



SXM 20400SG4W

MDVR

User Manual

This manual applies to SXM 20400SG4W products. Some technical details may vary, so if you find any discrepancies between the actual product and the description in this document, please contact the technical support department.

The content of this manual may be updated periodically without prior notice.

Model description:

Installation environment

To extend the equipment's lifespan, install it in a location with minimal vehicle vibration.

To ensure proper heat dissipation, avoid installing the equipment in poorly ventilated areas (such as the trunk) and maintain a minimum distance of 15 cm from other objects on the same horizontal plane.

The equipment must be installed horizontally. During installation, consider protection from water, humidity, and direct sunlight. Also, keep the vehicle stationary to prevent the equipment from falling or being damaged.

For safe operation, the MDVR, camera, cabling, and accessories must be located in areas inaccessible to passengers and drivers.

Prevention of electric shocks and fires.

The unit operates on an 8V to 36V DC power supply. Verify correct polarity during wiring to avoid short circuits.

Before connecting external devices, ensure the unit is turned off. Do not handle the power supply or the unit with wet hands.

Do not spill liquids on the unit to avoid short circuits or fire hazards. Do not place other devices directly on top of the camera.

Do not disassemble the unit's housing without proper technical training, as there is a risk of damage and electric shock.

Transport and handling

To prevent damage during transport, handle the equipment carefully during loading and moving. Using the original packaging is recommended whenever possible.

It is strictly forbidden to move the equipment or replace components while it is energized, as this may cause damage to the system.

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1. Product Introduction

1.1. Product Description

The (MDVR) is a high-definition recording device specifically designed for vehicular applications. It allows simultaneous recording and playback of up to four channels of analog and AHD audio and video.

The device incorporates a high-performance dual-core ARM DSP processor and an embedded Linux operating system. It also integrates H.265 video compression technology, GPS positioning, and various solutions tailored to the vehicular environment, such as power outage protection, shock absorption, disk thermal control, and a wide-voltage power supply design.

This device can be used in a wide range of applications, including public transportation, logistics, school transportation, law enforcement, security vehicles, and special cargo transport, among others.

Product Features:

Supports H.264 and H.265 video encoding, with 4 channels at 1080P/720P resolutions (PAL/NTSC).

Enables simultaneous recording and playback of up to 4 channels of analog AHD audio and video.

Incorporates 4-pin aviation connectors, providing high reliability and tamper resistance. Compatible with an external GPS antenna.

Supports storage via one SD card, with a maximum capacity of up to 512 GB.

DC power supply with a wide voltage range (8V to 36V), with a regulated 12V output. Compatible with 4G network data transmission.

1.2 Product specifications

Article	Detail	Parameter
Operating system	Operating system	Embedded Linux
System language	System language	English, other (freely customizable)
Video compression format	Video compression format	H.265/H.264
OSD	OSD	Character overlay function, supports overlaying images of time and date, vehicle identification and other information.
Graphical user interface	graphic interface	System parameters can be configured via the external display and remote control.
Video and recording system	Video entry	4-channel video inputs (aviation plug interface), 1.0 Vp-p, 75 Ω
	Video output	1-channel mixed video output (VGA output can be customized), 1.0 Vp-p, 75 Ω
	Preview function	Single channel or multi-screen splicing preview, supporting full screen display function by manual or event triggering.
	Video resolution	The 4-channel machine supports 1080P/720P/D1/CIF optionally, and can support a maximum of 4 1080P channels.
Audio	Recording mode	Default automatic recording
	Audio Input	4 channels, aviation plug
	Audio Output	1 channel, aviation plug
	Format	G711a compression format
Alarm input	Alarm input	4-channel alarm inputs, with alarm link function.
Alarm output	Alarm output	1 channel output
Positioning	Positioning	Supports integrated GPS/BD (GPS/GLONASS) module
Sensor	Sensor	Supports integrated acceleration sensor
Mobile network	4G	Integrated 4G network module
Video storage	SD card	Supports up to a 512GB SD card, loop recording. (Minimum recommended capacity: 64GB; Type A2/U3).
Video playback	File format	H.265/H.264
	Video search	Search for recorded video files by recording time, recording mode, etc.
	Playback	Supports multi-channel synchronous playback, supports fast forward and rewind, supports speeds of 2, 4, 8, 16 and 32 times (optional).
Update	Firmware update	It supports updates via SD card and USB drive, and also supports network updates.
Power Connection	Input connector	Wide and adaptable power voltage input, with protection functions against overload, overvoltage, undervoltage, short circuit and

		reverse connection; supports timed on/off and delayed on/off function.
	Input voltage	DC: 8 ~ 36 V
	Consumption	Maximum power consumption in normal operation: 5 W, in standby: 0.5 W
Work environment	Temperature	-20°C ~ 70°C
Security Management	Humidity	20% ~ 80%
Other	Password access	Management of two levels of user and administrator passwords.
	Size:	153 (width) x 35 (height) x 121 (length) mm

**** If the above parameters are modified, refer to the actual product. ****

1.3. Device Introduction

A. Front panel diagram



B. Introduction to front panel functions

Function	Nomenclature	Detail description
Remote control	IR	Infrared receiver, used to receive remote control signals.
Indicator light	PWR.	Power indicator. Lights up when the power supply is normal.
Indicator light	REC.	Video indicator. Flashes while recording.
Indicator light	NET	Network status indicator. When the network connection is successful, the light will remain on; it will blink when the network is not connected.
Indicator light	GPS	GPS status. The light stays on when the GPS is working correctly and flashes when there is no signal.
Lock		The device turns on automatically when the electronic lock is closed; the device turns off automatically when the electronic lock is open.
USB interface	USB	It is used to back up files and update the firmware version.
SD card slot	SD Card	Open the slot using the electronic lock and insert the SD card. When the electronic lock is engaged, do not force the slot open, as this could damage the device.

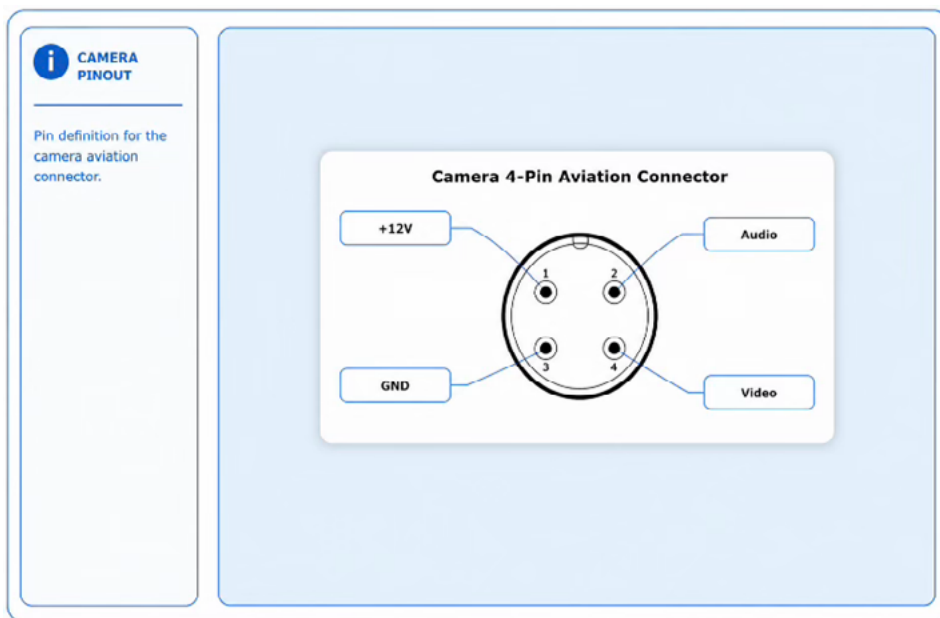
C. Rear panel appearance diagram:



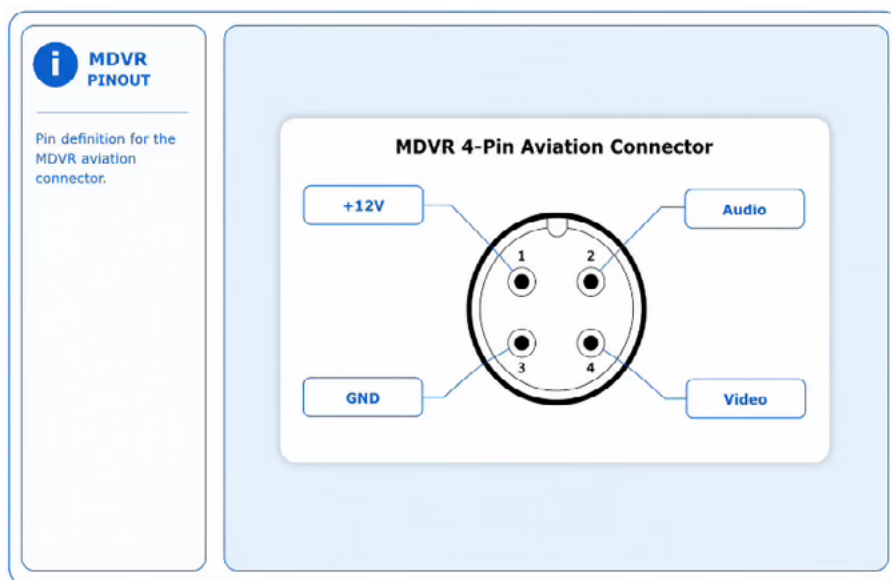
D. Description of each interface on the rear panel:

Function	Nomenclature	Detail description
Audio and video input interface	CH1	First channel audio and video input interface
Audio and video input interface	CH2	Second channel audio and video input interface
Audio and video input interface	CH3	Third-channel audio and video input interface
Audio and video input interface	CH4	4-channel audio and video input interface
Audio and video output interface	CVBS	Standard CVBS audio and video output interface.
Power connector	PWR	Power input interface
I/O Interface	I/O	4 alarm inputs, 1 alarm output
GPS antenna interface	GPS	It supports a dedicated external GPS antenna. It must be placed in a location free of obstructions and interference, and the GPS antenna must be at least 50 cm away.
4G antenna interface	4G	It supports a dedicated external 4G antenna. It must be placed in a location free of obstructions and interference, and the 4G antenna must be located at a distance greater than 50 cm.

E. Definition of the device's aviation interface



F. Definition of the camera's aviation interface



G. Definition of the I/O interface

Pin Diagram	Pin definition	Pin definition	Pin definition
	1	2	3
	GREY	GREY	YELLOW
	Alarm input 1	Alarm input 3	Alarm output
	4	5	6
	GREY	GREY	BLACK
	Alarm input 2	Alarm input 4	GND

H. Introduction to the main buttons of the remote control

(1) LOGIN:

If the MDVR has a password, press the LOGIN button to enter it. Since the system does not have recovery or reset functions, it is recommended that you keep the password safe.

(2) Numeric keys (1, 2, 3, 4):

They allow you to directly select the display channels CH1, CH2, CH3 and CH4.

(3) Screen split key:

Allows you to switch between full-screen and four-screen modes. Press the key to display all four channels simultaneously.

(4) EXIT:

Allows you to return to the previous submenu or exit the settings menu, returning to the monitoring screen.

(5) Navigation keys (up, down, left, right):

They allow you to navigate through the different menu options and select items on the screen.

(6) PLAY:

It allows you to start video playback once the corresponding file has been selected.

(7) INFO:

It allows you to view system information.

(8) OK:

It allows you to confirm the selected option.



2. Steps for installing the equipment

2.1 Step 1: Unlock the cover.

Turn the key 90° clockwise to unlock the electronic lock.

Once the lock is released, slide the cover to the right to access the SD card slot.



2.2 Step 2: Install the SD card

Insert the SD card according to the logo on the panel. After installing the SD card, close the cover.

2.3 Step 3: Close and lock the cover

Once the device is installed, turn the electronic lock 90° counterclockwise to lock it; otherwise, the equipment will not be able to be switched on.

2.4 Step 4: Install the GPS antenna and the 4G antenna.

Install the GPS antenna and the 4G antenna according to the instructions printed on the MDVR.

The GPS antenna must be located on the exterior of the vehicle, pointing upwards (towards the sky), with no obstructions on its surface, especially metal objects, and away from potential sources of interference from other electronic or communication devices.

4G Antenna



SXM 20400SG4W



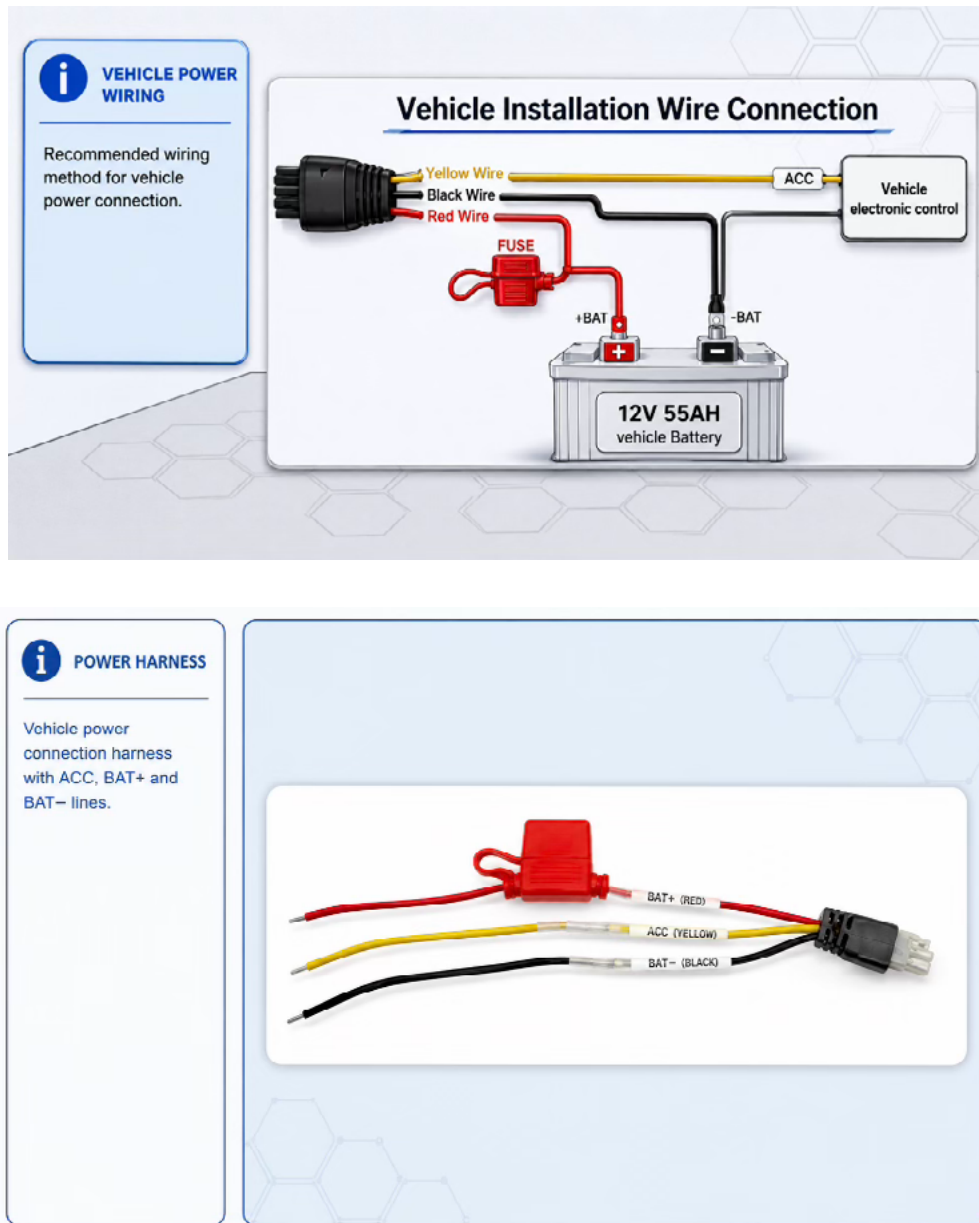
GPS Antenna



2.5 Step 5: Connect the power cord.

A: The MDVR's power-on/power-off mode is set to "On":

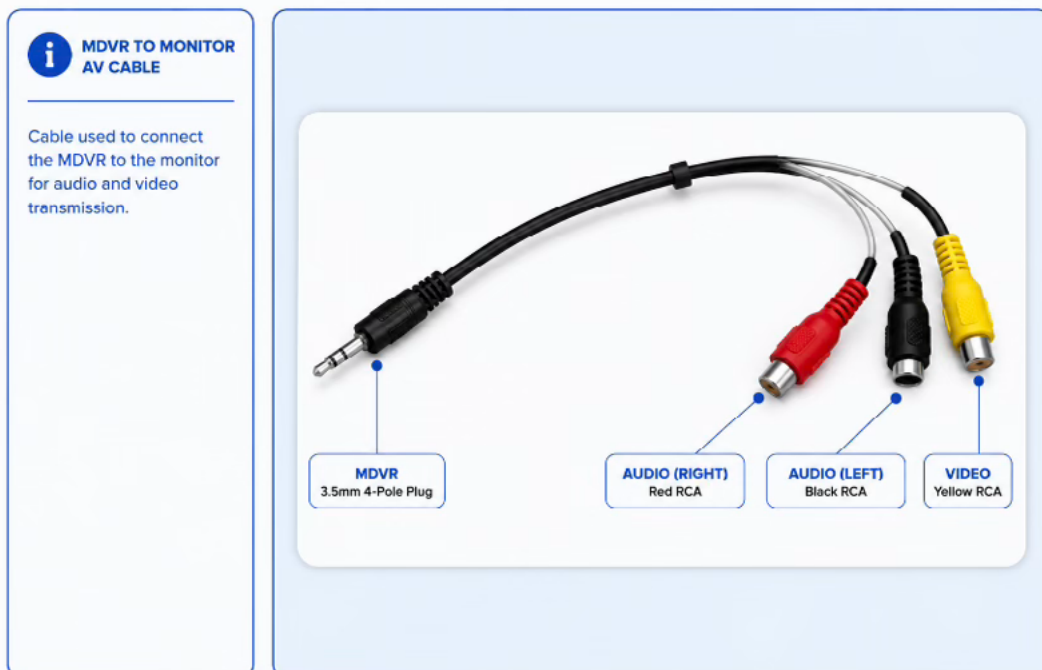
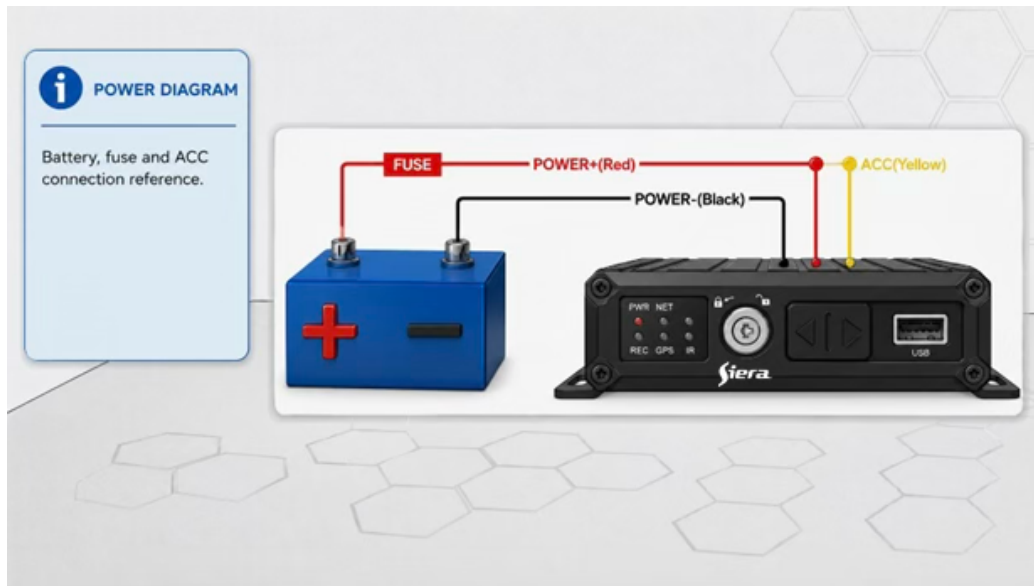
Access the MDVR's "Settings - General - Power On/Off" menu. When the "Power On/Off Mode" is set to "On," connect the white 4-pin connector to the PWR (4-pin) power input interface on the back of the MDVR. The red and black wires go directly to the car battery (red is positive and black is negative). The yellow wire connects to the car's ACC ignition switch (i.e., the switch on the gear shift lever before the car engine starts). When the car is turned on, the device will automatically turn on, and when the car is turned off, it will automatically turn off.



B: When the switching mode is set to “timed” (or product test mode), the power connection method is: Enter MDVR “System Settings - General - Power On/Off”, set “Power On/Off Mode” to “Timer”, or when the device is used in an environment other than a vehicle (such as bus stops, logistics transfer stations, etc.), or when performing product testing, you can join the red and yellow wires together to connect them to the positive pole of the power supply, and the black wire to the negative pole separately.

2.6 Step 6: Connect the display output device.

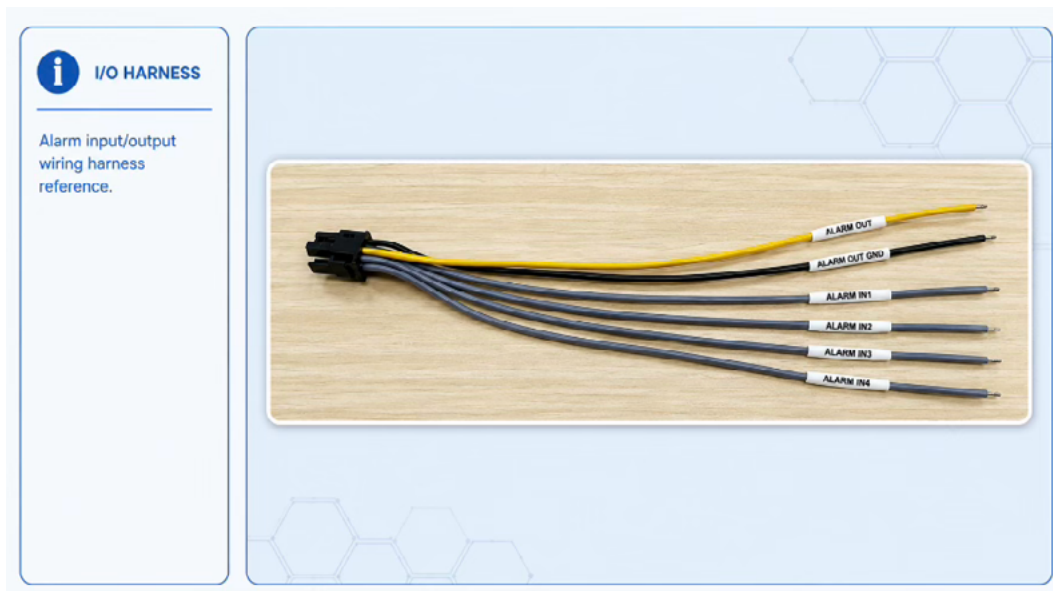
This product supports one AV OUT video output. Customers can choose which display to connect it to based on their needs. Connect one end of the corresponding 4-pin AV output cable to the AV OUT port on the rear panel and connect the other end to the display.



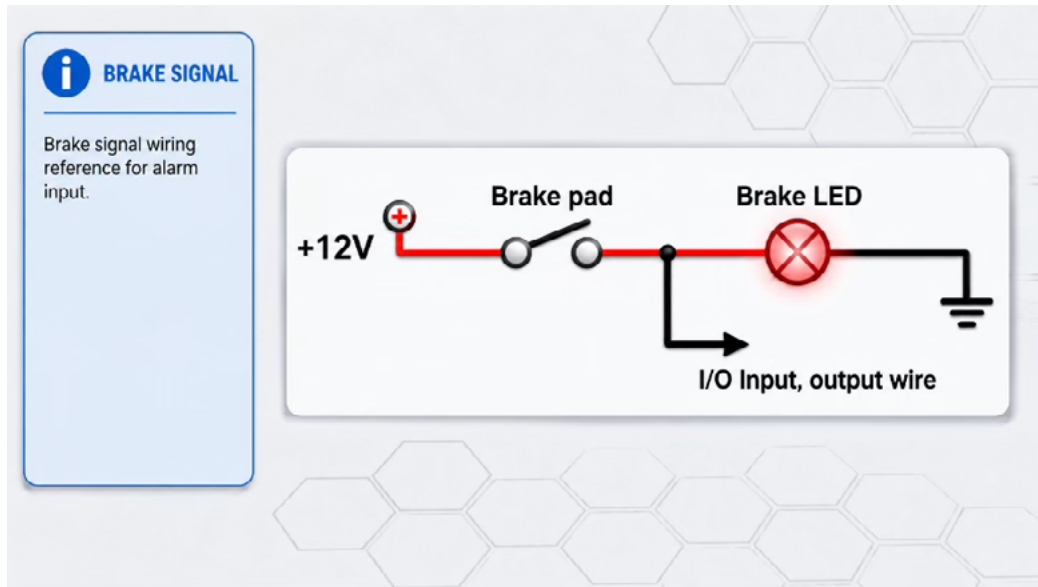


2.7 Step 7: Alarm input and output lines

Connect external sensors to the four corresponding alarm input/output ports on the rear panel of the device. The connection diagram is as follows:



Example: The following block diagram shows that pressing the brake pedal detects a high level; otherwise, it detects a low level. Therefore, braking will trigger the device's alarm.

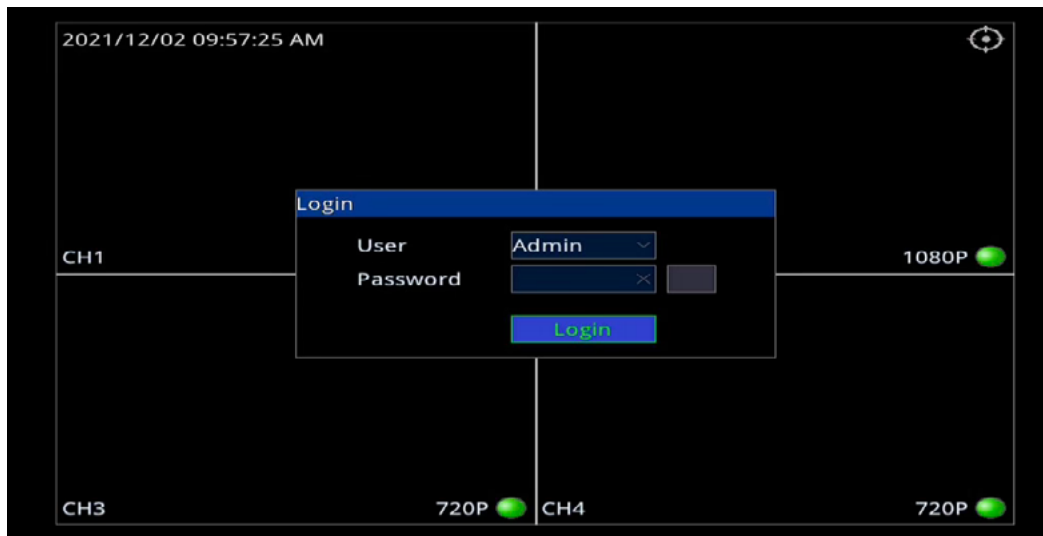


Alarm Output Wiring

This device provides an alarm output and uses a 200 mA output current to power external alarm equipment. If you wish to power a relatively high-power device, you will need to connect an external relay.

2.8 Step 8: Connect the camera

Connect the camera to the aviation port's video input interface.



User: Regular users and administrators. When logged in as a regular user, you will only be able to search and browse, but you will not be able to access the menu to configure settings. To configure settings, log in as an administrator.

Note: The initial password for regular users is 000000 and the initial password for administrators is 888888.

4.2 Main Menu

The main menu includes: system settings, file search, system information, and system maintenance.

Note:

1. The settings in all the following submenus must take effect after confirming [Save], otherwise the settings will not be valid.
2. Check box, If the border is filled with blue, it means that it is selected, and if it is not filled, it means that it is not selected.
3. Access the menu interface (including video query) and the device will stop recording.
4. Press the number keys on the remote control to enter numbers directly.

4.3 System Message

Exit

2022/03/16 13:05:36

App Version	T2022031409	MCU Version	V2021.12.01.App_402xE					
Voltage1(V)	11.6	Voltage2(V)	11.6					
Device ID	0	PlateNo						
Disk1(GB)	SD0: 57.502/59.476	Disk2(GB)	USB0: 0.000/0.000					
Server1	120.079.058.001:6608 Linked							
Server2	000.000.000.000:0 No Link							
G-Sensor(g)	X:-0.01 Y:-0.02 Z:-0.81							
GPS State	113.855925E , 22.649325N , 0km/h , 0° , 7* , Normal							
4G State	Connected , Hybrid , APN:3gnet , Signal:-61 , IP:10.10.209.53							
WIFI State	No Exist							
IO Input	1	2	3	4	5	6	7	8
IO(H/L)	L	L	L	L	-	-	-	-

Press the INFO key to access the system information self-check page.

5. System configuration

12:54:49
03/16/2022

Setup

FileSearch

Information

Maintenance

General

Vehicle

Preview

Record

Alarm

Network

Peripheral

Device Name

MDVR

Device ID

0

Default

Save

System settings include: General, Vehicle, Preview, Record, Alarm, Network, and Peripheral.

General settings

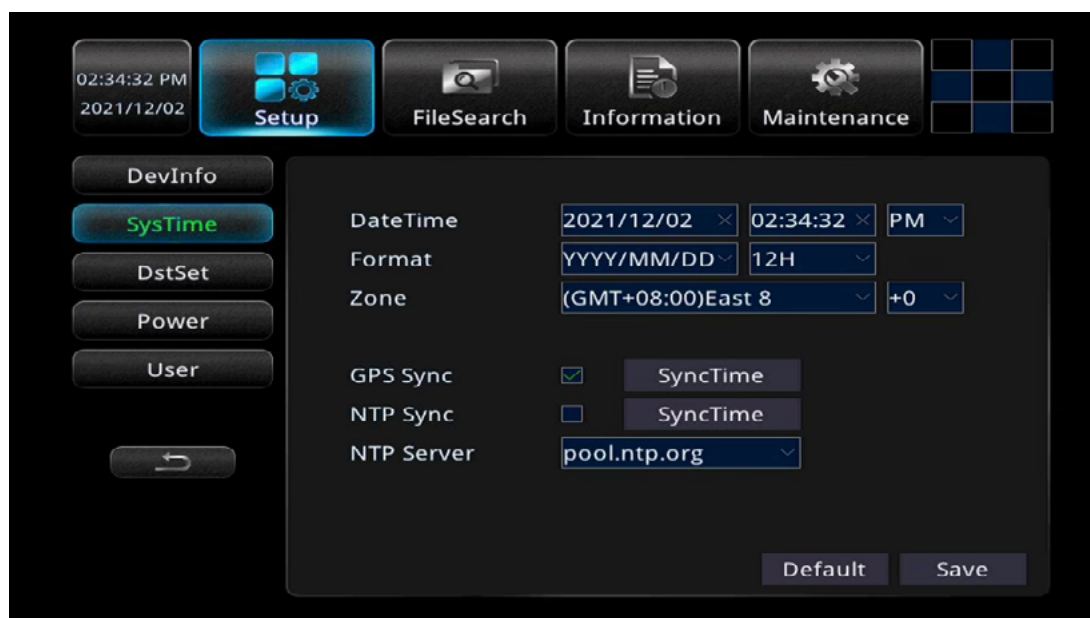
5.1 Device Information Configuration



Device Name: Press the numbers to enter. Default is MDVR.

Device ID: Press the numbers to enter. The default is 0.

5.2 System Time Setting



DateTime: Press the OK key to begin entering the date and time.

Format: Date format. Year/Month/Day, Day/Month/Year, Month/Day/Year.

Press the OK key to select.

Zone: Press the OK key to select the time zone; the system defaults to GMT+08.

GPS Sync: Press the OK key to manually synchronize the time.

5.3 Summer settings



Enable: Disable "Enable" and the time will be displayed normally; if "Enable" is enabled, the system time will be offset by 1 hour. Disabled by default.

Offset: The time is set to 1 hour by default.

Mode: Date/Week, Default: Date.

STime: The default value is January 1 at 00:00:00.

End Time: The default value is January 1 at 00:00:00.

Note: During Daylight Saving Time, the system time is set back one hour.

5.4 Device power on/off settings



Power Mode: Configure the power mode, ACC mode, and timer mode.

Delay Off: time in minutes that the MDVR remains on after the vehicle is turned off.

ACC Mode: Turns the MDVR on or off according to the car key signal.

Delayed shutdown (min): Disconnecting the ACC will not turn off the system directly but will do so automatically after the delayed shutdown time. Press the numeric keys to enter the delayed shutdown time.

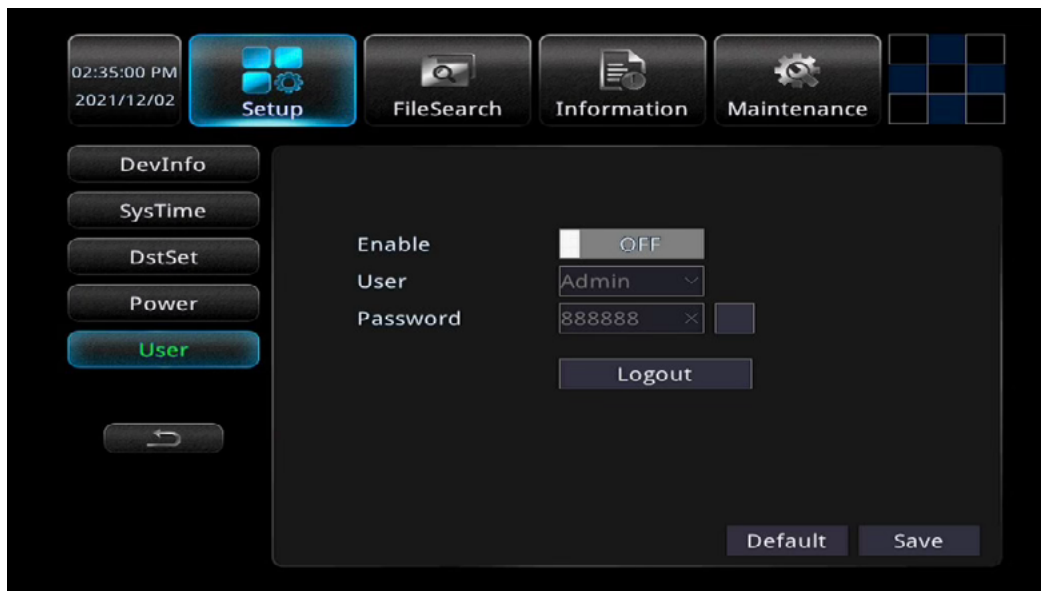
Timer: To set the power-on time in "Timer Mode", press the number keys to enter..

PWRProtect: Press the [OK] key to activate battery protection. When activated, press the numeric keys to enter the voltage protection parameters. If the actual voltage falls below the set parameters, the message "off..." will appear on the interface. Wait for the message to appear in the pop-up window.

TimeRestart: Press the [OK] key to activate the scheduled restart. Once activated, press the numeric key to enter the restart time. When the scheduled time is reached, the restart command will be executed.

Notice: The programmed on and off times are independent of the size, and the full time period is one cycle.

5.5 User settings



Enable: When disabled, press the [LOGIN] key on the preview screen to directly access the settings page; when enabled, pressing the [LOGIN] key on the preview screen will require you to enter your login password.

User: The ordinary user account is Guest and the administrator account is Administrator.

Password: The initial password for normal users is 000000 and the initial password for administrators is 888888.

Logout: If "Activate", the next login will need to enter the password; if "Deactivate", the next login will be able to access the settings page directly.

6. Vehicle information settings

6.1 Vehicle information



18:07:02
03/15/2022

Setup FileSearch Information Maintenance

VehicleInfo Position

PlateNo

DriverName

DriverLicense No Login

PhoneNum

Company

InstallDate 2021/12/25

Default Save

PlateNO: Press the OK key to select the plate number prefix and enter the numeric keys.

DriverName: Press the OK key to enter the system keyboard input mode.

Driver License: Press the [OK] key. You can use the numeric keypad to enter or use the card machine to log in and auto-complete.

PhoneNum: Press the OK key to enter system keyboard input mode.

Company: Press the OK key to access the system keyboard input mode.

InstallDate: Press the OK key, you can use the numeric keypad to enter the corresponding date.

6.2 Vehicle positioning



GPS Interval: Press the [OK] key to begin entering the value using the numeric keys.

7. Preview settings

7.1 Screen settings



CVBS Output: Select PAL/NTSC. Default: PAL.

VGA output: Select the resolution. The default is 1920*1080.

Split: Video preview display mode. The default value is 2x2.

Language: Language selection. Default language: English.

Timeout: If you do not perform any action after the set time, you will automatically exit to the video preview screen. By default, 30 seconds is selected.

7.2 Margin adjustment



Left: Adjust the left margin.

Right: Adjust the right margin.

Top: Adjust the top margin.

Bottom: Adjust the bottom margin.

7.3 OSD Information Configuration



DateTime: Displays the date and time on the video preview screen.

Chn: Displays the channel on the video preview screen.

Resolution: Displays the channel resolution on the video preview screen.

StatusIcon: Displays the GPS status on the video preview screen.

Rec State: Displays the recording logo on the video preview screen.

Mirror: Displays the channel's investment branding on the video preview screen.

GPS: Displays GPS positioning information on the video preview page.

PlateNo: Displays the license plate number information on the video preview page.

DriverInfo: Displays the driver's name and driver's license number on the video preview page.

8. Recording settings

8.1 Configuring recording attributes



Encode Format: You can select H264/H265 format. The default format is H265.

Stream Type: The default value is the main stream.

File Format: The default format is ".asf".

File Duration (min): The shortest video file is 5 minutes long and the longest is 99 minutes. The default value is 30 minutes.

PreRec Duration (s): The minimum prerecording duration is 0 seconds and the maximum is 10 seconds. The default value is 10 seconds.

Record Password: AES256 encryption, disabled by default. If the video is encrypted, you will need to enter the password to play it through the device and MDVPlayer. With encrypted video, playback is not supported by other players.

Save Alm Rec (day): 0~99 days, the default is 99 days. Recordings will be saved for the specified number of days. When this period is exceeded, pending alarm recordings will be automatically deleted.

Record Mode: When automatic mode is selected, all videos will be recorded; when alarm recording mode is selected, only alarms will be recorded.

8.2 Main flow configuration

Channel enablement: Press the OK key to check/cancel.

Resolution: Sets the video resolution; the default is 1080p. The encoding resolution cannot be higher than the corresponding camera's resolution. For example, a 720p camera cannot record video in 1080p, but a 1080p camera can record video in 720p.

FrameRate: Sets the video's frame rate. The default value is 15.

Quality: The higher the image quality level, the sharper the recorded video; the lower the image quality level, the blurrier the recorded video. The default quality is medium.



8.3 Secondary streaming setup



Chn: Press the OK key to check/cancel.

Answer: Press the OK key to select CIF/D1; the default value is D1.

FrmRate: The video encoding frame rate; the default value is 15.

Quality: The higher the image quality level, the sharper the recorded video will be. The default quality is medium.

8.4 Camera properties settings



Channel activation: Press the OK key to check/cancel. When activation is enabled, the image is displayed normally on the video preview screen; when activation is disabled, the video preview screen is black.

Mode: Automatic mode, which automatically identifies the camera's properties (type, resolution, format); Manual mode, where the user manually configures the camera's parameters (if the configured parameters differ from the camera's actual properties, the corresponding channel will not be displayed correctly). The default mode is automatic.

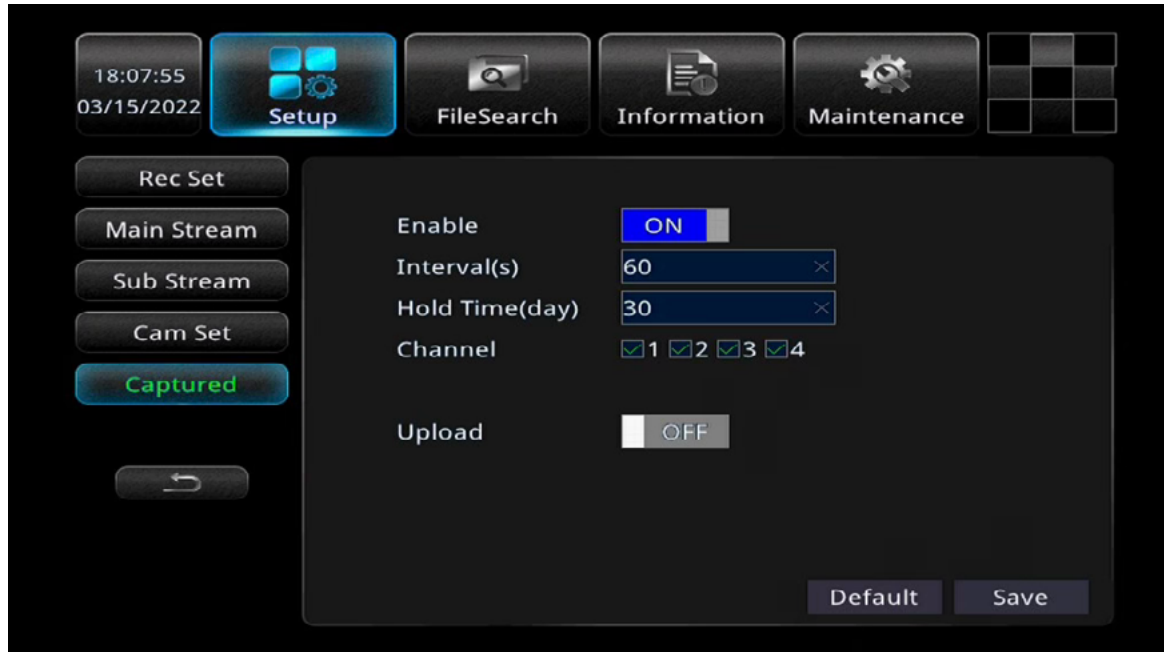
Type: AHD/TVI/CVI optional. Default is AHD.

Res: optional CIF/D1/960H/720P/1080N/1080P. The default value is 1080P.

FrmRate: The default frame rate for the PAL system is 25; the default frame rate for the NTSC system is 30.

Direction: You can select "Normal/Mirror/Flip/Mirror Flip". The default option is normal.

8.5 Scheduled snapshot



Enable: Activates the scheduled snapshots switch (disabled by default). When enabled, scheduled snapshots will be initiated according to the established rules.

Interval(s): The unit is second, and the snapshot will be taken at the set snapshot interval.

Hold Time (day): The unit is days, and it will be saved according to the configured number of days. When the configured number of days is exceeded, it will be automatically deleted.

Channel: All four channels are selected by default. The selected channel will be used as the target for capturing the image.

Upload: When enabled, this feature will periodically upload captured photos to the platform. Disabled by default.

9. Alarm settings

9.1 Input/Output Configuration



Chn	Trigger Leve	Type	Linkage Set
☐ 1	Low	Default	
☐ 2	Low	Default	
☐ 3	Low	Default	
☐ 4	Low	Default	

Enable switch: Press the [OK] key to enable/disable the I/O alarm.

Trigger Level: Press the OK key to select high/low (+12V/GND). The default value is high (+12V).

Linkage Set: Configuration I/O alarms require linkage events to change state.

9.2 Speed settings



Name	Thr(km/h)	Linkage Set
☐ Speed Max	120	
☐ Speed Min	120	
☐ Parking	0	

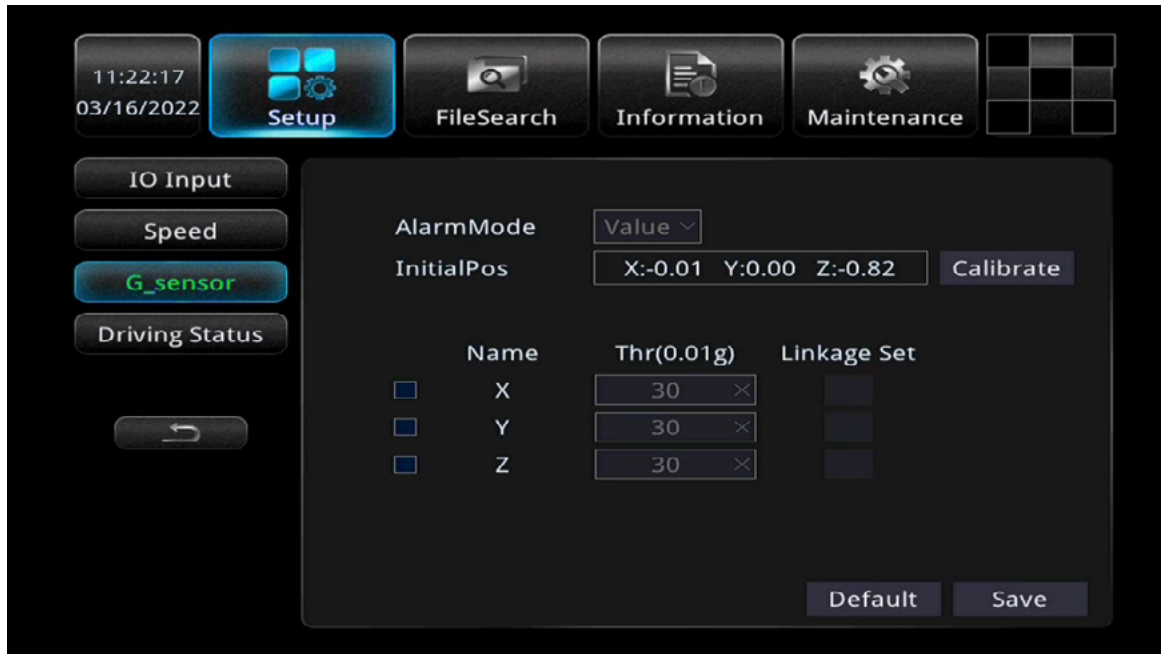
Speed Max: If the vehicle's speed exceeds the set speed, an overspeed alarm will be activated.

Speed Min: If the vehicle speed is lower than the set speed, a low speed alarm will be activated.

Parking: Parking for longer than the allowed time will trigger the parking time expired alarm.

Binding set: Configure the speed alarm binding event.

9.3 G-sensor configuration



11:22:17
03/16/2022

Setup

FileSearch

Information

Maintenance

IO Input

Speed

G_sensor

Driving Status

AlarmMode: Value

InitialPos: X:-0.01 Y:0.00 Z:-0.82

Calibrate

	Name	Thr(0.01g)	Linkage Set
☐	X	30	☐
☐	Y	30	☐
☐	Z	30	☐

Default Save

AlarmMode: The default mode is value mode.

InitialPos: Press the OK key to calibrate the current initial position; the current initial position is the stable position during charging.

X/Y/Z: Disabled by default. When enabled, the corresponding threshold value can be entered. If the value of an address exceeds the threshold, an alarm will be generated.

9.4 Driving status



This function is used to warn the driver of the breaks they should take to avoid fatigue and prevent accidents caused by it.

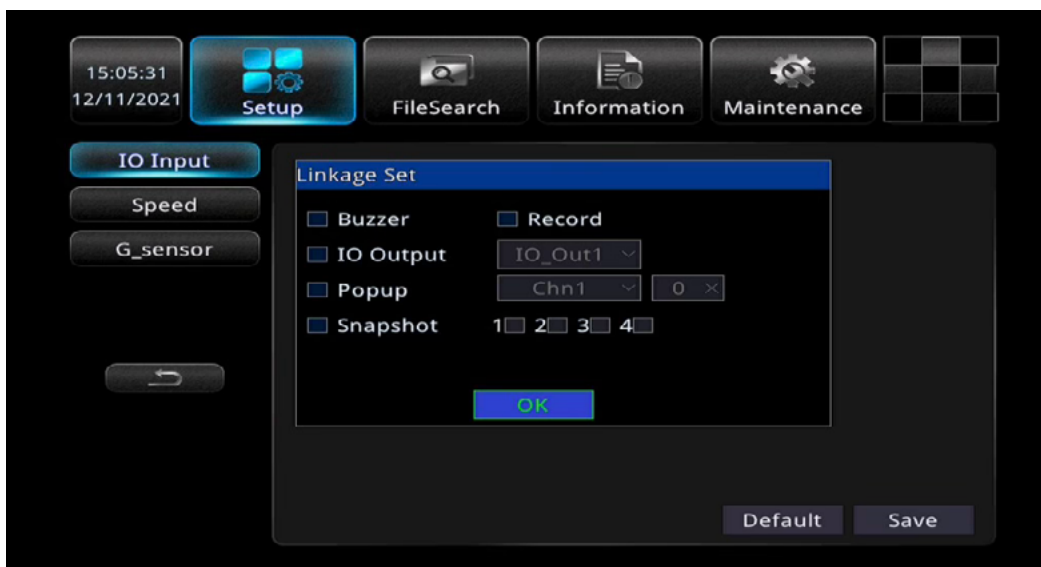
Rest Duration (min): The unit is minutes, which is used to monitor the driver's rest time.

Early Tired: disabled by default, the unit is minutes, when driving time reaches the set threshold, a fatigue warning will be generated.

Tired: disabled by default, the unit is minutes, when the driving time reaches the set threshold, a fatigue alarm will be generated.

Over Time: This feature is disabled by default and the unit is minutes. When driving time exceeds the set threshold, a timeout alarm will be triggered.

9.5 Trigger link



Buzzer: turn the buzzer on/off (open/close).

Record: Alarm recording with or without link (opening/closing).

IO Output: I/O output with/without link (input/output).

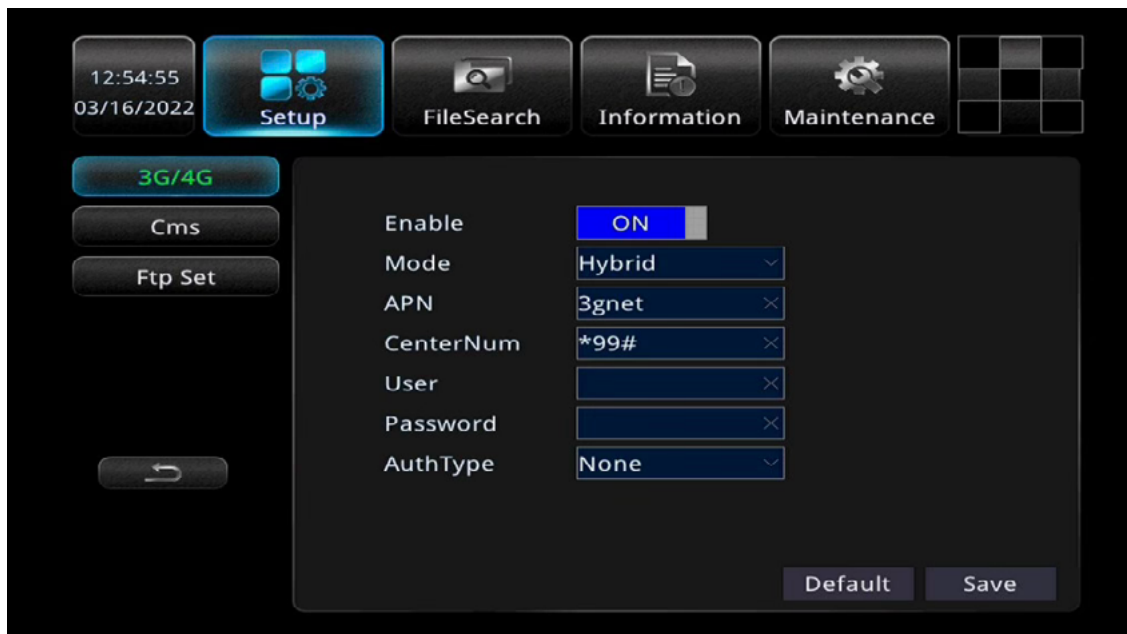
Popup: Full-screen display of a single channel, with or without linking. For example, if the vehicle reverses, turns left, or turns right, the corresponding channel is displayed in full screen.

Channel appearance delay: duration of full-screen display of a single channel (unit: seconds).

Snapshot: Linked/unlinked video capture (on/off).

10. Network configuration

10.1 3G/4G configuration



Enable: Activate/deactivate the 4G network.

Mode: Hybrid/2G/3G_WCDMA/3G_EVDO/3G_TD_SCDMA/4G_LTE. The hybrid network can automatically select the network mode according to the connected SIM card.

APN: Consult your SIM card operator for APN information, and then enter it.

Center Number: Consult your SIM card carrier for the center number. The default center number is *99# (it's the most commonly used).

User: Check with your SIM card operator to obtain it.

Password: Request it from the SIM card operator.

AuthType: Consult your SIM card operator for this. Default: None.

10.2 SXM platform configuration



Field	Value
Protocol	SXM
VisitType	IP
Server1	120.079.058.058
Port1	6608
Protocol	SXM
VisitType	IP
Server2	000.000.000.000
Port2	0

Protocol: "None", "SXM", "JTT808/1078". SXM is the default.

VisitType: IP address or domain name (optional).

Server1: Enter the server's IP address.

Port1: Enter the server's port number.

10.3 FTP settings



Field	Value
Enable	ON
Server1	120.079.058.058 2121
User	admin
Password	SXM Server

Enable: Switch to enable the FTP function.

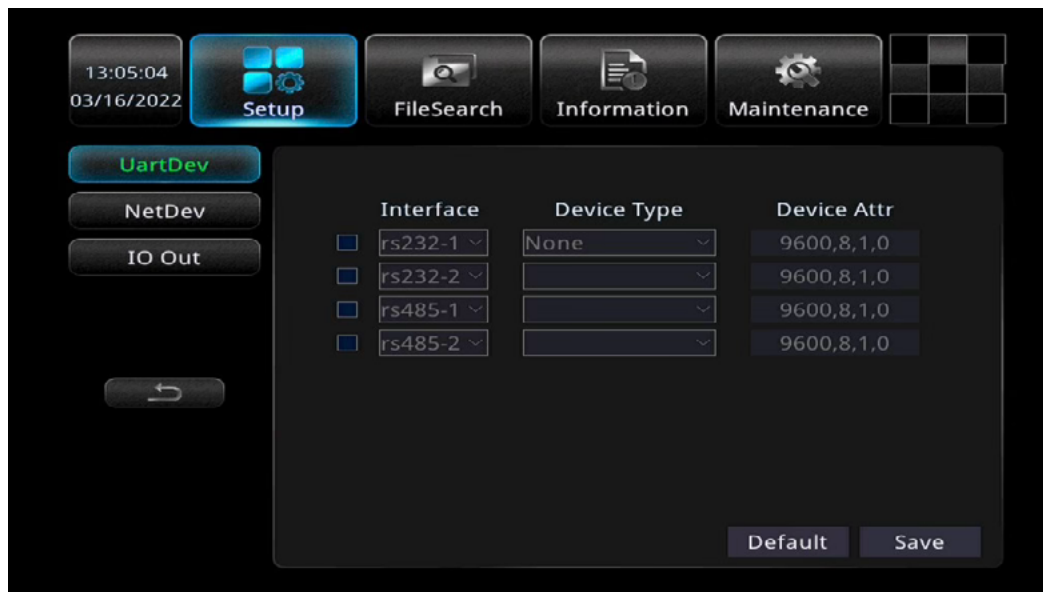
Server1: IP address and port number of the FTP server. The default IP address is 190.64.80.99 and the port number is 2121.

User: FTP username. The default username is admin.

Password: FTP password. The default password is SXM Server.

11. Peripheral configuration

11.1 Serial device configuration



	Interface	Device Type	Device Attr
☐	rs232-1	None	9600,8,1,0
☐	rs232-2		9600,8,1,0
☐	rs485-1		9600,8,1,0
☐	rs485-2		9600,8,1,0

Enable: Serial port enable switch.

Interface: Serial port type selection, optionally rs232-1/ttyUSB1.

Device Type: Peripheral type selection, optionally /rfid-R215/pcT00I-VN/fuel sensor/transmission transparent.

Device Attr: Peripheral serial port parameter configuration.

11.2 I/O output configuration



IO_Out1	AlarmLinkage
IO_Out2	

I/O Output: Optional alarm/control switch link, default alarm link. When the alarm link is selected, the control switch alarm will not affect the I/O output and only applies to all alarm links.

12. File Search



Position: Disk selection (SD0/SD1). Default is SD0.

STime: Press the numeric keys to enter the time; the default value is 00:00:00.

End Time: Press the numeric keys to enter the time; the default time is 23:59:59.

Type: AllRec /Normal Record /Alarm Record /Record /Image. The system selects All Record by default.

Rec Chn: All channels/channel 1/channel 2/channel 3/channel 4. The system is set to All channels by default.

RecSearch: Move the cursor to the "Video Search" button and press the [OK] key to access the search interface.

12.1 Video search

Use the arrow keys to select the video you want to play and press the [PLAY] key to play it.

RecExport: Press the [Enter] key to select the video you want to export, and then press the [RecExport] key to export the video file to a USB drive.

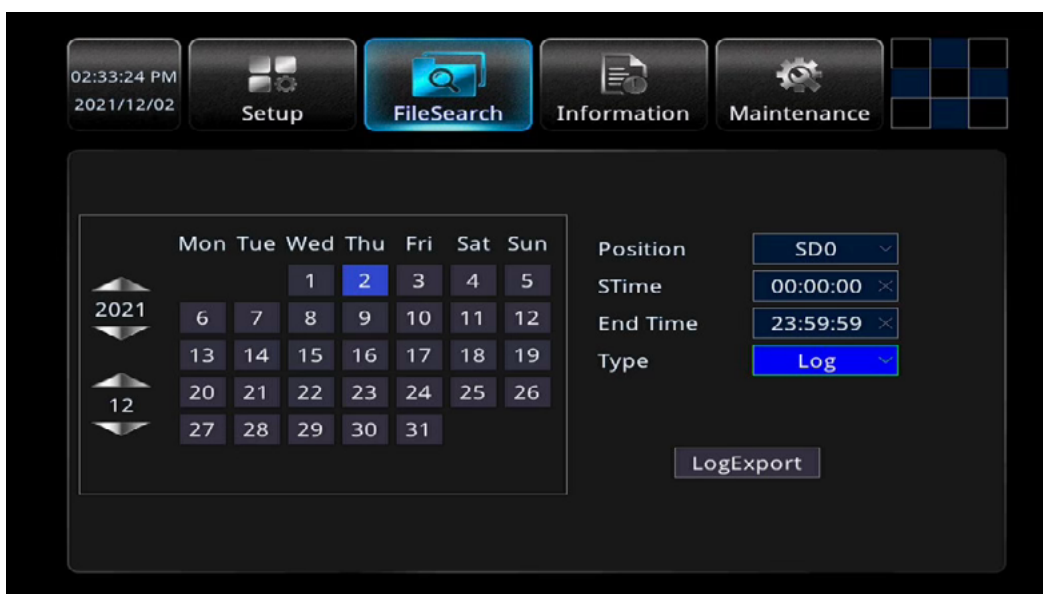
Use the arrow keys to select [First], [Prev], [Next], and [Last], and press the [OK] key to display the page change information.



Chn	STime	Duration	Size(MB)	Res	Type	Format
1	09:33:48	00:00:00	0.000	720P	Normal	H264
1	09:34:54	00:05:00	8.230	720P	Normal	H264
2	09:34:54	00:05:00	12.509	1080P	Normal	H264
3	09:34:54	00:05:00	4.702	960H	Normal	H264
4	09:34:54	00:05:00	12.482	1080P	Normal	H264
1	09:39:54	00:05:03	8.335	720P	Normal	H264
2	09:39:54	00:05:03	12.607	1080P	Normal	H264
3	09:39:54	00:05:04	4.733	960H	Normal	H264
4	09:39:54	00:05:04	12.617	1080P	Normal	H264
1	09:44:54	00:05:03	8.348	720P	Normal	H264

1 / 10 First Prev Next Last RecExport

12.2 Exporting records



02:33:24 PM
2021/12/02

Setup FileSearch Information Maintenance

Mon Tue Wed Thu Fri Sat Sun

2021

12

Position: SD0

STime: 00:00:00

End Time: 23:59:59

Type: Log

LogExport

The log records events such as “power on/off, GPS time calibration, alarm” (including “Event Date, Event Time, Event Name”).

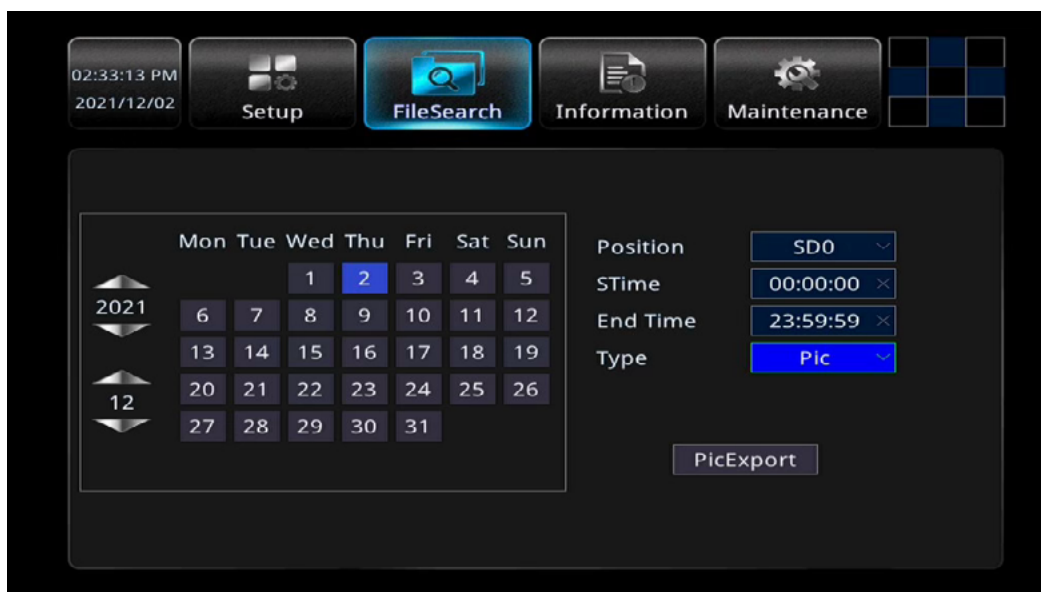
To search for a date: Press the arrow keys to select the date; by default, the current day is displayed.

STime: Press the number keys to enter the time; The default value is 00:00:00.

End Time: Press the number keys to enter the time; The default time is 23:59:59.

LogExport: Press ☐Export☐ to start exporting logs.

12.3 Image Export



Search Date: Press the arrow keys to select the date; the default date is today.

STime: Press the number keys to enter the time; the default is 00:00.

End Time: Press the number keys to enter the time; the default is 23:59:59.

Pic Export: Press the [OK] key to begin exporting images. The interface will display the message: "File exported successfully!". The export is complete.

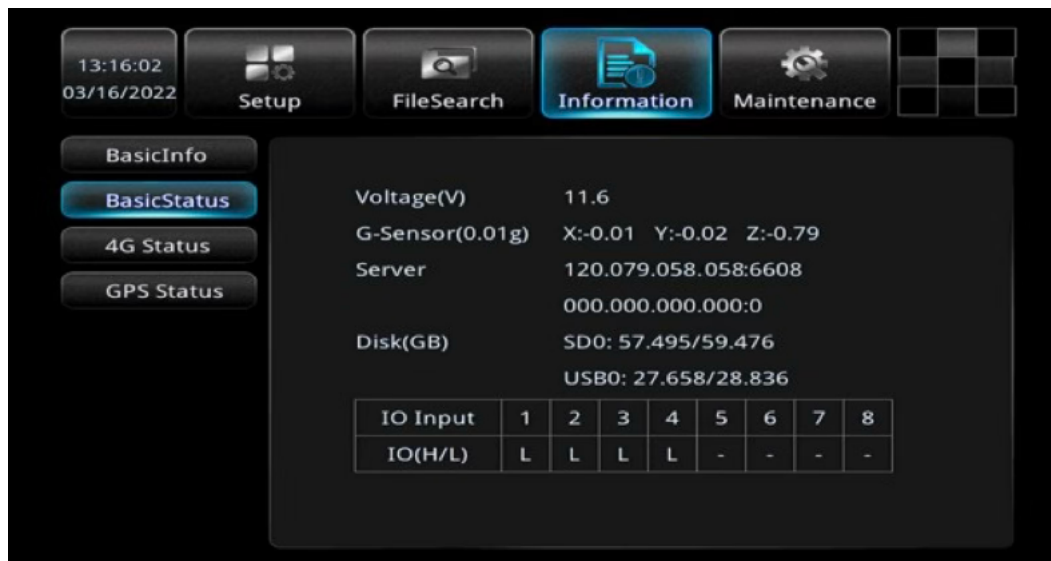
13. System information display

13.1 Basic information



Device ID: Displays the device ID configured in the device information.
Plate No.: Displays the license plate number configured in the vehicle information.
App Version: Displays the current firmware version number of the MDVR.
MCU Version: Displays the current MCU version number of the MDVR.
Hardware Version: Displays the current hardware version number of the MDVR.

13.2 Basic information about the state



Voltage: Displays the MDVR's input voltage.
G-sensor: Displays the current inertial sensor value.
Server: Displays the IP address and port number of the current local server.
Disk: Displays the capacity of the MDVR's SD card and external USB device.
IO(H/L): Displays the current I/O (Inputs/Outputs) status.

13.3 4G State



State: Indicates whether the dialing was successful.

Mode: Shows the current network mode (2G/3G/4G).

SIM State: "Exists" is requested for normal access; "Not Exists" is displayed when the SIM card is not connected or recognized.

Signal: Displays the network signal value after successful dialing. A signal greater than -65 is very good; between -75 and -65 is good; a signal less than -75 is bad.

IP Addr: Displays the IP address after a successful connection.

IMSI: SIM card unique identification code.

IMEI: The unique identification code of the 4G module.

Operator: Shows the operator of the SIM card.

13.4 GPS Status



GPS antenna not connected: The antenna status shows that it is disconnected (Antenna State = Disconnected).

GPS antenna connected: The antenna status is normal (Antenna State = Normal).

GPS antenna connected but not positioned: The GPS status display is invalid, and the antenna status display is normal (State = Disconnected and Antenna State = Normal).

GPS antenna connected and positioned: The GPS status is valid, and the antenna status is normal. It displays the number of satellites, vehicle speed, latitude, and longitude (State = Normal and Antenna State = Normal).

14. System Maintenance

14.1 Disk maintenance



Format: The SD card comes pre-configured with the exFAT file system. If the SD card is not formatted as exFAT, MDVR can format it manually, and once the formatting [Format] is complete, recording can begin normally.

14.2 Parameter maintenance



Import: Imports the configuration parameters from the external USB device to the current device.

Export: Exports all configuration parameters from the current device to the external USB device.

Default: This operation will erase all device settings; use with caution.

Note: When installing a large number of devices, and if each requires the same configuration, use the import and export configuration function. That is, after configuring one device, export the configuration file and then import it to the other devices. This way, all devices will have the same configuration.

14.3 Update maintenance



MDVRVer: Displays the MDVR firmware version number. Press the [Upgrade] key to start the update.

MCUVer: Displays the MDVR MCU version number. Press the [Upgrade] key to start the update.

Note: You must create a folder named mdvr_upgrade on the SD card (or an external USB drive), place the MDVR firmware or MCU firmware in this folder, and then click the [Upgrade] button to update.

14.4 Device Restart



Restart: Press [OK] to restart the device.

14.5 Developer Tools



This function is for developers to perform tests with the equipment stationary and to be able to increase speed without the MDVR needing to be moved.

GpsSimulatedSpd: Press the OK key to activate the switch.

MaxSpeed: The upper speed limit.

GpsSpdStep: Analog value of the speed step.

CurSpeed: The initial value of the simulated vehicle speed.

+: Means the vehicle speed increases (in test mode).

-: Means the vehicle speed decreases (in test mode).

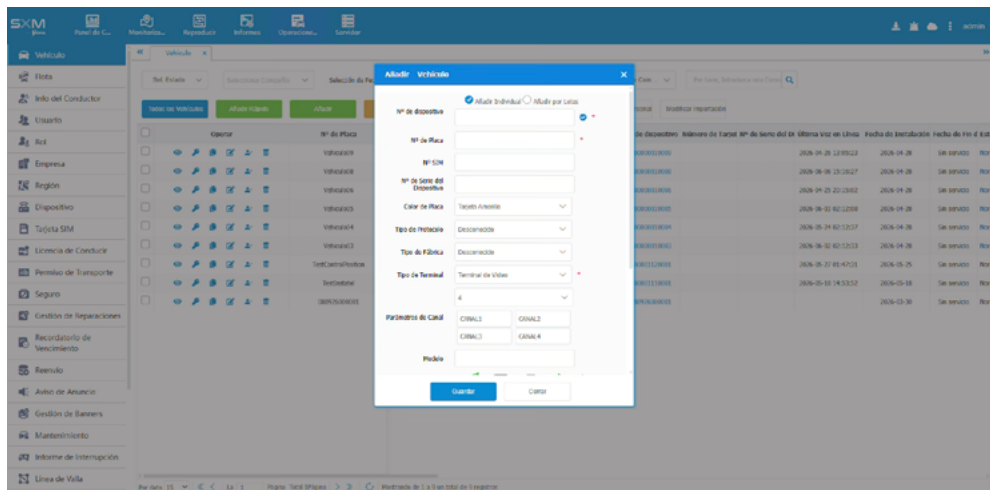
GPS ColdStart: Press the [OK] key to clear the GPS positioning information and reset the positioning each time the vehicle is started.

Note: This menu can only be operated by developers, and the device must be equipped with a GPS antenna and a GPS module for this function to work.

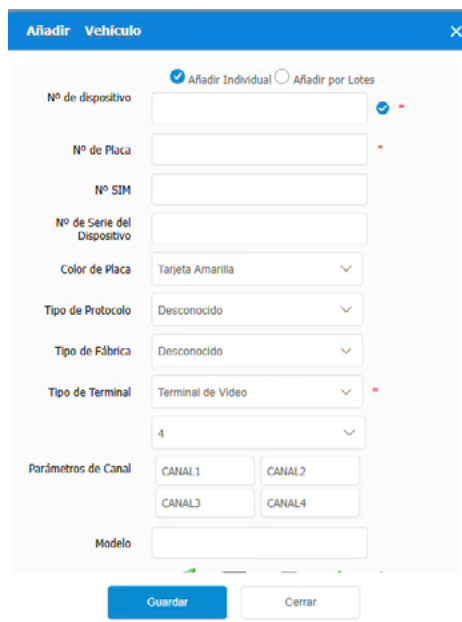
15. Add device to SXM platform

Log in to SXM Software with your super administrator account.

Navigate to: "Information Management" - "Operations Management" - "Vehicle Information" - "Quickly Add Car" to access the vehicle registration page (as shown in Figure 1).



Complete the vehicle information (see Figure 2):



Device Number: For protocol 808, a 12-digit number must be entered. Vehicle License Plate Number: This will be automatically populated when the device number is entered.

Protocol Type:

Select "Ministerial Standard 1078 (video)" for protocol 808.

Select "Unknown" for SXM Software's proprietary protocol.

Terminal Type: "Location Terminal": positioning only. "Video Terminal": positioning and video.

Select 4 channels according to the equipment configuration.

Vehicle Icon: Select the corresponding icon to easily identify the device. Company/Fleet: Select the corresponding company or fleet.

16. Appendix: Common situations and solutions of the SXM 20400SG4W

Q: What should I do when the product has a problem I can't resolve on my own?

A: Note the product model and software version number, and send a detailed description of the problem to our technical support engineer for analysis. The more detailed the description, the easier it will be for us to analyze and process the information.

Q: What should I do when there is no video output from the integrated host device?

A: 1. Check the host's power status. If only a red indicator is lit, it means the host is in standby mode and has not powered on. Also, verify that the red and yellow power supply wires are properly connected. If only one power wire is connected, the host cannot be powered on.

2. Check if the screen is on and if the screen video is set to AV mode.

3. Check the connection status of the host and display video output cable.

4. Check the lock status of the host's electronic lock to ensure that it can be deactivated normally.

Q: What should I do when the host's video input interface and the camera's input interface are different?

A: The vehicle's main device uses a 4-pin interface, while the camera uses a BNC interface or an aviation connector. If they are incompatible, use an adapter connector or a standard connection cable compatible with the main device's connection sequence.

Q: What should I do if the device is powered on and the SD card is installed, but it is not recording?

A: 1. Check if the SD card was formatted after installation. Unformatted SD cards cannot be used. Access the main menu, select "System Maintenance," and format the newly installed SD card.

2. Check if the installed SD card is formatted as exFAT. SD cards that are not formatted as exFAT will not record video.

3. The channel recording function will not record if the channel recording function is not enabled.

4. Check if the SD card is properly connected and if the REC indicator on the front panel is lit.

Q: Has the recording file been lost, or is there no recording file at all for a certain period of time?

Answer: 1. Determine the time period of video loss by analyzing the first video file before and after the video file was lost.

2. Confirm if the host has not been powered on during that time period, for example, if the host has not configured a shutdown delay, such as stopping during a failure, loading and unloading, etc.

GPS-related problems

Q: The GPS module exists but there is no coordinate information?

Answer: 1. Check if the GPS module is present; if it is not present, check if the GPS module is installed or if it is making good contact.

2. Check that the GPS antenna is making good contact and is not disconnected. It is recommended to place it in a location with good signal. Note that some car window films can block the GPS signal.

3. If you perform the test indoors, the GPS antenna will be inside the room and the signal will be blocked. It is recommended to place the GPS antenna outdoors.

4. Driving in forests, tunnels, near tall buildings, under viaducts, or in surrounding environments such as thunderstorms can cause problems with the GPS.

No signal is received or an incorrect signal is received.

5. Use a multimeter to check if the GPS wiring port has a 3V voltage output. If there is no 3V output, check if the GPS module is damaged and if the IPX power link is open.

Q: Is the GPS location shown on the map off-route?

A: If the GPS module is correctly positioned, the signal is valid. There are various reasons for deviation, such as government restrictions, error tolerance, GPS signal interruption, etc. The actual satellite map may be biased for security reasons. Generally, the map can be corrected using GPS correction.



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