User Manual
For

X3-H0401 MDVR

Mobile Digital Video Recorder

For more information, please visit our website **www.en.streamax.com**

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

Streamax X3-H0401 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.264 video compression / decompression technology, 3G/4G network, GPS positioning technology, as well as WIFI. It supports not only video recording in 1080P, 720P, AHD, 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, with anti-vibration ability, anti-electromagnetic interference, radiation, flexible and convenient installation, hard disk storage, SD card backup design and high reliability.

1.2. Specifications

Function Overview		Preview, Recording, Playback, Network, Locating
System	OS	Linux 3.0.8
	Control Mode	Easy Check, network, CP4, mouse (3G/4G/WIFI)
Video	Input	4 channels AHD + 1 channel IPC
	Output	1 channel
	Total Resource	PAL: (4x25)FPS 720P(AHD)+1080P@30FPS(IPC) Or (4x12)FPS 1080P(AHD)+1080P@30FPS(IPC) NTSC: (4x30)FPS 720P(AHD)+1080P@30FPS(IPC) or(4x15)FPS 1080P(AHD)+1080P@30FPS(IPC)
	Video Signal Standard	Electrical level: 1Vpp Impedance: 75Ω NTSC/PAL Optional
	UTC	Support setting AHD camera OSD
Audio	Input	5 channels (1 channel IPC audio input)
	Output	1 channel
	Audio Signal Standard	Electrical level: 2Vpp Input impedance: 4.7kΩ
Display	Display Split	1/4/9
	OSD	Channel No., GPS Location, Alarm, Vehicle No, Speed, Date/Time
	Operation Interface	Semi-transparent GUI
Recording	Video/Audio Compression	Video: H.264
		Audio: ADPCM (G.711A, G.711U optional)

|		
	Image Resolution	PAL: 1080P,720P,WD1(928X576),WHD1(928X288), WCIF(464X288),D1(704X576),HD1(704x288), CIF(352x288); NTSC: 1080P,720P,WD1(928X480),WHD1(928X240), WCIF(464X240),D1(704x480),HD1(704x240), CIF(352x240); Digital: 1080P(1920X1080),720P(1280X720)
	Image Quality	1-8 levels adjustable (1 is the best)
	Recording Mode	Boot up/Manual/Schedule/Alarm
	Pre-recording	0-60minutes
	Post-recording	0-30 minutes
	Mirror/Dual Recording	Support
Playback	Playback Channel	1 channel by local playback
	Search Mode	Date/time, channel, event
Network	3G/4G optional	EVDO/WCDMA/TDD-LTE/FDD-LTE
	Wi-Fi	802.11b/g/n
	Network connection	Wi-Fi/3G/4G optional
	IPC Ethernet	6-pin M12(10/100M x 1, PON power supply)
Locating	GPS	Location tracking, Speed detection and Time sync
Storage	HDD	2.5" SATA hard disk x 1 / SSD
	SD Card	1 x SD (Max. 256G)
Interface	USB	1 x USB2.0(Type A)+ 1 x USB2.0(Type B)
	SIM	SIM slot x 1
	RS232	RS232 x 2
	RS485	RS485 x 2
	Sensor	8 inputs, 2 outputs
	Speed	1 channel pulse speed detection
	Control panel	CP4 optional
	Inter communication	I MIC interface
Power	Input	DC8-36V, ACC
	Output	5V@500mA, 12V@500mA
	Max Power Consumption	30W
	Standby Power Consumption	≈0W
Physical Characteristic	Dimension (L × W × H)	255.3 x 150 x 89.1mm
	Weight	2.0 KG
Environment	Operating Temperature	-10℃~ +70℃ ; -40℃~ +70℃(with heater)
	Operating Relative Humidity	8%-90%(No Condense)

1.3. External interface

Dimension (Unit: mm)
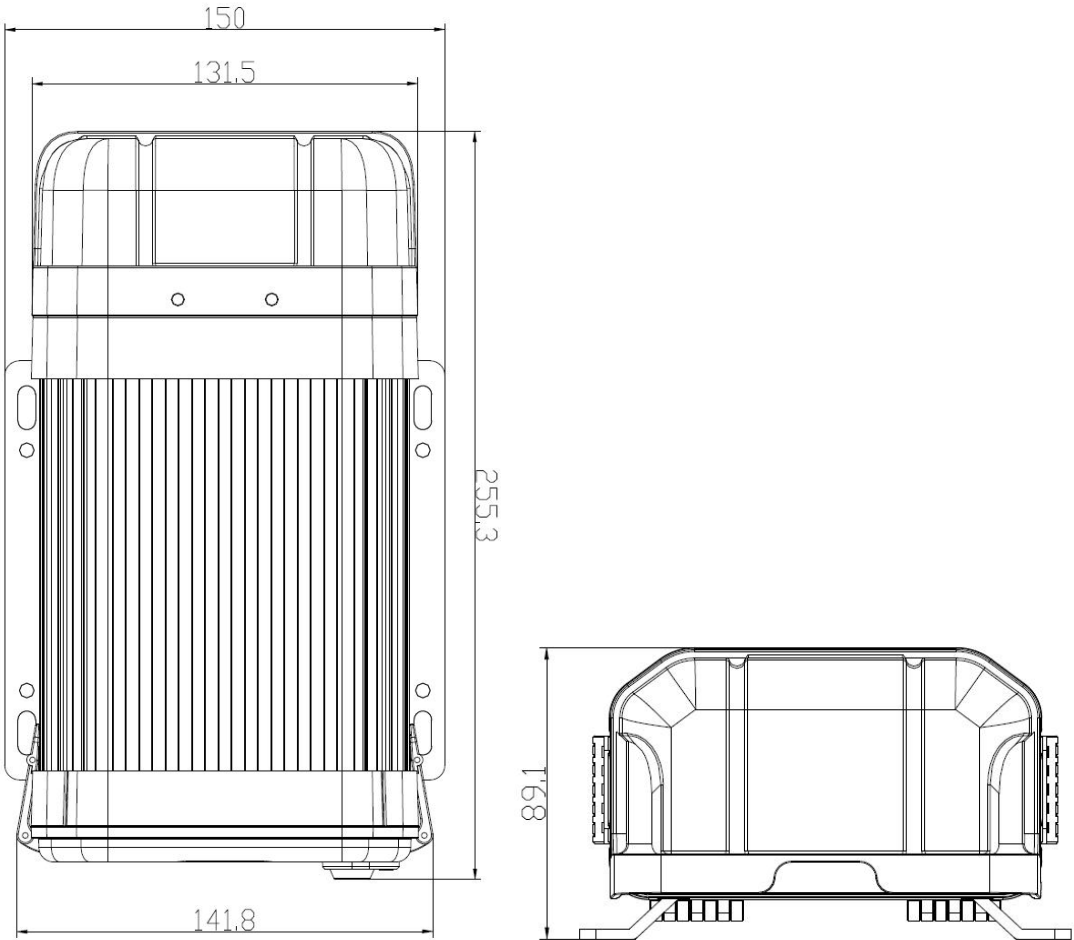
Front panel
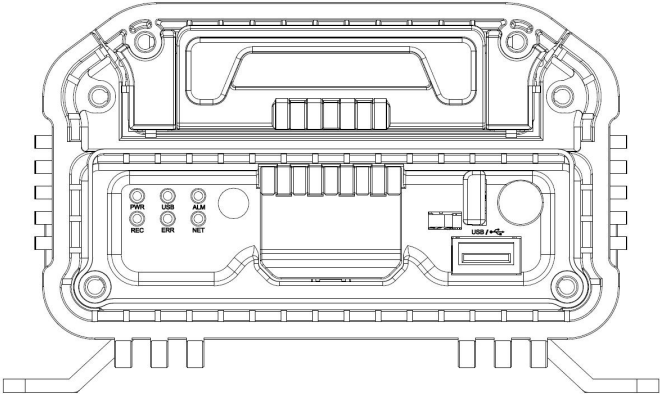
Rear panel
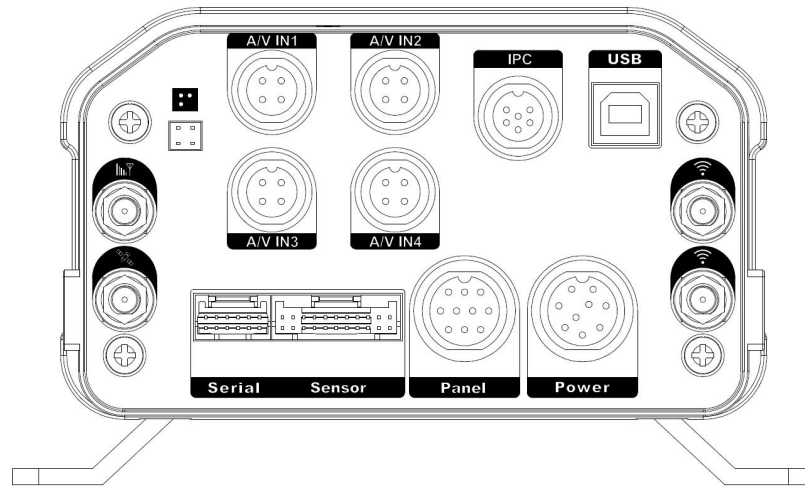
Serial No.	Print	Description
1	A/V IN1~4	Audio & Video Input 1-4
2	IPC	IPC A/V input
3	USB	USB 2.0 interface
4	![icon]	3G/4G/Antenna interface
5	![icon]	GPS Antenna interface
6	![icon]x2	Wi-Fi Antenna interface
7	Serial	Serial interface
8	Sensor	Sensor interface
9	Panel	Control panel (CP4) interface
10	Power	DC 8-36 V power input

1.4.   System diagram
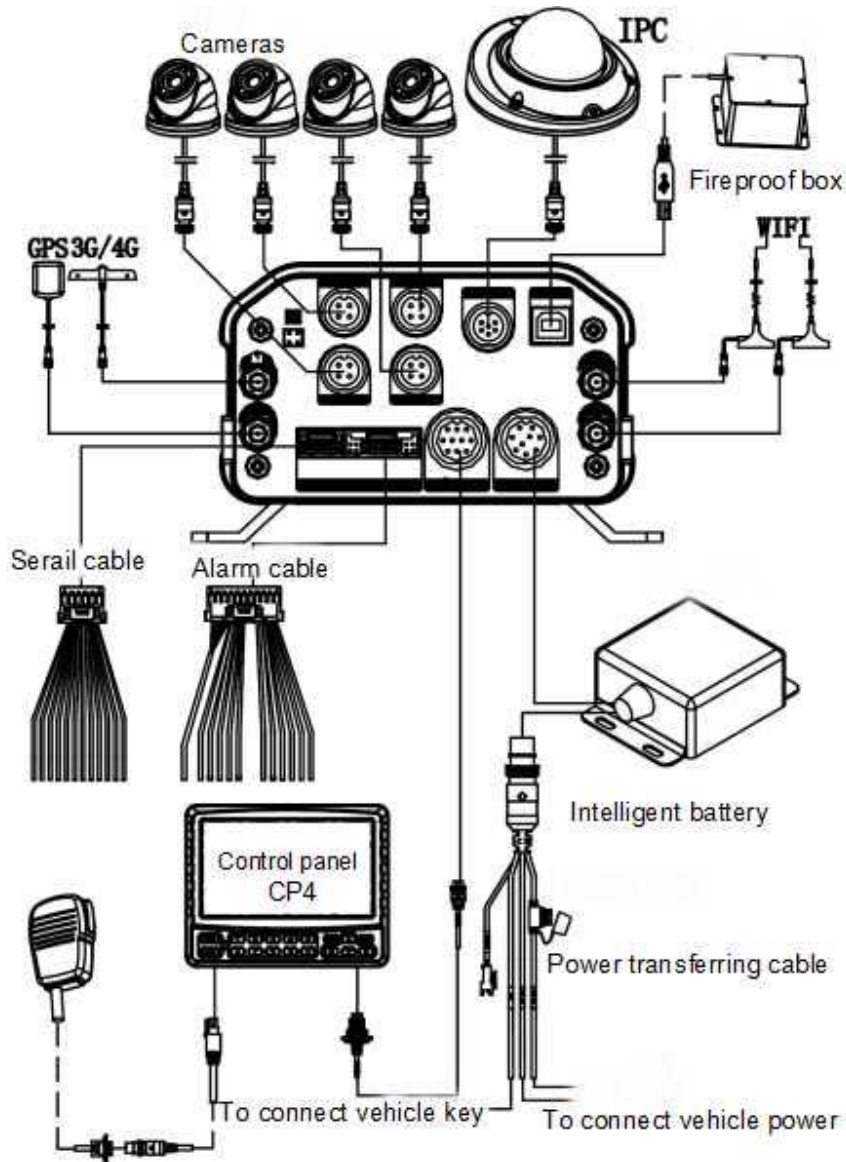
1.5. Hard disk installation

Slot slant

1.Pull out hard disk box, get out of 4 screws at the bottom of it.

2.Get the shock absorber. Tear its one side to a certain angle. (Get rid of both rubbers of shock absorber when the thickness of hard disk is 9mm. Keep the rubbers when it is 7mm.)

3.Slot the hard disk slant into the shock absorber.

4.Press the four angels tightly to the shock absorber.

5.Connect SATA cable to hard disk. Put the shock absorber into the shelf. (Installation shelf is upward.)

6.Push the shelf into the box and screw 4 screws.

Correct installation VS Wrong Installation：
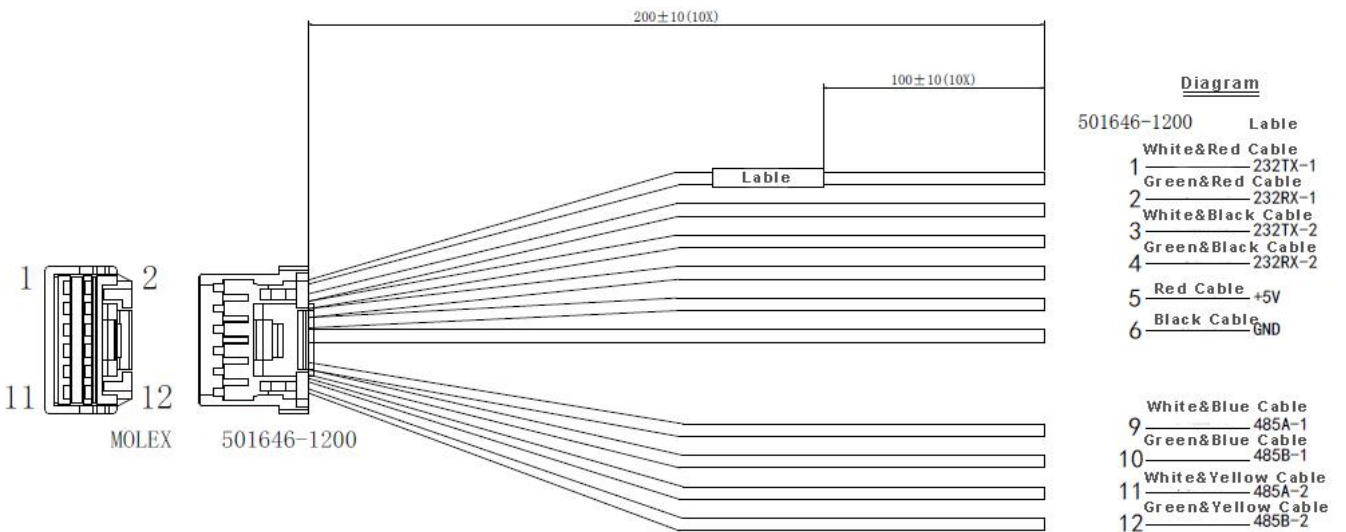
Correct Installation
(Shelf is upward.)

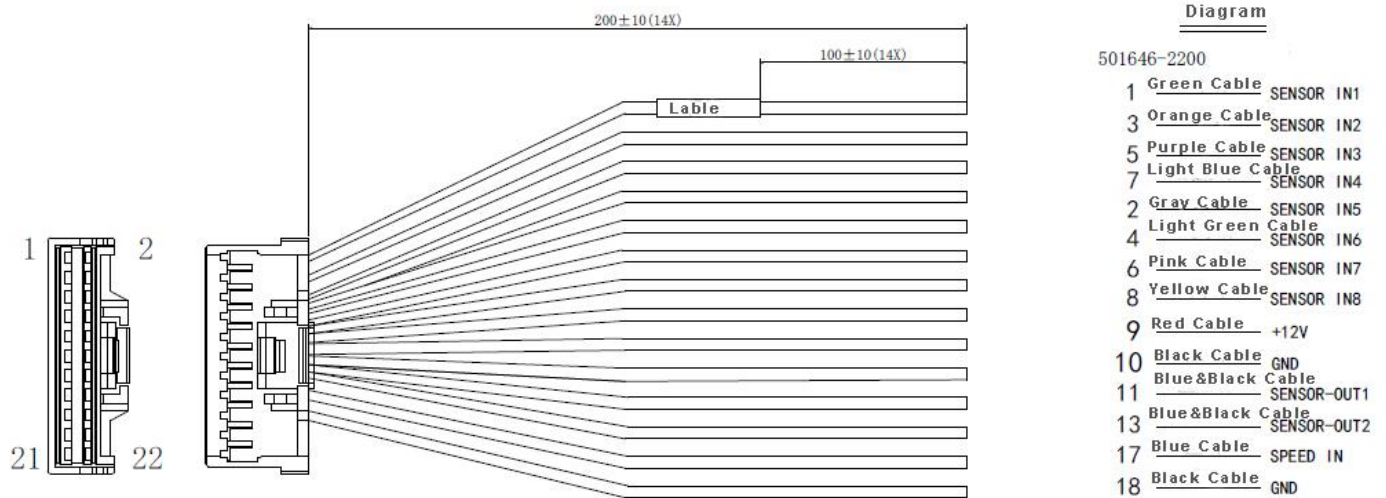Wrong Installation
(Hard disk is upward.)

With heating function

Without heating function

1.6. Definition and pictures of external cables

Serial port definition

200±10(10X)

100±10(10X)

Lable

Diagram

501646-1200   Lable

1	White&Red Cable	232TX-1
2	Green&Red Cable	232RX-1
3	White&Black Cable	232TX-2
4	Green&Black Cable	232RX-2
5	Red Cable	+5V
6	Black Cable	GND
9	White&Blue Cable	485A-1
10	Green&Blue Cable	485B-1
11	White&Yellow Cable	485A-2
12	Green&Yellow Cable	485B-2

1   2
11   12
MOLEX   501646-1200

Alarm cable definition

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 shutdown in ignition switch mode?

Please follow below steps to check it:

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 shutdown if it is still during recording time of the task table.

7) How to install the WIFI antenna?

The antenna must be installed on unobstructed place of the roof, and be fixed with glue.

8) The device cannot be shut down when in ignition ON/OFF mode？

Check if the ACC signal wiring is correct and if there is voltage for ACC signal line after the key is turned off .

If you have set timing recording, and at the current time it is still in task recording, the device may be impossible to be shut down.

9) GPS anomaly.

Check if the GPS antenna is properly installed. There is silkscreen GPS identification on the GPS antenna pedestal on the back of the MDVR device. Check if the antenna connector is blocked and make sure the antenna connector not be covered by other things.

Trees block, being inside the tunnel, driving near tall buildings or viaduct, thunderstorms and other environmental effects may also cause to receive no GPS signal or error signal.

10) No voice in video files.

See if there is an external microphone, or if the camera cannot capture audio;

Enter into the video channel settings, then check if the audio is open;

Ensure video input and normal recording, on which the audio recording channels must be based.

11) The device doesn't record.

Make sure the storage part is installed and of fine contact, the data can be read on PC, and the storage device is not formatted.

Check if there are video signal input to the main device, and whether there are video images in the channel pictures.

12) Why has the MDVR device always been in a state of restart?

Check whether the MDVR device voltage is insufficient. If the device voltage does not reach the start voltage, the device will restart.

Hard disk or SD card may cause the MDVR device unable to start. You need to remove the storage

device and then boot up to verify whether it is caused by the storage device.

13) Why the MDVR device cannot start?

Check the device input power to see if the power wiring is correct, if there is ground wire connected back to the battery, and if the fuse of the power wire is n good condition;

Check whether there is voltage (more than 7V) on power input ACC signal wire;

Check whether the hard disk key is turned off.

14) What is the log in user name and password for new device?

The default user name and password are both "admin". The device password can be set as empty.

15) In the ON/OFF of basic settings, the low voltage protection is 8V, why?

After testing, when the battery is lower than 8V, the voltage will lower down quickly. Therefore the lowest voltage is set to be 8V. When it is lower than 8V, the MDVR device will recognize it as external power-off and then enter into shutdown state.