

# 4G Smart Video Terminal

## Product User Manual

**Product Name: 4G Dash Cam Product**

**Model: T98 1+3 AI Dashcam**



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# 1. Product Overview

This product integrates positioning, 4G communication, video storage and transmission, and is a dedicated driving recorder for online car-hailing. It supports one channel of 1080P and three channels of 720P video recording storage, and it equipped with ADAS and DMS active security algorithms, which can realize remote real-time preview video and remote Historical video playback. Support seamless integration with customer's platforms. It is widely used in taxis, online car-hailing, light truck and other nationally regulated industries.

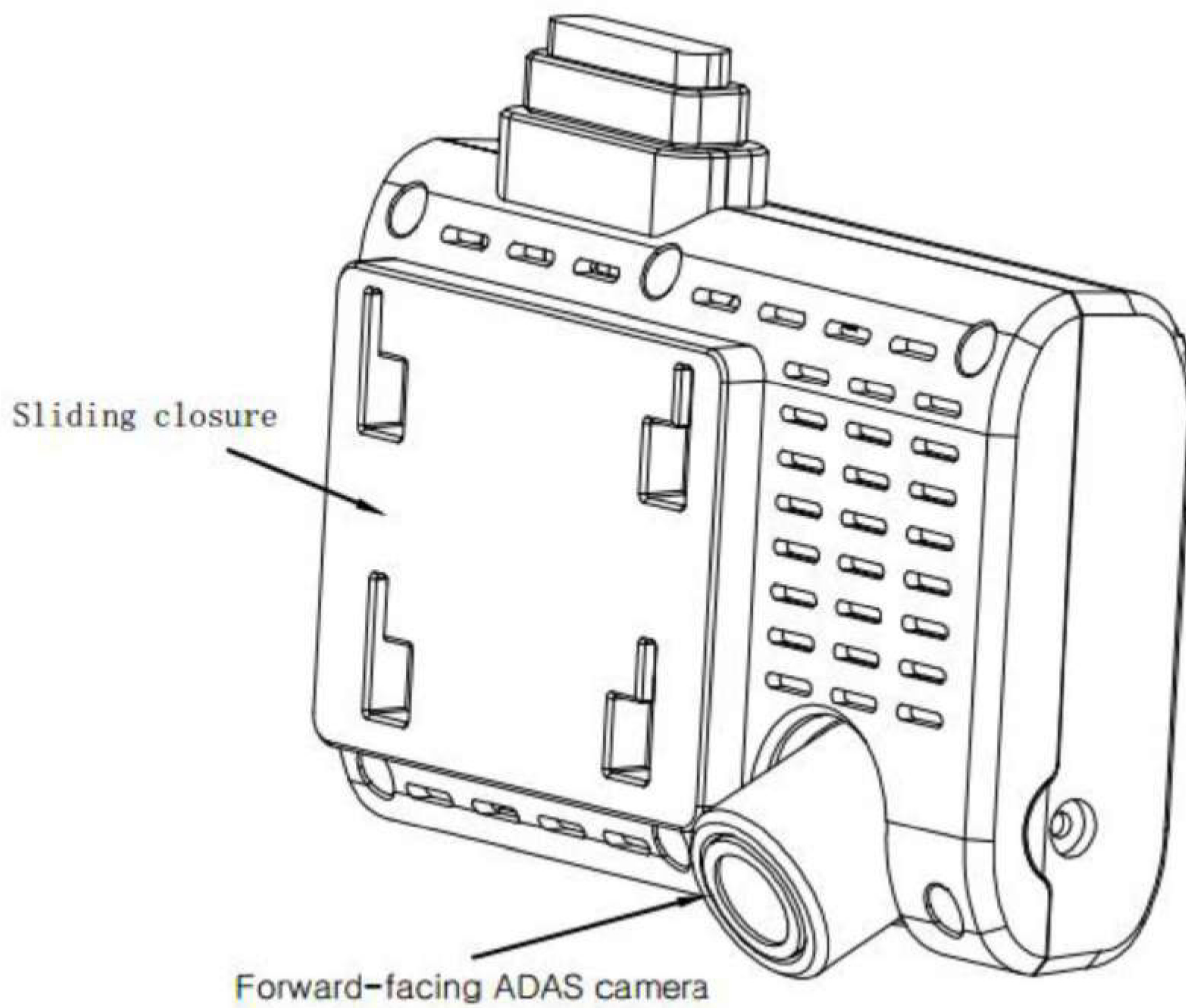
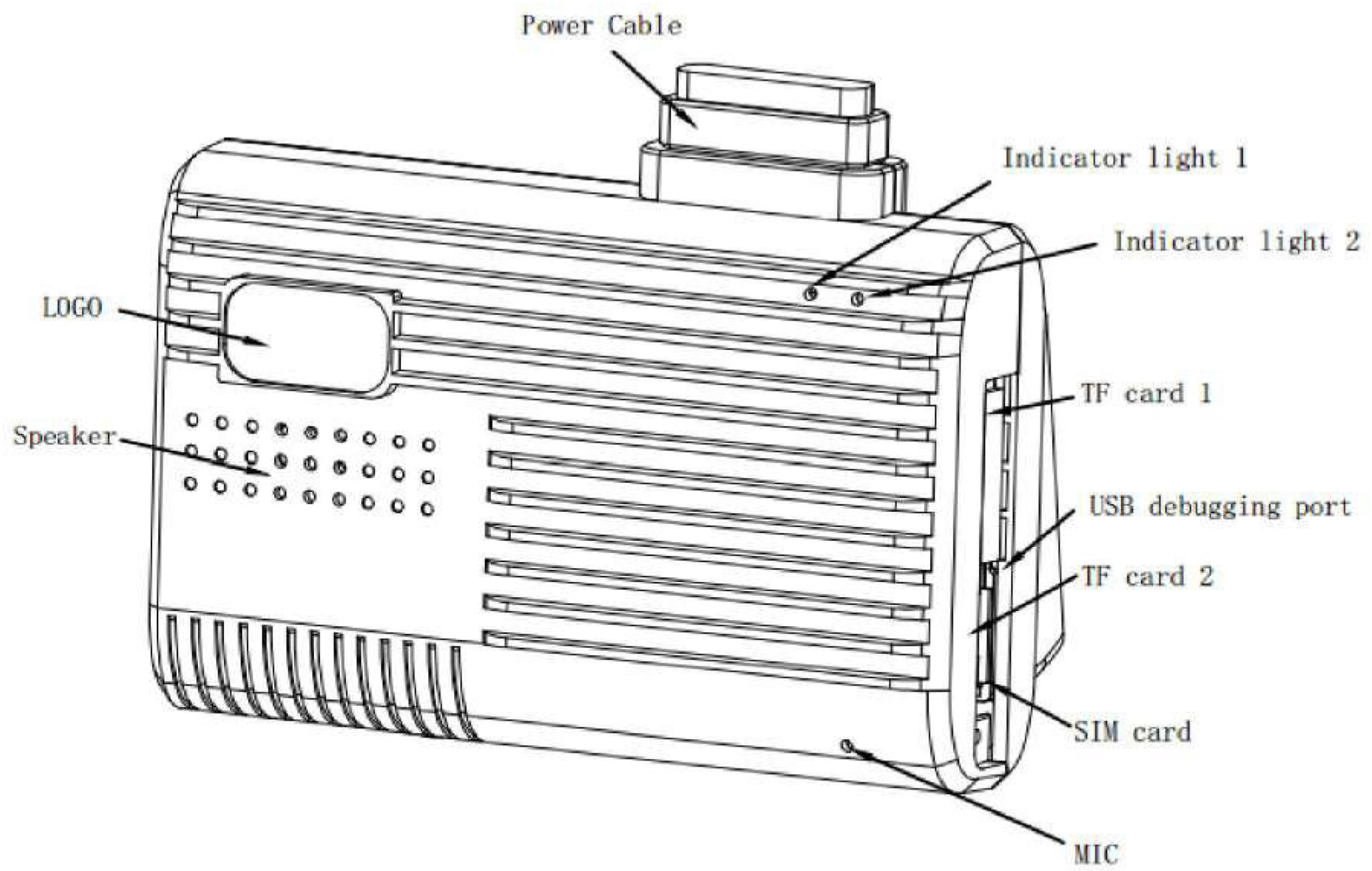
## 2. Product Features

- ◆ Real-time location monitoring: Periodically reports location information such as longitude, latitude, and speed based on the preset return interval.
- ◆ 1 channel 1080P HD video and 3 channels 720P video real-time storage and upload
- ◆ Support 2 TF card Loop recording
- ◆ Support remote intercominitiated by the monitoring platform.
- ◆ Real-time video playback and historical video playback at the monitoring platform.
- ◆ Support 1-channel RS232 port.
- ◆ Support ADAS and DMS AI safety driving assistance functions.

ADAS: give voice warning for dangerous driving behaviors such as lane departure, close proximity and collision, and upload it to the platform for evidence collection

DMS: can effectively warn drivers of dangerous driving behaviors, such as fatigue, smoking, phone call, distraction, etc. by voice warning and uploading to the platform for evidence collection

### 3. Product Appearance



## 4. Product Parameters

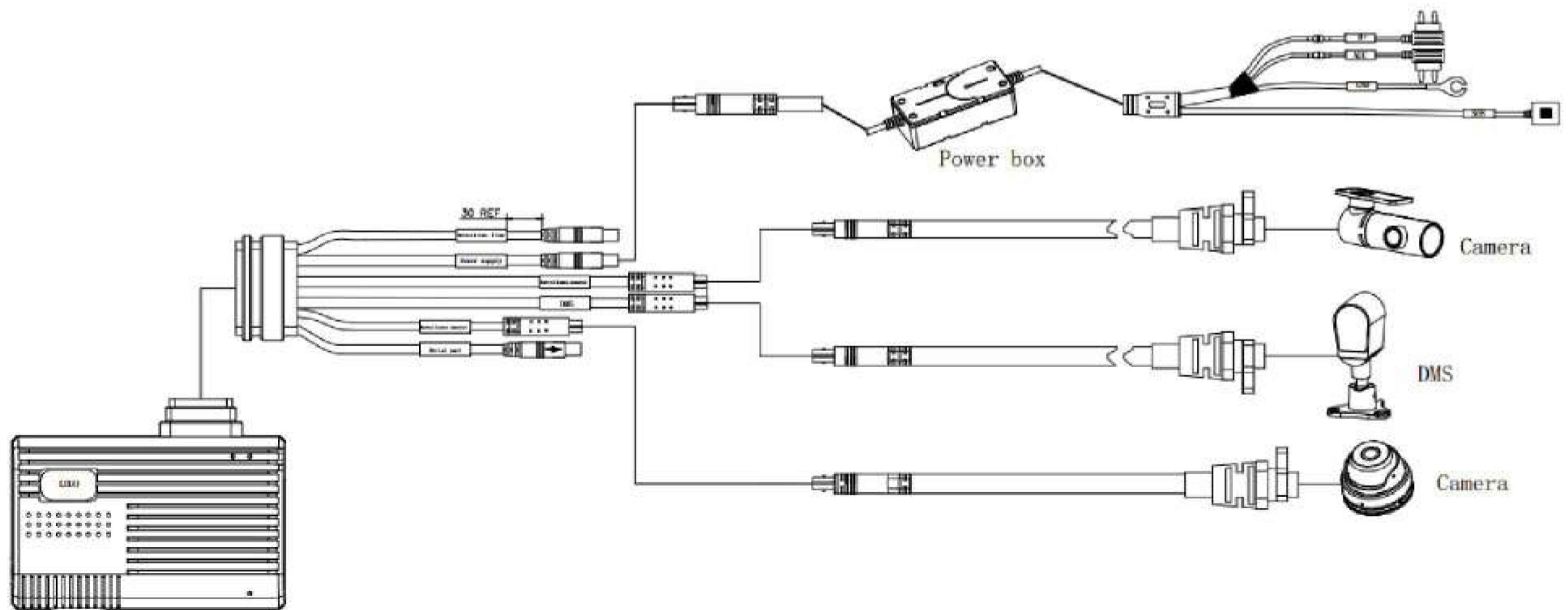
Features		Specifications
Operation system	Operation system	Linux
Hardware	MCU	4 Cores A53
	ROM	8GB
	RAM	1GB
Audio/video	AHD video input	1 <sup>st</sup> -channel AHD 1080P(1290*1080) Second, third, fourth channel AHD 720P(1280*720)
	Audio input	2-channel audio, PCM format
	Audio output	1-channel audio, PCM format, inner speaker.
	Video uploading format	MP4
	Video encode	H.264
	Audio encode	G711A
	Code rate	Main code rate:1792Kbps; Subcode rate: 512Kbps
	Real-time video recording	4--channels
WIFI	WIFI	Built-in WIFI, 2.4GHz
Network	2G/3G/4G	LTE FDD: B1/B3/B5/B8 LTE TDD: B34/B38/B39/B40/B41 WCDMA:B1/B5/B8 GSM: 900/1800MHZ Note: Different countries or regions need to choose different communication modules due to the differences of communication operators, please ask sales for details.
Storage	TF card	Support two TF card ( single card max 256G)
Other features	Working voltage	DC10V-36V
	Working electricity	420mA@12V(Not load) ;240mA@24V( Not load )
	Sleeping power consumption	6mA@12V
	Working temperature	-20°C~ +60°C
	Storage temperature	-30°C ~ +80°C

	Backup battery	3.7V 2000mAh
	Device dimension	L110mm*W70mm*H28mm

## 5. Product Function

Project	Function	Description
Multimedia function	Video mode	Loop recording
	Storage	Support up to 2pcs 256GB high-speed TF cards
	Capture	Remotely send command to capture
	Time-lapse video save	ACC off, time-lapse recording 5S
	Remote intercom	Support remote intercominitiated by the monitoring platform.
Data upload	Real-time tracking	Upload positioning information such as latitude and longitude according to the set time interval
	ACC On/Off status	Location data packet contains the ACC status each time
	Vehicle power off alarm	Turn on the backup battery, when the device cannot detect the vehicle voltage, it will report a power off alarm to server
	Low voltage alarm	When the device detects that the vehicle voltage is lower than 10V, it reports a low-voltage alarm to server
	Over-speed alarm	Set the maximum speed limit value through the platform or SMS command. When the GNSS speed is more than the set value, an over-speed alarm will be reported to the server
	Blind area data upload	When the terminal is located and not online, the location data will be stored in the device, up to 10,000 pieces. When the signal is normal and the device goes online normally, the stored location data will be automatically uploaded to server.
	Inflection data upload	When the direction angle of the device changes more than a certain angle, the device will immediately upload a position data to optimize the trajectory.
	Remote upgrade	Support OTA remote upgrade

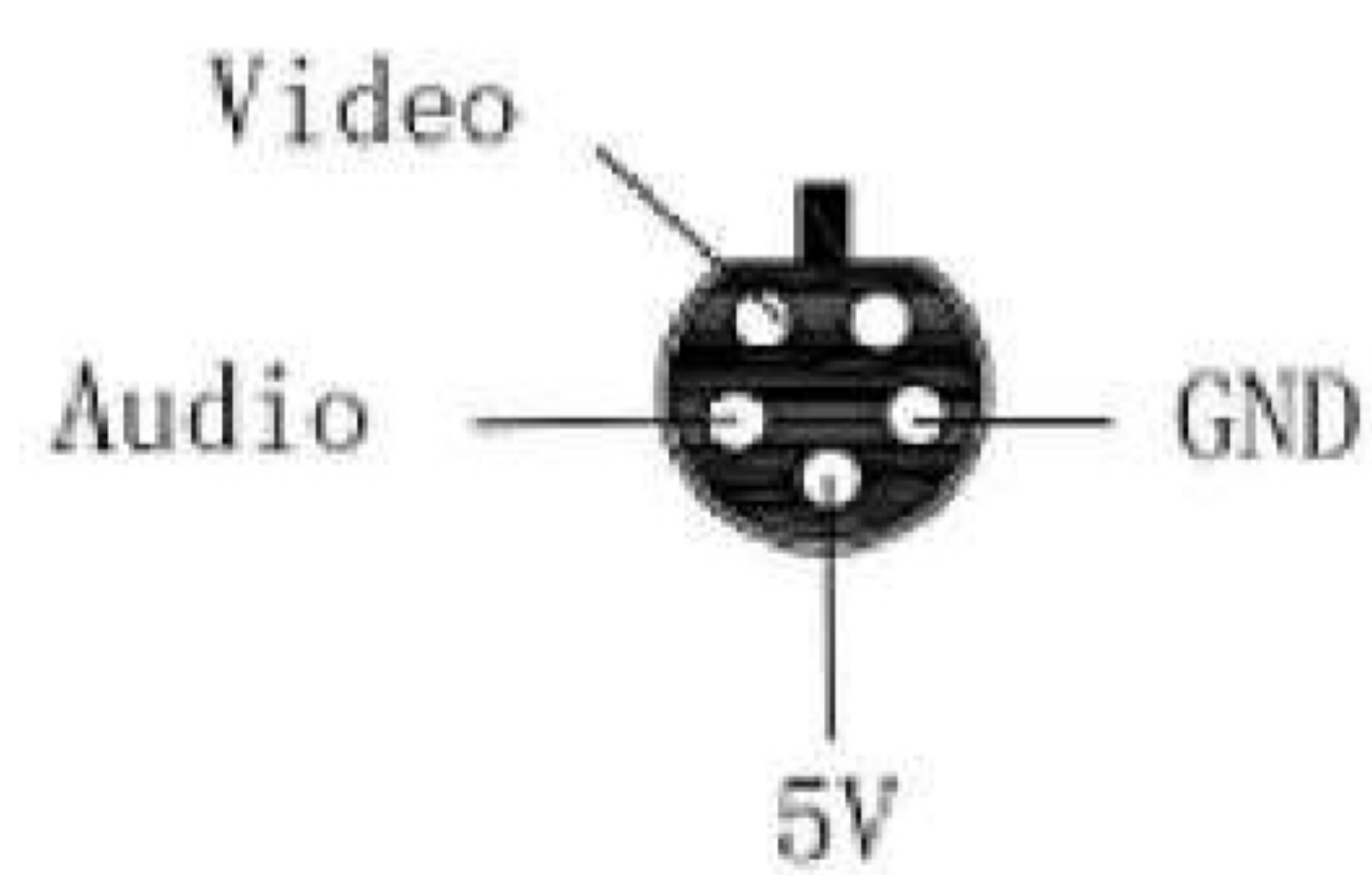
## 6. Product Wiring Diagram



## 7. Product wire/connector Definition

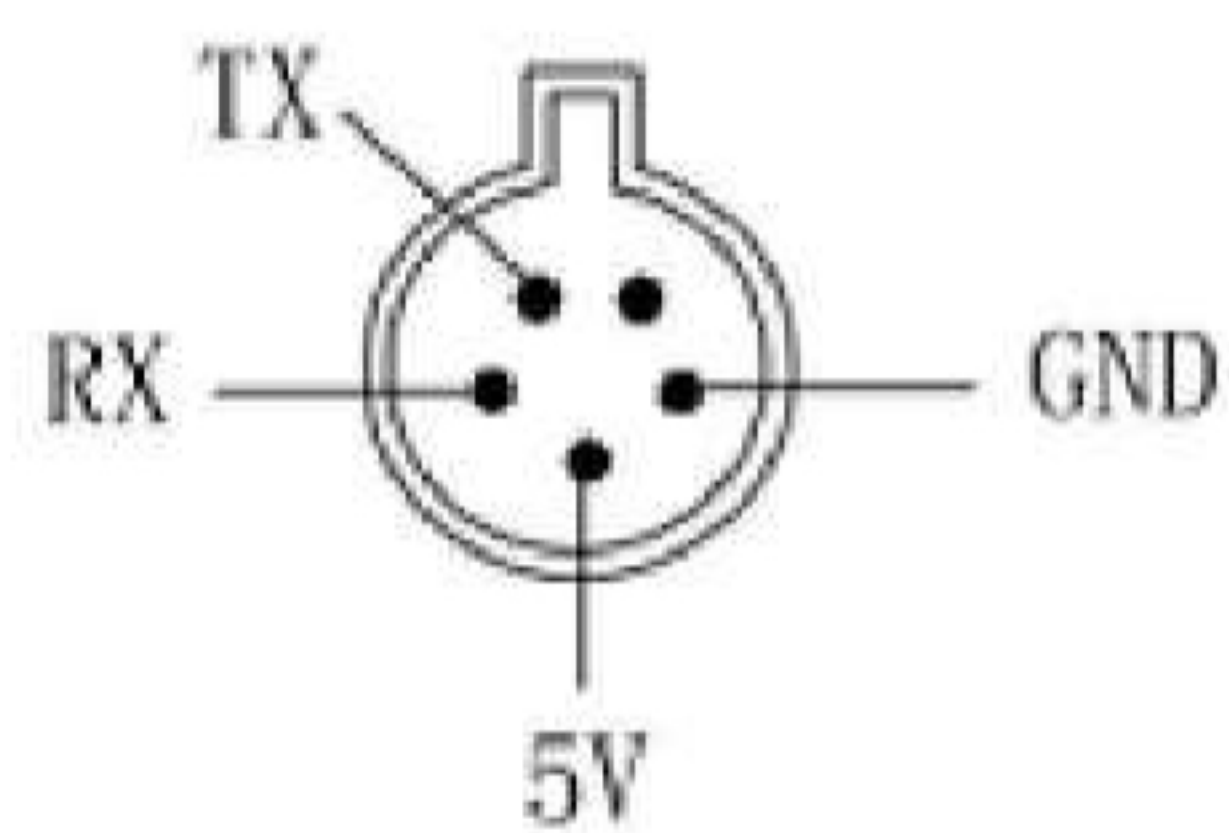
### 7.1 Video wire definition

View orientation:Forward



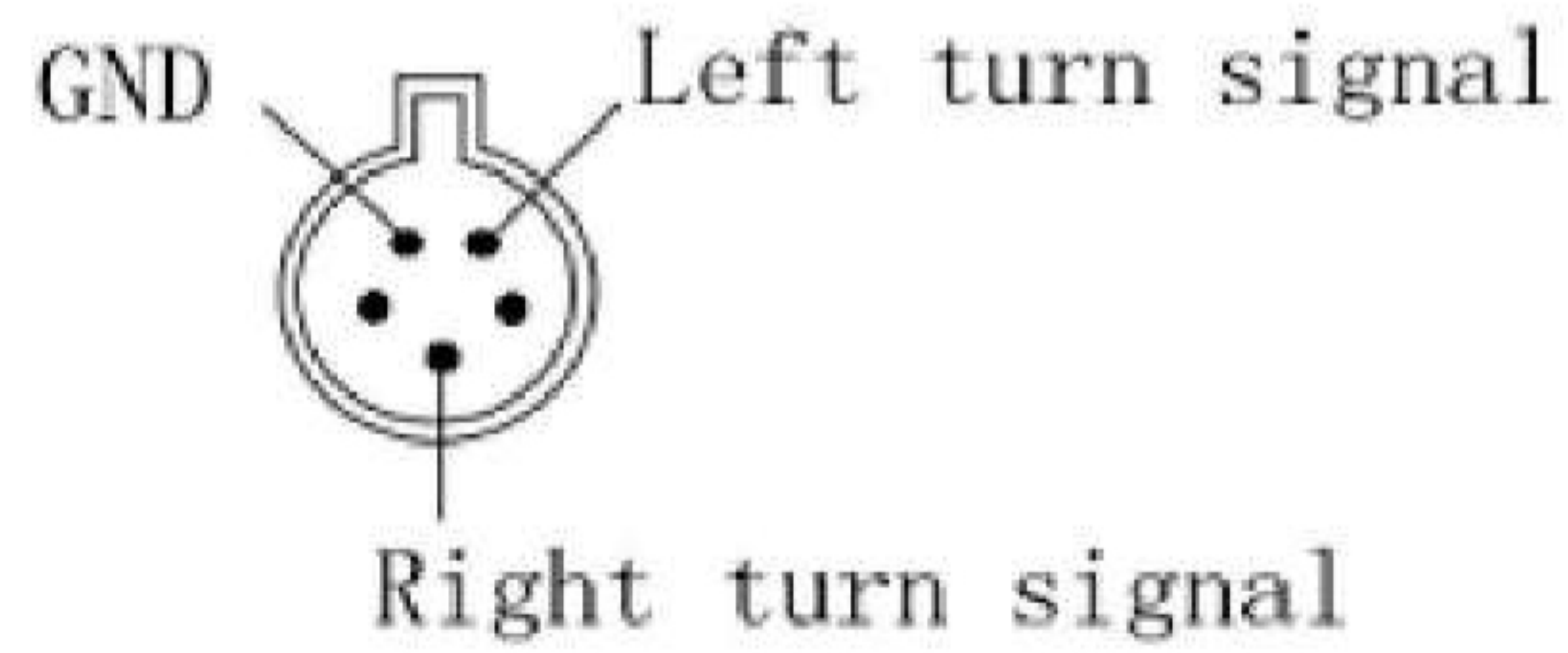
### 7.2 RS232 definition

View orientation:Forward



### 7.3 IO detect wire definition

View orientation:Forward



### 8. Device indicator definition

Indicator	Description
Yellow	Not light: No power or the hard disk not work. Blinking(lamp on 0.5s, and off 0.5s): hard disk working Bright always: power on but the hard disk not work.
Blue	Not light: No power or not dialing Blinking (lamp on 0.5s, and off 0.5s): Online Bright always: Dialing

## 9. Product Online Configuration

<b>Command Format:</b>	
<SPBSJ*P:BSJGPS*D:219.133.034.198,7788*T:120.076.068.123,7788*A:CMNET,admin,123456*N:13333223344*C:30>	
SPBSJ	Header
*P:BSJGPS	Password
*D:219.133.034.198,7788	IP 1 and port (Note: if the IP is less than 3 digits, add 0 in front of it)
*T:120.076.068.123,7788	IP 2 and port (Note: if the IP is less than 3 digits, add 0 in front of it)
*A:CMNET,admin,123456	APN(max 25 bit), account, password
*N:13333223344	Device number
*C:30	Time interval (Unit: Second)

## 10. Analysis of Common Problems

Fault Phenomenon	Reason Analysis	Method
Image is reflective	Car windshield can cause reflections	Proper rotation to adjust the lens angle will improve the recording effect
Great difference between day and night recordings	Because the night light is weaker than the daytime, it will affect the imaging effect, which is a normal phenomenon	NA
Unable to boot device properly	abnormal wiring	Confirm whether the wiring is correct or replace the adapter cable
No automatic recording after startup	The TF card is not inserted or the TF card cannot be detected	First make sure that the TF card is inserted, and then re-plug the TF card after the power is turned off. Format the memory card or replace it with a new one

Recording process aborted abnormally	TF card abnormal	Format the TF card or replace it (recommended to use a class10 memory card above 8G)
The recording picture is not clear	The lens protector is not removed or the glass is stained	Make sure the camera lens protector is removed, check the lens and front windshield for dirt and wipe
The recorded video cannot be played on the phone	May be incompatible with the player or mobile phone system	It is recommended to use a card reader to copy the video to the computer for playback
Terminal not online	SIM card needs to be recharged	Contact the network operator for payment
	Whether the SIM card is damaged and the contact is good	Reinstall the SIM card
	Online parameter setting error	Refer to the manual to reset the parameters
	No signal or weak signal	Check the network signal
Terminal is not positioning	No signal or weak signal	Check the GNSS signal
	The terminal antenna is not facing up	Readjust the terminal placement

## 11. Precautions

11.1 Electronic products please pay attention to waterproof

11.2 Please keep the vehicle battery fully charged

11.3 The power supply of the device is between 10V and 36V DC. When installing, it should be determined whether the user's power supply system is within this range. Exceeding the maximum voltage of the terminal will damage the terminal.

11.4 When the ambient temperature exceeds the normal operating temperature range of the terminal, it is recommended to power off

11.5 When the vehicle is in an underground parking lot, tunnel or garage, the positioning signal will be affected. And there may be a blind spot of the communication network signal, which makes the device unable to monitor; when the vehicle leaves the above area, the device will automatically resume normal operation

11.6 In case of abnormality, please do not repair it by yourself. The manufacturer is not responsible for damage caused by connecting non-original accessories or unplugging the connection between components

11.7 This product is a safe driving assistance product, and any loss caused by failure or information loss has nothing to do with the company

11.8 This product is an auxiliary device for the purpose of recording external images of the vehicle. Due to the different situation and environment of the vehicle, some functions will not be supported. In order to further improve the product, irregular firmware upgrades will cause changes in product performance, sometimes Due to the use environment, it may not be possible to take pictures, so the driving images recorded by this product are for reference only, and the status of the TF card will also lead to the situation that pictures cannot be taken.

11.9 Although this product can record and save the images of vehicle accidents, it does not guarantee that all accident images can be recorded, and the collision sensor cannot be activated by a slight collision accident, so the images may not be recorded in a special folder.

11.10 Be sure to turn off the power before inserting or unplugging the TF memory card.

11.11 For the stable use of the product, it is recommended to format the memory card at least once a week.

11.12 General TF card has a service life, long-term use may lead to data cannot be saved, in this case, it is recommended to buy a new TF card to use, the company will not be responsible for data loss caused by long-term use.

11.13 Do not install or operate this product while the vehicle is in motion.

11.14 Do not connect the uninterruptible power supply without authorization, otherwise it may cause the failure of the car or the product. For installation matters, please consult a professional.

11.15 Do not subject this product to strong shocks or vibrations to avoid damage to the product, resulting in malfunction or unusable use

11.16 The temperature range for normal use of this product is -20 degrees Celsius to 60 degrees Celsius, beyond this temperature range may cause product failure, fire or explosion