

# MEITRACK MD533S MDVR User Guide



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# 1 Copyright and Disclaimer

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## 2 Product Introduction

### 2.1 Product Overview

The MD533S, a two-channel HD mobile digital video recorder (MDVR), features two systems (dual communication channel) and high stability. Adopting the high-performance processor and Linux operating system, it can operate in vehicle tracking mode and video recording mode simultaneously and is a core product of new-generation wireless vehicle video surveillance solutions that uses H.264 or H.265 video compression or decompression, GPS positioning and wireless data transmission technologies.

The MD533S is small in size and light in weight and is characterized by internal GPS system and video system. With the metal outer case, it dissipates heat more effectively and its rugged sturdy housing make it shockproof. This unit is specially designed for mobile video surveillance for different types of vehicles, such as buses, long-distance coaches, taxis, logistics vehicles, armored cars and private cars.

### 2.2 Product Function

#### 2.2.1 DVR Function

- Two-channel 1080P live video recording
- Automatic video overlaying
- Search and play back videos via the platform, app or software
- Download videos via the platform or app
- OSD overlay for video recording
- SOS alert recording
- Alert photo capturing
- Image quality settings
- Self-adaptive camera resolution and format

#### 2.2.2 Position Tracking

- GPS + LBS positioning
- Real-time location query
- Tracking by time interval
- Tracking by distance
- Tracking by mobile phone

- Speeding alert
- Cornering report

### 2.2.3 Alert

- SOS alert
- GPS antenna cut-off alert
- External power supply cut-off alert
- GPS blind spot alert
- Engine or vehicle door status alert
- Geo-fence
- Video signal lost alert
- Harsh braking alert
- Harsh acceleration alert
- I/O port detection
- Driver fatigue alert

### 2.2.4 Others

- Support a CAN bus interface
- Support the speedometer RPM
- Support a RFID reader
- Support multiple types of fuel level sensors
- Support two-way calling
- Play videos by using MT Player software
- Upload data via 4G or WiFi
- Configure the MDVR by using the local area network (LAN) web page
- Support parallel running of two systems
- Support the 2.4 GHz WiFi hotspot function
- Preview videos by using the RTMP
- Check downloaded videos via a WiFi hotspot

Item	Parameter	Specifications
System structure	System operation	Parallel running of two systems; two communication channels (to prevent data loss)
Audio and video	Video input	Two 4-pin ports (5557 interface), connected to cameras (5 V) Connect to 2-channel AHD cameras, support D1/720P/1080P and self-adaptive PAL and NTSC formats. However, the type of the two cameras connected must be the same. Support 2x1080P@25fps live video recording.
	Video output	1-channel CVBS aviation connector (Work together with the conversion cable. Level: 1.0 Vp-p. Impedance: 75 Ω). Resolution: 704 x 576 (PAL format) & 704 x 480 (NTSC format)
	Compression standard	H.264 or H.265 (When videos are previewed in real time or played back by using the RTMP, the compression mode of real-time streaming and storage streaming must be configured as H.264.)

	Image display	Support one-image and two-image display
	Audio compression	G.711A or G.726 optional. G.711A by default. (When videos are previewed in real time or played back by using the RTMP, the audio compression mode must be configured as G.711A.)
	Audio input	2-channel camera Mic input. The audio function is required for the camera. 1-channel handset input 1-channel 3.5 mm headphone jack input (GSM audio interface)
	Audio output	1-channel handset output (The audio output port of the CVBS display is the same as that of the handset.) 1-channel 3.5 mm headphone jack output (GSM audio interface)
	Video search and playback	Search and play back videos based on the channel, recording type, bit rate type, or time.
	Recording method	Simultaneously record general videos and alert videos as well as sounds and videos.
	Storage medium	1 micro SD card, up to 512G It is recommended that you use a micro SD card with the memory of more than 16 GB. (If one 1080P camera records videos for one hour, more than 1 GB memory is occupied.)
2G/3G/4G	MD533S-E	GSM: B3/B8 WCDMA: B1/B8 LTE FDD: B1/B3/B7/B8/B20/B28A
	MD533S-A	WCDMA: B2/B4/B5 LTE FDD: B2B4/B12
	MD533S-AU	GSM: B2/B3/B5/B8 WCDMA: B1/B2/B5/B8 LTE FDD: B1/B2/B3/B4/B5/B7/B8/B28 LTE TDD: B40
	MD533S-J	WCDMA: B1/B6/B8/B19 LTE FDD: B1/B3/B8/B18/B19/B26 LTE TDD: B41
	MD533S-G	GSM: B2/B3/B5/B8 WCDMA: B1/B2/B4/B5/B6/B8/B19 LTE FDD: B1/B2/B3/B4/B5/B7/B8/B12/B13/B25/B26/B18/B19/B20/B28 LTE TDD: B38/B39/B40/B41
WiFi	Internal. IEEE 802.11 b/g/n. Frequency: 2.4 GHz. Support AP/STA mode.	
GPS/GLONASS	Detect the insertion, pull-out, and short circuit of the antenna.	
Protocol	Protocol supported	Meitrack protocol (CCE) + RTMP (audio and video transmission protocol, compatible with Meitrack's private audio and video transmission protocol)
Software upgrade	Upgrade mode	Manual upgrade
	Upgrade method	(1) Plug the USB flash drive with the firmware into the USB port to automatically upgrade the device (or connect the device to the computer through the debug interface and then start Meitrack Manager software to upgrade the device).

		(2) Use the LAN web page to upgrade the firmware (WiFi). (3) OTA update.
Others	Power input	DC: 11–36V. Rated input: 12 V/1.5 A
	Power consumption	Start the host audio and video: about 6 W Connect two cameras: about 7.5 W in the daytime (a display connected: 11 W); about 8.5 W at night (a display connected: 12 W) Connect a single camera: 50–100 mA in the daytime; 100–150 mA at night
	SPI memory	16 MB flash. Used to store data in blind spots.
	Built-in 3-axis accelerometer	Support Start to Move / Stop Moving detection.
	I/O port	4 inputs: SOS, ACC, IN3, and IN4. IN3: Configured as the positive or negative trigger. IN4: Configured as the positive or negative trigger or pulse detection. 2 outputs, 2 AD ports, and 1 1-Wire port
	Operating temperature	-20°C to 70°C
	Weight	300g
	Dimension	120 mm x 115 mm x 25mm

## 2.3 Main Device and Accessories

Standard Accessory	Quantity	Description
MD533S MDVR	1	
GPS antenna	1	Boost your device's GPS signal.
4G antenna	1	Boost your device's 4G signal. Main antenna and auxiliary antenna.
WiFi antenna	1	Boost your device's WiFi signal.
I/O cable	1	20-pin cable. The cable is 20 cm in length.
USB cable	1	Connect to a PC to configure device parameters and upgrade software.
CD download card	1	

Optional Accessory	Description
AHD 1080P camera	Four-pin port. Connected to a 5 V power supply.
AHD 720P camera	Four-pin port. Connected to a 5 V power supply.
D1 camera	Four-pin port. Connected to a 5 V power supply.
Camera extension cable (4-pin 5557 interface)	The cable is three meters or five meters in length by default. Others (a cable 0.5–20 meters in length) need to be customized.
Micro SD card	It is recommended that you use an industrial-level card (class 10, U1 or over V10. The write speed is more than 10 MB/s.).
Conversion cable (CVBS display and A95)	There is one 6-pin female aviation connector on one end of the conversion cable and two 4-pin M12 male aviation connectors on the other end. The cable is 200 mm in length. The two male aviation connectors are connected to the CVBS display and



	A95 handset.
CVBS display	The CVBS display must work together with the conversion cable (CVBS display and A95).
A95 handset	The handset cable is one meter in length. The A95 handset must work together with the conversion cable (CVBS display and A95).
ultrasonic fuel level sensor	
A53 fuel level sensor	
A61 sensor box	
A52 digital temperature sensor	The cable is three meters, five meters, 10 meters or 20 meters in length by default. Others need to be customized.
RFID reader	
RFID tag	RFID tags are provided based on users' needs.
iButton reader	
iButton key	iButton keys are provided based on users' needs.
2-pin microphone	
2-pin speaker	

## 2.4 About the MDVR

### 2.4.1 Product Appearance



Figure 2.5.1 Front panel

Interface	Sign Name	Description
Microphone/Speaker interface	Audio	Connect to the microphone or speaker.
Debug interface	Debug	Connect to a PC to configure device parameters.
Power button	POWER KEY	Turn on or turn off the device.
USB port	USB	USB host 2.0. Used to update the firmware and connect a mouse to control a display.
WiFi	WiFi	WiFi antenna connector
GPS	GPS	GPS antenna connector
3G/4G	3G/4G	SMA connector. 3G/4G main antenna.

## 2.4.2 LED Indicator

Sign Name	Color	LED Indicator	Indicator Status	Description
SD	Green	Micro SD card LED indicator	Blink fast (frequency for writing data)	A micro SD card is detected and there is written audio and video data in the card.
			Blink suddenly (once every 5 seconds; indicator on: 100 ms)	A micro SD card is detected, but no data is written into the card.
			Steady off	No micro SD card is detected.
VLOSS	Red	Video lost LED indicator	Steady on	All AV inputs are not connected to cameras.
			Blink suddenly (once every 5 seconds; indicator on: 100 ms)	One AV input is not connected to a camera.
			Steady off	All AV inputs are connected to cameras.
WIFI	Green	WiFi LED indicator	Blink suddenly (once every 5 seconds; indicator on: 100 ms)	There is a WiFi module, but no data is sent.
			Blink fast	WiFi data is sent and received normally.
			Steady off	There is no WiFi module.
3G/4G	Green	3G/4G LED indicator	Steady on	There is an incoming call, or the subscriber you dialed is busy now.
			Blink fast (once every 0.1 seconds)	The device is being initialized.
			Blink fast (0.1 seconds on and 2.9 seconds off)	A signal is received from a base station.
			Blink slowly (1 second on and 2 seconds off)	No signal is received from a base station.
GPS	Blue	GPS LED indicator	Steady on	A button or an input is triggered.
			Blink fast (once every 0.1 seconds)	The device is being initialized, or the battery power is low.
			Blink fast (0.1 seconds on and 2.9 seconds off)	A GPS signal is received.
			Blink slowly (1 second on and 2 seconds off)	No GPS signal is received.

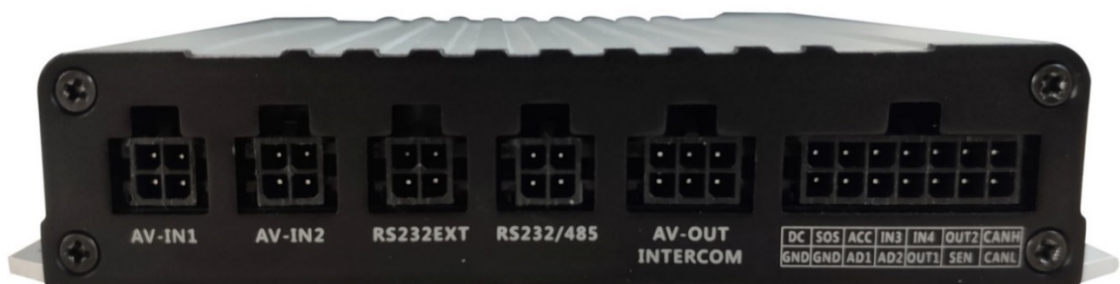


Figure 2.5.2 Rear panel

### 2.4.3 Interface Definition

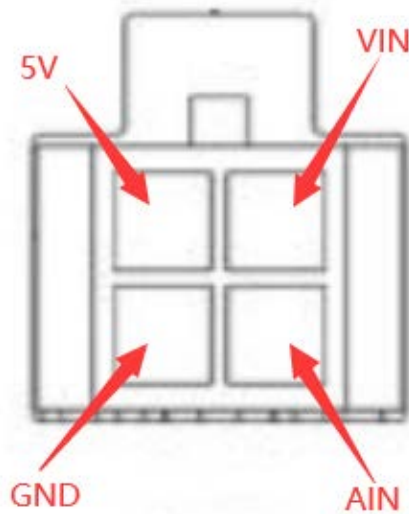
Interface	Sign Name	Description	
AV input port	AV-IN1 AV-IN2	Two 4-pin ports (5557 interface), connected to cameras (5 V) Connect to 2-channel AHD cameras, support D1/720P/1080P and self-adaptive PAL and NTSC formats. However, the resolution and format of the two cameras connected must be the same. Support 2x1080P@25fps live video recording. Camera Mic input. The audio function is required for the camera.	
RS232 port	RS232 EXT	Four pins. Connect to 4-pin accessories, such as the RFID reader and ultrasonic fuel level sensor. It is reserved for other customized peripherals, such as the magnetic card reader.	
Serial communication interface	RS232/RS485	Four pins. RS232 port by default. Connect to 4-pin accessories, such as the RFID reader and ultrasonic fuel level sensor. It is reserved for other customized peripherals. The RS485 port needs to be customized.	
AV output port and handset	Conversion cable (CVBS display and A95)	AV-OUT	CVBS aviation connector (level: 1.0 Vp-p. Impedance: 75 Ω). Resolution: 704 x 576 (PAL format) & 704 x 480 (NTSC format)
		INTERCOM	Handset
I/O port	IO	Power input and I/O cable 4 inputs: SOS, ACC, IN3, and IN4. IN3: Configured as the positive or negative trigger. IN4: Configured as the positive or negative trigger or pulse detection. 2 outputs, 2 AD ports, and 1 1-Wire port CANH and CANL	

Note: The audio output port of the CVBS display is the same as that of the handset.

### 2.4.4 Camera Interface

The device is equipped with two 4-pin AV input ports (5557 interface), which are connected to 5 V cameras.

The following figure shows the interfaces of AV-IN1 and AV-IN2:



### 2.4.5 I/O Port

1 Power input (+)	3 SOS	5 ACC	7 Input 3	9 Input 4	11 Output 2	13 CANH
2 GND input (-)	4 GND output (-)	6 Analog input 1	8 Analog input 2	10 Output 1	12 Digital temperature sensor	14 CANL

Pin Number	Cable Color	Description
1 (Power +)	Red	Positive charge of the power input, connected to the positive charge of the vehicle battery. Input voltage: 11–36 V. 12 V is recommended.
2 (GND)	Black	Ground wire. Connect to the negative charge of the vehicle battery or to the negative terminal.
3 (SOS)	White	Digital input 1. Negative trigger (SOS button by default)
4 (GND output)	Black	Ground wire, connected to input 1 (SOS button)
5 (ACC)	White & brown	Digital input 2. Positive trigger Connect to the vehicle ACC cable by default to detect the vehicle ACC status.
6 (Analog input 1)	Blue	Analog input 1 with 12-bit resolution. Valid voltage: 0–30V Connect to an external sensor, such as the fuel level sensor.
7 (Input 3)	White & red	Digital input 3. Positive trigger by default. It can be switched to negative trigger. Connect to a door trigger signal cable to detect vehicle door status.
8 (Fuel level sensor)	Blue & brown	Analog input 2 with 12-bit resolution. Valid voltage: 0–30 V There is a white plug on the AD cable, and the cable is connected to the A53 fuel level sensor by default.
9 (Input 4)	White & yellow	Digital input 2. Positive trigger by default. It can be switched to negative trigger or pulse detection. Connect to a door trigger signal cable or the speedometer.

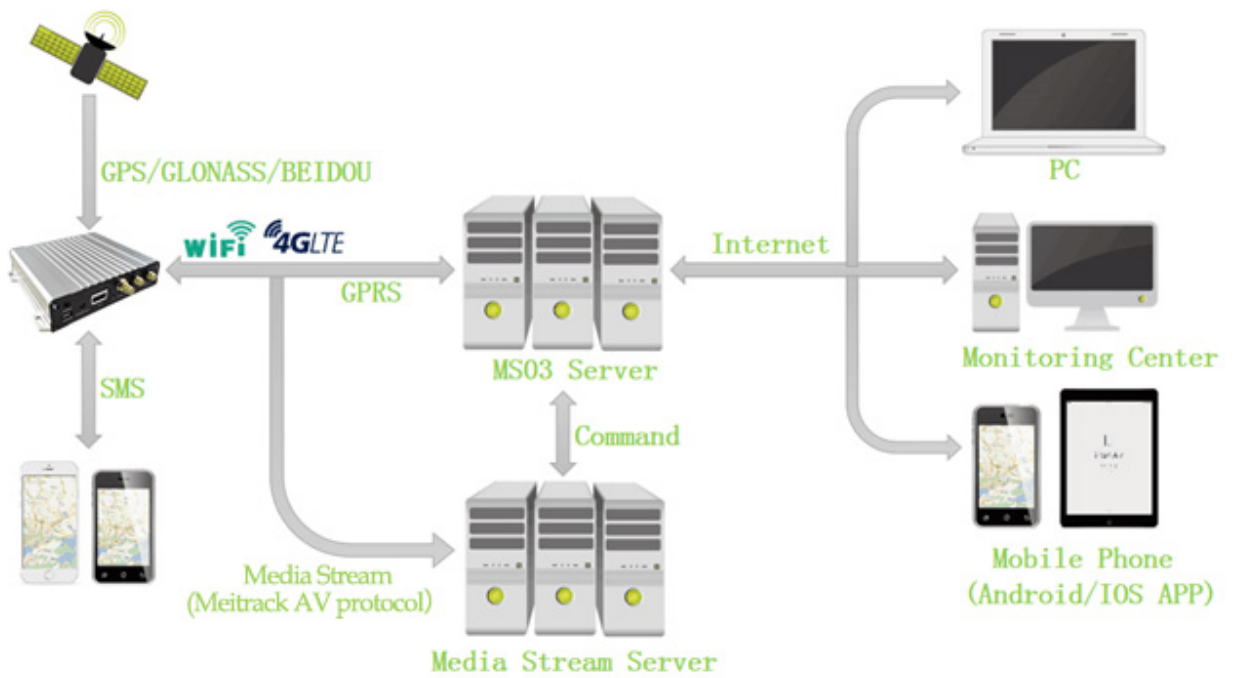
Pin Number	Cable Color	Description
10 (Output 1)	Yellow	Output 1. Low level triggering by default (0 V). Invalid: open collector Maximum voltage for output open collector (invalid): 40 V. Maximum current: 400 mA. Allow users to configure it as the high level trigger. Connect to an external relay to remotely cut off the vehicle fuel cable or engine power supply.
11 (Output 2)	Yellow & brown	Output 2 Valid: low level (0 V) Invalid: open collector Maximum voltage for output open collector (invalid): 40 V. Maximum current: 400 mA. Allow users to configure it as the high level trigger. Connect to an external relay to remotely cut off the vehicle fuel cable or engine power supply.
12 (Digital sensor input/iButton)	Green	TTL3.3V level Connect to the A52 digital temperature sensor by default by using the A61 sensor box. It can also be connected to the iButton reader. Note: The DC or AC voltage that is greater than 3.3 V is not allowed. Otherwise, the device may be damaged.
13 (CANH)	Orange & white	Connect to a CAN bus peripheral.
14 (CANL)	Orange	Connect to a CAN bus peripheral.

### 3 How it Works

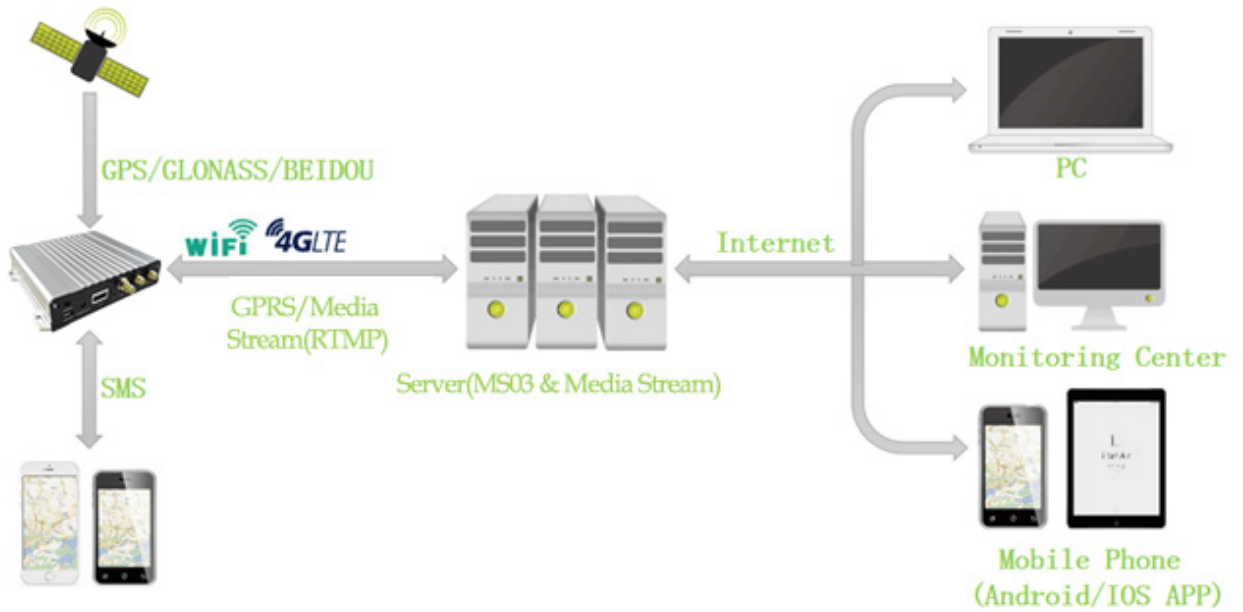
#### 3.1 Working Diagram

The MD533S support the RTMP (audio and video transmission protocol) and is compatible with Meitrack's private audio and video transmission protocol. There are two communication modes as follows:

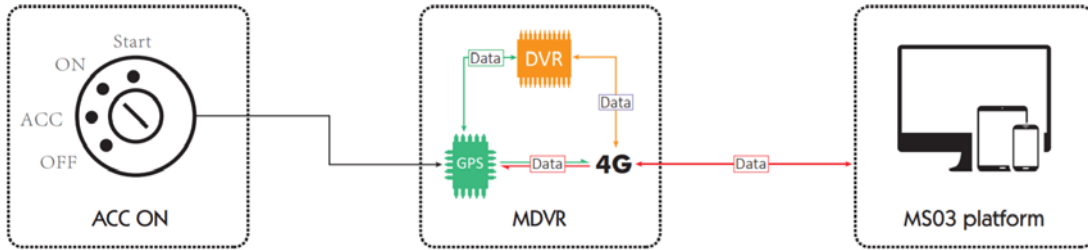
Mode 1: Meitrack GPRS protocol (CCE) + Meitrack's private audio and video transmission protocol



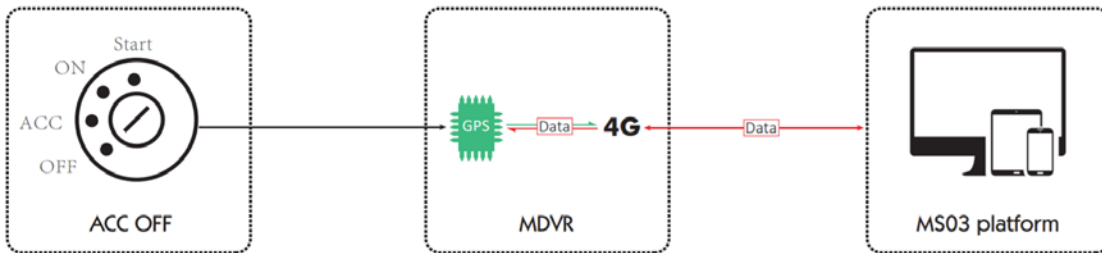
Mode 2: Meitrack GPRS protocol (CCE) + RTMP



### 3.2 Dual System Mode



As shown in the preceding figure, the video system and vehicle tracking system operate simultaneously.



As shown in the preceding figure, the video system stops operating, while the vehicle tracking system is operating.

### 3.3 Working Mode

#### MDVR Working Mode

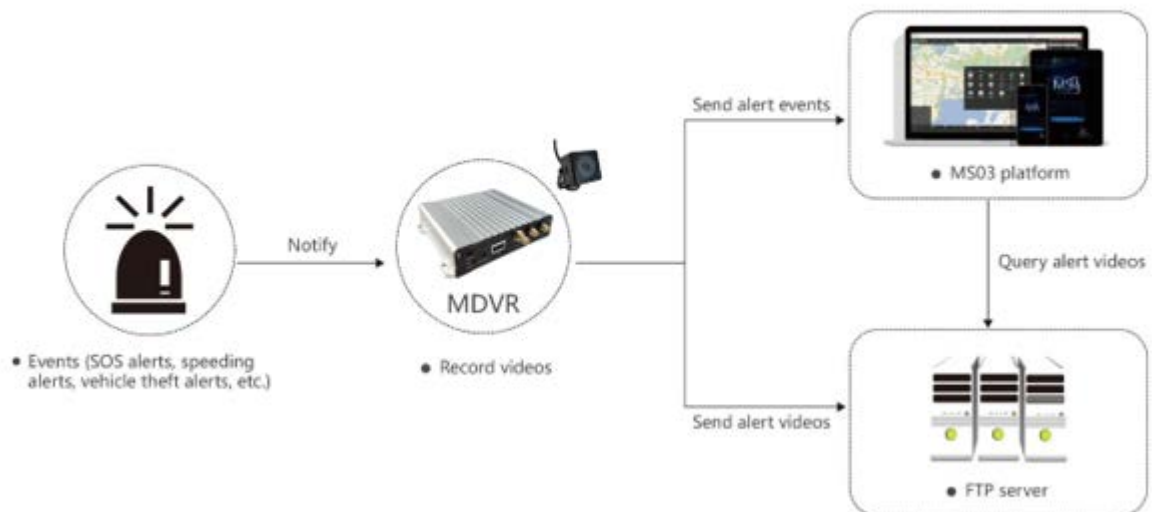
##### Working mode 1: Video recording (network disconnected)



##### Working mode 2: Real-time video surveillance

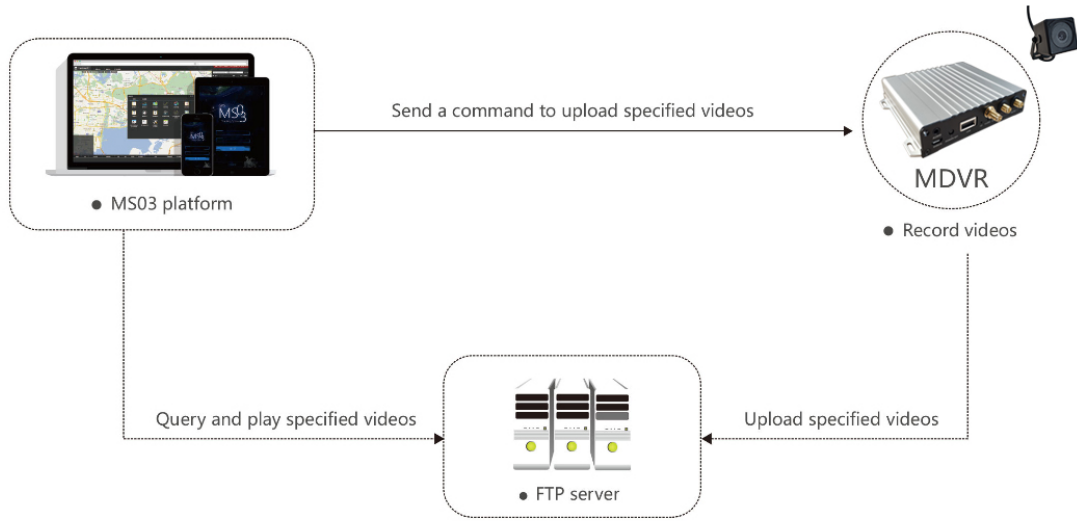


##### Working mode 3: Alert triggering and uploading

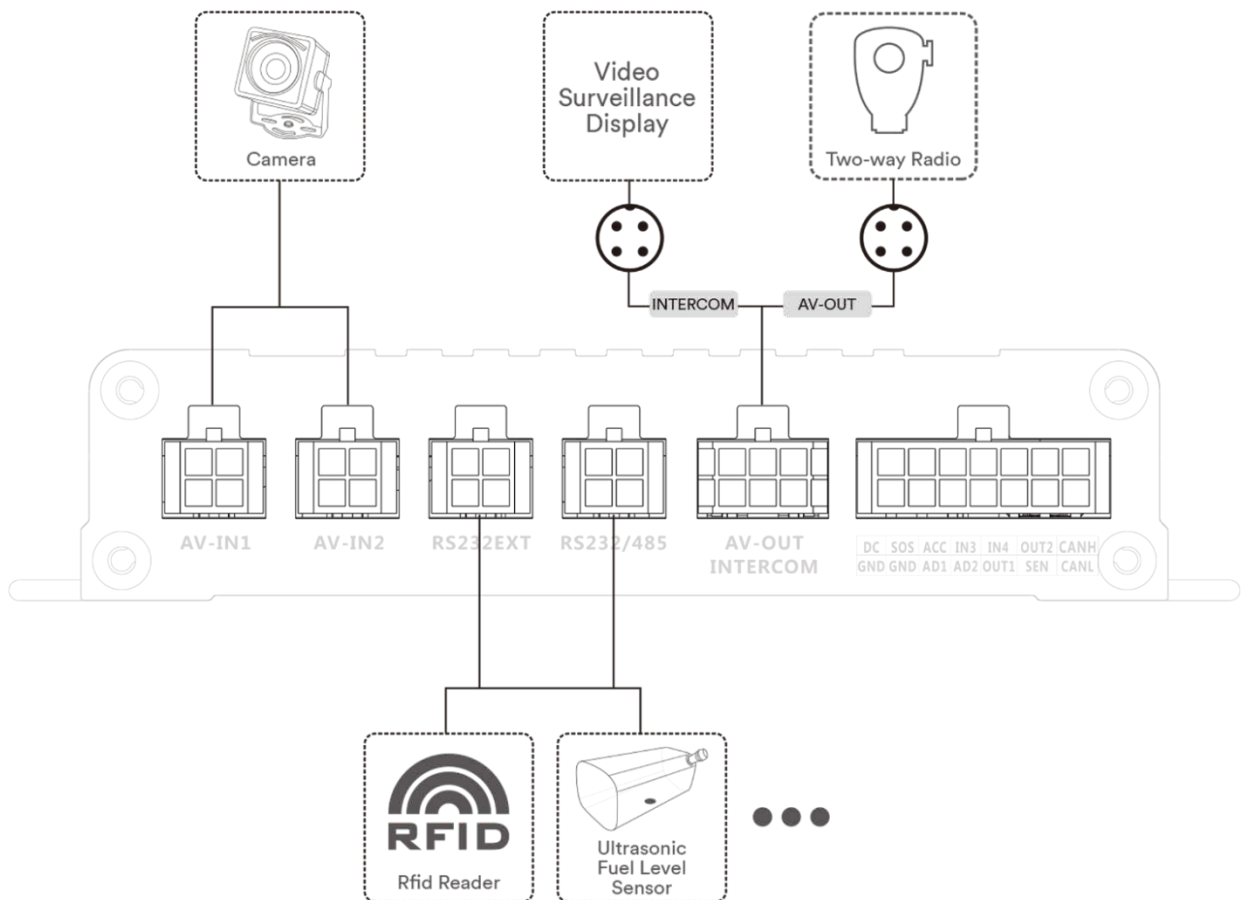


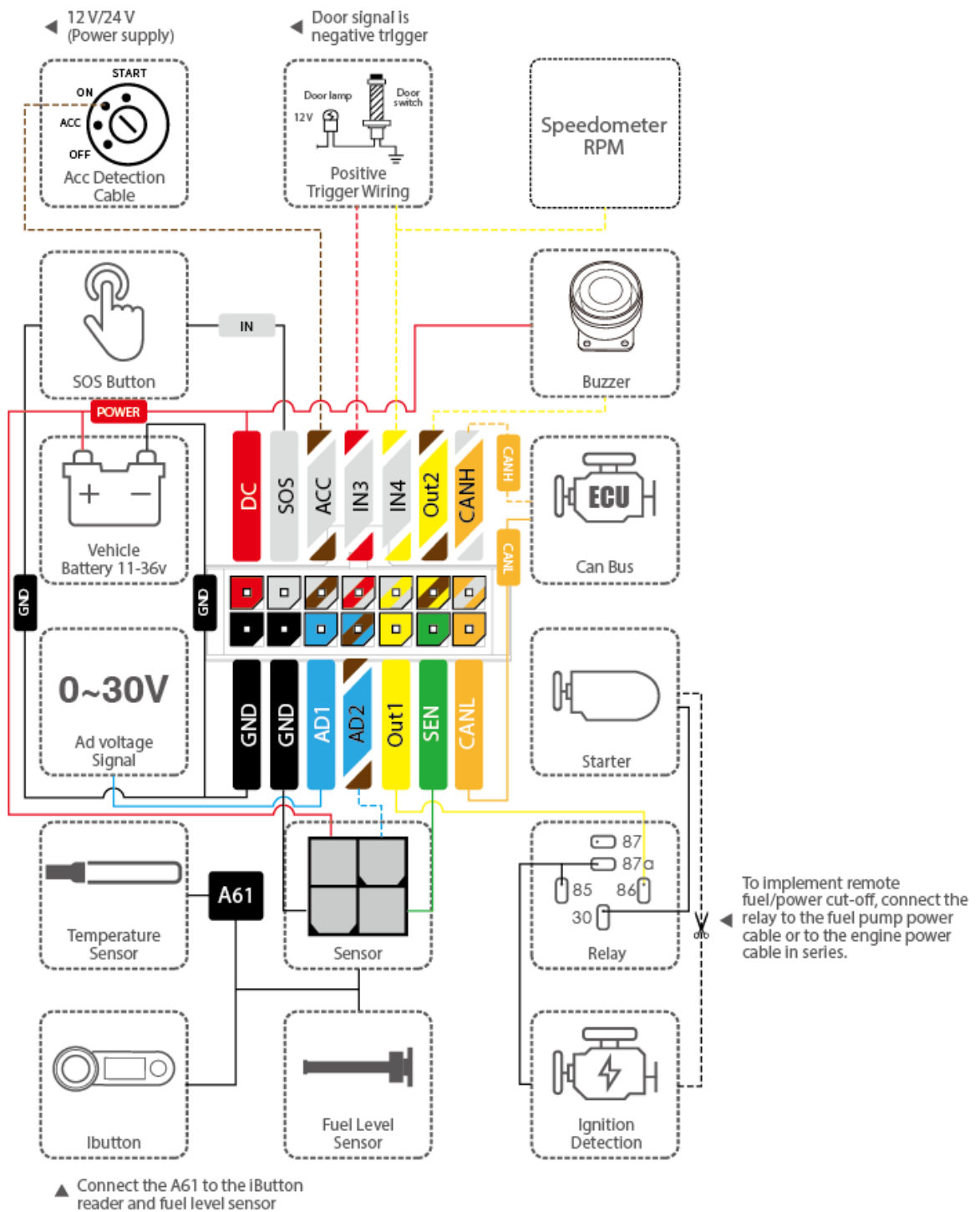


**Working mode 4: Alert video search and uploading**



**3.4 Peripheral Wiring Diagram**





## 4 Fast Installing and Using the MDVR

Perform the following eight steps to fast install and use the MDVR:

1. Loosen the screws and remove the upper cover.
2. Insert the SIM card into the SIM card slot and install the micro SD card.
3. Connect to cameras, a display, a handset, a GSM antenna, a WiFi antenna, or a GPS antenna.
4. Connect the power cable (including the VCC, GND and ACC cables) to the external power supply. (The ACC cable must be

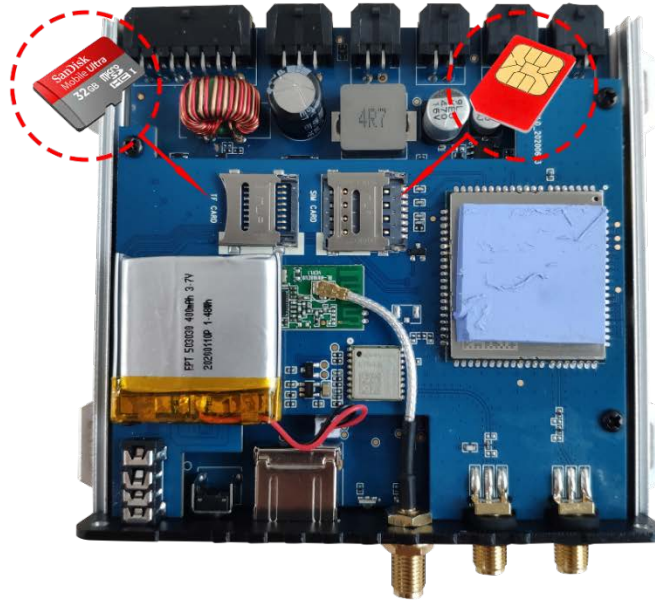
- connected to the positive terminal of the external power supply. Otherwise, the video recording function cannot be enabled.)
5. Set the IP address and port of the platform.
  6. Set the data transmission network.
  7. Set the login user name and password.
  8. After logging in to the platform, users can implement video surveillance, search videos, and make voice calls.

#### 4.1 Installing the MDVR

- (1) Loosen the four screws and remove the upper cover according to the arrows shown in the following figure.



- (2) Install the SIM card and micro SD card.
- (3) Connect to two cameras, a display, a GPS antenna, a GSM antenna, or a WiFi antenna.



Connect cameras 1–2 to AV-IN1–2 interfaces respectively.

Connect the display to the AV-OUT interface.

Connect the microphone or speaker to the audio interface.

Connect the handset to the INTERCOM interface.

Connect the WiFi antenna, GPS antenna, and 3G/4G antenna to the MDVR. (If the WiFi antenna is not connected, the WiFi function is unavailable.)

Connect the power cable to the PWR interface.

(4) Supply power to the MDVR and connect the external power supply to the ACC cable (white and orange cable).

**Note:** To enable the video recording function, ensure that the ACC cable is connected to the positive terminal of the power supply.

(5) After the external power supply is connected, the initialized MDVR automatically records videos, and the display is turned on automatically and play live videos.



## 4.2 Configuring the MDVR

After the MDVR is installed, connect it to a network and server. Users can configure the MDVR by using any of the following methods: Meitrack Manager software, SMS, platform, and embedded web page. This section describes how to use the Meitrack Manager software to fast configure the MDVR.



You need to install Meitrack Manager first. (Visit [www.meitrack.com](http://www.meitrack.com) to download the latest software). After the installation is completed, connect the USB cable to a computer, and then perform the following steps to configure the MDVR.

(1) Configure the MDVR after installation, and connect it to the network and platform server. You can configure the MDVR by using any of the following methods: Meitrack Manager software, SMS, and platform.

Set the IP address and port for uploading positioning data, IP address and port for uploading video data, and the user name and password of the FTP server:

GPRS Tracking

Para Setting

GPRS  Close  TCP  UDP

IP/Domain  Port

Backup IP/Domain  Port

GPRS Timezone(mins)

SMS configuration:

Send the following command to set the IP address and port for uploading positioning data: 0000,A21,1,67.203.15.7,50005,APN(for example, Internet),APN\_USER,APN\_PASSWORD.

(2) Set the IP address of the FTP server. Video data will be uploaded to the specified FTP server.

FTP Setting

FTP Enabled

IP/Domain  Port

User Name  Password

Remote Directory

Maximum File Size(MB)

(3) Set the network.

There are two network connections: cellular network (3G/4G) and WiFi network. A WiFi network is the best choice, and a cellular

network is the second choice. It means that if the MDVR is connected to a WiFi network, the cellular network is disabled.

WiFi configuration:

As shown in the following figure, enter the WiFi SSID and password and click **Set**. The WiFi network connection is set successfully. You can click **Refresh** to search the WiFi list nearby.



Cellular network configuration:

Enter the APN, APN user name and APN password, and click **Set** to save the settings.



(4) Check whether the micro SD card is installed properly. When you use the MDVR for the first time, if the system detects format errors, the micro SD card is initialized automatically. If "no error" is displayed as follows, it means that the micro SD card is initialized successfully.

Disk	Driver Type	Current Disk	Free Space(MB)	Capacity(MB)	Free Space(%)	Error Flag	Driver Serial Number	Format Hard Disk
Disk1	Read-write	<input checked="" type="checkbox"/>	0	58973	0.00%	No error	262146	Format
Disk2	Read-write	<input type="checkbox"/>	0	0	0.00%	No drive	0	Format
Disk3	Read-write	<input type="checkbox"/>	0	0	0.00%	No drive	0	Format

## 5 Configuring the MDVR by Using the LAN Web Page

(If you want to know how to use the function, please see the *Meitrack MDVR Operation and Function Manual*.)

Connect the computer and MDVR to the same WiFi hotspot, and then configure the MDVR by using the LAN web page.

You need to obtain the IP address of the LAN connected to the MDVR. (To obtain the IP address, you can connect the MDVR to Meitrack Manager to check the network status, send a command to query the network status, or contact the LAN administrator.)

Event  
Peripheral  
Maintain  
Network

Check Network Information

PPPoE Settings  
APN  
User Name  
Password

Hotspot Settings  
 Enable Hotspot

Network Information

Current Network: WiFi

**GSM**

GSM Status	Normal	GSM Type	Unregistered
Simcard Ready	Ready	GSM CSQ	5
Simcard Number		GSM IMEI	860425044193835
Simcard IMSI	460043189005889	Connect State	Not dial-up

**WiFi**

WiFi Status	Normal	WiFi SSID	Meitrack_GuoJi
WiFi Mode	Station	WiFi Signal Value	100
IP Address	192.168.17.106	MAC Address	32-30-3A-66-34-00
Subnet Mask	255.255.255.0	Preferred DNS Server	119.29.29.29
Default Gateway	192.168.17.1	Alternate DNS Server	223.6.6.6

After entering the MDVR IP address in the address bar of your web browser, you can configure the MDVR on the web page.

Meitrack DVR

192.168.17.106/index.html

Welcome to Meitrack DVR

account

\*\*\*\*\*

English 中文

Sign in

On the web page that is displayed, enter the user name and password (default user name: admin; default password: 0000), and log

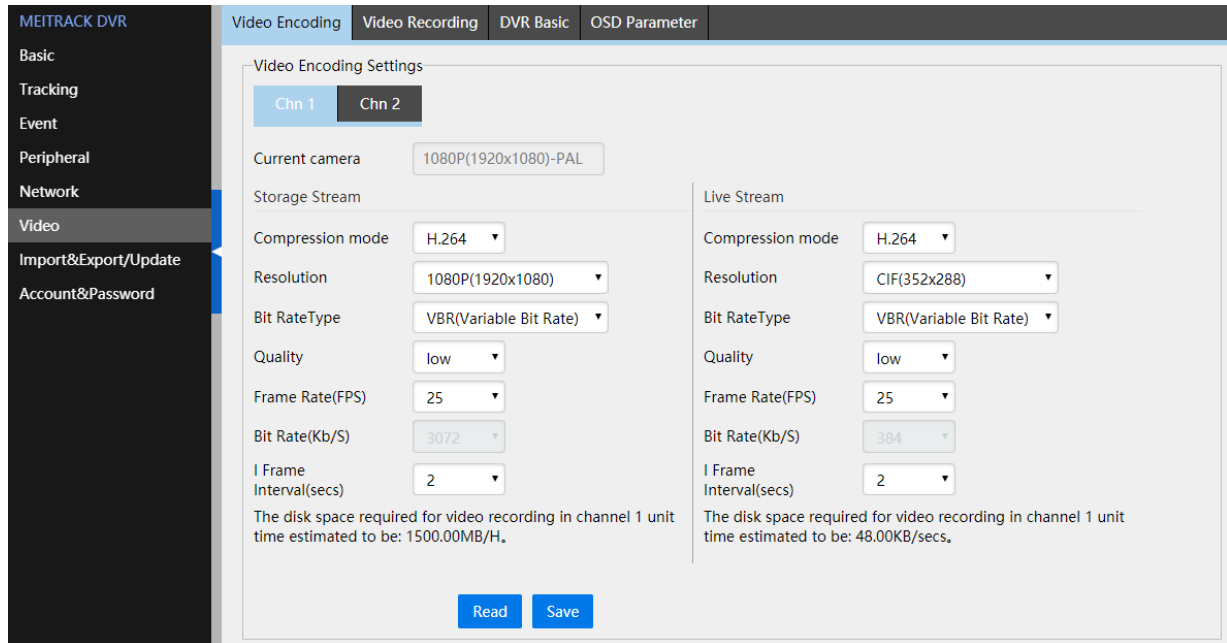


in to the system. Then configure the MDVR on the web page. The configuration method is similar to that of Meitrack Manager.

MEITRACK DVR	Device base info	Main param	System Power	System Maintain	Disk Info	MDVR SPEAK
Basic	<p>Device base info</p> <p>version MD533S_H100V006.006</p> <p>IMEI 860425044193835</p> <p>SN 60902890010</p>		<p>Global Setting</p> <p>Tracker Name <input type="text"/></p> <p>Buff space Allocation</p> <p>GPRS buffer space: 50%      Total Size(bytes): 10485760</p> <p>Log buffer space: 50%</p> <p><input type="button" value="Read"/> <input type="button" value="Save"/></p>			
Tracking	<p>DVR Version</p> <p>App ver MD533S_V006</p> <p>Web ver V8.4</p>		<p>Local time zone Setting</p> <p>Local Timezone(mins) 480</p> <p><input type="button" value="Read"/> <input type="button" value="Save"/></p>			

MEITRACK DVR	GPRS Tracking	SMS Tracking	Upload Information Select
Basic	<p>GPRS Tracking</p> <p>Parameter Settings</p> <p>GPRS <input type="text" value="TCP"/></p> <p>IP/Domain <input type="text" value="mdvr.meitrack.tk"/></p> <p>Port <input type="text" value="50005"/></p> <p>Backup IP/Domain <input type="text"/></p> <p>Port <input type="text"/></p> <p>GPRS Timezone(mins) <input type="text" value="0"/></p>		
Tracking	<p>Server2</p> <p>GPRS2 <input type="text" value="Close"/></p> <p>IP/Domain 2 <input type="text"/></p> <p>Port 2 <input type="text"/></p>		
Event	<p>Tracking</p> <p>Report Method <input type="text" value="Auto Event Report"/></p> <p>GPRS Mode <input type="text" value="Mode 0"/></p>		
Peripheral			
Network			
Video			
Import&Export/Update			
Account&Password			

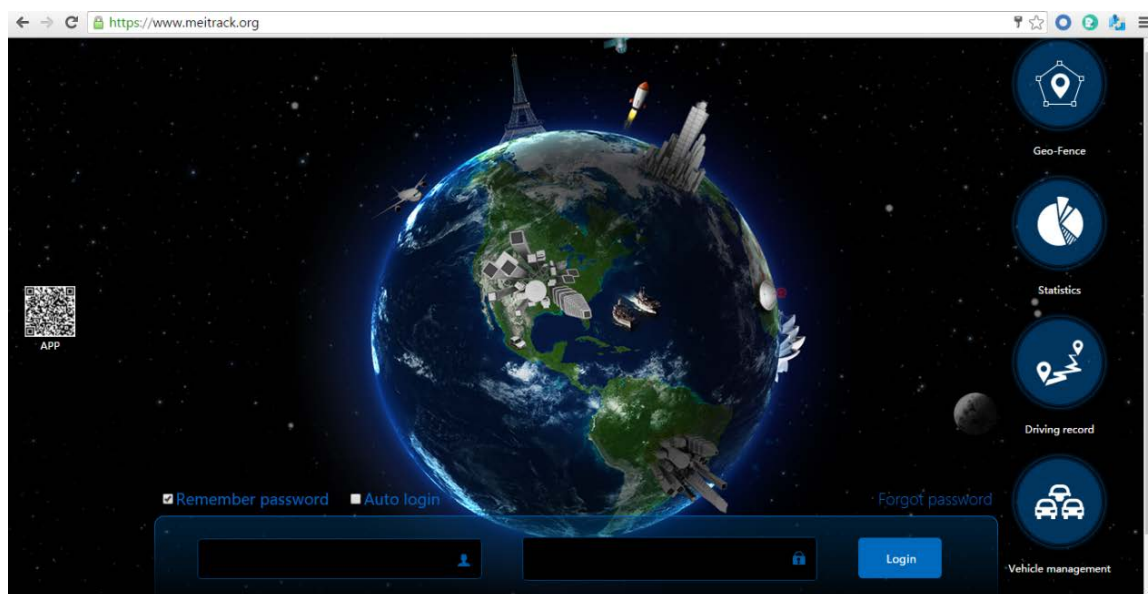




## 6 MS03 Web Platform

(If you want to know how to use the platform, please see the *Meitrack MDVR Operation and Function Manual*.)

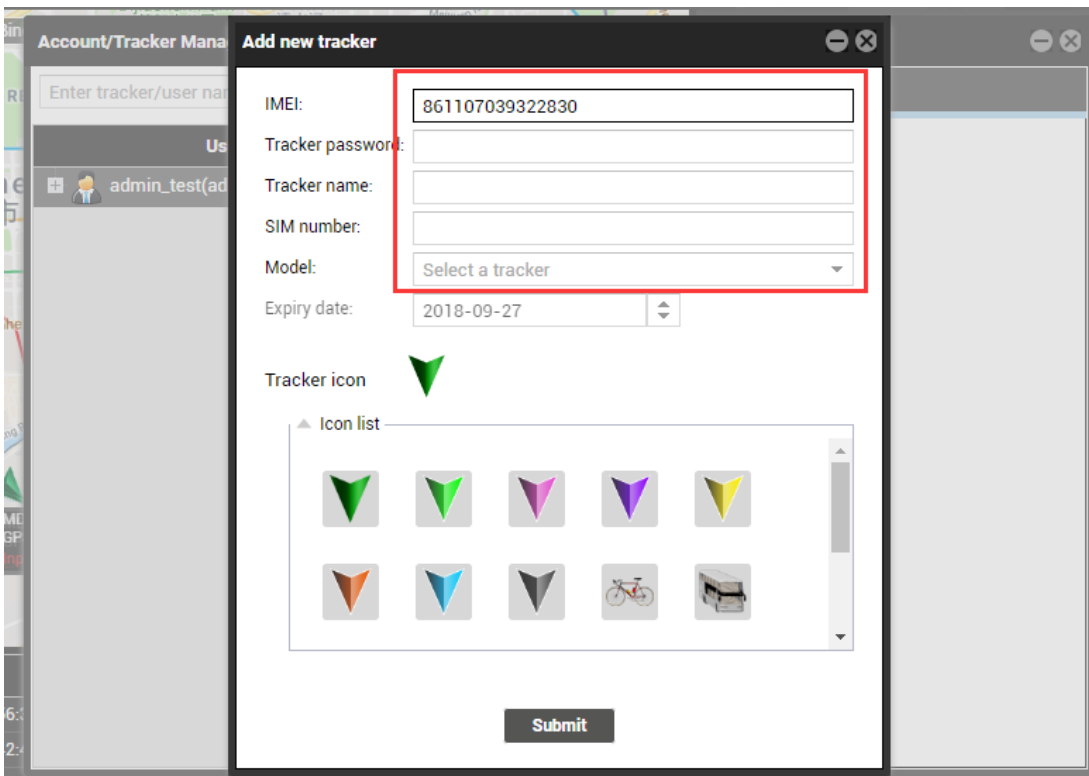
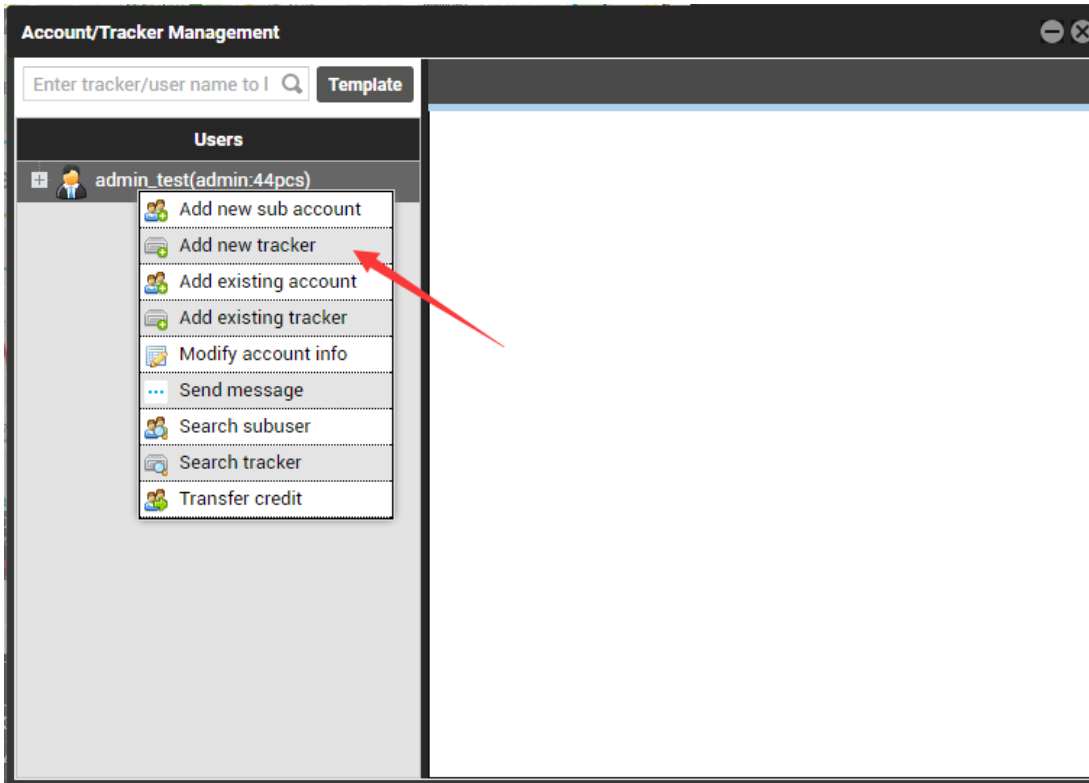
You can visit [mdvr.trackingmate.com](https://mdvr.trackingmate.com), enter the user name and password, and log in to the MS03 platform. On the platform, real-time streaming of the MDVR can be loaded (real-time monitoring), and recording files can be stored (large files are stored on the FTP server).



### Add a MDVR:

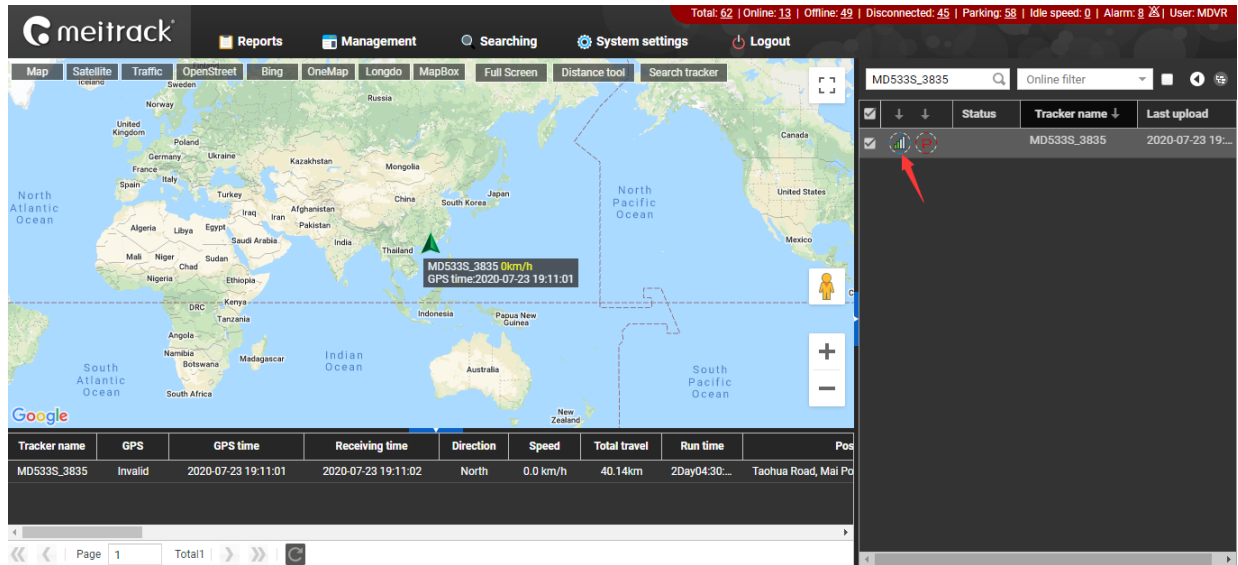
1. On the main interface, choose **Management**. On the page that is displayed, select **Account & Tracker** from **Use Normal**.
2. On the **Account/Tracker Management** window, right-click a user, and select **Add new tracker**.
3. On the **Add new tracker** window, enter related information, modify the expiry date, and click **Submit**.

Note: The IMEI number must be consistent with that printed on the MDVR. Otherwise, the MDVR cannot be detected by the system.



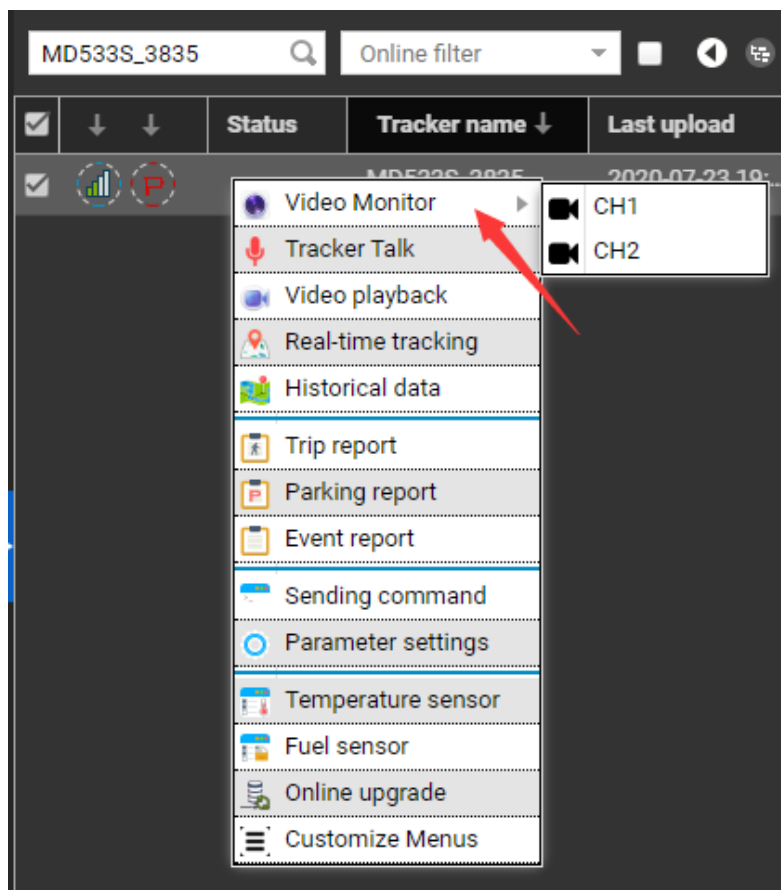
**Check whether the MDVR is online:**

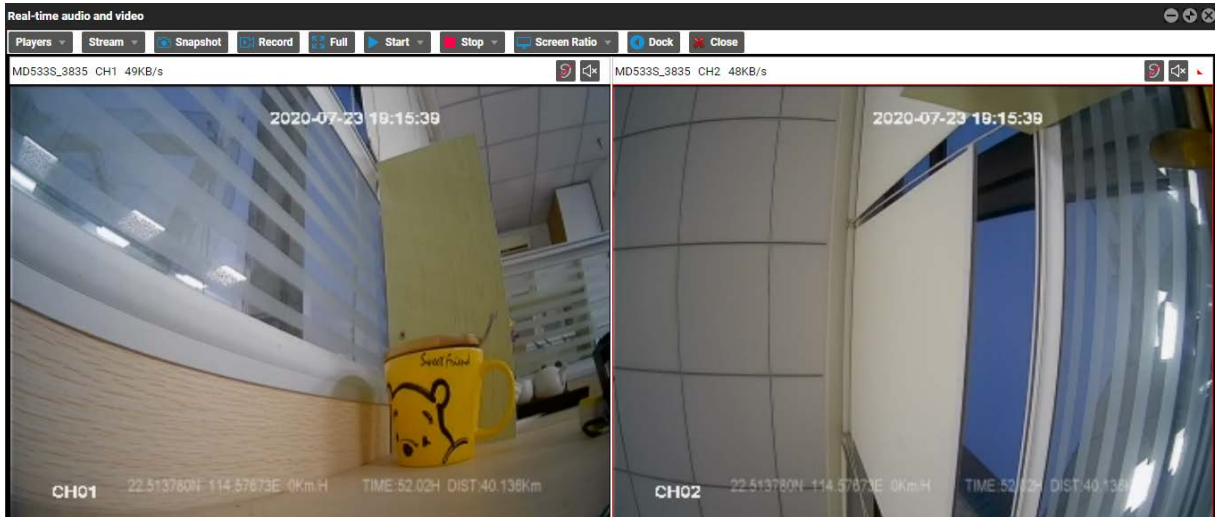
If the green signal icon is displayed, it means that the MDVR is online.



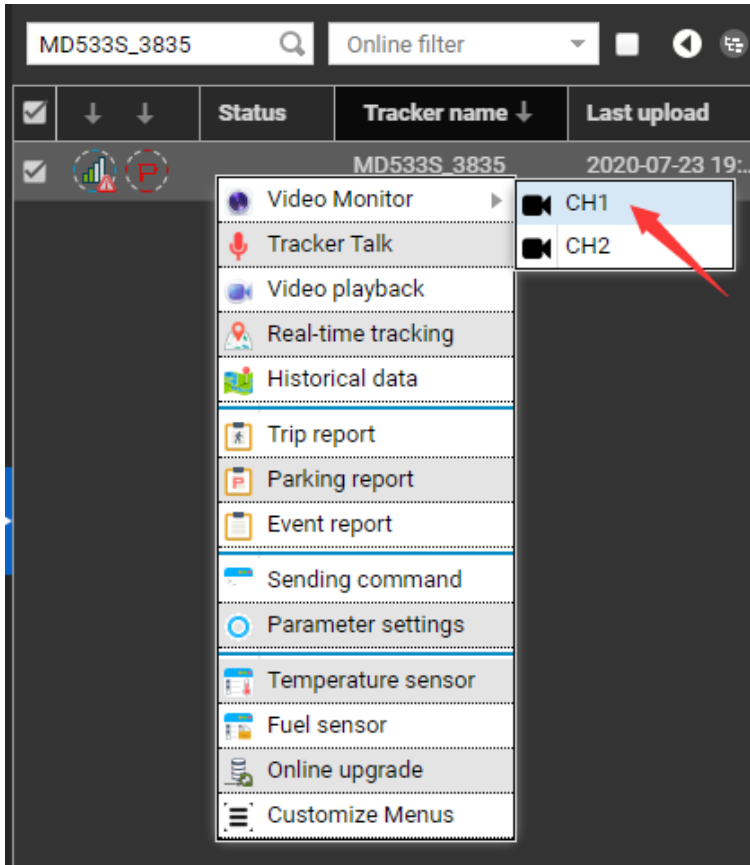
**Video surveillance:**

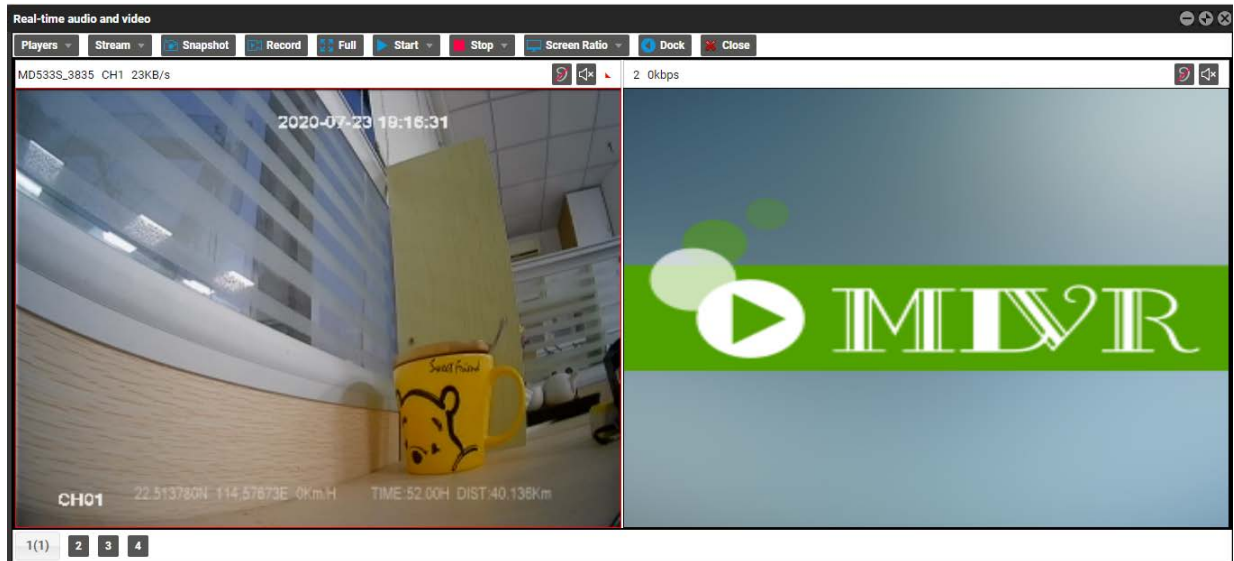
Right-click a MDVR and select **Video Monitor** to start all-channel surveillance.





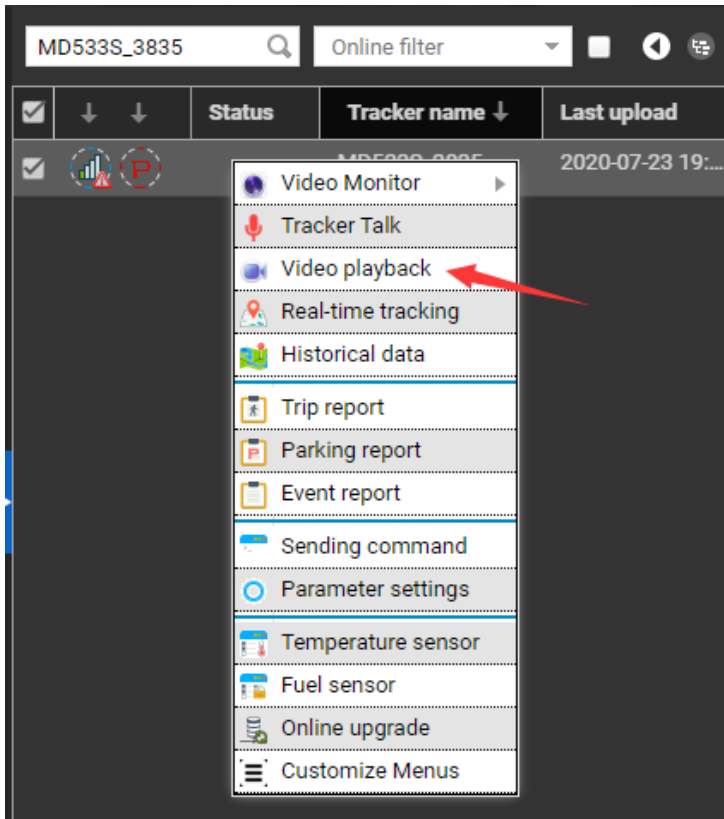
If a single channel is selected, such as CH1, videos in this channel is played.

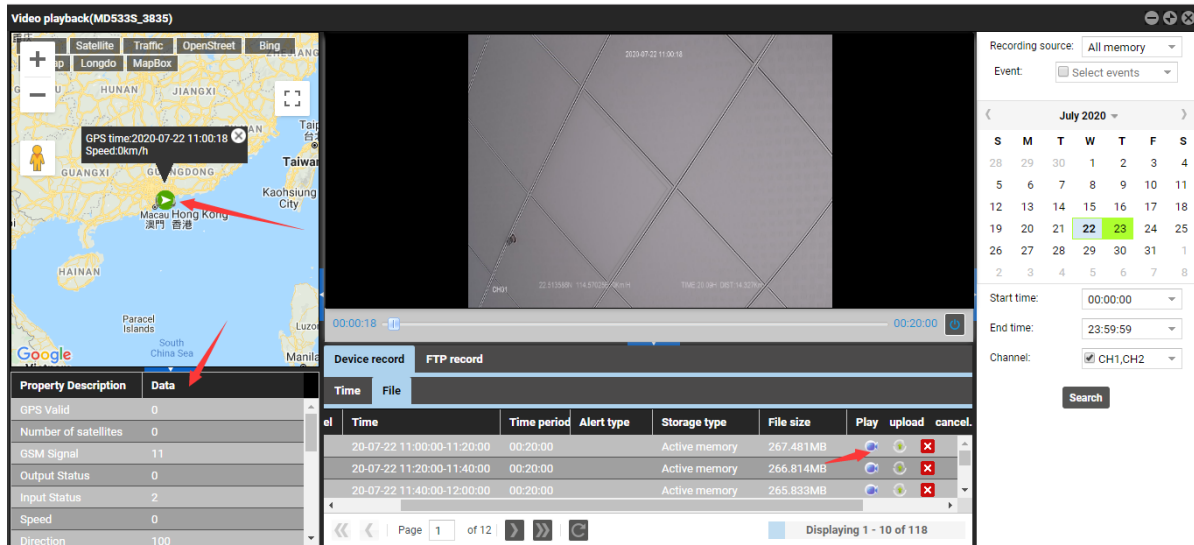




#### Video playback and search:

Right-click a MDVR and select **Video playback**. On the page that is displayed, set **Start time**, **End time** and **Channel**, and click **Search**. Then the video playback starts.



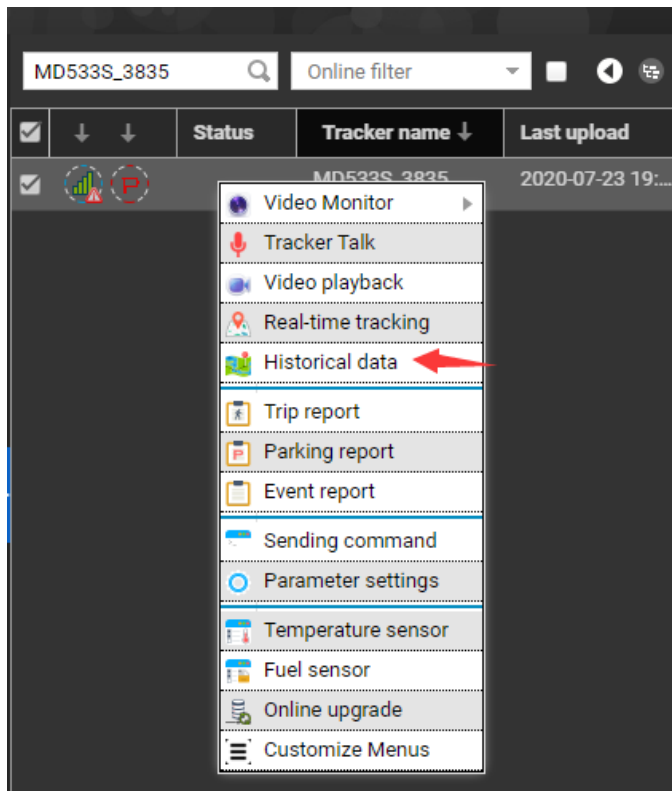


While playing back video files, the location information of related images is displayed and travel routes are played.

As shown in the previous figure, the icon in the **Play** column is used to play the current video, the icon in the **Upload** column is used to upload the current video file to the FTP server, and the icon in the **Cancel** column is used to stop uploading the video file.

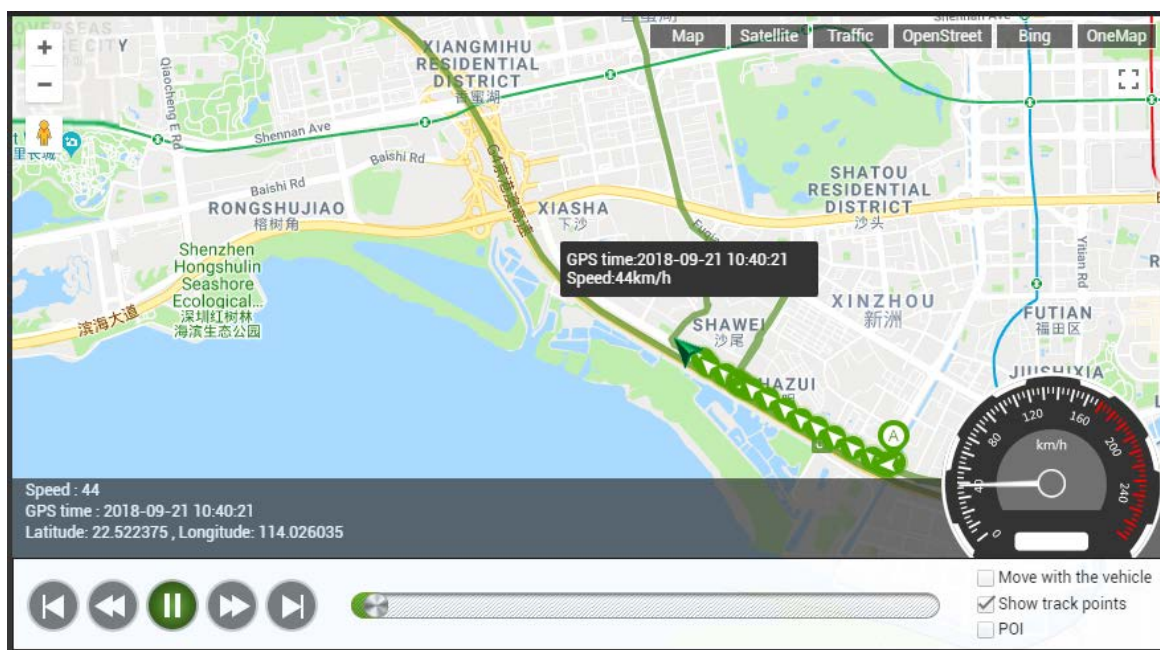
**Query historical positioning data:**

Right-click a MDVR and select **History data report**. On the page that is displayed, click the map icon. The device's travel routes are displayed.





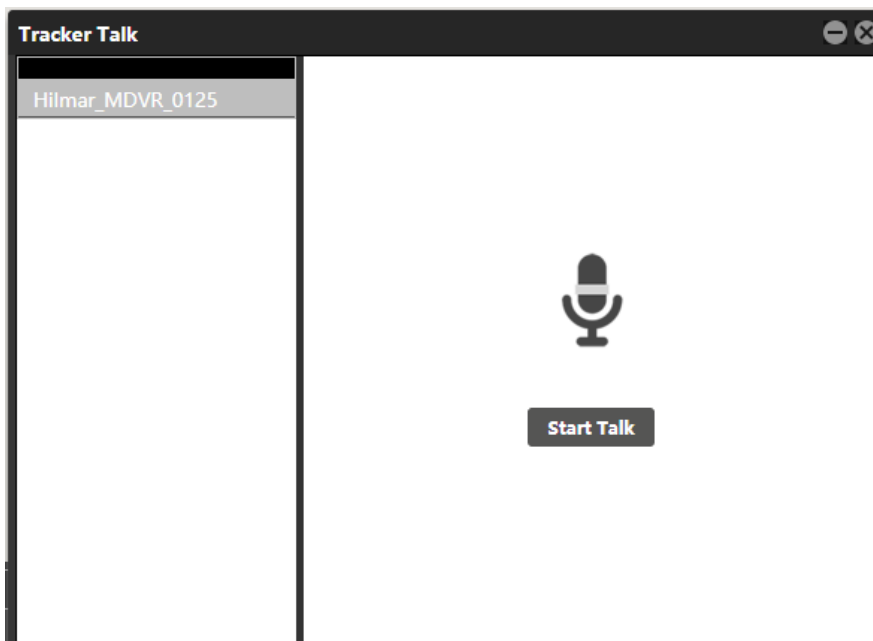
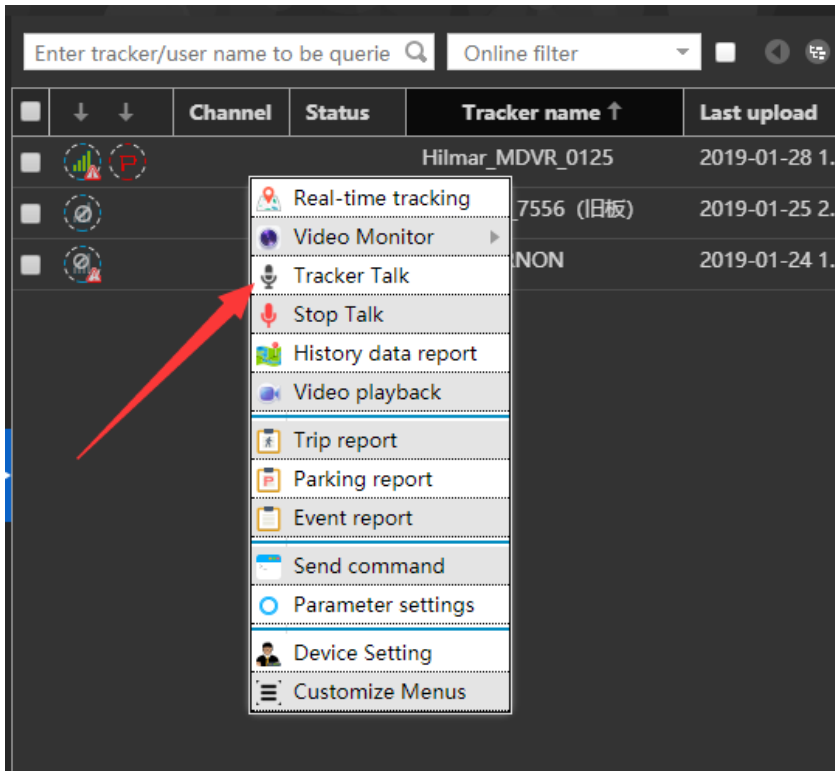
Tracker name	GPS time	Receiving time	GPS valid	Speed	Latitude	Longitude	Position	Alarm type	Altitude	Direction	North An	Number of satell
MD533S_3835	2020-07-23 00:00:30	2020-07-23 00:00:31	Invalid	0	22.512676	114.061128		Track By Time Interval	9	East	101	0
MD533S_3835	2020-07-23 00:01:31	2020-07-23 00:01:32	Invalid	0	22.512676	114.061128		Track By Time Interval	9	East	101	0
MD533S_3835	2020-07-23 00:02:32	2020-07-23 00:02:32	Invalid	0	22.512676	114.061128		Track By Time Interval	9	East	101	0
MD533S_3835	2020-07-23 00:03:32	2020-07-23 00:03:33	Invalid	0	22.512676	114.061128		Track By Time Interval	9	East	101	0
MD533S_3835	2020-07-23 00:04:33	2020-07-23 00:04:34	Invalid	0	22.512676	114.061128		Track By Time Interval	9	East	101	0
MD533S_3835	2020-07-23 00:05:33	2020-07-23 00:05:35	Invalid	0	22.512676	114.061128		Track By Time Interval	9	East	101	0
MD533S_3835	2020-07-23 00:06:34	2020-07-23 00:06:35	Invalid	0	22.512676	114.061128		Track By Time Interval	9	East	101	0
MD533S_3835	2020-07-23 00:07:35	2020-07-23 00:07:36	Invalid	0	22.512676	114.061128		Track By Time Interval	9	East	101	0
MD533S_3835	2020-07-23 00:08:35	2020-07-23 00:08:37	Invalid	0	22.512676	114.061128		Track By Time Interval	9	East	101	0
MD533S_3835	2020-07-23 00:09:36	2020-07-23 00:09:37	Invalid	0	22.512676	114.061128		Track By Time Interval	9	East	101	0
MD533S_3835	2020-07-23 00:10:37	2020-07-23 00:10:37	Invalid	0	22.512676	114.061128		Track By Time Interval	9	East	101	0
MD533S_3835	2020-07-23 00:11:37	2020-07-23 00:11:38	Invalid	0	22.512676	114.061128		Track By Time Interval	9	East	101	0
MD533S_3835	2020-07-23 00:12:38	2020-07-23 00:12:39	Invalid	0	22.512676	114.061128		Track By Time Interval	9	East	101	0
MD533S_3835	2020-07-23 00:13:39	2020-07-23 00:13:40	Invalid	0	22.512676	114.061128		Track By Time Interval	9	East	101	0
MD533S_3835	2020-07-23 00:14:39	2020-07-23 00:14:40	Invalid	0	22.512676	114.061128		Track By Time Interval	9	East	101	0



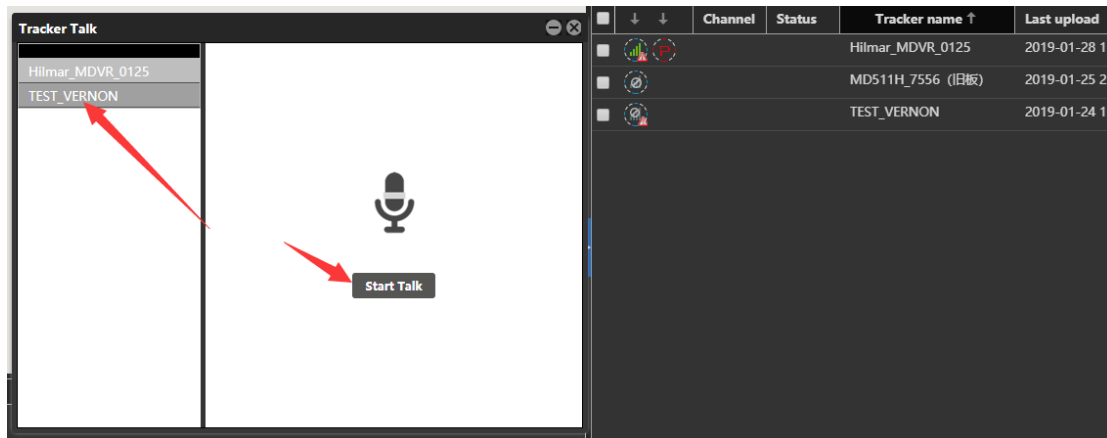
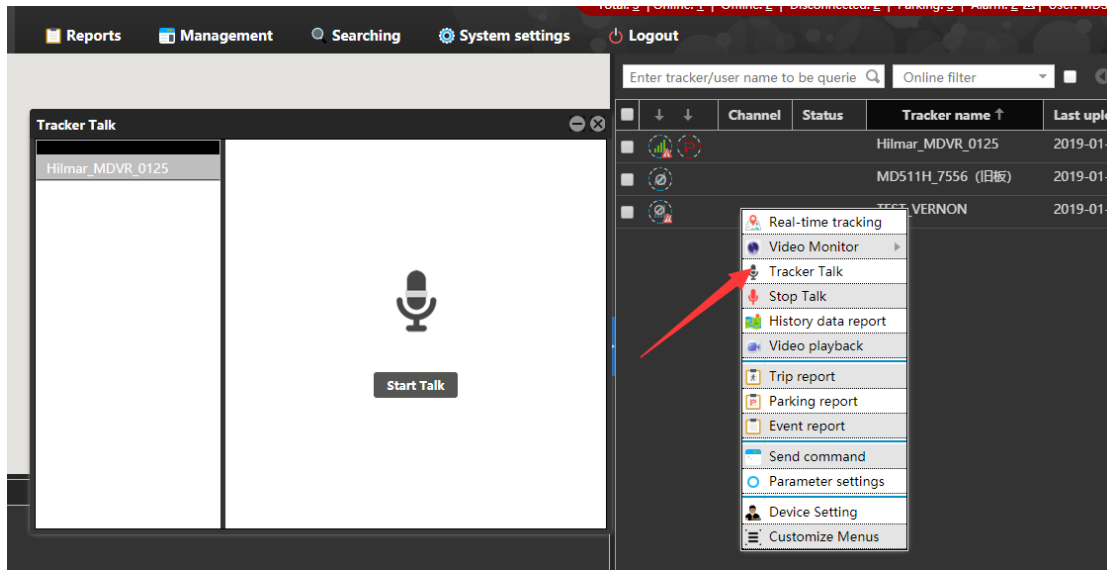
**Two-way calling:**

Right-click the MDVR and select **Tracker Talk**.





You can talk with multiple users.



Select the users to call, and click **Start Talk** to start broadcasting.




Before a talk starts, MDVR users need to press and hold down the talk button at the left side of the handset. During broadcasting, a call can be made between platform users and MDVR users, while MDVR users cannot talk with each other.

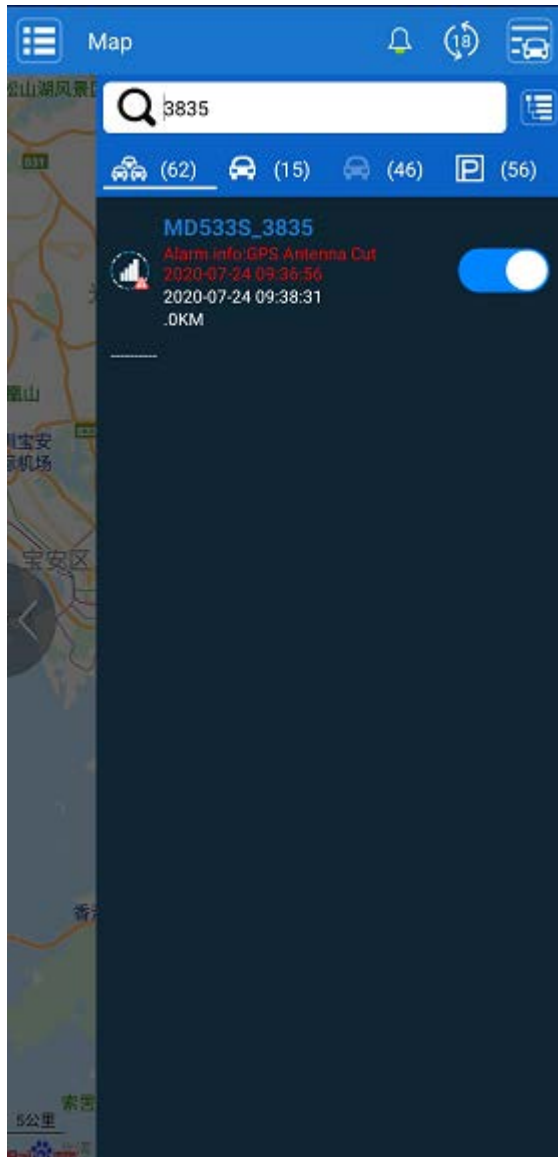
## 7 MS03 App

### 7.1 Logging In to the App



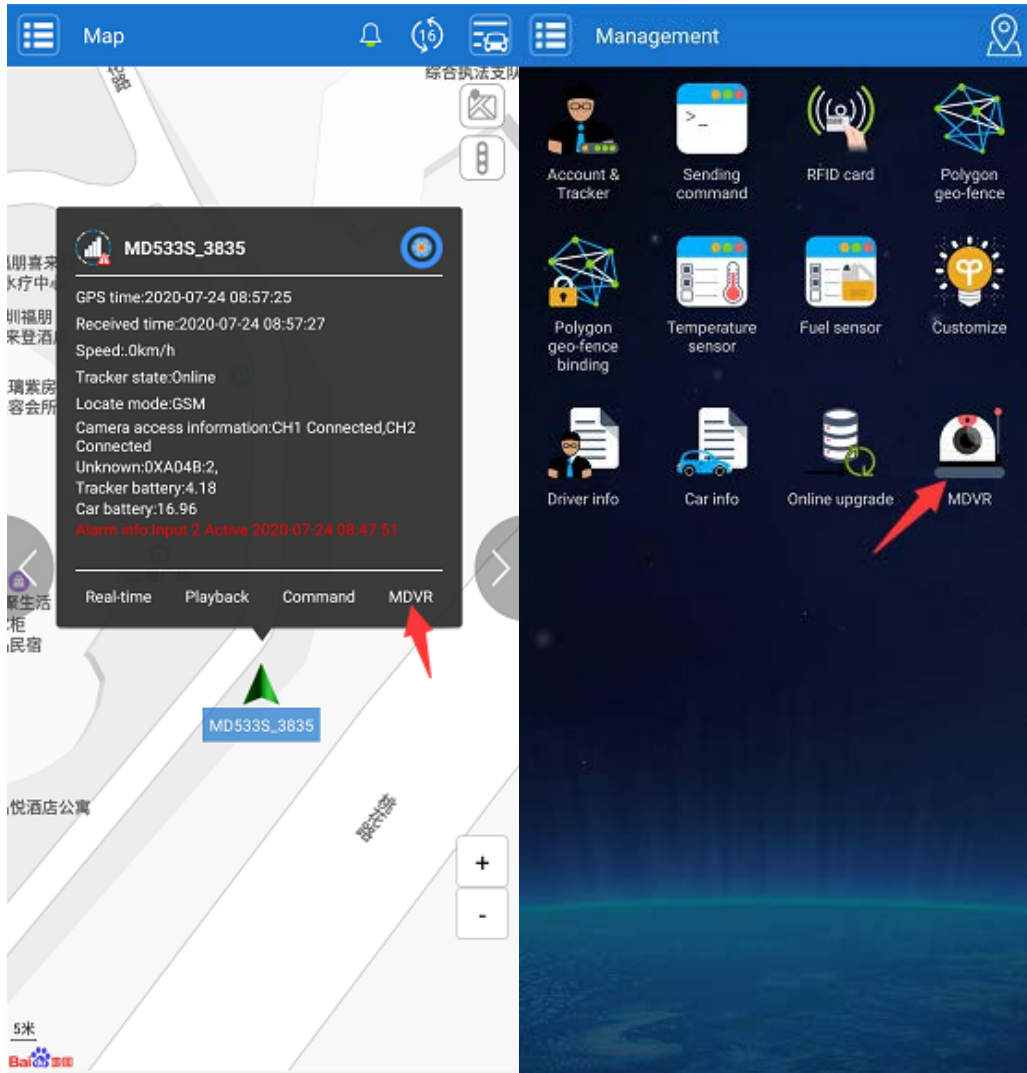
### 7.2 Checking MDVR Online Status

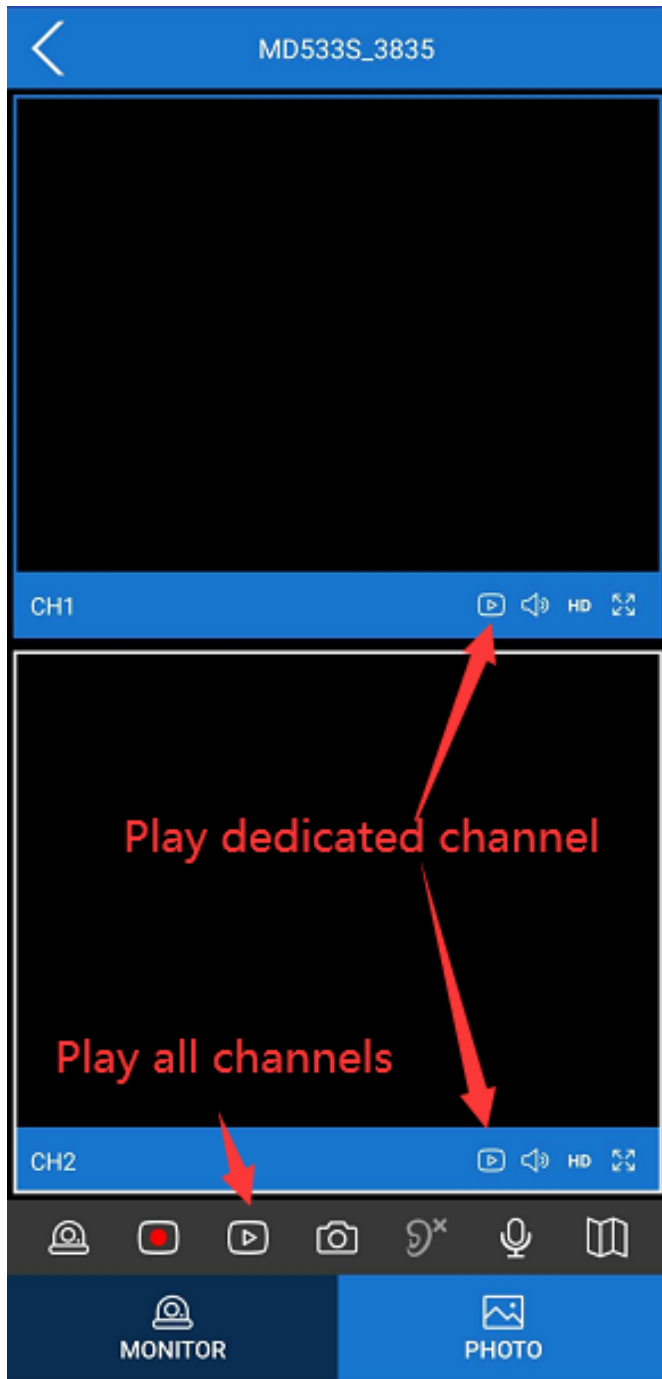
If the green signal icon  is displayed, it means that the MDVR is online.





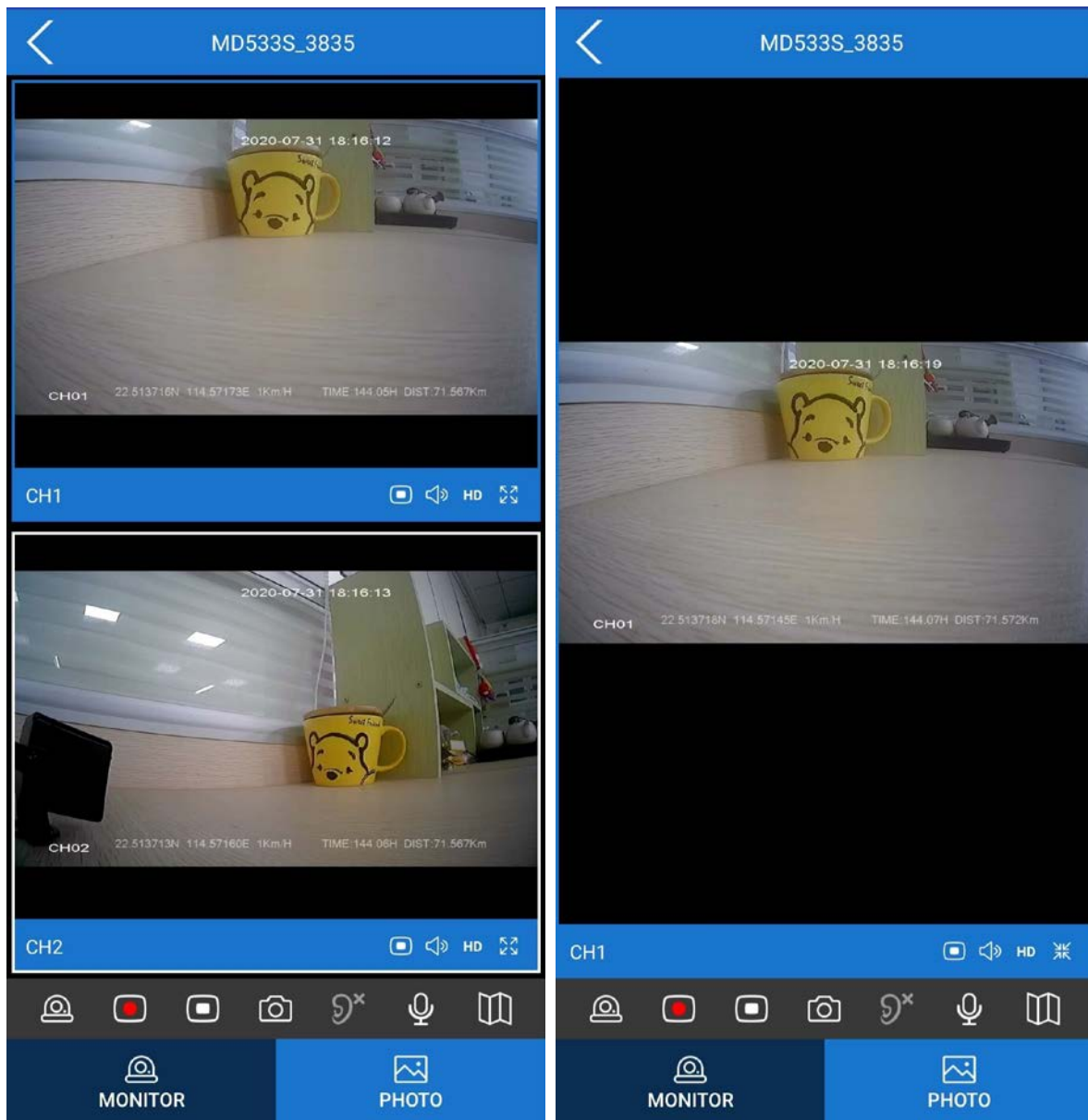
### 7.3 Video Surveillance

Click **MDVR** on the map, or choose **MDVR** on the **Management** page. Then the video surveillance page is displayed.







Click  to play videos of corresponding channel. Click  to start all-channel surveillance.

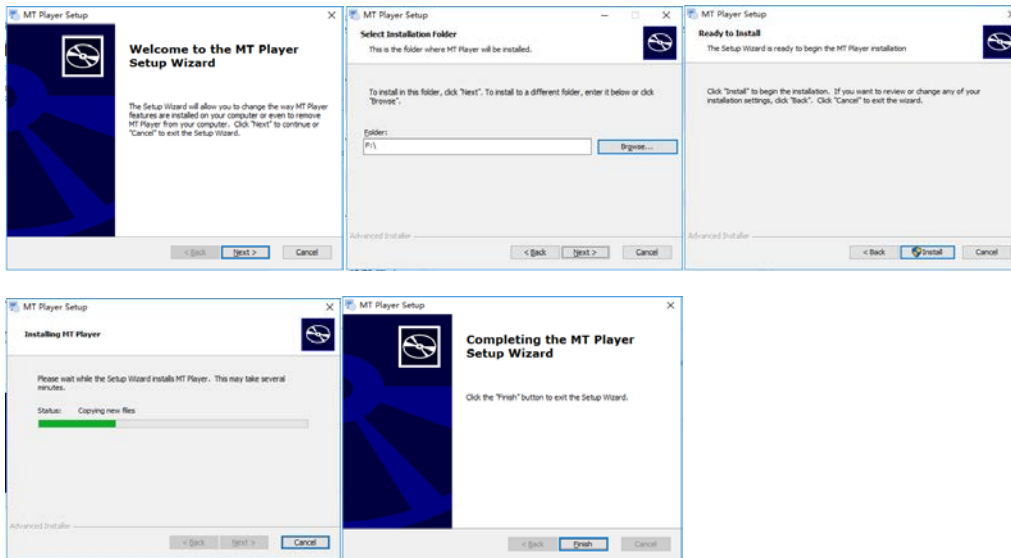


## 8 Playing MDVR Videos by Using MT Player Software

(If you want to know how to use the function, please see the *Meitrack MDVR Operation and Function Manual*.)

### 8.1 Installing MT Player

Unzip the file  **MTPlayerSetup.rar**, and double-click the file  **MTPlayerSetup.exe** to install the software according to the setup wizard.



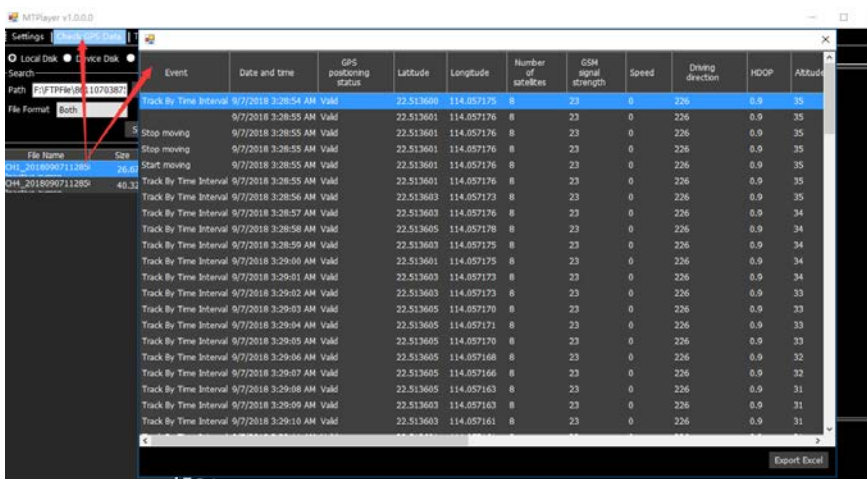
## 8.2 MT Player Function

### 8.2.1 Querying GPS Positioning Data

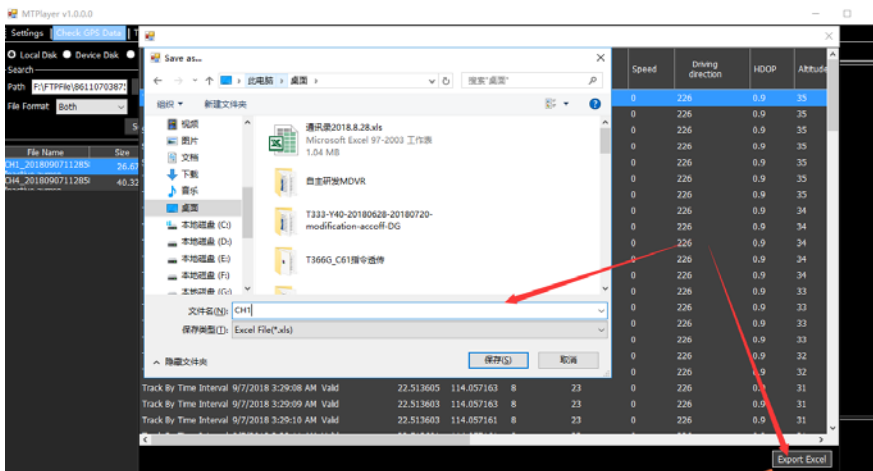
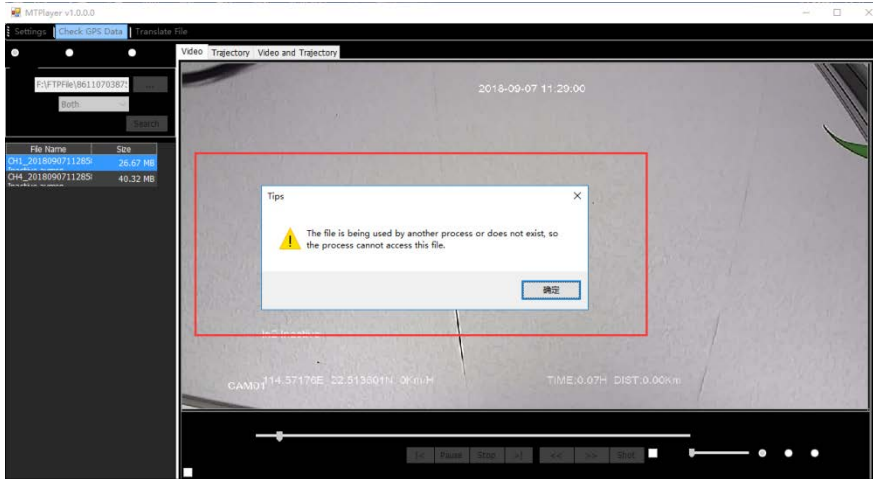
After selecting a video on the following page, you can obtain the GPS positioning data generated during the video recording and export these data to an Excel file.

Note:

- GPS positioning data cannot be queried while videos are being played. Otherwise, an error warning pops up.
- Recorded videos support two formats: **.avmsg** and **.mp4**. If you want to read GPS positioning data, you must select a video in **.avmsg** format.







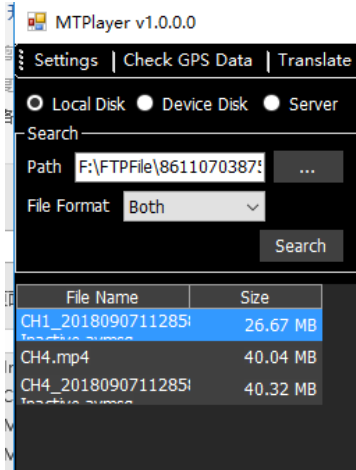
CH1.xls [兼容模式] - Excel

GPS Data																	
	Latitude	Longitude	Number of satellites	GSM signal strength	Speed	Driving direction	HDOP	Altitude	Mileage	Run time	Output port status	Input port status	AD1	AD2	AD3	Battery voltage	Extern
2	22.513605	114.057175	23	0	226	0.9	35	0	1966	0	2	1	1	0	422	2356	
3	22.513601	114.057176	23	0	226	0.9	35	0	1966	0	0	1	1	0	431	2356	
4	22.513601	114.057176	23	0	226	0.9	35	0	1966	0	0	1	1	0	431	2356	
5	22.513601	114.057176	23	0	226	0.9	35	0	1966	0	0	1	1	0	431	2356	
6	22.513601	114.057176	23	0	226	0.9	35	0	1966	0	0	1	1	0	421	2356	
7	22.513601	114.057176	23	0	226	0.9	35	0	1967	0	0	1	1	0	426	2356	
8	22.513603	114.057173	23	0	226	0.9	34	0	1968	0	2	1	1	0	425	2356	
9	22.513603	114.057175	23	0	226	0.9	34	0	1970	0	2	1	1	0	422	2356	
10	22.513601	114.057175	23	0	226	0.9	34	0	1971	0	2	1	1	0	422	2356	
11	22.513603	114.057173	23	0	226	0.9	34	0	1972	0	2	1	1	0	431	2325	
12	22.513603	114.057175	23	0	226	0.9	33	0	1973	0	2	1	1	0	421	2356	
13	22.513605	114.057170	23	0	226	0.9	33	0	1974	0	2	1	1	0	422	2356	
14	22.513605	114.057171	23	0	226	0.9	33	0	1975	0	2	1	1	0	421	2356	
15	22.513605	114.057170	23	0	226	0.9	33	0	1976	0	2	1	1	0	425	2326	
16	22.513605	114.057168	23	0	226	0.9	32	0	1977	0	2	1	1	0	422	2325	
17	22.513605	114.057166	23	0	226	0.9	32	0	1978	0	2	1	1	0	421	2326	
18	22.513605	114.057163	23	0	226	0.9	31	0	1979	0	2	1	1	0	422	2326	
19	22.513603	114.057163	23	0	226	0.9	31	0	1980	0	2	1	1	0	425	2326	


## 8.2.2 Playing Videos

### 1. Play videos stored in local disks.

Locate a video in .avmsg or .mp4 format on local disks of your computer.



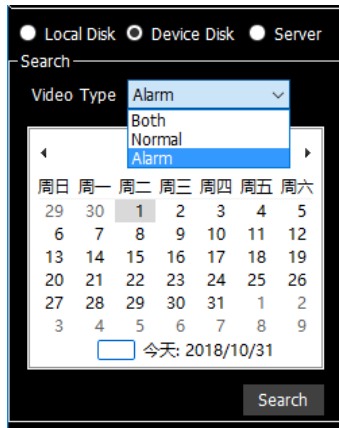
2. Play videos stored in a storage disk of the MDVR.

If related video file is detected from a storage disk of the MDVR by MT Player, the icon  is displayed.

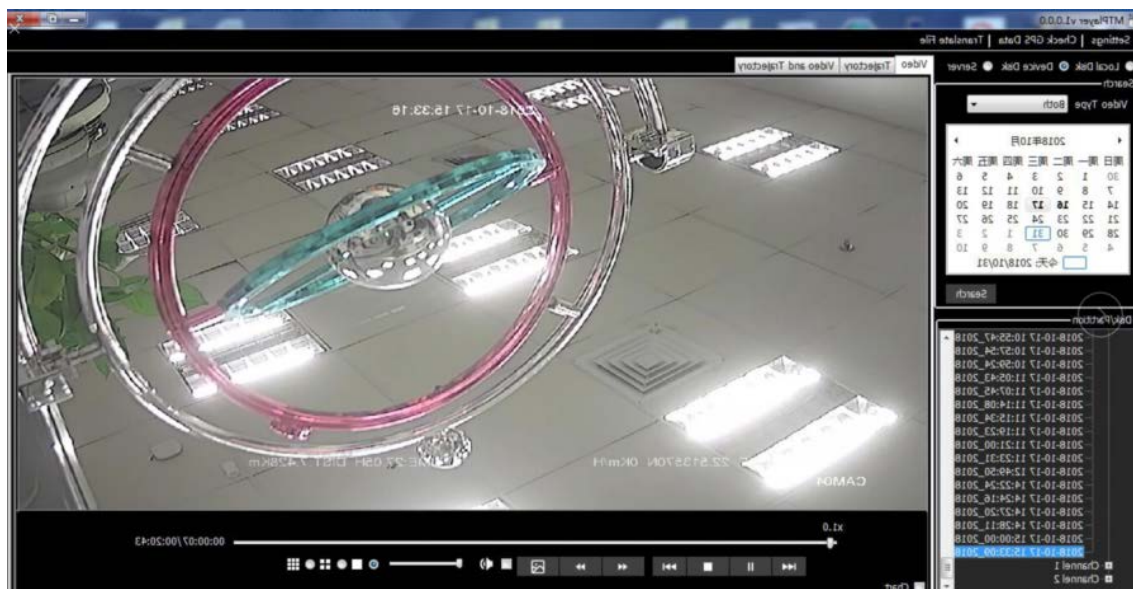
If a black bold date appears on the calendar, it means that there are videos recorded on that day.



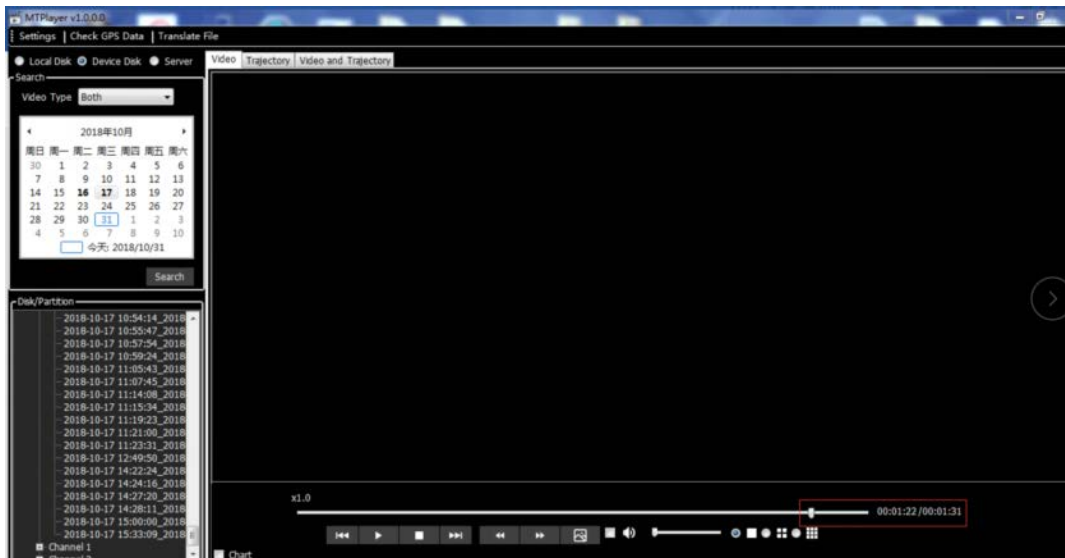
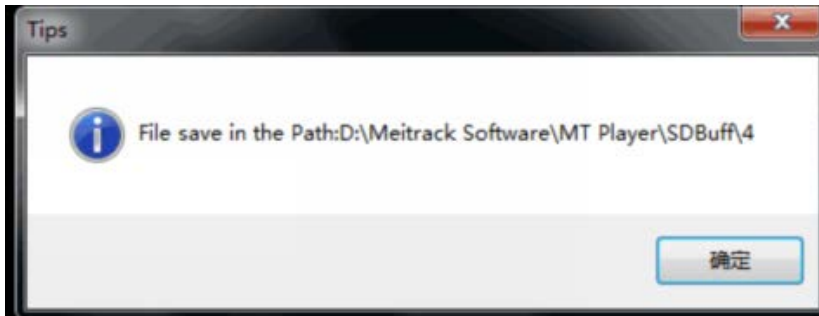
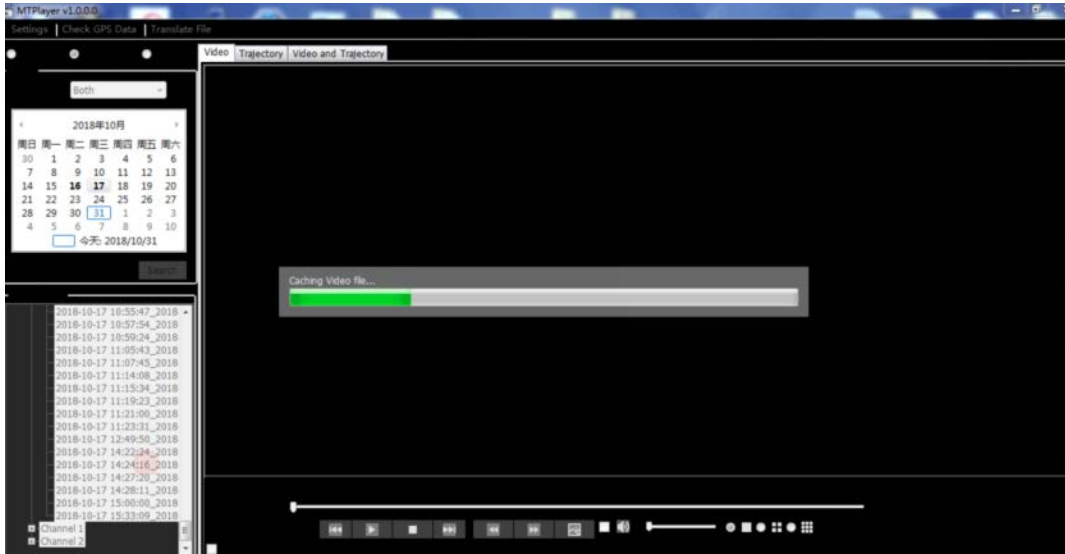
You can select **Normal** to play a complete video or **Alarm** to play an alert video.



Double-click the name of a video file. Then the video is played automatically.



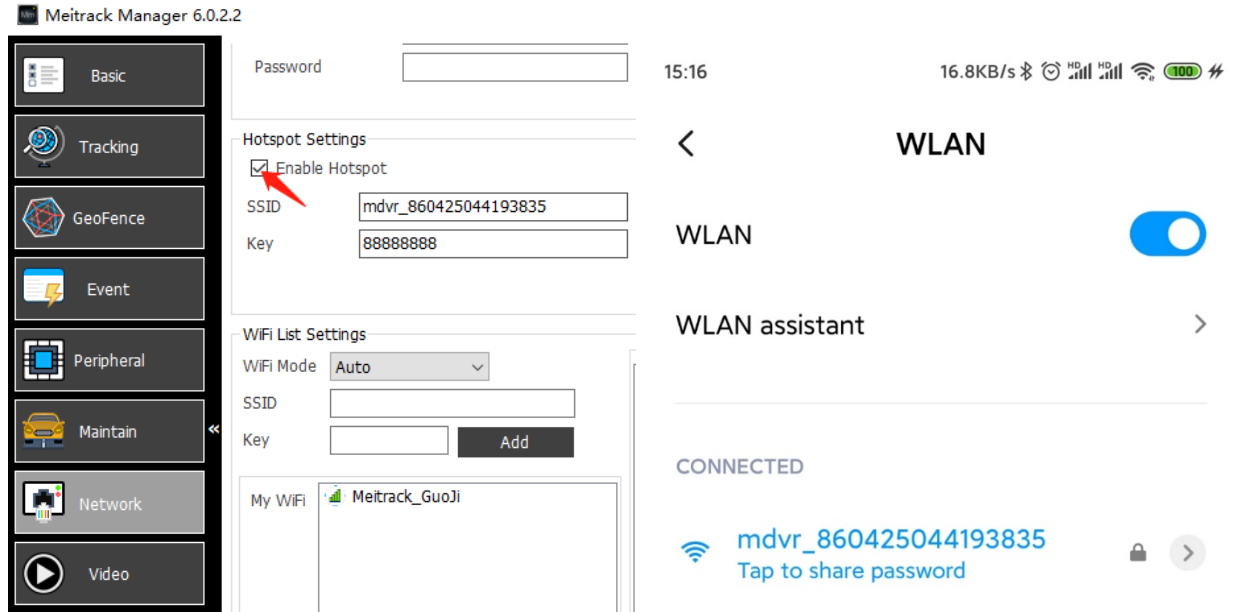
You can also download the video, and then play it.



## 9 MT Viewer App Function

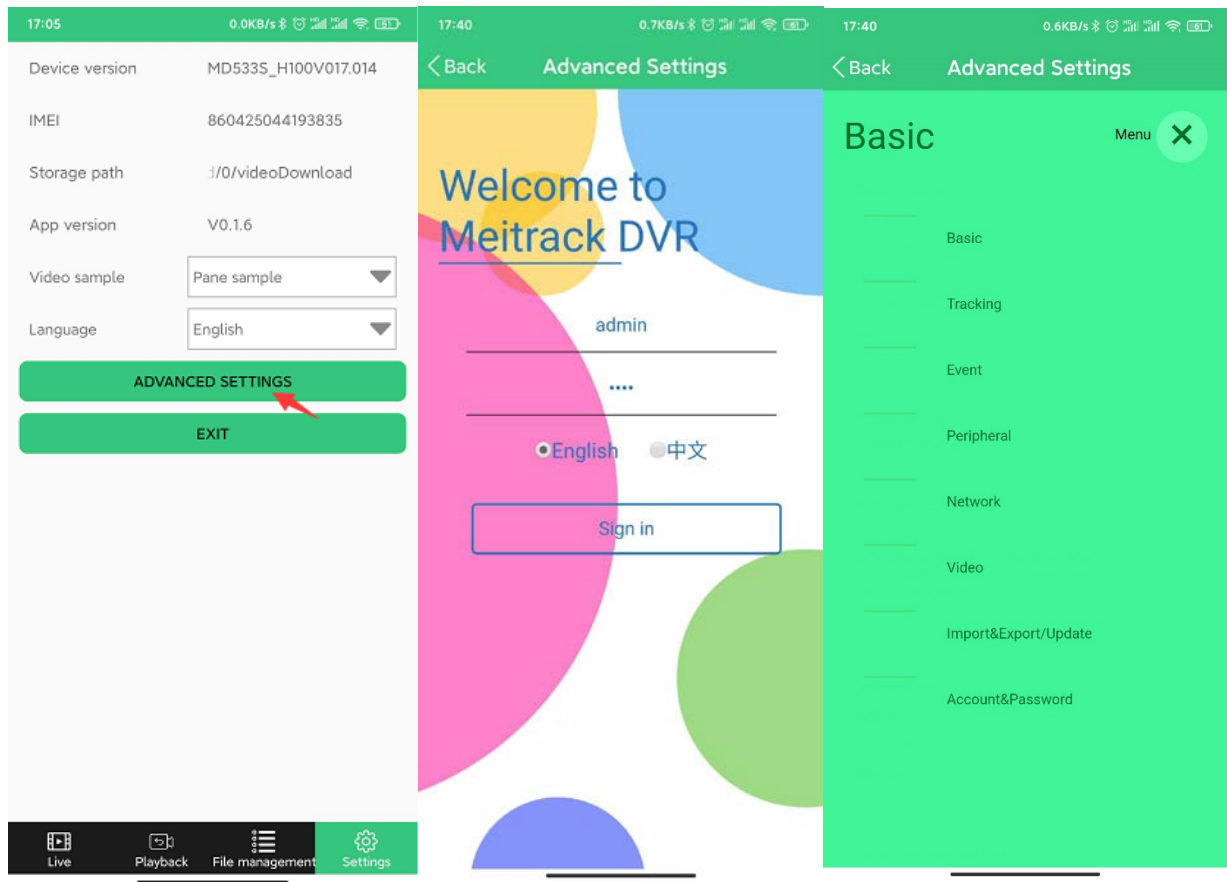
Start the MT Viewer app and connect a WiFi hotspot of the MDVR. Then you can preview, play back, and download videos without consuming any data usage.

As shown in the following figure, enable the hotspot function of the MDVR (default password: 88888888), and connect your phone to a WiFi hotspot of the MDVR.



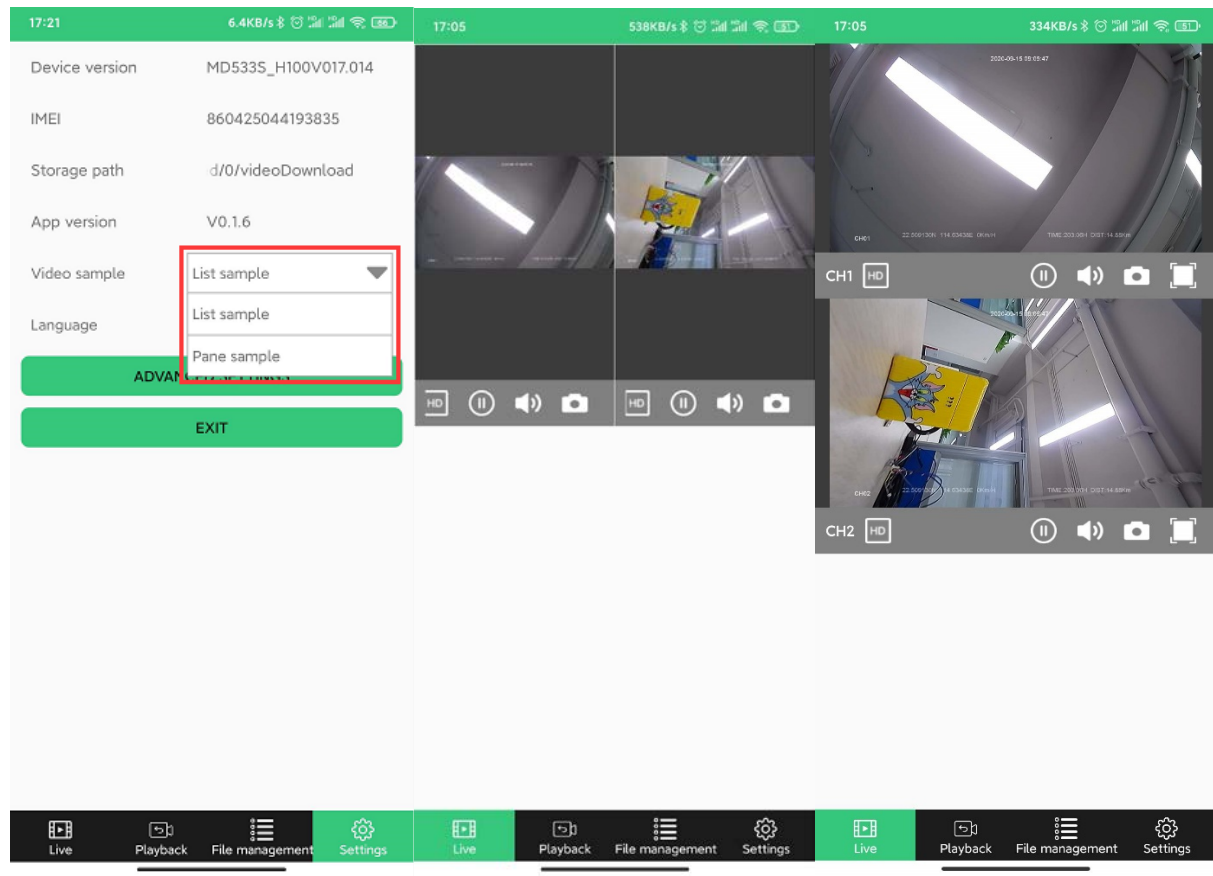
### 9.1 Configuring the MDVR

After a WiFi network is connected, start the MT Viewer app, and Click **Settings--Advanced Settings** to enter the parameter configuration interface. On the web page that is displayed, enter the user name and password (default user name: admin; default password: 0000), and log in to the system. Then configure the MDVR on the web page. The configuration method is similar to that of Meitrack Manager.



## 9.2 Live Preview

The Video Style can be selected, and then click **Play** to preview a video in real time.



## 9.3 Playback

Click **Playback** to query all video files stored in the micro SD card. These videos can be played back and downloaded.



17:36 0.0KB/s 17:37 0.0KB/s

**HIDE SEARCH CONDITIONS**

Start Data Sep 18, 2020  
 Start Time 00:00:01  
 End Time 23:59:59

Select channel  ch1,ch2  
 Alert type   
 Bit rate type All Streams

QUERY

No.	Channel No.	Time
1	1	2020-09-18 09:54:39-11:00:00
2	1	2020-09-18 11:00:00-12:00:00
3	1	2020-09-18 12:00:00-13:00:00
4	1	2020-09-18 13:00:00-14:00:00
5	1	2020-09-18 14:00:00-15:00:00
6	1	2020-09-18

No. 12  
 Channel No. 1  
 Time 2020-09-18 17:35:00  
 Duration 00:01:00  
 Alert type  
 Audio and video resource type Audio and Video  
 Bit rate type Main Stream  
 Storage type Main storage  
 File size (MB) 12.82

PLAY DOWNLOAD BACK

Live Playback File management Settings Live Playback File management Settings

17:37 175KB/s 17:38 0.1KB/s

No. 12  
 Channel No. 1  
 Time 2020-09-18 17:35:00-17:36:00  
 Duration 00:01:00  
 Alert type  
 Audio and video resource type Audio and Video  
 Bit rate type Main Stream  
 Storage type Main storage  
 File size (MB) 12.82

STOP DOWNLOAD BACK

CH1\_200907000001\_200907010000\_0\_0\_0  
 H1\_200918173500\_200918173600\_0\_0\_0  
 CH2\_200907092303\_200907092415\_2\_0\_0

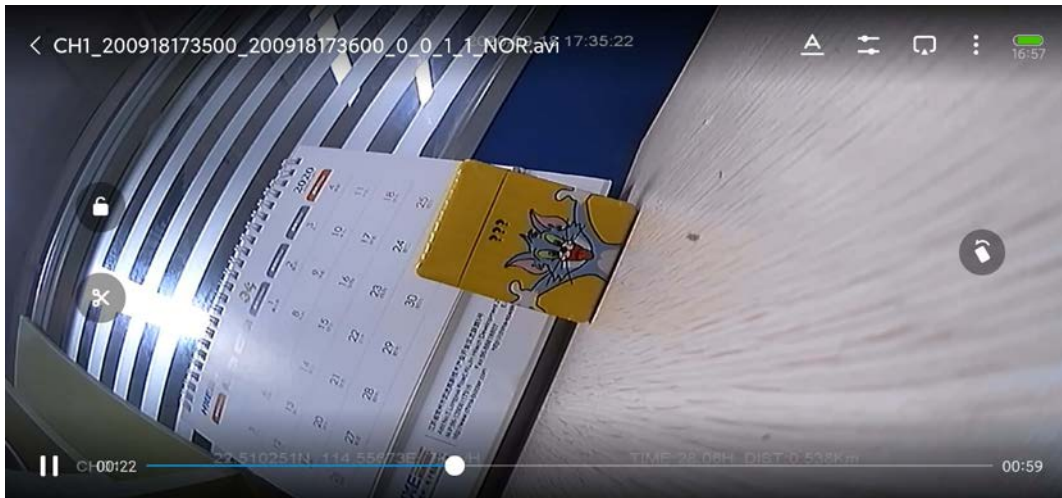
Downloading...  
 Downloading...Please wait a moment.

00:00:07/00:01:00  
 CH1

Live Playback File management Settings Live Playback File management Settings

## 9.4 File Management

Double-click the downloaded video file to play the file.



## 10 FAQs

### 10.1 MDVR Abnormal

- a) Q: The MDVR does not record videos. Why?  
A: Check whether the ACC cable is connected to the positive terminal of the external power supply (or the ACC is on), and whether the micro SD card LED indicator and video lost LED indicator blink normally.
- b) Q: The storage disk (micro SD card) LED indicator does not blink normally, and the MDVR does not record videos. Why?  
A: Check whether there are video recordings at the specified time periods. If the problem still exists, please restart the MDVR.
- c) Q: Available WiFi networks cannot be searched, or searched WiFi network signals are poor. Why?  
A: Please install the WiFi antenna to improve WiFi signal strength.

### 10.2 Data Usage Consumption

Data usage depends on the size of data uploaded from the device. Uploaded data contains video data and positioning data.

Video data calculation formula:  $\text{Bitrate (Kbs)} / 8 \times \text{Number of channels} / 1024 = \text{Data usage consumption per second (MB)}$

**(Note: The formula is applicable to scenarios that the device is monitored continuously via the platform or uploads video files continuously. It becomes unavailable when functions of monitoring and FTP uploading are enabled at the same time or data usage is calculated by using special calculation methods.)**

Positioning data calculation formula:  $0.2 \text{ KB} \times 3600 / \text{GPRS interval} \times 24 / 1024 = \text{Data usage consumption per hour (MB)}$

**(Note: The formula is applicable to general use scenarios. It becomes unavailable when commands are frequently sent to read and write, photos are frequently uploaded, or data usage is calculated by using special calculation methods.)**

Under normal circumstances, data usage of the device is as follows:

Good image quality: 1080p (1920 x 1080). Bitrate: 3,072 Kbs (H.264)/1,536 Kbs (H.265). Frame rate: 25 FPS							
Compression mode	Number of Channels	Data Usage Within 10 Minutes	Data Usage Within 1 Hour (GB)	Data Usage Within 1 Day (GB)	Data Usage Within 1 Week	Data Usage Within 1 Month	Data Usage Within 1 Year (GB)



		(GB)			(GB)	(GB)	
H.264	1 channel	0.22	1.32	31.7	221.9	951	11570.5
	2 channels	0.44	2.64	63.4	443.8	1902	23141
H.265	1 channel	0.11	0.66	15.85	110.95	475.5	5785.25
	2 channels	0.22	1.32	31.7	221.9	951	11570.5

<b>Average image quality: 720p (1280 x 720). Bitrate: 2,048 Kbs (H.264)/1,024 Kbs (H.265). Frame rate: 25 FPS</b>							
Compr ession mode	Number of Channels	Data Usage Within 10 Minutes (GB)	Data Usage Within 1 Hour (GB)	Data Usage Within 1 Day (GB)	Data Usage Within 1 Week (GB)	Data Usage Within 1 Month (GB)	Data Usage Within 1 Year (GB)
H.264	1 channel	0.15	0.9	21.6	151.2	604.8	7257.6
	2 channels	0.3	1.8	43.2	302.4	1209.6	14515.2
H.265	1 channel	0.075	0.45	10.8	75.6	302.4	3628.8
	2 channels	0.15	0.9	21.6	151.2	604.8	7257.6

<b>Bad image quality: D1 (704 x 576). Bitrate: 512 Kbs (H.264)/256 Kbs (H.265). Frame rate: 25 FPS</b>							
Compr ession mode	Number of Channels	Data Usage Within 10 Minutes (GB)	Data Usage Within 1 Hour (GB)	Data Usage Within 1 Day (GB)	Data Usage Within 1 Week (GB)	Data Usage Within 1 Month (GB)	Data Usage Within 1 Year (GB)
H.264	1 channel	0.0375	0.225	5.4	37.8	151.2	1814.4
	2 channels	0.075	0.45	10.8	75.6	302.4	3628.8
H.265	1 channel	0.01875	0.1125	2.7	18.9	75.6	907.2
	2 channels	0.0375	0.225	5.4	37.8	151.2	1814.4

<b>Best image quality: 1080p (1920 x 1080). Bitrate: 8,192 Kbs (H.264)/4,096 Kbs (H.265). Frame rate: 25 FPS</b>							
Compr ession mode	Number of Channels	Data Usage Within 10 Minutes (GB)	Data Usage Within 1 Hour (GB)	Data Usage Within 1 Day (GB)	Data Usage Within 1 Week (GB)	Data Usage Within 1 Month (GB)	Data Usage Within 1 Year (GB)
H.264	1 channel	0.59	3.54	84.96	594.72	2548.8	31010.4
	2 channels	1.18	7.08	169.92	1189.44	5097.6	62020.8
H.265	1 channel	0.295	1.77	42.48	297.36	1274.4	15505.2
	2 channels	0.59	3.54	84.96	594.72	2548.8	31010.4

- (1) Q: If the device is monitored occasionally via the platform and not all video files need to be uploaded, how much data usage does it consume?
- A: The data usage depends on the number of alerts. Each alert video lasting one minute consumes about 180 MB. Under normal circumstances, if the monitoring frequency is not high (one hour per day. DA image quality) and the number of alerts is few (10 alerts per day), the data usage consumption per day is about 3.8 GB.
- (2) Q: What is the difference between the data usage generated during monitoring and the data usage generated by files uploaded to the FTP server?

A: The data usage generated during monitoring is calculated based on real-time streaming, while the data usage generated by files uploaded to the FTP server is calculated based on storage streaming.

### 10.3 Power Consumption

The device's power consumption varies depending on the following three conditions:

Sleep mode: 10 mA

Eight cameras and a display: 1–3 A

A single camera: 100–400 mA (The light in the daytime is strong, so the power consumption is low. The light in the night is weak, so the power consumption is high.)

(1) Q: If the engine is not started, will the vehicle battery be quickly consumed by the device?

A: If the engine is not started, the recording function of the device is disabled. So the power consumption is lower than 100 mA and excessive consumption of the vehicle battery will not happen.

(2) Q: How to reduce the power consumption?

A: You can reduce the number of peripherals, alert event uploading times and camera channels.

### 10.4 Video Storage

The maximum storage capacity of the MDVR varies depending on the capacity of micro SD cards on the market. So users can choose a proper micro SD card as needed. For details about the storage time of the device with different capacity, see the following tables. As shown in the following tables, the storage time of the storage disk with the largest capacity ranges from three days to 320 days due to the image quality and the number of channels.

<b>Good image quality: 1080p (1920 x 1080). Bitrate: 3,072 Kbs (H.264)/1,536 Kbs (H.265). Frame rate: 25 FPS</b>				
Video compression mode	H.264		H.265	
Number of channels	1 channel	2 channels	1 channel	2 channels
Storage time of a 256 GB micro SD card (hour)	160	80	320	160
Storage time of a 512 GB micro SD card (hour)	320	160	640	320
Storage time of a 1 TB micro SD card (day)	26	13	52	26

<b>Average image quality: 720p (1280 x 720). Bitrate: 2,048 Kbs (H.264)/1,024 Kbs (H.265). Frame rate: 25 FPS</b>				
Video compression mode	H.264		H.265	
Number of channels	1 channel	2 channels	1 channel	2 channels
Storage time of a 256 GB micro SD card (hour)	240	120	480	240
Storage time of a 512 GB micro SD card (hour)	480	240	960	480
Storage time of a 1 TB micro SD card (day)	40	20	80	40

<b>Bad image quality: D1 (704 x 576). Bitrate: 512 Kbs (H.264)/256 Kbs (H.265). Frame rate: 25 FPS</b>				
Video compression mode	H.264		H.265	
Number of channels	1 channel	2 channels	1 channel	2 channels
Storage time of a 256 GB micro SD card (hour)	960	480	1920	960
Storage time of a 512 GB micro SD card (hour)	1920	960	3840	1920
Storage time of a 1 TB micro SD card (day)	160	80	320	160

<b>Best image quality: 1080p (1920 x 1080). Bitrate: 8,192 Kbs (H.264)/4,096 Kbs (H.265). Frame rate: 25 FPS</b>				
Video compression mode	H.264		H.265	

Number of channels	1 channel	2 channels	1 channel	2 channels
Storage time of a 256 GB micro SD card (hour)	60	30	120	60
Storage time of a 512 GB micro SD card (hour)	120	60	240	120
Storage time of a 1 TB micro SD card (day)	10	5	20	10

(1) Q: What will happen if the micro SD card is full?

A: If the micro SD card is full, original video recordings are automatically replaced with new ones by default. So you need to upload or back up video files regularly. If you don't want data to be replaced, set the function of "stopping recording after the disk is full" by Meitrack Manager software.

(2) Q: Can I extend the storage time by reducing the frame rate?

A: Yes. If the frame rate is reduced, the storage time can be extended by 10% to 50%. However, it affects the smoothness of video images. Therefore, it is recommended that the frame rate should be greater than 15 FPS. Otherwise, images will be discontinuous.

## 10.5 Camera Installation



Fix the camera by using the screws.



If you have any questions, do not hesitate to email us at [info@meitrack.com](mailto:info@meitrack.com).