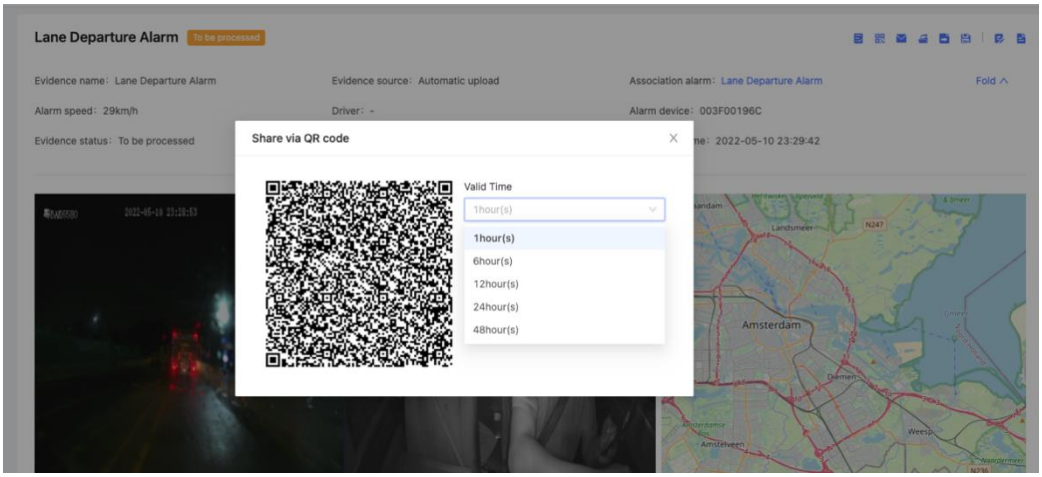


i. Alarm processing ( ):

For details of functions, please refer to Section 2.4.2 part 3（b）

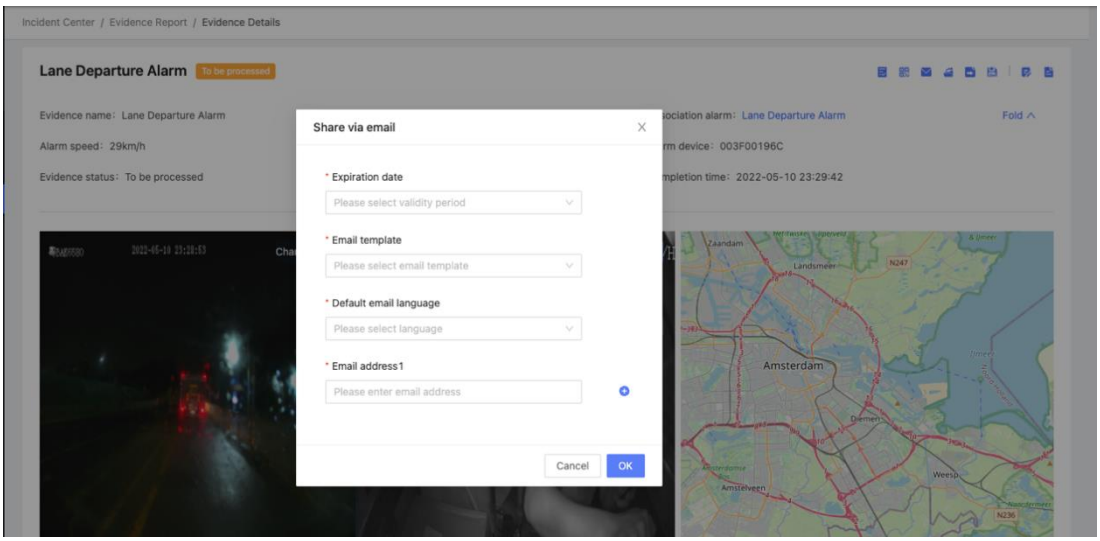
ii. Share via QR code ( ):

Users may share alarm videos via QR code with a user-defined valid time. The maximum valid time is 48 hours. Different valid time will correspond to different QR codes.



iii. Share via email ( ):

Users will be able to quickly email the alarms to drivers at relevant email address so that drivers will learn to improve their driving skills in a timely manner. Expiration date indicates the date when the current email will expire. Beyond such expiration date, the recipient of the email will not be able to check the alarm video through the link enclosed. Email template is the template set up by users in FT manager. In the field of “Default email language”, users may, according to actual needs, select a language to send emails. The languages available for selection are currently: Chinese, English, Spanish and Portuguese. In the field of “Email address”, users may freely add unlimited number of email addresses.

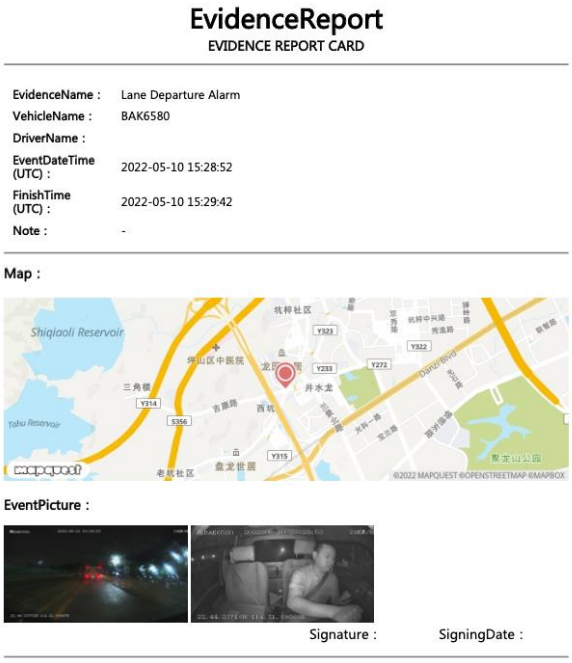


iv. Export evidence ( ):

By clicking the icon “Export evidence”, users will be able to export alarm videos or snapshots. If any alarm evidence is a video, the video will be in MP4 format.

v. Export report ( ):

By clicking the icon “Export report”, users will be able to quickly export a report of current alarm evidence, which can be provided to the safety operation team or to the driver. The text of such report is as below:



EvidenceReport

EVIDENCE REPORT CARD

EvidenceName :	Lane Departure Alarm
VehicleName :	BAK6580
DriverName :	
EventDateTime (UTC) :	2022-05-10 15:28:52
FinishTime (UTC) :	2022-05-10 15:29:42
Note :	-

Map :

EventPicture :

Signature : SigningDate :

vi. Export H264 ( ):

By clicking the icon “Export H264”, users will be able to export an alarm video in H264 format. Such function is not available in case of alarm snapshot.

vii. Processing records ( ):

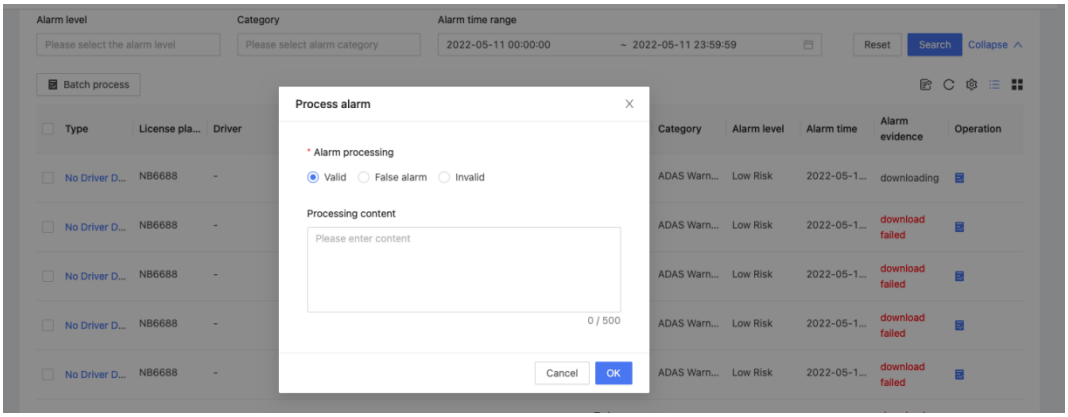
The function “Processing records” is mainly used to record the visitors’ performance of the above additional functions.

viii. Visit records ( ):

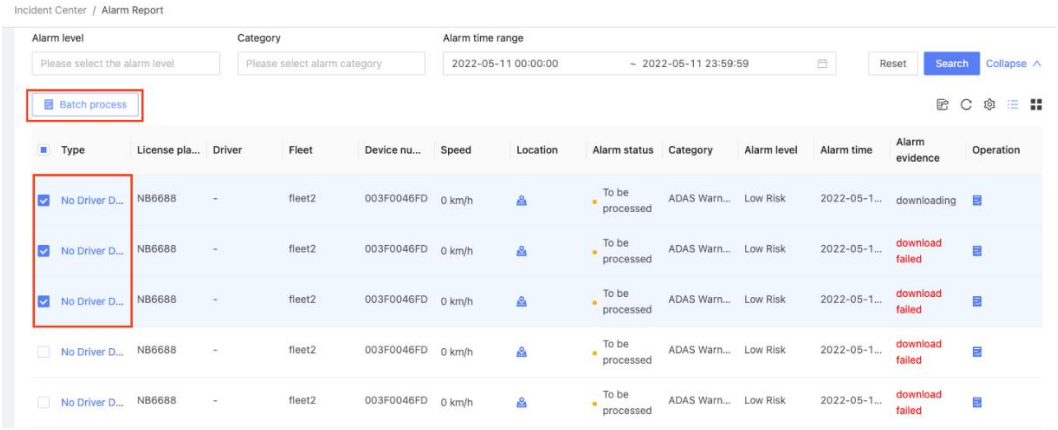
The function “Visit records” is mainly used to record the visitors who previewed this alarm evidence.

5. Alarm processing

Alarm processing is mainly to facilitate users to quickly pre-classify alarms once identified, and the alarm is classified by default as: Valid, invalid, and false alarm. Valid: An alarm recognized as valid by users, which may help users in terms of safety training. Invalid: An alarm that is recognized as valid by users, and that is not the most important alarm at the moment or has no impact on the driver's safe driving. False alarm: An alarm that is recognized as false positive by users. For such alarm, statistics should be made and provided to the service provider. Users may rate or comment on the alarm after it has been classified.



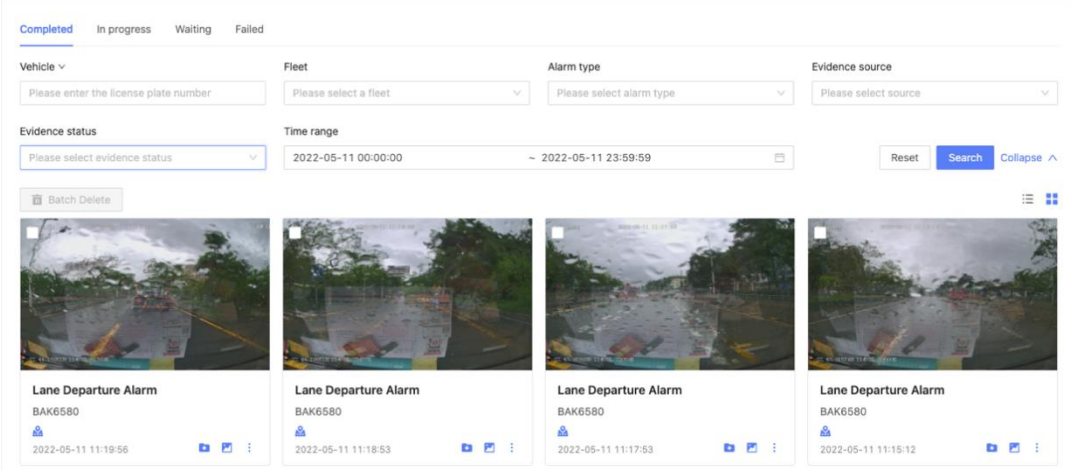
Users will be also able to implement batch processing by checking multiple alarms and clicking the 'Batch process'.



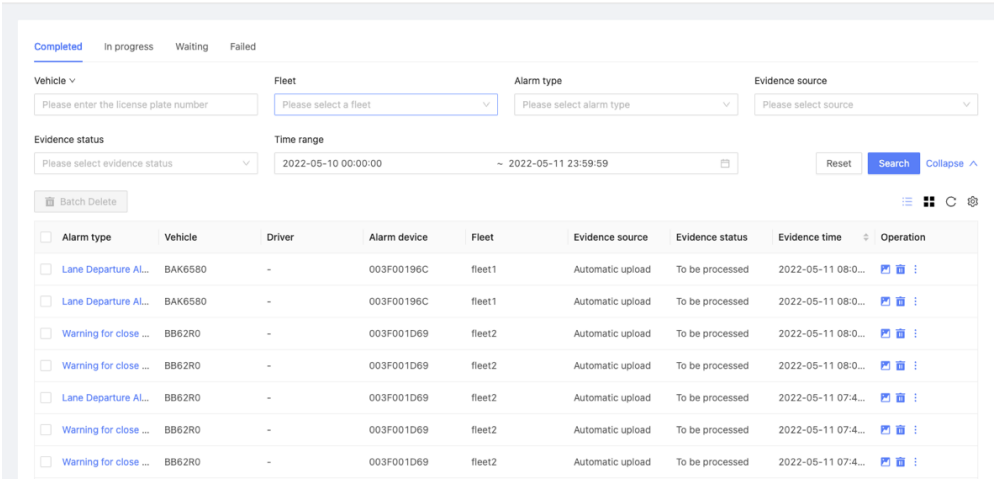
2.4.3 Evidence report

Evidence report offers multidimensional search conditions, enabling users to quickly search for alarm videos or snapshots. Such conditions include: Fuzzy search of vehicle name, fleet name, alarm type, evidence upload method, evidence processing status, and time range.

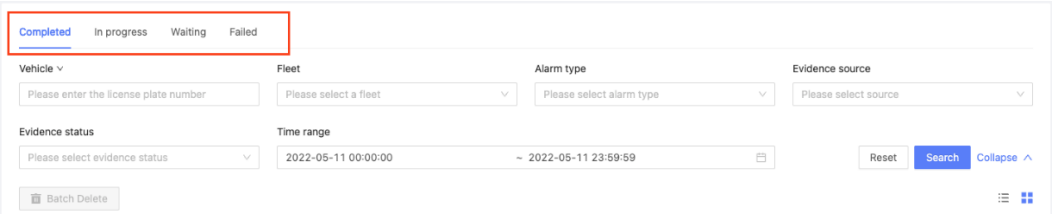
Note: The date for time range will default to the date of the platform.



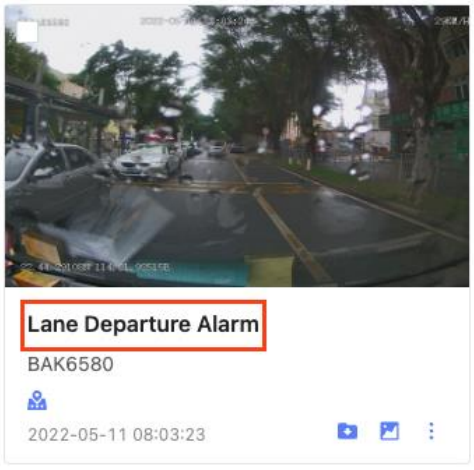
This module offers a total of two different preview modes: Image preview mode and List preview mode. The picture at the top shows an example of the picture preview mode, and the picture at the bottom shows an example of the list preview mode. In the picture preview mode, a white play button will be provided in the middle of the picture if the evidence available is a video. Users can click the play button for a quick preview of the evidence video. If the evidence is a snapshot, there will be no white play button in the middle of the picture.



Upload status of alarm video and snapshot will be classified as: “Completed, In progress, Waiting, Failed”.



By clicking the text below the alarm snapshot or video, users will enter the page for alarm evidence details. For details of functions, please refer to Part ④ of Section 2.4.2.

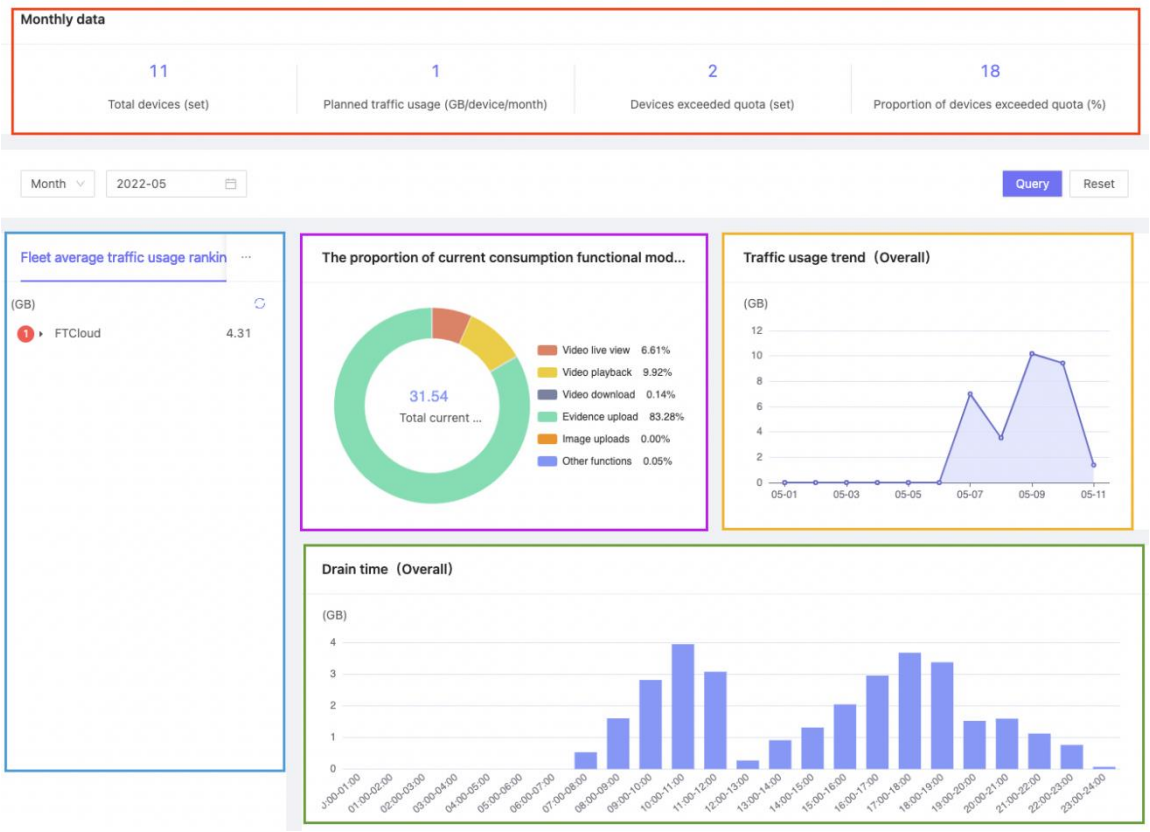


2.5 Dataflow center

The module Dataflow Center is a newly added function to FT Vision 3.6 version for the purpose of helping users monitor the overall traffic usage by video devices of fleets.

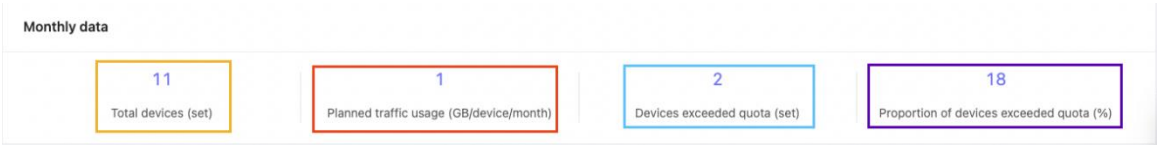
2.5.1 Dataflow analysis

This module is for statistical analysis of the SIM card traffic used by vehicles. Users may use this module to quickly identify the trend and distribution of traffic usage by fleets, facilitating a quick identification of device with traffic abnormality and the implementation of reasonable control over such device. This module consists of five sub-modules, all of which are interrelated with each other.



1. Data board

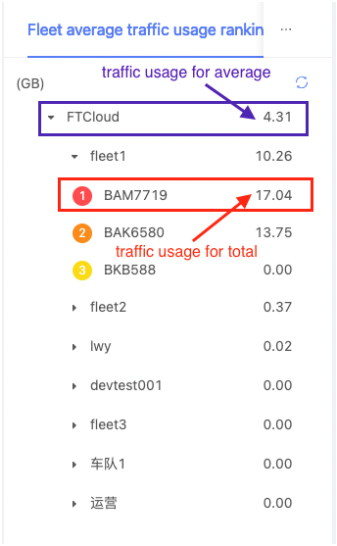
The board provides an overall statistics of the traffic usage in a month, with the following information: The number of devices, quota of planned traffic usage, number of devices exceeding the quota, and proportion of the devices exceeding the quota to total devices. The traffic usage quota should be set by users in the configuration of 'Tenant details'.



2. Fleet traffic usage ranking

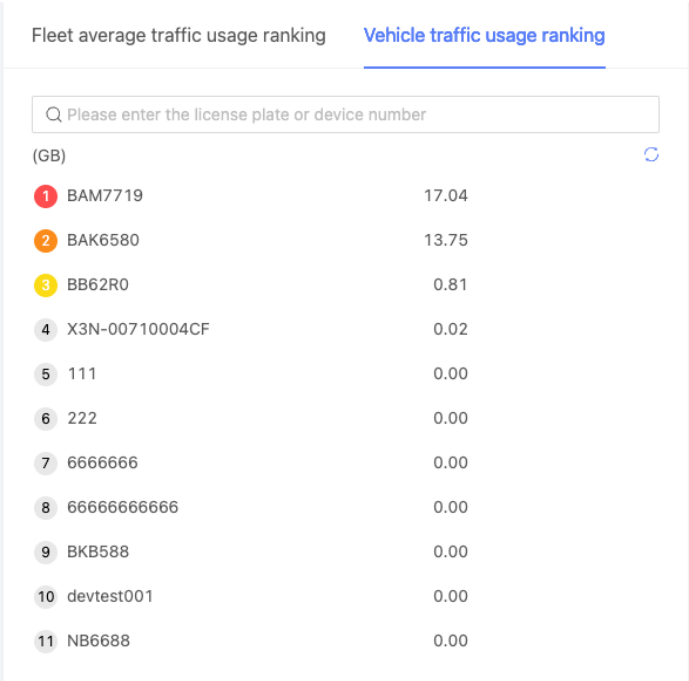
   a) Fleet average traffic usage ranking

This module is mainly used for the ranking of the fleet average traffic usage. A higher average indicates a relatively great amount of traffic used by the fleet in the month. With the ranking list, users will be able to check the average traffic usage and the total traffic usage of a fleet. The number on the right of each main fleet and subordinate fleet is the average traffic usage of that fleet. By clicking '▸' next to the fleet name, users will be able to check the total traffic usage of all the vehicles in the fleet for the month.



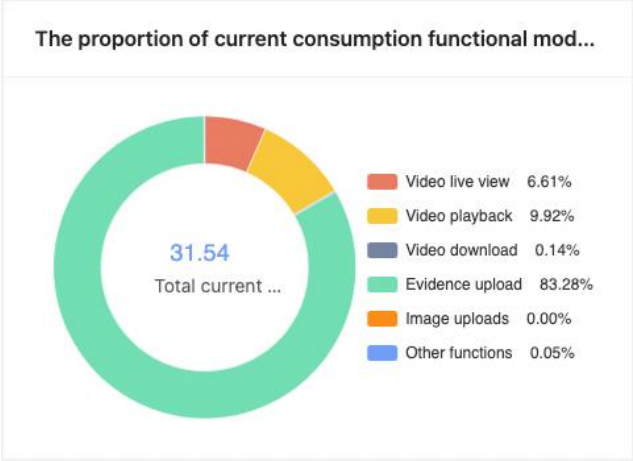
b) Vehicle traffic usage ranking

This module is mainly for the ranking of traffic usage by all the vehicles in a fleet. The vehicle ranking at a higher place uses more traffic. The number on the right of each vehicle is the total amount of traffic used by the vehicle, and the unit is GB.

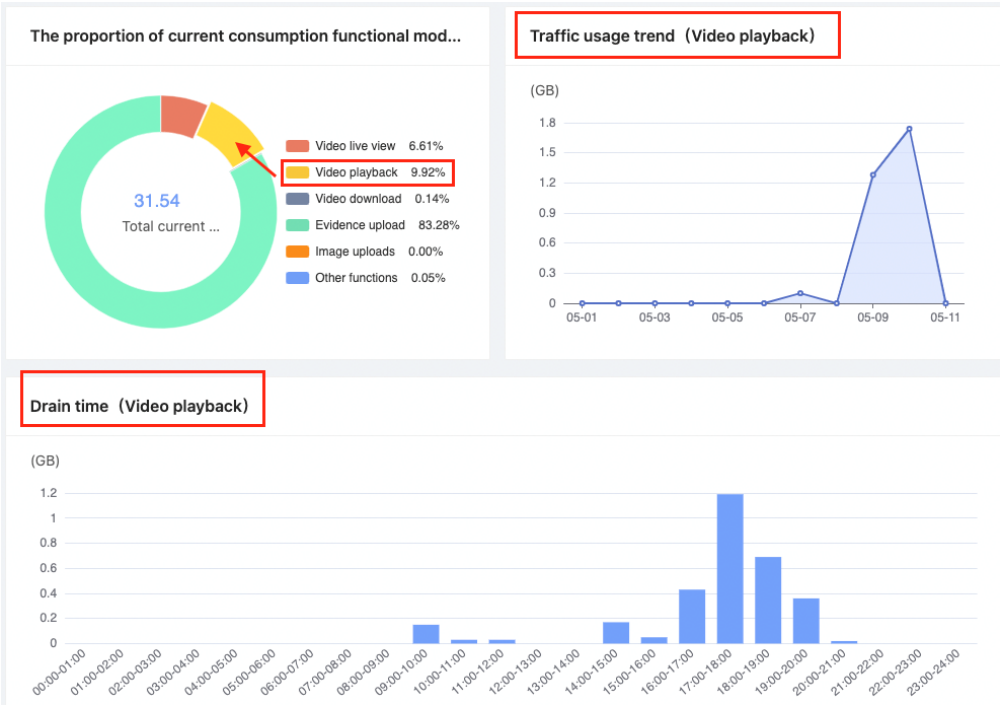


3. Proportion of traffic usage

This module enables users to understand the distribution of current fleet traffic usage types which include: Video live view, video playback, video download, evidence upload, image uploads, and other functions

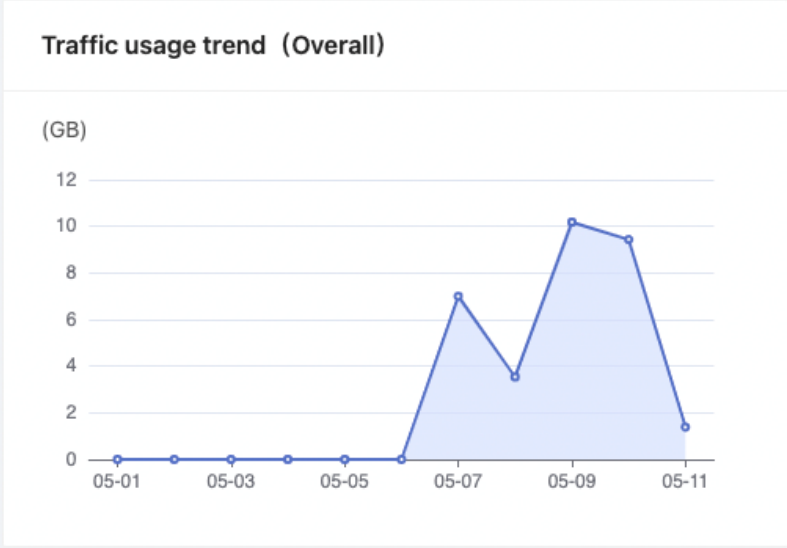


Users can click to select the traffic usage type they want to check, and the type selected will be highlighted, and the charts of traffic usage trend (by date) and drain time will change accordingly. Click again to highlight the traffic type and both charts above will show the full data.



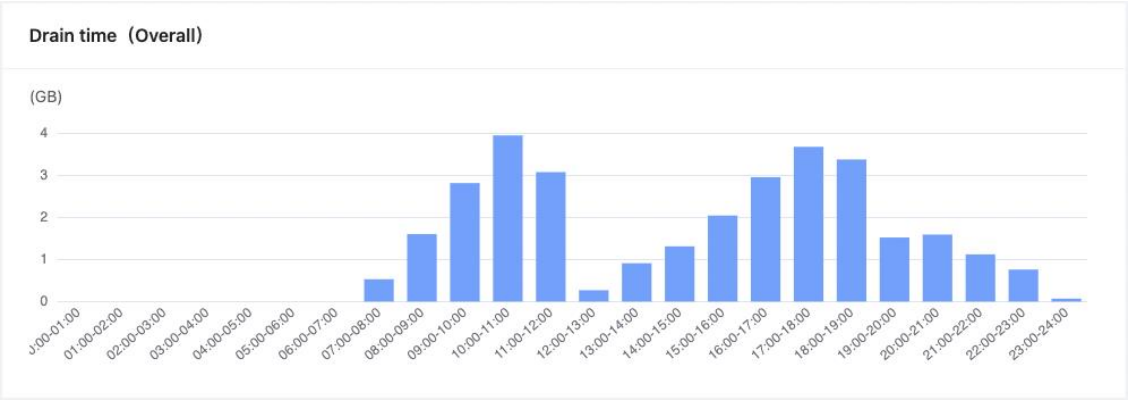
4. Traffic usage trend chart

This module shows the overall trend of the daily fleet traffic usage, taking the time as the X-axis and the total traffic usage as the Y-axis. The charts will change as users click the traffic distribution chart (pie chart).



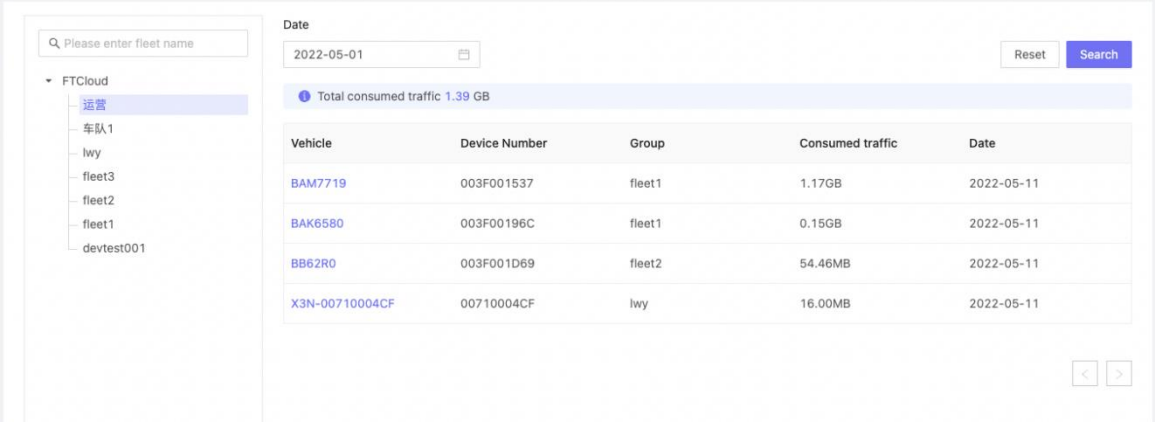
5. Drain time

This module shows the current fleet traffic usage at different times of a day. A higher value of traffic usage indicates a greater number of alarms generated in the current time period. Users may combine this chart with the event time distribution chart for a integrated analysis.



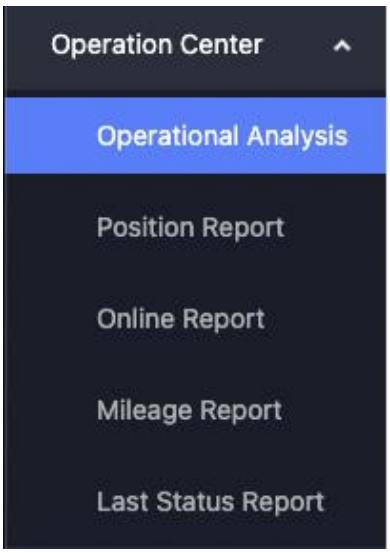
2.5.2 Traffic management

This module will help users to understand the daily traffic usage of all the vehicles in a fleet. Users will be able to search for the desired fleet by using the available organization tree or by using the search field for a fuzzy search. The time condition for search can only be one day or a few days before the current date, and there is no option of time range available for users.



2.6 Operation center

The module Operation Center is mainly used to help users understand the operation status of the current fleet. This module presents fleet operation data with a variety of dimensions, including: Position report, online report, mileage report, and last status report.

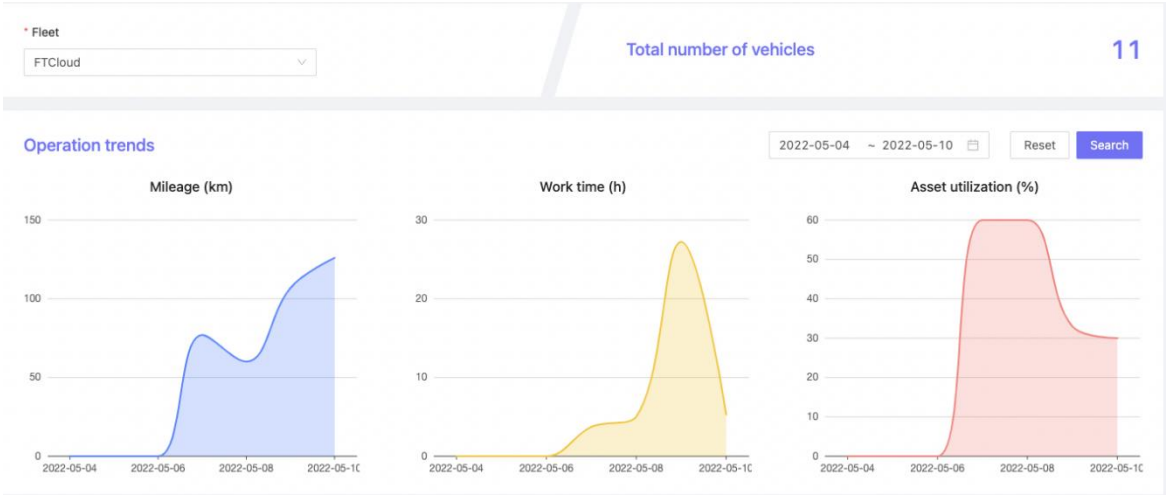


2.6.1 Operational analysis

This module is an overview and analysis of the fleet operation status, helping users to quickly preview the operation data within a certain period of time to understand the operation situation.

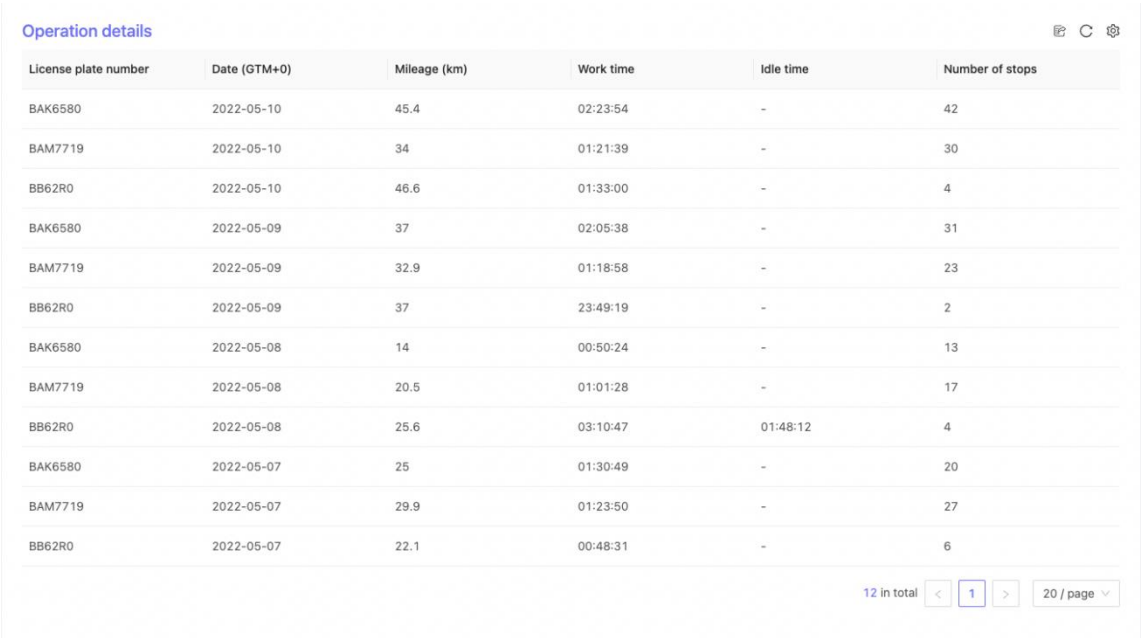
2.6.1.1 Operation data board

Checking the board, users will understand the data trend over a certain period of time. Users can use the search field 'Fleet' in the upper left corner to search for the fleet they want to check. The operational data displayed here includes trend charts for mileage (blue), work time (yellow), and asset utilization (red).



2.6.1.2 Operational data details

Operational data details will provide all operation details of the vehicles in the selected fleet for a certain period of time, including: License plate number, date, mileage, work time, idle time, and number of stops. Users will be able to quickly export an excel file of relevant operational data by clicking on the export icon '[icon]'.



License plate number	Date (GTM+0)	Mileage (km)	Work time	Idle time	Number of stops
BAK6580	2022-05-10	45.4	02:23:54	-	42
BAM7719	2022-05-10	34	01:21:39	-	30
BB62R0	2022-05-10	46.6	01:33:00	-	4
BAK6580	2022-05-09	37	02:05:38	-	31
BAM7719	2022-05-09	32.9	01:18:58	-	23
BB62R0	2022-05-09	37	23:49:19	-	2
BAK6580	2022-05-08	14	00:50:24	-	13
BAM7719	2022-05-08	20.5	01:01:28	-	17
BB62R0	2022-05-08	25.6	03:10:47	01:48:12	4
BAK6580	2022-05-07	25	01:30:49	-	20
BAM7719	2022-05-07	29.9	01:23:50	-	27
BB62R0	2022-05-07	22.1	00:48:31	-	6

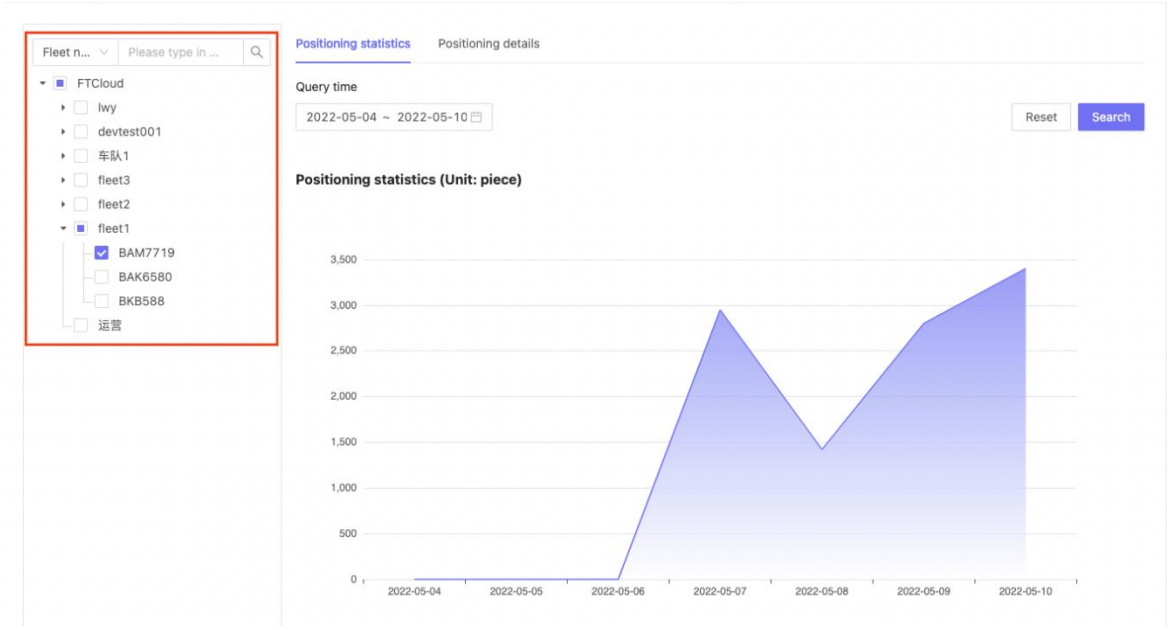
12 in total 1 20 / page

2.6.2 Positioning statistics

Position report is mainly used to make statistics of the GPS status of fleets.

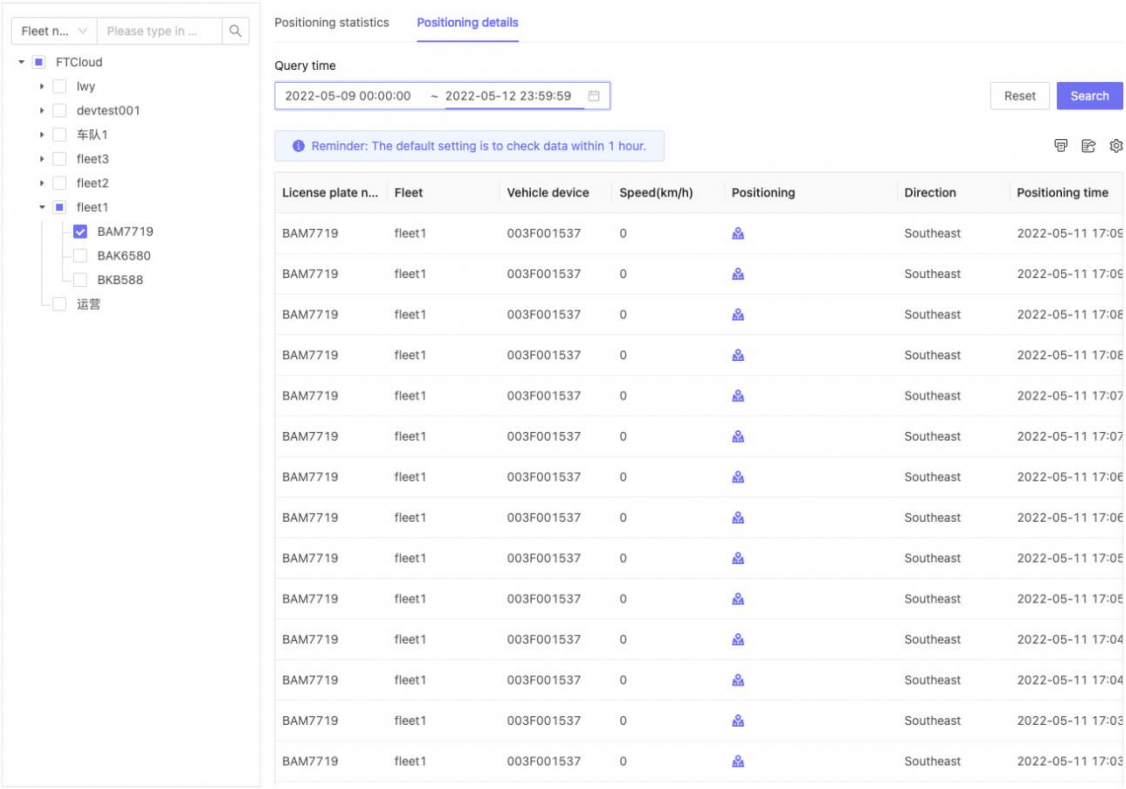
2.6.2.1 Positioning statistics

This module is mainly for the statistics of the number of GPS points reported by a fleet in a certain period of time, and the statistics will be displayed by date to show the trend. Users will be able to search for target fleets or vehicles through the organization tree on the left, or conduct a fuzzy search with the search field.



2.6.2.2 Positioning details

This module enables users to print or export all the GPS points of a vehicle within a certain day or a certain period of time. This module only enables the query related to a single vehicle but a fleet.



2.6.3 Online report

Online report enables users to understand the online status of devices and gives a side view of vehicle utilization, including the work time.

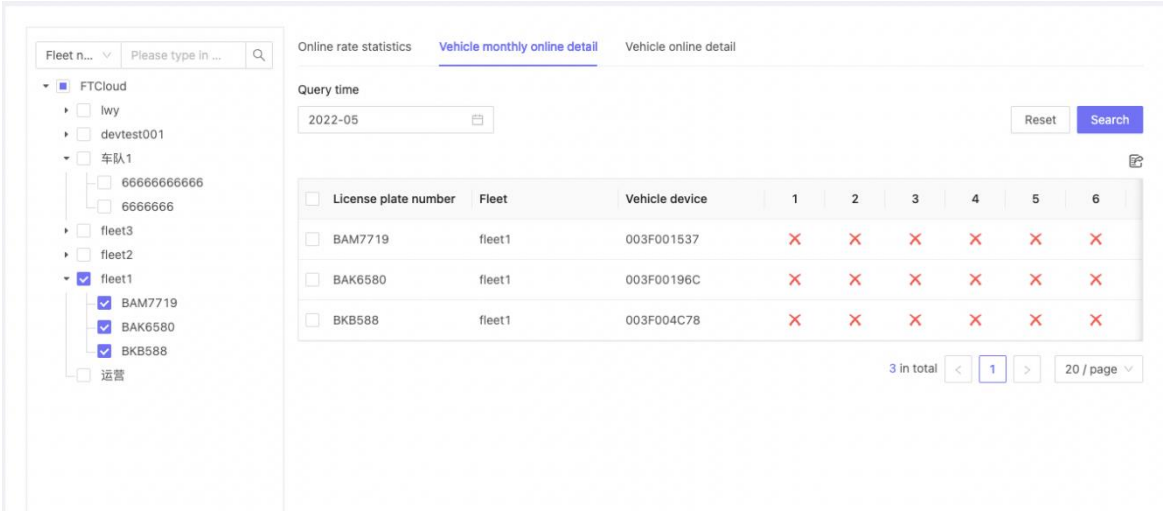
2.6.3.1 Online report

This module is mainly for the statistics of vehicle utilization of a fleet or a vehicle during a certain period of time. Vehicle online rate (%) = the number of online vehicles / all vehicles in the fleet.



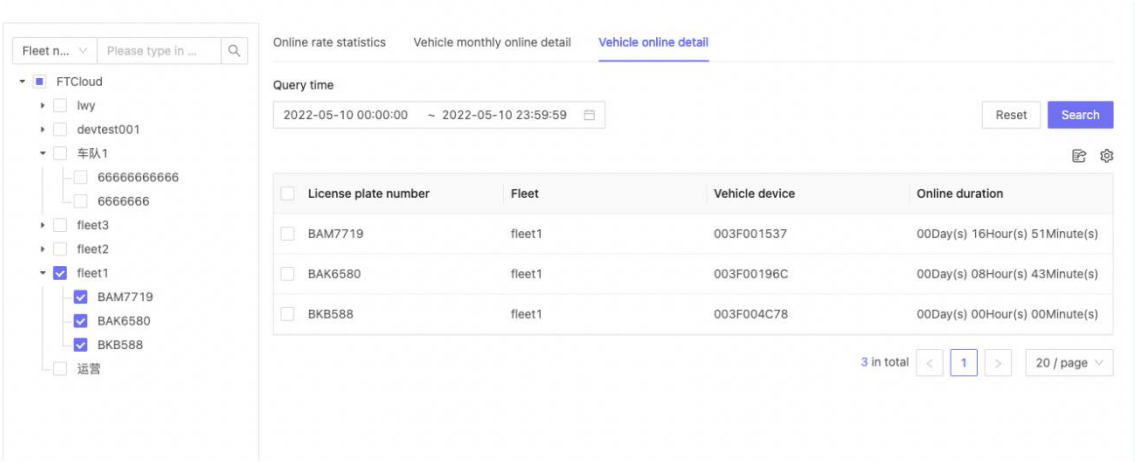
2.6.3.2 Vehicle monthly online detail

This module mainly provides the daily online status of each vehicle in the current fleet, and users will be able to view the online status on different days by implementing a slide down for table rows. 'X' indicates that the vehicle is not online on the specific day, '✔' indicates that the vehicle is online on the specific day. The search is implemented by month.



2.6.3.3 Vehicle online detail

This module mainly shows the total online time of a fleet within a certain period of time. Users will be able to quickly export relevant data by selecting target fleets or vehicles.



2.6.4 Mileage report

This module mainly supplies the mileage details of fleets or vehicles.

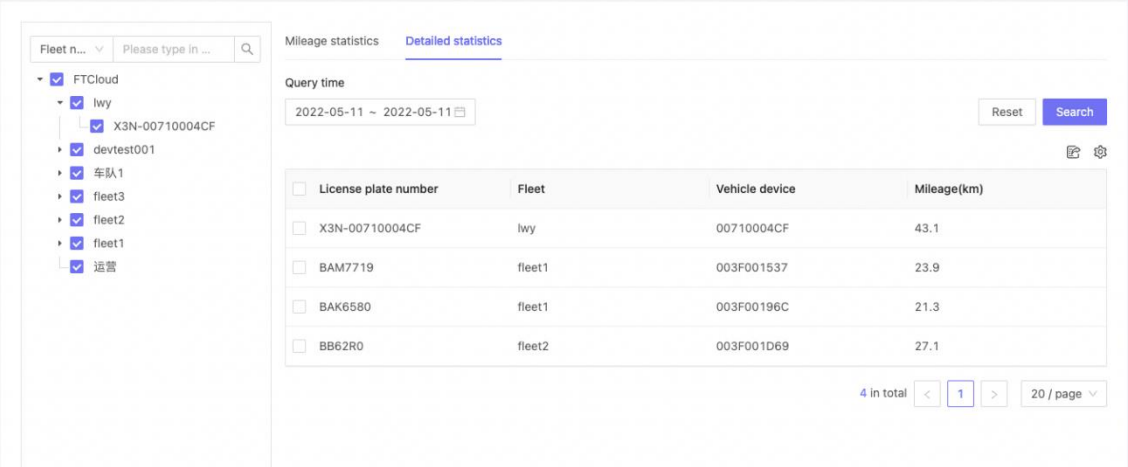
2.6.4.1 Total mileage statistics

This module mainly provides the trend chart of total mileage of fleets or vehicles. Users will be able to conduct search with the organization tree or search field.



2.6.4.2 Mileage details

This module mainly offers the total mileage of fleets or vehicles, and users will be able to conduct search with the organization tree or search field.

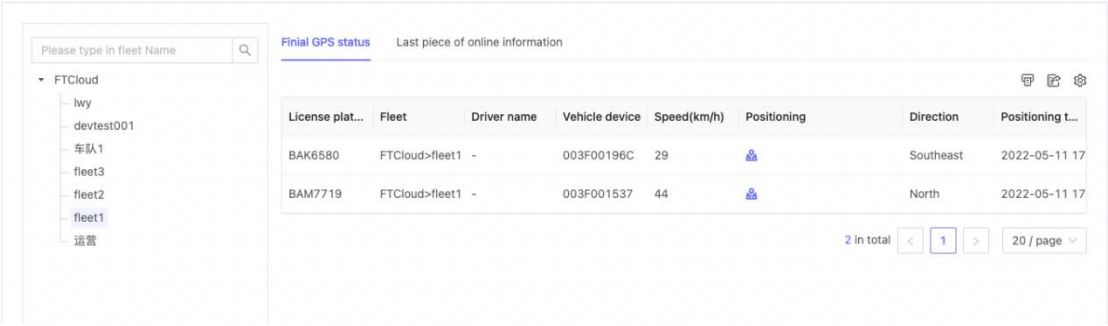


2.6.5 Last status report

This module mainly displays the last online status and time of vehicles.

2.6.5.1 Final GPS status

This module mainly provides such information of devices / vehicles as location, direction and positioning time related to the last upload of GPS point. The search is only implemented by fleet name.



2.6.5.2 Last piece of online information

This module mainly provides such information as offline time of all the vehicles or devices in the current fleet, including the last online time and offline time of the devices / vehicles.

