Mobile NVR Installation Instruction Guide

V1.0.0

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Welcome

Thank you for using our mobile NVR!
This manual is designed to be a reference tool for the connection and operation of mobile NVR.
Before installation and operation please read the following safeguards and warnings carefully!
Please keep it for future reference!

Important Safeguards and Warnings

1．Electrical safety

- All installation and operation here should conform to your local electrical safety codes.
- The product must be grounded to reduce the risk of electric shock.
- We assume no liability or responsibility for all the fires or electric shock caused by improper handling or installation.

2．Transportation security

- Heavy stress, violent vibration or water splash are not allowed during transportation, storage and installation.

3．Installation

- Keep upwards. Handle with care.
- Do not apply power to the device before completing installation.
- Do not place objects on the device.
- The device and its accessories installation shall be insulation in case there is any interference when it connects to the vehicle and forms a circuit.
- Please make sure the securing screw can sustain the mobile NVR weight. Please make sure the mobile NVR is firmly fixed.
- The device power supplying shall come from the special cable of the accumulator + and accumulator -. Please add protective tube on the accumulator + and accumulator – to guarantee vehicle proper security and operation.
- The power output port or cable of the mobile NVR shall not connect to any non-recommended device.
- Always shutdown the device and unplug the power cable before you replace the HDD or any part.

4．Qualified engineers needed

- Regularly maintain the mobile NVR cables in case the cable connection is loosing which may result in accident. Contact your service engineer or local retailer to do the dust clearance job.
- All the examination and repair work should be done by the qualified service engineers.
- We are not liable for any problems caused by unauthorized modifications or attempted repair.

5．Environment

- The device should be storaged or operated in a cool, dry place away from direct sunlight, inflammable, explosive substances and etc.

- It shall be storaged and used in the specified environments.

7. Accessories

- Be sure to use all the accessories recommended by manufacturer.
- Before installation, please open the package and check all the components are included.
- Contact your local retailer ASAP if something is broken in your package.

Caution

FOR YOUR DEVICE SAFETY, PLEASE CHANGE SYSTEM DEFAULT PASSWORD AFTER YOU FIRST LOGIN IN!

1 Basic Requirements

1.1 Components (One Vehicle)

For the mobile surveillance device, the list shall include NVR, mobile HD PTZ camera, rated power supplying, monitor, mobile keyboard, engineering cable and etc.

Material Name	Quantity	Note
Mobile NVR	1	-
1.3M IR HD mobile PTZ camera	1	-
HDD（500G 2.5-inch SATA port ）	1	-
Mobile 5V-RS232 port control keyboard	1	-
7-inch LCD digital monitor（4-pin M12 aviation port-12V input）	1	
CAT5E standard network cable(two crystal heads) 10M	2	-
Dual-way portable radio components	1	-
4-pin aviation port female-male cable 6M	4	One portable handset, one screen, one keyboard, one pickup.
10-pin aviation port female to VGA female connection cable	1	
Mobile power cable（DJ7031-6.3-21 socket-4M）	1	Proving power from the vehicle
Pickup components	1	-
Protection case components	1	-
4-pin aviation port male audio/video power composite cable 250mm（for EX series）	1	Provide power from the CAN port of the rear panel to PTZ
Power supplying-AC85~264V/DC24V/150W-connection pin input/output	1	Provide power from the CAN port of the rear panel to PTZ
PTZ bracket of the aluminum vehicle roof	1	Customized
PTZ bracket foot pad of the aluminum vehicle roof	1	Customized

1.2 Engineering Materials

SN	Name	Quantity	Note
1	PTZ bracket of the aluminum vehicle roof	1	Customized
2	PTZ bracket foot pad of the aluminum vehicle roof	1	Customized
3	Screws to secure the bracket	1	-

2 System Structure

The installation figure is shown as below. See Figure 2-1.

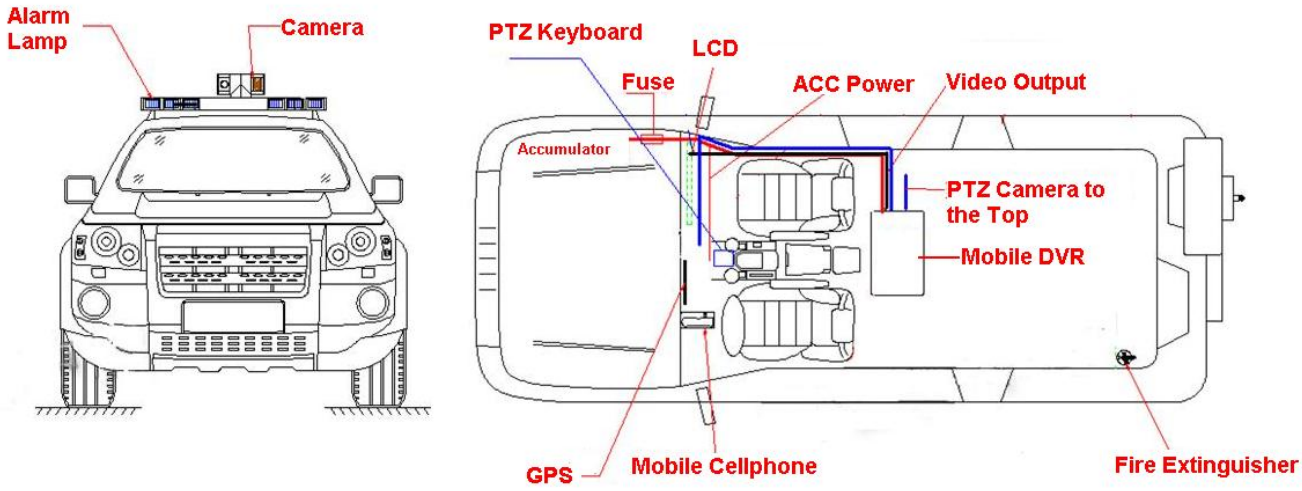

Figure 2-1

3 Installation Requirements

3.1 Device Connection

3.1.1 Cable Connection 1

Please refer to Figure 3-1 for cable connection information.

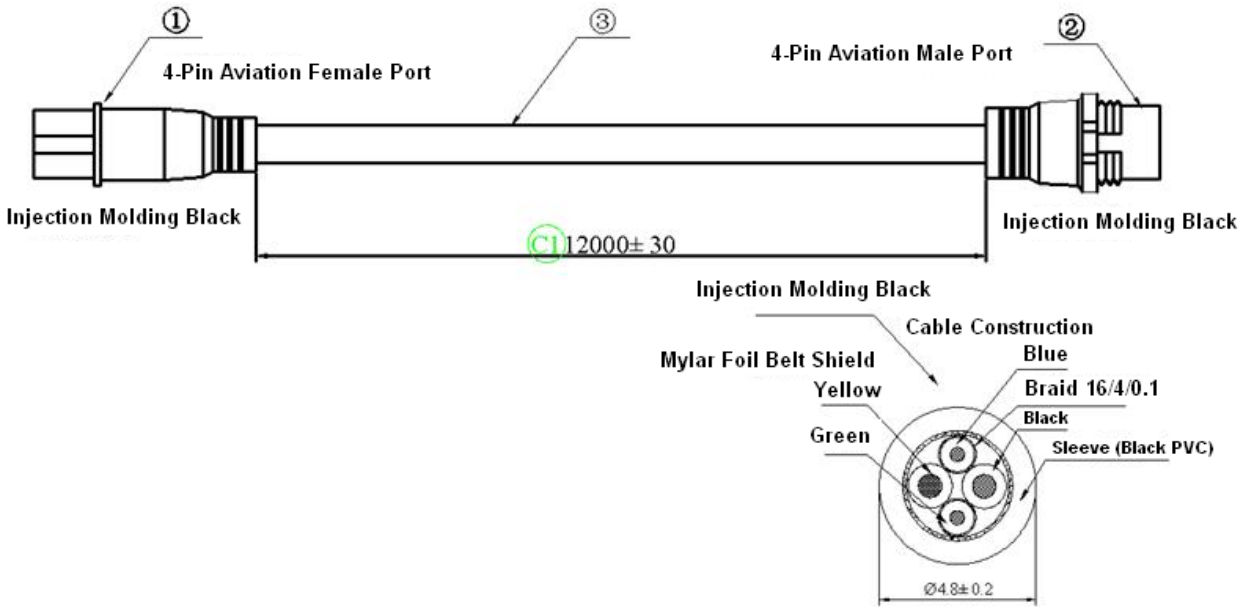

Figure 3-1

Socket	Pin	Cable Color	Pin	Socket
Aviation socket 4P female port	1	Yellow（Power）	1	Aviation socket 4P male port
	2	Black+GND	2	
	3	Blue pin （Audio）	3	
	4	Green pin （Video cable）	4	

SN	Name	Specifications	Quantity
1	Socket	Aviation port M12-4pin (Male)	1
2	Socket	Aviation port M12-4pin (Female)	1
3	Cable		1

3.1.2 Cable Connection 2

Please refer to Figure 3-2 for cable connection information.

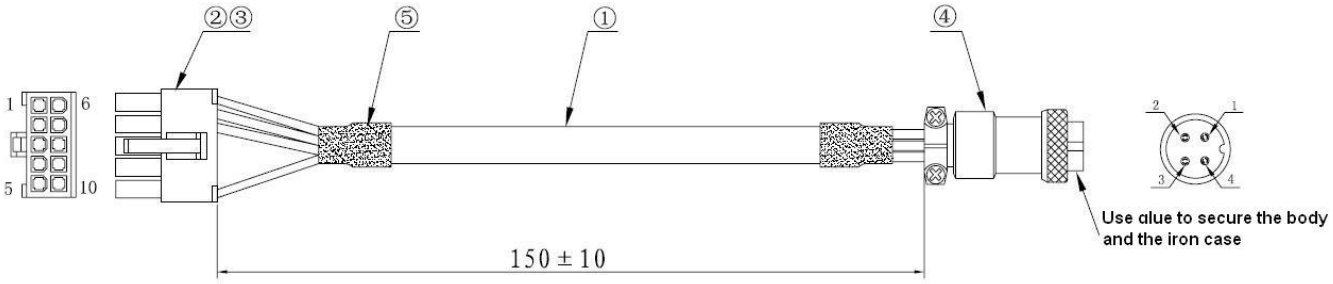

Figure 3-2

Small 5557-2*5Y	Color	4-Pin Aviation Female Port
1	Green	3
2	Black	2
3		
4		
5		
6	Blue	4
7		
8		
9		
10	Yellow	1

SN	Name	Specifications	Quantity
1	Cable	2464-4*22 OD=4.8mmblack/yellow/blue/green	1
2	socket	43030-T	1
3	Terminal	40325-2*5Y 3.0 space	4
4	Socket	12M-4F 4-pin aviation female port	1
5	Heat shrink tube	Φ6*15mm	2

3.2 Cabling

Please use the hidden cable layout. Bundle the cable for each 50cm. Reserve 100mm at the both ends of the cable and use the cable clip to secure. Please mark the clear cable number. Use the integration video and power cable wiring harness and make sure the cable is secure.

3.3 Installation Requirements

The cable shall be hidden. The installation shall be secure and it is easy to lay the cable.
It is easy to realize the daily maintenance and to activate the alarm. It can avoid the misuse.

4 Front Panel and Rear Panel

4.1 Front Panel

The front panel is shown as in Figure 4-1.

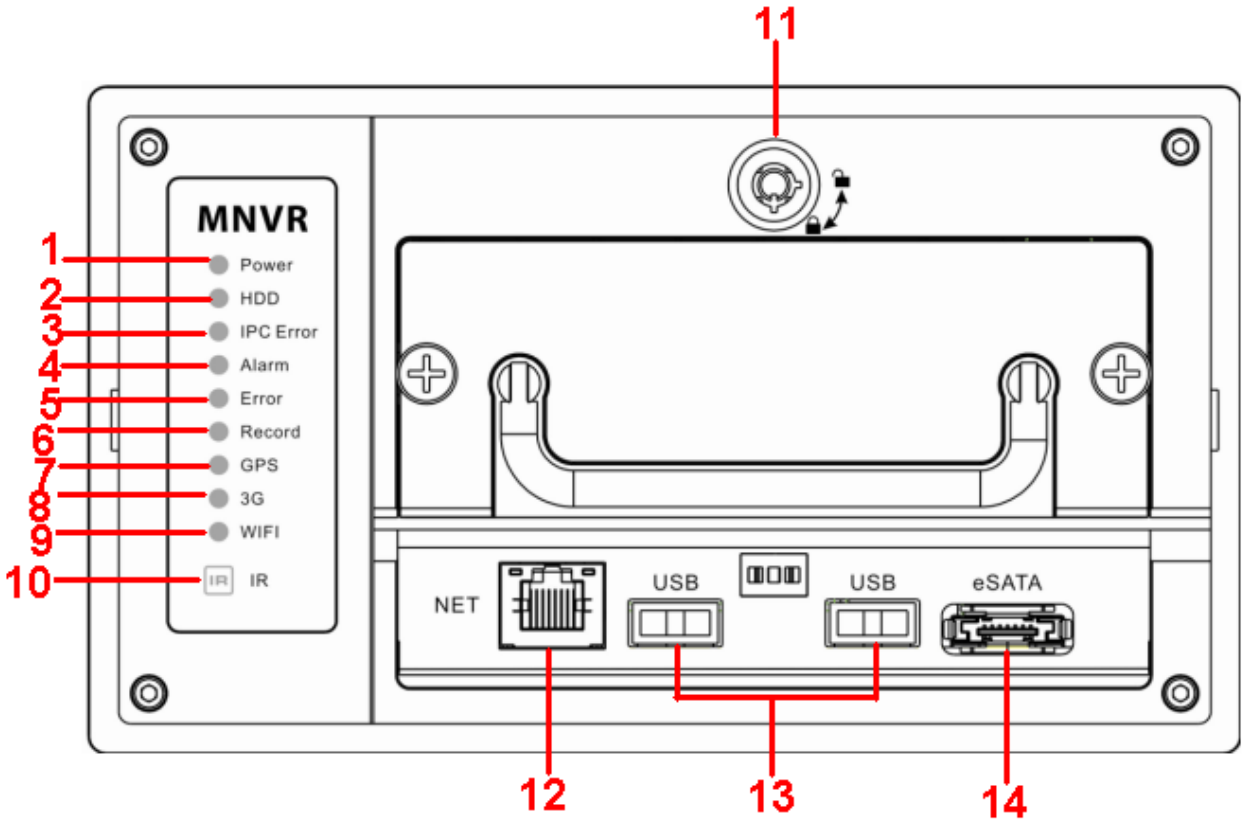

Figure 4-1

Please refer to the following sheet for detailed information.

SN	Function
1	Power indicator light
2	The red light is on when there is HDD. The light is off when there is no HDD.
3	Network camera connection status indicator light. The light becomes on when the connected network camera is abnormal.
4	Alarm indicator light.
5	HDD storage indicator light. The red light becomes on when the HDD write error occurs.
6	Record indicator light
7	GPS indicator light **Please note only the unit of GPS module supports this function.**
8	3G indicator light **Please note only the unit of 3G module supports this function.**
9	WIFI indicator light **Please note only the unit of WIFI module supports this function.**
10	Remote control IR receiver

11	Lock button
12	RJ45 network port
13	USB3.0 port
14	eSATA port

For the SIM card slot information, please refer to Figure 4-2.

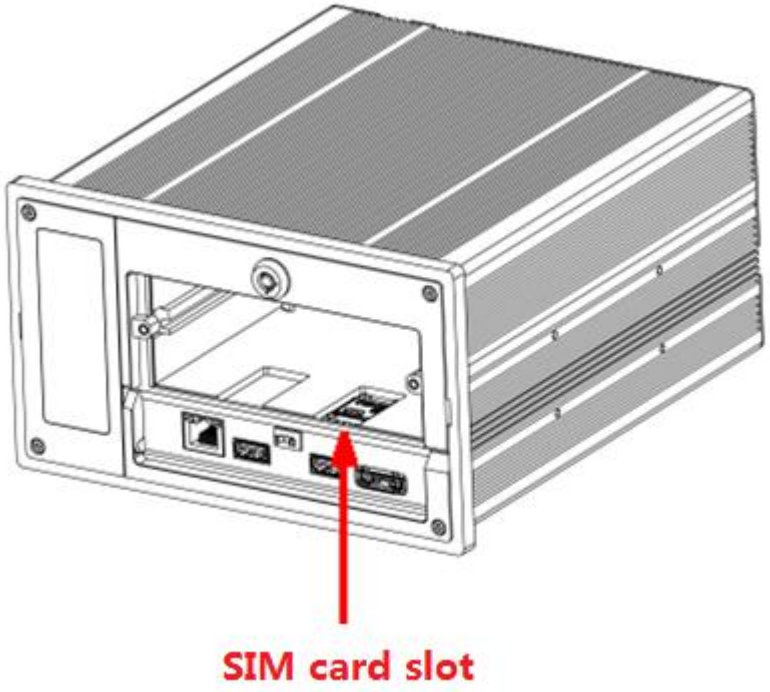

Figure 4-2

4.2 Rear Panel

4.2.1 Rear Panel

The rear panel is shown as in Figure 4-3.

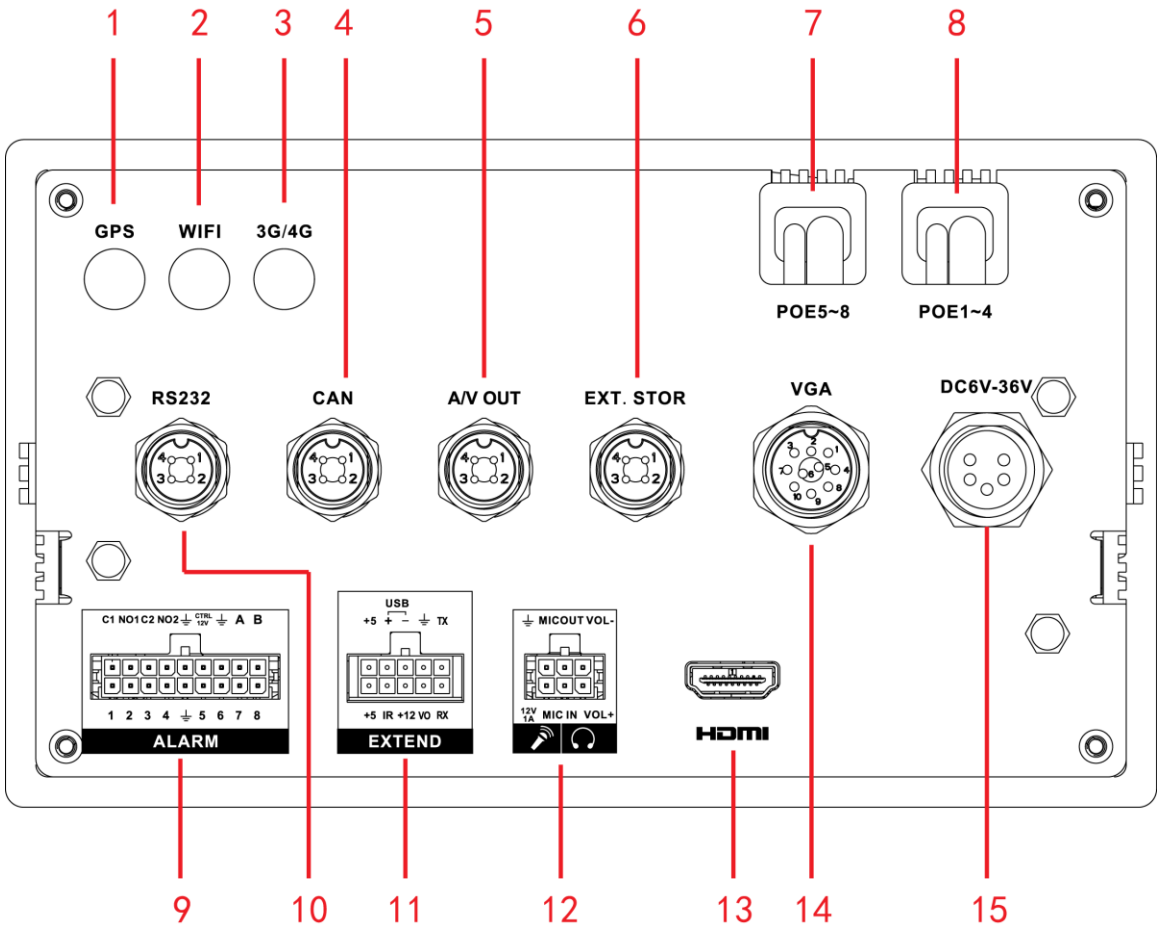

Figure 4-3

Please refer to the following sheet for front panel button information.

SN	Function
1	GPS port
2	WIFI antenna port
3	3G antenna port
4	CAN audio broadcast port. Connect to audio broadcast device. It can provide power to the mobile PTZ.
5	Audio/video output
6	Connect to peripheral HDD.
7	IPC connection port 5~8
8	IPC connection port 1~4
9	Alarm input/output port
10	RS232 COM
11	Extension port
12	Bidirectional talk port
13	HDMI port
14	VGA port
15	Device power socket

4.2.2 Extension Port

This series has the built-in power; you do not need the mobile power supply sourcing.

The following contents are to introduce function of each port. You can make connection cable by yourself or you can contact your local retailer to purchase.

The extension port1 is shown as in Figure 4-4.

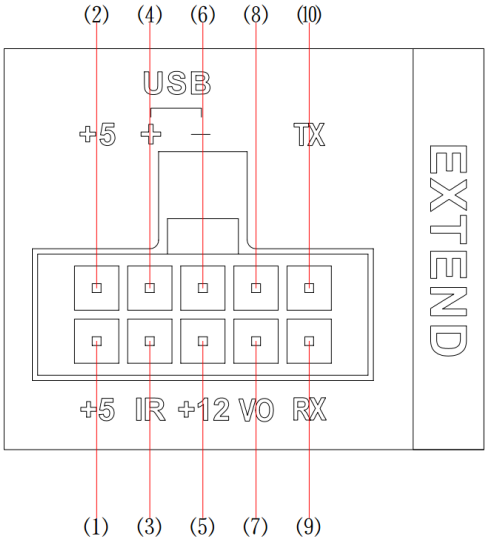

Figure 4-4

Please refer to the following sheet for detailed information.

SN	Function	SN	Function	SN	Function
1/2	5V output	3	Remote control input	4/6	USB
5	+12V output	7	Video output	8	GND
9	RXD_232	10	TXD_232	-	-

4.2.3 Alarm port

Alarm input and output interface is shown as in Figure 4-5.

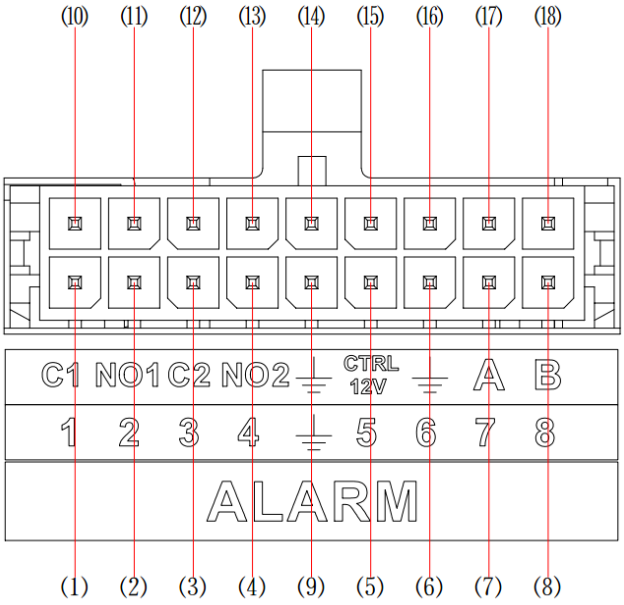

Figure 4-5

Please refer to the following sheet for detailed information.

Name	Pin Introduction
1～8	Alarm input 1～Alarm input 8
9	GND
10/11	Alarm output 1
12/13	Alarm output 2
14	GND
15	Controllable 12V output
16	GND
17/18	RS485 AB cable

4.2.4 Bidirectional talk port

The following contents are to introduce function of each port. You can make connection cable by yourself or you can contact your local retailer to purchase.

The bidirectional talk port is shown as in Figure 4-6.

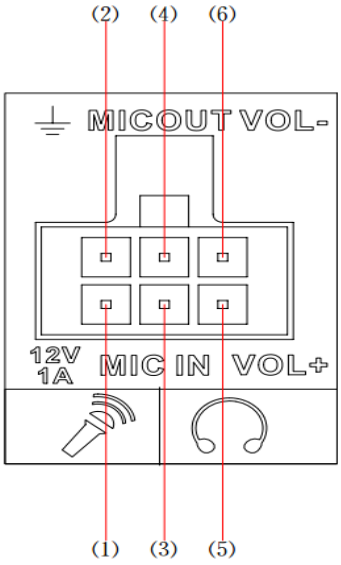

Figure 4-6

Please refer to the following sheet for detailed information.

SN	Function
1	12V/1A
2	GND
3	MIC IN
4	MIC OUT
5/6	Speaker+/Speaker-

4.3 Device Installation

Please refer to the following figure for detailed information. See Figure 4-7 and Figure 4-8. The unit is mm.

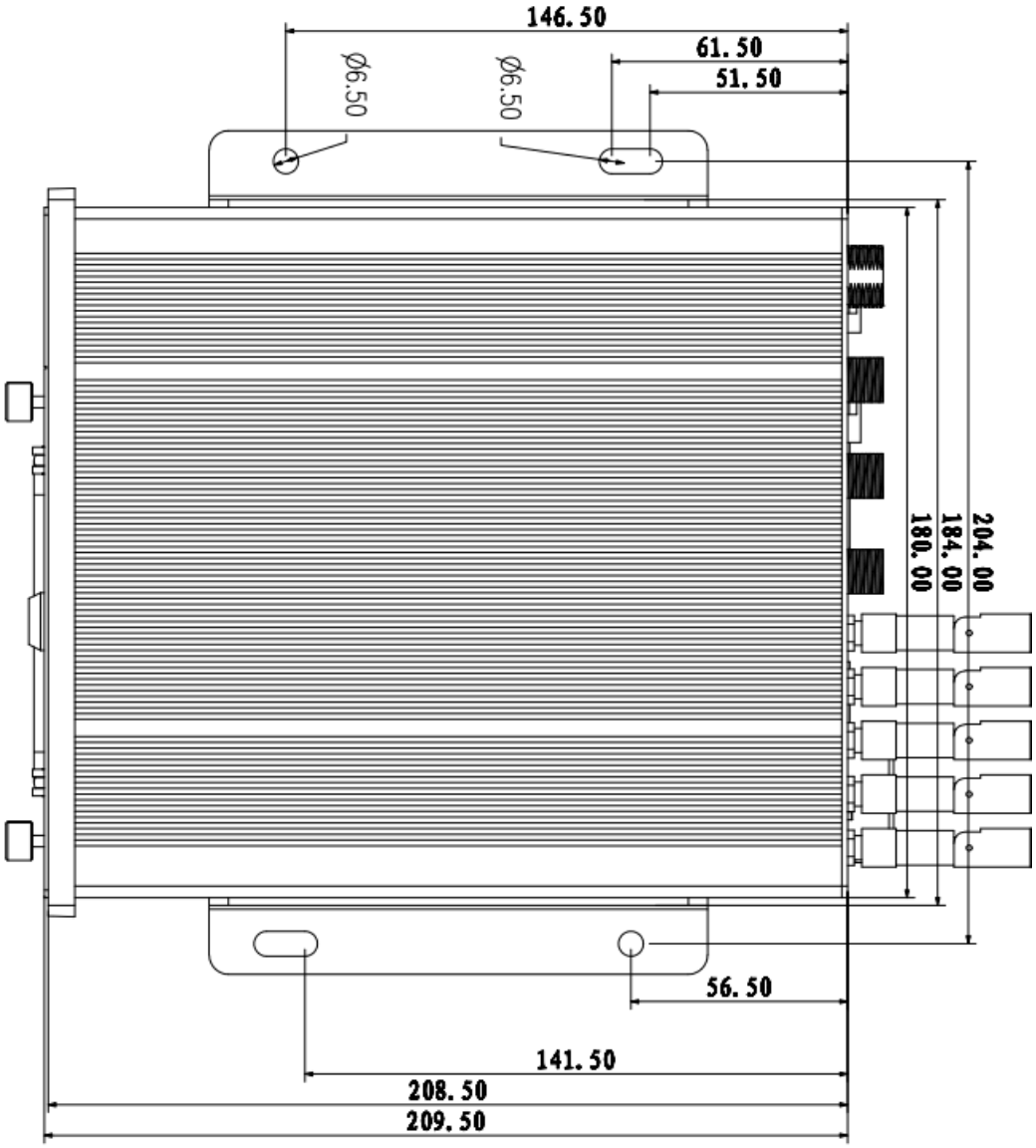

Figure 4-7

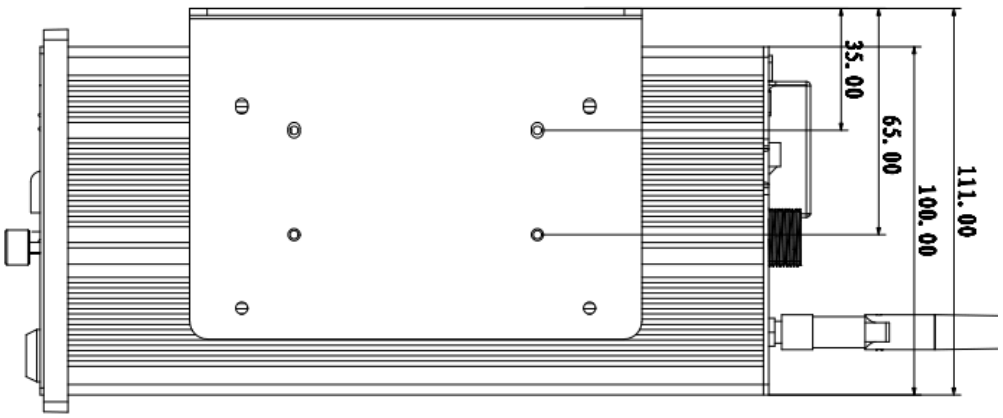

Figure 4-8

5 Device Debug

5.1 Web Access

If you want to access the mobile NVR via WEB, please make sure the computer and the NVR are in the same IP segment.

Open the browser and then input the NVR IP address. You can login the device, the default user name is **admin** and the password is **admin**.

5.2 Peripheral Devices Connection

5.2.1 NVR and PTZ camera

Login the NVR local menu, the default user name is **admin** and the password is **admin**.

On the preview interface, right click mouse and then select PTZ. You can set protocol, baud rate, address and etc.

Select the channel from the dropdown list and the type shall be remote.

The interface is shown as in Figure 5-1.

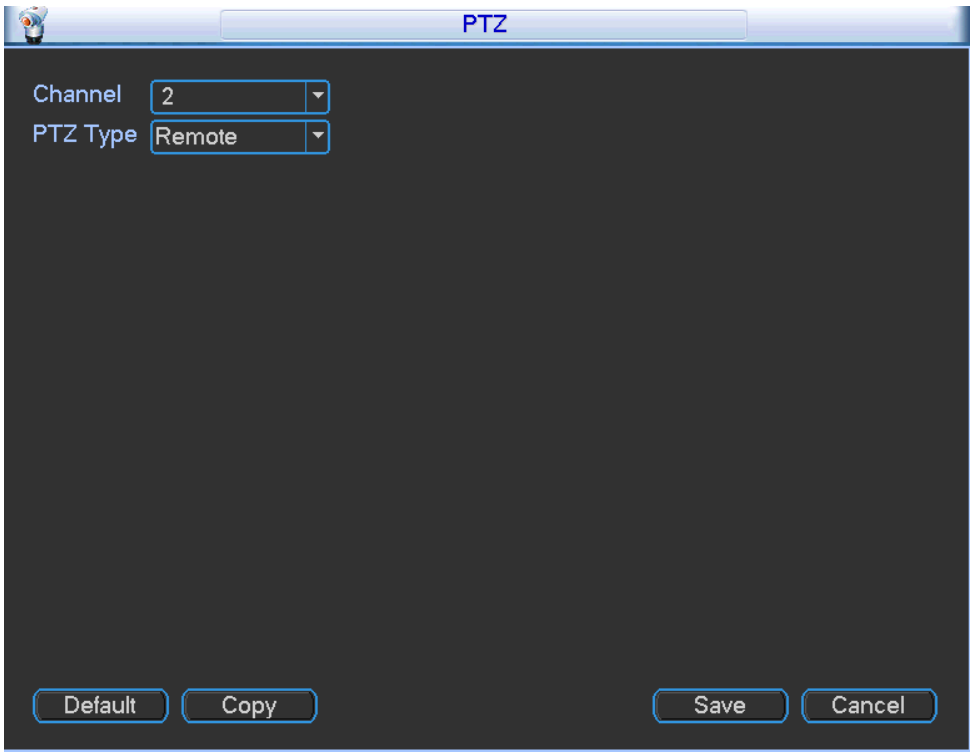

Figure 5-1

5.2.2 NVR and Keyboard

On the local menu, from Setting->RS232, you can see the following interface. See Figure 5-2.

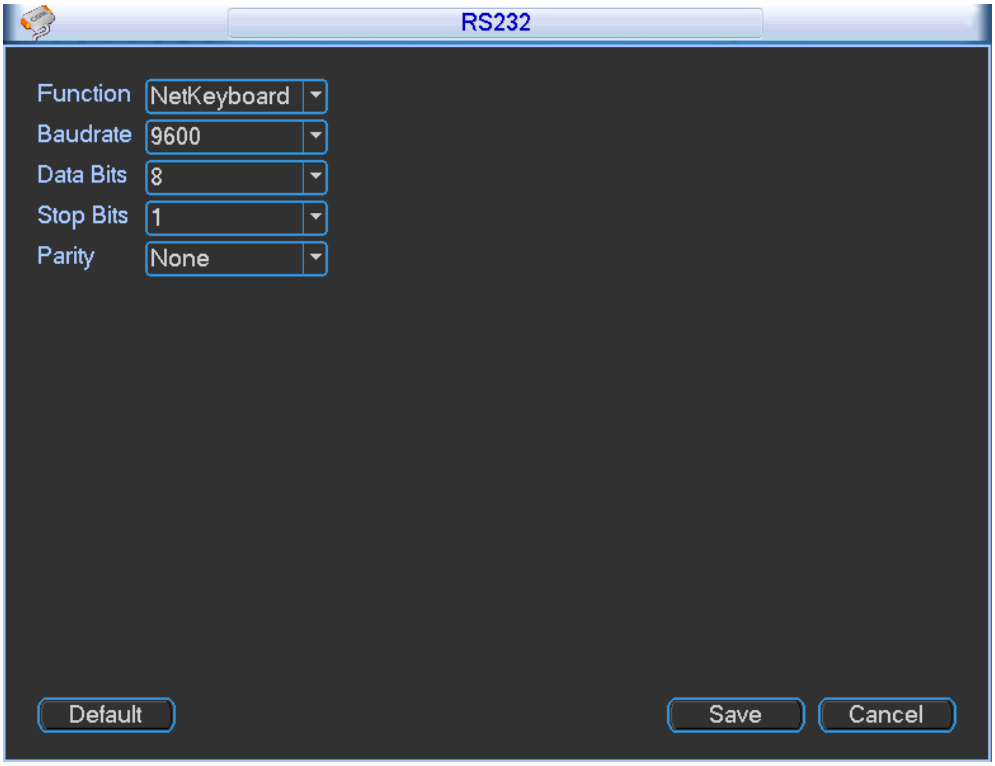

Figure 5-2

Login Web, from Setup->System->RS232, you can set function, baud rate and etc.
The interface is shown as in Figure 5-3.

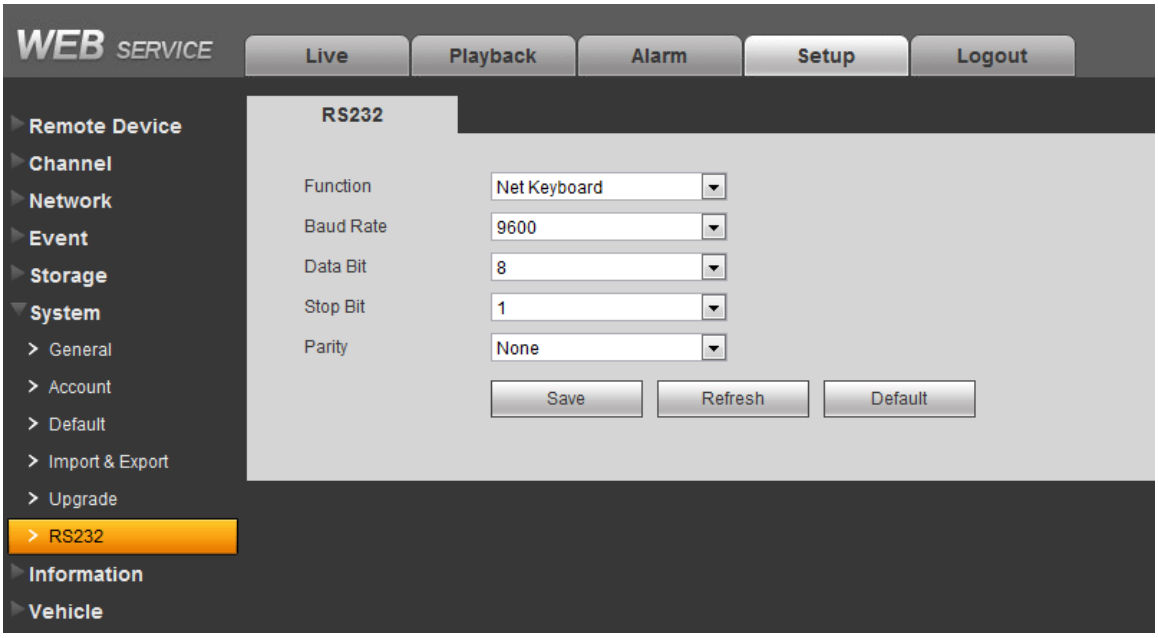

Figure 5-3

The setup information is shown as below:

- Function: network keyboard.
- Baud rate: 9600.
- Data bit: 8.
- Stop bit 1.

- Parity: none.

5.2.3 Overlay Realtime OSD

The interface is shown as in Figure 5-4.

Figure 5-4

For PTZ angle (195/01) and camera zoom information (01X), please go to the PTZ camera menu to set. For the vehicle plate information (A3273), time(2011-02-22 17:10:37), GPS information(lon120.33931 lat30.30281 V：0), you can go to the local menu (setting->encode->overlay) to set. Or you can go to WEB, from setup->Channel->Video&audio->Overlay to set. See Figure 5-5 or Figure 5-6.

- Overlay: Please note the following overlay titles can not be in the same position. **Please note only the unit of GPS module supports GPS overlay function.**
  - ✧ Cover area (Privacy mask): Here is for you to set privacy mask section. You can drag you mouse to set proper section size. In one channel video, system max supports 4 zones in one channel.
  - ✧ Preview/monitor: privacy mask has two types. Preview and Monitor. Preview means the privacy mask zone can not be viewed by user when system is in preview status. Monitor means the privacy mask zone can not be view by the user when system is in monitor status.
  - ✧ Time display: You can select system displays time or not when you playback. Please click set button and then drag the title to the corresponding position in the screen.
  - ✧ Channel display: You can select system displays channel number or not when you playback. Please click set button and then drag the title to the corresponding position in the screen.
  - ✧ License No. : You can select system displays car number or not when you playback.
  - ✧ GPS display: You can select system displays latitude and longitude or not when you playback.

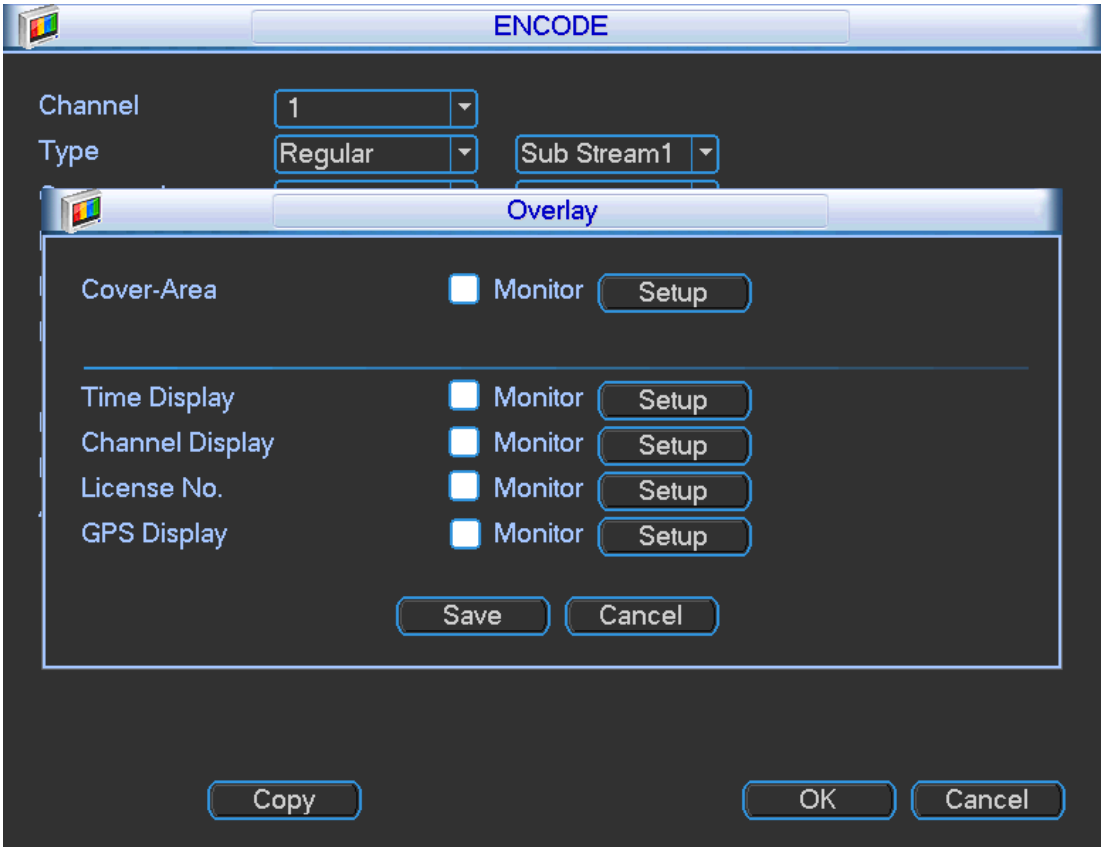

Figure 5-5

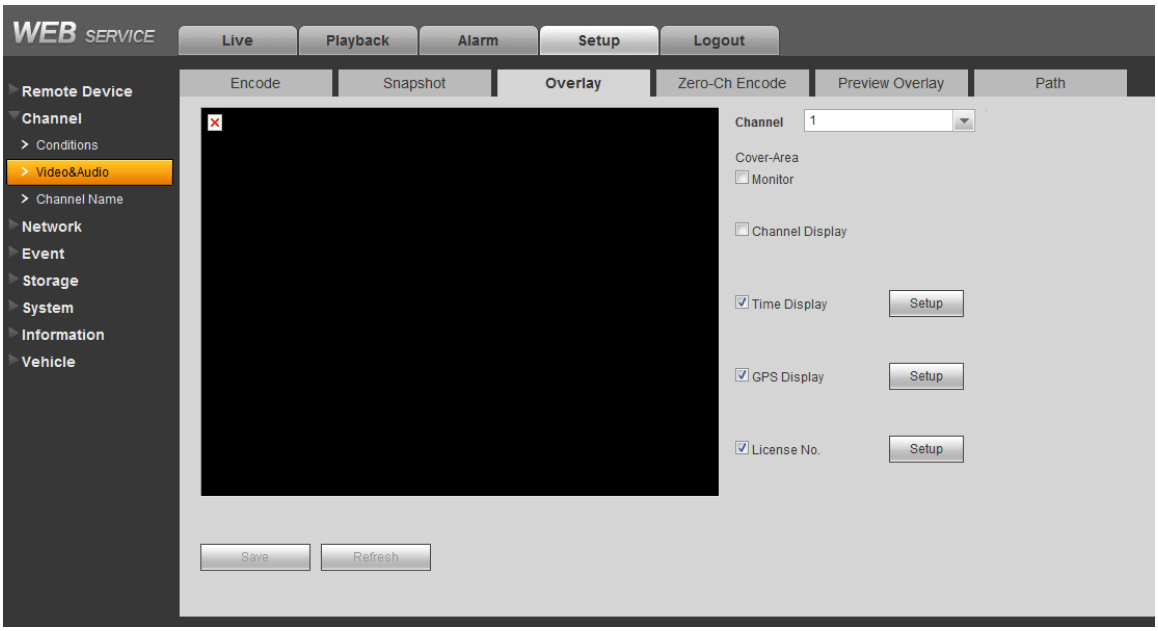

Figure 5-6

On the WEB, from Setup->Vehicle->Vehicle, the interface is shown as in Figure 6-1. You can set plate information too.

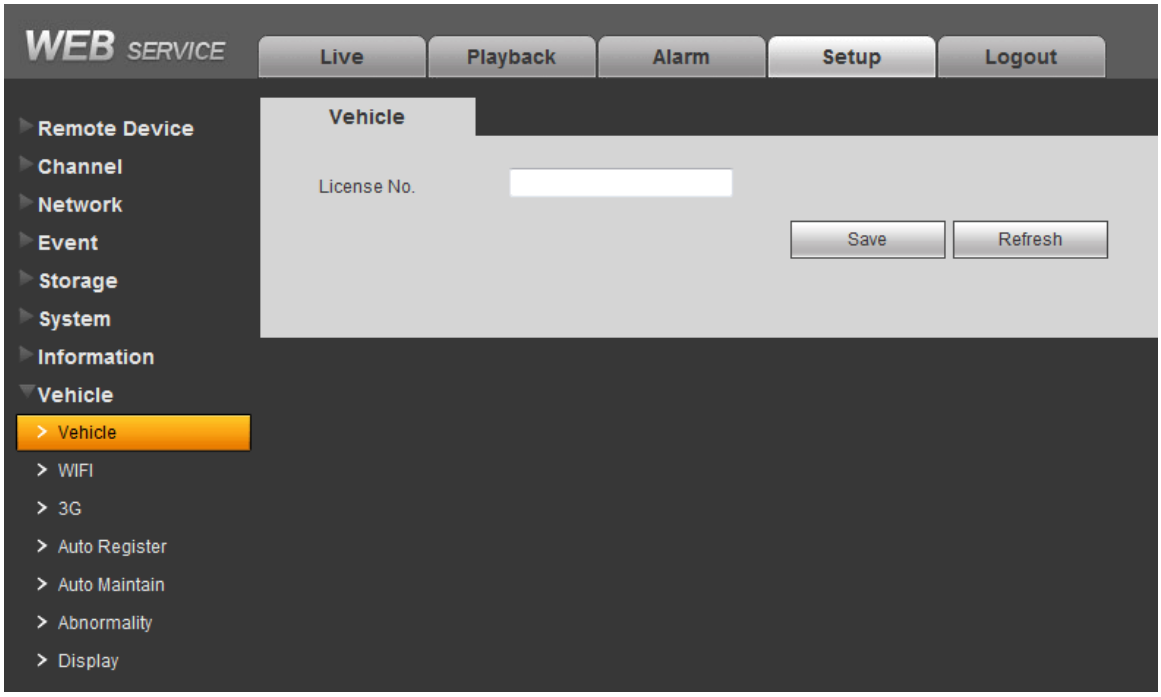

Figure 5-7

5.3 Function

5.3.1 Encode

On the local main menu, from Setting->Encode, the interface is shown as in Figure 5-8.

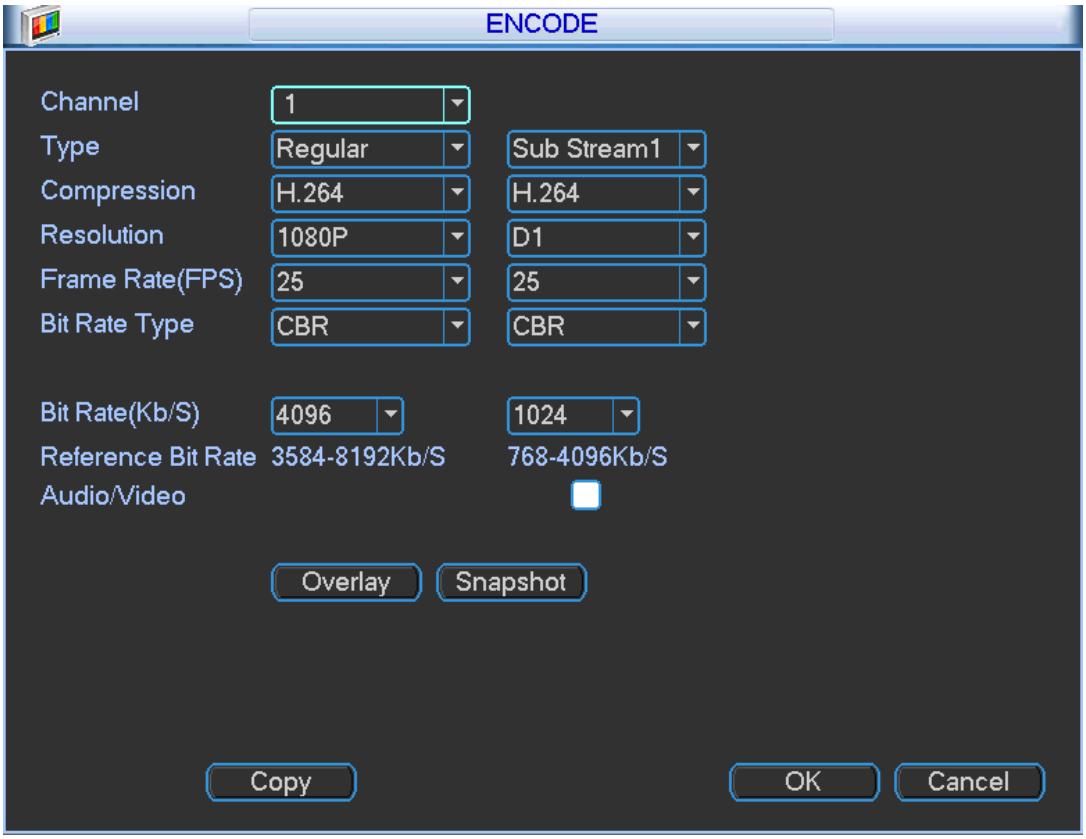

Figure 5-8

Or on the WEB, from setup->Channel->Video&audio->Encode, the interface is shown as in Figure 5-9.

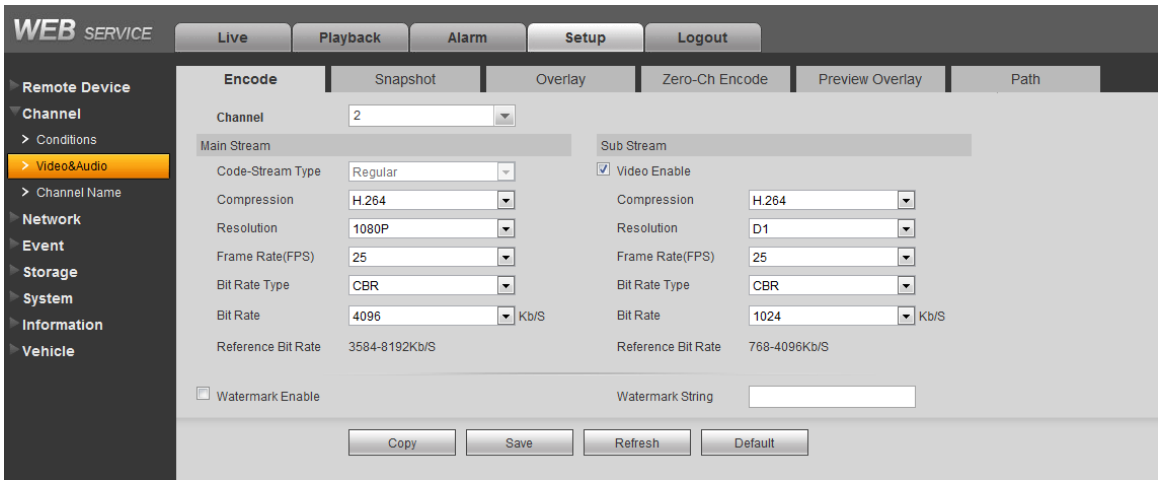

Figure 5-9

- Channel: Select the channel you want.
- Type: Please select from the dropdown list. There are two options: regular/alarm. You can set the various encode parameters for different record types.
- Compression: System supports H.264, MJPEG.
- Resolution: System supports various resolutions, you can select from the dropdown list. The main stream supports 3M/1080P/SXGA/1.3M/720P. The sub stream supports D1/CIF.
- Frame rate: It ranges from 1f/s to 25f/s in NTSC mode and 1f/s to 30f/s in PAL mode.
- Bit rate type: System supports two types: CBR and VBR. In VBR mode, you can set video quality.
- Quality: There are six levels ranging from 1 to 6. The sixth level has the highest image quality.
- Video/audio: You can enable or disable the video/audio. The main stream is enabled by default. The record includes audio and video if you highlight audio button here. For extra stream, you need to check video first and then select audio.
- Audio format: Here you can set device audio format: G711a, PCM, G711μ.

5.4 Auto register

On the local menu, from Vehicle->Register, you can see the following interface. See Figure 5-10.

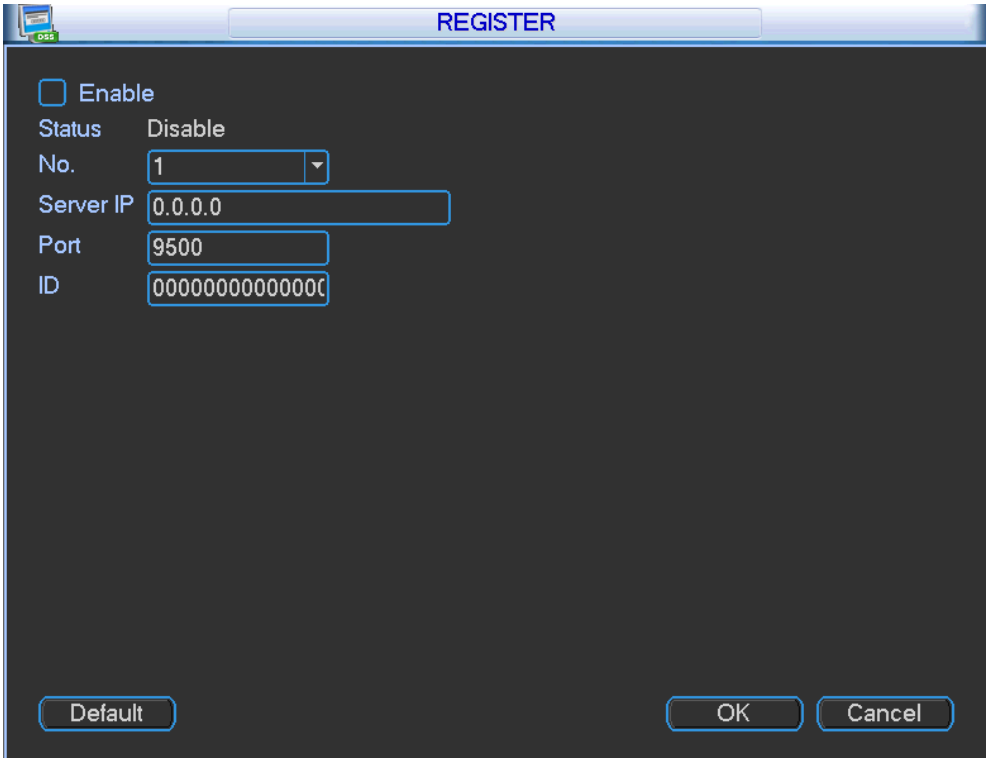

Figure 5-10

Or on the WEB, from Setup->Vehicle->Auto register, the interface is shown as in Figure 5-11.

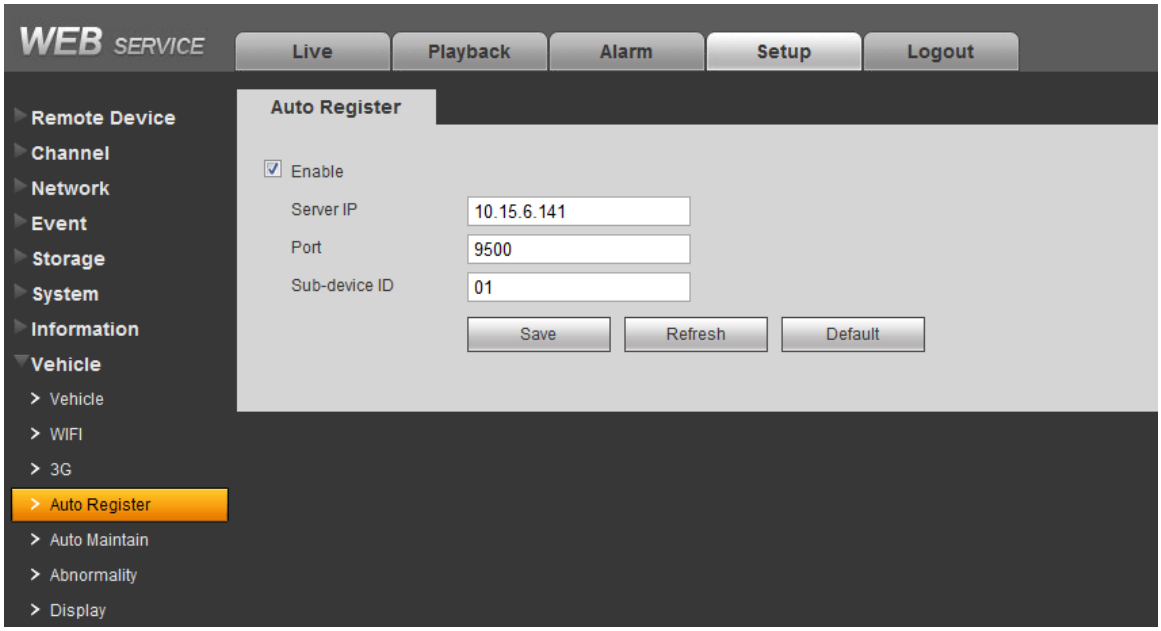

Figure 5-11

- Enable: Check the box here to enable the auto register function.
- Server IP: Input DSS server IP address.
- Port: DSS server port value.
- Sub-device ID: Input the device ID allocated from the DSS server.

5.5 ACC delay

On the local menu, from Vehicle->maintain, the interface is shown as in Figure 5-12.

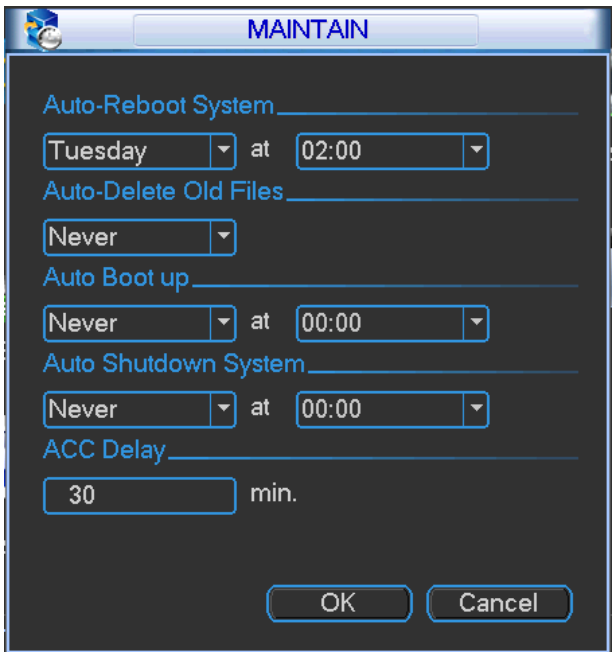

Figure 5-12

Or on the WEB, from Setup->Vehicle->Auto maintain, the interface is shown as in Figure 5-13.

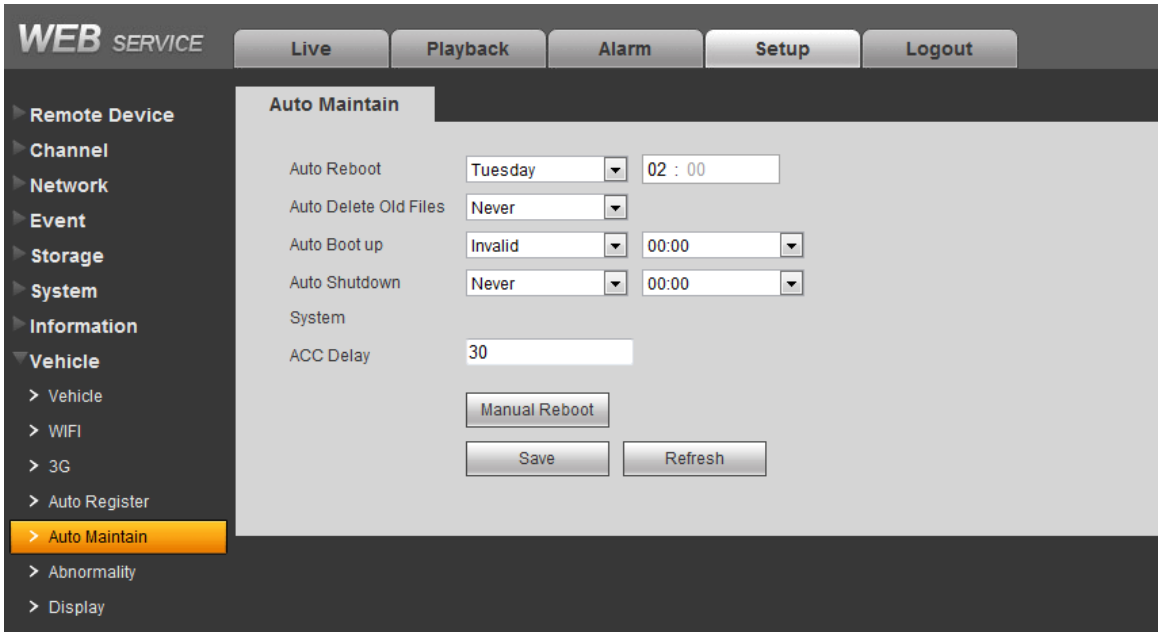

Figure 5-13

Here you can set auto-reboot time and auto-delete old files, auto shutdown, and auto ACC delay (0-65535 minutes) setup. You can set to delete the files for the specified days.

Note

- The auto boot up and ACC delay function is only valid when vehicle ACC signal connection is OK. The auto shut down has higher priority than ACC delay. If you enable these two functions at the same time, the ACC delay function is null.

6 Reference Figures

You can refer to the following figures for reference. See Figure 6-1 through Figure 6-5.

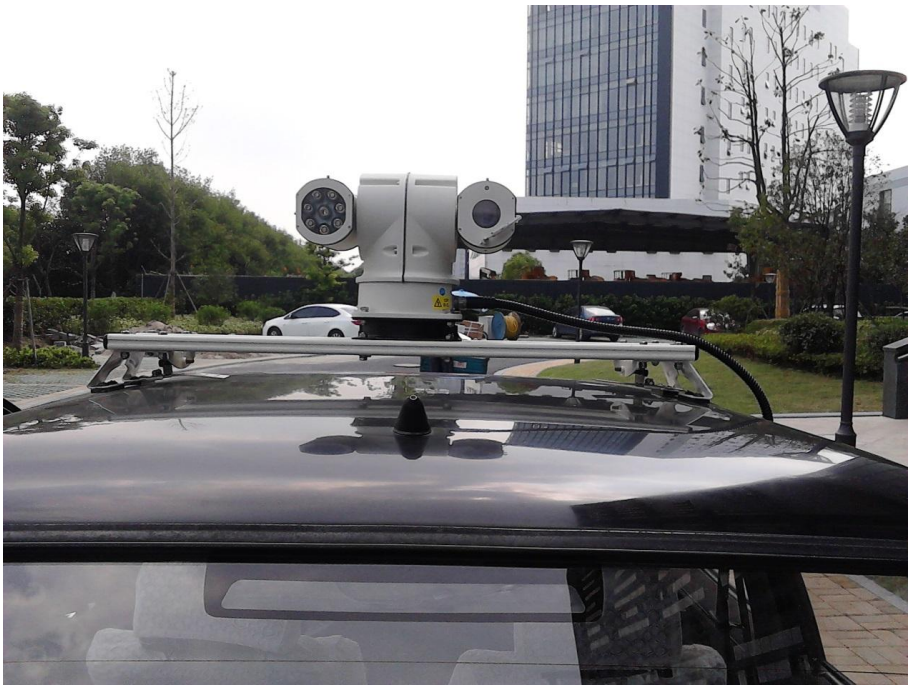

Figure 6-1

Figure 6-2

Figure 6-3

Figure 6-4

Figure 6-5

Note

- **This installation guide for reference only. Slight difference may be found in the user interface.**
- **All the designs and software here are subject to change without prior written notice.**
- **All trademarks and registered trademarks are the properties of their respective owners.**
- **If there is any uncertainty or controversy, please refer to the final explanation of us.**
- **Please visit our website or contact your local service engineer for more information.**