

User Manual For Menzel MVSS MZ3H-6AHD-2IPC (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

MZ3H-6AHD-2IPC 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

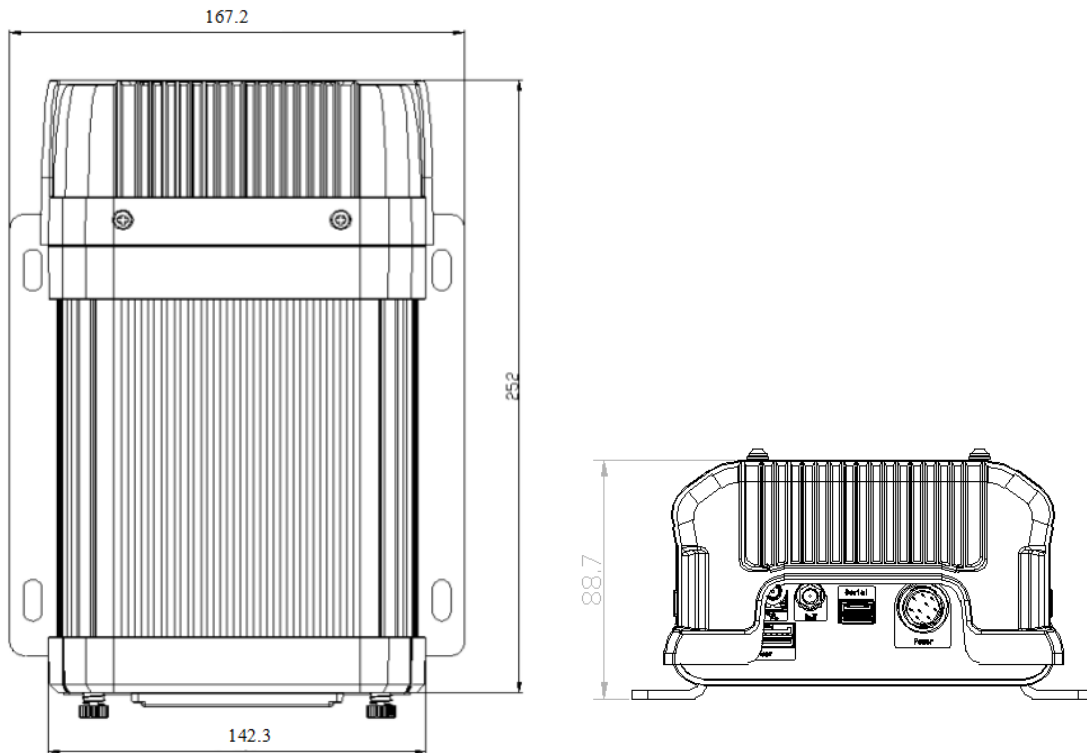
Technical Items		Technical Indicators	
Product Model		MZ3H-6AHD-2IPC	
Function Overview		Preview, Recording, Playback, Network, Locating	
System	Operating System	Linux	
	Control Mode	CP4, mouse, Easy Check, network(3G/4G/WIFI)	
Video	Input	AHD*6+IPC*2+AI kit	
	Output	2 CH (CP4+VGA)	
	Total Resource	6x720P@15fps+2x1080P@30fps 4x1080P@12fps+2x1080P@30fps 4x720P@30fps+2x1080P@30fps	
	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	<p>PAL: 1080P(1920X1080), 720P(1280X720), WD1(928X576), WHD1(928X288), WCIF(464X288), D1(704X576), HD1(704x288), CIF(352x288)</p> <p>NTSC: 1080P(1920X1080), 720P(1280X720), WD1(928X480), WHD1(928X240), WCIF(464X240), D1(704x480), HD1(704x240),CIF(352x240);</p> <p>Digital: 1080P(1920X1080), 720P(1280X720)</p>
	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	<p>2 x 6-pin DIN JACK (10/100M PON port, power supply)</p> <p>2 x 6-pin DIN JACK (10/100M Network port, no power supply)</p>
Locating	GPS	Location tracking, speed detection and time sync
Sensor	G-Sensor	Built-in 6-axis inertial sensor

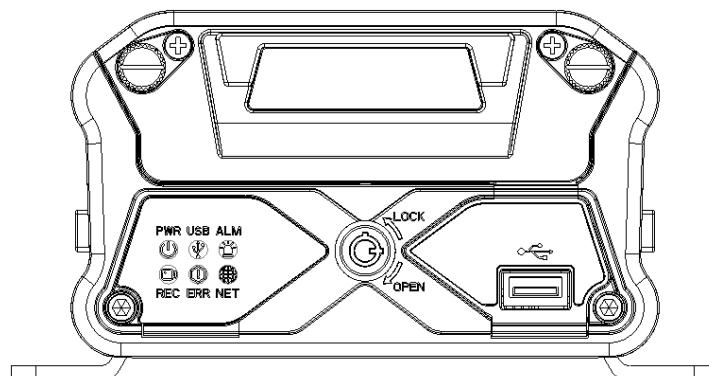
Storage	HDD/SSD	1 x2.5"SATA HDD or SSD, thickness 7mm/9.5mm/15mm, support hard disk heating
	SD	Support SDXC 32GB/64GB/128GB/256GB, plug and play
Interface	USB	1 x USB2.0(Type A) + 1 x USB2.0(Type B), hot swap
	SD	1 x SD slot
	SIM	1 x SIM slot
	Serial	2 x RS232, 1 x RS485, 1 x CAN
	I/O	8 inputs, 2 outputs
	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	6.75W (not include cameras, screen and HDD)
	Standby Power Consumption	≈0W
Physical characteristics	Dimension(mm)	252x167.2x88.7 (with bracket and rear shield)
	Weight (KG)	2.2KG (not include HDD)
Environment	Operating Temperature	-40°C ~+70°C (with heating and no HDD) -40°C~ +55°C (with heating and HDD)
	Operating Humidity	8%-95% (No condensation)

1.3. External interface

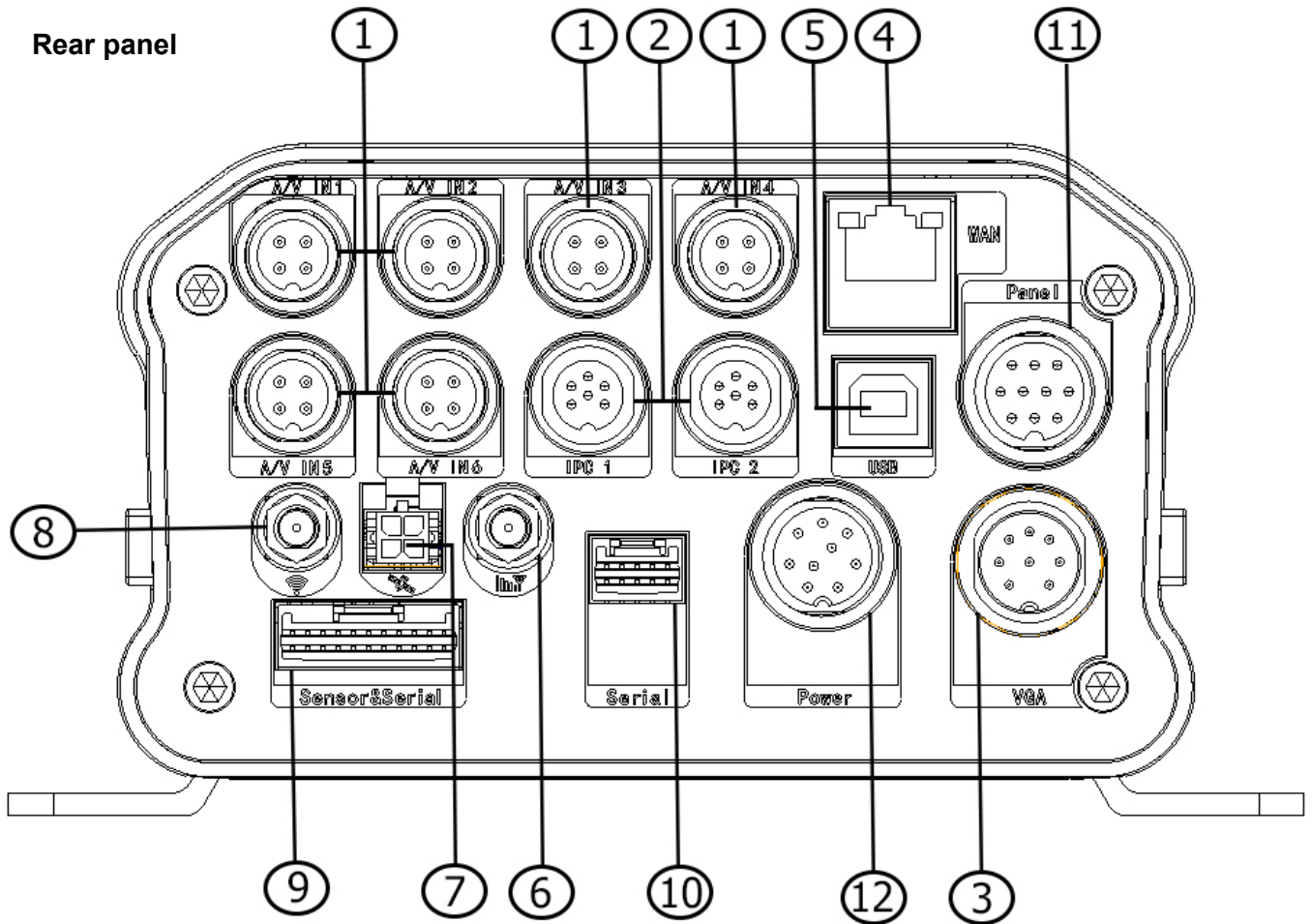
Dimension (Unit: mm)






Front panel

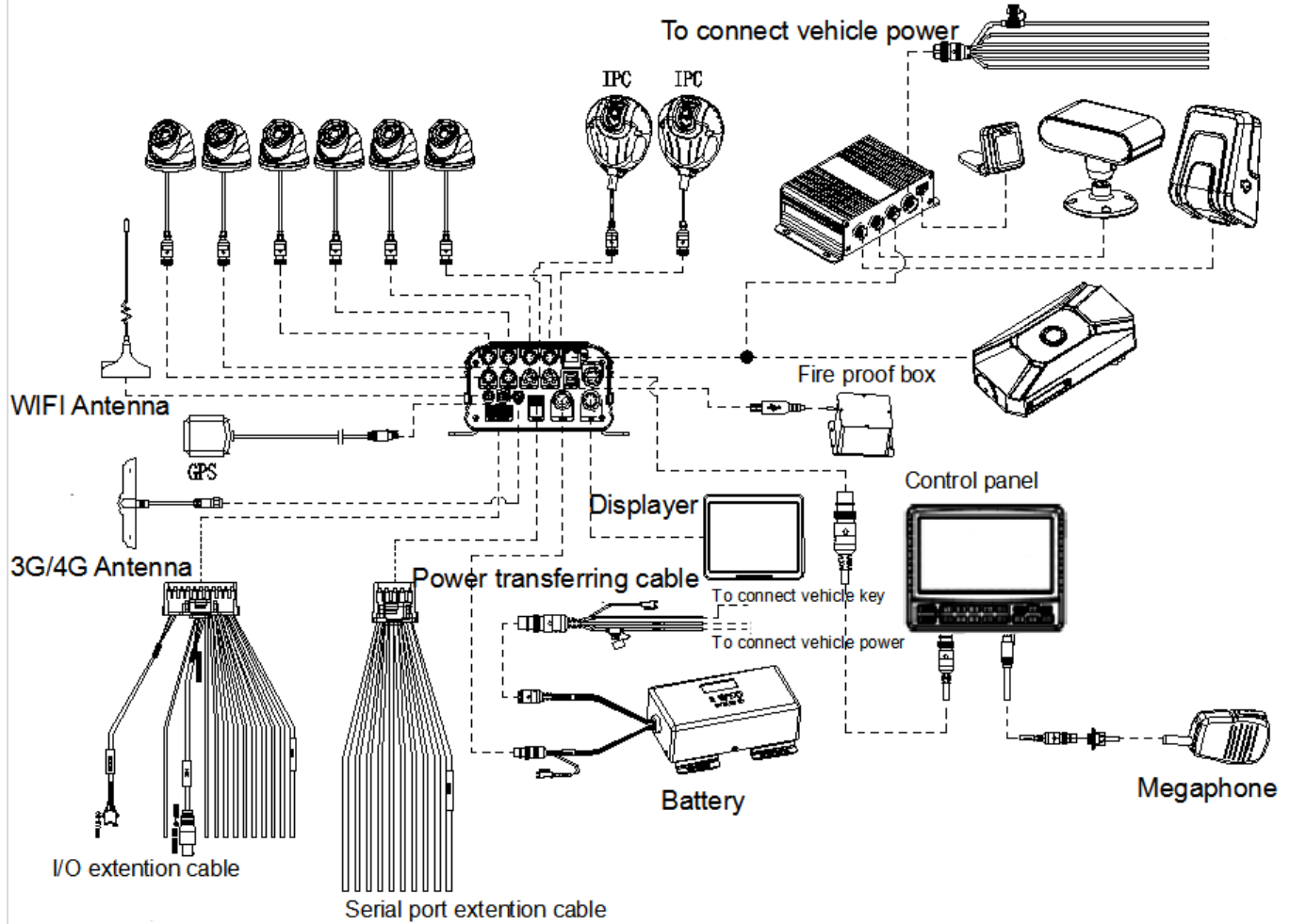


Rear panel



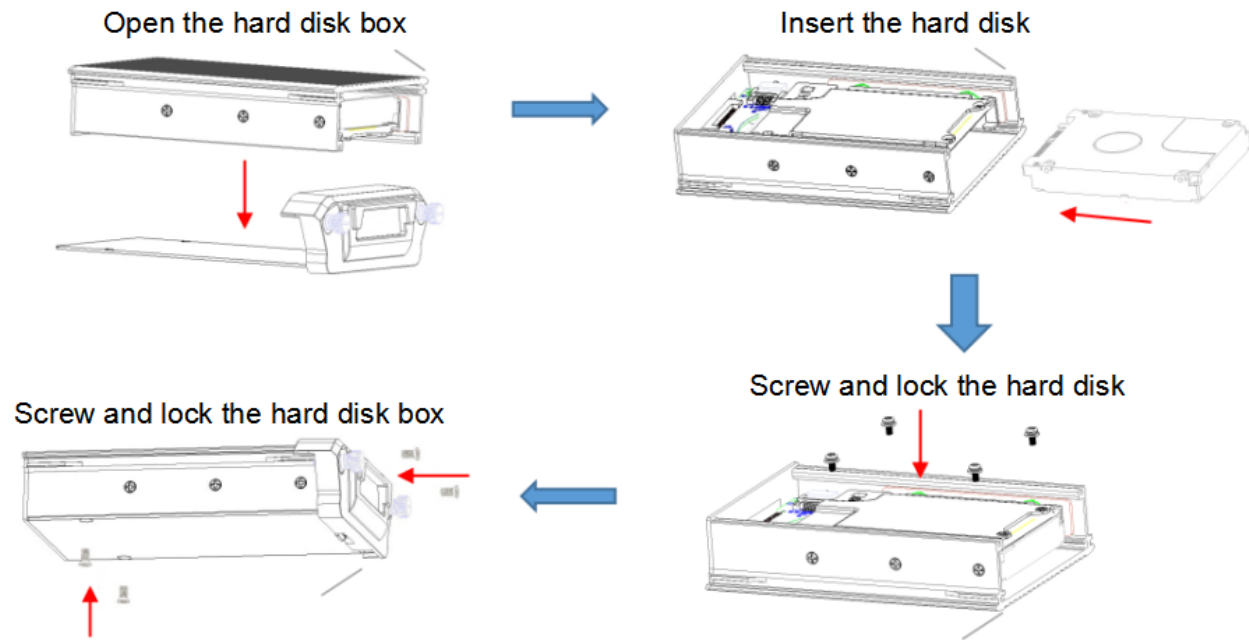
Serial No.	Print	Description
1	A/V IN1~6	Analog audio/video input 1~6
2	IPC1~2	IPC A/V input 1~2
3	VGA	VGA video interface
4	WAN	100Mbps network interface
5	USB	USB 2.0 interface (Type B)
6		3G/4G antenna interface
7		GPS antenna interface
8		WiFi antenna interface
9	Sensor & Serial	Sensor & serial interface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

1.4. System diagram



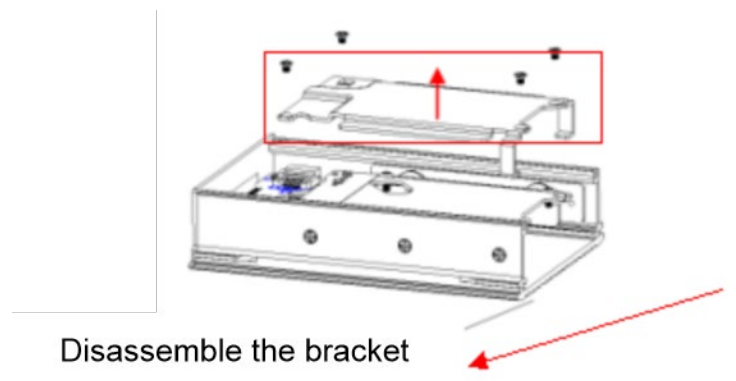
1.5. Hard disk installation

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



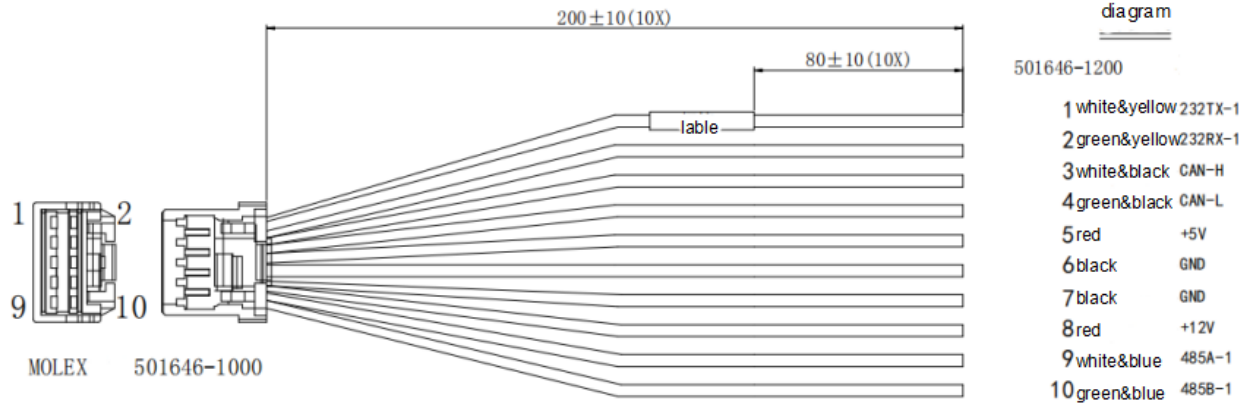
The procedure to install the hard disk of 15mm

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

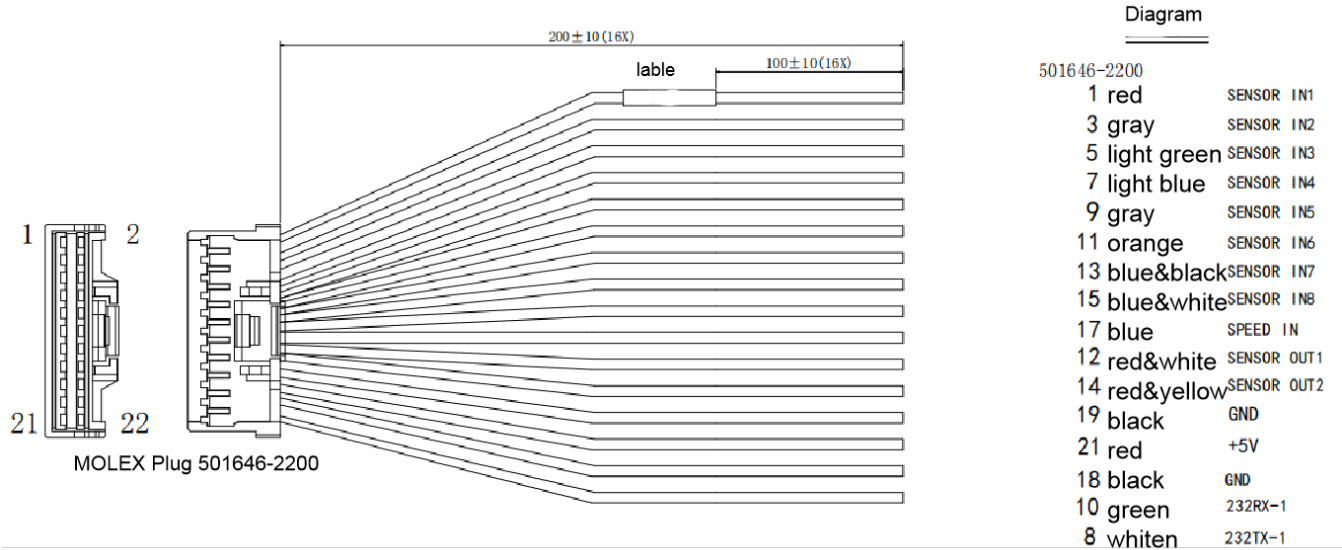


1.6. Definition and pictures of external cables



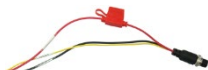
Serial port definition



Alarm cable definition



Standard accessories

Accessories	Description	Quantity	Accessories	Description	Quantity
	Vehicle fuses (7.5A and 15A)	2		MDVR key	1
	9 pin aviation power input wire	1			

Optional accessories

Accessories	Description	Accessories	Description
	UPS		panic panel
	Wi-Fi to laptop		Back up touch screen
	Disk reader		A/V OUT cable
	Fire proof box (Black Box)		Serial connection box
	Megaphone		Serial alarm wire
	Built in 3G/4G module and Antenna		GPS module and Antenna
	Built-in WIFI module and Antenna		PTZ Camera

Software

Live view

- Real-time video
- Real-time location
- Adjustable bandwidth to make sure video transmission is fluent



Real-time alarm

- View real-time alarm
- Emergency alarm auto download



Evidence

- Export evidence automatically
- Rapid evidence search
- Easy evidence management



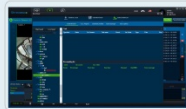
Playback

- Local video playback
- Remote data playback



ADS

- Auto download by different categories
- AP management balance technology
- Auto adaptive network technology



One key alarm



Trigger alarm



Auto pops up real-time video



Push message



Evidence report



Auto download alarm video



Platform handling and driver notify

Auto download



Create download task

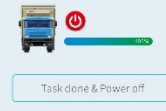


Task list of occupation detect

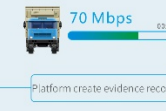


Waiting 20 mins

Waiting 36 mins



Task done & Power off



Platform create evidence record

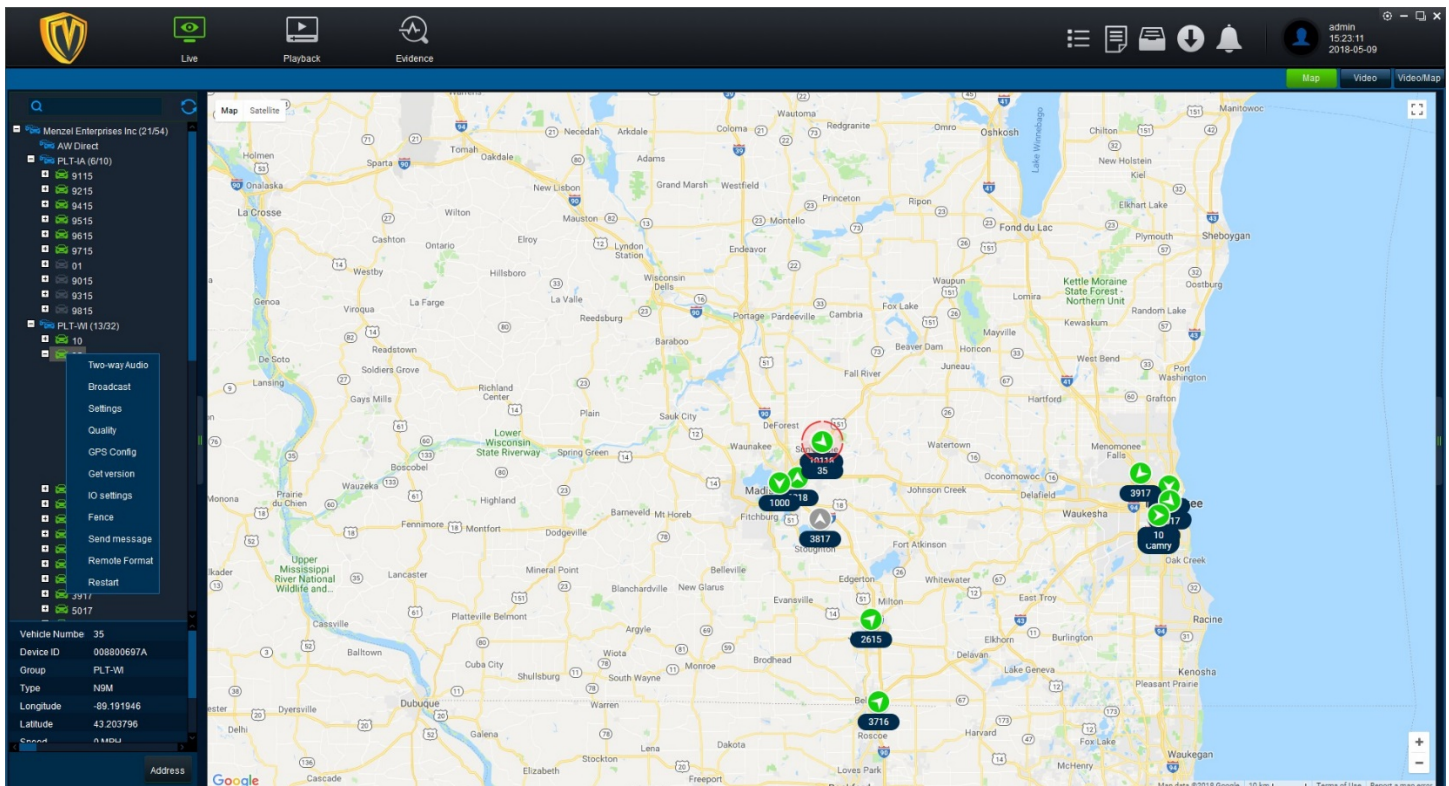
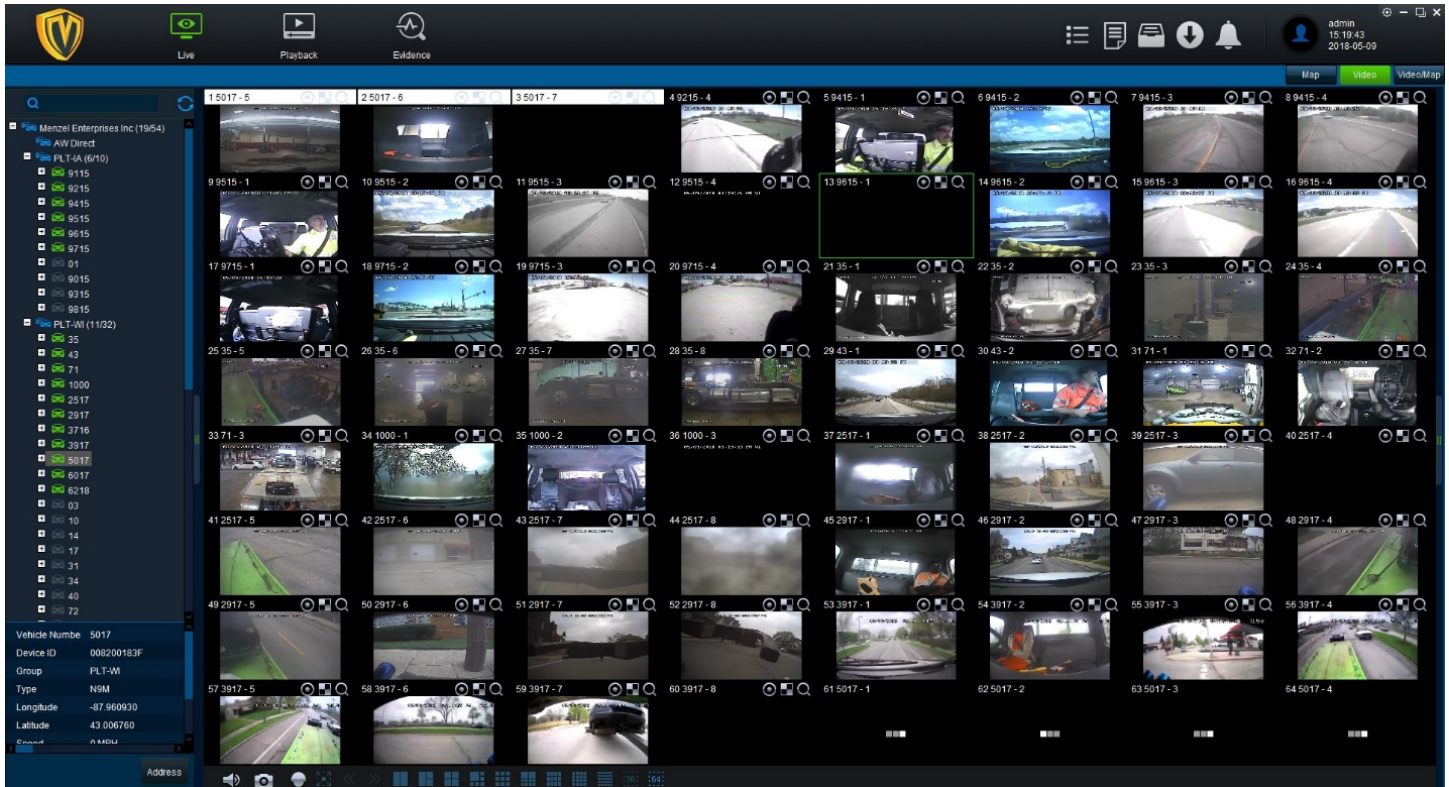


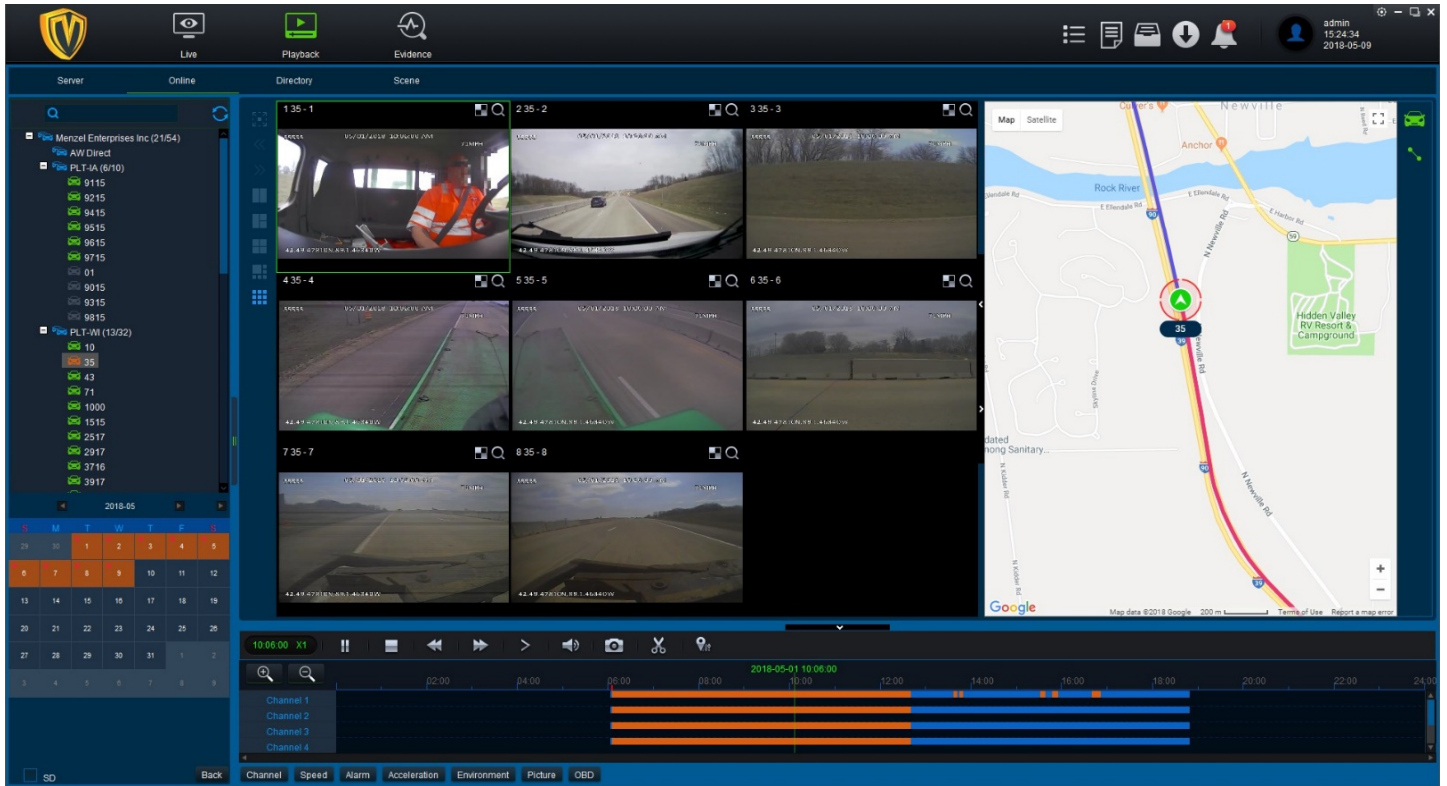
Awake sleeping device



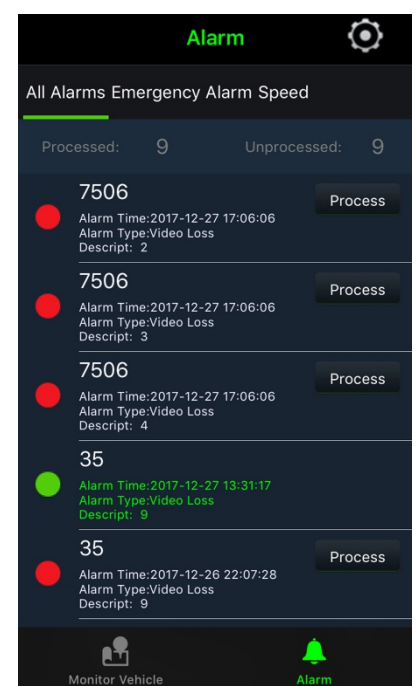
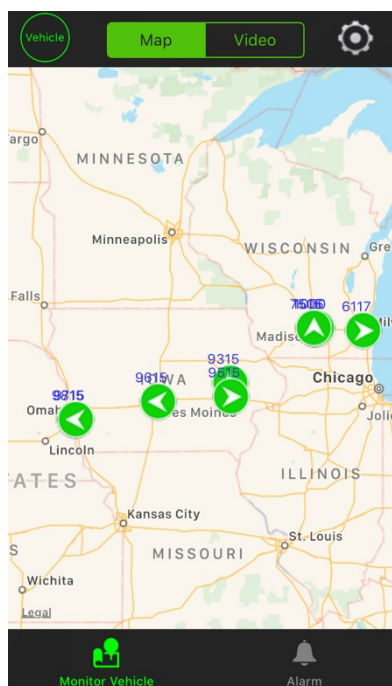


Desktop Software:





Apps IOS & Android:



**LIVE
STREAM**

GPS

ALERTS

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?

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 shut down 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 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 in 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 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 shutdown state.





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WHAT DOES THIS WARRANTY COVER?

This Limited Warranty covers defects in materials and workmanship of the hardware components of our products, including, without limitation, the MZ3, MZ5, and MZ7 (each a “product”) for the Warranty Period (as defined below).

WHAT DOES THIS WARRANTY NOT COVER?

This Limited Warranty does not cover any damage due in whole or in part to: (a) transportation; (b) storage; (c) improper use; (d) failure to follow the product instructions or to perform any preventive or required maintenance; (e) alterations, modifications, repairs or servicing made by someone other than our authorized technicians; (f) normal wear and tear; (g) external causes such as accidents, abuse, water damage, anomalies in the electrical current supplied to the product; (h) extreme thermal or environmental conditions; (i) performance deterioration or damage to the software or hardware caused, or contributed to, by computer viruses, malware or spyware; (j) cost associated with software updates and upgrades relating to enhanced or additional features or performance; (k) software added to the hardware products, third-party software, or



the reloading of software; (l) connectivity, internet, or telephony issues or unavailability; or (m) other actions or events beyond our reasonable control. You are responsible for the proper installation of the product, and we shall have no liability for any claims, damages, defects, or losses caused (in whole or in part) by the faulty or improper installation of the product. This Limited Warranty does not guarantee that the use of the product will be uninterrupted or error-free.

WHAT IS THE PERIOD OF COVERAGE?

This Limited Warranty starts on the date of first purchase by the end user, whether from us our distributor, and lasts for one year (the “Warranty Period”). The Warranty Period is not extended if we repair or replace the product. We may change the availability of this Limited Warranty at our discretion (with notice to our distributor, if you purchased from a distributor), but any changes will not be retroactive.

WHAT ARE YOUR REMEDIES UNDER THIS WARRANTY?

With respect to any defective product during the Warranty Period, we will, in our sole discretion, either: (a) repair the product using either new or refurbished parts, (b) replace such product with a new or refurbished product that is equivalent to the product to be replaced, or (c) refund to you all or part of the purchase price of such product. Any returned or replaced part or product for which a refund is given shall become our property.

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For specific instructions about how to obtain warranty service for your product, you must call (608) 422-4844 or email our Customer Service Department at support@menzeltech.com. In general, you will need to deliver your product in either its original packaging or in equally protective packaging to the address specified by our Customer Service Department. You may also be required to provide a purchase receipt. During your use of the product, and before you deliver your product for warranty service, you shall have sole responsibility for removing any removable storage media and backing up any data, software, or other materials you may have stored or preserved on your product. It is possible that such storage media, data, software or other materials will be destroyed, lost or reformatted during service, and we will not be responsible for any such damage or loss. You must pay for shipping and any insurance, duties and taxes to deliver the product to the address specified by our Customer Service Department and you assume all risk of loss and/or damage to the product until it arrives at the address so designated. We will pay for shipping of the returned product to your address, within the jurisdiction of the first purchase. Shipping, mode, and carrier is at our discretion, and you must request and pay for any variation. We do not pay for insurance, duties and taxes on returned products.

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