

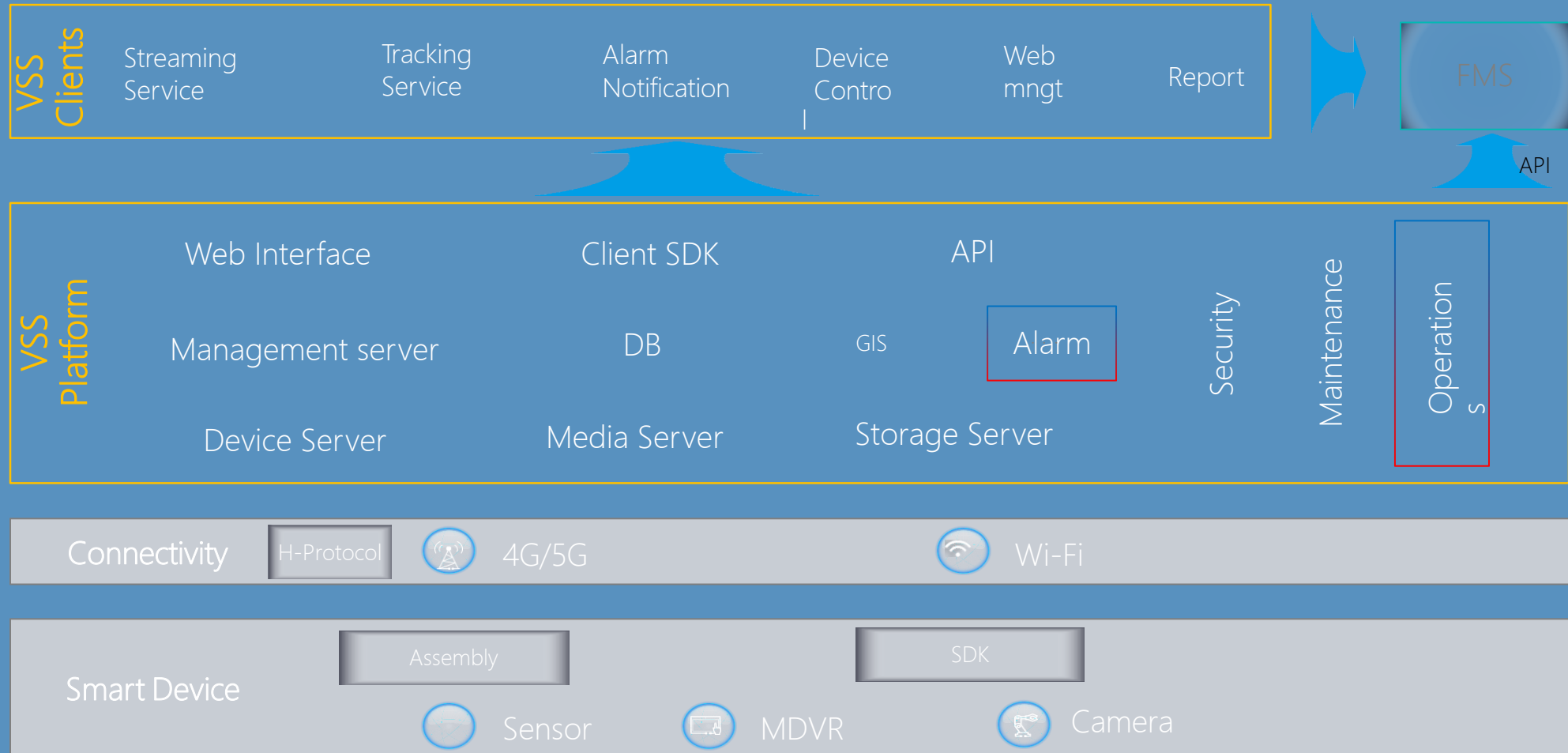
Smart Video Telematics Platform

- Controltech VSS Introduction

June. 2023



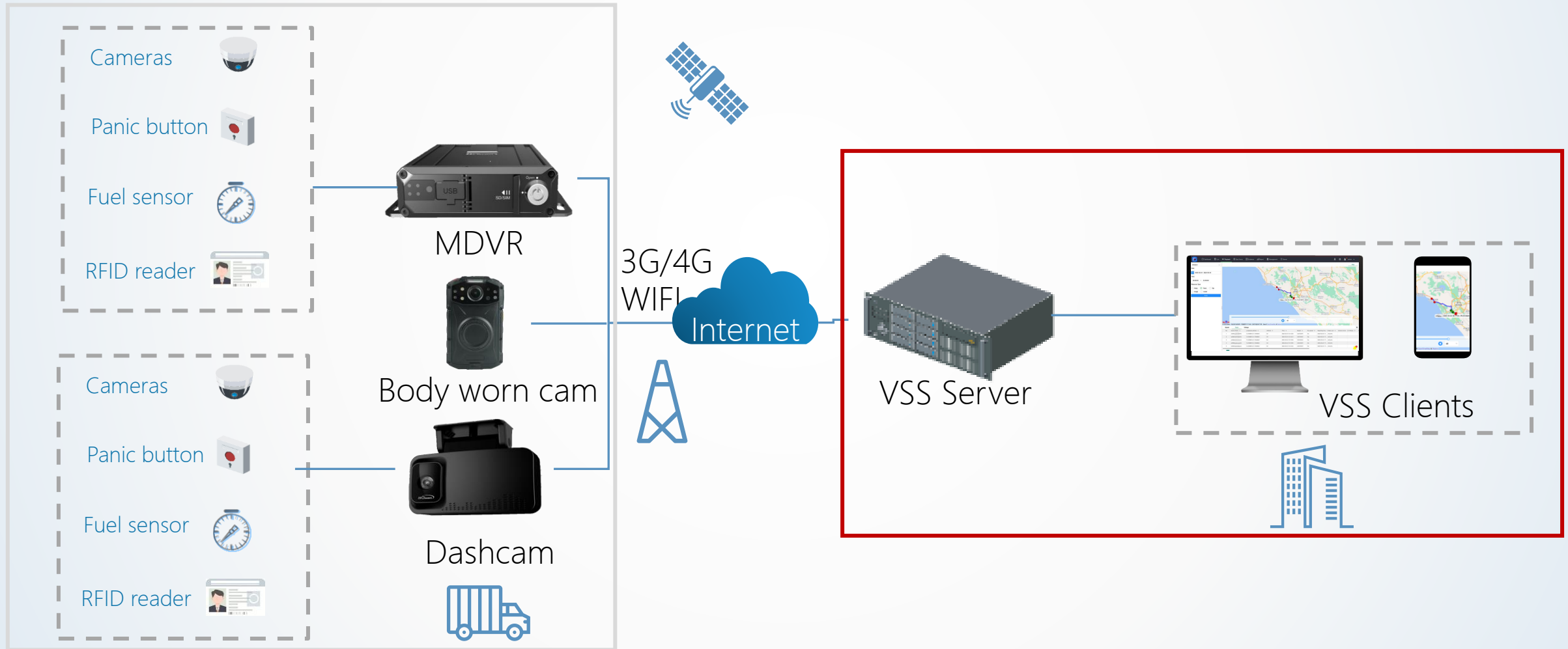
Controltech Vehicle Service Software



Advanced & reliable software designed for video telematic systems, managing diversified devices and offering best user experience

End-to-End System, as "Turn-key" Solution

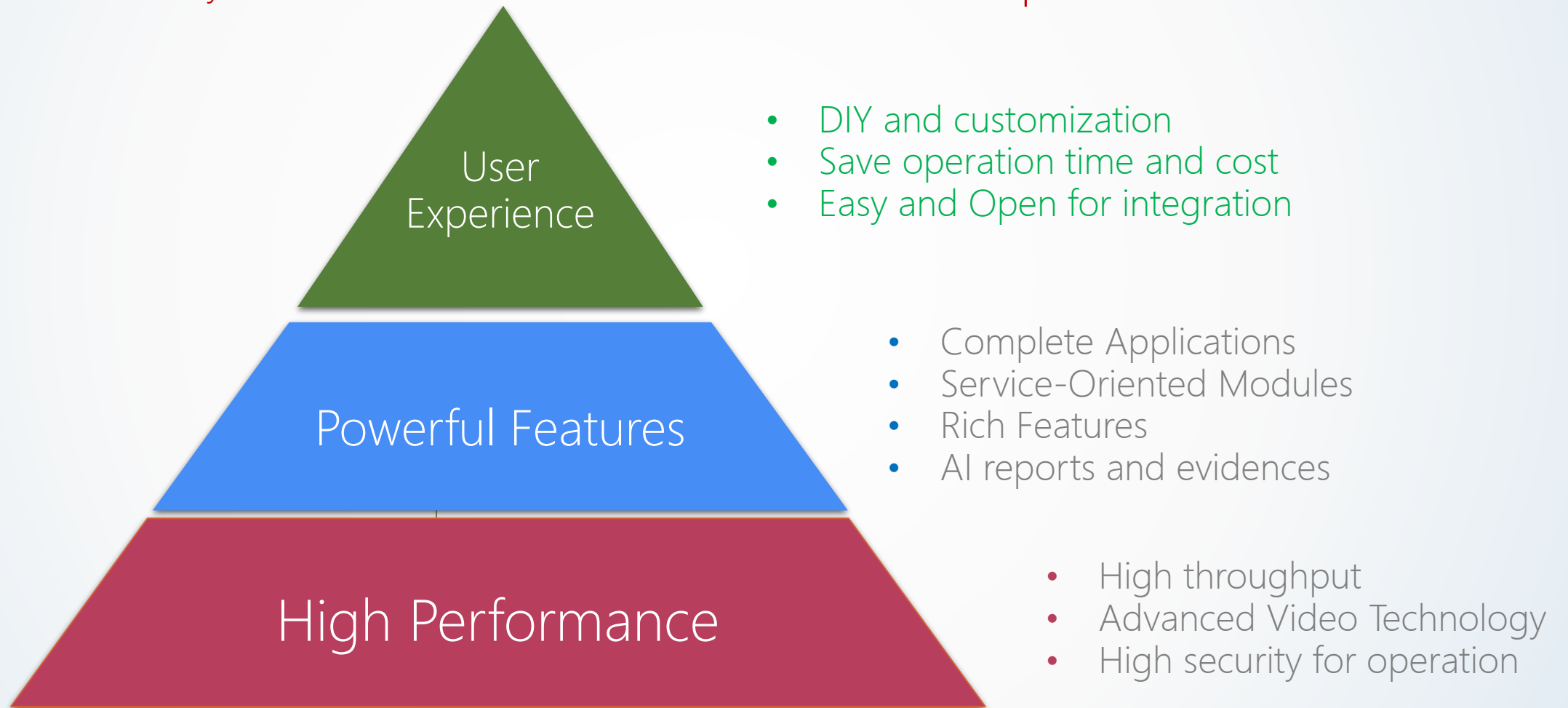
Controltech VSS software is the **Core** in Controltech **end-to-end** vehicle service system.

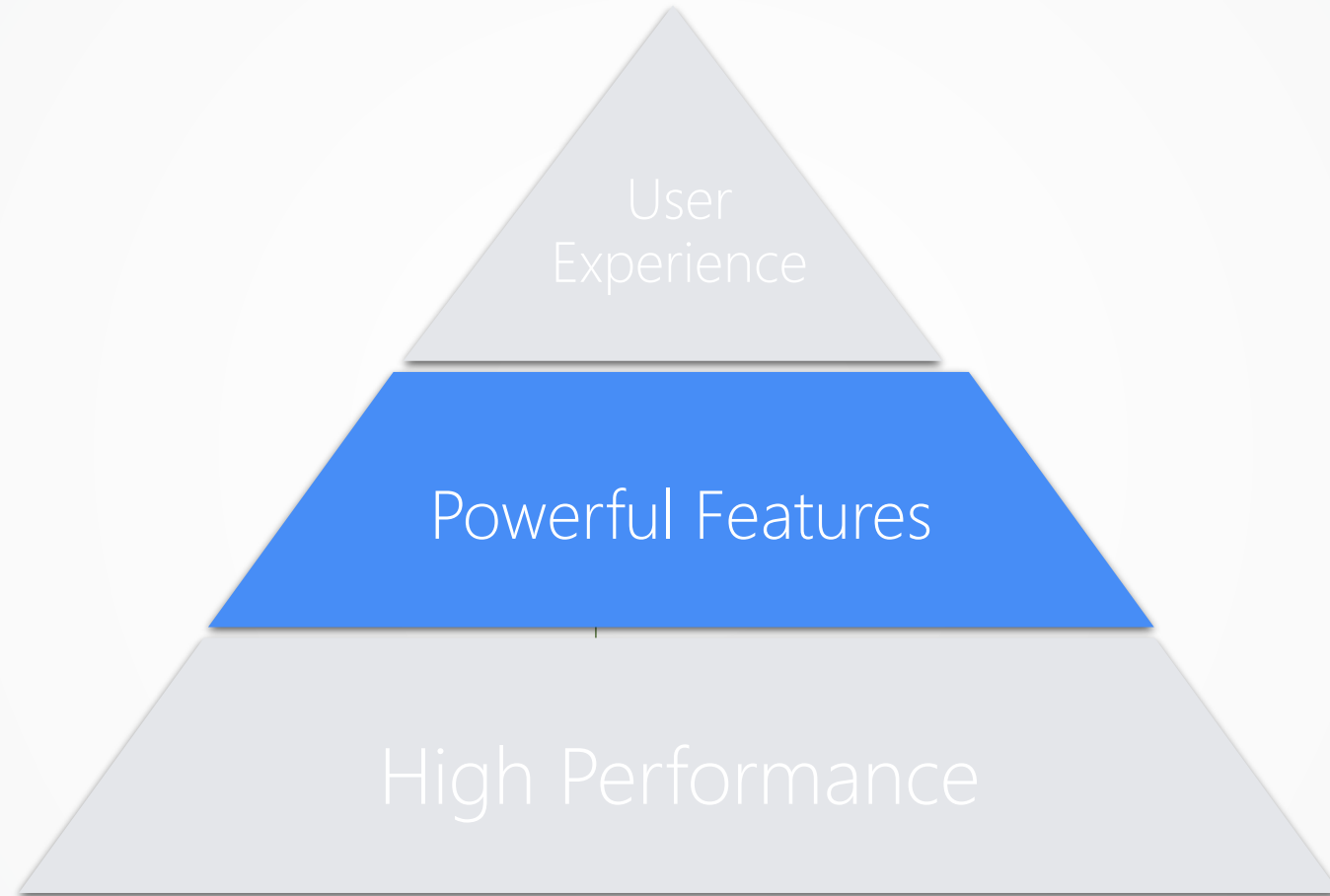


Key Advantages of VSS



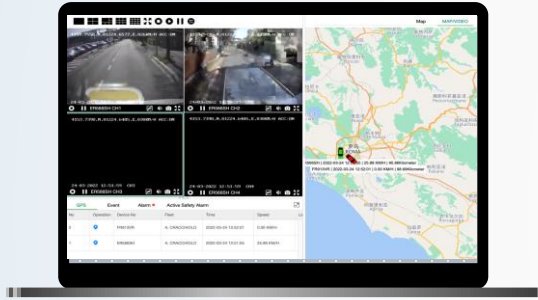
Controltech VSS software featured with power features and high performance, which form the base stones for **key of vehicle services**——better and better **user experience**



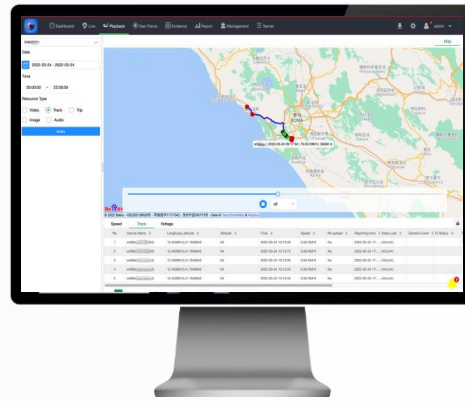


Multiple and Complete Clients

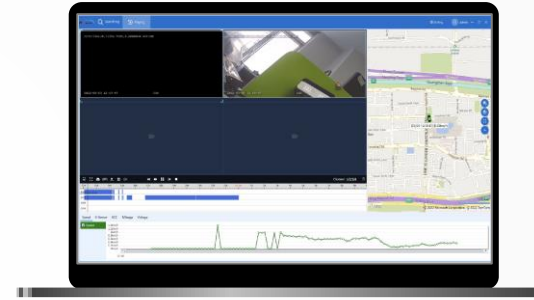
- Support both C/S and B/S structures
- Rich and complete clients, to meet demands of management in multiple scenarios



Desktop client



Web browser client



VSS player



Mobile App

Service-Oriented Modules



VSS is designed for, and highlighted with, 3 major Modules, focusing on the 3 key factors in video telematics.



Driver Management

- Diversified Driver Attendance
- Driver database
- Driver Behavior
- Easy Driver Dispatch
- Evidence



Vehicle Management

- Vehicle health management
- Vehicle control
- Mileage counting

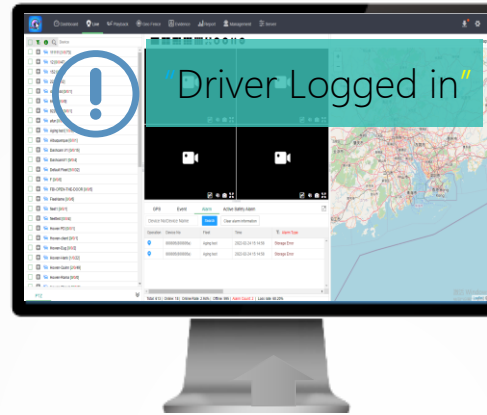


Device Management


- Device Live health monitoring
- Batch upgrade
- Batch configure



Driver Attendance




- Multiple ways to authorized driver ID
- Attendance report in VSS



Name: Charles
ID: 8776XXD
Status: Activated

Face Recognition






Name: James
ID: 9546XXE
Status: Activated

RFID Reader






Name: Cris
ID: 3426XXA
Status: Activated

iButton





Name: Rob
ID: 3876XXB
Status: Activated

Magnetic
Card Reader



More convenient driver attendance management

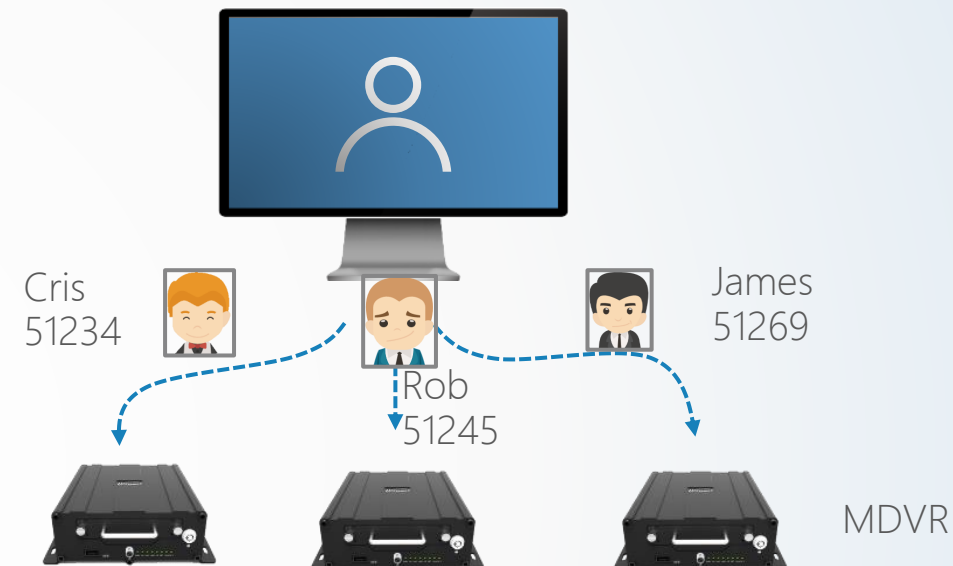


Batch Update Driver Info Remotely



The screenshot shows a web-based management interface for a fleet. A sidebar on the left contains navigation links: Fleet, Vehicle, Role, User, Driver, Driver issued, Alarm Strategy, and Auto Download. The 'Driver' section is selected. A modal window titled 'Update' is open, displaying a form for updating driver information. The form includes fields for Driver Name (Jackson), Gender (Male), Card No. (647638), Fleet (111), Phone (+54 003773723), Email, ID, Driver License No, and Birth Date. There are two image upload sections: 'Upload Driver Face Image' and 'Upload Driver License Image', each with an 'upload image' button and a placeholder image of a man. At the bottom of the modal are 'OK' and 'Cancel' buttons. In the background, a table lists drivers with columns for Name, Gender, and ID.

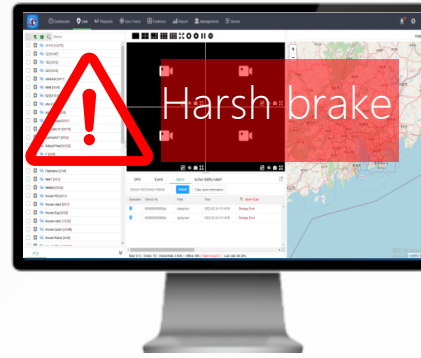
Name	Gender	ID
xavar	Male	14
Narixy driver1	Male	86F34625
		1234567890



- Driver image, name, ID
- Issue to offline device



Driver Behaviors Monitoring



- Events auto pushed to VSS;
- Evidence Center management
- Alarm linkage in VSS



Reckless Driving

- Harsh Braking/acceleration
- Harsh Cornering[NEW]
- G-sensor based/GPS Based
- Over speed, low-speed
- Idle
- CAN bus base *
- Auto detect installation direction



Fatigue/Distraction

- Smoking
- yawning
- Phone call
- Distraction
- Eye closed
- No Seatbelt



Driving Assistance

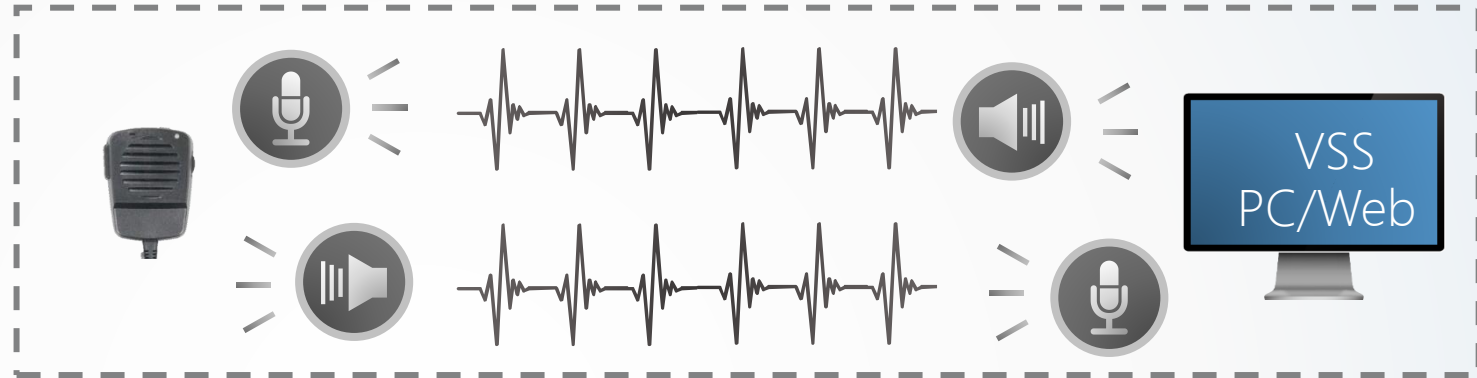
- Lane Departure Warning
- Pedestrian Collision Warning
- Too close Warning
- Vehicle ahead start
- Forward Collision Warning



Easy Driver Dispatch

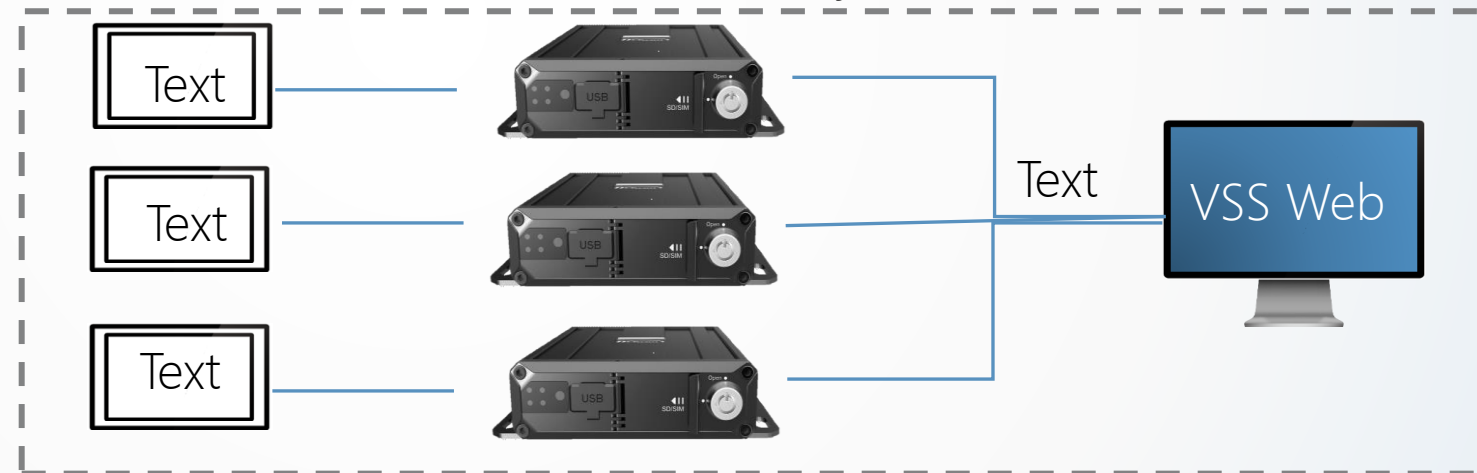


Clients launch a two-way audio talk with MDVR/Dashcam.



Two-way Audio

Clients can issue text message to several MDVR and display on their monitors at the same time.



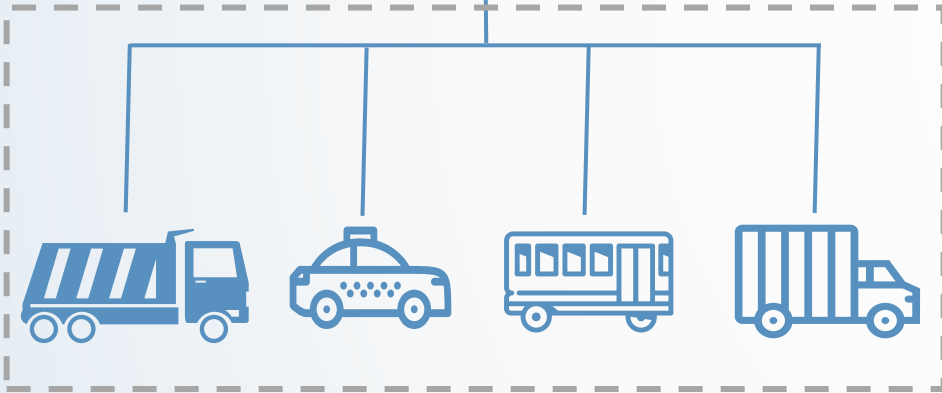
Text broadcast



Fast dispatch, Improve operation efficiency



Vehicle Health Monitoring



ACC ON/OFF



Fuel monitoring



Idle status



Temperature and humidity



Battery voltage



RPM monitoring



Accident crash



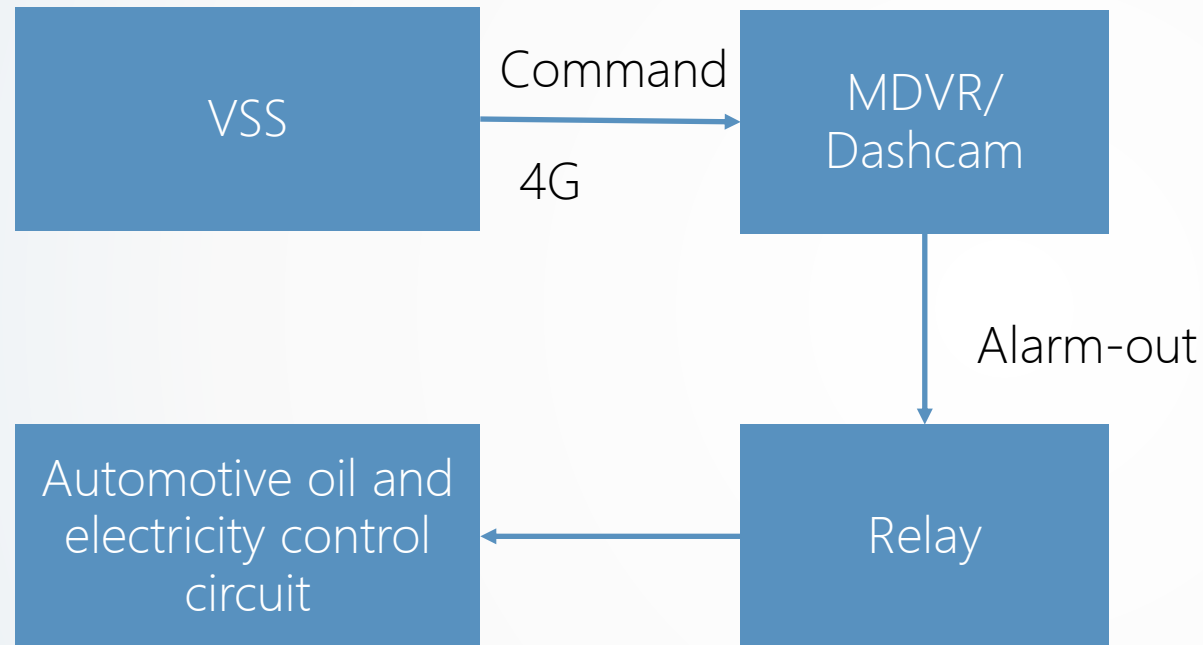
Mileage monitoring



Now you know how your vehicles doing



Easy Remote Vehicle Control



Vehicle control

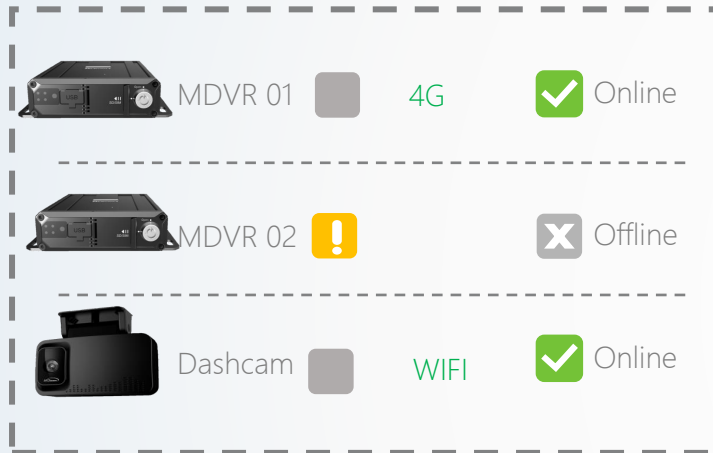
- Fuel cut off
- Fuel cut recovery
- Power cut off
- Power cut off recovery



Control the vehicle in time remotely when meet emergency

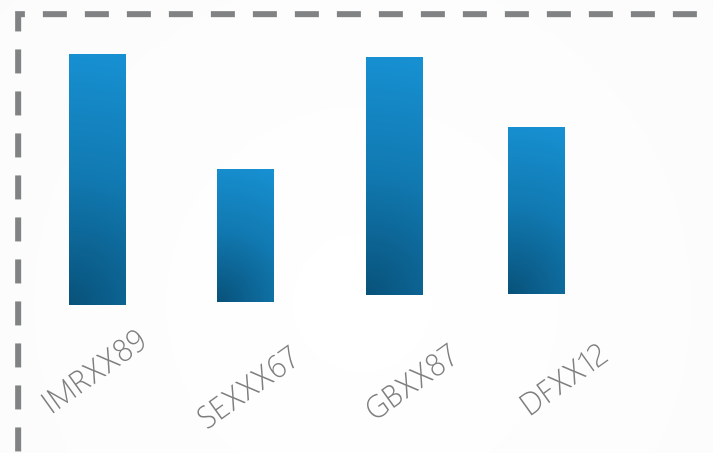


Device Status Statistics



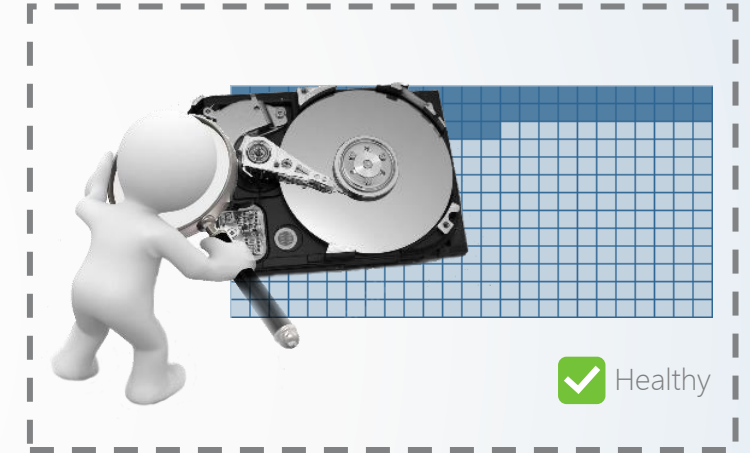
Device Status

Easily check status of devices



Flow Usage Status

Directly show flow usage status



Hard Disk/SD Card Status

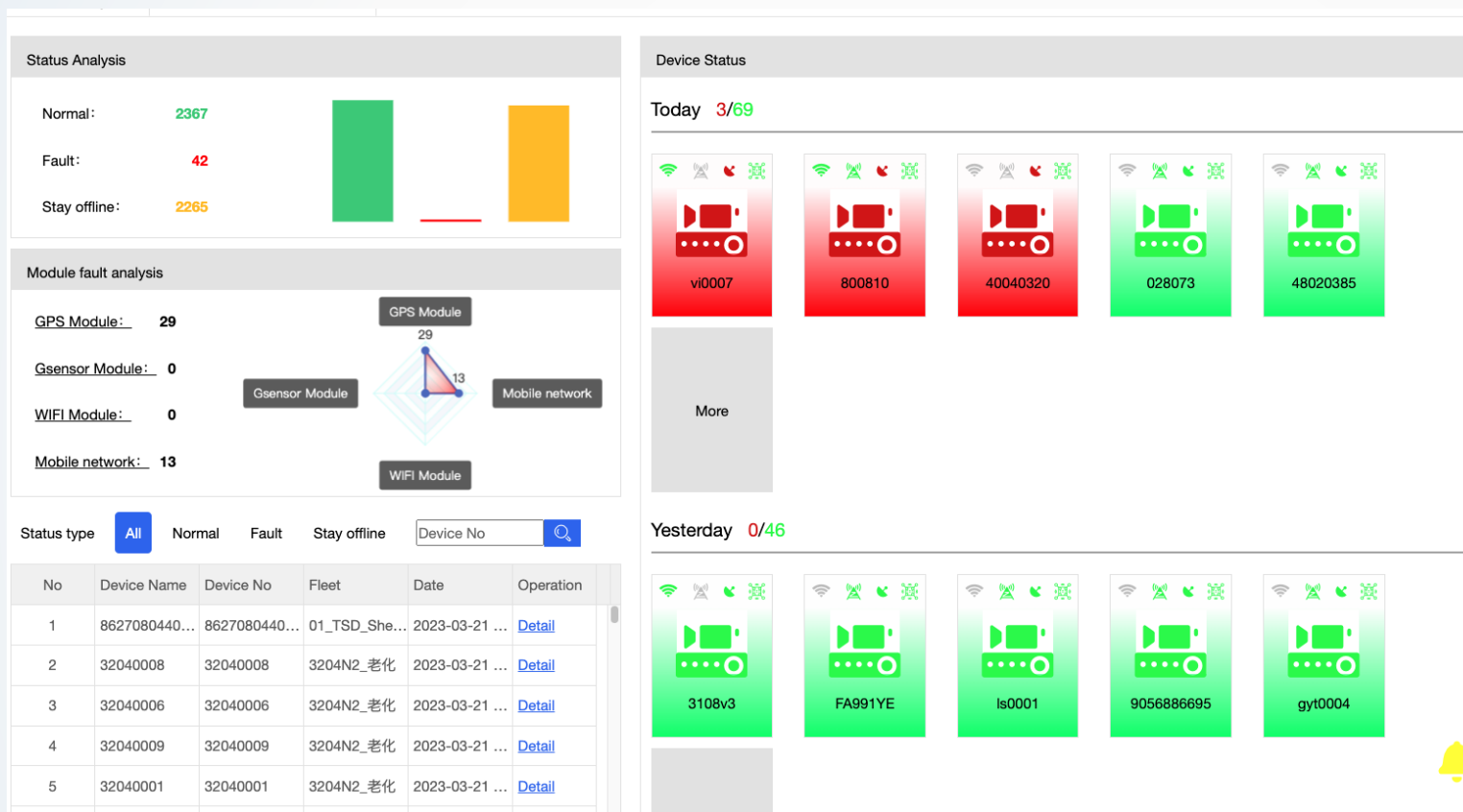
Monitoring hard disks/SD card for failures



Catch the device exceptions



Device Status Statistics



Device Live Status Dashboard
Graphical chart and modules status details,
easy to review



Single Device Parameter Setting



The screenshot shows a web-based configuration interface for a device. On the left is a sidebar menu with options: System Config, registration message, Basic Info, State Info, Access Mode, Network Config, APN, and LOG. The 'registration message' option is selected. The main panel displays the following fields:

registration message			
Province ID	1	City/County ID	1
Manufacturer ID	howen	Terminal model	2
Terminal ID	hw01	License plate color	blue
Plate No	ق٢٥B88888		

Below the fields is a blue 'Submit' button. At the bottom of the interface, a status bar displays: PTZ, Total: 617 | Online: 19 | Online Rate: 3.08% | Offline: 598 | Alarm Count: 199 | Loss rate: 90.28%.



Easy check device parameters setting in Web Or desktop client



Easy Batch Device Maintenance



Fleet × Batch Config ×

Template name

Operation	Template name	Terminal model	Create date	Creator
<input type="button" value="Issue"/>	2022-03-07 15:39-vi...	MA80-08V2	2022-03-07 15:39:25	admin
<input type="button" value="Issue"/>	2022-03-07 15:34-vi...	MA80-08V2	2022-03-07 15:34:48	admin
<input type="button" value="Issue"/>	2022-03-07 13:55-8...	ME31-08	2022-03-07 13:55:05	admin
<input type="button" value="Issue"/>	2022-03-07 09:25-vi...	MA80-08V2	2022-03-07 09:25:34	admin
<input type="button" value="Issue"/>	2022-02-23 15:13-8...	MA80-08	2022-02-23 15:13:22	admin
<input type="button" value="Issue"/>	2022-02-23 15:12-8...	MA80-08	2022-02-23 15:12:38	admin
<input type="button" value="Issue"/>	2022-02-23 15:07-8...	MA80-08	2022-02-23 15:07:35	admin

Batch config

Upgrade File Manager ×

Package file

Operation	Package Name	Version	Device Model	Creator
<input type="button" value="Issue"/>	项目mcu	G22030901	MA80-08V2	admin
<input type="button" value="Issue"/>	8002	P22030701	MA80-02	admin

Add

Package Name *

Package file

Upgrade file management

Batch Upgrade ×

Task Name

Operation	Task Name	Create date	State
<input type="button" value="Pause"/> <input type="button" value="Issue"/>	v2升级	2022-03-09 10:19:16	Normal
<input type="button" value="Pause"/> <input type="button" value="Issue"/>	v1升级	2022-03-02 16:33:58	Normal
<input type="button" value="Pause"/> <input type="button" value="Issue"/>	MA8008-G21100901...	2022-03-02 16:30:58	Normal
<input type="button" value="Pause"/> <input type="button" value="Issue"/>	v1往返升级	2022-03-02 10:52:21	Normal
<input type="button" value="Pause"/> <input type="button" value="Issue"/>	v1往返升级	2022-03-01 13:38:44	Normal
<input type="button" value="Pause"/> <input type="button" value="Issue"/>	v1升级	2022-03-01 11:54:27	Normal
<input type="button" value="Pause"/> <input type="button" value="Issue"/>	v1升级	2022-03-01 11:34:52	Normal

Batch upgrade



- Batch devices management at the same time.
- Easier and more efficient



Smart Data Flow Control



Traffic Flow setting

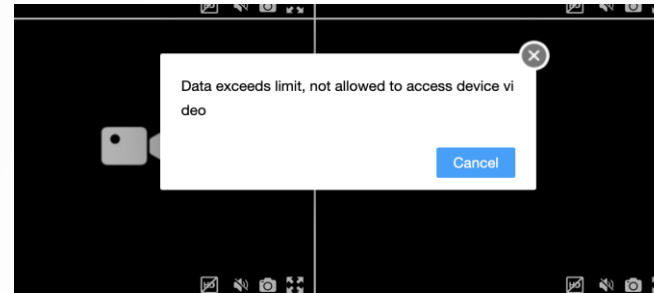
-1 means no limit, >0 means threshold

Flow Limit Day MB

Month data traffic limit MB

Traffic Flow Settlement Day

Threshold setting



Over flow tip message

2022-03-25 00:00:00 - 2022-03-25 23:59:59

Device

Traffic Flow Type All

Traffic Flow direction

All

Access Mode All

Search

No	Device No	Device Name	Traffic Flow No	Traffic Flow Type	Data consumption (MB)	Access Mode	Reporting time	Consumption time
1	800548045549	Taxi 30	Upward	Signaling	0.0748491287	4G	2022-03-25 21:10:46	2022-03-25 21:10:46
2	60196	60196	Upward	Signaling	0.0004892349	4G	2022-03-25 21:09:49	2022-03-25 21:09:49
3	fa990ye	FA990YE	Upward	Live	3.4317808151	4G	2022-03-25 21:06:13	2022-03-25 21:06:13
4	fa990ye	FA990YE	Upward	Live	5.8668837683	4G	2022-03-25 21:06:12	2022-03-25 21:06:12
5	fa990ye	FA990YE	Upward	Signaling	0.0134925842	4G	2022-03-25 21:06:04	2022-03-25 21:06:04
6	800548045549	Taxi 30	Upward	Signaling	0.0087480545	4G	2022-03-25 21:03:40	2022-03-25 21:03:40
7	60196	60196	Upward	Signaling	0.0004892349	4G	2022-03-25 21:03:20	2022-03-25 21:03:20

Statistical report



Control the flow usage, save the money

Highlighted Features



Useful and Unique features for best operation experience

Video

Cloud Recorded Video
Multi-channel Synched Playback
Multi-channel Video File Merge

Location

Quicker Position tracking
Local GEO Fencing

Alarm

More Alarm Linkage
Convenient Evidence Center



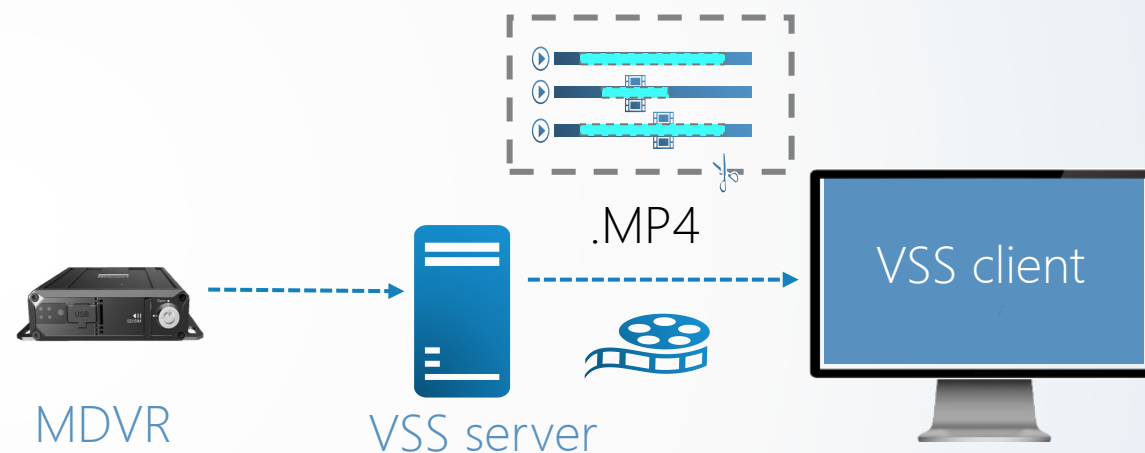
Cloud Recorded Video



The screenshot shows the VSS client software interface. It includes a top navigation bar with options like Dashboard, Live, Playback, Geo Fence, Evidence, Report, Management, and Server. The main area displays a video playback window with a map overlay showing a vehicle's location. Below the video window is a table of recorded video files.

File Type	Date	Channel	File Size	Type	Video File
Video File	2022-01-18 15:19:14-15:19:16	CH2	0.02M	Normal	C:\Howen\centralRecord\2022-01-18\77788
Video File	2022-01-18 15:03:04-15:19:28	CH2	6.42M	Normal	C:\Howen\centralRecord\2022-01-18\77788
Video File	2022-01-18 15:03:04-15:19:16	CH1	6.82M	Normal	C:\Howen\centralRecord\2022-01-18\77788
Video File	2022-01-18 15:03:04-15:19:16	CH4	6.75M	Normal	C:\Howen\centralRecord\2022-01-18\77788
Video File	2022-01-18 15:03:01-15:19:16	CH3	6.78M	Normal	C:\Howen\centralRecord\2022-01-18\77788

- Recording in VSS server for backup
- Quick search and download



Local storage

Cloud storage

MAIN STREAM

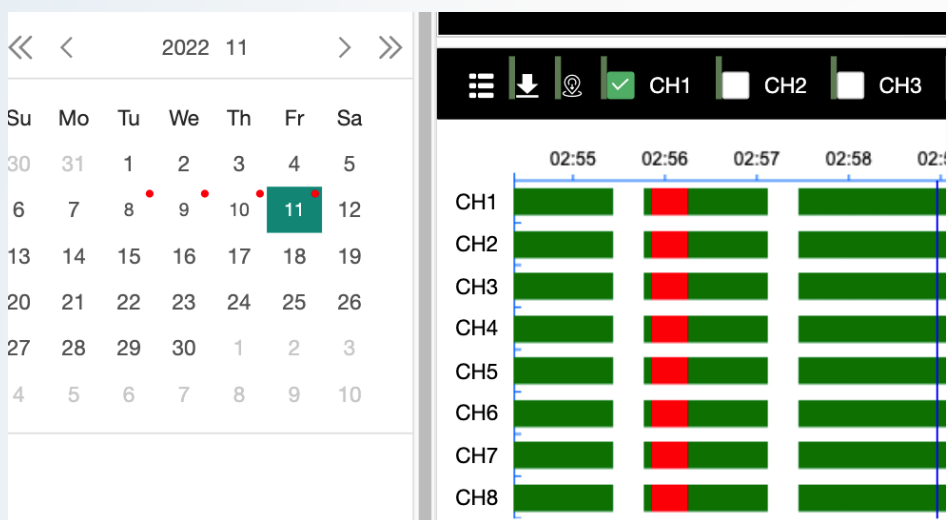
MAIN/ SUB STREAM



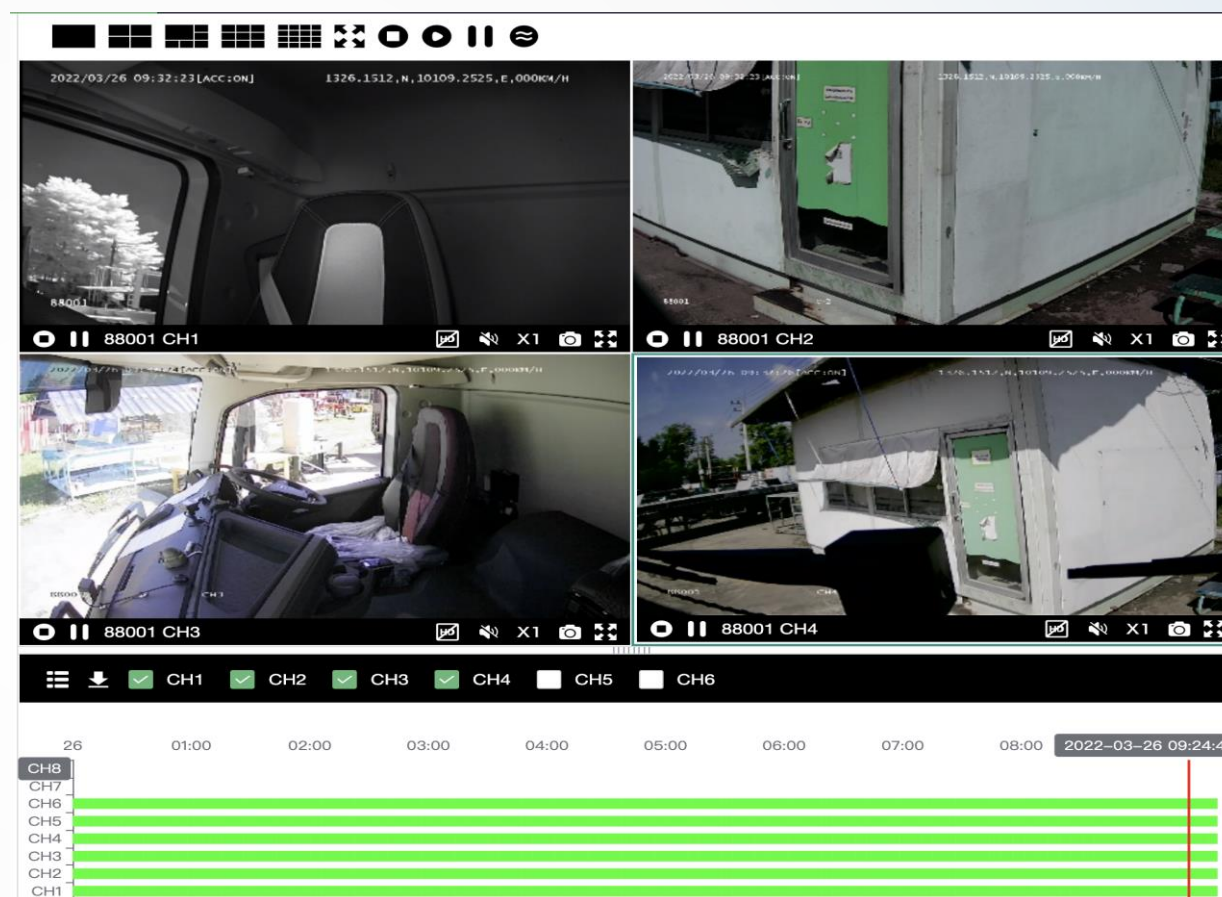
Cloud and edge storage, quick export



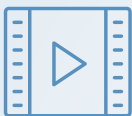
Multi-channel Search& Synched Playback



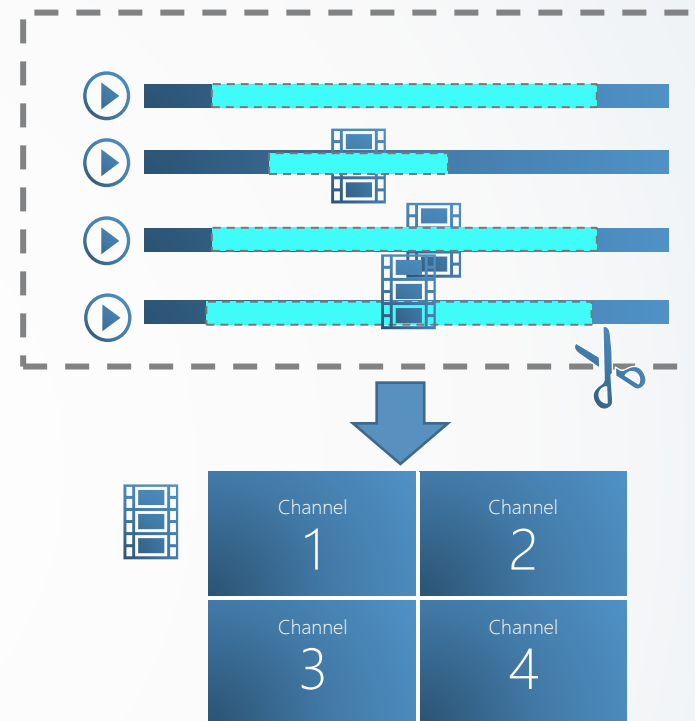
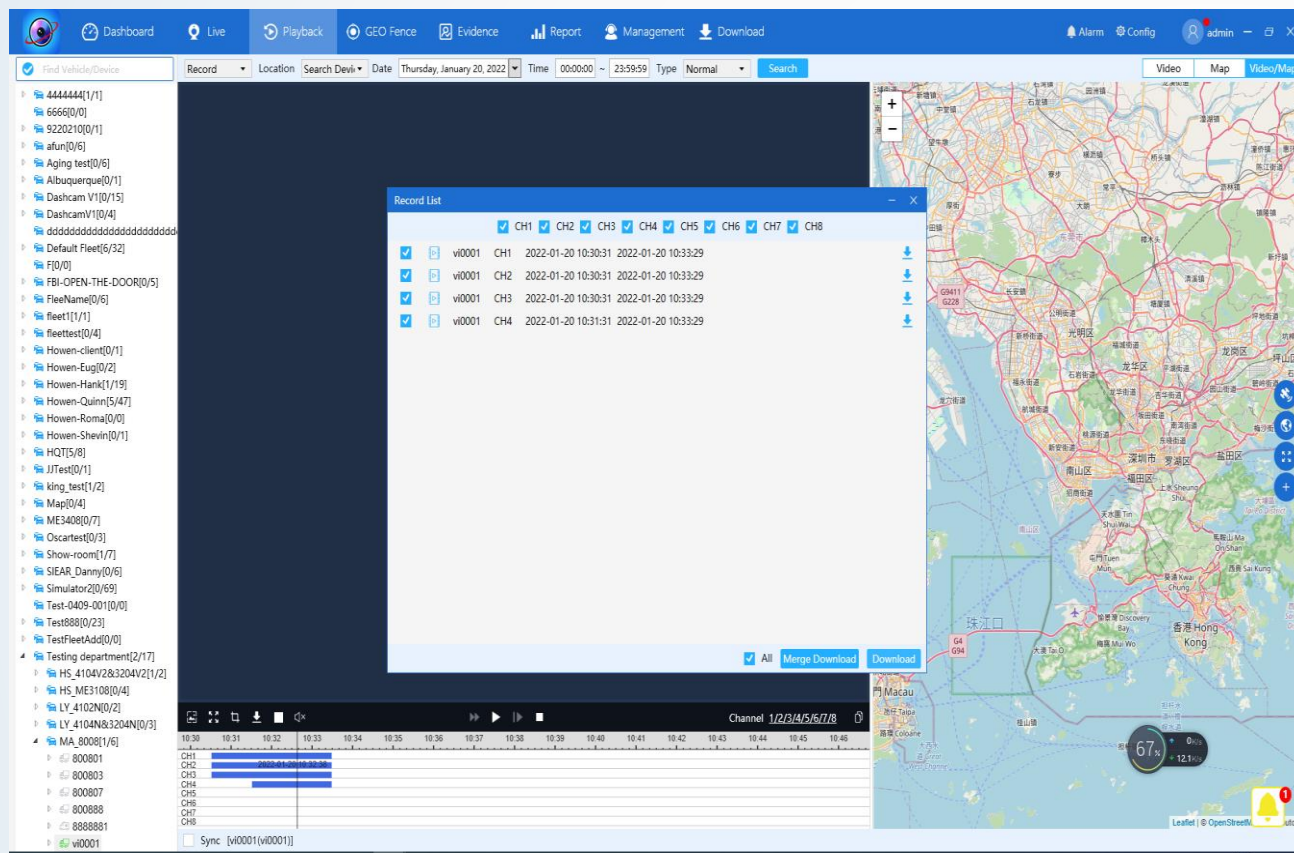
- Red color for alarm record
- Green color for general record
- Searching for Device recording distribution by month



Multi-channel video playback at the same time with same video frame.



Multi-channel Video File Merge



Check more channels in the video file

- Merge multi-channel to one video file
- Support different resolution channel



Rich Alarm types



IO Alarm

- ☐ Input alarm
- ☐ Panic alarm
- ☐ Abnormal Opening and Closing
- ☐ IO output

Speed Alarm

- ☐ Low Speed
- ☐ Over Speed
- ☐ Parking Overtime
- ☐ Harsh Acceleration
- ☐ Harsh Braking
- ☐ Low Speed Warning
- ☐ High Speed Warning
- ☐ Idle speed warning
- ☐ RPM exceeds

Device Alarm

- ☐ Storage Error
- ☐ ACC OFF
- ☐ ACC ON
- ☐ GPS module abnormal
- ☐ Front panel open
- ☐ Voltage
- ☐ GPS antenna disconnected
- ☐ GPS antenna shorted
- ☐ Trailer
- ☐ Freewheeling
- ☐ Vehicle move
- ☐ Trip Start
- ☐ In trip
- ☐ Trip End
- ☐ GPS location recover

DMS Alarm

- ☐ Fatigue driving alarm
- ☐ Phone call alarm
- ☐ Smoking
- ☐ Driver abnormal alarm
- ☐ Driver Changed
- ☐ Eye closed
- ☐ Yawning
- ☐ DMS Camera Cover
- ☐ Distracted Driving
- ☐ Seat belt not fastened
- ☐ No driver
- ☐ Drinking water
- ☐ Driver shift
- ☐ Driver return
- ☐ IR-blocking sunglasses
- ☐ Driver identified successfully
- ☐ Driver identification failed
- ☐ Cannot detect human face

ADAS Alarm

- ☐ Lane departure warning
- ☐ Pedestrian Collision
- ☐ Frequent lane departure warning
- ☐ Traffic sign violation warning
- ☐ ADAS Speed up
- ☐ ADAS Speed down
- ☐ Traffic sign recognition event
- ☐ FCW (Forward Collision Warning)
- ☐ HMW (Headway Monitoring Warning)
- ☐ Left lane departure warning (DMAD01)
- ☐ Right lane departure warning (DMAD01)
- ☐ Low-speed forward collision warning (DMAD01)

Video Alarm

- ☐ Video Lost
- ☐ Motion Detection
- ☐ Camera Cover

Geofence Alarm

- ☐ Enter geofence
- ☐ Exit geofence
- ☒ Overspeed alarm in geofence
- ☐ Overspeed warning in geofence
- ☐ Low speed alarm in geofence
- ☐ Low speed warning in geofence
- ☐ Forbidden parking engine ON
- ☐ Forbidden parking engine OFF
- ☐ Geofence stay overtime



Quick search alarms as you need



Combined Alarm Query



No	Device No	Alarm Type	Alarm Start	Alarm End	Speed	Time	Detail	Process
1	320402(320402)	Driver identification f...	111;110001;110002					
2	320402(320402)	Driver identification f...	111					
3	999904(粵B6B97T)	Video Lost	ee					
4	320402(320402)	Storage Error	ENEN					
5	320402(320402)	Video Lost	FLLET1					
6	999903(粵B35AV2)	Video Lost	ss					
7	999903(粵B35AV2)	ACC ON	test8					
8	999904(粵B6B97T)	Storage Error	連不住					
9	999904(粵B6B97T)	Storage Error	1 2 3					
10	320402(320402)	ACC ON	113.94677,22.5584259	Alarm Start	0.00 KM/H	2022-01-19 14:06:04		
11	320402(320402)	Driver identification f...	113.946754,22.558569	Alarm End	1.00 KM/H	2022-01-19 14:05:09	id:" ; name:" ; tp:82	
12	320402(320402)	Driver identification f...	113.946732,22.5585766	Alarm End	1.00 KM/H	2022-01-19 14:04:19	id:" ; name:" ; tp:82	
13	4104004(4104004)	Parking Overtime	113.946564,22.5582066	Alarm Start	0.00 KM/H	2022-01-19 14:01:15	Threshold:0 ; Parkin...	
14	188888(188888)	Video Lost	113.946686,22.5585651	Alarm Start	0.00 KM/H	2022-01-19 14:00:26	channel:8	
15	188888(188888)	Video Lost	113.946686,22.5585651	Alarm Start	0.00 KM/H	2022-01-19 14:00:26	channel:7	
16	188888(188888)	Video Lost	113.946686,22.5585651	Alarm Start	0.00 KM/H	2022-01-19 14:00:26	channel:6	
17	188888(188888)	Video Lost	113.946686,22.5585651	Alarm Start	0.00 KM/H	2022-01-19 14:00:26	channel:5	

☒ Device 1

☒ Device 2

☒ Device 3

☒ Device 4

☒ Device 5

☐ Device 6

☐ Device 7

☐ Device 8

☐ Device 9

☐ Device 10

☐ Device 11

☐ Device 12

.....

☒ Input alarm

☒ Panic alarm

☒ Low speed

☐ Over speed

☐ FVS

☒ PCW

☒ Fatigue driving

☐ Making phone call

☐ Park over time

☐ Idel

☐ Video lost

☐ Storage error

.....

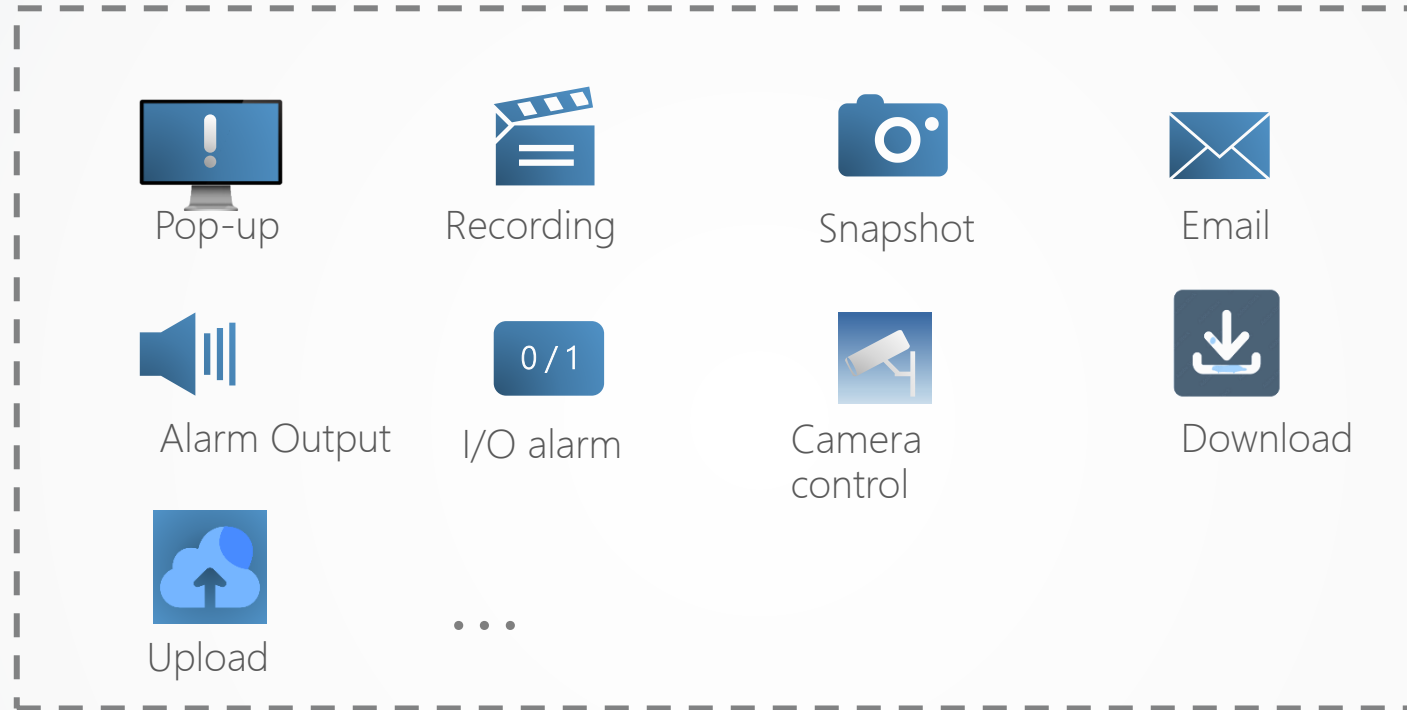
- Multiple alarm type, Multiple device
- Quick & flexible combined search
- In report and evidence center



Quick search alarms as you need



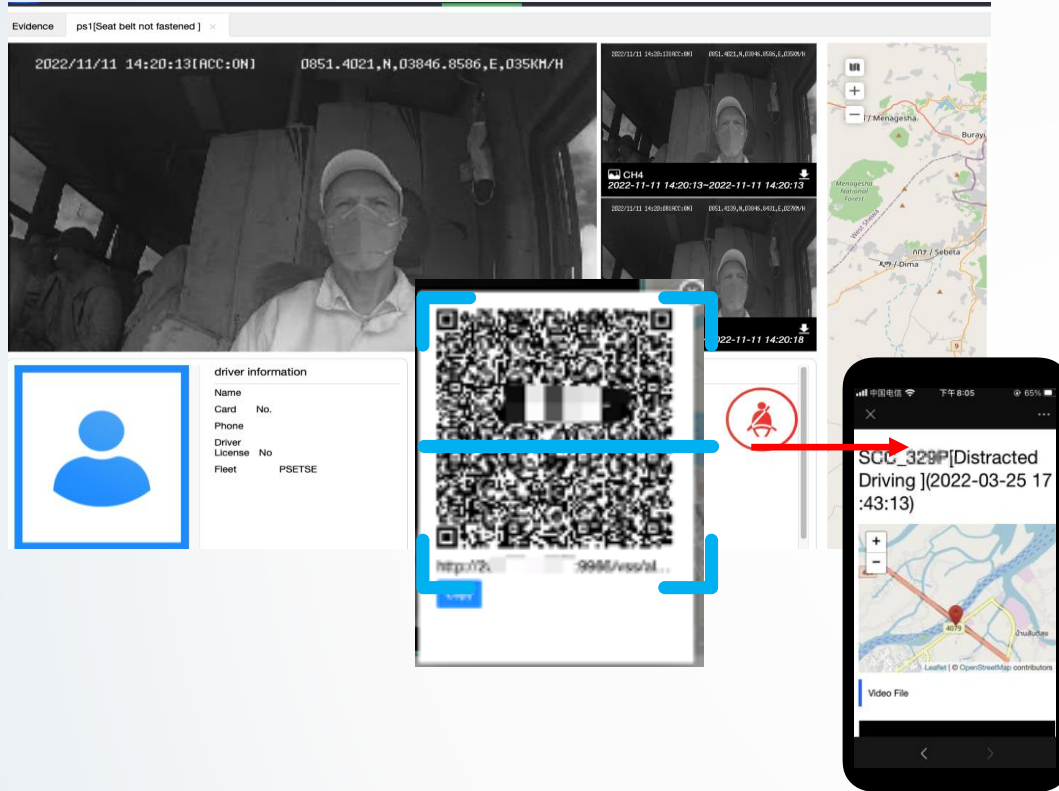
More Alarm Linkage



Various alarm linkage, won't miss any alarms, auto response to them



Convenient Evidence Center



- Includes of all the alarm types
- Short video clips/Snapshot/GPS route
- Quick and Combined query
- Preview/download
- icons for all alerts
- Quick evidence sharing: Set Validity ,QR code/link

 Focus dealing with the evidence easy and efficiently



Quicker Position tracking



Map
Google Map
Baidu Map
Bing Map
Google Map
OpenStreetMap
Google Maps (unauthorized)

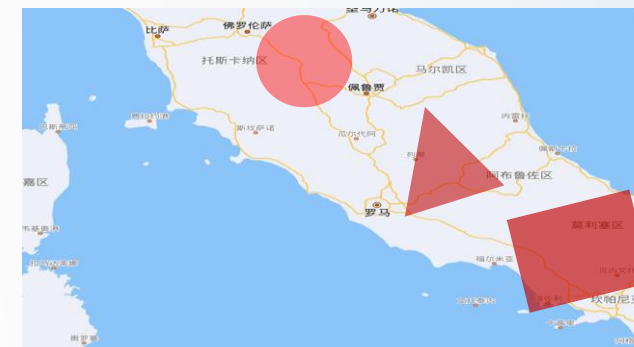
Various MAP

- Google map
- Open street map
- Bing map
- Baidu map
- Yandex Maps*

Mileage	Trip time	Begin Time	End Time
4	00:01:22	2022-03-24 20:21:37	2022-03-24 20:22:59
4374	00:04:42	2022-03-24 19:37:21	2022-03-24 19:42:03
16	00:00:01	2022-03-24 19:35:53	2022-03-24 19:35:54
44	00:00:04	2022-03-24 19:35:48	2022-03-24 19:35:52
10955	00:16:20	2022-03-24 19:19:27	2022-03-24 19:35:40
78	00:03:59	2022-03-24 19:02:22	2022-03-24 19:06:21

Trip tracking

- Trip report
- Trip playback
- Alarm points indicate
- Mileage counting



Smart Geo fence

- MDVR locally
- Rich rule settings and linkage
- Import/export
- Batch issue to multi vehicles
- Alarm report



Catch every position and every trip



Local GEO Fencing linkage



Dashboard Live Playback Geo Fence Evidence Report Management Server

Name Search Clean

Name	Type	Operation
weilan	Circle	
111	Polygon	
1	Polygon	
1111111	Polygon	
111	Polygon	
1111111	Polygon	
asdfasdf	Polygon	
E54654	Polygon	
test 1	Polygon	
ds	Polyline	
德文test	Polygon	

weilan

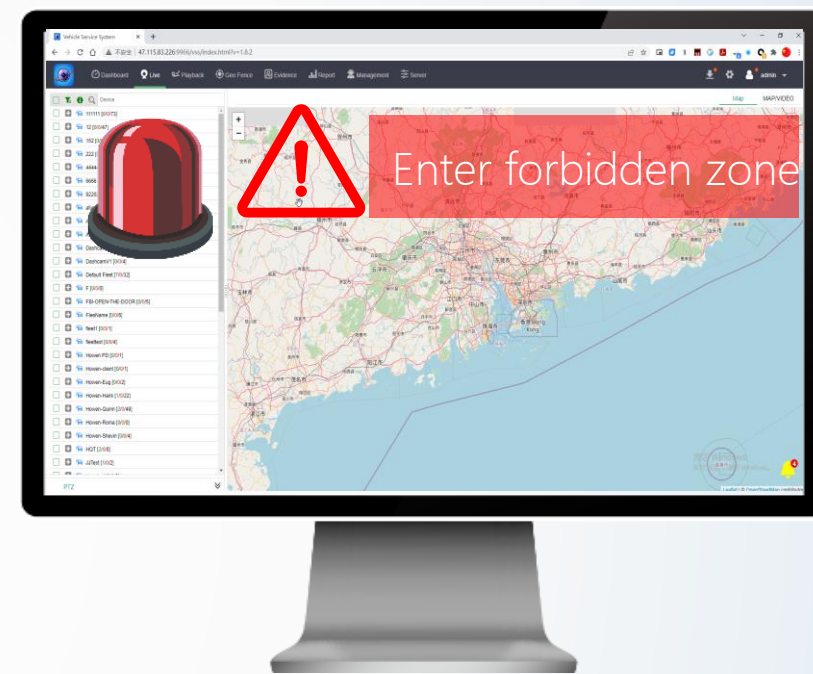
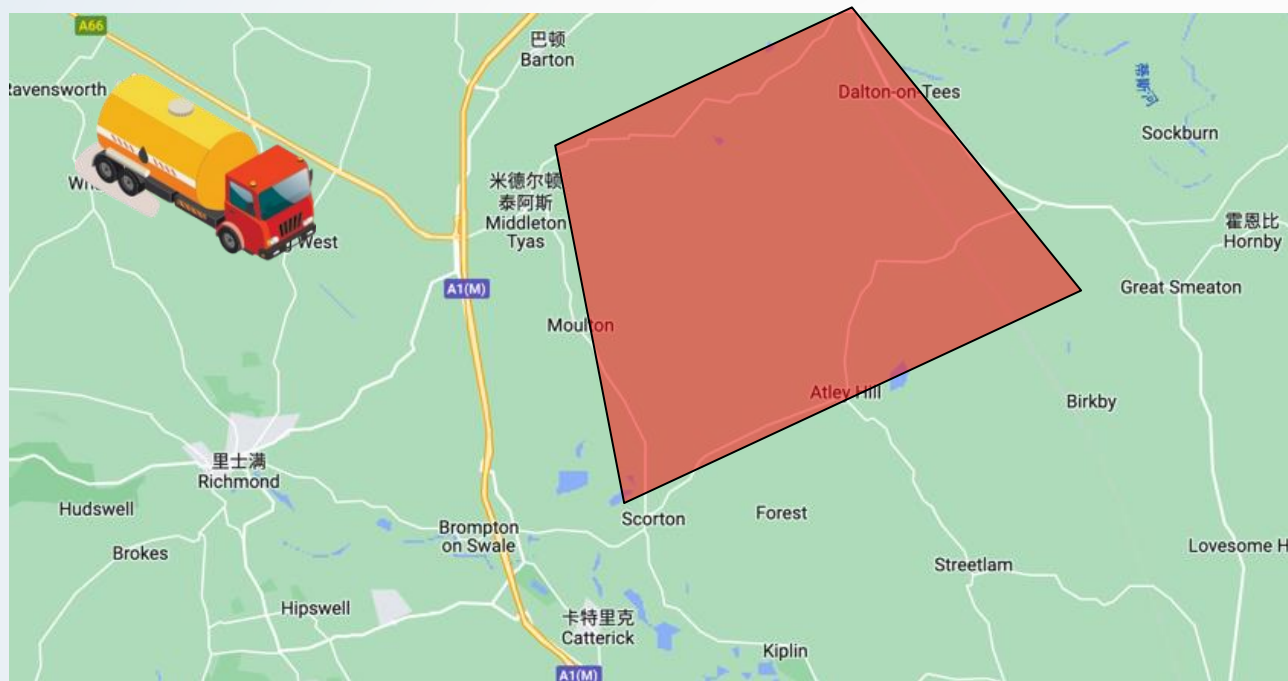
Device No	Device Name	Status	
10121212	10121212	Waiting to issue	
2021072601	2021072601	Waiting to issue	
222	222	Waiting to issue	
53630112	53630112	Waiting to issue	
800810	800810	Waiting to issue	
888965	testppp	Waiting to issue	
888999	888999	Waiting to issue	
900001	900001	Waiting to issue	
999900000001	999900000001	Waiting to issue	
999900000002	999900000002	Waiting to issue	
999900000003	999900000003	Waiting to issue	
999900000004	999900000004	Waiting to issue	



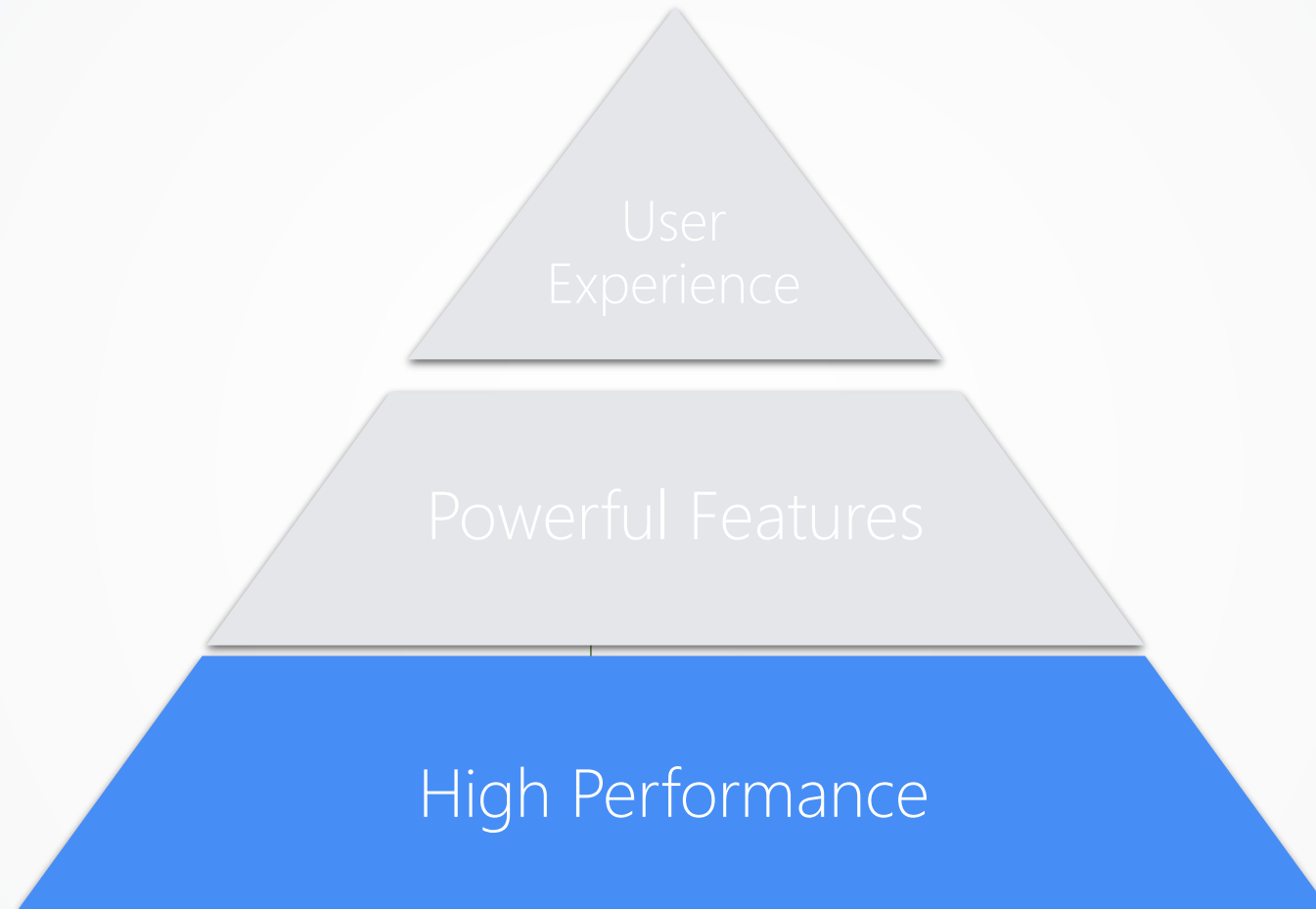
- Support batch issue to offline device
- Delivery status display
- More linkages optional
- Import/export



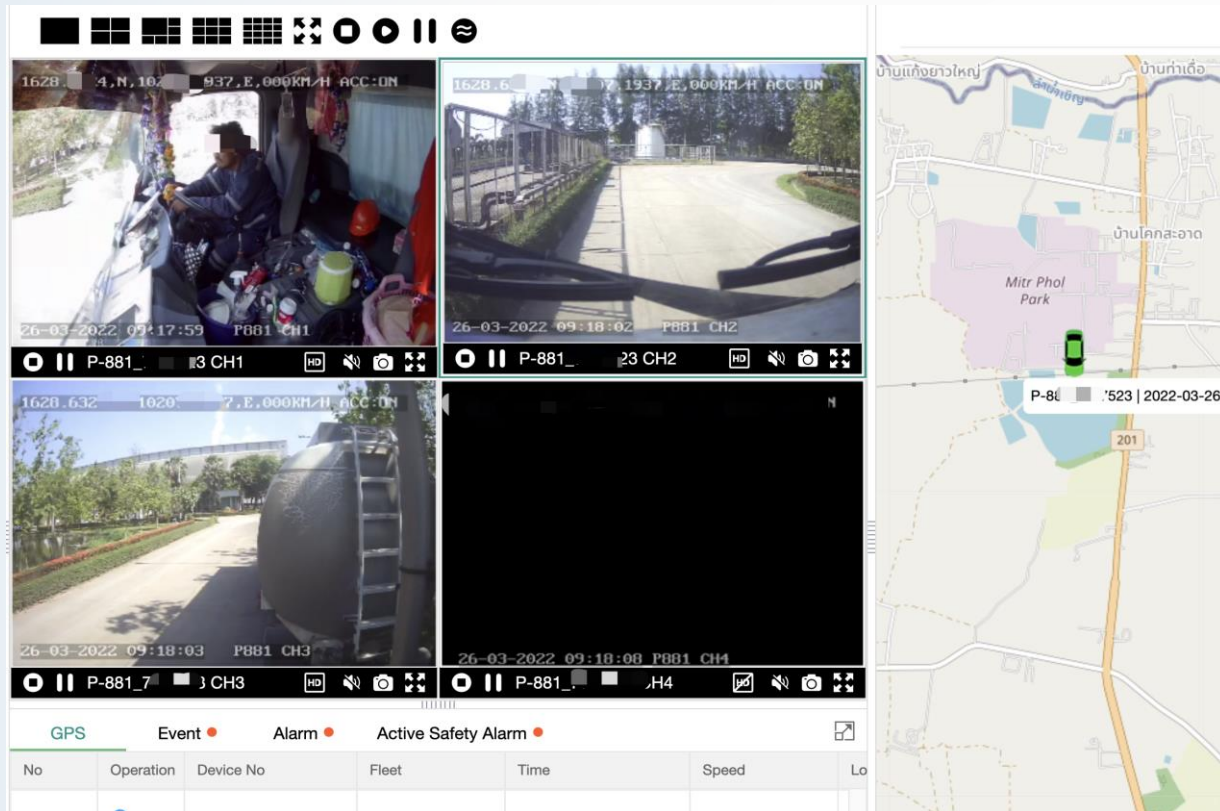
Flexible Local GEO Fencing linkage



- GEO configuration stored in MDVR locally, works when device offline
- Entry/ exit Illegal forbidden zone will trigger alert / voice alert even no network connection.
- Camera power ON/OFF base on entry/exit
- VSS batch issue to vehicles, save operation time and cost



Advanced Video Processing Technology



- HTML5 based (No need flash)
- Faster Video loading
- Support 100 split video view
- Multiple video mode: Smooth/real-time priority, etc



A better video stream processing framework

High throughput



Up to 10000 devices in one server



Up to 100 split video for one PC client

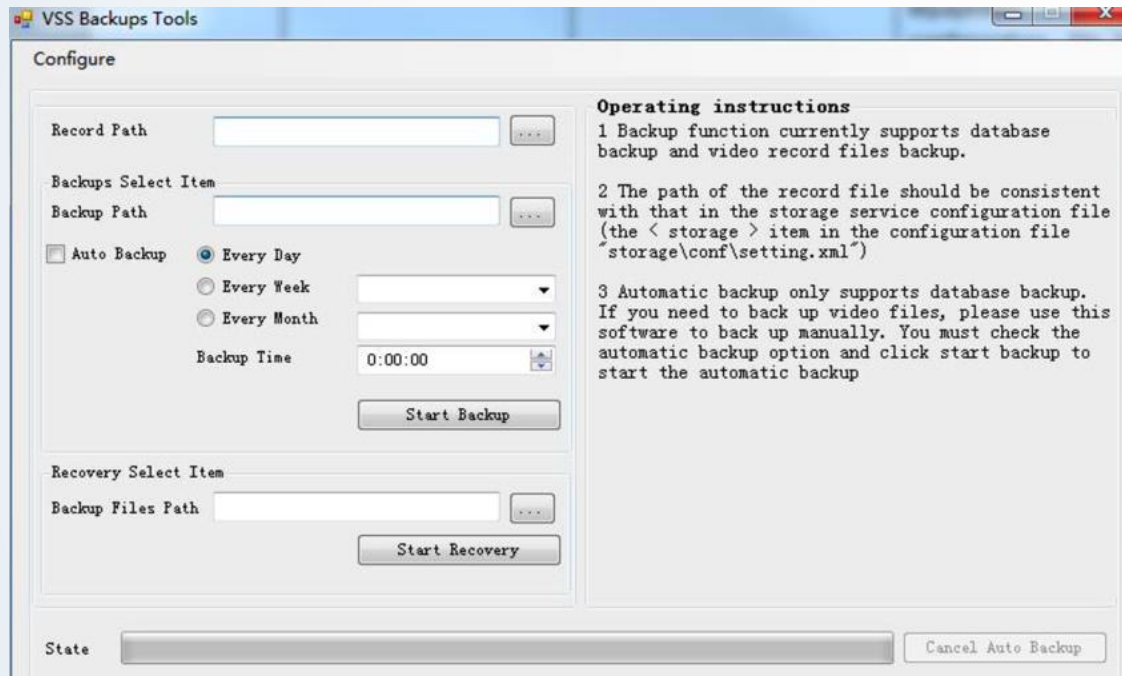


High concurrency capability, no limit of the users



Proved in many global projects

Powerful Backup Tool



Fast backup VSS database
Easy backup video file



One click to backup database and video file

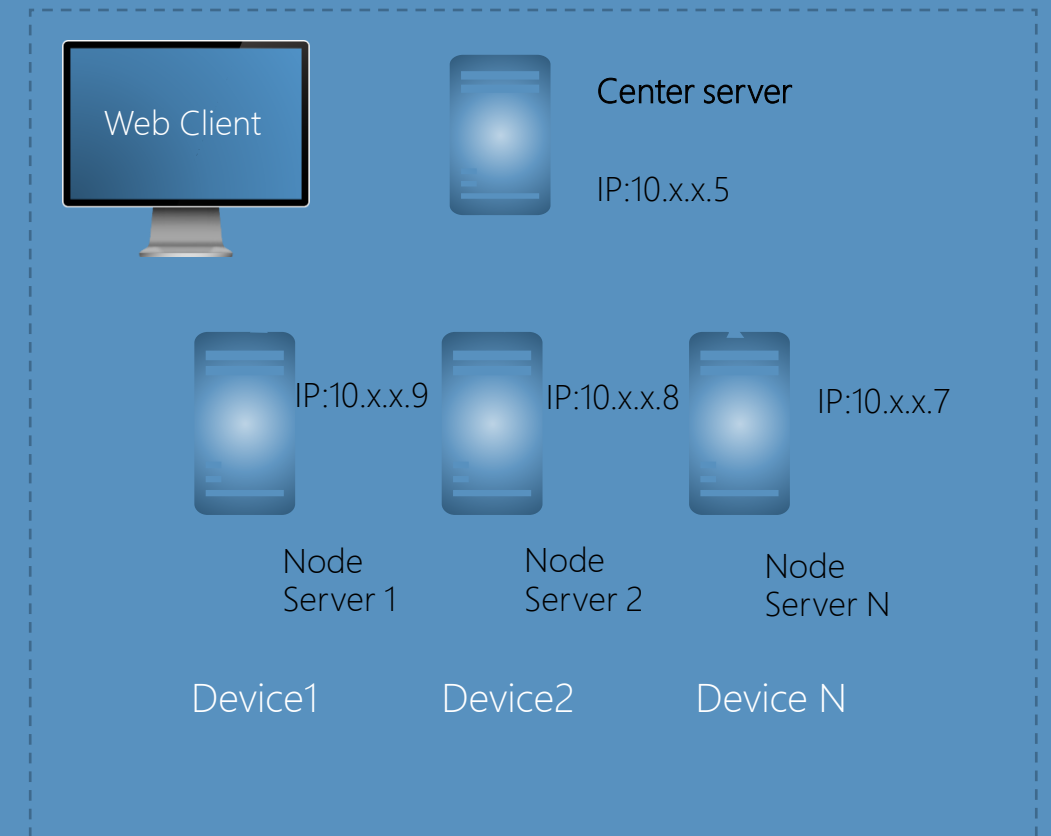
Distributed expansion

Server Config ✕

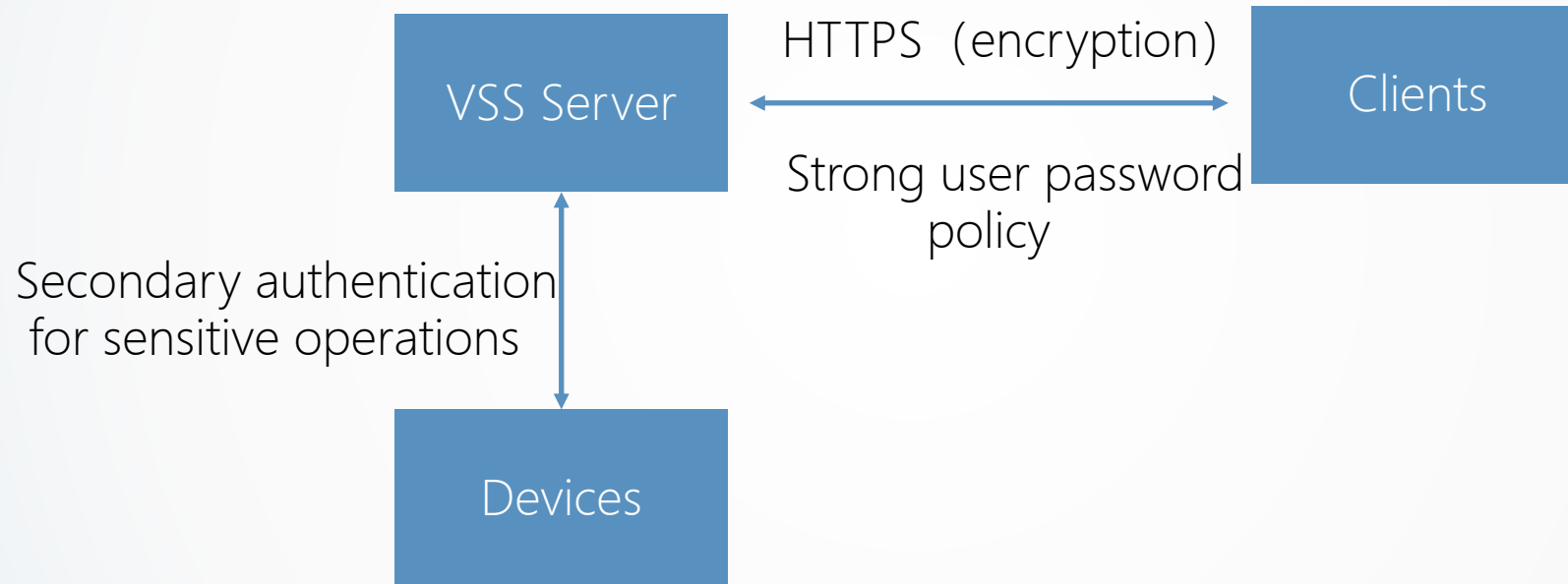
Add node

Server node *	Central node(2226)
Audio-video Count *	Central node(2226)
Channel Name *	Node server

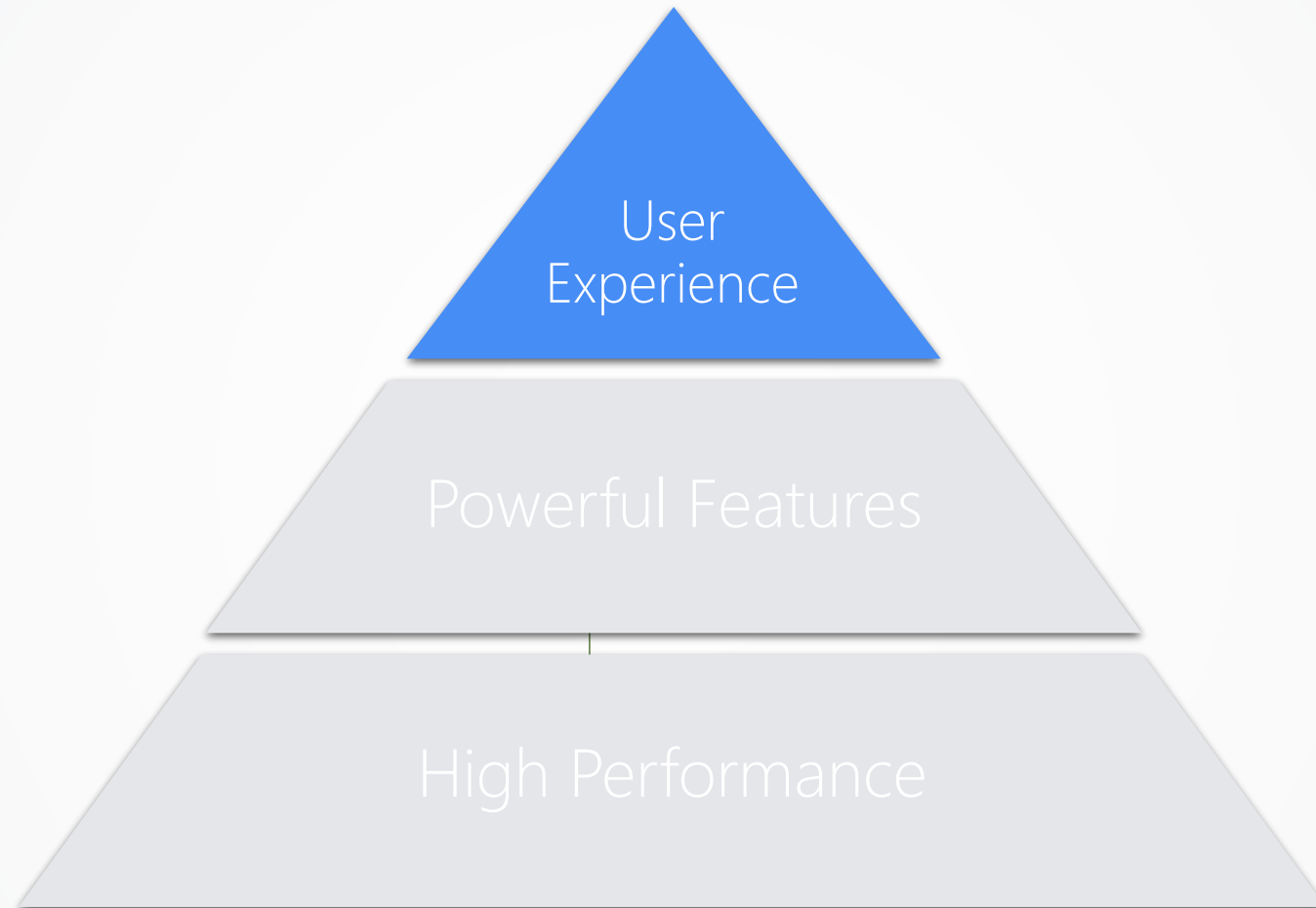
Update Delete Network Settings



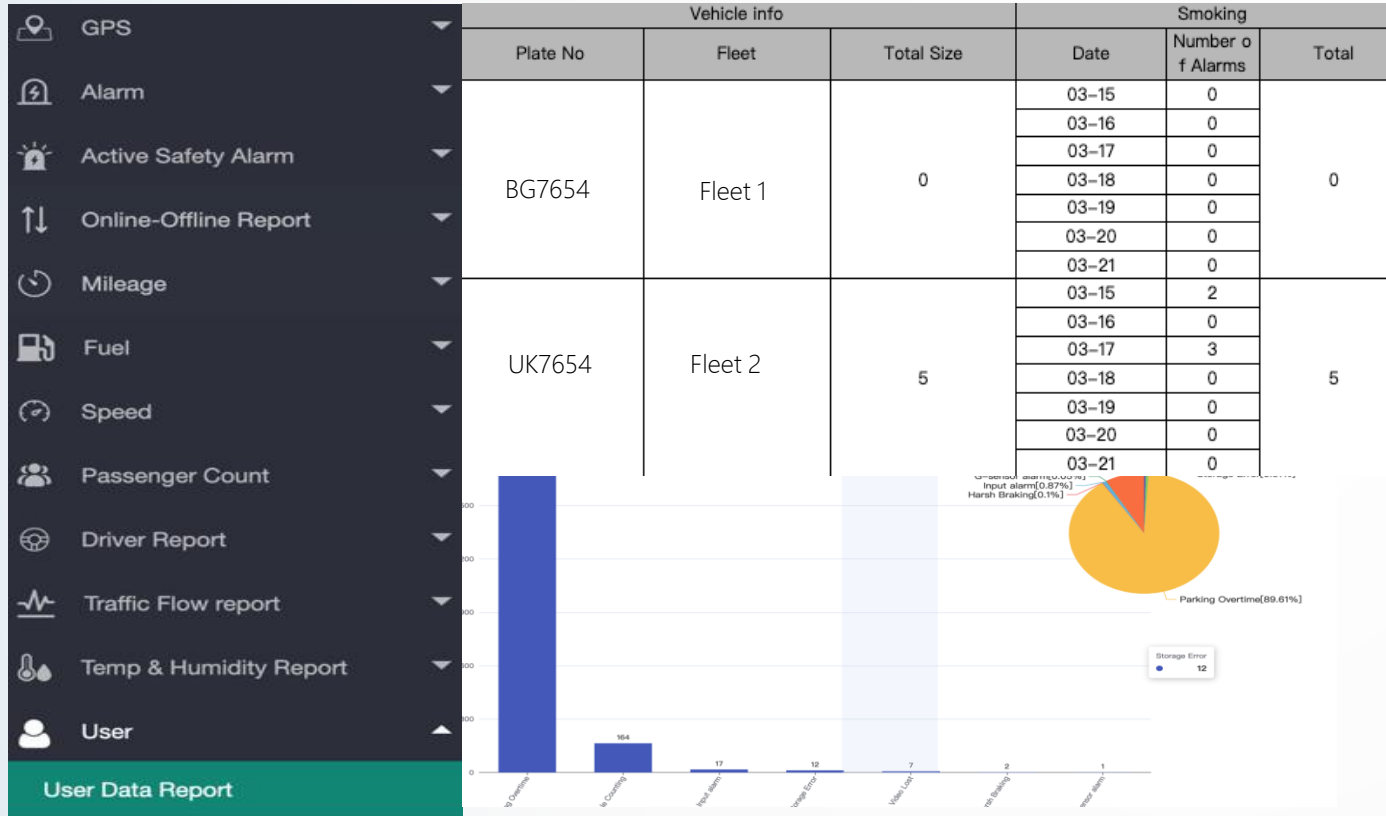
- Central node manages sub nodes
- Assigns the device to sub nodes
- Easy to expand



Data encryption , strict authentication make a secure system

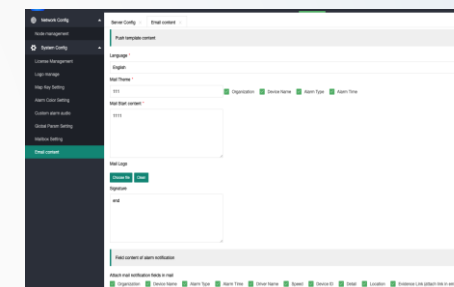
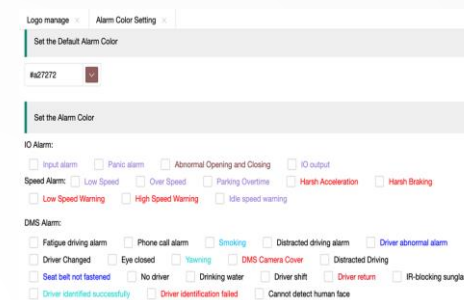
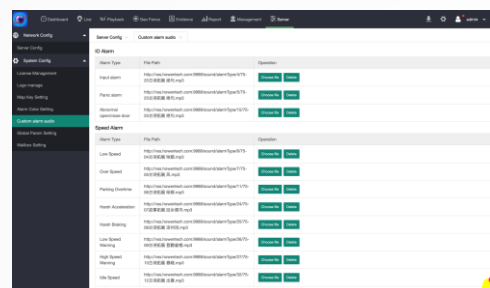
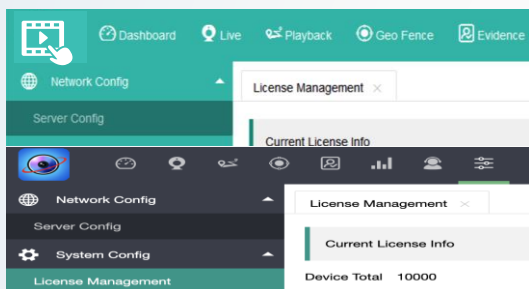


AI-focused Reports



- Detailed alarm data
- Graphical report
- Support export
- Designed for AI telematics

Easy & Flexible Customization



- Multi user LOGO
- Theme

- Alarm audio

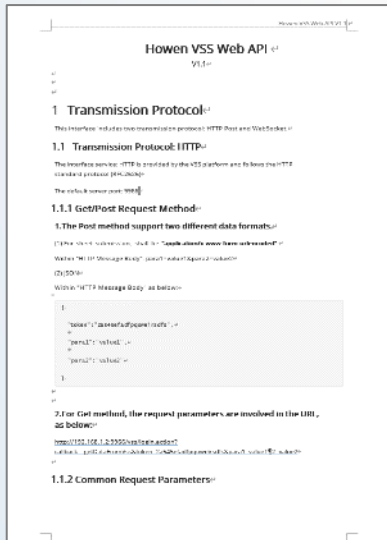
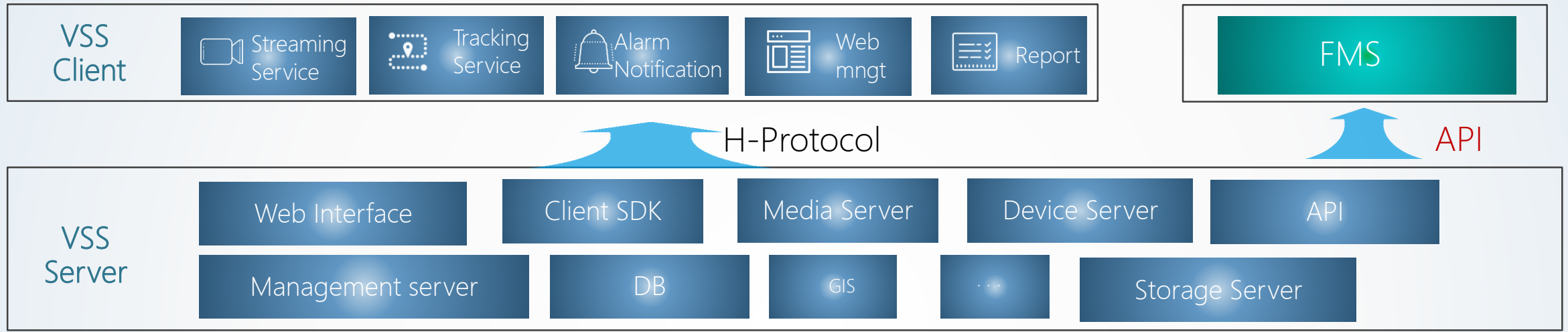
- Alarm color

- Alert Email Template



Easy DIY your system GUI

VSS API: Powerful tool for you to Build your own system



Advantages of Controltech VSS API integration

1. Rich interfaces
2. Easy to callback, to achieve quickest development
3. Friendly API documentations
4. Full support of Professional Engineers
5. VSS support on-premise implementation, meet local compliance

Benefits of Integrating Controltech Devices to Your Platform



Controltech hold most open strategy for integration.

- When hardware update, the protocol and API will also update accordingly and in time
- All Controltech products report to VSS server, so **"One-time Integrate, All Controltech Devices Work"**



Video x Telematics

Benefit from Advantages of both Telematics platform and Controltech VSS hardwares



Retain & Gain Customers

Providing same user experience, whilst adding video seamlessly; Upgrade to AI platform easily



Save Cost

- No need to train 2 group of operation teams to learn 2 softwares
- Controltech rich cost-effective devices for options
- One Platform, All Terminals

VSS footprints

[USA] towing truck



[Chile] Walmart



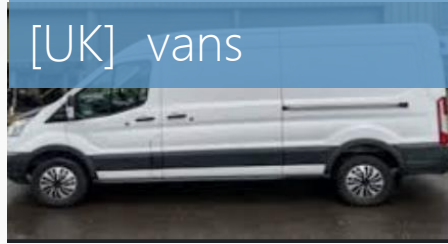
[Colombia] coca cola



[Peru] oil truck



[UK] vans



[Uruguay] BUS



[Spain] BUS



[Kazakhstan] police car



[Belgium] Crusher



[Poland] waste truck



[Brazil] BUS



[Kuwait] Cash Van



[Australia] trailers



[Philippines] BUS





Our Customers are people not vehicles !
