



Mobile Digital Hard Disk Recorder 4-776-81

User Manual

Version: V 1.4



WARNINGS

Before using this unit please check the parts list and read this instruction manual thoroughly.

- * **Power Source** -The DVR should be connected to a 12 - 24 volt dc power supply only.
- * **Water and Moisture** - Do not use the DVR where it may be subject to water ingress or excessive moisture. Do not use outside the vehicle unprotected.
- * **Heat** - Do not install the DVR near any direct heat sources.
- * **Ventilation** -The DVR should be situated to allow free circulation of air.
- * **Foreign Material** - Care should be taken so that objects do not fall onto or into, and that liquids are not spilled on the DVR.
- * **Mounting** -The DVR MUST be mounted horizontal and fixed to a strong secure surface.
- * **Service** -The user should not attempt to service this units beyond that described in the operating instructions. There are no user-serviceable parts within the unit.
- * **Data Management** - Ensure storage is checked weekly. Download and backup sensitive data to a secure drive ensuring compliance with GDPR. Format the SD Card (Or HDD) then reinstall.

PACKAGE LIST

- MDVR can support up to 2*2TB(7mm) or 1*4TB(15mm) HDD
- User Manual
- Certificate of approval
- Remote Control (Batteries not included)
- Video Playback and GPS Software provided on CD
- Connecting Cable x 1
- 2 x Key's for HDD/SSD Drive

Note: There will be no additional announcement when the specification or parameters update.

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1 Product Overview

The four-channel /eight –channel /twelve–channel Embedded Digital Hard Disk Video Recorder、 Embedded

Network Hard Disk Video Recorder is designed for car safety. It uses embedded processor and embedded operating system, combined with video / audio compression / decompression, GPS, car recorder, and the capacity hard disk storage technology to confirm the high intelligence and high stability. Widely used for bus, ship, train, and other areas of security.

2 Basic functions

2.1 Audio/Video Compression Format

The video adopts latest ISO14496-10 (H.264) video compression technology, high compression rate to ensure a better image quality under less storage; the audio adopts G711A compression method, output a better voice with low distortion.

2.2 Audio/video recording mode

- Compression format

The audio video data are stored through special files, encrypted to prevent data loss under frequent power failure circumstances.

- Compression stream

Image quality with 8 levels and adjustable

4/8 Channel 960H: (192Kbps-2.0Mbps/channel)

4 Channel 1080P/960P/720P: (380Kbps-8.0Mbps/channel)

8 Channel 720P: (380Kbps-8.0Mbps/channel)

8 Channel 1080P: (380Kbps-8.0Mbps/channel)

12 Channel 720P: (380Kbps-8.0Mbps/channel)

12 Channel 1080P: (380Kbps-8.0Mbps/channel)

to meet different requirements.

- Storage

2.5 inch SATA hard disk, 2TB maximum.

2.3 Image quality when monitoring, recording, playback

- Resolution Monitoring:

4/8 Channel 960H: 960*576/CH; Recording: 960*576/CH; Playback: 960*576/CH

4 Channel 1080P/960P/720P: 1080P/960P/720P /CH; Recording: 1080P/960P/720P /CH;
Playback: 1080P/960P/720P /CH

8 /12Channel 720P: 1280*720/CH; Recording: 1280/720/CH; Playback: 1280*720/CH

8/12 Channel 1080P: 1920*1080/CH; Recording: 1920*1080/CH; Playback:1920*1080/CH

- Frequencies

The monitoring, recording and playback are all with 25fps or 30fps

- Horizontal resolution for monitoring

4/8 Channel 960H: 960*576 / channel

4 Channel 1080P: 1920*1080 / channel

8 /12Channel 720P: 1280*720/channel

8 /12Channel 1080P: 1920*1080 / channel

- Horizontal resolution for playback

4/8 Channel 960H: 960*576 / channel

4 Channel 1080P: 1920*1080 / channel

8 /12Channel 720P: 1280*720/channel

8/12 Channel 1080P: 1920*1080 / channel

2.4 Total Resources

4 Channel 960H:

- Support 4 channels 960H (960*576) simultaneous recording, total 120fps.

-
- Support 4 channels 960H (960*576) simultaneous playback, total 120fps.

8 Channel 960H:

- Support 8 channels 960H(960*576) simultaneous recording, total 240fps.
- Support 8 channels 960H(960*576) simultaneous playback, total 240fps.

4 Channel AHD 720P:

- Support 4 channels 720P (1280*720) simultaneous recording, total 120fps.
- Support 4 channels 720P (1280*720) simultaneous playback, total 120fps.

8 Channel AHD 720P:

- Support 4 channels 720P (1280*720) simultaneous recording, total 240fps.
- Support 4 channels 720P (1280*720) simultaneous playback, total 240fps.

4 Channel 1080P/960P/720P:

- Support 4 channels 1080P(1920*1080) simultaneous recording, total 120fps.
- Support 4 channels 1080P(1920*1080) simultaneous playback, total 120fps.

8 Channel 1080P:

- Support 8 channels 1080P (1920*1080) simultaneous recording, total 240fps.
- Support 8 channels 1080P (1920*1080) simultaneous playback, total 240fps.

12 Channel 1080P:

- Support 12 channels 1080P (1920*1080) simultaneous recording, total 360fps.
- Support 12 channels 1080P (1920*1080) simultaneous playback, total 360fps.

2.5 Alarm pre-recording

- Alarm video mode, alarm pre - recorded more than 5s video, audio, positioning data.

2.6 Full duplex

- Under full loading status, users can index, playback the recorded data with no frame loss.

2.7 Malfunction alarming function

- When the DVR fail to work, the alarm switch is ON, showing alarm information for 5 minutes at least.

2.8 Self-test the status and self-recovery

- When in working status, the “RUN” indicator will constantly flashes and check the device. Recovery will take no more than 3 minutes when device crashes.

2.9 Front-end device control and multi-channel monitor and switch

- The MDVR can control PTZ cameras through default protocols (RS-485, PELCO-D, 9600 baud rate),

4 Channel 960H: 4 channels real time, switchable to monitoring mode.

8 Channel 960H: 8 channels real time, switchable to monitoring mode.

4 /8Channel AHD 720P: 4 channels real time, switchable to monitoring mode.

4 Channel 1080P/960P/720P: 4 channels real time, switchable to monitoring mode.

8 Channel 1080P: 8 channels real time, switchable to monitoring mode.

12 Channel 1080P: 12 channels real time, switchable to monitoring mode.

2.10 Networking

- Combining the CMS software. With built-in 3G/4G module (not included), the car can be monitored remotely.

2.11 Data backup

- To backup the HDD data into computer via USB port and eSATA port .
- Downloading the HDD data remotely through network.
- Transfer the HDD data to computer, download and play the media via our unique DVR player software. Users can also switch the HDD files into universal AVI format to make it workable in other players.

2.12 Authority, encryption, data safety

- Enter the MDVR by password, default for “6666”. Data is stored in a special file system to ensure it's encrypted and safe.

2.13 Log function

- The log includes the alarming and malfunction information, stored into HDD. It can be checked via computer.

3 Features

3.1 Operating system

- Embedded Linux operating system, high stable, free from virus.
- English/Chinese/Russian/ Portuguese menu switchable.
- Graphical user interface.

3.2 Compression format

- H.264 format: more excellent frame rate, quality image output.

3.3 Monitoring and Recording

- Monitor:

4 /8 Channel 960H: 960H (960*576)

4/8 Channel AHD 720P: 4/8CH AHD 720P (1280*720)

4/8/12 Channel 1080P: 1080P (1920*1080)

- Record:

4 Channel 960H: PAL 100fps, NTSC 120fps, full real-time 4CH 960H recording.

8 Channel 960H: PAL 200fps, NTSC 240fps, full real-time 8CH 960H recording.

4 Channel AHD 720P: PAL 100fps, NTSC 120fps, full real-time 4CH 720P recording.

8 Channel AHD 720P: PAL 200fps, NTSC 240fps, full real-time 8CH 720P recording.

4 Channel 1080P/960P/720P: PAL 100fps, NTSC 120fps, full real-time 4CH 1080P recording.

8 Channel 1080P: PAL 200fps, NTSC 240fps, real-time 8CH 1080P recording.

12 Channel 1080P: PAL 300fps, NTSC 360fps, real-time 12CH 1080P recording.

- Record mode: by alarm, schedule, manual, *motion detection.

* Motion Detection: The DVR can be set to sleep with the vehicle unattended. 'Delay Time' under 'system settings' must be set for this feature to be operational. The use of a PIR is required to prompt the DVR to wake up. This is connected to Alarm Input 4 for 0-776-80 and Alarm Input 8 for 4-776-81.

If the PIR is triggered by movement the DVR will wake up and record for 30seconds and until no further movement is detected. This will create an alarm record on the system. See 0-876-85 and 0-743-23

- Support

4 Channel 960H: 4CH video and 4CH audio meanwhile recording.

8 Channel 720P/ 960H/ 1080P: 8CH video and 8CH audio meanwhile recording.

4Channel AHD 720P: 4CH video and 4CH audio meanwhile recording.

8 Channel AHD 720P: 8CH video and 8CH audio meanwhile recording.

4 Channel 1080P/960P/720P: 4CH video and 4CH audio meanwhile recording.

12 Channel 1080P/960P/720P: 12CH video and 12CH audio meanwhile recording.

- Record image quality: 8 levels adjustable.
- Video recorded in special file system to ensure lifespan and safety of HDD.
- Reliable evidence with unchangeable audio/video data.

3.4 Index and Playback

- Index and playback by time.
- Support :

4 Channel 960H: 4CH video, 1CH audio (any channel can be chosen),

8 Channel 960H: 8CH video, 1CH audio (any channel can be chosen) ,

4 Channel AHD 720P: 4CH video, 1CH audio (any channel can be chosen),

8 Channel AHD 720P: 8CH video, 1CH audio (any channel can be chosen),

4 Channel 1080P/960P: 4CH video, 1CH audio (any channel can be chosen),

12 Channel 720P: 12CH video, 1CH audio (any channel can be chosen),

index and playback at the same time, support amplifying in one channel.

- Data only played by DVR playback software.

3.5 HDD storage and data backup

- Support 2.5inch HDD max 2TB.
- The HDD data can be backed up via PC software.
- Support USB backup.

3.6 Control

- Dual MCU control, to ensure MDVR stability.
- Support remotely control by remote controller.

3.7 Others

- Upgrade through USB , easy to maintain.
- Protect by password, to avoid data damage.
- Delayed shutdown: default for 5s, adjustable.
- Anti-pulse and low voltage protection.
- Real-time timer.
- Anti-shock for the PCB panel and parts.
- Watch dog function to avoid system crush.

4 Technical Parameters

NOTE:MDVR support analog, AHD, CVI and TVI, you can choose the input mode in menu setting.

Device parameters	DVR Performance index		
Model	4CH MDVR	8CH MDVR	12CH MDVR
Product Name	4 Channel Mobile DVR(HDD Storage)	8 Channel Mobile DVR(HDD Storage)	12 Channel Mobile DVR(HDD Storage)
Operation System	Linux		
Operation Interface	Graphical Interfaces, Chinese/English/Portuguese/Russian/French/Turkish optional		
File System	TES Proprietary Format		
System Privileges	User Password		
Video Input	4*1080P/720P/960H	8 *1080P/720P/960H	12 *1080P/720P/960H
Video Output	1 Channel PAL/NTSC Output, 1.0Vp-p, 75Ω, Pin Aviation Connector		
	1 Channel VGA Support 1920*1080 , 1280*720 , 1024*768 Resolution		
Video Display	1 Or 4 Screen Display	1 /4 /8 Screen Display	1 /4 /12 Screen Display
Video Standard	PAL:25frames/Sec;NTSC:30frames/Sec		
System Resources	PAL:100 Frames; NTSC:120 Frames	PAL:200 Frames; NTSC:240 Frames	PAL:300 Frames; NTSC:360 Frames
Audio Input	4 Channels Independent Input 600Ω	8 Channels Independent Input 600Ω	12 Channels Independent Input 600Ω
Audio Output	1 Channel(4 Channels Can Be Convert Freely)	1 Channel(8 Channels Can Be Convert Freely)	1 Channel(12 Channels Can Be Convert Freely)
Basic Output Level	1.0—2.2V		
Distortion Plus Noise	≤-30dB		

Recording Mode	Sound And Image Synchronization		
Audio Compression	G711A		
Image Compression	H.264 Fixed Code Stream		
Image Format	4*1080P/720P/960H	8*1080P/720P/960H	12*1080P/720P/960H
Video Stream	192K-4.0Mbit/s		
Video Taking Up Of Hard Disk	85M-1800MByte/hour		
Playback Resolution	1 or 4*1080P/720P	1 or 4*1080P/8*720P	1 or 4*1080P/12*720P
Audio Bitrate	4KByte / s / channel		
Audio Taking Up Of Hard Disk	28MByte / hour / channel		
HDD Storage	2 * 2.5 inch 7mm (H) SATA HDD, Support Max 4TB		
SD card	1*SD, Support MAX 128GB		
Image Quality	14 Grades to Choose		
Alarm input	12 Channels Independent Input. High Voltage Trigger		
Analog alarm input	2 channels analog alarm input		
Alarm out	3 Channels Independent output(2 relay,1 DC 12v output)		
Move Detect	Available		
Host Access	Can Expand two For USB Disk Backup(front USB port is USB3.0)		
E-SATA	Support backup files via E-SATA port		
Wire line Access	Can Expand One RJ45 Ethernet Port		
Wifi	Can Expand One Wifi Module Inside		
3G/4G	Can Expand two FDD-LTE/TD-LTE/WCDMA/CDMA2000 Modules Inside		
GPS	Can Expand GPS/GNOLASS Module Inside		
RS232	3*RS232,they are convenient to connect with other vehicle equipment		
RS485	2*RS485, they are convenient to connect with other vehicle equipment or PTZ Camera		

Pulse speed	One channel pulse speed		
Intercom	Can Expand Intercom Module Inside		
G-Sensor	Can Expand G-Sensor Module Inside		
Canbus	Can Expand 2*Canbus Module Inside		
Amplicate Interface	Support 2 amplifier, 1 Inside bus, 1 Outside bus(default non-standard, Need to select O function)		
Power Consumption	DC8-36V 5% ≤12W		
Working Temperature	-40℃ ~ +70℃ ≤80%		
Clock	Built-In Clock, Calendar		
Product Size	235(L)*190(W)*80(H)mm (with Holder)		
Product Weight	3.0KG(without HDD)	3.2KG(without HDD)	3.4KG(without HDD)
Package	Each In a Box, 5 sets/Canton		
Box Size	243(L)*190(W)* 80(H)mm		
Carton Size	650(L)*375(W)* 255(H)mm		
Carton Weight	17kgs/ 18kgs (without HDD)		

Device parameters	MNVR Performance index		
Model	4CH MNVR	8CH MNVR	12CH MANVR
Product Name	4 Channel Mobile NVR(HDD Storage)	8 Channel Mobile NVR(HDD Storage)	8AHD+4IPCChannel Mobile

			ANVR(HDDStorage)
Operation System	Linux		
Operation Interface	Graphical Interfaces, Chinese/English/Portuguese/Russian/French/Turkish optional		
File System	TES Proprietary Format		
System Privileges	User Password		
Video Input	4*IPC/1080P/720P	8 *IPC/1080P/720P	8 *AHD+4*IPC/1080P/720P
Video Output	1 Channel PAL/NTSC Output, 1.0Vp-p, 75Ω, Pin Aviation Connector		
	1 Channel VGA Support 1920*1080 , 1280*720 , 1024*768 Resolution		
Video Display	1 Or 4 Screen Display	1 /4 /8 Screen Display	1 /4 /12Screen Display
Video Standard	PAL:25frames/Sec;NTSC:30frames/Sec		
System Resources	PAL:100 Frames; NTSC:120 Frames	PAL:200 Frames; NTSC:240 Frames	PAL:300 Frames; NTSC:360 Frames
Audio Input	4 Channels Independent Input 600Ω	8 Channels Independent Input 600Ω	12 Channels Independent Input 600Ω
Audio Output	1 Channel(4 Channels Can Be Convert Freely)	1 Channel(8 Channels Can Be Convert Freely)	1 Channel(12 Channels Can Be Convert Freely)
Basic Output Level	1.0—2.2V		
Distortion Plus Noise	≤-30dB		
Recording Mode	Sound And Image Synchronization		
Audio Compression	G711A		
Image Compression	H.264 Fixed Code Stream		
Image Format	4*1080P/4*720P	8*1080P/8*720P	12*1080P/12*720P
Video Stream	192K-4.0Mbit/s		
Video Taking Up	85M-1800MByte/hour		

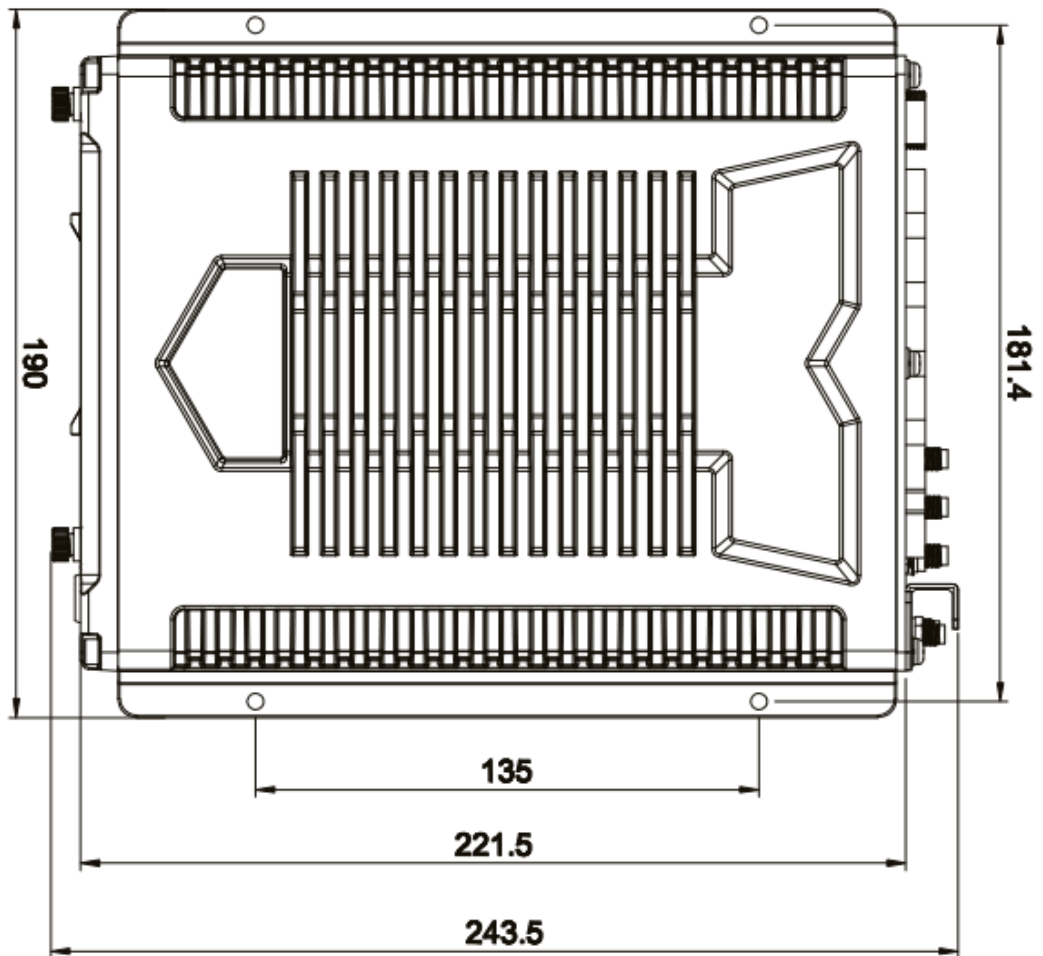
Of Hard Disk			
Playback Resolution	1 or 4*1080P/720P	1 or 4*1080P/8*720P	1 or 4*1080P/12*720P
Audio Bitrate	4KByte / s / channel		
Audio Taking Up Of Hard Disk	28MByte / hour / channel		
HDD Storage	2 * 2.5 inch 7mm (H) SATA HDD, Support Max 4TB		
SD card	1*SD, Support MAX 128GB		
Image Quality	14 Grades to Choose		
Alarm input	12 Channels Independent Input. High/Low Voltage Trigger		
Analog alarm input	2 channels analog alarm input		
Alarm out	3 Channels Independent output(2 relay,1 DC 12v output)		
Move Detect	Available		
Host Access	Can Expand two For USB Disk Backup(front USB port is USB3.0)		
E-SATA	Support backup files via E-SATA port		
Wire line Access	Can Expand One RJ45 Ethernet Port		
Wifi	Can Expand One Wifi Module Inside		
3G/4G	Can Expand two FDD-LTE/TD-LTE/WCDMA/CDMA2000 Modules Inside		
GPS	Can Expand GPS/GNOLASS Module Inside		
RS232	3*RS232,they are convenient to connect with other vehicle equipment		
RS485	2*RS485, they are convenient to connect with other vehicle equipment or PTZ Camera		
Pulse speed	one channel pulse speed		
Intercom	Can Expand Intercom Module Inside		
G-Sensor	Can Expand G-Sensor Module Inside		
Canbus	Can Expand 2*Canbus Module Inside		
Amplicate Interface	Support 2 amplifier, 1 Inside bus, 1 Outside bus(default non-standard, Need to select O function)		
Power	DC8-36V 5% ≤12W		

Consumption			
Working Temperature	-40°C~ +70°C ≤80%		
Clock	Built-In Clock, Calendar		
Product Size	235(L)*190(W)*80(H)mm (with Holder)		
Product Weight	3.0KG(without HDD)	3.2KG(without HDD)	3.4KG(without HDD)
Package	Each In a Box, 5 sets/Canton		
Box Size	243(L)*190(W)* 80(H)mm		
Carton Size	650(L)*375(W)* 255(H)mm		
Carton Weight	17kgs/ 18kgs (without HDD)		

Optional functions:

Basic			Type (Pin Connector)
Aviation	+A: GPS Function	+B: 3G/4G Function	
	+E: Lan Port	+J: Fireproof Box	
	+K: Canbus	+L: Wifi hot-Spot	
	+P: POE	+O: Power amplifier interface	
	+F: SD Card slot	+W: Wifi Function	
	+M: Dispatch Interface	+2 : SIM2 module	

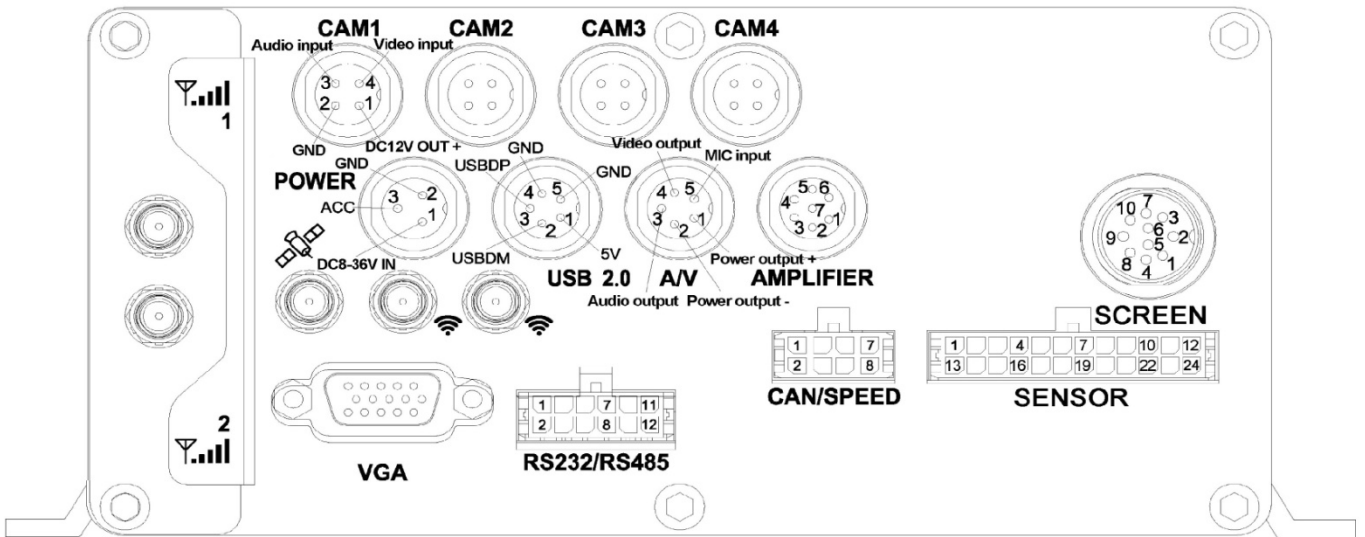
5 Instruction of Installation



The length unit is millimeter

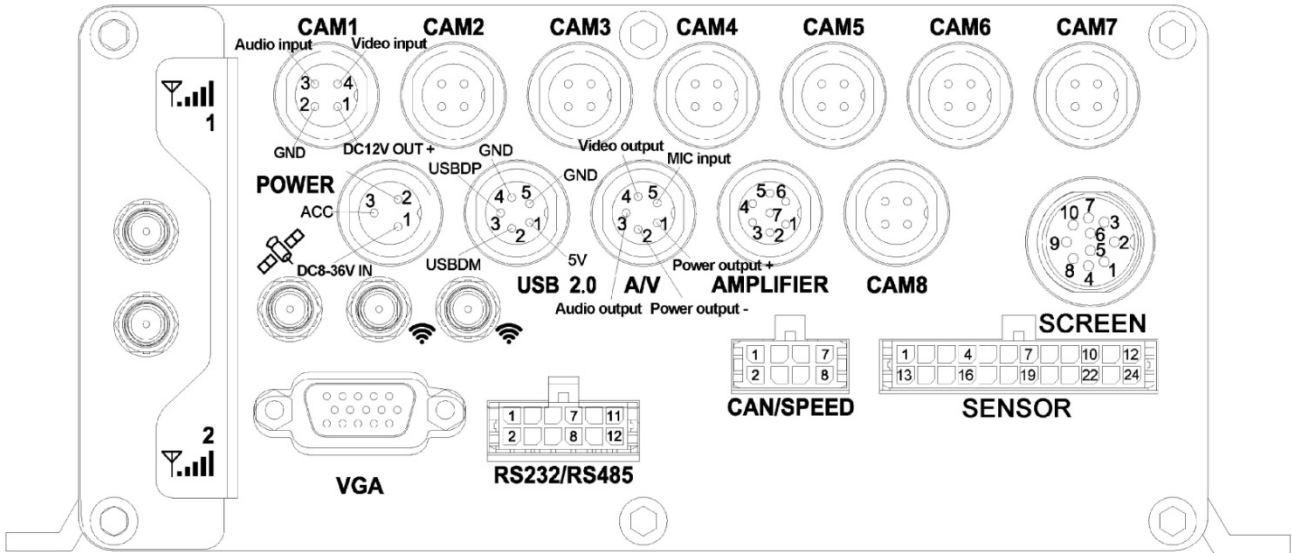
5.1 Instruction of External Interface Wiring

4CH MDVR



RS232/RS485 interface definition:	CANBUS interface definition:	AMPLIFIER interface definition:	SCREEN 10P definition:	SENSOR interface definition:
1 RS232 TX 1	1 canbus+ 1	1 Inside amplifier +	1 NET TX-	1 Alarm input 1
2 RS232 RX 1	2 canbus- 1	2 Inside amplifier -	2 NET TX+	2 Alarm input 2
3 RS232 TX 2	3 canbus+ 2	3 Outside amplifier +	3 AUDIO OUT	3 Alarm input 3
4 RS232 RX 2	4 canbus- 2	4 Outside amplifier -	4 NET RX-	4 Alarm input 4
5 RS232 TX 3	5 Pulse speed +	5 NC	5 NET RX+	5 Alarm input 5
6 RS232 RX 3	6 Pulse speed -	6 NC	6 VIDEO OUT	6 Alarm input 6
7 RS485+ 1	7 DC5V OUT+	7 GND	7 MIC OUT	7 Analog alarm input 1
8 RS485- 1	8 GND		8 RS232 RX	8 DC12V OUT+
9 RS485+ 2			9 RS232 TX	9 Alarm output 1
10 RS485- 2			10 GND	10 Alarm output 2
11 DC12V OUT+				11 Controllable DC12V output
12 GND				12 DC12V OUT+
				13 Alarm input 7
				14 Alarm input 8
				15 Alarm input 9
				16 Alarm input 10
				17 Alarm input 11
				18 Alarm input 12
				19 Analog alarm input 2
				20 GND
				21 Alarm output 1
				22 Alarm output 2
				23 GND
				24 DC5V OUT+

8CH MDVR



RS232/RS485 interface definition:

- 1 RS232 TX 1
- 2 RS232 RX 1
- 3 RS232 TX 2
- 4 RS232 RX 2
- 5 RS232 TX 3
- 6 RS232 RX 3
- 7 RS485+ 1
- 8 RS485- 1
- 9 RS485+ 2
- 10 RS485- 2
- 11 DC12V OUT+
- 12 GND

CANBUS interface definition:

- 1 canbus+ 1
- 2 canbus- 1
- 3 canbus+ 2
- 4 canbus- 2
- 5 Pulse speed +
- 6 Pulse speed -
- 7 DC5V OUT+
- 8 GND

AMPLIFIER interface definition:

- 1 Inside amplifier +
- 2 Inside amplifier -
- 3 Outside amplifier +
- 4 Outside amplifier -
- 5 NC
- 6 NC
- 7 GND

SCREEN 10P definition:

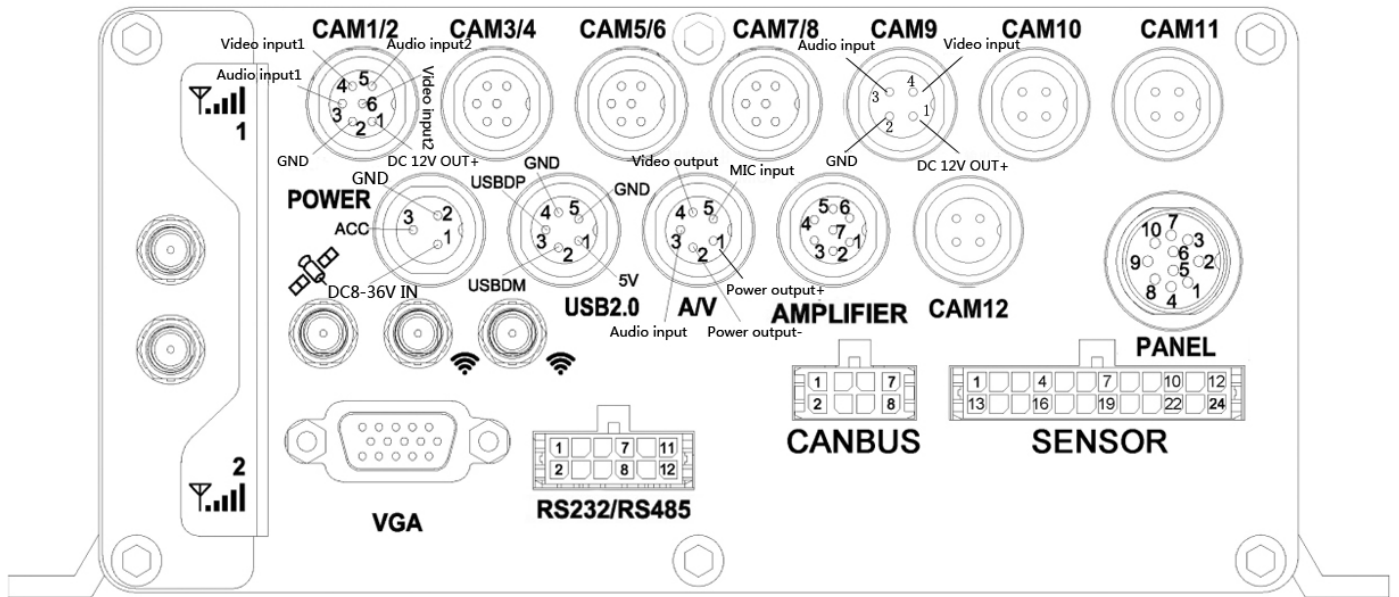
- 1 NET TX-
- 2 NET TX+
- 3 AUDIO OUT
- 4 NET RX-
- 5 NET RX+
- 6 VIDEO OUT
- 7 MIC OUT
- 8 RS232 RX
- 9 RS232 TX
- 10 GND

SENSOR interface definition:

- 1 Alarm input 1
- 2 Alarm input 2
- 3 Alarm input 3
- 4 Alarm input 4
- 5 Alarm input 5
- 6 Alarm input 6
- 7 Analog alarm input 1
- 8 DC12V OUT+
- 9 Alarm output 1
- 10 Alarm output 2
- 11 Controllable DC12V output
- 12 DC12V OUT+

- 13 Alarm input 7
- 14 Alarm input 8
- 15 Alarm input 9
- 16 Alarm input 10
- 17 Alarm input 11
- 18 Alarm input 12
- 19 Analog alarm input 2
- 20 GND
- 21 Alarm output 1
- 22 Alarm output 2
- 23 GND
- 24 DC5V OUT+

12CH MDVR



RS232/RS485 interface definition:

- 1 RS232 TX 1
- 2 RS232 RX 1
- 3 RS232 TX 2
- 4 RS232 RX 2
- 5 RS232 TX 3
- 6 RS232 RX 3
- 7 RS485+ 1
- 8 RS485- 1
- 9 RS485+ 2
- 10 RS485- 2
- 11 DC12V OUT+
- 12 GND

CANBUS interface definition:

- 1 canbus+ 1
- 2 canbus- 1
- 3 canbus+ 2
- 4 canbus- 2
- 5 Pulse speed +
- 6 Pulse speed -
- 7 DC5V OUT+
- 8 GND

AMPLIFIER interface definition:

- 1 Inside amplifier +
- 2 Inside amplifier -
- 3 Outside amplifier +
- 4 Outside amplifier -
- 5 NC
- 6 NC
- 7 GND

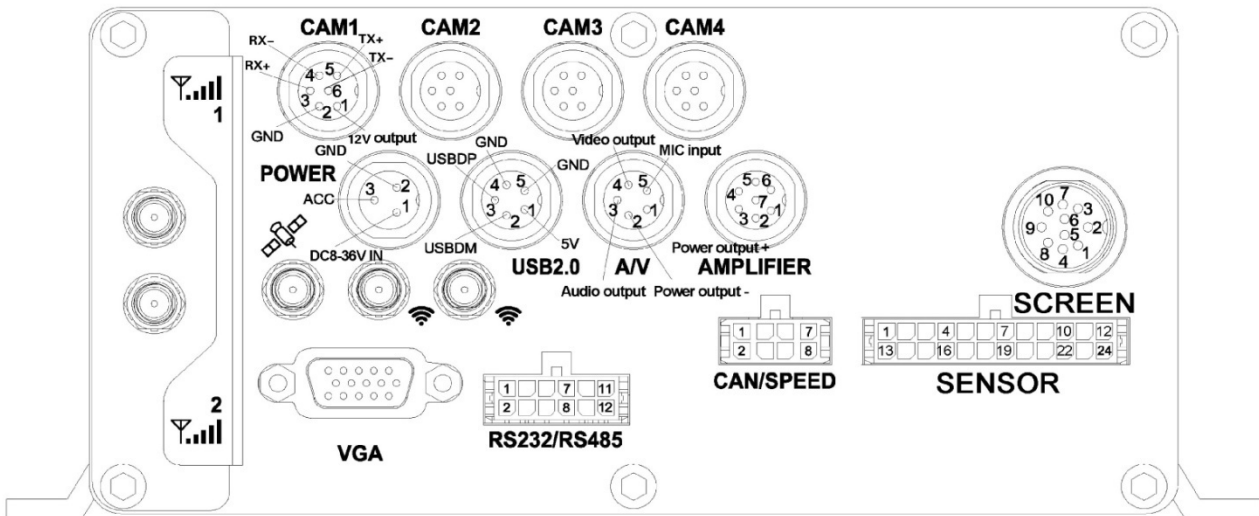
PANEL 10P definition:

- 1 NET TX-
- 2 NET TX+
- 3 AUDIO OUT
- 4 NET RX-
- 5 NET RX+
- 6 VIDEO OUT
- 7 MIC OUT
- 8 RS232 RX
- 9 RS232 TX
- 10 GND

SENSOR interface definition:

- 1 Alarm input 1
- 2 Alarm input 2
- 3 Alarm input 3
- 4 Alarm input 4
- 5 Alarm input 5
- 6 Alarm input 6
- 7 Analog alarm input 1
- 8 DC12V OUT+
- 9 Alarm output 1
- 10 Alarm output 2
- 11 Controllable DC12V output
- 12 DC12V OUT+

4CH MNVR



RS232/RS485

interface definition:

- 1 RS232 TX 1
- 2 RS232 RX 1
- 3 RS232 TX 2
- 4 RS232 RX 2
- 5 RS232 TX 3
- 6 RS232 RX 3
- 7 RS485+ 1
- 8 RS485- 1
- 9 RS485+ 2
- 10 RS485- 2
- 11 DC12V OUT+
- 12 GND

CANBUS interface

definition:

- 1 canbus+ 1
- 2 canbus- 1
- 3 canbus+ 2
- 4 canbus- 2
- 5 Pulse speed +
- 6 Pulse speed -
- 7 DC5V OUT+
- 8 GND

AMPLIFIER interface

definition:

- 1 Inside amplifier +
- 2 Inside amplifier -
- 3 Outside amplifier +
- 4 Outside amplifier -
- 5 NC
- 6 NC
- 7 GND

SCREEN 10P

definition:

- 1 NET TX-
- 2 NET TX+
- 3 AUDIO OUT
- 4 NET RX-
- 5 NET RX+
- 6 VIDEO OUT
- 7 MIC OUT
- 8 RS232 RX
- 9 RS232 TX
- 10 GND

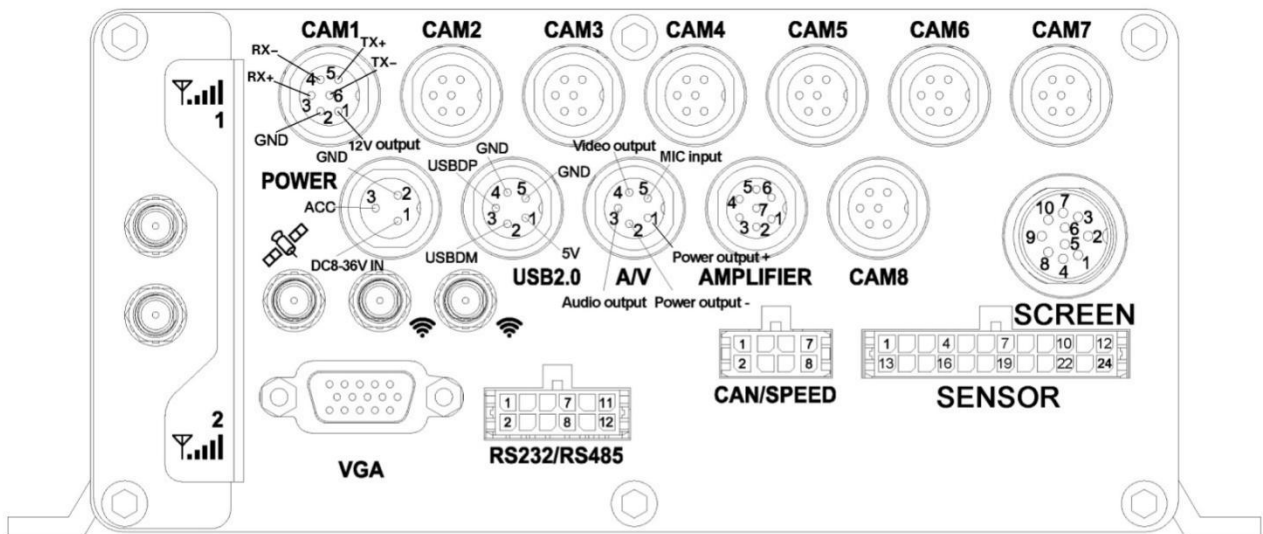
SENSOR interface

definition:

- 1 Alarm input 1
- 2 Alarm input 2
- 3 Alarm input 3
- 4 Alarm input 4
- 5 Alarm input 5
- 6 Alarm input 6
- 7 Analog alarm input 1
- 8 DC12V OUT+
- 9 Alarm output 1
- 10 Alarm output 2
- 11 Controllable DC12V output
- 12 DC12V OUT+

- 13 Alarm input 7
- 14 Alarm input 8
- 15 Alarm input 9
- 16 Alarm input 10
- 17 Alarm input 11
- 18 Alarm input 12
- 19 Analog alarm input 2
- 20 GND
- 21 Alarm output 1
- 22 Alarm output 2
- 23 GND
- 24 DC5V OUT+

8CH MNVR



RS232/RS485

interface definition:

- 1 RS232 TX 1
- 2 RS232 RX 1
- 3 RS232 TX 2
- 4 RS232 RX 2
- 5 RS232 TX 3
- 6 RS232 RX 3
- 7 RS485+ 1
- 8 RS485- 1
- 9 RS485+ 2
- 10 RS485- 2
- 11 DC12V OUT+
- 12 GND

CANBUS interface

definition:

- 1 canbus+ 1
- 2 canbus- 1
- 3 canbus+ 2
- 4 canbus- 2
- 5 Pulse speed +
- 6 Pulse speed -
- 7 DC5V OUT+
- 8 GND

AMPLIFIER interface

definition:

- 1 Inside amplifier +
- 2 Inside amplifier -
- 3 Outside amplifier +
- 4 Outside amplifier -
- 5 NC
- 6 NC
- 7 GND

SCREEN 10P

definition:

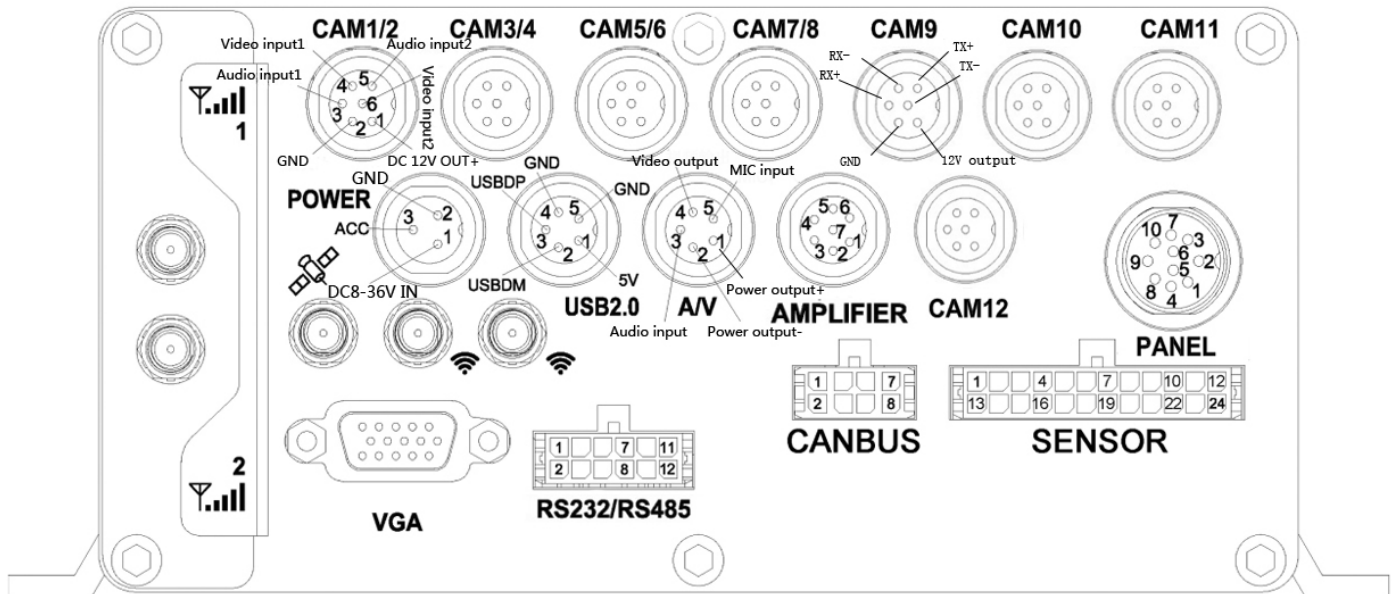
- 1 NET TX-
- 2 NET TX+
- 3 AUDIO OUT
- 4 NET RX-
- 5 NET RX+
- 6 VIDEO OUT
- 7 MIC OUT
- 8 RS232 RX
- 9 RS232 TX
- 10 GND

SENSOR interface

definition:

- 1 Alarm input 1
- 2 Alarm input 2
- 3 Alarm input 3
- 4 Alarm input 4
- 5 Alarm input 5
- 6 Alarm input 6
- 7 Analog alarm input 1
- 8 DC12V OUT+
- 9 Alarm output 1
- 10 Alarm output 2
- 11 Controllable DC12V output
- 12 DC12V OUT+
- 13 Alarm input 7
- 14 Alarm input 8
- 15 Alarm input 9
- 16 Alarm input 10
- 17 Alarm input 11
- 18 Alarm input 12
- 19 Analog alarm input 2
- 20 GND
- 21 Alarm output 1
- 22 Alarm output 2
- 23 GND
- 24 DC5V OUT+

12CH MANVR



RS232/RS485

interface definition:

- 1 RS232 TX 1
- 2 RS232 RX 1
- 3 RS232 TX 2
- 4 RS232 RX 2
- 5 RS232 TX 3
- 6 RS232 RX 3
- 7 RS485+ 1
- 8 RS485- 1
- 9 RS485+ 2
- 10 RS485- 2
- 11 DC12V OUT+
- 12 GND

CANBUS interface

definition:

- 1 canbus+ 1
- 2 canbus- 1
- 3 canbus+ 2
- 4 canbus- 2
- 5 Pulse speed +
- 6 Pulse speed -
- 7 DC5V OUT+
- 8 GND

AMPLIFIER interface

definition:

- 1 Inside amplifier +
- 2 Inside amplifier -
- 3 Outside amplifier +
- 4 Outside amplifier -
- 5 NC
- 6 NC
- 7 GND

PANEL 10P

definition:

- 1 NET TX-
- 2 NET TX+
- 3 AUDIO OUT
- 4 NET RX-
- 5 NET RX+
- 6 VIDEO OUT
- 7 MIC OUT
- 8 RS232 RX
- 9 RS232 TX
- 10 GND

SENSOR interface

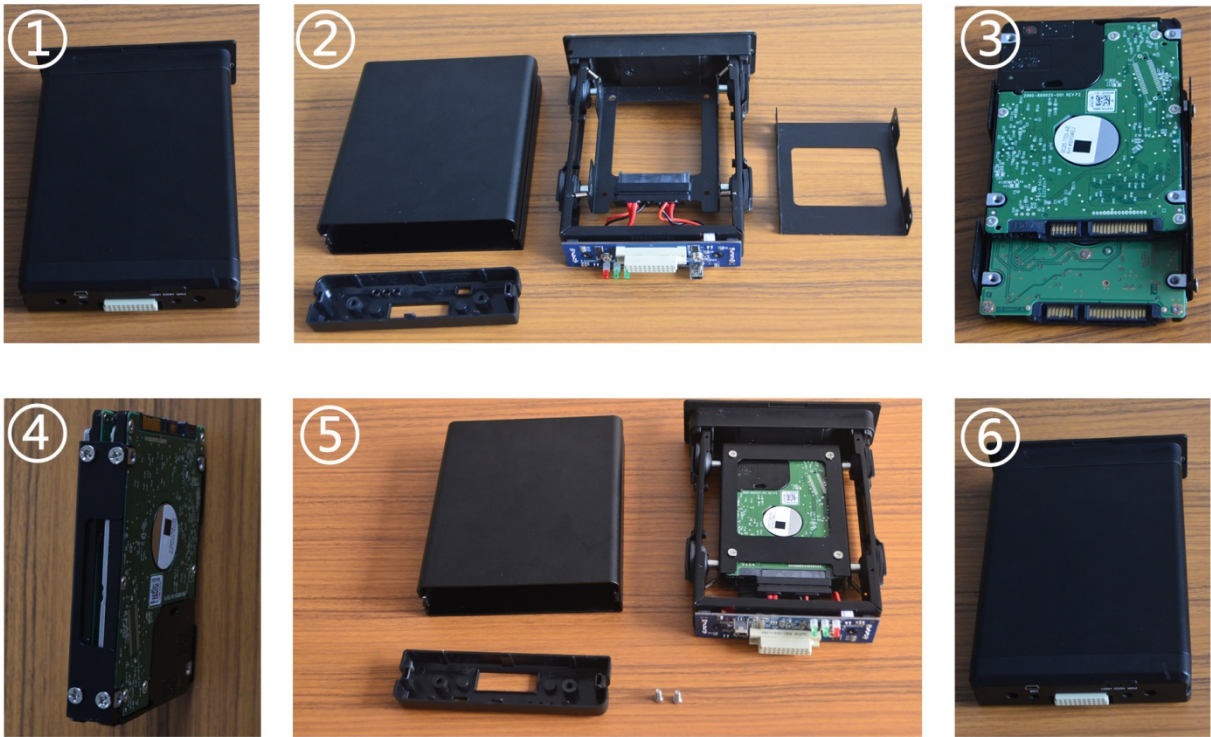
definition:

- 1 Alarm input 1
- 2 Alarm input 2
- 3 Alarm input 3
- 4 Alarm input 4
- 5 Alarm input 5
- 6 Alarm input 6
- 7 Analog alarm input 1
- 8 DC12V OUT+
- 9 Alarm output 1
- 10 Alarm output 2
- 11 Controllable DC12V output
- 12 DC12V OUT+

Remarks:

- If the power supply is 12V, then the current of 12V output can be just 5A. So if there are more than this power, we suggest customers to get power for other cameras from the 12V vehicle power directly or use Our special car power supply.
- Ports:
 - DEBUG: testing port
 - RS232/RS485: intercom connecting port
 - SENSOR: alarm port
- WIFI hotspot, fire box interface, network port, CAN BUS, power amplifier, bus station-announcer are not standard interface, that will be add when you have request order.

5.2 Instruction of HDD Installation



Make sure whether power switch is turned on or turned off, if it is turned on, please use the key, turn the indentation to the “off” position.

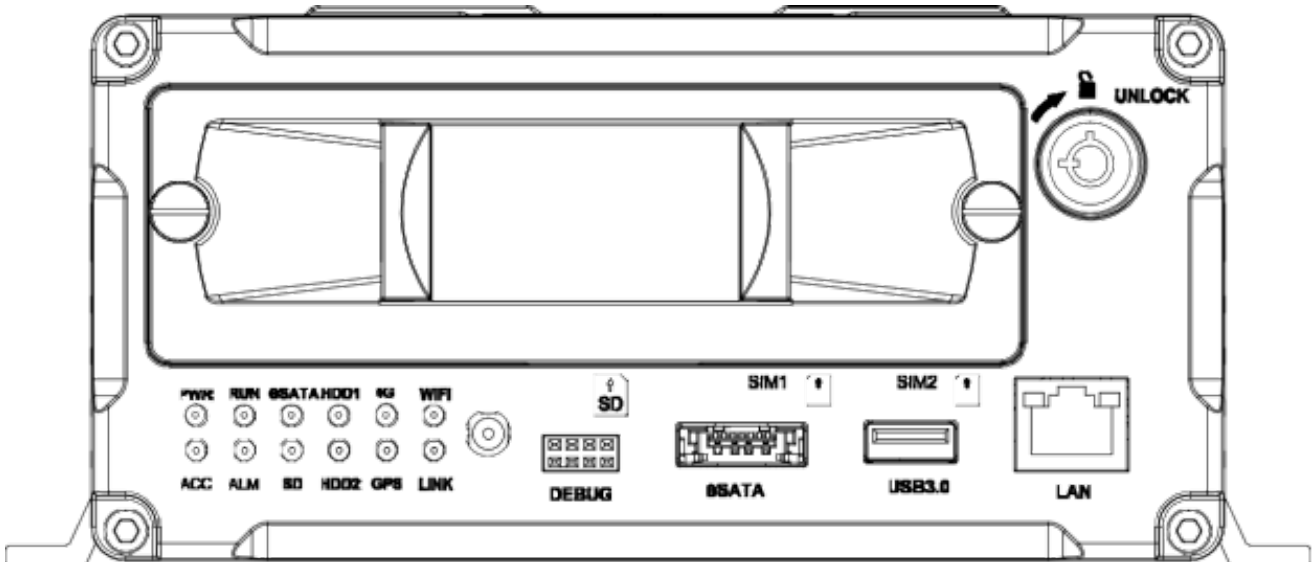
- Pull out the front panel of the hard drive box. Remove the hard drive and place it on the table.
- Set down the two screws of the hard drive by cross-screwdriver.
- Continue to use a Phillips screwdriver to the two hard drives through the left and right of the four screws are fixed on the bracket
- Insert the SATA cables to two hard drives.
- Put the four white screws of the machine through the center hole of the four shockproof rubber pads. Fix hard drive on the four holes of hard drive box, do not make the screws too tight, leave a little space for hard drive to move. So it can reach a perfect effect.
- Put the hard disk into the middle of the hard disk protection shell

-
- Fasten the hard disk interface protection shell by the two screws
 - Aim the hard drive box towards the groove of the front board, push in evenly. Please note the face and back while pushing. Upturn the silk-screen in the right position.
 - Set the lock of the front board by key. Turn the groove on the “turn on” position, lock hard drive box in place to prevent hard drive from moving out.

Note : Hard drive fixing lock besides fixing the hard drive, also take the place of host power switch .So do this operation, make sure all lines are completely connected. Otherwise, if vehicles's power has been connected with the standard input voltage, the machine could be destroyed. So while installing, if the line has not been completely connected, please stop to do this step. The hard drive can not roll out even it has not been locked.

6 Instruction of Using

6.1 Instruction of Front Panel



- **LED**

- ✓ **PWR LED:** lighting while work starts. Power LED on.
- ✓ **RUN INDICATOR:** flashing when machine work well.
- ✓ **ESATA INDICATOR:** flashing when backup the data by esata.
- ✓ **HDD 1 INDICATOR:** record, play, backup data flashing
- ✓ **4G INDICATOR:** When with 3G/4G or WIFI module, or with LINK, this led will be on if the settings are all right and the network connects well
- ✓ **Wifi INDICATOR:** When with WIFI module, it will be on if WIFI module works well.
- ✓ **ACC INDICATOR:** ACC controller signal regularly,it would indicate
- ✓ **ALM INDICATOR:** When have alarm signal, it would be on, when alarm signal disappear it would be off.
- ✓ **SD INDICATOR:** When the model has SD card storage function, SD card read normally then it would indicate.




- ✓ **HDD 2 INDICATOR:** record, play, backup data flashing
- ✓ **GPS INDICATOR:** with GPS module, MDVR work well indicate
- ✓ **LINK INDICATOR:** when wired network connect normally, it would indicate.
















- **Key and Other Descriptions**




- ✓ **DEBUG:** debug interface.
- ✓ **ESTAT:** backup interface.
- ✓ **SD:** SD card interface.
- ✓ **LAN:** network RJ45 interface.
- ✓ **IR:** infrared receiving window.
- ✓ **LOCK:** while removing the hard drive, use the key to unlock in order to remove the hard drive, unlock after machine's auto-disconnects the power, the power auto-connect after being locked.
- ✓ **USB3.0:** backup the video data of hard drive via USB .
- ✓ **SIM1:** standard SIM card size: 15 x 25mm, default connection.
- ✓ **SIM2:** standard SIM card, size: 15 x 25mm, SIM1 card automatically switch SIM2 card when disconnected (SIM2 module matching).

NOTE: Recommend to use the SanDisk brand of the USB disk , the minimum volume 256M, must support the FAT32 file system.

6.2 Instruction of Remote Control Operation

	①Lead to menu; ②Return
	Record
	Enter the sub-menu to set and confirm

		Playback on the mobile MDVR
		①Stop when recording or playback;②Delete
		Pause/Play when playback
		Fast-forward when playback video , play speed can be x2, x4, x8, press one time is x2, press two times is x4, and press 3 times is x8.
		Fast Backward when playback video, one press back for 10seconds
		For PTZ wiper (customized)
		Enter PTZ control mode.
		Control PTZ Zoom
		Control PTZ focus
		Mute key, to turn on or turn off audio output when playback videos with audio.(The audio input of the playback device must be connected to the audio output of the MDVR.)
		① Exit when video playback or backup. ② Exit from PTZ mode.
		①Upward for MENU selection. ②"UP" direction for PTZ control mode.
	① Downward for MENU selection. ② "Down" direction for PTZ control mode.	
	① Towards to left for MENU selection or MENU setup. ② "Left" direction for PTZ control mode.	

		①Towards to right for MENU selection or MENU setup. ②"Right" direction for PTZ control mode.
		①screen zoom the first channel video when surveillance, record ② Enter password or set system password. ③shortcut keys, press the first key shortcut to switch the number 1, press the second key shortcut to switch the capital letter a, press the third key shortcut toggles the lowercase letters a, press the up and down keys to change value.
		①4 channel display when surveillance, record and playback. ② Enter password or set system password.
Other number buttons		Press 1, 2, 3, 4, 5, 6, 7, 8 switch to CH1, CH2, CH3, CH4, CH5, CH6, CH7, CH8
Other buttons		Not mentioned buttons, not in use.


Remark: When the MDVR is in alarm condition, the remote control is invalid.

6.3 Menu Setting Instruction

(Our company system support IR remote control and mouse to operation, This document introduces the operation of the remote control, the left click of mouse means to confirm or enter, and the right click means exit or return)

First press ""key, then press ""to enter the default password"6666",



then press "" to enter the main menu interface;

There are "System", "Disk", "Record", "Playback", "Network" and "Alarm" options, select the option by

pressing these buttons"  ,  ,  ,  " , then press "" to enter.



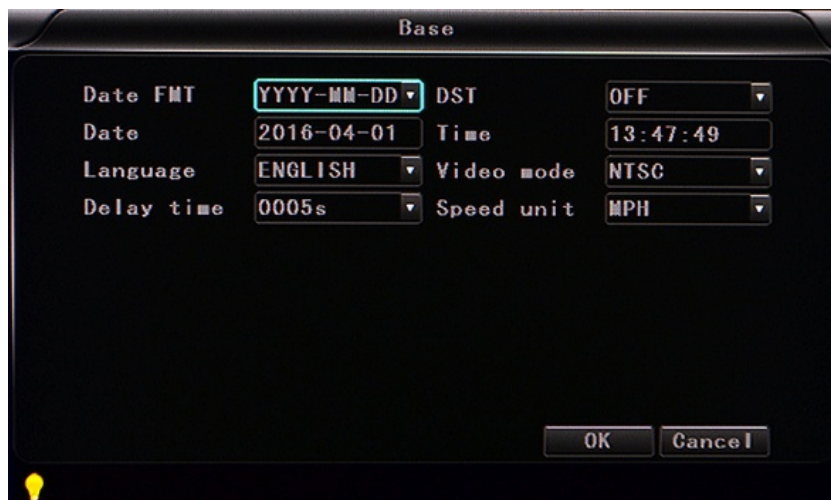
- **System Settings:** includes options of "Setup", "Vehicle", "Other", "[System info](#)", "Log", "Config".



- **Setupsetting:** includes options of “Base”, “User”, “Serial”, “PTZ”, “GPS”, “G-sensor” and “NTP”

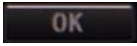
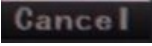


- **Base setting:** Set the System time, TV system, Language, etc.






- ✓ **Date format:** Offer 3 display methods like “y/m/d, m/d/y, d/m/y” for personal habit.





- ✓ **Daylight saving time:** suitable for according countries or areas.
- ✓ **Date:** Adjust the date of HDD recorder
- ✓ **Time:** Adjust the time of HDD recorder
- ✓ **Language:** Set "Chinese","English","Portuguese","Russian" and "French", "Turkish",have to restart the MDVR after setting.
- ✓ **Video Mode:** Set "PAL" or "NTSC", have to restart the MDVR after setting.
- ✓ **Delay Time:** MDVR Time-lapse turn off function after the car ignition off, the default time is 5S, and 30s,1min,2min,5min,10min,20min,30min,2hour,4hour,The longest time is 24 hours, all could be set, have to restart the MDVR after setting.
- ✓ **Speed unit:** you can choose MPH or KMH


(Note: Select  to save parameters, select  don't save parameters)


Operating Way:

Enter the menu, press "、

to select the options ,then press "

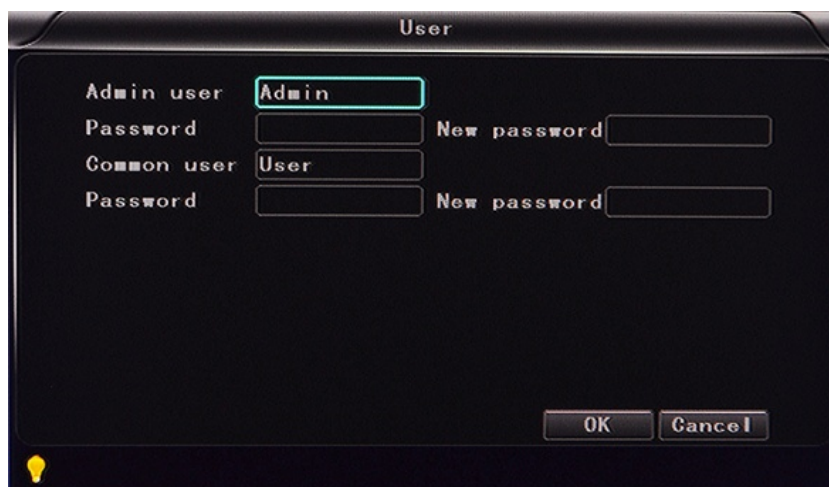
to enter the modification mode, adjust the number by pressing "、、、

”, press "

to save after adjustment. Press "

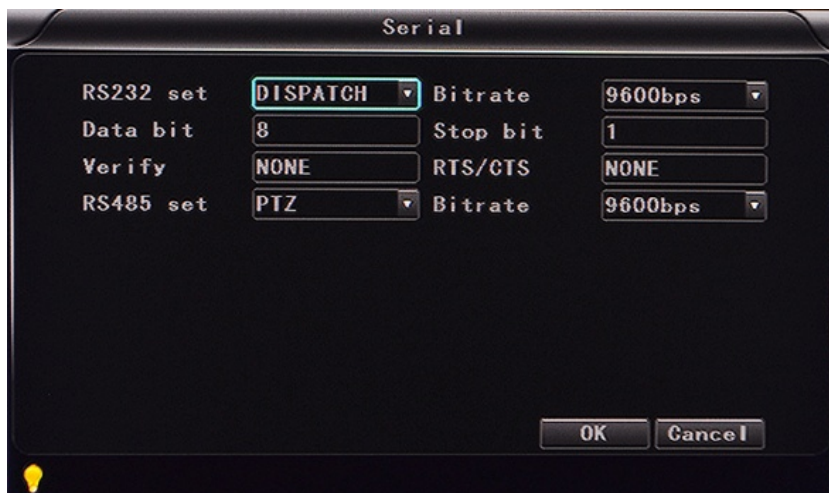
"key to exit after all settings done.

- **User settings:** Set up the user name and password of administrator and common.

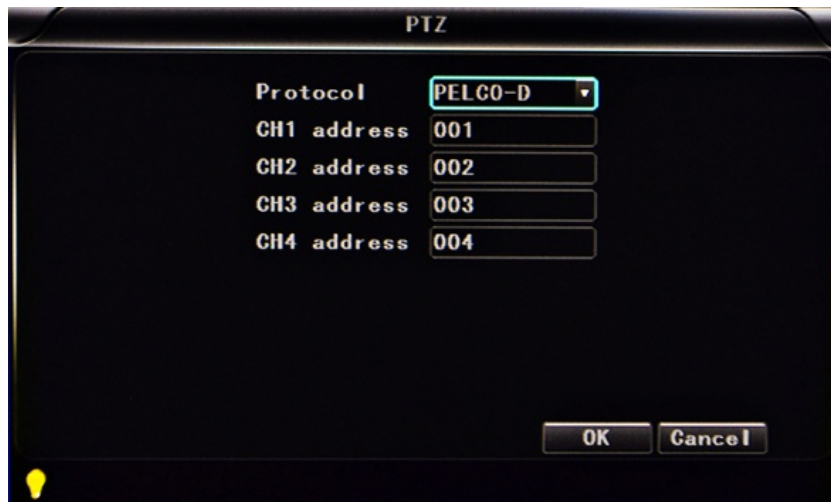


- ✓ **Admin user:**set up the user name of administrator

- ✓ **Password:** Enter the default password before changing the new password.
- ✓ **New password:** Enter the new password.
- ✓ **Common user:** set up the user name of common.
- ✓ **Password:** Enter the default password before changing the new password.
- ✓ **New password:** Enter the new password.
- **Serial setting:** this is Serial setting to set up the communication protocol with external equipment.

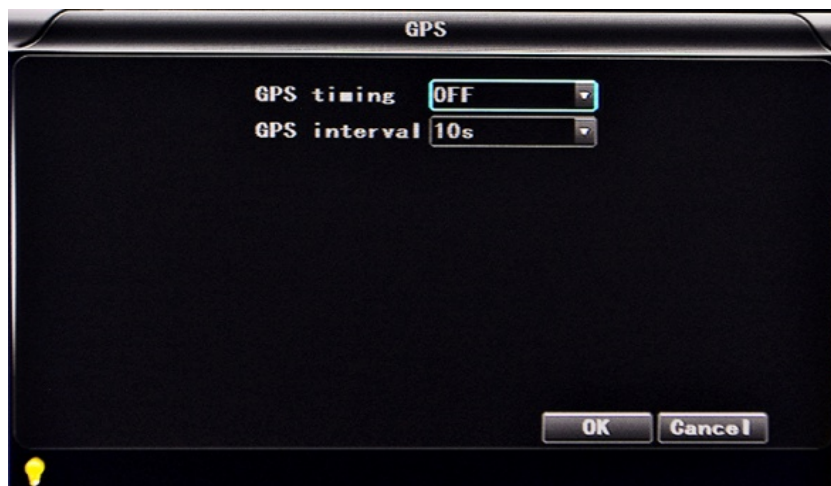


- ✓ **RS232 set:** support dispatch, led panel, ID card, OBD, person count.
- ✓ **Bitrate:** support 2400bps,4800bps,9600bps,19200bps and 38400bps.
- ✓ **Data bit:** the default value is 8.
- ✓ **Stop bit:**the default value is 1.
- ✓ **Verify:** the default value is none.
- ✓ **RTS/CTS:**the default value is nont.
- ✓ **RS485 set:** support PTZ, led screen, oil sensor, ID card, OBD, person count.
- ✓ **Bitrate:**support 2400bps,4800bps,9600bps,19200bps and 38400bps.
- **PTZ setting:** Adjust and control the camera with external PTZ device.



- ✓ **Protocols:** default PELCO-D, support PELCO-D.PELCO-P.
- ✓ **Channel-Address:** Channel one-Device address.
- ✓ **Channe2-Address:** Channel two-Device address.
- ✓ **Channe3-Address:** Channel three-Device address.
- ✓ **Channe4-Address:** Channel four-Device address.

- **GPS setting:**



- ✓ **Time zone:** different by countries, e.g: China for UTC+08
- ✓ **GPS Interval:** GPS Data upload interval, used with other system interface.

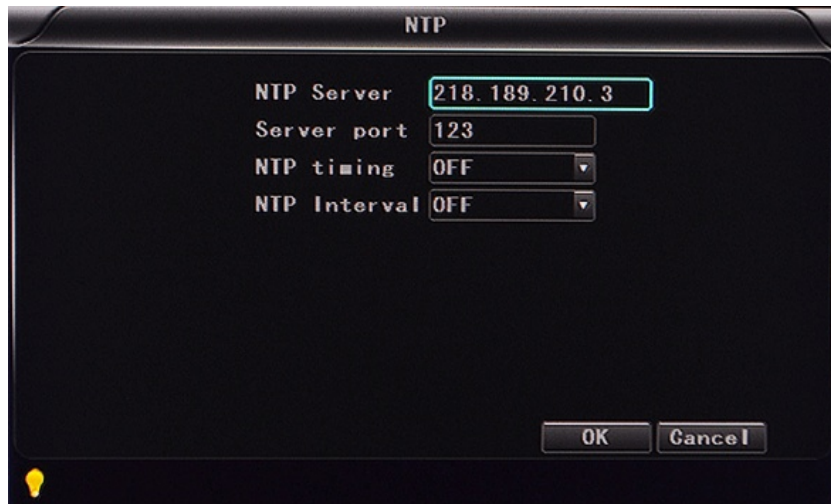
- **G-sensor setting:**



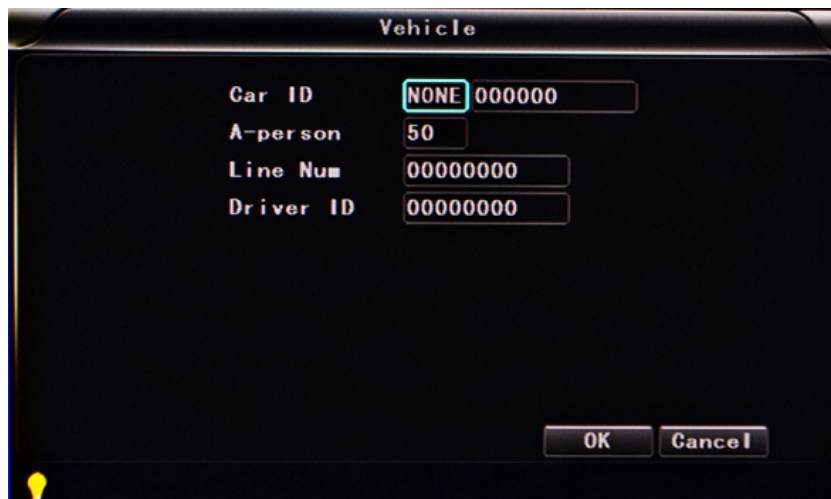
- ✓ **GSensor-X:** 2000mg(default value, this value will change accordingly if the X direction gravity accelerated speed value is changeable).
- ✓ **GSensor-Y:** 2000mg(default value, this value will change accordingly if the Y direction gravity accelerated speed value changeable).
- ✓ **GSensor-Z:** 2000mg(default value, this value will change accordingly if the Z direction gravity accelerated speed value is changeable).

(note:Press the **Adjust** to adjust G-sensor parameters when first installed)

- **NTP setting:**

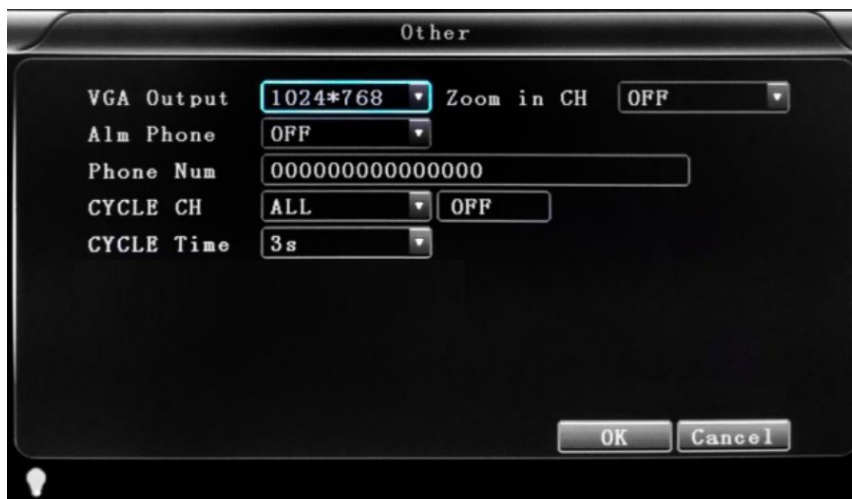


- ✓ **NTP server:** the NTP server ip
- ✓ **Server port:** default port is 123
- ✓ **NTP timing:** different by countries, e.g: China for UTC+08
- ✓ **NTP Interval:** timedata upload interval, used with NTP server.
- **Vehicle information:** details of car plate number, route and driver code.

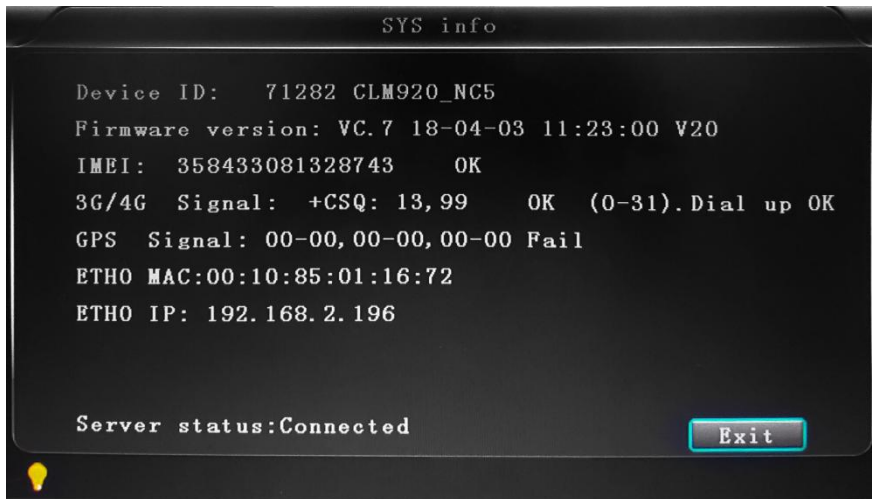


- ✓ **Car ID:** can be showed by English, Chinese simplified language, Numbers or common symbols.
- ✓ **A-person:** setup the original carried person for the vehicles.
- ✓ **Line Num:** the driving route and code.
- ✓ **Driver ID:** set up the driver code information.

- **Other information:**



- ✓ **VGA Output:** 1920*1080,1280*720,1024*768,no output
- ✓ **Zoom in CH:** Choosing which channel to see when power on each time. This is also useful when backing the car. Eg .when you choose CH 1 as the Zoom , when you start the device , it will show CH1 in the whole screen .
- ✓ **Alarm Phone:** set the action of alarm or not.
- ✓ **Phone number:** click alarm function, set the phone number for alarm.
- ✓ **Cycle CH:** which channel will cycle display on the monitor
- ✓ **Cycle time:** how often will display the next cycle channel.
- **System information:** Display MDVR hardware code number, software version information(only view, couldn't be changed)



- ✓ **Device encoding:** only for this MDVR, the code is unique.
 - ✓ **Software version:** the version No. of MDVR software.
 - ✓ **IMIE:** IMIE No. of 3G/4G network or module
 - ✓ **Strength of 3G/4G signal:** strength value:99, unknown: 0-31
 - ✓ **Strength of GPS signal:** AA-BB(AA: GPS No;BB: GPS strength. Show signal strength of max3).
 - ✓ **ETH0 MAC:** the MAC address
 - ✓ **ETH0 IP:** the IP address
 - ✓ **Server status:** the status of server connection.
- **LOG information**



✓ **Log type:** User action log, alarm logging, equipment status log.

● **Configuration management**



✓ **Import:** Import the configuration parameters

✓ **Export:** Export the configuration parameters


✓ **Renew:** Restore the factory parameter

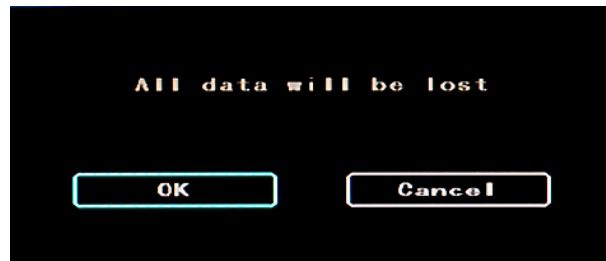
■ **Disk:** Check and format



✓ **Disk Name:** Display the system recognized HDD name.

-
- ✓ **Overwrite:** Choose on and off
 - ✓ **Total Size:** Display the total size of HDD.
 - ✓ **Free Size:** Display the remaining Capacity of HDD.
 - ✓ **Free record time:**It is only an estimate.
 - ✓ **Format:** Format HDD(only format the headfiles of HDD) .

Select this item, there is a format interface after press“”,confirm to format, cancel to return the original interface.



- **Record:** the video files setting,It includes “codec”,”channel” and ”record plan”.



- **Codec:**



✓ **Channel:** select the channel setting (the information of each channel could be set independently)

✓ **Resolution:** CIF/HD1/D1/960H/720p/1080p;

The left side is the local storage information, The right side is network transmission information; local "CIF,HD1,D1" is optional, only "CIF" for network transmission.

✓ **Frame:** 1-25/30fps

The left side is local storage information, The right side is network transmission information.

✓ **Stream mode:** Constants Bit Rate and Variable Bit Rate.

✓ **Quality:** Video quality setting

The left side is the local video quality(total 14 grades,

192kbps/320kbs/512kbps/768kbps/1Mbps/1.2Mbps/1.5bps/2Mbps/3Mbps/4Mbps/5bps/6Mbps/7Mbps/8Mbps)

The right side is the network transmission quality(total 13 grades,

32kbps/48kbs/64kbps/80kbps/112kbps/144kbps/192kbps/256kbps/320kbps/384kbps/512kbps/768kbps/1024kbps)

✓ **Audio:** Select to record audio or without audio.

✓ **JPEG:** set captured of time and interval, Select a Trigger for alarm triggering to capture, choice time 10s, 30s, 60s, 120s, 300s.

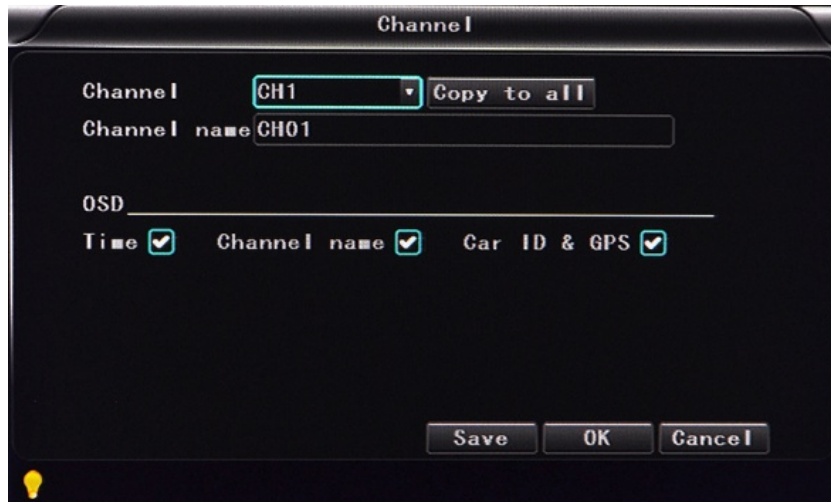
✓ **Input mode:** HD MDVR can choose AHD/CVI/TVI or analog, the other equipment can't to be

chosen.

- ✓ **Copy to all:** Copy to all channels

Note: save after finished video parameter setting (have to restart the MDVR after setting.)

- **Channel:**



- ✓ **Channel:** select the channel setting (the information of each channel could be set independently)
- ✓ **Channel name:** the name of each channel
- ✓ **OSD:** choose to add the character information or not.
- ✓ **Copy to all:** Copy to all channels

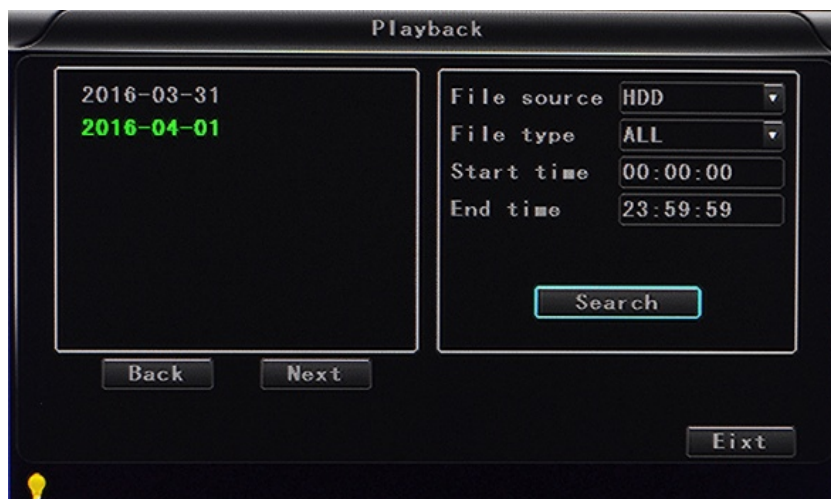
- **Record plan**



- ✓ **Channel:** select the channel setting (the information of each channel could be set independently)
- ✓ **Record mode:** real time and event or no record
- ✓ **File length:** the packaged video files length setting (5/10/15/25/30/60 minutes optional)
- ✓ **Prerecord:** Before the alarm recording time (no, 5s, 10, 15s)
- ✓ **Event REC time:** Alarm-triggered video duration (30-330s optional, 30s unit) .
- ✓ **Schedule:** the timer is timing recording, the alarm is alarm recording.
- ✓ **Copy to all:** Copy to all channels.
- ✓ **Save:** save after finishing video parameter setting (have to restart the MDVR after setting.)

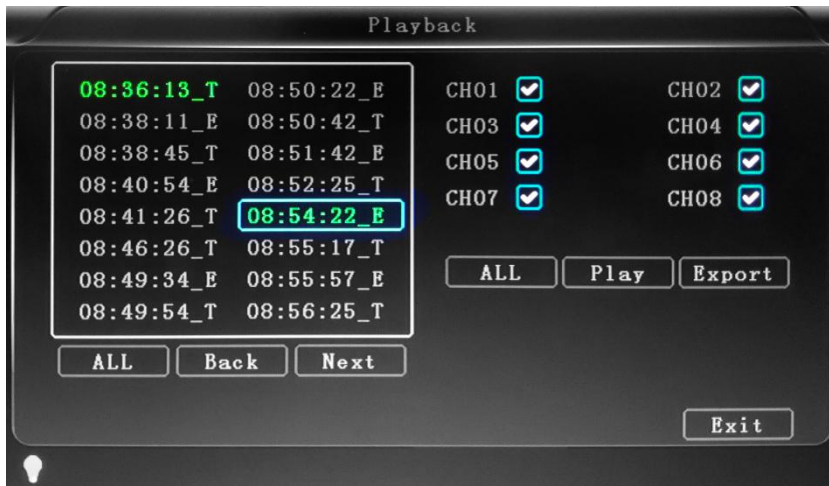
The operating method is similar to the "basic settings" operating

- **Playback:** the recorded video Playback



There is video date in the menu, it will show the vide time after press "Search", choose the playback time range according to require time ,then press "Play "button to replay the video.

File format suffix "_P" is power off video file , suffix "_E" indicates an alarm trigger video files, suffix "_T" indicates an timing video files.



- ✓ **Channel:** 1CH/4CH/8CH/12CH Video playback; video playback on each channel or full screen, playback and record simultaneously
- ✓ **Play:** Select the video files and channel to replay
- ✓ **Export:** Select the HDD video files backup to USB Disk

The operating method refers to "local video playback instruction"

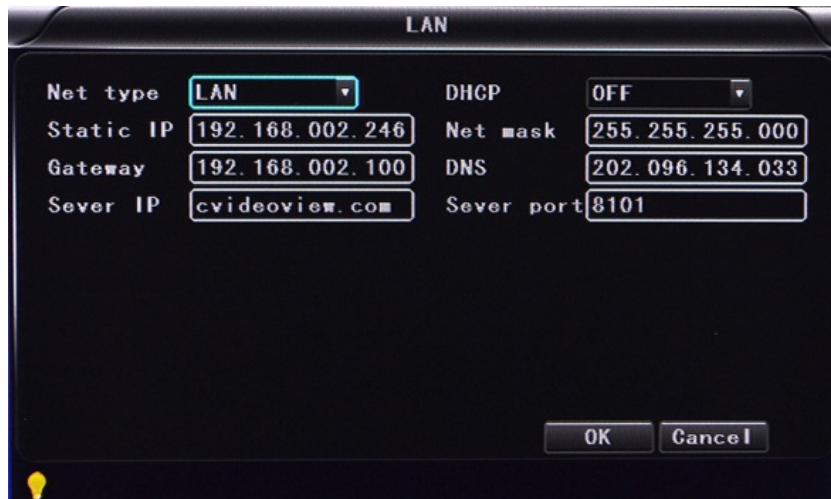
■ **Network Setting: LAN, 3G, WIFI, IPC**



- ✓ **LAN:** connecting via RJ45.
- ✓ **3G/4G:** insert 3G/4G SIM card into the slot.

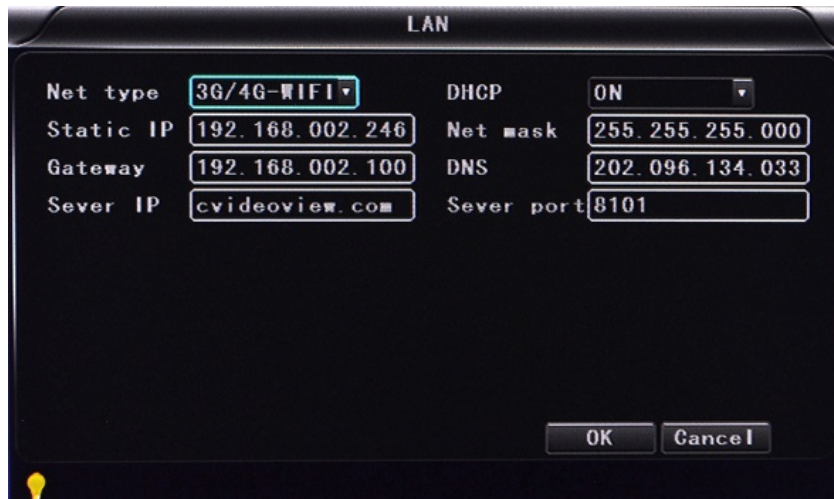
- ✓ **WIFI:** connecting the network of WIFI.
- ✓ **IPC:** To connect the IPC camera Settings.
- ✓ **SIP:** Chinese government standard platform
- ✓ **CH ID:** Chinese government standard platform information

- **Local Network Setting (LAN) :**

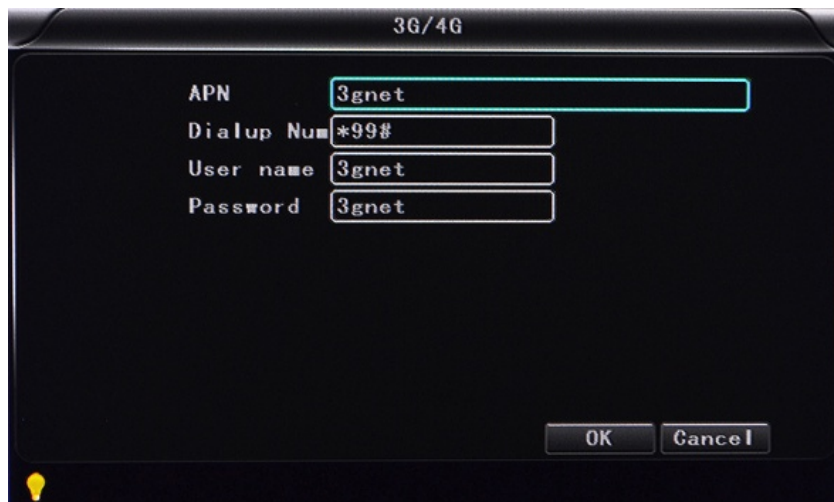


- ✓ **Network Type:** LAN and 3G/4G-WIFI optional.
 - ✓ **DHCP:** Automatically get the IP address(in order not conflict with the LAN, please enable ON, and also enable DHCP on the router, P.S, only one DHCP server can be enable in one LAN).
 - ✓ **Static IP:** setup under LAN and WIFI mode.
 - ✓ **Net mask:** Subnet mask under LAN or WIFI mode.
 - ✓ **Gateway:** gateway under LAN or WIFI mode.
 - ✓ **DNS:** please input when the server IP is DNS, and not necessary when IP is static.
 - ✓ **Server IP:** If the units login on our server, please use cvideoview.com, and if the units login on your own server, please use yours.
 - ✓ **Server Port:** Keep it as default of 8101.
- **3G Network Setting:**
 - ✓ **Net type:** select 3G-WIFI if you are going to use 3G mode.

- ✓ **DHCP: ON**



Access into “Network”→”3G”

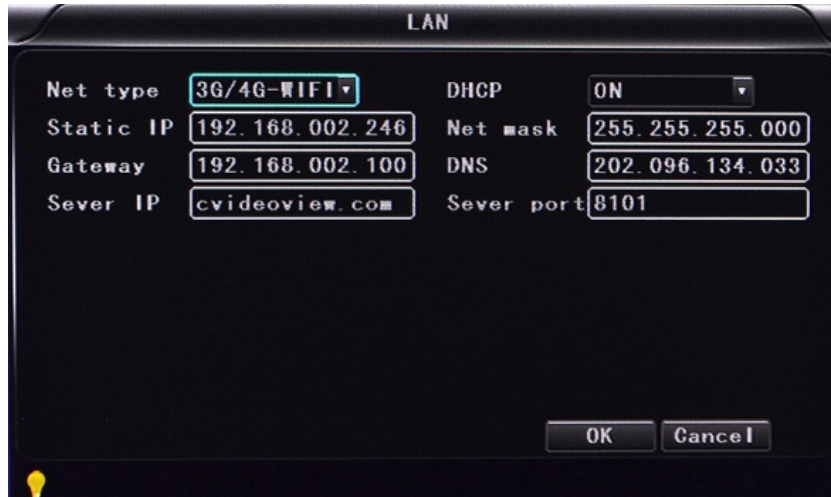


- ✓ **APN:** Access Point Name.
- ✓ **Dialup Num:** Get this info from your carrier.
- ✓ **User Name:** Fill in if you have.
- ✓ **Password:** Fill in if you have.

Note: please make sure you select the proper SIM card fit for 3G/4G module.

- **WIFI Setting:**

- ✓ **Net type:** Select 3G-WIFI when the type is under LAN.
- ✓ **DHCP:** ON



Access Network setup →“WIFI”



- ✓ **SSID:** WIFI router device name.
- ✓ **Password:** using password for SSID.
- ✓ **Certificate:** Support “WPA-PSK”.
- ✓ **Encryption:** Support ”TKIP”.

Access router, check its “WIFI “encryption.

WIRELESS SECURITY MODE

To protect your privacy you can configure wireless security features. This device supports three wireless security modes, including WEP, WPA-Personal, and WPA-Enterprise. WEP is the original wireless encryption standard. WPA provides a higher level of security. WPA-Personal does not require an authentication server. The WPA-Enterprise option requires an external RADIUS server.

Security Mode : WPA-Personal ▼

SETUP COMPLETE!

Below is a detailed summary of your wireless security settings. Please print this page out, or write the information on a piece of paper, so you can configure the correct settings on your wireless client adapters.

Wireless Band : 2.4GHz Band

Wireless Network Name dlink
(SSID) :

Security Mode 2 : Auto (WPA or WPA2) - Personal

Cipher Type : TKIP and AES

Pre-Shared Key :
c47086bee2659742883d5bb36da53356e51407f1635855aa7cbef92b5598bf6c

Notes:

Please make sure the router WIFI encryption keep the same with the setup in MDVR if the units use WIFI.

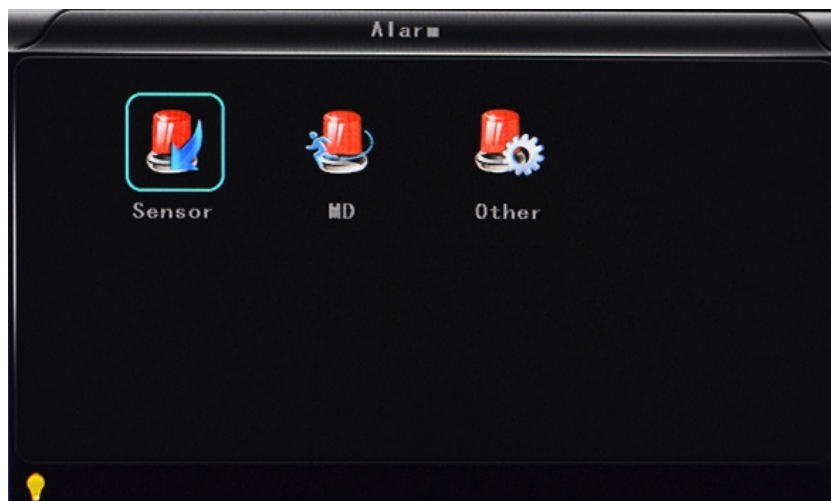
- **IPC Setting**(This function can only suit for Mobile NVR)

- ✓ **Channel:** main channel , different channel set can choose.
- ✓ **Time Sync:** turn on/off means if open the time synchronization between ipc and device.
- ✓ **IPC Addr:** put and modify ipc address when the ip camera and device in one network area.

-
- ✓ **IPC Port:** the device port which connect with ip camera.
 - ✓ **User Name:** the user name which connect with ip camera.
 - ✓ **Password:** the user names password
 - ✓ **Search:** it is can search the local network ipc when click the search button
 - ✓ **Save:** click the save button to keep the sets after set

Note:the network type must be changed to LAN when connect with ipc.

- **SIP:**Foreign users can't use this standard, it's just suit for chinese client .
- **CH ID:** Foreign users can't use this standard, it's just suit for chinese client .
- **Alarm setting :** Sensor alarm, Motion detecting alarm and other alarm setting



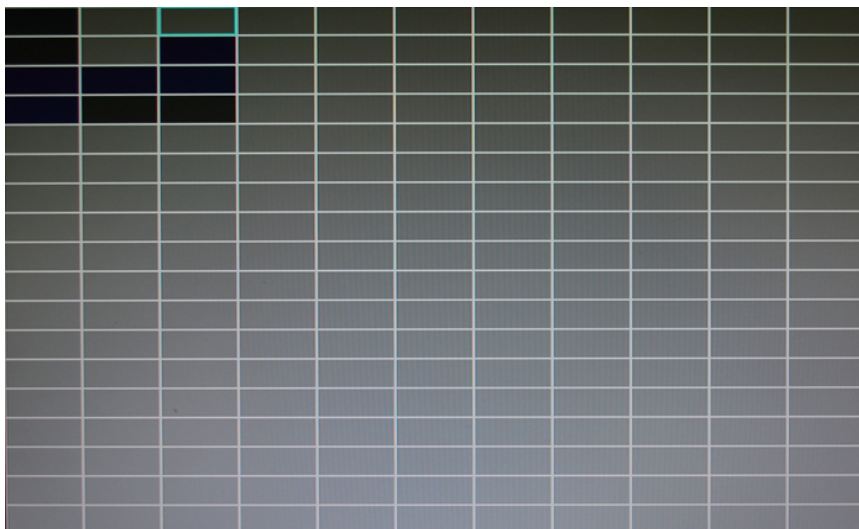
- ✓ **Sensor:**An external sensor alarms.
- ✓ **MD:** Motion detecting alarm.
- ✓ **Other:** other alarm setting.
- **Sensor Setting**



- ✓ **Channel:** main channel , different channel set can choose.
- ✓ **Enable:** turn on/off means if open the sensor alarm.
- ✓ **Sensor Name:** put and modify the name of sensor.
- ✓ **Trigger level:** High or low level trigger the alarm.
- ✓ **linkage:** Set up ON/ OFF video linkage function.
- ✓ **OSD:** Choose whether to overlay alarm information.
- ✓ **Lock:** Won't cover this alarm video after choose this lock.
- ✓ **Alarm:** Choose whether to overlay alarm information.
- ✓ **Alarm Out:** Choose whether to alarm out .
- ✓ **Save:** click the save button to keep the sets after reboot
- **MD:** Motion detecting alarm.

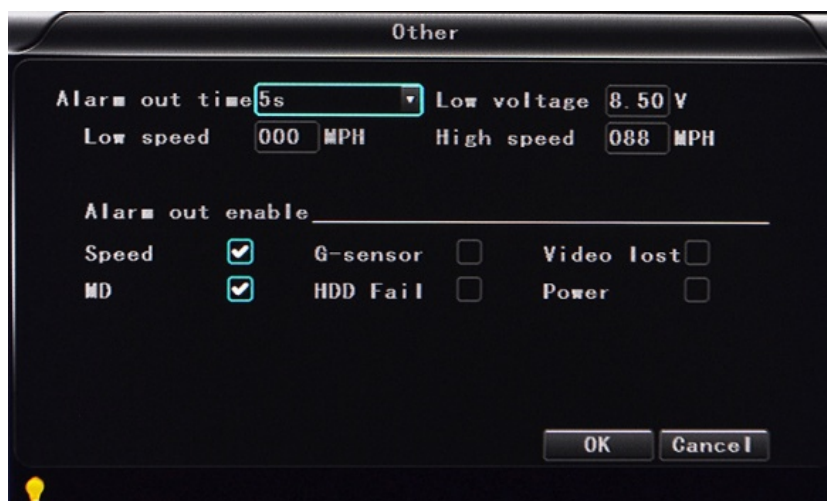


- ✓ **Channel:** main channel , different channel set can choose.
- ✓ **Enable:** Open and close motion detect record and motion detect sensitivity selection such as “off”, “high” , “low”. Opening motion detect recording, also need to set the icon “S” (alarm record) for time range of the detect record in “Record Setting” status except select “High” , “Low”. “High” , “Low” is the grade of detect sensitivity, higher grade record easier.
- ✓ **Area setup**



: No detect
 : Low sensitivity
 : High sensitivity

- **Other:** other alarm setting.



- ✓ **Alarm out time:** Alarm output time (5s-900s).
- ✓ **Low voltage:** The low voltage alarm about car battery.
- ✓ **Low speed:** The low speed alarm.
- ✓ **High speed:** The high speed alarm.
- ✓ **Alarm out enable:** setup the types of alarms linkage, speed, G-sensor, video lost, Motion detecting alarm, HDD fail, power.

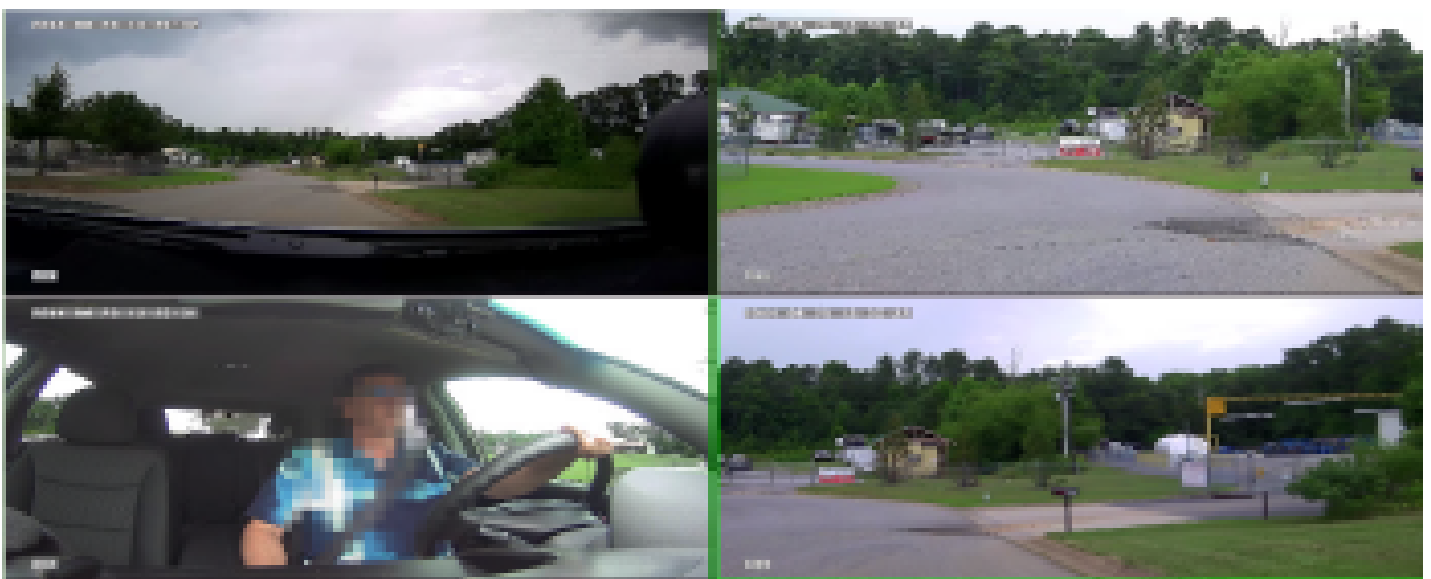
6.4 MDVR Video Playback Instruction

Our company System support 2 video playback ways.

- 1) Users can watch the video playback with the IR remote control, the specific steps are as follows:

Enter the main menu, move to "playback" option ,press "OK" to enter, next press the key "▲" or "▼" to

select the playback date ,and move to “Search”, then press “”key to display the video files of the selected date(file named by the record time),same press “”or“” again to select the time to play.If your required time is not available in the current page,press “”or“”key to the next page,till you find the required time,then press “”key to move the option“play channel”,again press “”to select the playback channel.If you need to reselect the files,press keys“”or“”to repeat the previous steps to select again, then press“”.Press “”or“”to select the replay channel,then press“”or press “” to button“play”,next press “”to replay, the system will switch to the video playback status,you can see the playback video in the selected channel. Press “”、、、”keys to switch the channel,and press “”back to the quad screen. Press“”to stop, press again for replay.Press“”to exit and back to 4ch record status, press “”and back to the “search/playback”interface, then press “”or“”to select other video playback.







2) User can watch the video playback with the mouse, the specific steps are as follows:

Enter the main menu, Click on the “playback” option to enter, next select the playback date, file type and time frame ,then press “Search” to display the video files of the selected date(file named by the record time).After selected the time and channel , press “Play” to play.If your required time is not available in the current page,press “Back”or“Next”to the other page,till you find the required time.



User press “” on the playback interface,and then use the mouse to click” ”to implement different functions, such as:before, stop, play, pause, a frame play, fast forward, next and

audio(each channel).

6.5 Video Backup

Our company System support 2 video backup ways.

1) Connect the USB disk to the MDVR's USB port for backup (Ports on Demand) ; Operating method as follows:

- Connect USB disk to the MDVR's USB port (FAT32 format, backup Max.20G).
- On the video playback interface,select the backup video files first,then move to“Export”option,and press “OK”to backup, “Export END”display after backup finished,the USB disk could be taken

away,then press””to exit if no other operations.






- If you need to backup another files,press“”to repeat the previous steps to backup。

2) Take the HDD box out from MDVR, then connect the HDD reader to the PC, you can check the video playback on PC via the installed our company's local playback analysis software .(Suitable for large amount data backup, simple and flexible. The proprietary data files also could be converted to the common format, suitable for different reading demands). Specifics refer to the local playback analysis software instruction).

6.6 PTZ control

This function just used to has PTZ function models, there is two ways. Operations are as followings:

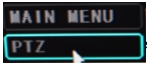
1) User can control PTZ camerawith the IR remote control, the specific steps are as follows:

When MDVR is working, click“”, entre“PTZ control”mode,If MDVR has connect with screen, then on screen's left above would show “PTZ”, click“”, “”, “”, “”, PTZ would scroll as it

shows, the PTZ camera would rotate after each command by clicking PTZ icon in the CMS or operating

the control board; Control over if wanna quit at all, click“ESC”。

2) User can control PTZ camerawith the mouse, the specific steps are as follows:

When MDVR is working, Click the mouse left button, then the screen would show this picture “”,

click“PTZ”, There is PTZ control icon would display, the PTZ camera would rotate after each command by

clicking PTZ icon; the PTZ control icon will be displayed on the channel which your mouse to click; Control

over if want to quit at all, click the mouse right button.



6.7 Video Data Volume

The required volumes of video and video-related settings , please see the following table:

4CH 1080P-NVR			8CH 720P-NVR			12CH 720P-NVR		
VIDEO QUALITY	Total Record Frame	Data Size Per Hour	VIDEO QUALITY	Total Record Frame	Data Size Per Hour	VIDEO QUALITY	Total Record Frame	Data Size Per Hour
2.0 Mbps	100frame	6.1GB	2.0 Mbps	200frame	10.32GB	2.0 Mbps	300frame	15.48GB
1.5 Mbps	100frame	4.58GB	1.5 Mbps	200frame	7.74GB	1.5 Mbps	300frame	11.61GB
1.2 Mbps	100frame	3.65GB	1.2 Mbps	200frame	6.18GB	1.2 Mbps	300frame	9.27GB
1.0 Mbps	100frame	3.05GB	1.0 Mbps	200frame	5.16GB	1.0 Mbps	300frame	7.74GB
768 Kbps	100frame	2.3GB	768 Kbps	200frame	3.86GB	768 Kbps	300frame	5.79GB

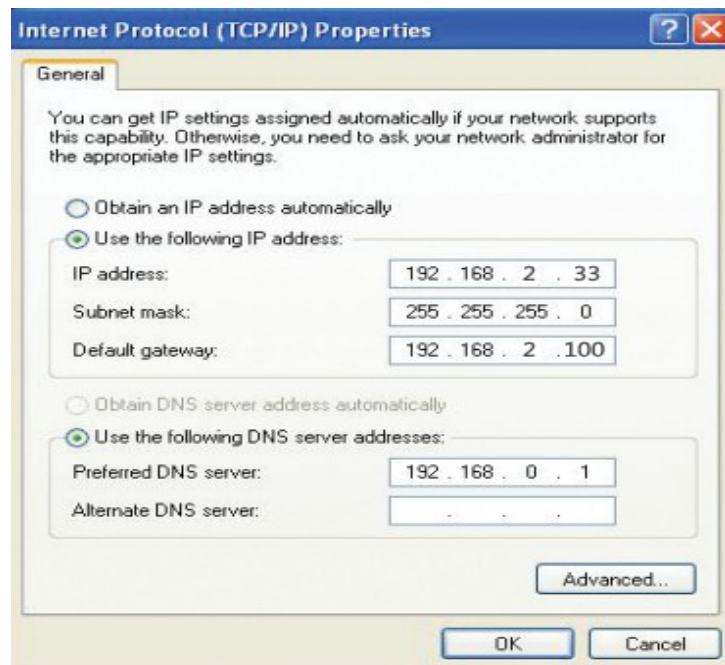
512 Kbps	100frame	1.5GB	512 Kbps	200frame	2.58GB	512 Kbps	300frame	3.87GB
320 Kbps	100frame	1GB	320 Kbps	200frame	1.62GB	320 Kbps	300frame	2.43GB
192 Kbps	100frame	0.58GB	192 Kbps	200frame	0.96GB	192 Kbps	300frame	1.44GB

Note: Based on users matching conditions to apply the appropriate drive and related settings.

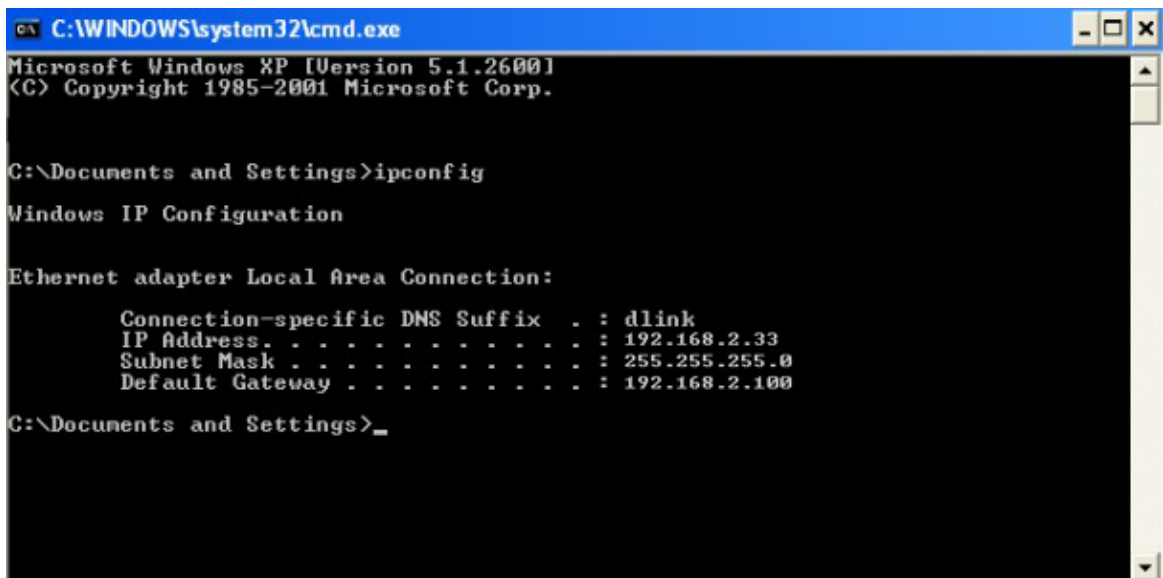
Storage capacity calculation formula: video quality * 3600 * channel / 8/1024 = MB / hour

6.8 Extranet Port Mapping

- ✓ Install the CMS server in LAN, please refer to the manual how to install CMS server.
- ✓ First, make sure the PC which installed the server use **Static Public IP**, not automatically get.



- ✓ Access into **“Program”→“Run”→“CMD”**, fill in **“ipconfig”→“Enter”** to see if the server IP has been set successfully.



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings>ipconfig

Windows IP Configuration

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . : dlink
    IP Address. . . . .               : 192.168.2.33
    Subnet Mask . . . . .            : 255.255.255.0
    Default Gateway . . . . .        : 192.168.2.100

C:\Documents and Settings>_
```

- ✓ Open the file of “DVR_Server.cfg” in the server installation path, can check whether the ports have been set successfully.

Port: 9010, 9001, 8101



```
DVR_Server.cfg - 记事本
文件(F) 编辑(E) 格式(O) 查看(V) 帮助(H)

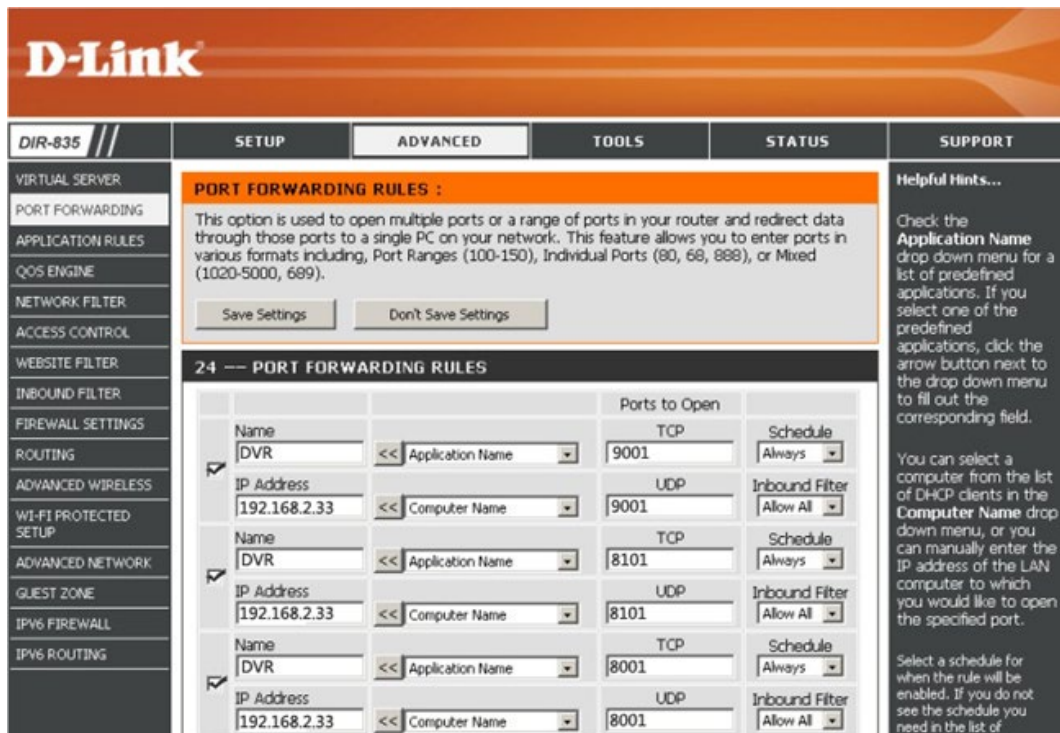
[Server]
Server_port=8001
Client_port=9001
TCPServer_port=8101
UserName_Num=1
UpdatePass=0
GpsPlayer_dis=30
[SendGPS]
Gps_IP=127.0.0.1
Gps_Port=9009
Gps_Stauts=2
debug_status=0
[UserName00]
Name=admin
Password=admin
MaxNum=0

Ln 16, Col 2
```

- ✓ Access into router→“Advanced”→“Port forwarding ”:



- ✓ Add the ports of 9010, 8101, 9001 to the port forwarding.




- Name:** fill in a name for MDVR port.
- Ports to Open:** 9010, 8101, 9001.

- c) **IP Address:** Server IP address.
- d) **Inbound Filter:** TCP、UDP、Allow ALL, please select “Allow All”.
- e) **Schedule:** select “Always”.

✓ Fill in the ports, and click”**Save settings**”.

PORT FORWARDING RULES :

This option is used to open multiple ports or a range of ports in your router and redirect data through those ports to a single PC on your network. This feature allows you to enter ports in various formats including, Port Ranges (100-150), Individual Ports (80, 68, 888), or Mixed (1020-5000, 689).

Save Settings  Don't Save Settings

24 — PORT FORWARDING RULES

			Ports to Open	
<input checked="" type="checkbox"/>	Name	<< Application Name >>	TCP	Schedule
	DVR		9001	Always
	IP Address	<< Computer Name >>	UDP	Inbound Filter
	192.168.2.33		9001	Allow All
<input checked="" type="checkbox"/>	Name	<< Application Name >>	TCP	Schedule
	DVR		8101	Always
	IP Address	<< Computer Name >>	UDP	Inbound Filter
	192.168.2.33		8101	Allow All
	Name		TCP	Schedule

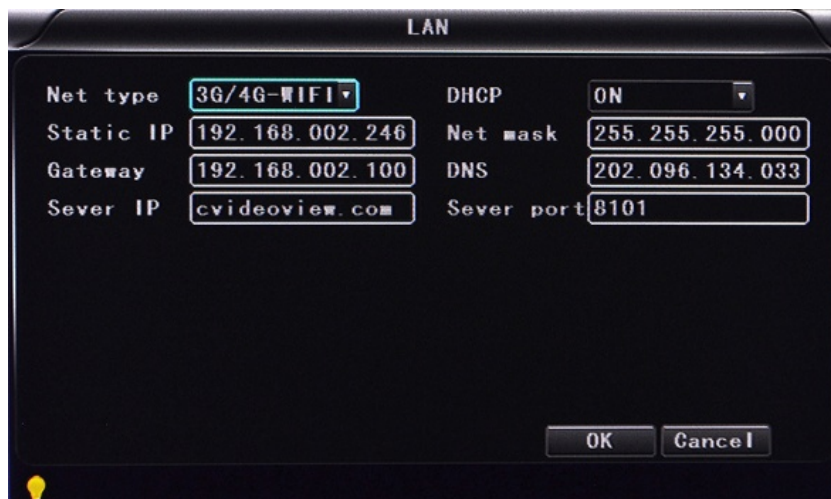
✓ After the port mapping settings, find the “**IP Address**” in the WAN, the IP Address is your CMS server IP. login the server IP on the CMS client to access.



Notes: When extranet access into LAN server, it need do mapping on the router. Then extranet can access into WAN IP.

- ✓ Change the Server IP to the related one, Access into MDVR

“menu”→”Network setting”→”LAN”→”Server IP”→XXX.XXX.XXX.XXX



6.9 Domain binding setting

After finished the server set up and the port mapping, you can login via network IP.

There are two ways to access the network as follow.

ADSL dial-up: It will assign a different dynamic IP address for each dial

Leased line: It will assign a static IP address, and you can access directly

So, when set up the server with the way of ADSL dial-up, you can binding DDNS via domain in order to prevent the distribution of different dynamic IP in each dial.

Note 1 : DDNS is used to mapping the dynamic IP address to a static DNS. Client program will send the dynamic IP to the server program when the user access the network, then the server program will provide the DNS server to realize dynamic DNS.

Note 2 : If the dynamic domain name is free, you will temporarily unable to access via the free domain name when things going wrong with the the domain name service provider's server.

The related parameters below is for routers test. Please refer to actual network environment when installation.

✓ Access into router setup, select "**Dynamic DNS**" to check the related setup.

D-Link

DIR-835 // SETUP ADVANCED **TOOLS** STATUS SUPPORT

ADMIN
TIME
SYSLOG
EMAIL SETTINGS
SYSTEM
FIRMWARE
DYNAMIC DNS
SYSTEM CHECK
SCHEDULES

DYNAMIC DNS

The DDNS feature allows you to host a server (Web, FTP, Game Server, etc...) using a domain name that you have purchased (www.whateveryournameis.com) with your dynamically assigned IP address. Most broadband Internet Service Providers assign dynamic (changing) IP addresses. Using a DDNS service provider, your friends can enter your host name to connect to your game server no matter what your IP address is.

Sign up for D-Link's Free DDNS service at www.DLinkDDNS.com.

Save Settings Don't Save Settings Reboot Now

DYNAMIC DNS SETTINGS

Enable Dynamic DNS :

Server Address : << Select Dynamic DNS Server

Host Name :

Username or Key :

Password or Key :

Verify Password or Key :

Timeout : 576 (hours)

Status : Disconnected

Helpful Hints...
To use this feature, you must first have a Dynamic DNS account from one of the providers in the drop down menu.
More...

- a) **Enable Dynamic DNS:** Enable ON if you need to use DDNS
- b) **Server Address:** Fill in accordingly
- c) **Username or Key:** Fill in applied user name
- d) **Password or Key:** Fill in password
- e) **Verify Password or Key:** confirm the password
- f) **Timeout:** Timeout setting
- g) **Status:** Status of connection

Notes: DDNS need to be applied by customers if necessary.

- ✓ Fill in the user name and password, use DDNS login, it shows connect successfully if login properly, and will display the applied the DNS.

Notes: please refer to the Oray for the DNS apply.

- ✓ After DNS binding, you can access into server via DNS.

