## 1. 产品简介

    XV-400具有体积小、功能强大、多用途、性价比高的特点，采用高速处理器和嵌入式操作系统，结合了最先进的H.265视频压缩/解压缩、4G网络、GPS、GSENSOR、DMS、OBD、读卡器、按钮开关等。该产品可实现2路/4路720P或1080P全帧录音，可选择CIF/HD1/D1/720P/1080P五种录音格式。采用本地存储、无线上传数据，配合监控平台实现报警联动集中监控、远程管理、回放分析。它是车载信息技术的扩展，广泛应用于保险公司、取证、物流车队管理、出租车公司等。

XV-400 have a small size, powerful, multi-purpose, cost-effective features, which use high-speed processor and embedded operating system, combined with the most advanced H.265 video compression/decompression, 4G network, GPS, GSENSOR, DMS, OBD, card reader, button switch, etc. The product can realize 2-channel/4-channel 720P or 1080P full-frame recording, and can choose five recording formats of CIF/HD1/D1/720P/1080P. It adopts local storage and wireless data upload, and cooperates with the monitoring platform to realize central monitoring of alarm linkage, remote management as well as playback analysis. It's an expansion of the Telematics, widely used in insurance companies, forensics, logistics fleet management, taxi companies, etc.
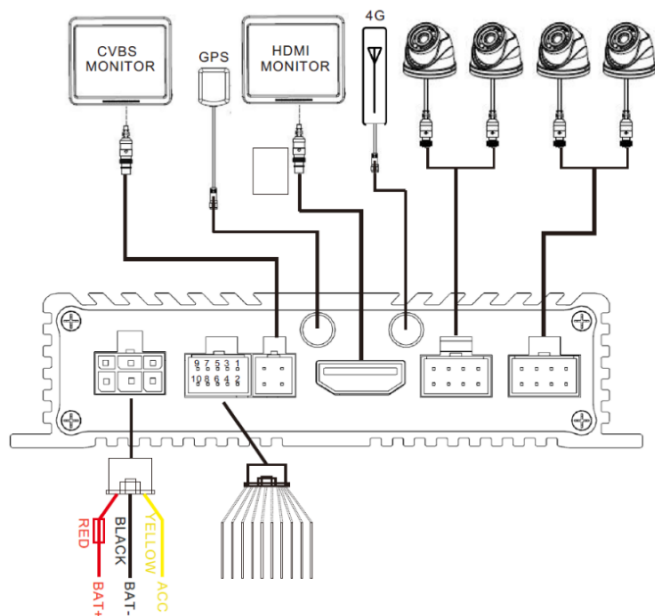
## 2. 产品参数 **Specifications**

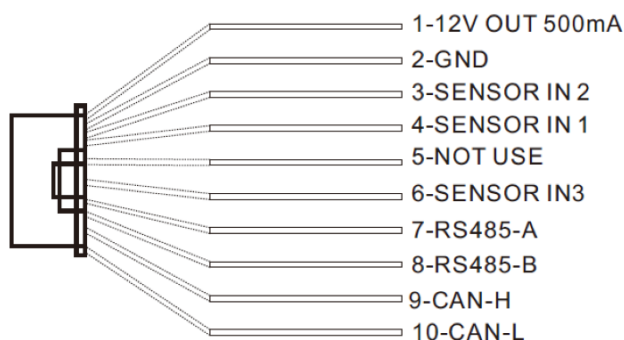| ITEM 项目 | PARAMETER 参数 | PERFORMANCE 性能 |
|---|---|---|
| Product Model | | XV-400 |
| Function Profile | | Video recording, photo, playback, crash detection, remote real-time preview, GPS, alarm recording, DMS, OBD data, etc. |
| System | Language | English |
| | Operation System | Linux |
| | Main processor | HI3520DV400 |
| Video | Video Input | 4 CH: AHD 1080P |
| | Video Output | 1 CH: HDMI, 1 CH: CVBS |
| | Video Standard | PAL, NTSC |
| | Video Compression | H.265, 30 FPS |
| | Video Display | 1~4 CH |
| Audio | Audio Input | 4 CH |
| | Audio Output | 1 CH |
| | Audio Code | G726 |
| | Recording | Simultaneous with video recording |
| Image Processing & Storage | Image Format | 720p/1080p optional |
| | Video Code Rate | 720p: 2048Kbps ~ 4096Kbps |

| | | 1080P: 2048kbps~8192kbps |
|---|---|---|
| | | 8 levels, and L1 is the best |
| | Data Storage | 2x TF with 256GB maximum, hidden /outside |
| | USB | 1x USB (Mouse and WIFI dongle) |
| Alarm (Optional) | Alarm Input | 3 CH high level trigger |
| | RS485 Port | 1 CH |
| Extendable Port | 4G LTE | TD-LTE/FDD-LTE |
| | GPS | GPS. Beidou and Glonass as options |
| Acceleration sensor | G-sensor | 3 axis |
| Connection port | Output | HDMI connector |
| | Input | Navigation connector |
| Working Environment | Working Temp. | -20~ +65℃ |
| | Humidity | 10%~90% |
| Shape | Shell | Aluminum alloy |
| | Size | 102mmx 114mmx 66mm |

3. 接线图示意图Wiring Diagram

3.1 设备接线示意图Wiring Diagram of device



3.2 I/O串口接线示意图Wiring Diagram of IO

1-12V OUT 500mA
2-GND
3-SENSOR IN 2
4-SENSOR IN 1
5-NOT USE
6-SENSOR IN3
7-RS485-A
8-RS485-B
9-CAN-H
10-CAN-L

3.3 产品安装指导Installation direction of MDVR



安装说明 Installation notes

① Tbox-DVR should be installed in the storage box or under-seat of the vehicle's co-pilot.

② GPS and 4G antennas should be placed near the A-pillar of the vehicle or externally to avoid obstruction.

③ And it is forbidden to load heavy objects on it, the surrounding environment is free of debris and the ventilation conditions are good. It is forbidden for the Tbox-DVR to be exposed to the sun on the bridge surface.

④ The Tbox-DVR is placed horizontally with the indicator light facing the cab to ensure that the X axis is consistent with the driving direction and the Y axis is perpendicular to the driving direction.

⑤ For the connection of camera and Tbox-DVR , the joint of extension cable needs to be wrapped with waterproof tape to prevent water stains from entering the cable core.

⑥After the Tbox-DVR is powered on for the first time, need to enter the remote control and press the INFOR button to check the network connection, GPS positioning and storage disk/card information, and enter the APP or platform to confirm whether there is data upload. It takes about 2 minutes to power on and upload data for the first time.

⑦ Non-professionals are prohibited from opening the Tbox-DVR shell. If necessary, please contact the  technical persons to perform again.

# 4. 常见问题Related Questions

4.1 Why doesn't the device record video after turning on?

① Check the SD or TF card on the device.

② Check the status on the system information:

Status classification: non-normal or normal

4.2 Why does the device often restart?

①. Frequent restarts: the device repeatedly goes offline and the video is not continuous.

②. Reasons:

a. The vehicle power supply is unstable. Please check the input voltage of the device with 8-36V,

b. The storage disk or card may be faulty. Format the storage disk/ card or replace the storage disk/card while retaining the data.

4.3 GPS issues

①. Check the status of the module on the device being normal.

②. Check if the GPS antenna is connected properly. The antenna should be placed in a wide and unobstructed place. If the vehicle is driving through the tunnel, a tall building or a large tree, the signal will not be received. It is normal.

③. The device is online, but there is no positioning information. Please check whether the GPS is turned on in the system Serial menu. Or check whether the GPS antenna is placed accurately. Or try to replace a GPS antenna.

4.4 4G issues

①. Check 4G module status, dial parameter settings.

②. Check the antenna with connection and 4G signal strength.

③. Check the status of the SIM card, whether the SIM card has the Internet access function

4.5. The device is working normally. Why can't connect to the platform?

①. Please confirm that the 4G module has been dialed successfully on system.

②. Check the IP address and port of the server set on the device being correct.

③. Check the platform server running normally.

4.6 The video file has no sound

①. Check whether there is an external pickup, or whether the camera has an audio capture function.

② Enter the video channel setting, check whether the audio is turned on;

③ The channel to realize the audio recording must have a video input and record normally.

## 4.7 GSENSOR issues

During installation, follow the direction indicated by the arrow on the front panel of the device, keep the X axis parallel to the direction of travel, and the Y axis is at a vertical angle to the direction of travel.

## 4.8 Software local upgrade Instructions

Copy the upgrading file to the SD card or USB flash drive, insert the SD card or USB flash drive into the device, power on the device, and automatically upgrade after the startup is successful. The upgrade is automatically restarted. After the restart, check the version number in the system information menu.
Note: Do not power off the device during the upgrade process