Meitrack MDVR FAQ

Applicable Model:

MD511H/MD522S/MD811H/MD822S/MD533S/MD500S

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Contents

1 Copyright and Disclaimer ..... - 5 -
2 MDVR FAQ ..... - 5 -
2.1 MS03 and Streaming Media Server Installation Requirements ..... - 5 -
2.1.1 Windows Server ..... - 5 -
2.1.2 Linux Streaming Media Server ..... - 6 -
2.1.3 H.265 Decoding ..... - 6 -
2.1.4 Preparations Before MS03 Installation ..... - 6 -
2.2 What's the Streaming Media Server ..... - 6 -
2.3 Function of the Streaming Media Server ..... - 7 -
2.4 How to Integrate the MDVR with a Third-Party Platform ..... - 7 -
2.5 How to Upgrade the MDVR Firmware ..... - 7 -
2.5.1 Upgrading the MDVR Firmware Using Meitrack Manager and a USB Flash Drive ..... - 7 -
2.5.2 Automatically Upgrading the MDVR Firmware Using a USB Flash Drive ..... 错误!未定义书签。
2.5.3 Upgrading the MDVR Firmware Using the LAN Web Page ..... - 8 -
2.5.4 OTA Firmware Update on the MS03 Platform ..... - 8 -
2.6 Technical Specifications of Cameras ..... - 8 -
2.7 The MDVR Does Not Support Video Recording After the Engine Is Off. Why? ..... - 8 -
2.8 How to Set the Working Time of the MDVR After the Engine Is Off? ..... - 9 -
2.9 If the Engine Is Not Started, Will the Vehicle Battery Be Quickly Consumed By the Device? ..... - 9 -
2.10 After the MDVR Is Connected to a Display, a Noise Can Be Heard. Why? ..... - 9 -
2.11 Power Consumption ..... - 9 -
2.12 Data Usage ..... - 9 -
2.13 Video Storage Space ..... - 10 -
2.14 The MDVR Fails to Detect Any Hard Disk or SD Card or Detects That the Hard Disk or SD Card Is Abnormal. Why? ..... - 10 -
2.15 How to View Video Recordings Stored in the Hard Disk or SD Card? ..... - 10 -
2.16 Why an SD Card Reader Is Required? ..... - 10 -
2.17 After the Hard Disk or SD Card Is Inserted Into a Computer, a Formatting Prompt Appears. Why? ..... - 10 -
2.18 After the Hard Disk or SD Card Is Inserted Into the MDVR, It Is Formatted Automatically. Why? ..... - 11 -
2.19 No Video File Is Searched on MT Player. Why? ..... - 11 -
2.20 Video File Format ..... - 11 -
2.21 How to Convert a .avmsg File to a .mp4 File ..... - 12 -
2.22 The Video Format Cannot Be Converted via MT Player. Why? ..... 错误!未定义书签。
2.23 When the Disk Is Full, Can Video Files Be Stored Normally? ..... - 12 -
2.24 Storage Medium and Maximum Storage Capacity Supported ..... - 12 -
2.25 MT Viewer Fails to Be Connected. Why? ..... - 12 -
2.26 Default Storage Path of Video Files Downloaded By MT Viewer ..... - 12 -
2.27 The MDVR Cannot Be Started. Why? ..... - 12 -
2.28 Network Connection ..... - 12 -
2.29 Route Mode Settings ..... - 12 -
2.30 A Cellular Network Fails to Be Connected. Why? ..... - 12 -
2.31 The WiFi Network Fails to Be Set or Connected. Why? ..... - 13 -

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2.32 Ethernet Connection ..... - 13 -
2.33 The MDVR Is Online, But It Does Not Support Real-Time Previewing and Playback of Videos. Why? ..... - 13 -
2.34 IP Address and Port Configuration ..... - 13 -
2.35 How to Automatically Upload Video Files to a Specified FTP Server ..... - 13 -
2.36 What Are OSD Parameters? ..... - 14 -
2.37 What Is the Difference Between the Local Time Zone and the GPRS Time Zone? ..... - 14 -
2.38 What Is the Difference Between H.264 and H.265? ..... - 14 -
2.39 What Is the Video Packaging Time? ..... - 14 -
2.40 What Is the Pre-recording Time and Recording Delay Time? ..... - 14 -
2.41 How to Fast Detect the Network Status? ..... - 15 -
2.42 Why Auto Reboot Is Required for the Device? ..... - 15 -

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2 MDVR FAQ

2.1 MS03 and Streaming Media Server Installation Requirements

2.1.1 Windows Server

Windows servers are required. The configuration requirements are as follows:

a) Less than 500 MDVRs

CPU: E3-1230v4 4-core x 1

Memory: 8 GB

Hard disk: 600 GB 10K SAS x 2 RAID 1 (SSDs are recommended.)

Optical fiber connectivity speeds of 100 Mbps or above are recommended and the network needs to have a fixed IP address.

b) 500–1000 MDVRs

CPU: E3-1230v4 4-core x 1

Memory: 16 GB

Hard disk: 1.2 TB 10K SAS x 2 RAID 1 (SSDs are recommended.)

Optical fiber connectivity speeds of 100 Mbps or above are recommended and the network needs to have a fixed IP address.

c) 1001–10000 MDVRs

CPU: E5-2620v4 6-core x 2

Memory: 32 GB

Hard disk: 1.2 TB 10K SAS x 6 RAID 5 PERC H710 (SSDs are recommended.)

Optical fiber connectivity speeds of 100 Mbps or above are recommended and the network needs to have a fixed IP address.

d) 10001-50000 MDVRs

CPU: E5-2650v4 8-core x 2

Memory: 64 GB

Hard disk: 1.2 TB 10K SAS x 12 RAID 5 PERC H710 (SSDs are recommended.)

Note:

1) Optical fiber connectivity speeds of 100 Mbps or above are recommended and the network needs to have a fixed

IP address.

2) The previous hard disks are for reference only. The size of hard disks varies depending on the number of devices and storage time of records and videos. For the following hard disk, 1000 devices are supported and 180 days of records and videos can be retained.
3) If 100 Mbps network bandwidth is not enough, you need to increase the bandwidth.
4) Windows Server 2019 Standard 64-bit English operating system is used.
5) SQL Server 2019 Standard 64-bit English database is used.

2.1.2 Linux Streaming Media Server

Customers can prepare Linux streaming media servers as required.
Operating system: Ubuntu 18.04.1 LTS
CPU: E3-1230v4 4-core x 1
Memory: 16 GB
Hard disk: 500 GB 10K SAS x 2 RAID 1 (SSDs are recommended.)
Optical fiber connectivity speeds of 100 Mbps or above are recommended and the network needs to have a fixed IP address.

2.1.3 H.265 Decoding

If H.265 decoding is required, the configuration requirements are as follows:
CPU: I7-9700 or I7-10700 8-core x 1
Memory: 16 GB
Hard disk: 500 GB SSD
Operating system: Windows 10 Pro
Optical fiber connectivity speeds of 100 Mbps or above are recommended and the network needs to have a fixed IP address.
Note: Users have to purchase physical machines instead of virtual machines and graphics cards of virtual machines do not support H.265 encoding. These configuration requirements are for reference only and will be updated as required. For details, contact related personnel from Meitrack.

2.1.4 Preparations Before MS03 Installation

Users need to provide the following information before installing the MS03 server:

a) Remote connection method, account and password
b) MS SQL database account and password
c) User-defined logo (pixel: 205x60)
d) Complete domain name
e) Email address, Email account, Email password, SMTP address, SMTP port, and SSL encryption if an Email is required.

2.2 What's the Streaming Media Server

a) The main function of the streaming media server is to transmit video files to a client using specified streaming media protocol (RTP, RTSP, MMS, or RTMP), so that users can view these video files on the client.
b) After videos are collected and received, they are broadcast live on the client using specified streaming media protocol.

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2.3 Function of the Streaming Media Server

a) Parse video data uploaded by the MDVR to form standard data streams. Then the player detects and plays the videos.

b) Decode the video files from the FTP server to form standard data streams. Then the player detects and plays the videos.

c) Decode the video files from the MDVR to form standard data streams. Then the player detects and plays the videos.

2.4 How to Integrate the MDVR with a Third-Party Platform

a) Customer develops streaming media and integrates the whole protocol of the MDVR.

b) The API of the MS03 streaming media server is open and RTMP video streams are pushed to the customer's platform for playing.

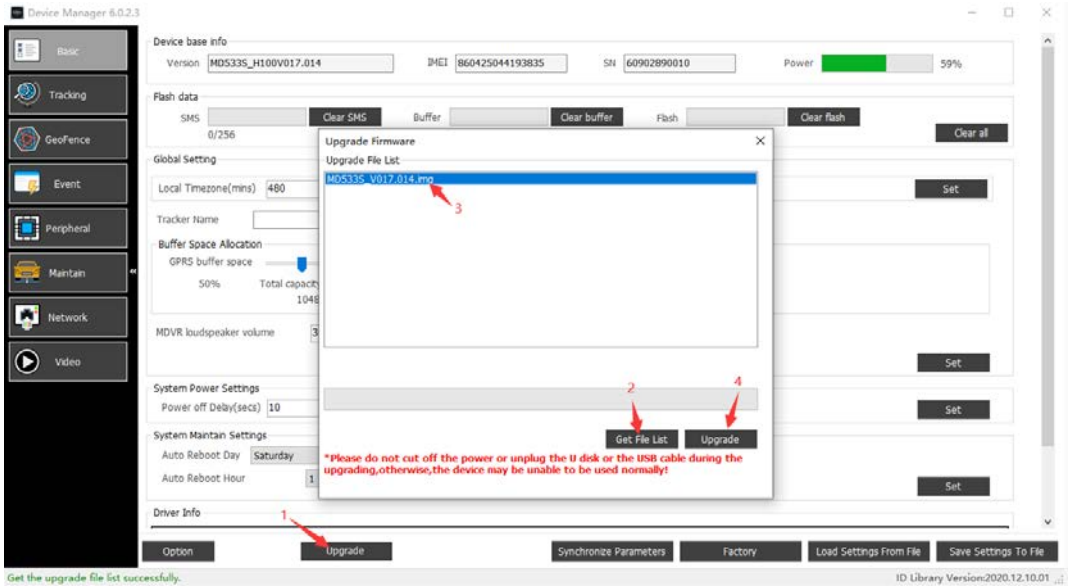
2.5 How to Upgrade the MDVR Firmware

2.5.1 Upgrading the MDVR Firmware Using Meitrack Manager and a USB Flash Drive

a) Put the firmware to be upgraded into the USB flash drive. (Only 2.0 USB flash drives are supported)

b) Plug the USB flash drive into the USB port of the MDVR.

c) Run Meitrack Manager. On the **Basic** page, click **Upgrade**. On the window that is displayed, click **Get File List**, select related firmware, and click **Upgrade**.



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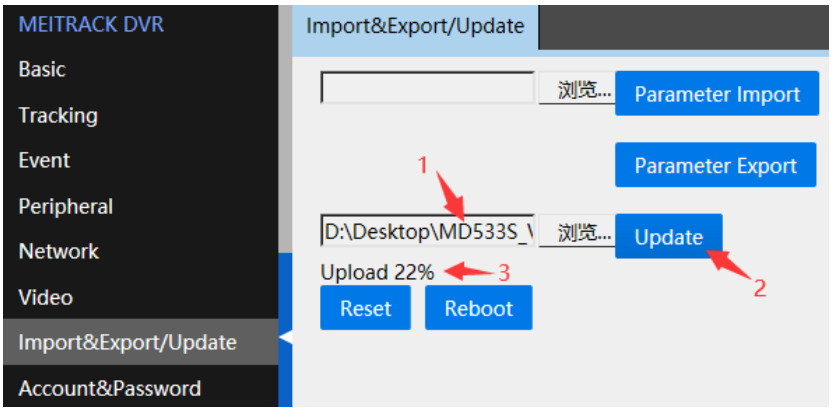
2.5.2 Upgrading the MDVR Firmware Using the LAN Web Page

a) Add the firmware file.

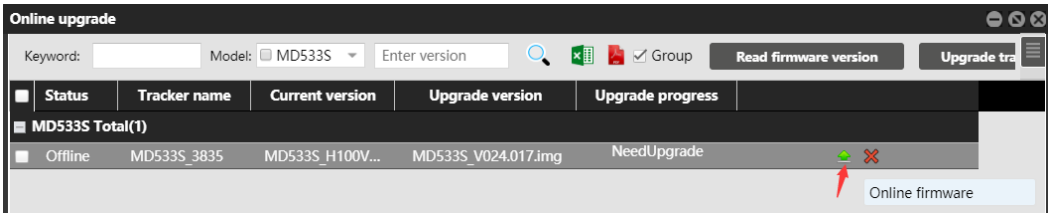
b) Click **Update**.

c) Check the MDVR firmware uploading progress.



2.5.3 OTA Firmware Update on the MS03 Platform

Log in to the MS03 platform and upgrade the MDVR firmware via the OTA.



2.6 Technical Specifications of Cameras

a) MD511H/MD522S: 4-channel AHD cameras. D1/720P and self-adaptive PAL and NTSC formats are supported. The type of the four cameras connected can be different. (However, the format and resolution of cameras connected to the AV-IN1 port and AV-IN2 port must be the same, and the format and resolution of cameras connected to the AV-IN3 port and AV-IN4 port must be the same. For example, if the AV-IN1 port is connected to a D1 camera, the AV-IN2 port must be connected to a D1 camera and the AV-IN3 or AV-IN4 port can be connected to other type of cameras.)

b) MD811H/MD822S: 8-channel AHD cameras. D1/720P/1080P and self-adaptive PAL and NTSC formats are supported. The type of the four cameras connected can be different. (However, the format and resolution of one camera connected to an AV-IN port must be the same as that of the other camera connected to the AV-IN port.)

c) MD533S: 2-channel AHD cameras. D1/720P/1080P and self-adaptive PAL and NTSC formats are supported. The type of the two cameras connected must be the same.

d) MD500S： Support 1-channel DMS, 1-channel ADAS, and 2-channel 720p audio and video recordings. Supports D1/WD1/720P cameras.

2.7 Which DMS/ADAS alarm events are supported by the MD500S

DMS：Turn head to the left、Turn head to the right、Raise head、Lower head、Drowsiness、Yawning、Calling、Smoking、Driver absence.

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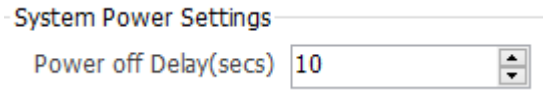
ADAS：Forward collision、Distance detection、Left lane departure、Right lane departure、Front vehicle start.

2.8 The MDVR Does Not Support Video Recording After the Engine Is Off. Why?

The MDVR supports parallel running of two systems. When the ACC is off, the GPS system continues to work and the DVR system stops work to reduce the device's power consumption.

2.9 How to Set the Working Time of the MDVR After the Engine Is Off?

After the engine is off, the DVR system continue to work for 10 seconds by default. If the device is equipped with a standard firmware, the maximum working time of the DVR system can be set to 65535 seconds. If longer working time needs to be set, customize the firmware.



2.10 If the Engine Is Not Started, Will the Vehicle Battery Be Quickly Consumed By the Device?

After the engine is off, wait for five minutes, then the device enters sleep mode. In this way, the power consumption is lower than 10 mA and excessive consumption of the vehicle battery will not happen.

2.11 After the MDVR Is Connected to a Display, a Noise Can Be Heard. Why?

The power of the external power supply is not enough. Please try to increase the input voltage and current.

2.12 Power Consumption

Start the host audio and video: about 8 W

Connect to eight cameras: about 24 W in the daytime (a display connected: 29 W); about 32 W at night (a display connected: 37 W)

Connect to a single camera: 50–100 mA in the daytime; 200–250 mA at night

2.13 Data Usage

a) The data usage varies depending on the size of data uploaded by the device. Uploaded data contains audio and video data and positioning data.

b) Video data calculation formula: Bitrate (Kbs)/8 x Number of channels /1024 = Data usage 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.)

c) Positioning data calculation formula: 0.2 KB x 3600/GPRS interval x 24/1024 = Data usage per day (MB)
Note: The formula is applicable to general use scenarios. It becomes unavailable when commands are frequently sent to read and write data, photos are frequently uploaded, or data usage is calculated by using special calculation methods.
Note: Please contact us for free computing tools.

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2.14 Video Storage Space

Calculation formula of disk space for video recordings in one channel within one hour (MB/H): (Bitrate of storage streams/1024) x 3600/8/0.9 = Size of video recordings

For example, when the bitrate is 7072 Kbs, the size of video recordings in one channel within one hour is 1500 MB. If the size of the SD card is 512 GB and only one camera is connected, the video recordings can be stored for about 350 hours.

Note: Please contact us for free computing tools.

2.15 The MDVR Fails to Detect Any Hard Disk or SD Card or Detects That the Hard Disk or SD Card Is Abnormal. Why?

a) Please ensure that the hard disk or SD card is installed properly.

b) Check whether the SD card is read-only.

c) Replace the hard disk or SD card and try again later.

2.16 How to View Video Recordings Stored in the Hard Disk or SD Card?

a) Remove the hard disk or SD card from the MDVR and insert it into a computer. Then view video recordings via MT Player.

b) Play back videos via the MS03 platform.

2.17 Why an SD Card Reader Is Required?

Only when an SD card is detected as a portable device on a computer, videos can be viewed via MT Player. Sometimes an SD card is detected as a disk. Therefore, you had better prepare an SD card reader in advance.

2.18 After the Hard Disk or SD Card Is Inserted Into a Computer, a Formatting Prompt Appears. Why?

After the hard disk or SD card is installed, it enters working state. After it is inserted into a computer, the computer may detect that it is abnormal.

Do not format the hard disk or SD card. Otherwise, video files stored in the hard disk or SD card will be deleted.

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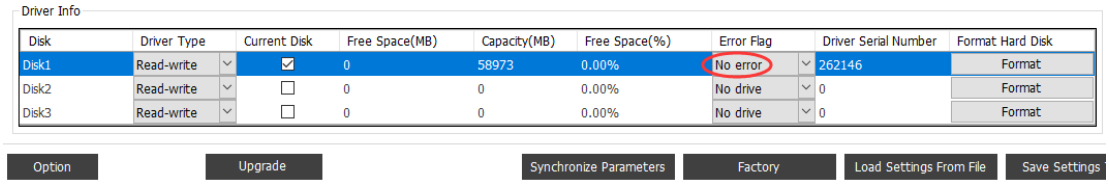
2.19 After the Hard Disk or SD Card Is Inserted Into the MDVR, It Is Formatted Automatically. Why?

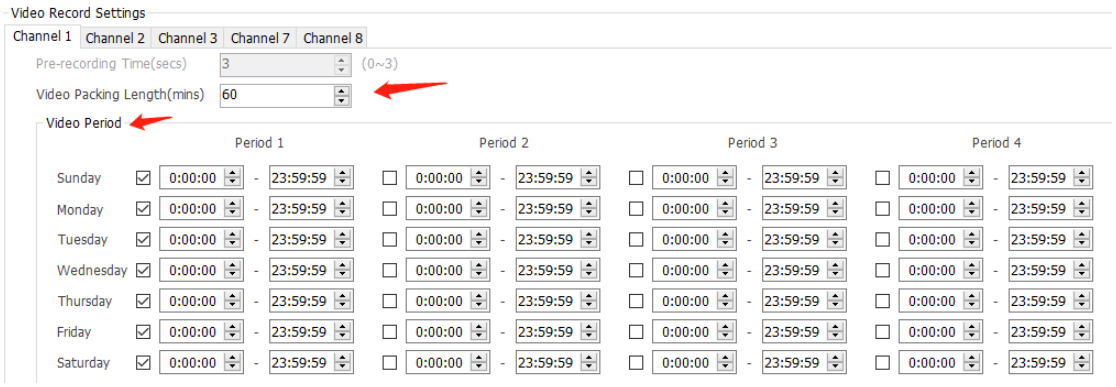
When the hard disk or SD card is inserted into the MDVR for the first time, if the system detects format errors, the hard disk or SD card will be formatted automatically and enters working state. If "no error" is displayed on Meitrack Manager, it means that the hard disk or SD card is initialized successfully.



2.20 No Video File Is Searched on MT Player. Why?

a) Check whether video files are stored in the hard disk or SD card and the video recording function is enabled at the specified time period.

b) Check whether the hard disk or SD card has enough space to store video files. For example, if one 1080P camera records videos for one hour, more than 1 GB memory is occupied. If an SD card with small memory is used, no complete video file exists. (By default, when a video is recorded in one channel for 60 consecutive minutes, a video file is generated.)



2.21 Video File Format

Video files are in **.avmsg** format.

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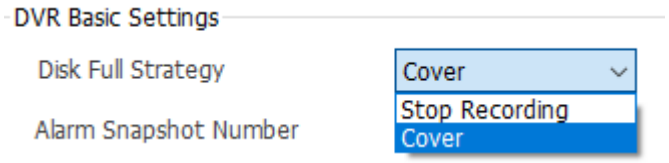
2.22 How to Convert a .avmsg File to a .mp4 File

MT Player can be used to convert a **.avmsg** file to a **.mp4** file and supports this video format conversion only.

2.23 When the Disk Is Full, Can Video Files Be Stored Normally?

After the disk is full, users can stop recordings or replace old videos with new ones (default).



2.24 Storage Medium and Maximum Storage Capacity Supported

a) The MD533S supports one micro SD card.

b) The MD522S or MD822S supports two SD cards.

c) The MD511H or MD811H supports one SD card and one hard disk.

d) A hard disk supports up to 2 TB, while a micro SD card or an SD card supports up to 512 GB.

2.25 MT Viewer Fails to Be Connected. Why?

Enable the hotspot function of the MDVR, connect your phone to a WiFi hotspot of the MDVR, and then start MT Viewer. If MT Viewer still fails to be connected, exit MT Viewer and then start it, or use another mobile phone to try again.

2.26 Default Storage Path of Video Files Downloaded By MT Viewer

1) The storage path of video files is **Downloads/MTViewer**.

2) The storage path of photos is **DCIM/MTViewer**.

2.27 The MDVR Cannot Be Started. Why?

a) Check whether the cabling is correct and external power supply works properly.

b) Check whether the electronic lock of the device is locked (excluding the MD533S).

2.28 Network Connection

There are three ways to connect a network: cellular network (3G/4G), WiFi, and Ethernet.

Ethernet is the best choice, WiFi is the second choice, and a cellular network is the last choice. It means that if the MDVR is connected to Ethernet, the WiFi and cellular network will be disabled.

2.29 Route Mode Settings

The route mode supports four options: Auto, GSM, WiFi and Ethernet. If **Auto** is selected, the MDVR will first detect the Ethernet network, then the WiFi network, and finally the GSM network.

2.30 A Cellular Network Fails to Be Connected. Why?

No GSM signal is detected, the GSM antenna is not installed properly, the GSM antenna is damaged, GSM jamming is detected, the APN settings are not correct, the SIM card does not have sufficient balance, or the GPRS function is not

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enabled.

2.31 The WiFi Network Fails to Be Set or Connected. Why?

The WiFi module is not started (When the ACC is on, the WiFi module starts to work.), the WiFi SSID or password is not correct, the WiFi antenna is not installed properly, the WiFi antenna is damaged, or the WiFi router network is abnormal.

2.32 Ethernet Connection

The DHCP is not enabled for the MDVR, so you have to enter a fixed IP address and related information. Please ensure that the settings of the IP address, subnet mask, gateway, active DNS server, and standby DNS server are correct.

Note: The MD533S cannot be connected to a network through a port.

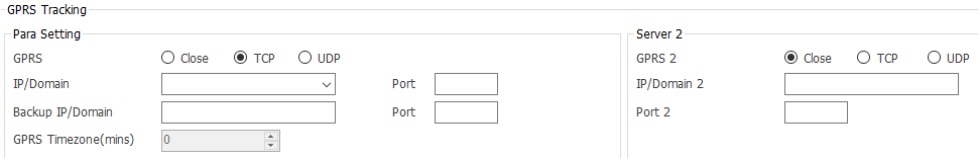
2.33 The MDVR Is Online, But It Does Not Support Real-Time Previewing and Playback of Videos. Why?

1) When the ACC is on, the device is started.
2) The hard disk, SD card, or micro SD card is abnormal.
3) The electronic lock of the device is not locked (excluding the MD533S).

4) The MS03 platform and streaming media server are abnormal.

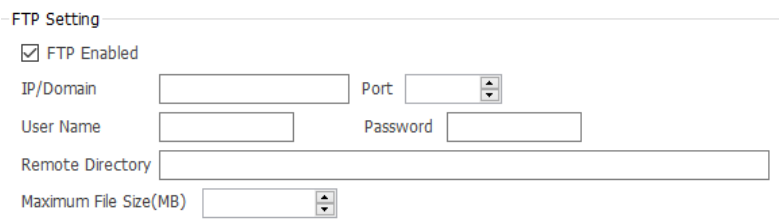
2.34 IP Address and Port Configuration

The MDVR supports two IP addresses. Please ensure that the IP address and port are set correctly.



2.35 How to Automatically Upload Video Files to a Specified FTP Server

1) An FTP server is required to store video recordings and photos from the MDVR.
2) Set the FTP server IP address, domain name, port, user name, password, and remote directory (IMEI).



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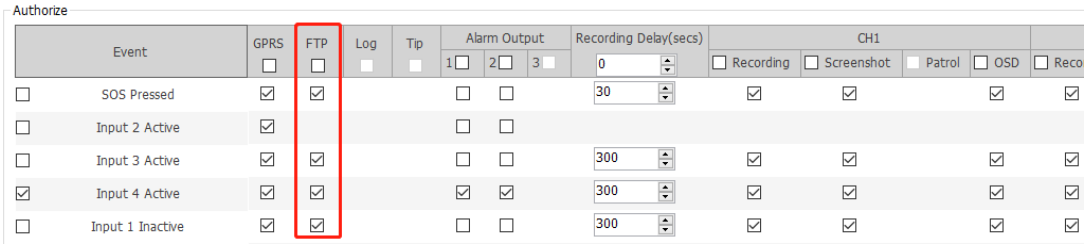
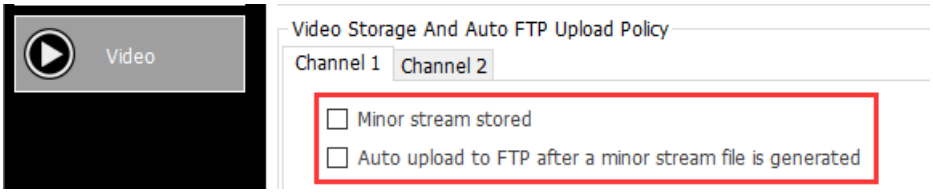
3) As shown in the following figure, if **FTP** for an alert is selected, when an emergency alert is triggered, a video will be recorded, a photo will be taken, and the video and photo will be uploaded to the FTP server automatically.

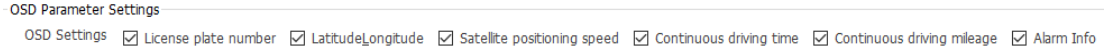


4) Minor stream files can be stored in the MDVR and automatically uploaded to the FTP server.



2.36 What Are OSD Parameters?

OSD parameters are showed on the video screen, such as the license plate (device name), latitude, longitude, driving speed, continuous driving time, and alert information.



2.37 What Is the Difference Between the Local Time Zone and the GPRS Time Zone?

The local time zone indicates the time characters shown among camera OSD characters or among SMS alert texts. GPRS time zone: The time of uploading positioning data is based on GMT 0 (London time). You can set the GPRS time zone as required. The MS03 platform can automatically detect users' time zone, and the GPRS time zone does not need to be changed.

2.38 What Is the Difference Between H.264 and H.265?

When the image quality of two videos is the same and their bitrates are the same, the storage space of the video adopting the H.265 standard is 50% less than that of the video adopting the H.264 standard. If the storage space of two videos is the same and their bitrates are the same, the image quality of the video adopting the H.265 standard is 30%–40% higher than that of the video adopting the H.264 standard.

2.39 What Is the Video Packaging Time?

Indicates the playing time of each audio or video file (excluding alert videos). Audio and video files are packaged based on the preset time.

2.40 What Is the Pre-recording Time and Recording Delay Time?

The pre-recording time indicates the recording time before an event is triggered. This time ranges from 0 to 900 seconds.

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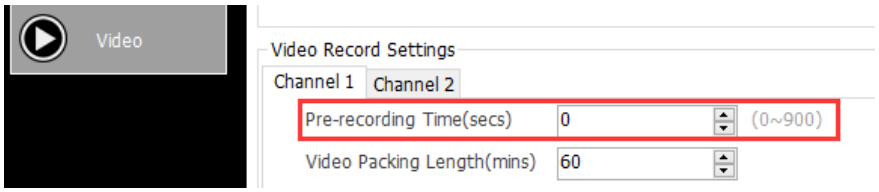
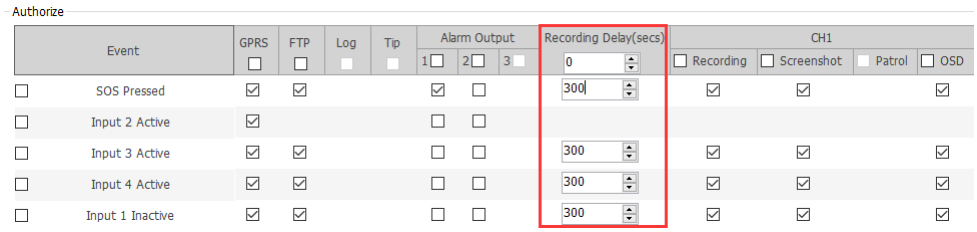


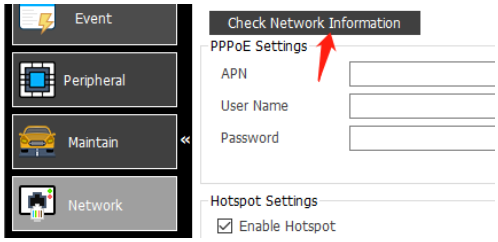
The recording delay time indicates the recording time of audio or video recordings after an event is triggered. The default time is 300 seconds.



For example, the pre-recording time is set to 600 seconds, and the recording delay time for an SOS event is set to 300 seconds. When an SOS event is triggered, a video recording lasting 900 seconds will be stored.

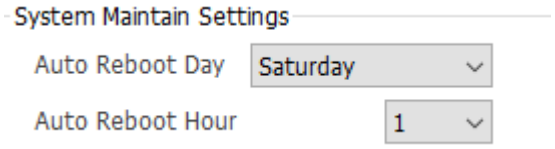
2.41 How to Fast Detect the Network Status?

Run Meitrack Manager, choose **Network** > **Check Network Information**.



2.42 Why Auto Reboot Is Required for the Device?

If the Linux system of the device runs for a long time, the device may lag due to a shortage of memory. In this way, users can set auto reboot to release the memory, thus improving the working efficiency of the device. The default auto reboot time is 1:00 am every Saturday.



If you have any questions, do not hesitate to email us at info@meitrack.com.

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