

User Manual For

X3-H0602 MDVR

Mobile Digital Video Recorder



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Notice

The information in this manual was current when published. The manufacturer reserves the right to revise and improve its products. All specifications are therefore subject to change without any notice.

The purpose of this manual is to kindly aid the user for the operation for our MDVR. The user should have a basic understanding of computer operation and basic knowledge of how to connect peripherals and make some settings.

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Guarantee & Warnings

1) Electrical Apparatus Safety

All installation and operation should comply with local electrical safety norms.

2) Transportation

In the process of transportation, storage and installation, please avoid heavy stress, violent vibration, impact and water splashing.

3) Installation

Install the equipment in accordance with the requirements, handle carefully. Do not heavily press the equipment before the MDVR installation is finished.

4) Requirements on Engineers & Technicians

All the work of checking and maintenance should be done by qualified technicians and engineers. We do not undertake any responsibility caused by unauthorized modifications.

5) Requirements on Environment

The equipment should be installed and stored in a cool and dry place, away from direct sunlight, flammable or explosive substances, etc. Keep gaps not less than 3cm around the device to facilitate ventilation for cooling.

6) Accessories

Make sure to use accessories from the manufacturer recommended in the attachment.

Insulate circuit ground and metal shell for all the peripherals.

Before installation, please open the package and ensure that all parts are included.

If there are any problems, please contact us as soon as possible.

1. Product Characteristics

1.1. Overview

Skeyewatch X3-H0602 is a functional Mobile Digital Video Recorder specially designed for vehicle video surveillance and remote monitoring. It has a high-speed processor and embedded operating system, combining with the most advanced H.265 video compression / decompression technology, 3G/4G network, GPS positioning technology, as well as WIFI. It supports not only video recording in 1080P, 720P, WD1, WHD1, WCIF, D1, HD1 and CIF formats, but also vehicle travel information recording and wireless data upload. With center software it also achieves alarm linkage central monitoring, remote management and playback analysis. It is easy to use with simple design, multi-functions, superior anti-vibration, anti-electromagnetic interference, radiation protection, hard disk storage, SD backup, flexible installation and high reliability.

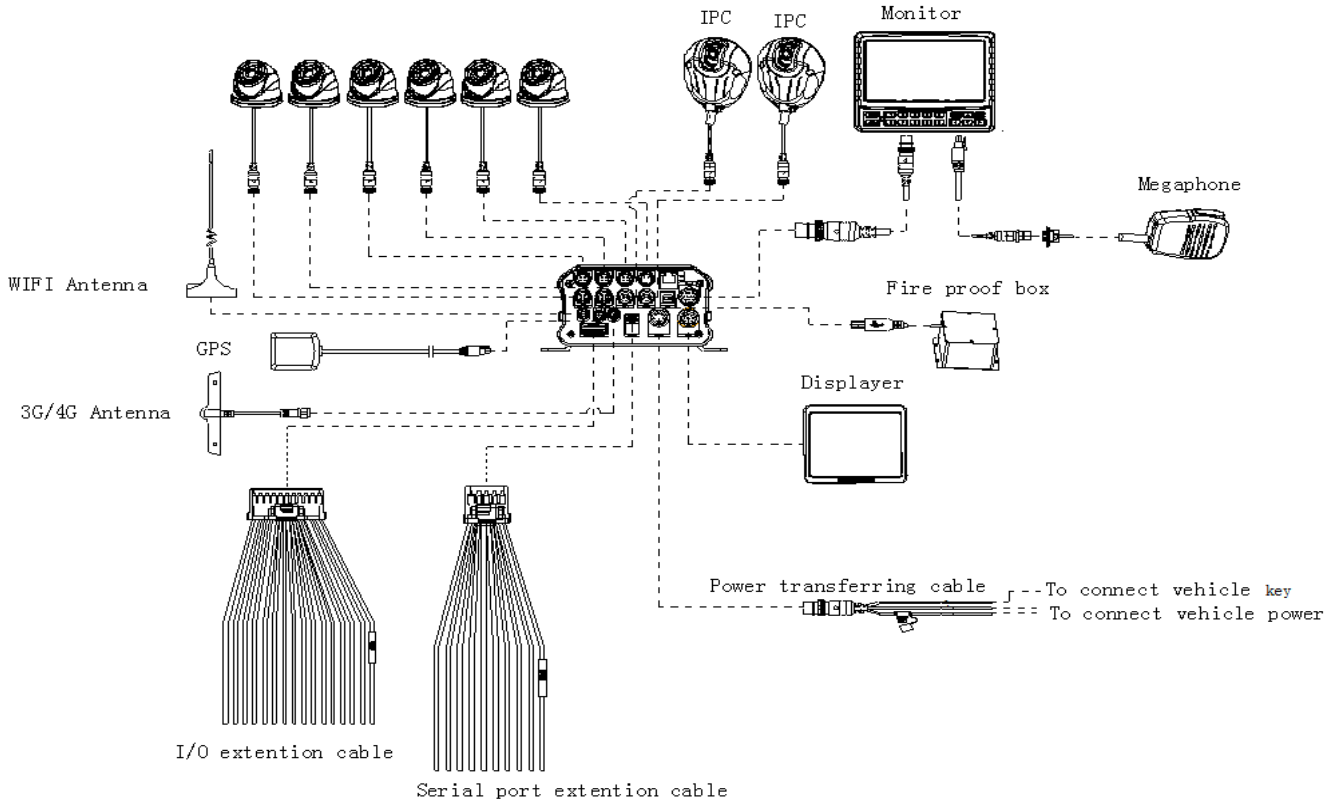
1.2. Specifications

| Technical Items | | Technical Indicators |
|--------------------------|-----------------------|--|
| Product Model | | X3-H0602 |
| Function Overview | | Preview, Recording, Playback, Network, Locating |
| System | Operating System | Linux |
| | Control Mode | CP4, mouse, EasyCheck, network(3G/4G/WIFI) |
| Video | Input | AHD*6+IPC*2 |
| | Output | 2 CH (CP4+VGA) |
| | Total Resource | PAL: 6*720P@15fps(AHD)+2*1080P@30fps(IPC) or4*1080P@10fps(AHD)+2*1080P@30fps(IPC) or4*720P@25fps(AHD)+2*1080P@30fps(IPC) NTSC : 6*720P@15fps(AHD)+2*1080P@30fps(IPC) or4*1080P@12fps(AHD)+2*1080P@30fps(IPC) or4*720P@30fps(AHD)+2*1080P@30fps(IPC) |
| | Video Signal Standard | Electrical level: 1Vpp Impedance: 75Ω NTSC/PAL Optional |
| Audio | Input | 8 CH (AHD*6+IPC*2) |
| | Output | 1 CH |
| | Audio Signal Standard | Electrical level: 2Vpp Input impedance: 4.7kΩ |

| | | | |
|------------------|---|---|---|
| Display | Display Split | 1/4/9 Image display | |
| | OSD | GPS, Alarm, Vehicle plate, Speed, Time, etc. | |
| | Operation Interface | Semi-transparent GUI | |
| Recording | Video/Audio Compression | Video | H.264/H.265 |
| | | Audio | ADPCM, G.711A G.711U |
| | Image Resolution Note: If analog channel(AHD) 1 or channel 2 are connected to 1080P, there will be no video image for channel 5 and channel 6. | PAL: 1080P(1920X1080), 720P(1280X720), WD1(928X576), WHD1(928X288), WCIF(464X288), D1(704X576), HD1(704x288), CIF(352x288) NTSC: 1080P(1920X1080), 720P(1280X720), WD1(928X480), WHD1(928X240), WCIF(464X240), D1(704x480), HD1(704x240),CIF(352x240); Digital: 1080P(1920X1080), 720P(1280X720) | |
| | Image Quality | 8 Levels adjustable (Level 1 is the best) | |
| | Recording Mode | Schedule/Alarm(sensor trigger, speed, acceleration, video loss, temperature) | |
| | Pre-recording | 0-60min | |
| | Post-recording | 0-30min | |
| | Playback | Playback Channel | 1/4 channel by local playback, supports WEB 1/4/8 channel by local playback |
| Search Mode | | Date/time, channel, event | |
| Network | 3G/4G | EVDO/TD-SCDMA/WCDMA/TDD-LTE/FDD-LTE optional | |
| | WIFI | 802.11b/g/n | |
| | Ethernet | RJ45 x 1(10/100M) | |
| | IPC Ethernet | 2 x 6-pin DIN JACK (10/100M PON port, power supply) 2 x 6-pin DIN JACK (10/100M Network port, no power supply) | |
| Locating | GPS | Location tracking, speed detection and time sync | |
| Sensor | G-Sensor | Built-in 6-axis inertial sensor | |
| Storage | HDD/SSD | 1 x2.5"SATA HDD or SSD, thickness 7mm/9.5mm/15mm, supports hard disk heating | |
| | SD | Support SDXC 32GB/64GB/128GB/256GB, plug and play | |

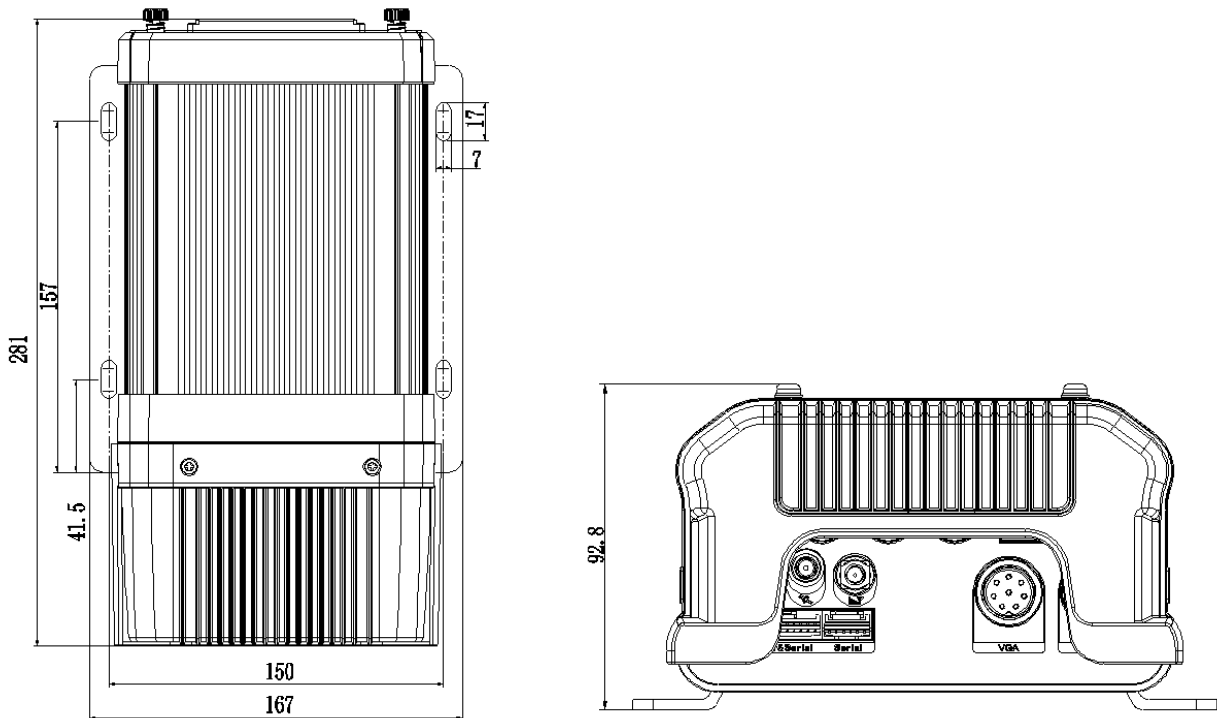
| | | |
|---------------------------------|---------------------------|--|
| Interface | USB | 1 x USB2.0(Type A)+ 1 x USB2.0(Type B), hot swap |
| | SD | 1 x SD slot |
| | SIM | 1 x SIM slot |
| | Serial | 2 x RS232, 1 x RS485, 1 x CAN |
| | I/O | 8 inputs, 2 outputs |
| | Speed | 1 channel pulse speed detection |
| | Control Panel | CP4 |
| | Intercommunication | 1 MIC port(CP4) |
| Power | Input | DC 8~36V, ACC |
| | Output | 5V@500mA & 12V@500mA |
| | Max Power Consumption | 46W |
| | Standby Power Consumption | ≈0W |
| Physical characteristics | Dimension(mm) | 281x167x92.8(with bracket and rear shield) |
| | Weight(KG) | 2.2KG (not include HDD) |
| Environment | Operating Temperature | -40°C ~+70°C (with heating and no HDD) |
| | Operating Humidity | 8%-95%(No condensation) |

1.3. System Diagram

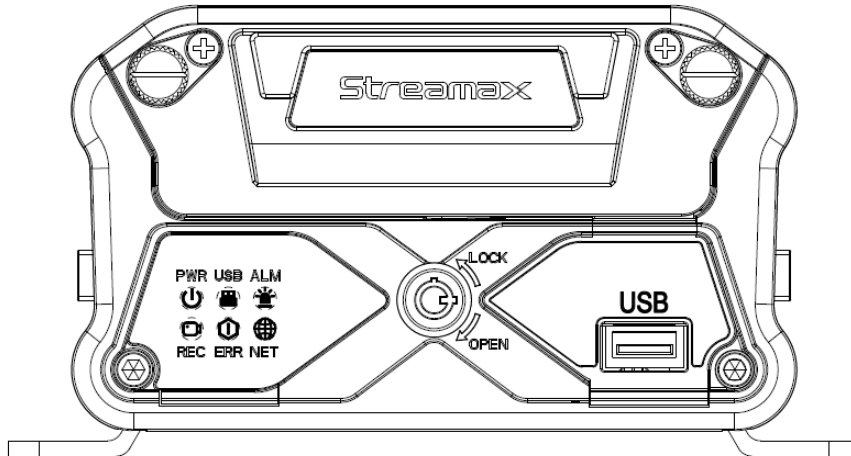


1.4. External interface

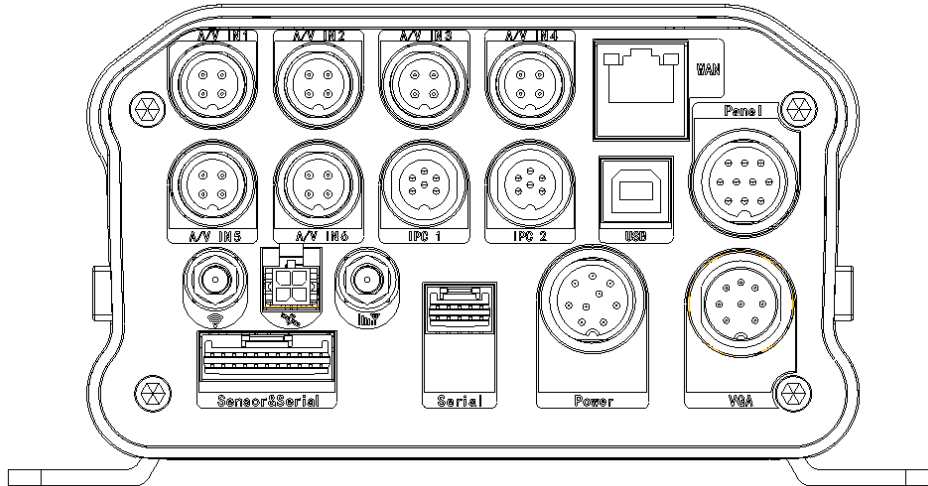
Dimension (Unit: mm)






Front Panel



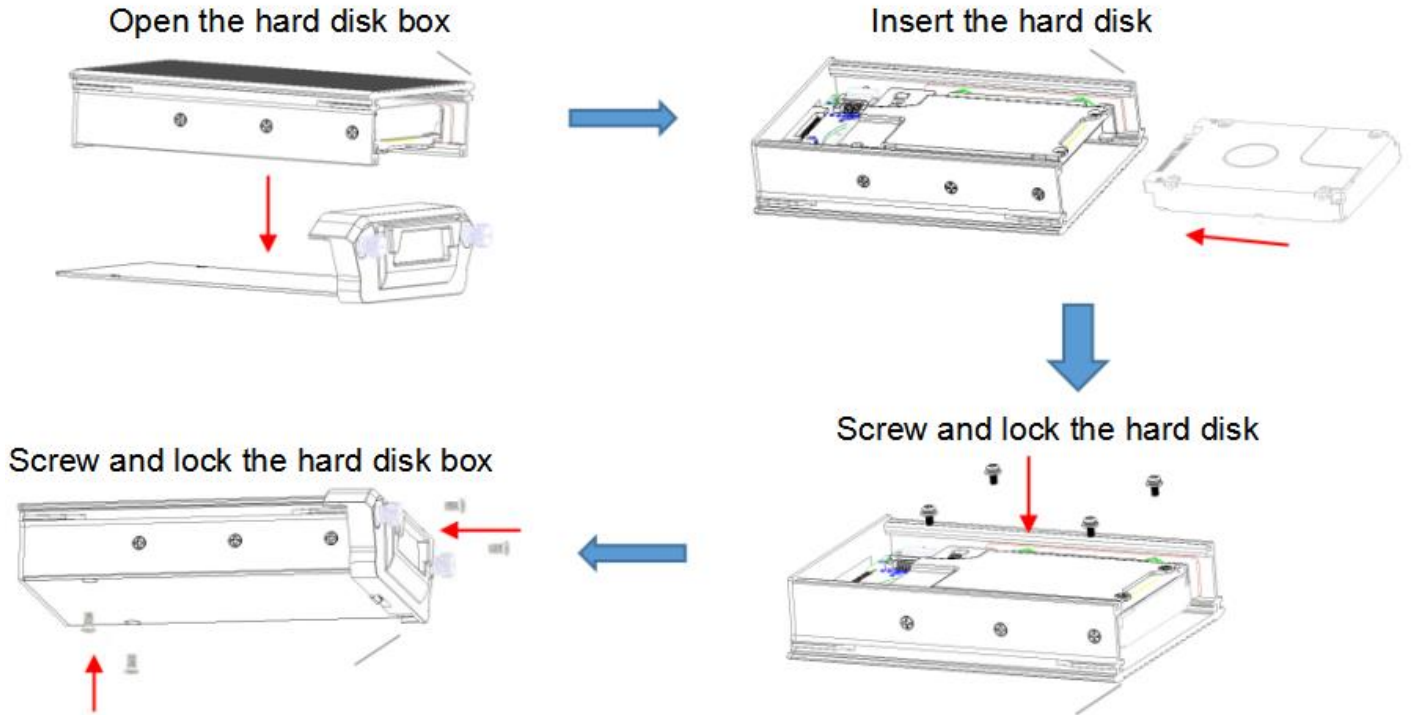
Rear Panel



| Serial No. | Print | Description |
|------------|---|------------------------------|
| 1 | A/V IN1~6 | Analog audio/video input 1~6 |
| 2 | IPC1~2 | IPC A/V input 1~2 |
| 3 | VGA | VGA video interface |
| 4 | WAN | 100Mbps network interface |
| 5 | USB | USB 2.0 interface (Type B) |
| 6 |  | 3G/4G antenna interface |
| 7 |  | GPS antenna interface |
| 8 |  | WIFI antenna interface |
| 9 | Sensor&Serial | Sensor & serial interface |
| 10 | Serial | Serial interface |
| 11 | Panel | Control panel interface(CP4) |
| 12 | Power | DC8-36V power input |

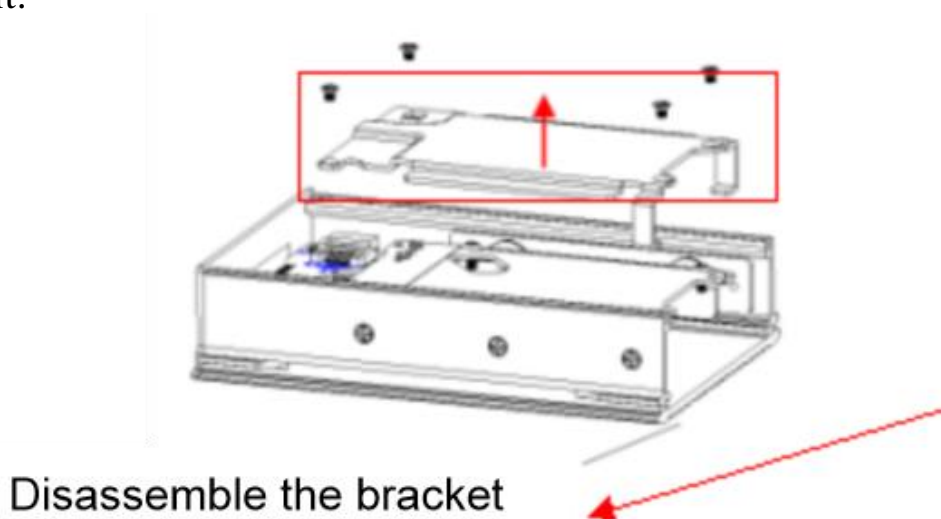
1.5. Hard disk installation

The procedure to install the hard disk of 9.5mm/7.5mm



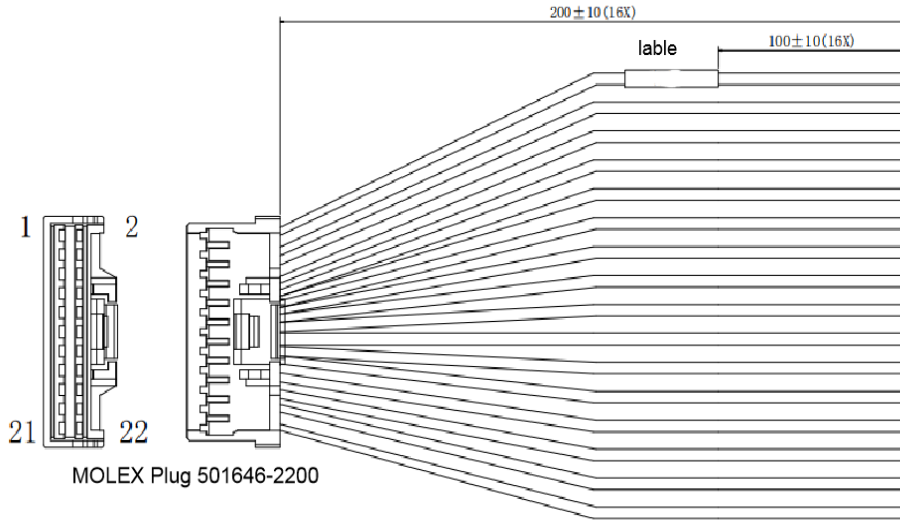
The procedure to install the hard disk of 15mm

To install the hard disk of 15mm, user needs to disassemble the brackets, and then insert it.



1.6. Definition and pictures of external cables

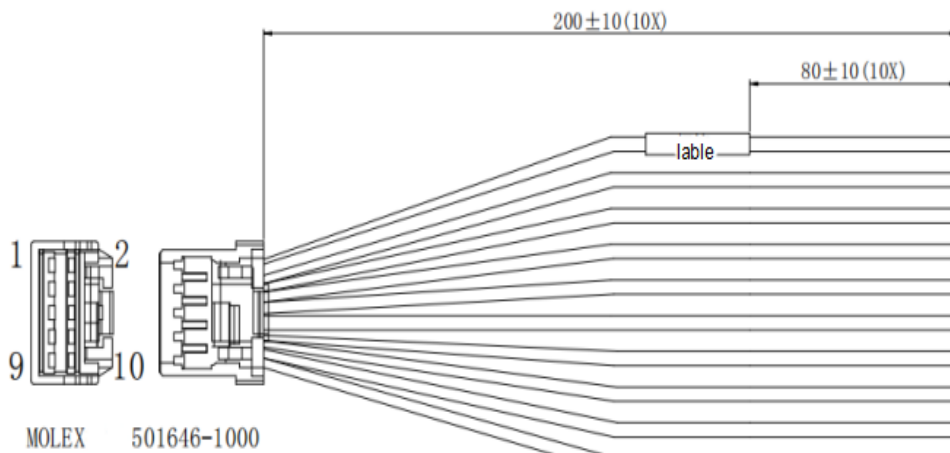
Alarm cable definition



Diagram

| 501646-2200 | | |
|-------------|-------------|-------------|
| 1 | red | SENSOR IN1 |
| 3 | gray | SENSOR IN2 |
| 5 | light green | SENSOR IN3 |
| 7 | light blue | SENSOR IN4 |
| 9 | gray | SENSOR IN5 |
| 11 | orange | SENSOR IN6 |
| 13 | blue&black | SENSOR IN7 |
| 15 | blue&white | SENSOR IN8 |
| 17 | blue | SPEED IN |
| 12 | red&white | SENSOR OUT1 |
| 14 | red&yellow | SENSOR OUT2 |
| 19 | black | GND |
| 21 | red | +5V |
| 18 | black | GND |
| 10 | green | 232RX-1 |
| 8 | whiten | 232TX-1 |

Serial port definition



diagram

| 501646-1200 | | |
|-------------|--------------|---------|
| 1 | white&yellow | 232TX-1 |
| 2 | green&yellow | 232RX-1 |
| 3 | white&black | CAN-H |
| 4 | green&black | CAN-L |
| 5 | red | +5V |
| 6 | black | GND |
| 7 | black | GND |
| 8 | red | +12V |
| 9 | white&blue | 485A-1 |
| 10 | green&blue | 485B-1 |

2. FAQ

1) The system can't start?

Usually this problem results from the incorrect power connection. Please follow below steps to check the power connection:

1. Check the input power, whether the power wire is connected correctly, whether the ground wire is connected back to the battery, and whether the fuse on the power wire is in good condition.
2. Check whether the ACC signal wire input to the power is with voltage higher than 7 V.
3. Check whether the device key is closed.

2) The MDVR restarts uninterruptedly?

Please follow below steps to check it:

1. Check whether the voltage of MDVR is insufficient. If the voltage is less than the start-up voltage of the device, the device would always restart.
2. The problem in hard disk/SD card may cause the failure to start. Take off the storage part and check whether it is broken down.

3) The device can't record?

Usually this problem results from the storage disk or camera. Please follow below steps to check it:

1. Check whether the storage disk is installed, whether it is in good contact, and whether the disk can be read normally in computer.
2. Check whether the storage disk is formatted. The storage disk should be formatted before normally storing record files.
3. Check whether there is video signal input into the device from camera, and whether there is video/image on the screen.

4) There is no voice in record file?

Please follow below steps to check it:

1. Check whether there is an external pickup, or whether the camera features with the function of audio collection.
2. Access to Video Channel Settings, check if Audio is set on.
3. There must be video input into the channel for recording and it must record normally.

5) The GPS works abnormally?

Please follow below steps to check it:

1. Check whether the GPS antenna is installed correctly. There is a silk print logo on the GPS antenna holder behind the host device.
2. Check whether the antenna receiver is sheltered. It should not be covered by any stuff, which may cause it not to receive signals.
3. Environmental influence such as tree shades, being inside tunnel, driving near tall building or elevated roads, thunderstorms or other weather influence, etc. can also cause signal loss or receiving wrong signals.

6) The device can't shut down in ignition switch mode?

1. Check if the ACC line connection mode is correct; and check whether there is voltage on ACC yellow line when the key is turned off.
2. If the device has been set with schedule recording, it can't shut down if it is still during recording time of the task table.