

Thank you for purchasing our product.  
Please read instructions before operation.  
Change without Notice

## **4 CH MOBILE DVR**

### **User Manual**



**CE FC**

## Safety Precautions



### CAUTION

#### RISK OF ELECTRIC SHOCK



#### CAUTION :

To reduce the risk of electric shock, do not expose this apparatus to rain or moisture. Only operate this apparatus from the type of power source indicated on the label. The company shall not be liable for any damages arising out of any improper use, Even if we have been advised of the possibility of such damages.

### Graphic Symbol Explanation



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user of the presence of insulated dangerous voltage within the product's enclosure that may be sufficient magnitude to constitute risk of electrical shock to persons.



This exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



All lead-free products offered by the company comply with the requirements of the European law on the Restriction of Hazardous Substances (RoHS) directive, which means our manufacture processes and products are strictly "lead-free" and without the hazardous substances cited in the directive.



The crossed-out wheeled bin mark symbolizes that within the European Union the product must be collected separately at the product end-of-life. This applies to your product and any peripherals marked with this symbol. Do not dispose of these products as unsorted municipal waste. Contact your local dealer for procedures for recycling this equipment.

Attention: installation should be performed by qualified service personnel only in accordance with the National Electrical Code or applicable local codes.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE UNITS NOT SPECIFICALLY DESIGNED FOR OUTDOOR USE TO RAIN OR MOISTURE.

## FCC STATEMENT

### WARNING

This device complies with Part 15 FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received including interference that may cause undesired operation."

### WARNING

This Equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.




⚠ You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

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# 1. Package Contents

Description	Picture	MR4100	MR4101
Power cable (6 pin/6m) + 5A fuse X 2		V	V
I/O cable		V	V
3G antenna (Female)	 Pictures for reference only, actual delivery-based	V	-
G-Mouse (Male/5m)		V	V
Wifi antenna (Female)	 Pictures for reference only, actual delivery-based	V	-
Remote Controller + battery		V	V
Screw x 6		V	V

Hard disk rack locker key		<b>V</b>	<b>V</b>
Cable with 4 video input and one usb port (1 pieces)		<b>V</b>	<b>V</b>
External Indicator		Optional	Optional

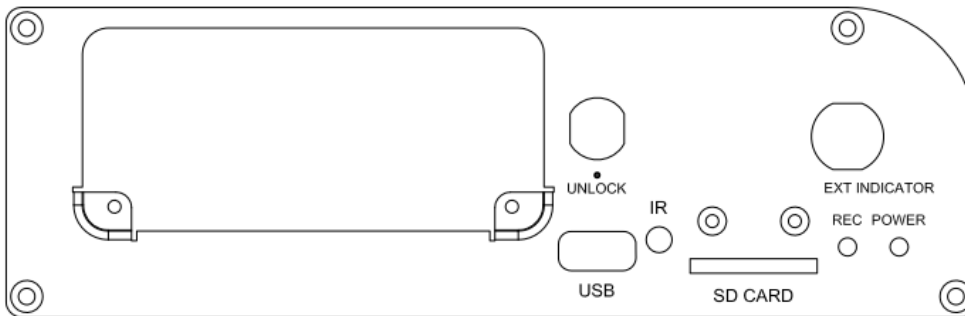
## CD Contents

Description	Model	
	MR4100	MR4101
MRPlayer	<b>V</b>	<b>V</b>
MRVMS RegisterServer_Setup ServerDBInstall	<b>V</b>	<b>Optional</b>

## 2. Product Overview

### Front Panel

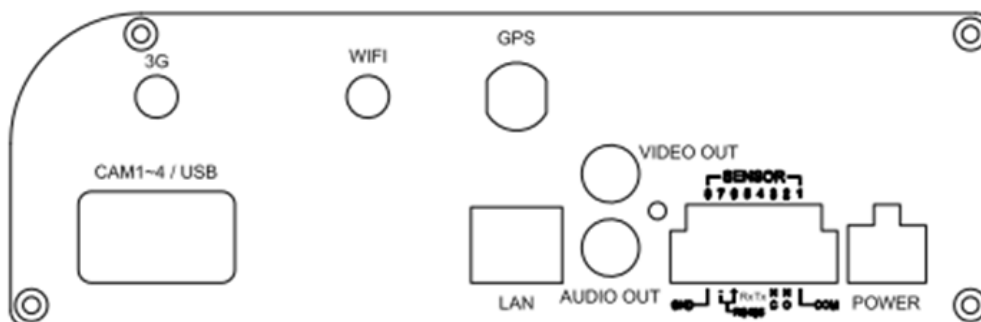
#### MR4100 / MR4101



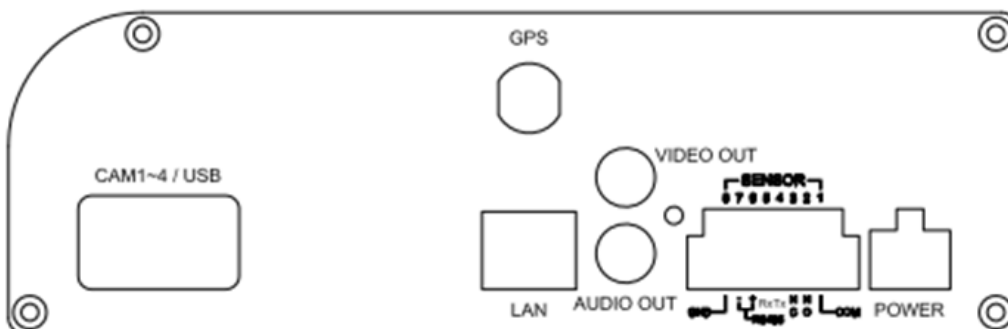
(※ Front panel USB port recommended only for USB storage, mouse recommended use the back Cable wire's USB port )

### Back Panel

#### MR4100: with 3G (4G) / WIFI function

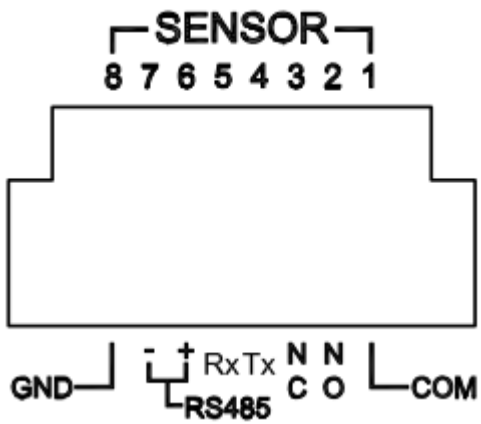


#### MR4101: without 3G (4G) function

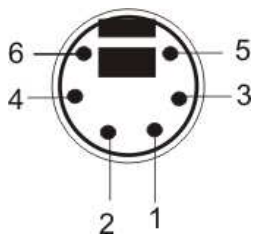


## Cable pin definition

I/O cable pin definition



Mini din type



Pin number	Description
1	Not used
2	Not used
3	Audio
4	GND
5	+12V
6	Video



The function button of this IR remote controller as below

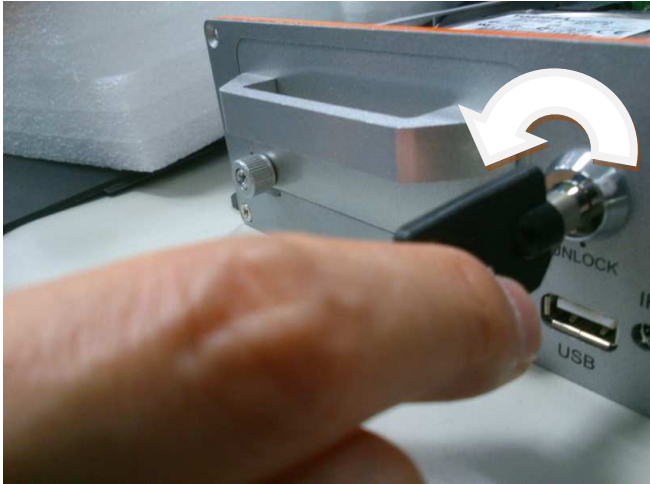


<b>Lock</b>	Lock the DVR system need a password to unlock it
<b>Panic</b>	Panic record button
<b>Menu</b>	Go to 'MENU' mode to setup the system
<b>Search</b>	Search recorded video
<b>Backup</b>	Backup the recorded data to other device
<b>Direction</b> (▲,▼,◀,▶)	Move cursor or control PTZ camera
<b>ENTER</b>	Select sub item in system setup mode
<b>ESC</b>	Exit the dialog window

### 3. Physical Connection

#### Hard disk installation

- ① Please insert the key in the front of the device and turn counterclockwise 90° to unlock.



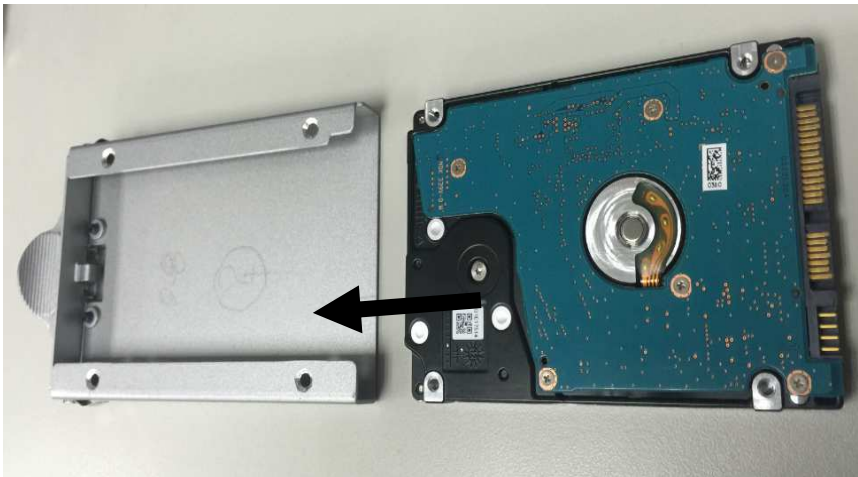
- ② Loosen the two screws and take off the cover.



- ③ Pull the rack out to install hard disk.



④ Turn the rack over to install HDD. Please take note of the direction and tighten HDD up by the four screws.



⑤ Set the HDD back to DVR. Please be sure you it is locked.



After you installed the hard disk, please put the rack back into the mobile DVR, tighten the two front screws and lock the rack. If the lock is not correctly done, the system won't be started up and the power led will flash.

※When HDD/SSD is installed, the bottom screen will display an Icon as

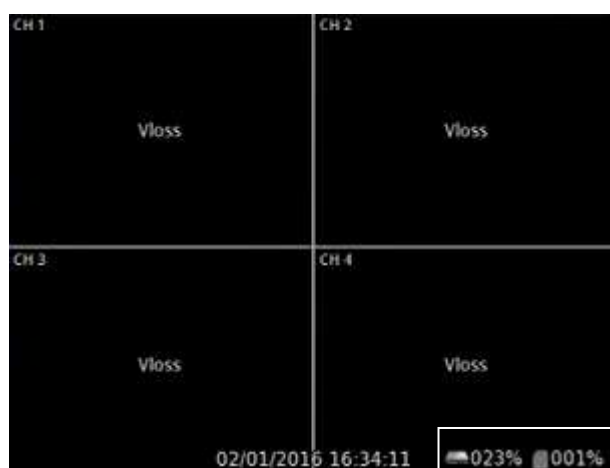


## SD card installation



1. Shut the power down
2. Loosen screws and open the cover
3. Insert SD card in the slot properly

※When SD Card is installed, the bottom screen will display an Icon as . Please refer to below photo.



Icon and storage information will be shown here.

※ To avoid problem of compatibility, please use below suggested SD cards. Furthermore, riser card to micro SD won't be accepted.

Brand	Capacity	Level		Speed
Transcend (Premium-9181AA)	32G	CLASS 10	UHS-1	45MB/s
SanDisk(Ultra)	32G	CLASS 10	UHS-1	48MB/s
PATRIOT(LX Series PSF32GSDHC 10-PC)	32G	CLASS 10	UHS-1	10MB/s
SONY(SF-32UY)	32G	CLASS 10	UHS-1	40MB/s

- ※ DVR only supports SD card formatted by FAT32. If use other format to record files, read/write problems may happen.
- ※ If the SD card is damaged, DVR will not be able to perform normal functions as recording, playback and so on.  
For the time being, please use computer to format the SD card. If it is still a problem, please contact the manufacturer of SD card for overhauling or data rescuing.
- ※ Supports SD, SDHC and SDXC.

## SIM card installation

When you purchase your SIM card to your telecom provider, please make sure that it meets one of the following standards in order to work:

GSM 850 900 1800 1900

WCDMA 850 1900 2100

- ① Loosen 4 bolts of the top cover and open it.



- ② Pull the SIM card socket.

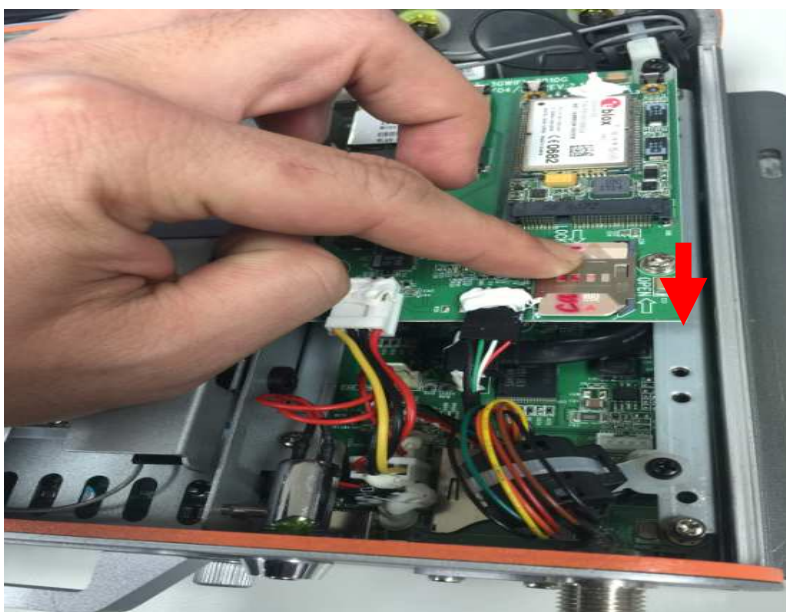




- ③ Insert the SIM card with its gold contact facing down and as below shown.



- ④ Put the lid back and push it to lock.



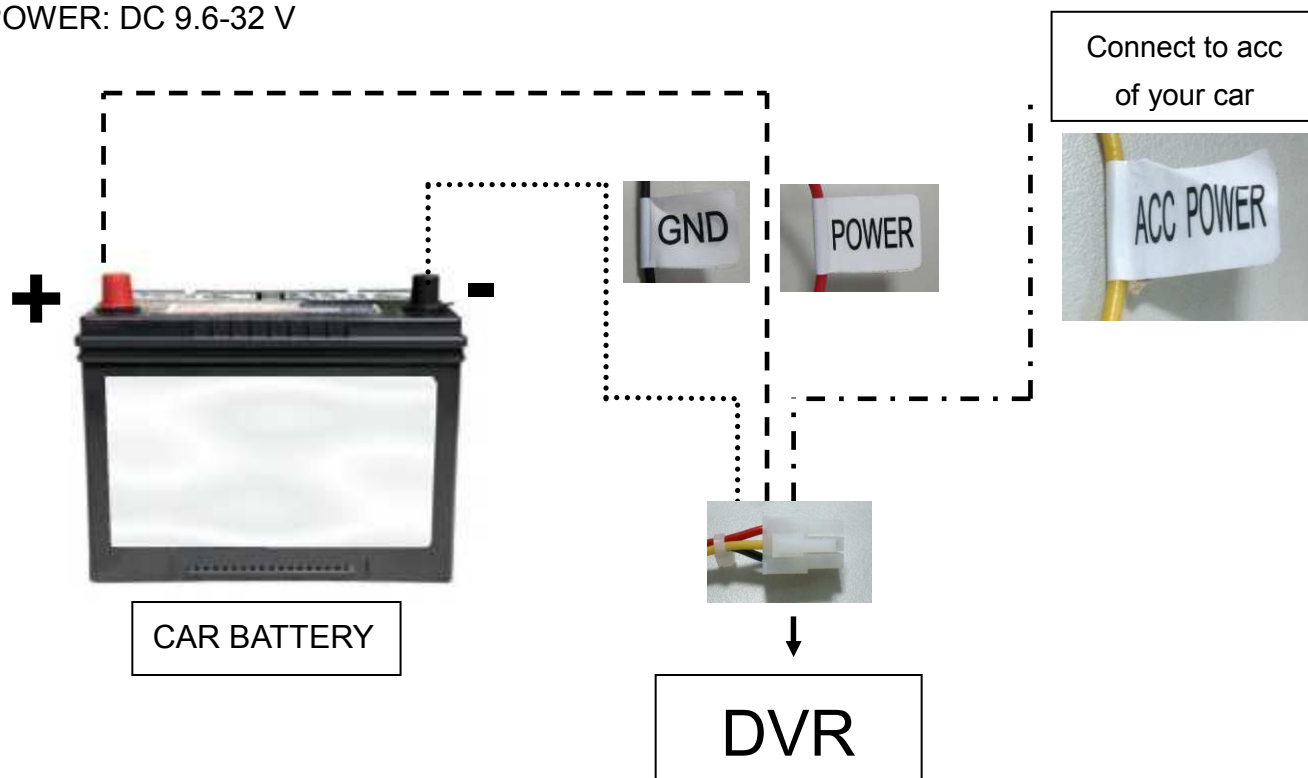
## Indicator light

LED Color	Description	Always ON	Always OFF	Flashing
Red	Record	recording (Normal/Event)	No recording	Warning: device can't record 、Vloss or HDD Initial fail
Green	Power	System ready	Power off	System booting

## Power Setup

Cable type	Meaning
.....	Ground -
-----	Power +
-----	ACC power

※ POWER: DC 9.6-32 V





For your information ground and power + cable are protected with a 5A fuse.

Note that, do not pull the power connector when the DVR is recording to avoid the hard drive be damaged. First unplug all cameras, wait that yellow led turn off then unplug the power.

## Event Box description



Icon	Description	Color	Always ON	Always OFF	Flashing
	Record	Red	recording (Normal/Event)	No recording	Warning: device can't record · Vloss or HDD Initial fail
	Power	Green	System ready	Power off	System booting

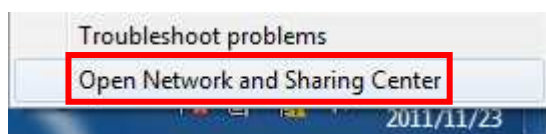
### 3. Setup

In order to access to the 4CH mobile DVR with a notebook, you need to have RJ45 cross cable

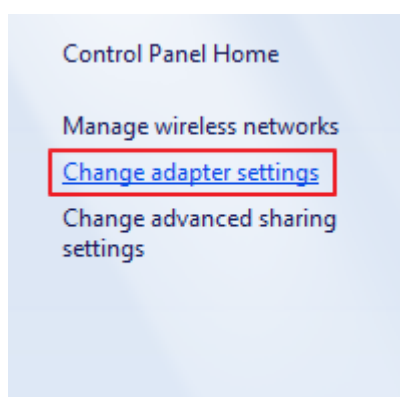
Link the notebook to the DVR with the LAN cable

Under windows 7

On the desktop bottom right, right click mouse on network icon then select **open network and sharing center**

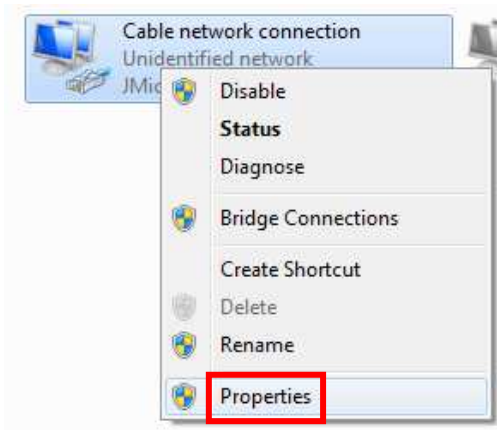


Then on the left select **Change adapter settings**

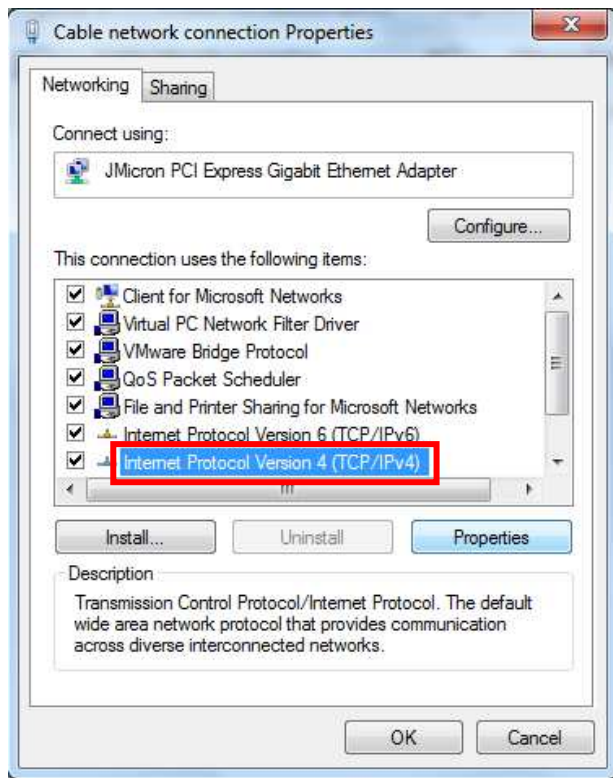


Choose your lan wired connection then mouse right click and select properties

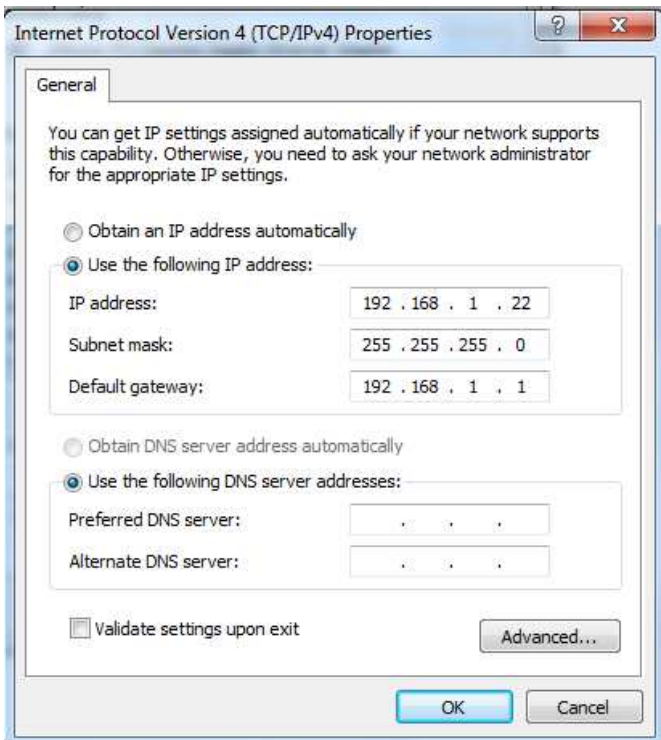




Then click on Internet Protocol IPV4 and click properties



Assign an IP address to your notebook as the DVR default IP is **192.168.1.99**



Valid by pressing ok

## Internet Explorer setting

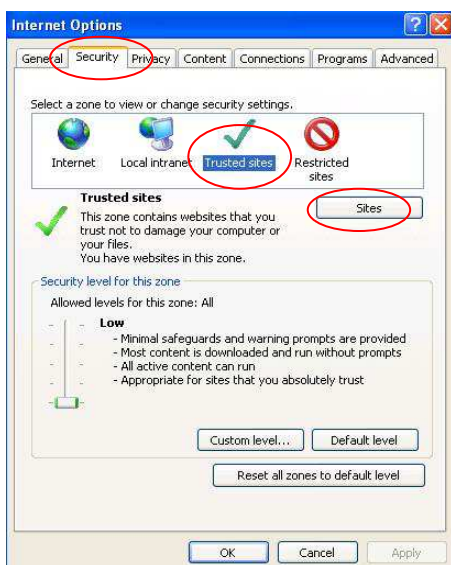
Our device supports **Internet Explorer 7, 8, 9(32bits) and 10(64bit) only**

The default IP address of the mobile DVR is **192.168.1.99**

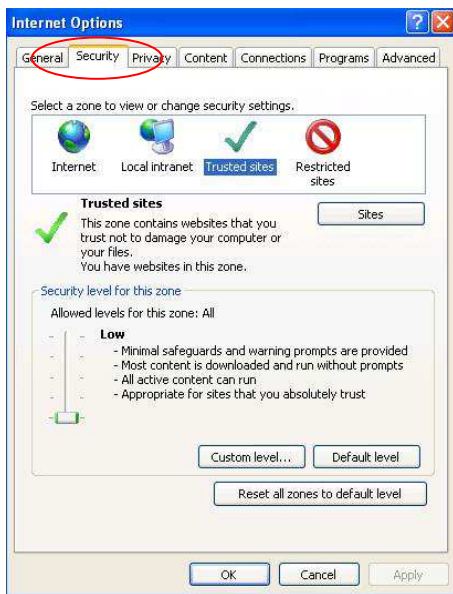
In order to install the active X you need to change your Internet Explorer settings

Open Internet Explorer, Click the Tools button, and then click Internet Options.

Click the Security tab, and then click a security zone Trusted sites. Click Sites.



The DVR IP should be shown in the *Add this website to the zone* field. Please make sure that the below option 'require server verification' is disabled Click Add and close.



Then turn the Security level to Low and press apply  
Return to Internet Explorer main page

Press Install

The icon must be in blue color then please login in the DVR

Default administrator username/password is "**admin**"/ "1111"

Default guest username/password is "**guest**"/ "1111"

If you don't operate the car dvr after a period of time (30 minutes) you will be automatically logged out, then you need to login again with your account and password



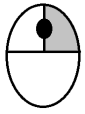
You will have a pop up message



A pop up message will display, press Yes to continue



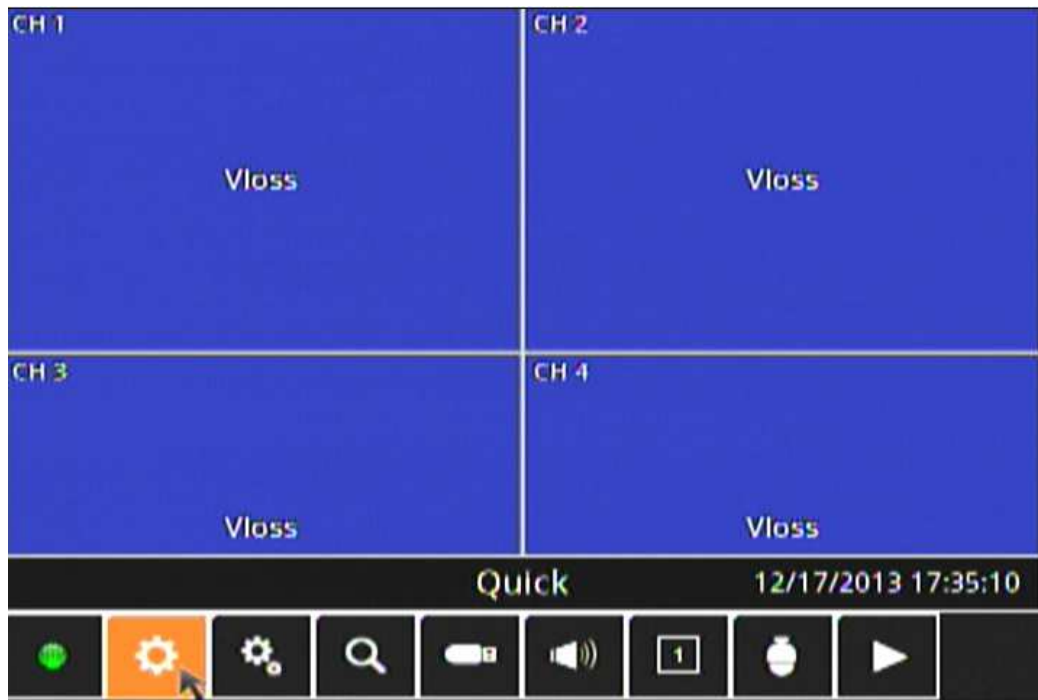
## 4. DVR operation via video out



Mouse right click →

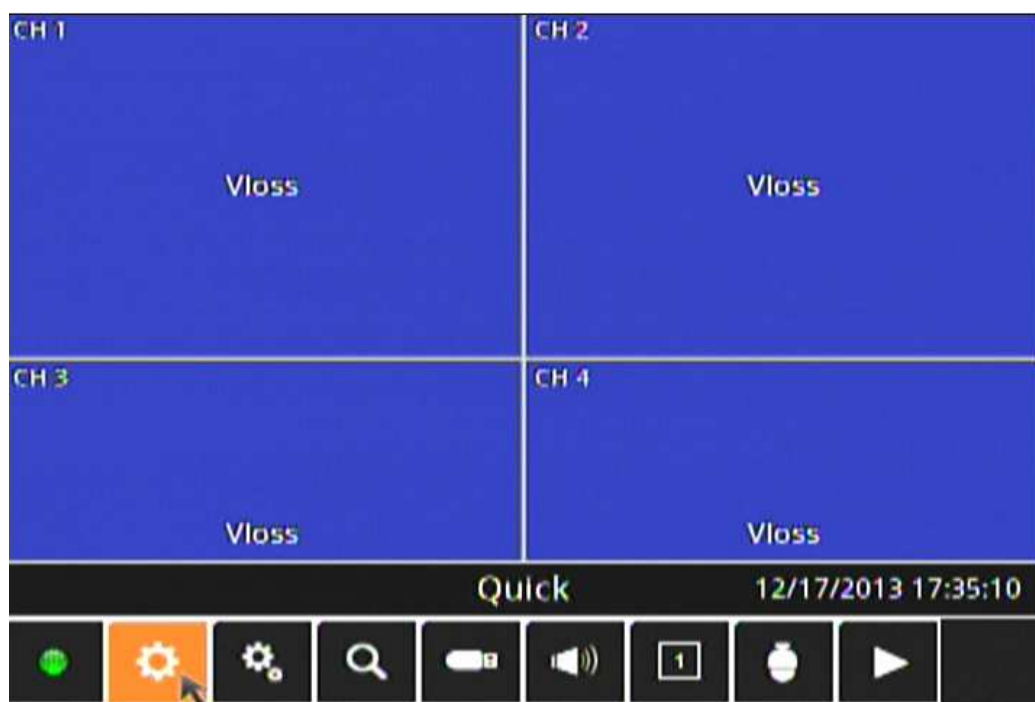


Quick



## Quick setting

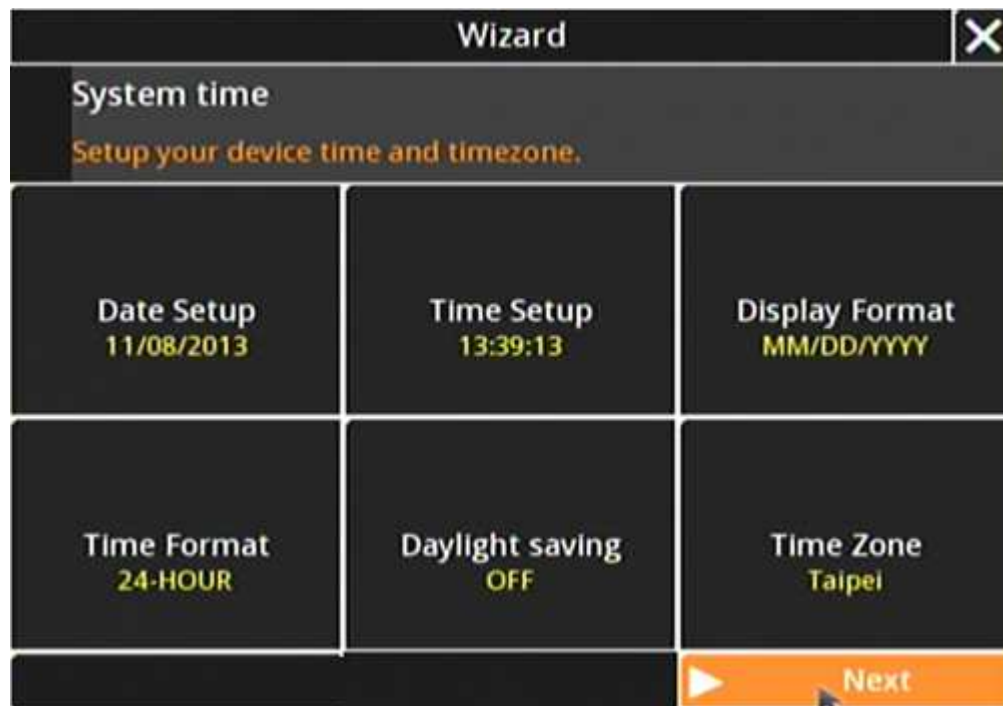
After click the “Quick” icon, the wizard will take you to fill out all needed information to setup the mobile DVR.



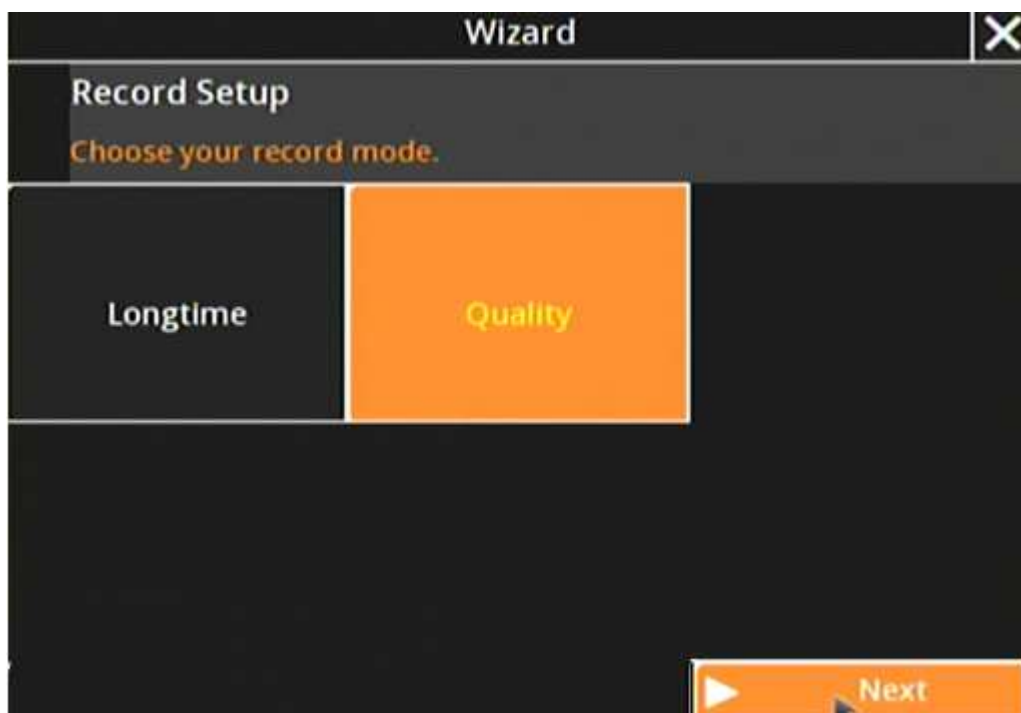
**Language:** There are 6 options at here, including “English”, “Traditional Chinese”, “Japanese”, “Deutsch”, “French”, “Portugues”.



**System time:** There are 6 options at here, including “Date Setup”, ”Time Setup”, “Display Format”, “Time Format”, “Daylight saving”, “Time Zone”.



**Record Setup:** Choose your record mode here, including “Longtime”, and “Quality” 2 options. longtime setup will extend record time but image quality will be reduced whereas QUALITY mode will give the best quality picture with a shorter recording time.



**Network Setup:** There are 6 options at here, including “LAN”, “Wifi”, “3G network”, “Center IP”, “Register Timing”, “E-mail” etc.

User can setup according to network environment

Wizard		
Network Setup Setup your network interface.		
LAN Static IP	Wifi 6F-WAP2	3G network internet
Center IP 192.168.6.241:8788	Register Timing 10sec	E-mail 0
		Next

**Ignition Off:** Setup Ignition off record mode this function is to setup when ignition is off post recording time, including 14 options can be selected. Including “Off”, “30 sec”, “5 min”, “10 min”, “15 min”, “20 min”, “25 min”, “30 min”, “35 min”, “40 min”, “45 min”, “50 min”, “55 min”, “60 min”.

Wizard				
Ignition Off Setup Ignition off record mode.				
OFF	30 sec	5 min	10 min	15 min
20 min	25 min	30 min	35 min	40 min
45 min	50 min	55 min	60 min	
				Next



**Car Info Setup:** 4 options here for selection, including “Device Number”, “Company Name”, “Driver Name”, “Car Number”. Then “Save” & quit.



The screenshot shows a window titled "Wizard" with a close button (X) in the top right corner. Below the title bar, the text "Car Info Setup" is displayed, followed by the instruction "Setup your Car Information." in orange. The main area is divided into four sections: "Device Number" with the value "000001", "Company Name" with the value "abcdef", "Driver Name" with the value "mr chen", and "Car Number" with the value "1234". A "Save" button is located at the bottom right of the window.

Field	Value
Device Number	000001
Company Name	abcdef
Driver Name	mr chen
Car Number	1234

Save

### Advanced Setup



The screenshot shows a window titled "Advanced" with a close button (X) in the top right corner. The main area is divided into eight sections, each with an icon and a label: "Record Setup" (icon of a stack of papers), "Device" (icon of a wrench and screwdriver), "Event Setup" (icon of a megaphone), "Network Setup" (icon of a globe with an 'e'), "Account" (icon of three people), "System tools" (icon of two interlocking gears), "System Info" (icon of a computer monitor), and "Exit" (icon of a blue circle with a white arrow pointing left). A mouse cursor is visible over the "System tools" button.

Option	Icon Description
Record Setup	Stack of papers
Device	Wrench and screwdriver
Event Setup	Megaphone
Network Setup	Globe with 'e'
Account	Three people
System tools	Interlocking gears
System Info	Computer monitor
Exit	Blue circle with white arrow

## Record Setup:

- **Record setup**
  - **Channel:** 4 channel totally. From 1~4.
  - **Start Record:** "ON", "OFF"
  - **Frame Rate:** 1fps~30 fps (NTSC)/ 1fps~25 fps (PAL)
  - **Quality:** 5 options can be selected; "highest", "high", "normal", "low", "lowest".
  - **Resolution:** "320X240", "720X240", "720X480". (NTSC)  
"320X288", "720X288", "720X576". (PAL)
  - **Audio:** "ON", "OFF"
  - **Post Record:** can be setup from "OFF", "30 sec", "1 min", "2 min", "5 min", "15 min", "30 min", "1 Hour". Finally, "Apply ALL", "Save", & "Exit".
- **Ignition Off:** postpone time can be set from "30 sec", "5 min", "10 min", "15 min", "20 min", "25 min", "30 min", "35 min", "40 min", "45 min", "50 min", "55 min", "60 min". After setup this section, click "Save" and this page will be automatically exited.
- **Streaming:**
  - **Frame Rate:** From 1~15.
  - **Quality:** "Highest", "High", "Normal", "Low", "Lowest".
  - **Keyframe:** 1 sec ~ 10 sec. "Save", then quit automatically.
- **Device:**
  - **Color Setup**
    - **Camera:** 1 ~ 4
    - **Camera Title:** edit the camera name.
    - **PTZ Setup**
      - **PTZ Protocol:** "PELCO\_D", "PELCO\_P".
      - **PTZ ID:** 1~255.
      - **PTZ baud rate:** "110", "300", "1200", "2400", "4800", "9600", "19200", "38400", "57600", "115200".
  - **Color Setup**
    - Brightness:** 0~10
    - Contrast:** 0~10
    - Saturation:** 0~10
- **Storage:** Installed HDD's information will be located and listed here. Including HDD's "**Name**", "**Size**", "**Format**". After click "Format" pop-out message would ask & make sure user want to do the "Format" action. check "Yes" or "No" button for your choice. Meanwhile, the HDD overwrite action can be set when HDD was fully used for the record file. Please if you insert already used hard disk, the hard disk will be formatted

- **IR:** IR ID can be set here and there are “Not assigned”, “1-1~1-9”, “2-1~2-9”, “3-1~3-9”, “4-1~4-9”.

- **Keyboard:**

- **ID:** 1~15
- **Baudrate:** 2400 、 4800 、 9600.

- **Battery detector:**

- **Enable:** “ON”, “OFF”
- **Voltage type:** 12v or 24v.

※ Battery voltage detection function: when the voltage is too low, will alert user.

- **Buzzer:**

- **Sensor:** “OFF”, “Critical”, “Warning”. Default is Critical
- **Video Loss:** “OFF”, “Critical”, “Warning”. Default is Warning
- **HDD:** “OFF”, “Critical”, “Warning”. Default is Critical

- **Event Setup:**

Including the “Video Loss”, “Motion”, “Sensor”, “Speed Event”, “G-Sensor”.

- **Video Loss:**

- **Camera:** 1~4
- **Enable:** “ON”, “OFF” . if the status is “ON”, below 3 items can be setup at the same time.
- **Dwell:** OFF, “1 sec”, “2 sec”, “3 sec”, “4 sec”, “5 sec”, “6 sec”, “7 sec”, “8 sec”, “9 sec”, “10 sec”.
- **E-mail:** setup the receiver’s E-mail.
- **Alarm out:** Click the icon if need.

- **Motion:**

- **Camera:** specific 1~4 camera can be set.
- **Enable:** “ON”, “OFF”.
- **Dwell:** “OFF”, “1 sec”, “2 sec”, “3 sec”, “4 sec”, “5 sec”, “6 sec”, “7 sec”, “8 sec”, “9 sec”.
- **E-mail:** “ON”, “OFF”
- **Alarm Out:** click the box if need.
- **Event Record:** “ON”, “OFF”
- **Event Popup:** “ON”, “OFF”
- **Sensitivity:** 1~5

- **Area Setup:** setup the area we want to monitor. In green color area, “motion function is turned on,

- **Sensor:**
  - **Sensor:** 1 ~ 8
  - **Enable:** High/OFF
  - **Dwell:** 0 ~ 9 seconds
  - **Priority:** 1 ~ 8
  - **Email:** ON~ OFF
  - **Alarm out:** ON ~ OFF
  - **Event record:** 1 ~ 4
  - **Event popup:** 1 ~ 4

## **Speed Event**

**Enable:** ON/OFF

**Unit:** you can choose between Km/h or MPH

**Type:** High speed / Low speed

**Enable:** ON/OFF

**Threshold:** 1 ~ 300

**Dwell time:** define the length of the buzzer after each motion detection OFF ~ 9 seconds

**Email:** can send an email to predefined address in case of the event

**Alarm out:** in case of detection, DVR will send a signal via alarm out like a buzzer

## **G Sensor**

**Enable:** ON/OFF

**Threshold :** OFF ~ 5g

**Dwell time:** define the length of the buzzer after each motion detection OFF ~ 9 seconds

**Email:** can send an email to predefined address in case of the event

**Alarm out:** in case of detection, DVR will send a signal via alarm out like a buzzer

※ **If GPS mouse has already connect to the device, the bottom screen will**

**display this**  **ICON**

## Network Setup

### LAN

**Host Setting:** user can choose between STATIC IP, DHCP and OFF status

For static IP you need to key manually the IP, GATEWAY and NETMASK.

For DHCP, the DVR will retrieve the information from the network

### Net Service

**Center IP:** VMS server IP address.

**Center Port:** default is 8788 but can be changed according to customer need

Register timing: "OFF", "10 sec", "30 sec", "60 sec".

**Http Port:** default is 80 but can be changed according to customer need

**Streaming Port:** default is 554 but can be changed according to customer need

**Messenger Port:** default is 1999 but can be changed according to customer need

**DNS:** if the user specifies a DNS, it will help the CMS to find more fastly the ip of the dvr using 3g connection

**Stream:** ☒1 ☒2 ☒3 ☒4

**Warning:** make sure that these port are open in your router if you use a LAN network

※ If use LAN connect network, the bottom screen will display this  ICON

## **E-Mail**

**SMTP Server:** E-mail service mail server.

**Port:** E-mail service port.

**SSL:** ON/OFF

**Sender:** sender mail

**Recipient:** recipient mail

**Enable SMTP Auth:** ON/OFF

(some mail server need user authentication.)

**Account:** mail service account.

**Password:** mail service password.

**E-mail test:** Due to the authorization problem, some mail server will not work properly. Please click the "E-mail test " button to test your mail server. If you don't receive the email, please contact with your MIS department or change another mail server and try again.

## 3G Network/4G Network (only for MR4100)

**Enable:** ON/OFF

**Access Point Name (APN):** default is Internet.

**Access Number:** default is \*99#

**Username**

**Password**

※ If use 3G (or 4G) to connect network, the bottom screen will display this



ICON

## WIFI (only for MR4100)

**Enable:** ON/OFF

**SSID:** input your WIFI AP name.

**Authentication:** input your WIFI AP connect key.

※ If use WIFI to connect network, the bottom screen will display this  ICON

**Remote connection supports up 2 people log in**

Example:



x1 : Represent there 1 person is using LAN connection now.



x1 : Represent there 1 person is using 3G(or 4G) connection now.



x1 : Represent there 1 person is using WIFI connection now.

# Account

## authentication

**User Auth:** ON/OFF

## account

**Group:** Administrator/Guest

## Password

User can setup administrator and guest password

# System tools

## Time Setup

**Date:** Year- Month-Day

**Time:** Hour-Minute-Second

**Display format available:** MM/DD/YYYY, DD/MM/YYYY, YYYY/MM/DD

**Time format:** 12 hour or 24 hour

**Daylight Saving:** ON or OFF, after user selects the time zone, if daylight saving is enable, the DVR will automatically adjust the time



## Display

**Select language**

**CVBS X Adj:** 0~9

**CVBS Y Adj:** 0~9

**CVBS Height adjustment:** 0 ~ 9

**CVBS Width adjustment:** 0 ~ 9

**Video format:** PAL ~ NTSC

You can enable or disable the following function by click or unclick them

- System time
- Channel title
- Record Icon
- Motion Icon
- Alarm Icon
- Network Icon

## Upgrade

After you received the new firmware which name is **image.bin**, just copy it to a usb solid disk formatted in FAT32, insert in the usb port and click upgrade you will this following message

Message	Description
waiting	Starts the upgrade process
Are you sure to upgrade?	The usb key is being initialized, the yes/no will appear after few second
search file	If press yes it will look for the file in the usb key
upgrade system please wait	
1/4 (3/3)	
Upgrade complete. the system will reboot	Press ok to reboot the device

※**Notice:** After the new firmware update, we recommend user to reset the DVR to factory default.

## Car Info Setup

User can add car info such as: device number, company name, driver name, car number

## Import

User can import or restore setting

Message	Description
waiting	Starts the process
Are you sure to import config	The usb key is being initialized, the yes/no will appear after few second
Import complete! The system will reboot	Press ok to reboot the device

## Export

User can export or backup setting

Message	Description
waiting	Starts the process
Are you sure to export config ?	The usb key is being initialized, the yes/no will appear after few second
Export finish !	Press ok to leave the export mode

Notice: The export file name is *Config*, you can rename it for archive purpose but you must rename it as *Config* if you want to use it to restore setting in your combo DVR

## Default

This enables user to reset setting to default.

Message	Description
waiting	Starts the process
Are you sure to reset default?	Yes to validate, No to cancel
Reset Default Finish!	Press ok to reboot the system

## System Info

### System info:

Firmware Version, MCU version, Uboot version, UID SN (Internet connection identification code, only MR8000 models)

### Network Info:

DVR's IP address, MAC address, netmask, gateway

### Storage info:

status mention if the hard disk is correctly working, its model name and storage utilization

### GPS info:

Time, Longitude, Latitude, Speed, Height, Direction, Viewable, In use, Fixed status.

※ **The GPS function is only for satellite positioning.**

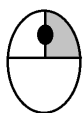
### 3G info/4G info:

Enable, signal, IP address, Netmask, Gateway

### Wifi info:

Enable, SSID, IP address, Netmask, MAC address, Gateway

## Search



Mouse right click →



Search

## Backup

User can make a backup of specific period on any usb device such usb key, external usb hdd

## Time Search

Key in specific time to playback the data, select the camera and click **go search**

※ When you use the calendar to select a date, if that day has video record in blue typeface represents

## Event List



User can select the channel, define start and end time, and click the search Icon.

## Log List

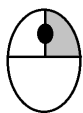
Select the channel

Define start and end time.

MR4100available: system, motion, sensor, video loss, network remote access

And click on Search it will display the results, and then select the event to play it back

## Backup



Mouse right click →






Backup

Insert your usb solid disk and

Select the channel you want to backup, define the time period and after the osd display your usb key free space memory, press **GO BACKUP !**

## Sound

You can adjust the sound volume with  or  from 1 to 15

Select the channel you want to listen by selecting the channel or press mute  to disable sound

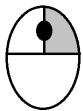
## Split screen


User can choose 1 、 2 、 3 or 4ch to display

## PTZ

User can control the ptz during live display

## Playback



Mouse right click →  Playback

User can playback last recorded file



Fast Rewind



Pause



Play



Fast Forward



Slow forward: it will forward frame by frame



Stop and return to main display



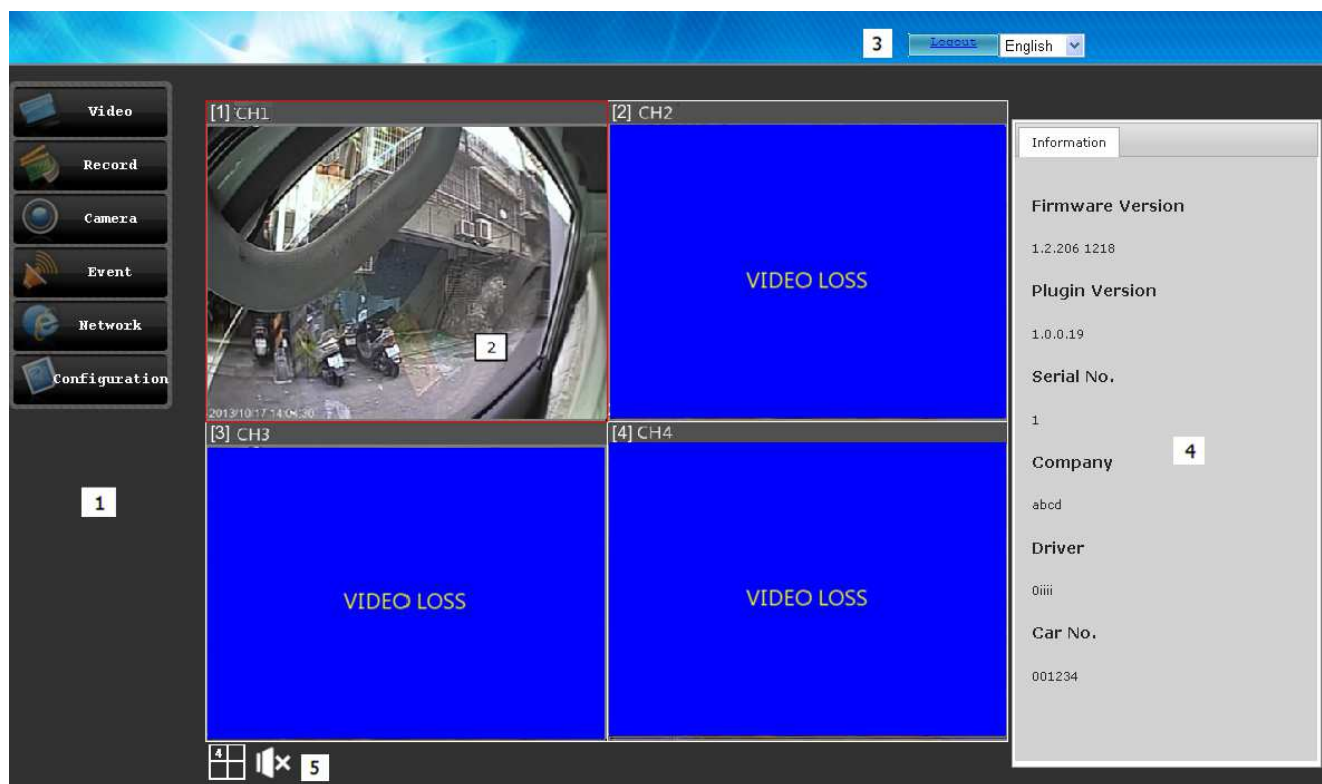
Split screen



Volume adj

## 5. DVR operation via browser

Live preview



After you log in, you will access to live picture , there are 5 areas:

- 1** is all the function of the DVR function are same as main video out
- 2** is the main display of the camera, to see a camera in full screen, just double click on it. To return to quad mode, please go to VIDEO/LIVE
- 3** is the log out function and language setting, you can choose English, Chinese, Francais and Portugal.
- 4** is the information regarding the system (firmware, plugin) and regarding the car (serial number, company, driver name, licence plate number), and also control PTZ
- 5** is audio on/off

## OSD operation

### Video

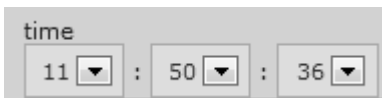
**Live** *please check page 11 for more information*

### Playback

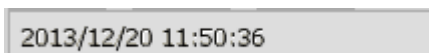
After you make sure that you have enabled video recording, you can playback a video.  
Select the date on the calendar




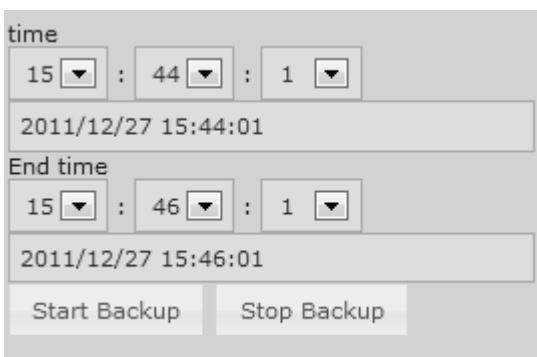
Then select the time you want to watch



Check on below line if it is the period you need



If data are available a  will appear, then press PLAYBACK,



if you press BACKUP then you have to specify the period then press START BACKUP  
you will have to specify the folder destination



The backup process in % will appear in each channel



When backup is finished, a confirmation message will display.

Then press Live display to return to normal operation

## Record

### Record

▼ Record Configuration

Channel

1

2

3

4

Record

OFF

ON

Frames Per Second

30

Quality

Low

Normal

High

Resolution

CIF

HalfD1

D1

Audio

OFF

ON

► General Configuration

Apply

Apply ALL

User can choose to record one specific channel or all channel.

User can enable or disable record.

Quality level: you can select between low, normal and high quality

Enable or disable audio recording on all channel

When HDD storage is damage or record fail, the SD CARD will automatically doing the record.

(※ SD CARD can support up to 32GB and need to format FAT32 before using.)

(※ Does not support hot-swappable SD card, do not remove the SD card while in use)

## General configuration

### Record

▶ Record Configuration

▼ General Configuration

Post-record (sec)

30 ▼

Overwrite

OFF

ON

Apply

Apply ALL

Post record 0~30 sec

Enable or disable overwriting on hard disk

**Ignition off:** After you switch off the power, the user can setup ignition off time

### Ignition OFF

Postpone Time

OFF

30SEC

5MIN

10MIN

15MIN

20MIN

25MIN

30MIN

35MIN

40MIN

45MIN

50MIN

55MIN

60MIN

Apply

## Streaming setup

### Streaming

Quality

Lowest

Low

Normal

High

Highest

Frames Per Second

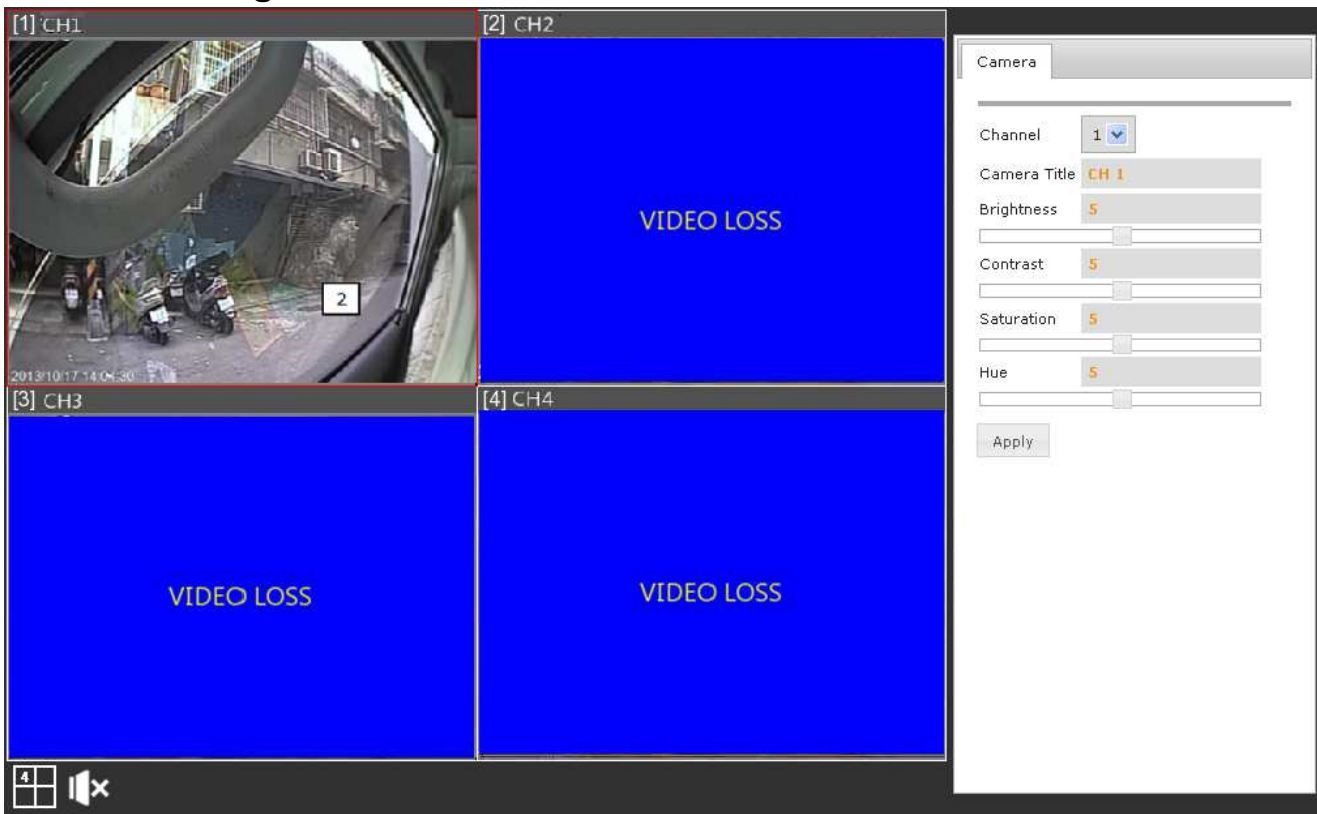
15 ▼

Keyframe (sec)

1 ▼

Apply

## Camera setting



User can change camera title

User can adjust camera brightness, contrast, saturation and Hue. Press apply to validate your choice

# Event

## VLOSS

### VLoss

---

Channel	<input checked="" type="button" value="CH 1"/>	<input type="button" value="CH 2"/>	<input type="button" value="CH 3"/>	<input type="button" value="CH 4"/>
Enable	<input type="button" value="OFF"/>	<input checked="" type="button" value="ON"/>		
Dwell	<input type="text" value="5"/> <input type="button" value="v"/>			
E-mail	<input checked="" type="button" value="OFF"/>	<input type="button" value="ON"/>		
Alarm Out	<input type="text" value="1"/>			

---

<input type="button" value="Apply"/>	<input type="button" value="Apply ALL"/>
--------------------------------------	--

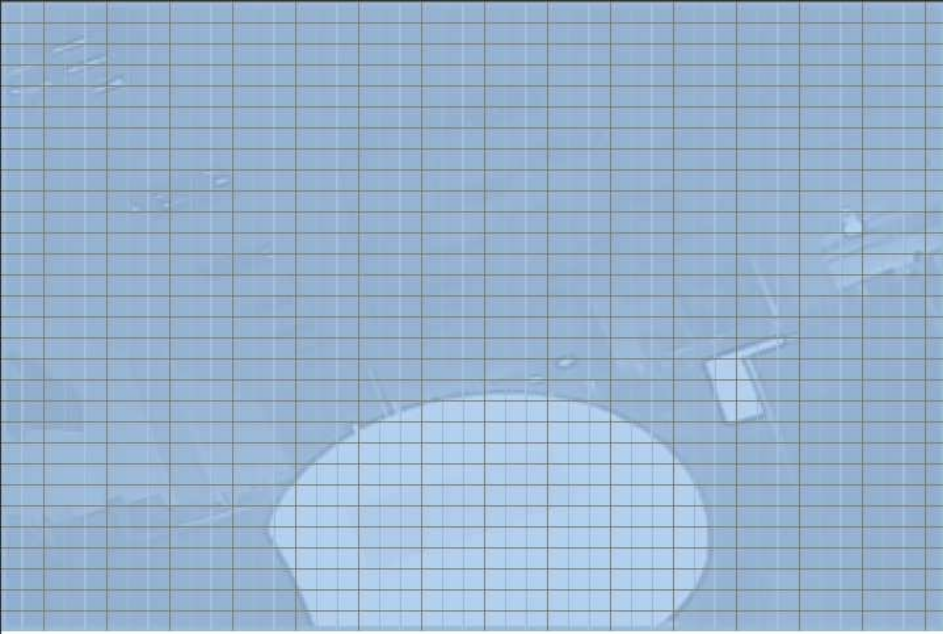
Select the channel you want to display video loss message.

Dwell time: 0 to 9 seconds

Email: disable or enable

Alarm out: if user wants send alarm out when video loss, click on the 1 so it has a click

## Motion detection



Motion

---

Channel

Enable Motion Detect

Record

Dwell (sec)

E-mail

Alarm Out

Popup

Sensitivity

Cell Enable: Mouse Left Click , Cell Disable: Mouse Right Click , Block : Press Ctrl + Mouse Click

User can setup motion detection one by one or all at the same time

To select a cell: Mouse Left Click, / To deselect a cell: Mouse Right Click,

To select or deselect a block: Press Ctrl + Mouse Click

Blue area means selected /No color area means not selected

User can setup which camera to record in case of motion detection

Dwell time: 0 to 9 seconds

Email: disable or enable

Alarm out: if user wants send alarm out when motion detection, click on the 1 so it has a click

Popup: displays a selected camera when motion detection occurs

Sensitivity: 1 to 5

Press apply to validate your choice

## Sensor

### Sensor

---

Sensor	<div>1</div> <div>2</div> <div>3</div> <div>4</div> <div>5</div> <div>6</div> <div>7</div> <div>8</div>
Enable	<div>OFF</div> <div>High</div>
Record CH	<div>✓ 1</div> <div>2</div> <div>3</div> <div>4</div>
Dwell(sec)	<div>5</div>
Popup Priority	<div>1</div>
E-mail	<div>OFF</div> <div>ON</div>
Alarm Out	<div>✓ 1</div>
Popup	<div>1</div> <div>2</div> <div>3</div> <div>4</div>

---

Apply

Apply ALL

---

**Sensor:** 1 to 8

**Enable:** setup the status of the sensor OFF / NC/ NO

**Record CH:** select which camera to record in case of sensor trigger

**Dwell time:** define the length of the buzzer after each sensor trigger 0 ~ 9 seconds

**Pop up priority**

**Email:** disable or enable

**Alarm out:** in case of sensor trigger, DVR will send a signal via alarm out like a buzzer or flashing red light

**Popup:** 1 ~ 4

## G sensor

### GSensor

---

Enable	<input checked="" type="radio"/> OFF	<input type="radio"/> ON
Threshold	<input type="text" value="3 G"/>	<input type="button" value="v"/>
Dwell(sec)	<input type="text" value="5"/>	<input type="button" value="v"/>
E-mail	<input checked="" type="radio"/> OFF	<input type="radio"/> ON
Alarm Out	<input type="text" value="1"/>	

---

**Enable:** ON/OFF

**Threshold:** OFF ~ 5g

**Dwell time:** define the length of the buzzer after each motion detection 0 ~ 9 seconds

**Email:** can send an email to predefined address in case of the event

**Alarm out:** in case of Gsensor detects a variation, DVR will send a signal via alarm out like a buzzer or flashing red light

## Speed event

### Speed Event

---

Configuration

---

Enable	<input checked="" type="radio"/> OFF	<input type="radio"/> ON
Unit	<input checked="" type="radio"/> KPH	<input type="radio"/> MPH

High Speed

Low Speed

---

This page let user to enable or disable the speed event detection

Unit can be kilometer per hour kph or mile per hour mph

User can enable or disable high speed detection, specify the highest speed threshold, its dwell time from 0 to 9 seconds, if send email or not and if enable the alarm out or not

## High Speed

### Speed Event

Configuration

High Speed

Enable

OFF

ON

Threshold(KPH)

100

Dwell

5

E-mail

OFF

ON

Alarm Out

1

Low Speed

Apply

**Same setting applies for Low Speed detection**

## Network

### Network Settings

Host Name

H264Server

DHCP

OFF

ON

IP Address

192.168.6.181

Subnet Mask

255.255.0.0

Default Gateway

192.168.6.254

Apply

This side enables user to setup network in order to remotely connect to it for example with a notebook for maintenance.

If the network has a DHCP server, you can enable this function.

Please make sure that gateway and subnet mask are the same on both side.

## Net Service

Server Ip	<input type="text" value="192.168.6.241"/>
Server Port	<input type="text" value="8788"/>
Http Port	<input type="text" value="80"/>
Streaming Port	<input type="text" value="554"/>
Msg Port	<input type="text" value="1999"/>
DNS	<input type="text" value="8.8.8.8"/>
Register Timing	<input type="button" value="OFF"/> <input checked="" type="button" value="10 (sec)"/> <input type="button" value="30(sec)"/> <input type="button" value="60 (sec)"/>
Streaming	<input checked="" type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input checked="" type="checkbox"/> 3 <input checked="" type="checkbox"/> 4

## Register timing

## Streaming

If your network has a router, please make sure to open these ports in order to enable smooth access to the dvr via browser or vms software.

All these port can be customized according to your needs



## Email

### E-Mail Settings

SMTP Server	<input type="text" value="0"/>
Port	<input type="text" value="587"/>
SSL	<input checked="" type="radio"/> OFF <input type="radio"/> ON
Sender	<input type="text" value="0"/>
Recipient	<input type="text" value="0"/>
SMTP Authentication	<input checked="" type="radio"/> OFF <input type="radio"/> ON

**Notice:**

Due to the authorization problem, some mail server will not work properly. Please click the "Mail Test" button to test your mail server. If you don't receive the email, please contact with your MIS department or change another mail server and try again.

SMTP server: we recommend to use gmail

Port: check with port your SMTP server is using

SSL: enable or disable according to your SMTP server

Sender: key in the email of the sender

Recipient: key in the email of the person who will receive notification in case of event.

SMTP authentication: enable or disable according to your smtp server if it's enable user need to provide the mail account and password

## Mobile network setting

### Mobile network

---

Enable 3G

OFF

ON

---

### Configuration

Access Point Name(APN)

internet

Access Number

\*99#

Here you can enable or disable 3G.

Provide information of how to connect to the 3G network (please check your operator for dial up procedure)

## WIFI setting

### WIFI

---

Enable WIFI

OFF

ON

Here you can enable or disable the wifi

## 6. Configuration

### Information

This section shows three type of information:

- Network such IP, http port, streaming port, MAC address and gateway
- Wireless network such as connection type, IP and gateway
- Hard disk such brand size and occupation ration

### System

Network: displays current network setting and Mac address

HDD: displays hard disk brand, model number, size and occupation percentage

### Display

The screenshot displays a configuration interface with two main sections: 'Display Setting' and 'Main Monitor'.

**Display Setting:** This section contains a 'Language' label and a row of language selection buttons. The buttons are: 'English' (highlighted in orange), '繁體中文', '日文', 'Deutsch', 'Français', and 'Portugal'.

**Main Monitor:** This section contains a 'Status Setup' label and a row of six toggle switches, each with a checkmark icon. The switches are: 'System time', 'Channel Title', 'Record Icon', 'Motion Icon', 'Alarm Icon', and 'Network Icon'.

User can select which items to display

## Account

Account

admin  
guest

User ID: admin  
Password: ●●●●  
Re-Password:   
Group: Administrator  
Remove Add Update

Two level of user can be define and unlimited account can be created  
Guest can only see live picture  
Administrator as full authority on the device  
Cell phone and Email are just for reference and optional

## Date and time

▼ Date Time Format

Date Format

YYYY/MM/DD

MM/DD/YYYY

DD/MM/YYYY

Hour Format

12H

24H

Select your preferred date format and hour format here

▼ Daylight Saving

Enable

OFF

ON

Enable or disable daylight saving, according to the time zone, it will automatically turns it on and off at the right time

▼ Time Setup

Synchronized

Sync PC

Time Zone

(GMT+08:00) Taipei

date

2013-12-20

time

13:35:19

Here you can manually setup your device time or synchronize with your computer time

## Car information

Modify Serial number, Company name, Driver name and License number

## Format

Format

Model Name	Capacity	Health	Usage	
TOSHIBA MK3276	320.0 GB	Usable	6	Format

User must format the hard disk before start recording

Factory reset

Once press this option a warning message will appear asking you if you want to reset, press YES to apply

**Factory reset**  
▲ Are you sure to reset ?  
  

Yes Cancel

**system reboot , please wait...**  

7 %

**Reset Default finish!**  

100 %

ok

Press ok

## Log

### Log List

---

Start Time	<input type="text" value="2011-12-28 17:47:1"/>	<input type="text" value="17"/>	:	<input type="text" value="47"/>	:	<input type="text" value="1"/>	<input type="button" value="Search"/>
End Time	<input type="text" value="2011-12-28 17:47:1"/>	<input type="text" value="17"/>	:	<input type="text" value="47"/>	:	<input type="text" value="1"/>	<input type="button" value="Backup"/>
Channel	<input type="text" value="1"/>	<input type="text" value="2"/>	<input type="text" value="3"/>	<input type="text" value="4"/>			
Type	<input type="text" value="System"/>	<input type="text" value="Event"/>	<input type="text" value="Error"/>	<input type="text" value="Operate"/>			

---

<input type="button" value="First"/>	<input type="button" value="Previous"/>	page <input type="text" value=""/>	<input type="button" value="Next"/>	<input type="button" value="Last"/>
--------------------------------------	---	------------------------------------	-------------------------------------	-------------------------------------

---

For troubleshooting purpose, you can browse the log

Select the starting and ending time, the channel concerned and use our 4 filters to reduce the number of event then press SEARCH. If you don't select channel, it will display system event.

**Search log please wait!**

7 %

### Log List

---

Start Time	<input type="text" value="2012-05-24 00:00:00"/>	<input type="text" value="0"/>	:	<input type="text" value="0"/>	:	<input type="text" value="0"/>	<input type="button" value="Search"/>
End Time	<input type="text" value="2012-05-26 23:59:59"/>	<input type="text" value="23"/>	:	<input type="text" value="59"/>	:	<input type="text" value="59"/>	<input type="button" value="Backup"/>
Channel	<input type="text" value="1"/>	<input type="text" value="2"/>	<input type="text" value="3"/>	<input type="text" value="4"/>			
Type	<input type="text" value="System"/>	<input type="text" value="Event"/>	<input type="text" value="Error"/>	<input type="text" value="Operate"/>			

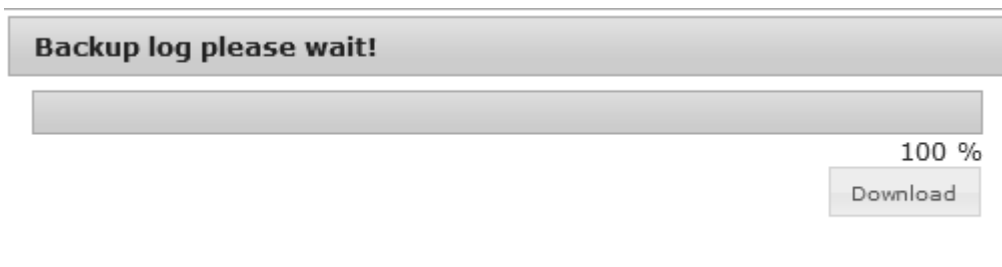
---

<input type="button" value="First"/>	<input type="button" value="Previous"/>	page <input type="text" value="1/3"/>	<input type="button" value="Next"/>	<input type="button" value="Last"/>
--------------------------------------	---	---------------------------------------	-------------------------------------	-------------------------------------

---

Type	Information	Start Time	End Time	Description
Operate	Login	2012-05-26 15:41:41	2012-05-26 15:41:41	192.168.10.64
Operate	Logout	2012-05-26 15:41:22	2012-05-26 15:41:22	192.168.10.64
Operate	Login	2012-05-26 14:20:05	2012-05-26 14:20:05	192.168.10.64
Operate	Login	2012-05-25 21:21:56	2012-05-25 21:21:56	192.168.10.64
Operate	Login	2012-05-25 21:21:54	2012-05-25 21:21:54	192.168.10.64
Operate	Logout	2012-05-25 21:21:37	2012-05-25 21:21:37	192.168.10.64
Operate	Login	2012-05-25 20:25:36	2012-05-25 20:25:36	192.168.10.64
Operate	Login	2012-05-25 17:49:17	2012-05-25 17:49:17	192.168.10.64
Operate	Login	2012-05-25 17:03:52	2012-05-25 17:03:52	192.168.10.64
Operate	Host/Car Setup	2012-05-25 17:01:22	2012-05-25 17:01:22	192.168.10.64

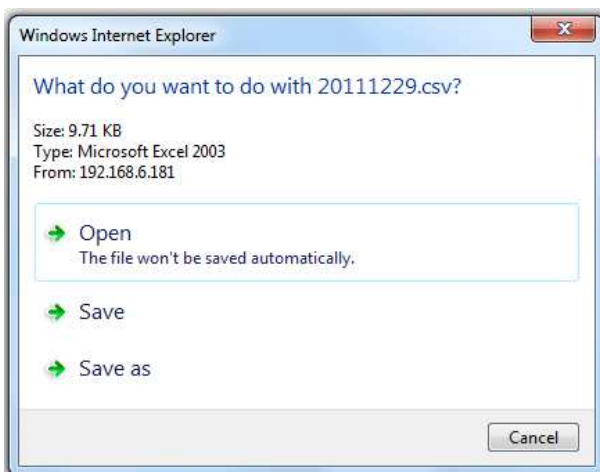
If you want to backup the log, press BACKUP,



Then press download

it will export all the events in one csv file

Choose **Save**



Then open the file with Microsoft Excel or any program supporting csv file

## 7. Vehicle Management Software (VMS) *works only for MR4100*

Our VMS is composed :

A client called MR VMS

A pc viewer called MR PLAYER,

A server software please follow below instructions

### Server software installation

Server main purpose is to receive data from each mobile dvr, so user needs to tell to the dvr the **server IP**, open internet explorer and key in the dvr IP, then go to Network then Port

Net Service	
Server Ip	192.168.6.241
Server Port	8788
Http Port	80
Streaming Port	554
Msg Port	1999
DNS	8.8.8.8
Register Timing	OFF 10(sec) 30(sec) 60(sec)
Streaming	✓ 1 ✓ 2 ✓ 3 ✓ 4
Apply	

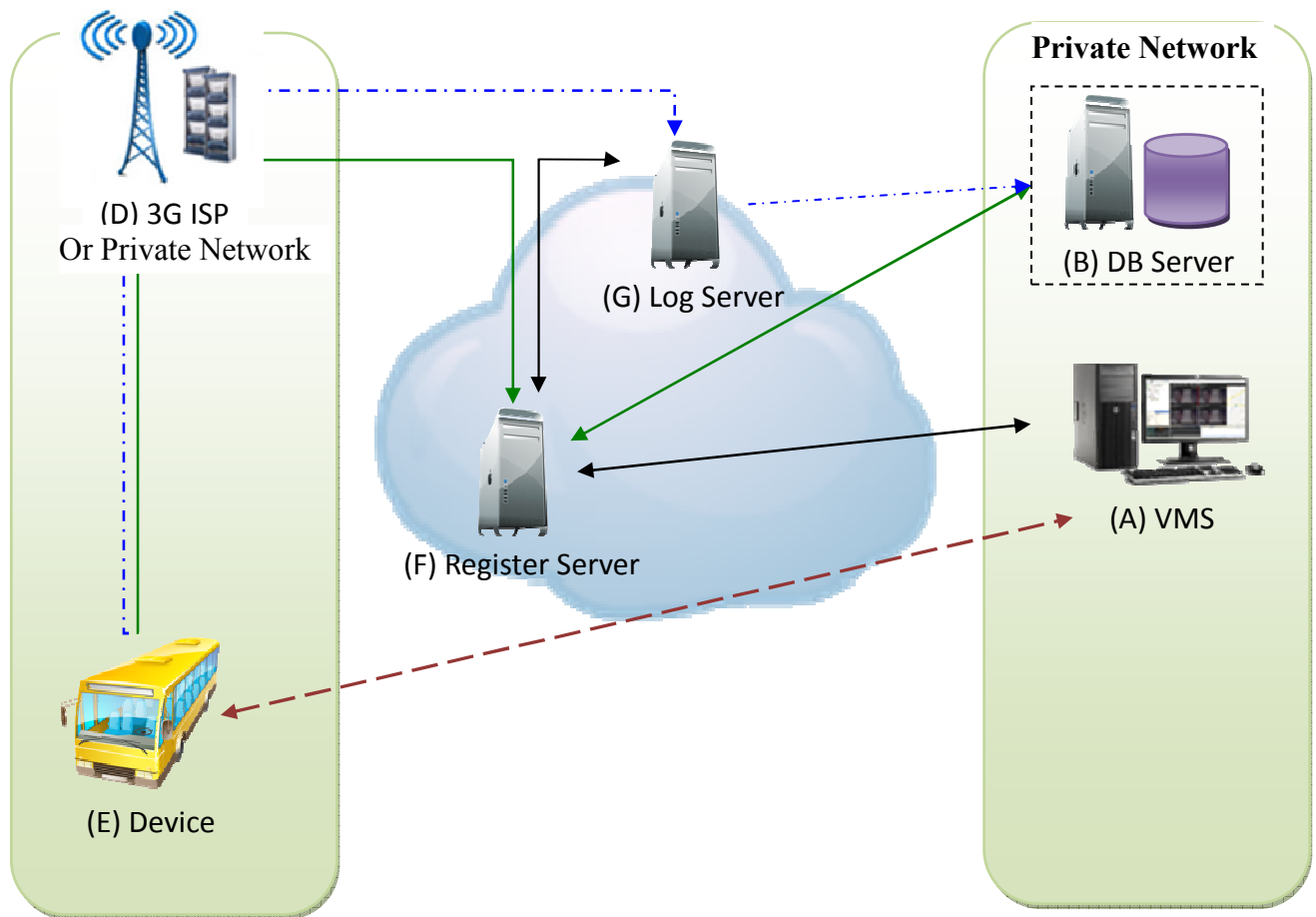


## 7. Register Server installation instructions

This guide is aim to install database and server application for mobile DVR °

### Achitecture

mobile dvr server and system architecture is based on three server Register Server, Log Server and Database server



System architecture

## 7.1 Basic requirements

Although the server can be built on the same computer, to have the best performance, we recommend that each individual can have a separate server software hardware environment. Database server and application server farm proposal meet the following basic requirements to achieve the best performance.

System hardware basic requirements

Item	Minimum requirements	notice
CPU	32/64bit · above four core · each one at least 1.5GHz	
Memory	Above 4GB	
Hard disk storage	At least 500GB	
Network	Ethernet 100/1000M	Need static IP from telecom provider or setup in the firewall Port Forwarding

Minimum requirements of the software

## 7.2 Database Server setting

(notice : if MS SQLServer is already installed please bypass this step

## 7.3 Before install SQL Server 2008 Express please make sure you installed below software

Server type	item	Minimum requirements
Database Server	Operating System	Windows XP above 32/64 bits .Net Framework 2.0 and above
	Database system	SQL Server 2008 Express R2 or above
Register Server	Operating System	Windows XP above 32/64 bits .Net Framework 2.0 and above
Log Server	Operating System	Windows XP above 32/64 bits .Net Framework 2.0 and above

Step 1 : download and install [Microsoft .Net Framework 3.5 SP1](#)

Step 2 : download and install [Windows Installer 4.5](#)

Step 3 : download and install [Windows PowerShell 1.0](#)

7.4 Go to Microsoft website and download SQL Server 2008 R2 SP2 Express or click the following link

<http://www.microsoft.com/en-us/download/details.aspx?id=30438>



Microsoft® SQL Server® 2008 R2 SP2 - Express Edition

Select Language:

English

Download

Microsoft SQL Server 2008 R2 Express with Service Pack 2 is a free and feature-rich database for developing and deploying SQL Server 2008 R2.

Free PC upc

- Security
- Software
- Service p
- Hardwar

Run Mic

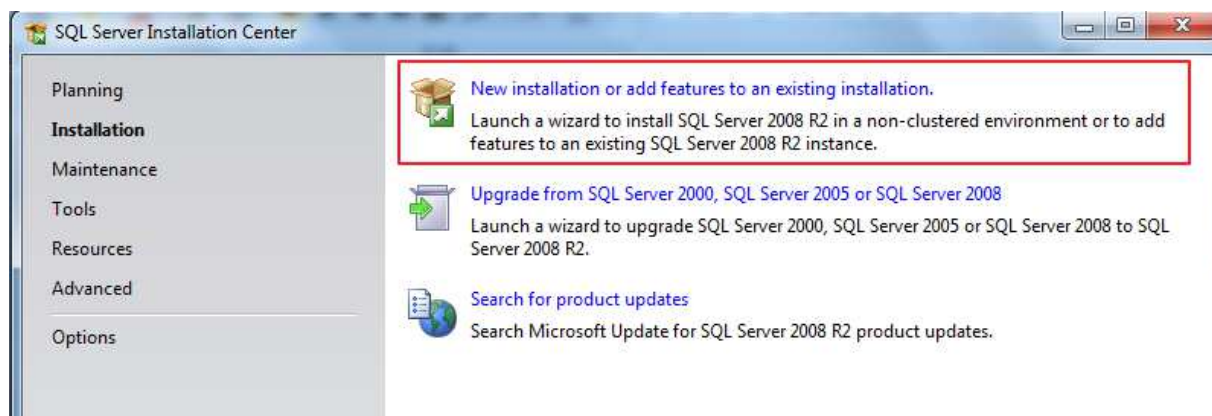
Click on download and select the file SQLEXPRTW\_x86\_ENU.exe then click on NEXT

Choose the download you want

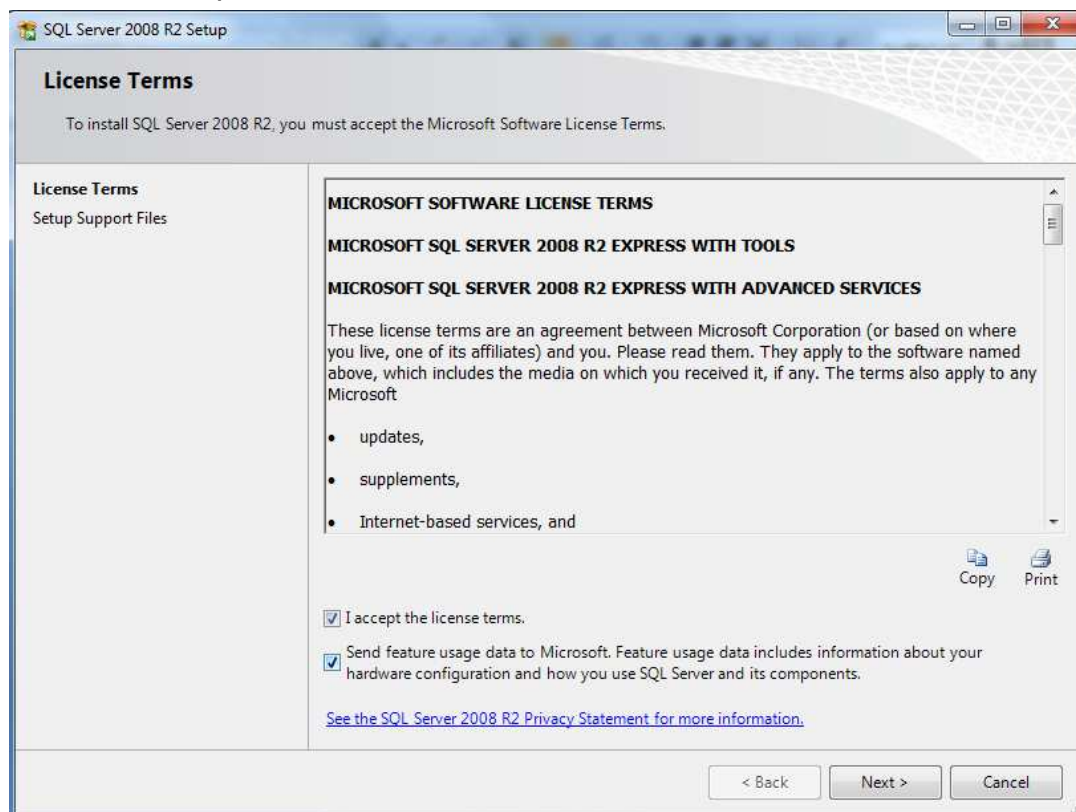
<input type="checkbox"/> File Name	Size
<input type="checkbox"/> SQLEXPADV_x86_ENU.exe	894.1 MB
<input type="checkbox"/> SQLEXPRTW_x64_ENU.exe	340.5 MB
<input type="checkbox"/> SQLEXPRTW_x86_ENU.exe	318.4 MB
<input type="checkbox"/> SQLManagementStudio_x64_ENU.exe	161.0 MB
<input type="checkbox"/> SQLManagementStudio_x86_ENU.exe	158.3 MB

## 7.5 Database server installation with SQL Server 2008 Express

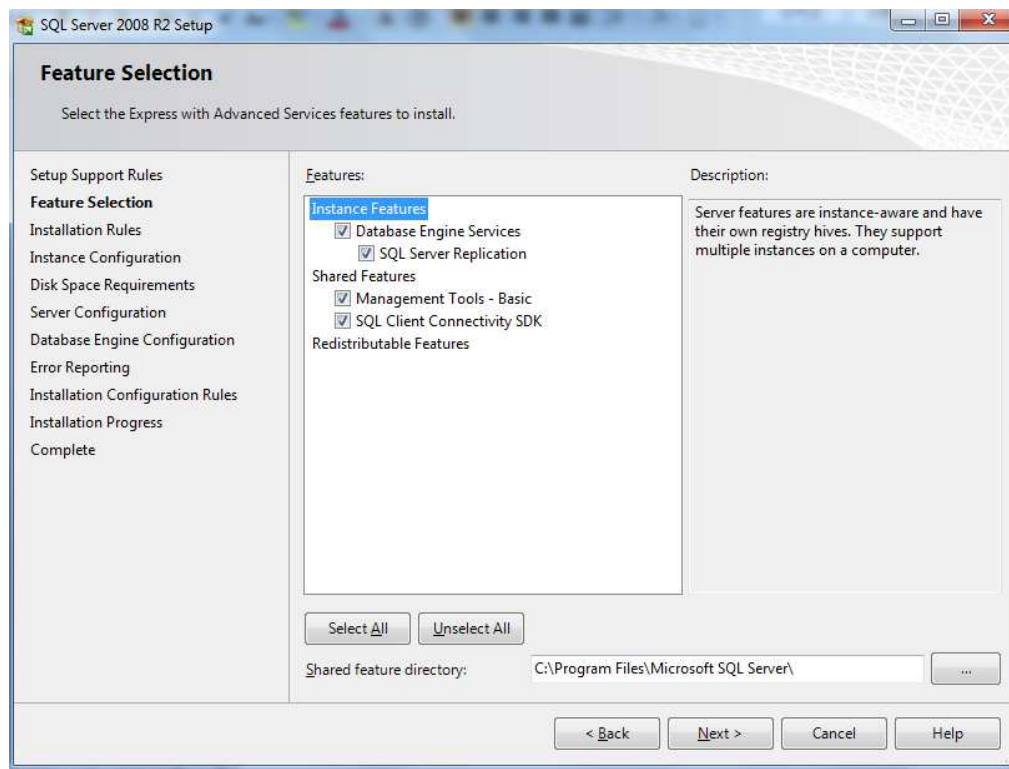
### 7.5.1.1 Launch the application called SQLEXPRTW\_x86\_ENU



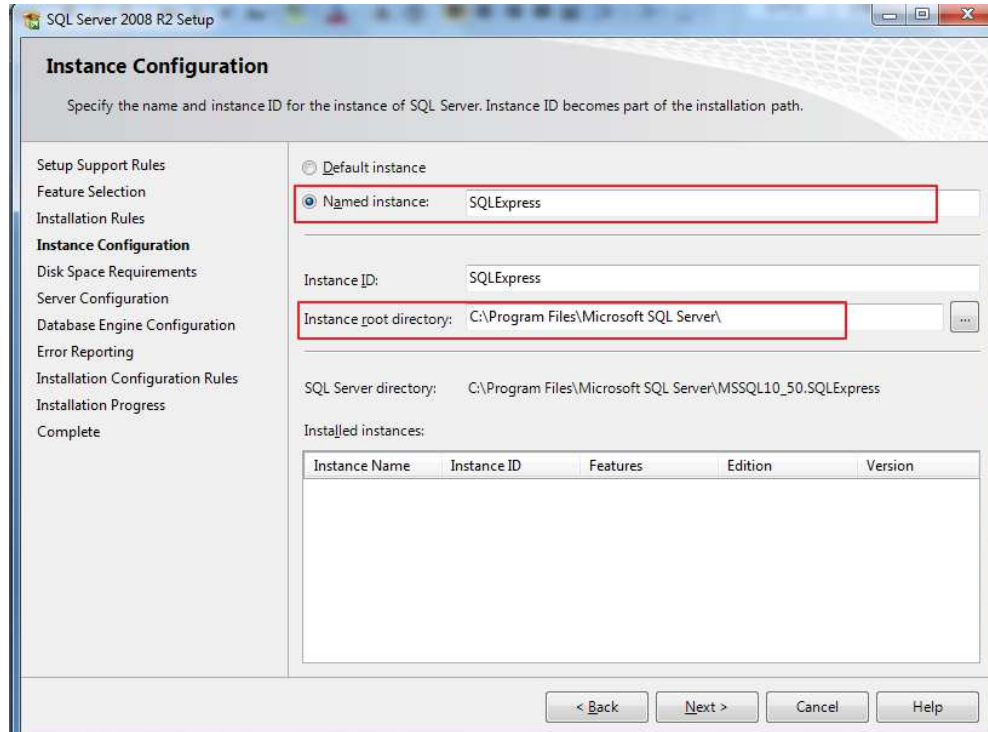
### 7.5.1.2 Accept the licence term and click on next



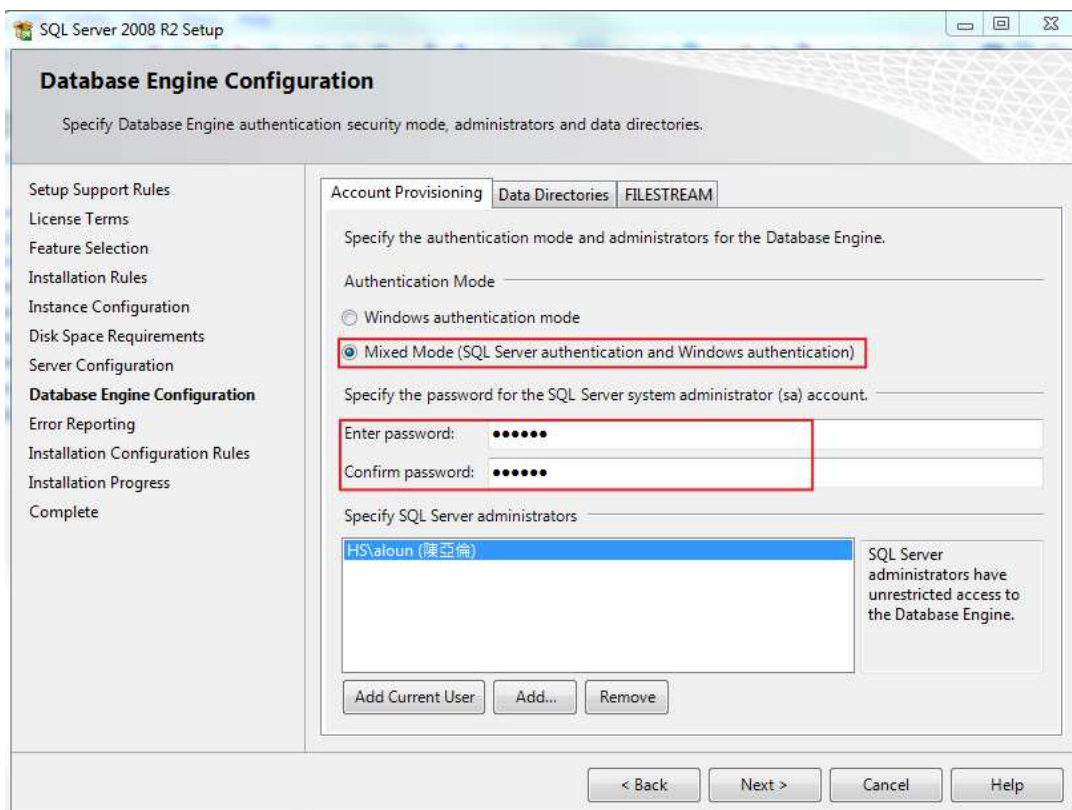
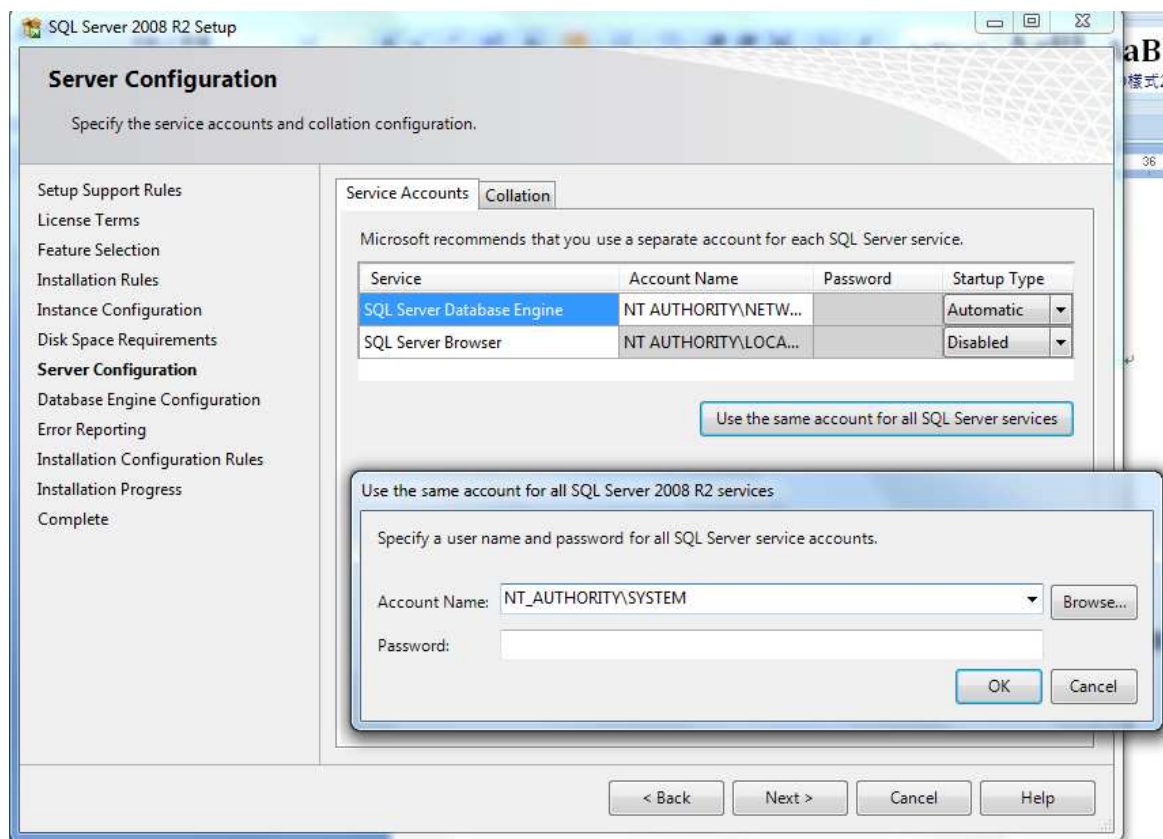
### 7.5.1.3 Select all then click on Next



### 7.5.1.4 Setup database server name and path route

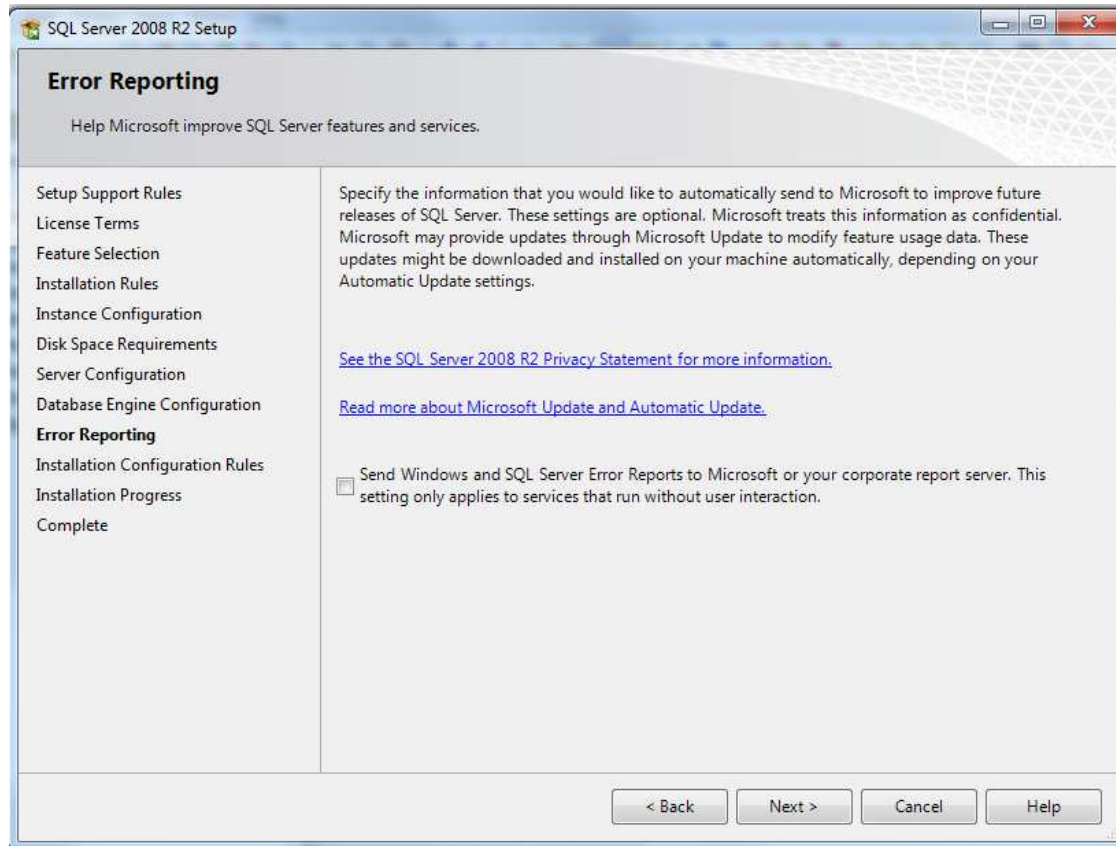


### 7.5.1.5 Set the database server account and specify the account name NT\_AUTHORITY\SYSTEM

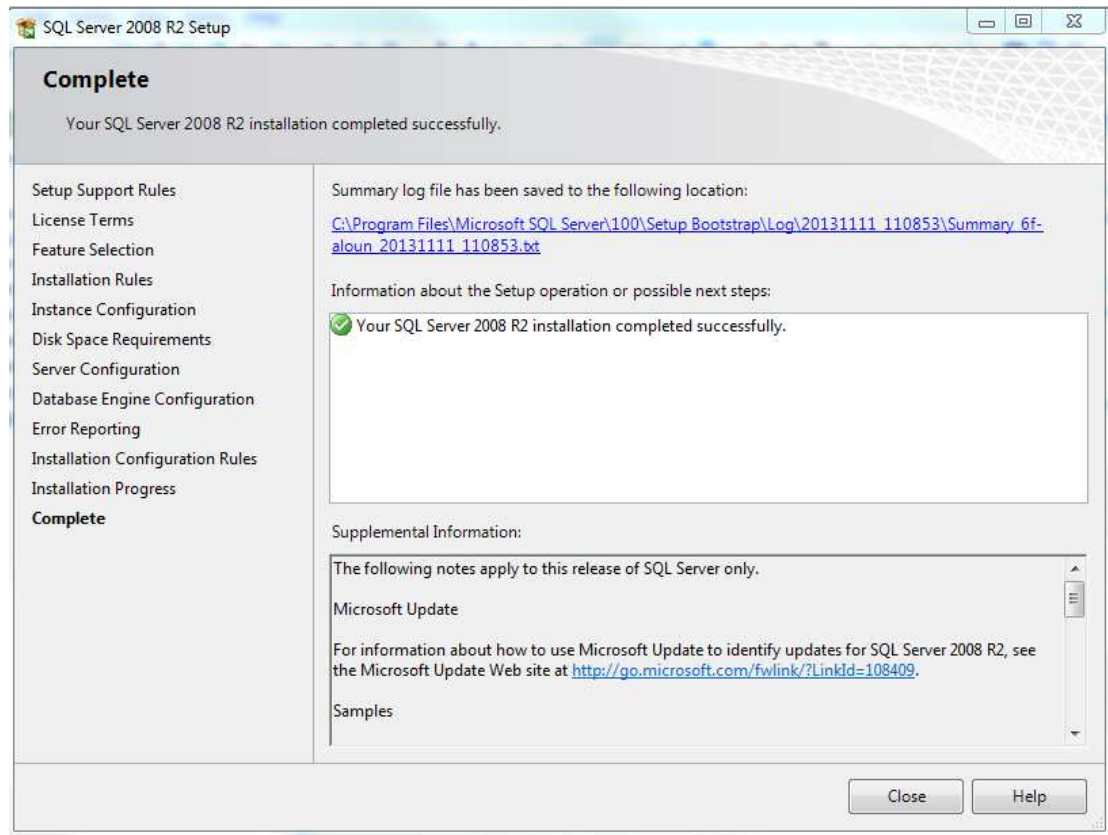




### 7.5.1.6 Choose Mixed mode and key a password for database server purpose



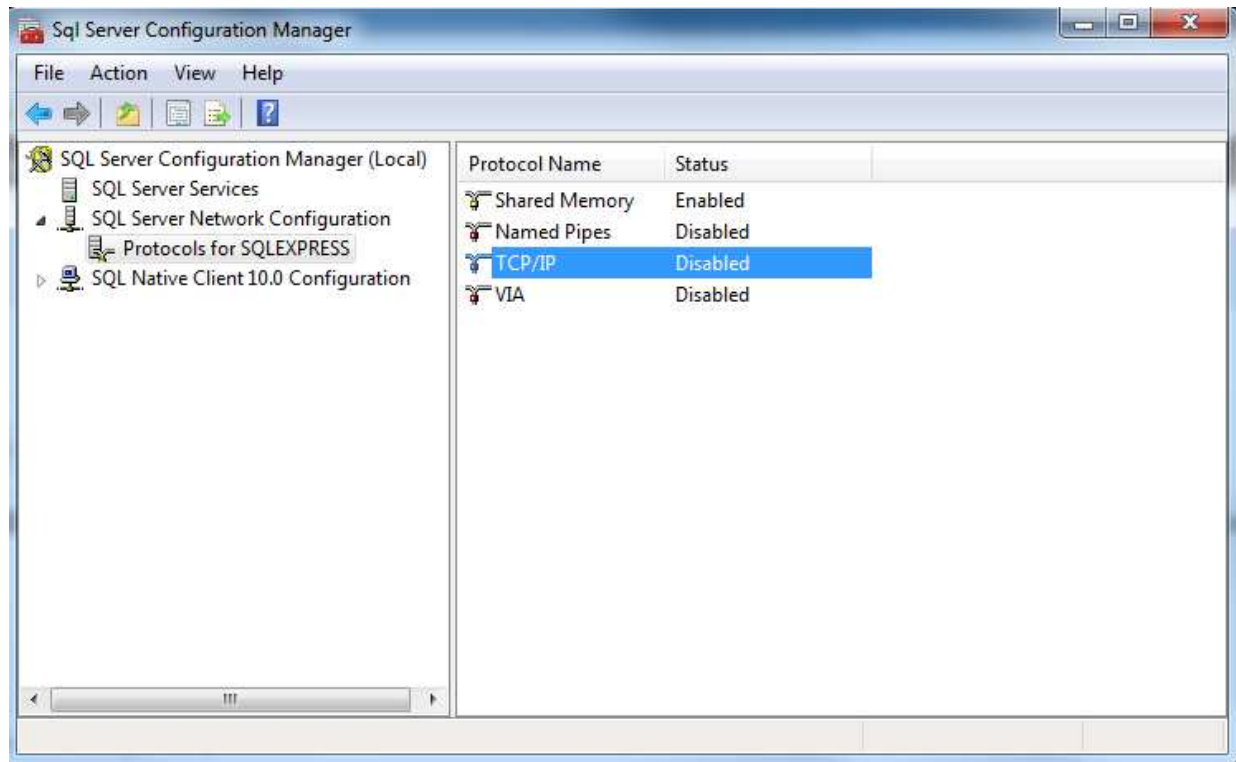
### 7.5.1.7 Click on next the installation is finished



## 7.6 Setting database server in order let the client connect to it

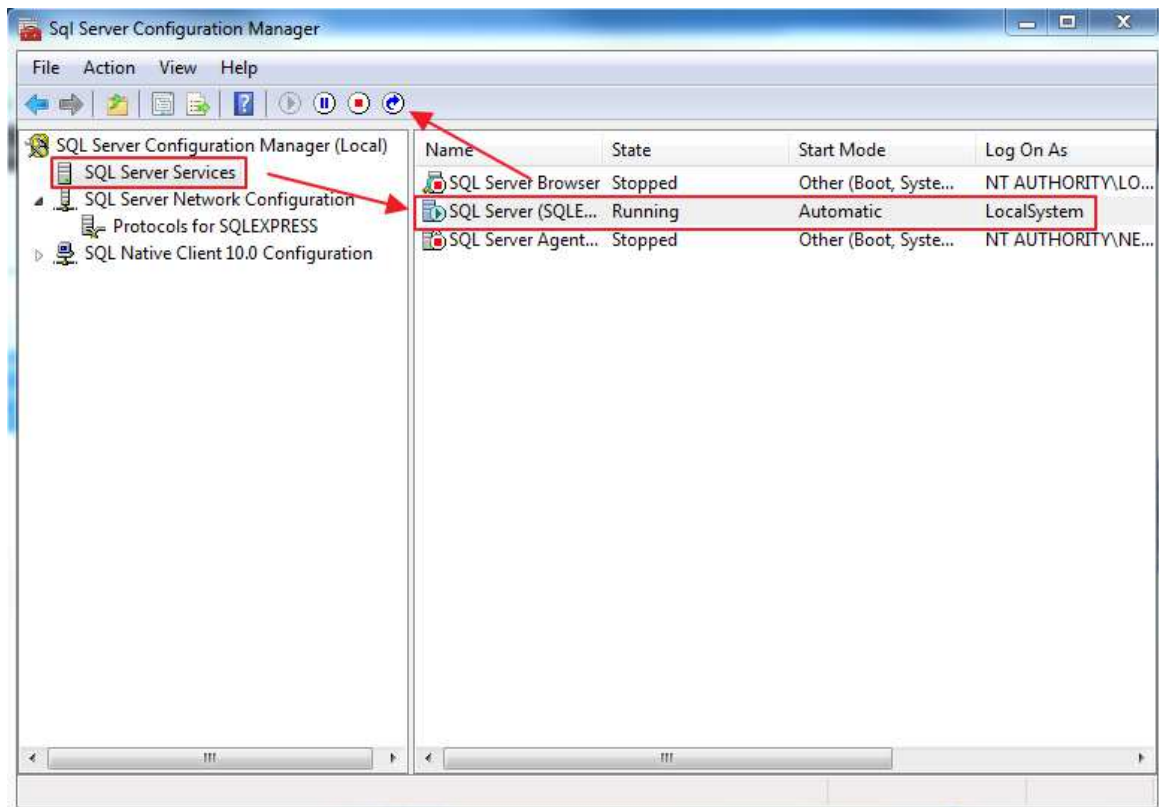
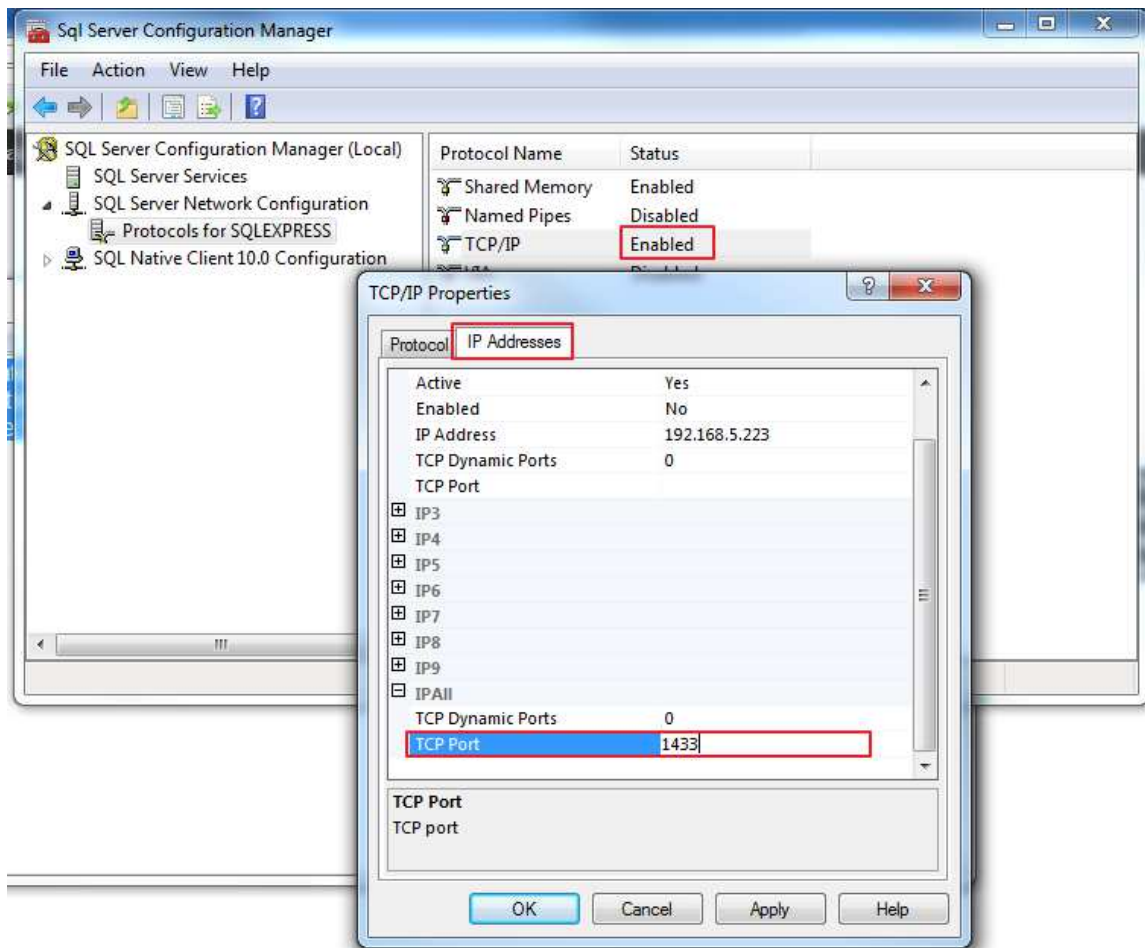
In windows bar, click on start → all program → Microsoft SQL Server 2008 R2 →

Configuration tools → SQL Server configuration manager in TCP/IP option · mouse right  
click TCP/IP choose **enable**



Then right-click on "Properties" to enter the "TCP / IP Properties" settings, switch to the "IP Addresses" tab in the Properties list, go to the last one "TCP port" setting is 1433. Then restart the SQL Server, click the "SQL Server Services" and then select "SQL Server" to restart its services to ensure the changes take effect





## Install Server database

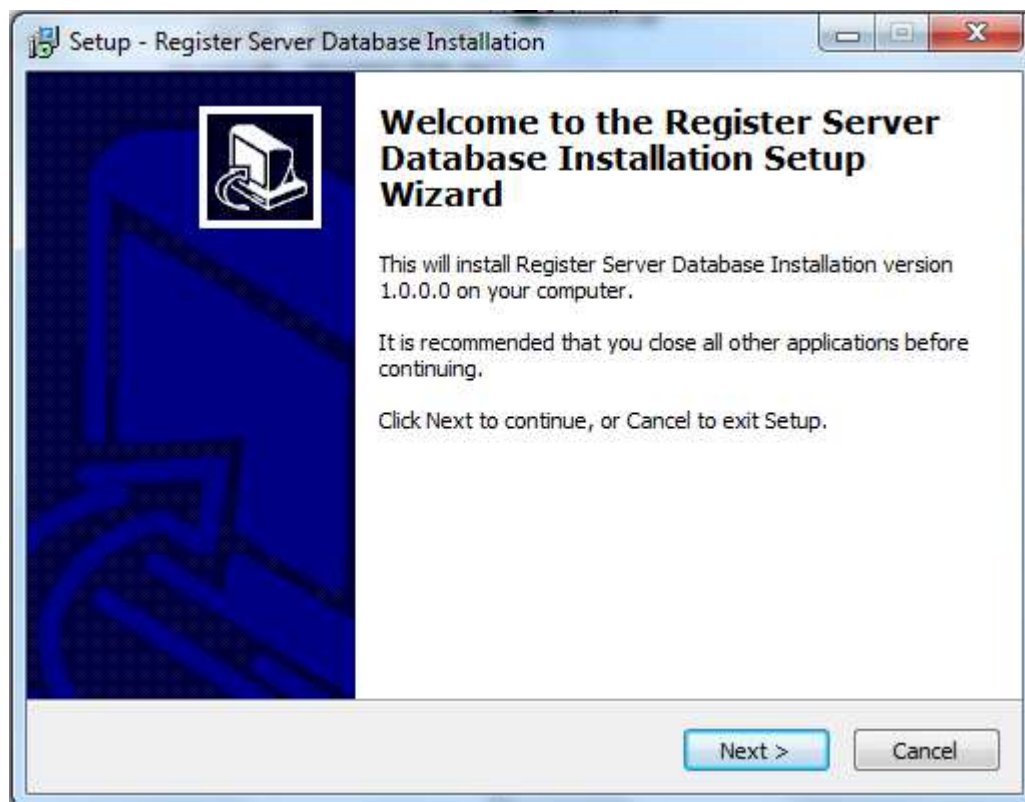
This software is located on the software cd folder called Environment



Launch ServerDBInstall.exe, this installer must enter Database administrator (sa) password and automatically creates the necessary databases and tables, and generate the database dedicated management accounts ddadmin, the default password is 1111, for the first time after installation, please Be sure to modify the password.

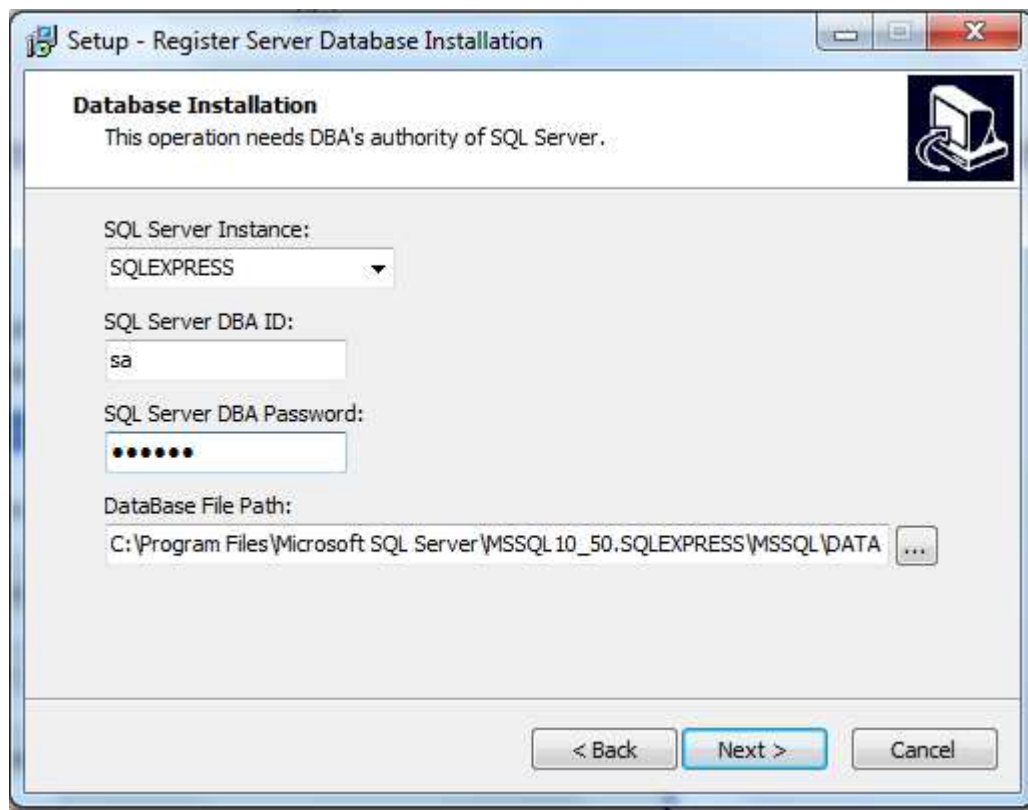
The installer only for database installation, delete function does not provide a database, the database administrator shall be manually deleted, if the repeated execution of the program, the original database data will be cleared, please exercise caution.

Launch Server database installation program



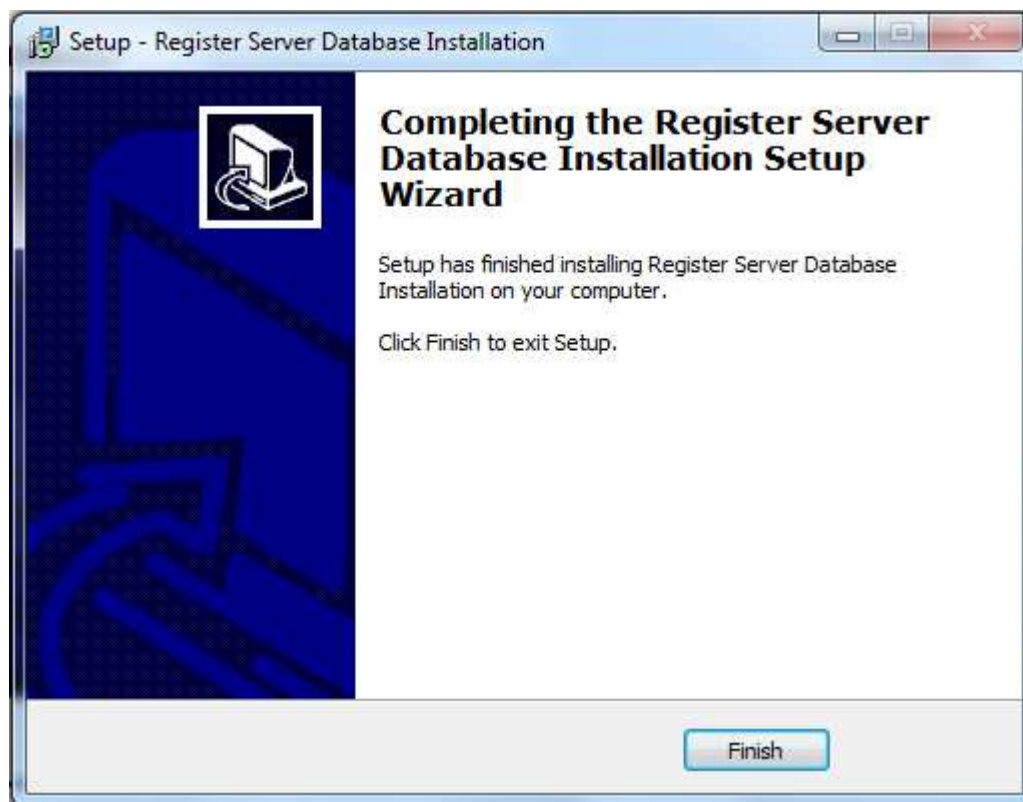
Enter the required information

If the system is not installed MS SQL Server can not continue with the installation, they already exist, the database server can be used, it is in the "SQL Server Instance" field appears optional server name. Please enter a database and the highest privilege management account and password. If you need to change the actual data storage paths can modify "Database File Path" held only recommended default options.



confirm whether you want to continue the installation

- Installation is finished



Install Register server software located in the cd Setup folder on the server pc and follow instructions



Then install the MRVMS software on the client pc and follow instructions

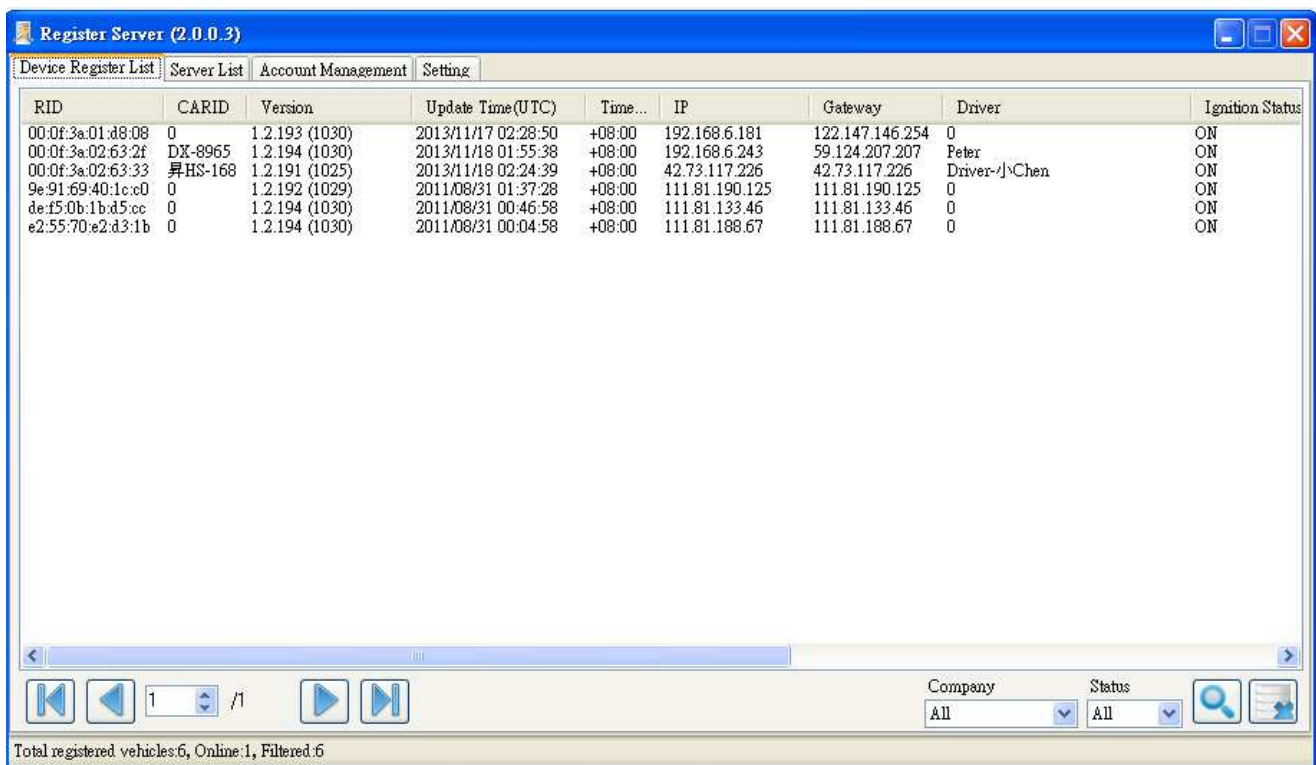


## Operation

**Server side:** launch the application named register-server



Default account and password are admin / 1111



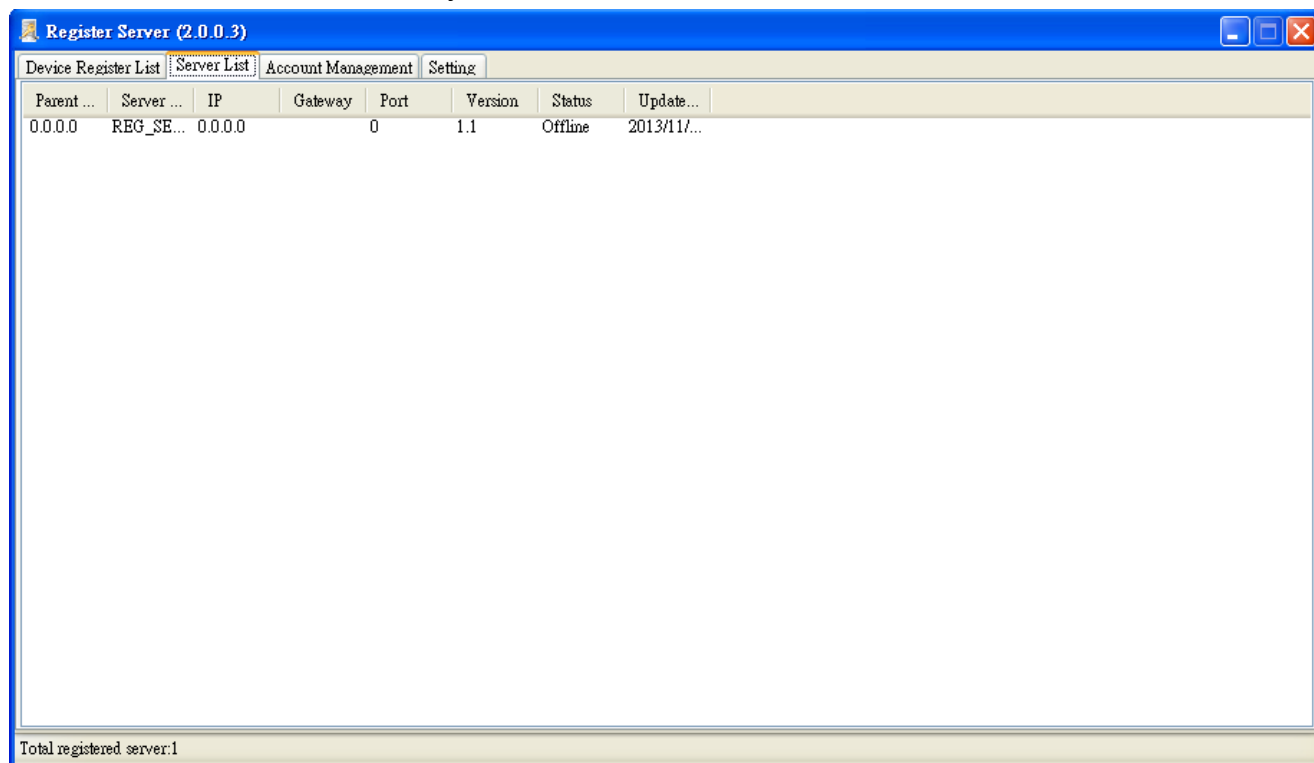
Then you will access to a page showing device connection status

At this page you can see each device registered ID(RID),Car ID, Version of the firmware, Update time, network information and Status

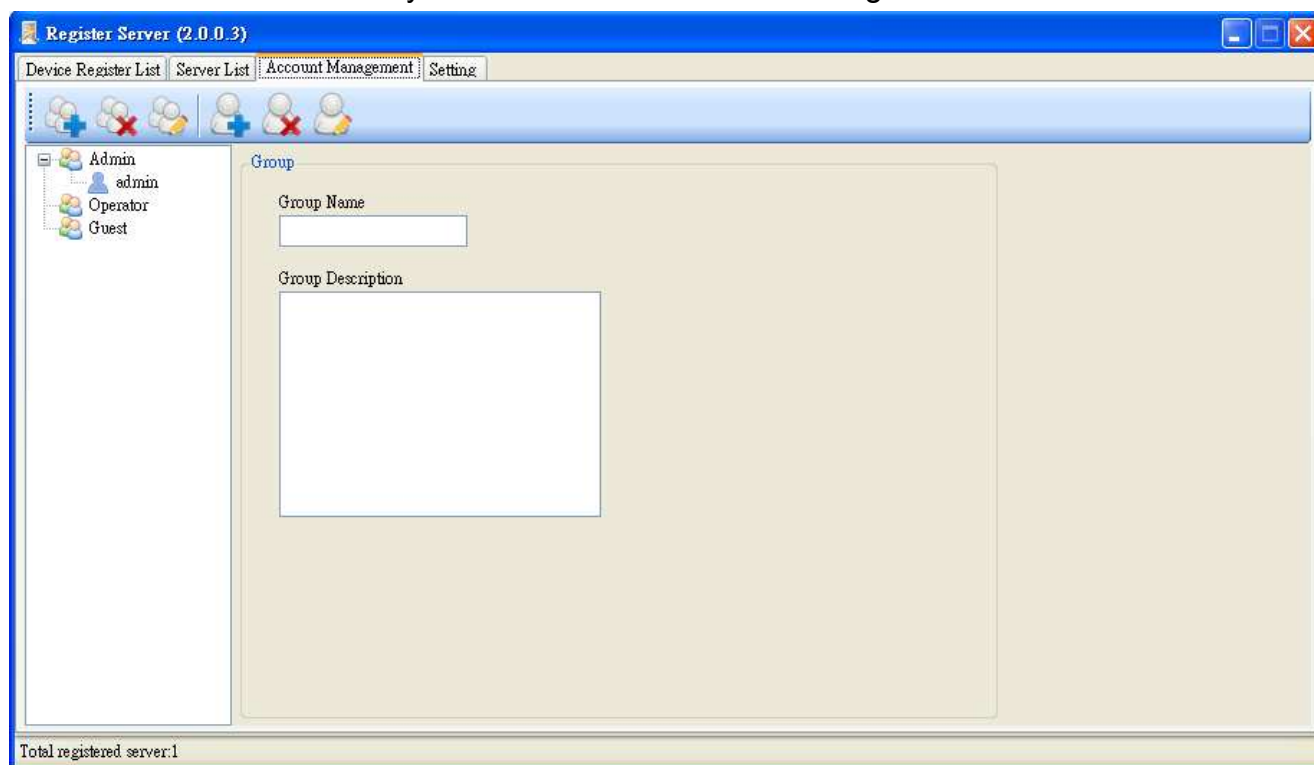


Clear button enables clear the current list, the server will then updates automatically the mobile dvr that can be linked

Click on the second tab will let you access to server list



Click on the third tab will let you access to the account management



There are 3 level of account, Administrator, Operator and Guest each can be customized on the right side. This concerns login from cms client,

Click on the fourth tab will let you access to the server setting

The screenshot shows the 'Register Server (2.0.0.3)' application window with the 'Setting' tab selected. The window contains several configuration sections:

- Server Setting:** Includes 'Server Port' (8788), 'Interval' (60), 'Start' and 'Stop' buttons, a checked 'Auto run on system start' checkbox, and a 'Language' dropdown menu set to '英文'.
- Parent Server:** Includes 'Parent Server IP' and 'Port' input fields.
- Database Setting:** Includes 'Database Server IP or Domain Name' (localhost), 'Database Name' (HSDB), 'Database Account' (hsadmin), and 'Database Password' (\*\*\*\*). A 'Test' button is located next to the password field.

At the bottom of the window, a status bar indicates 'Total registered server:1'.

Server setting: default port is 8788 , you need to double check on the mobile dvr that the port is the same otherwise the server wont be able to see the device

Start / Stop the service: the default setting is set on enabled but you can manually stop the server

Client side: launch the application called MRVMS



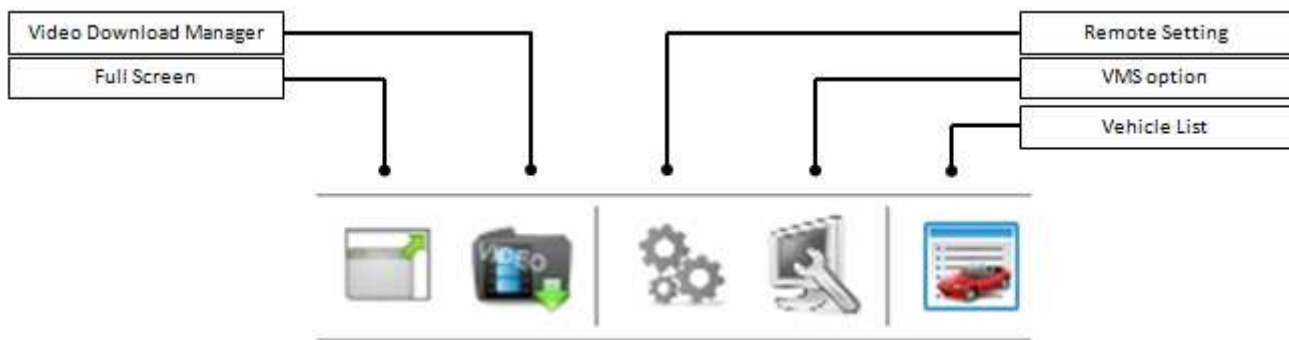
Default account and password are admin / 1111



Specify the server IP, Specify the server streaming port



## Tool bar description



**Full Screen**

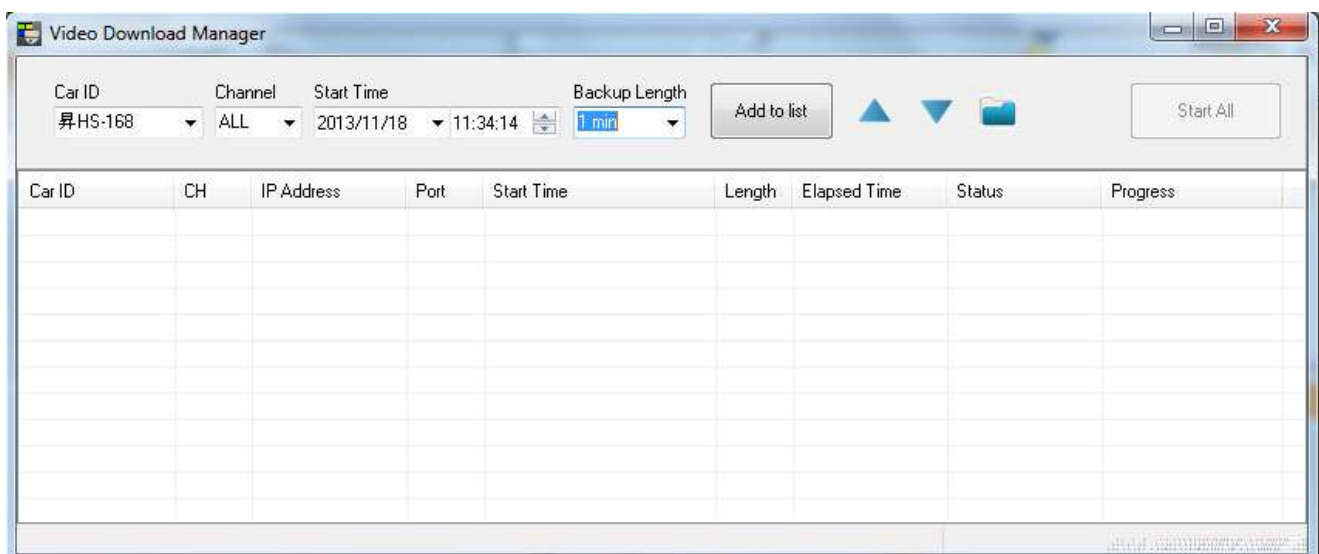
Displays the video in full screen on your monitor, to return to normal mode press ESC button on your keyboard



**Video download Manager**

Download recorded data from the dvr remotely, you can choose the car ID, the channel , the date and time and the backup length and do multiple backup

We recommend to be in LAN or WIFI environment to download the data and avoid be in 3G mode to download as the risk of failure is very high

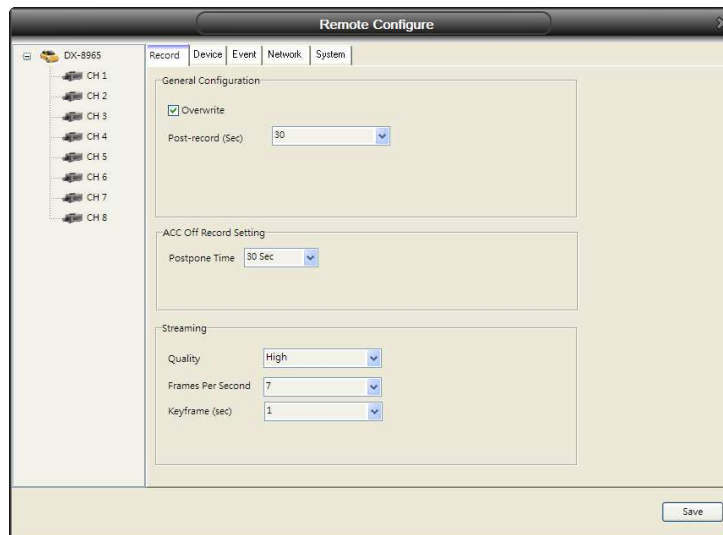




## Remote setting

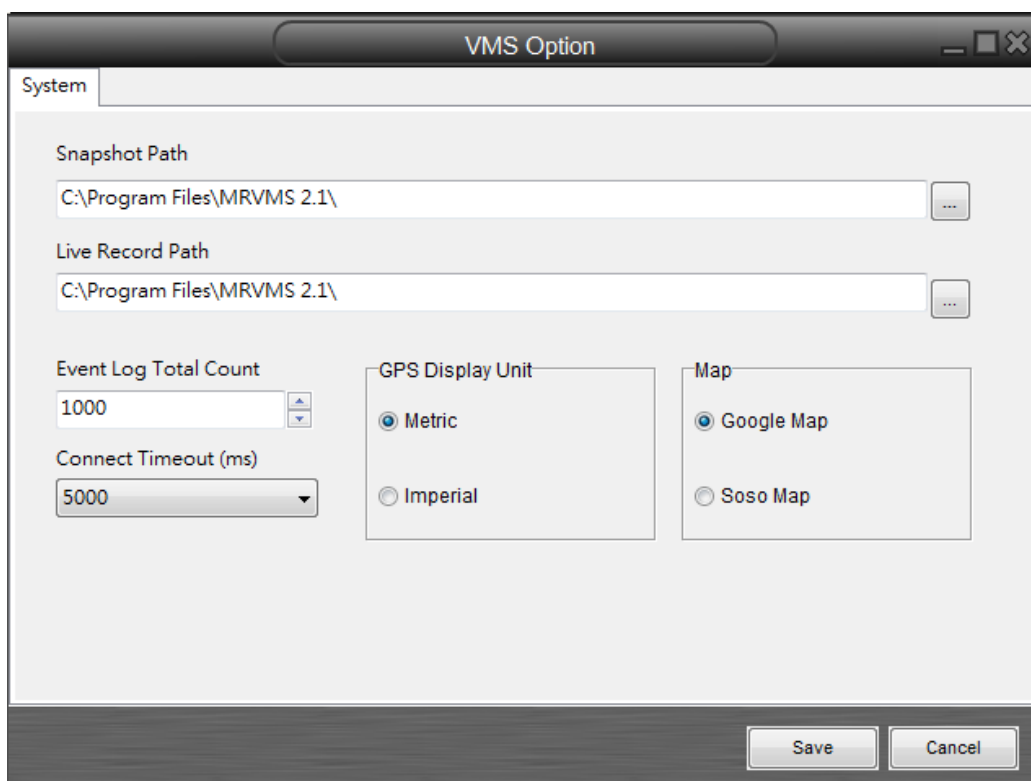
let you remotely setup mobile dvr features

all the functions are the same of the mobile dvr itself , to be able to access to the setting, the dvr must be connected.



## VMS option

Let you setup the snapshot path folder, live record path folder, event log number, GPD displayed unit, and used map

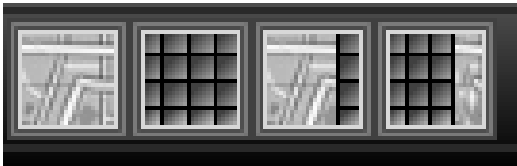




## Vehicle list

Display or hide the vehicle list

4 type of display are available select the one according to your preference



Car list: the program will show connected device with additional information, you can create or delete group for better management and pull one device to a group


Vehicle List Camera Setting

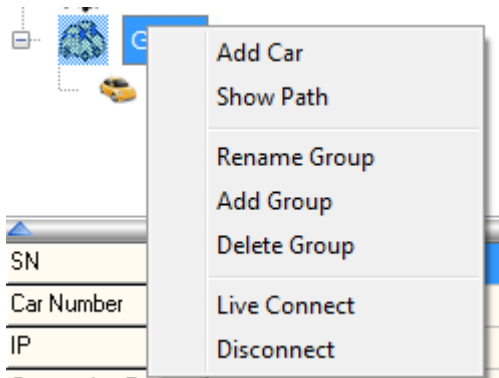
Refresh Add Remove Import Export

☒ All Car List

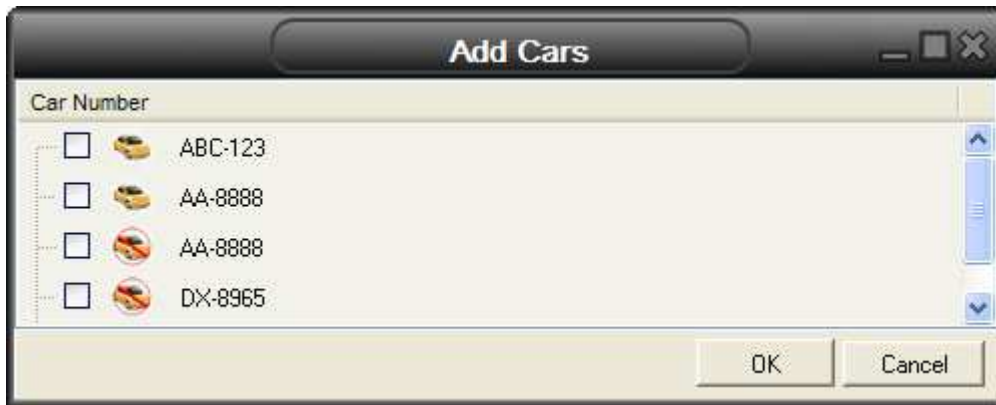
- All Car List (4)
  - ☐ 88-168
  - ☐ AB-1688
  - ☐ 001234
  - ☐ DX-8965
- Cars
  - + 88-168
  - AB-1688
    - CH1
    - CH2
    - CH3
    - CH4
    - CH5
    - CH6
    - CH7
    - CH8
  - + DX-8965

SN	00001
Car Number	AB-1688
IP	111.81.100.82
Connection Type	3G
Messenger Port	1999
Http Port	80
Stream Port	554
Company	Test
Driver	Driver-Chen

Before to see live picture, you need to create a group. Click on  , a car icon will appear, right click on the mouse to display the functions

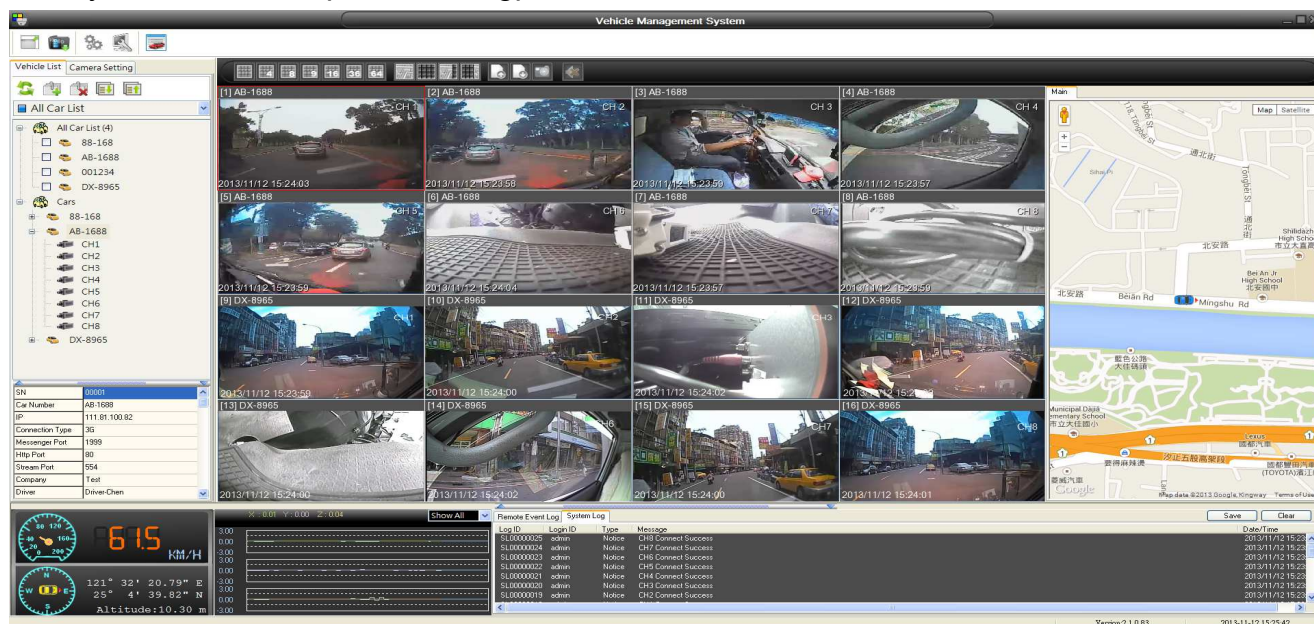


Add car: choose the car you want to add by selecting them



Then valid by pressing OK

Here you can see live picture with gps information



This section allows you to control the ptz camera and adjust the camera quality

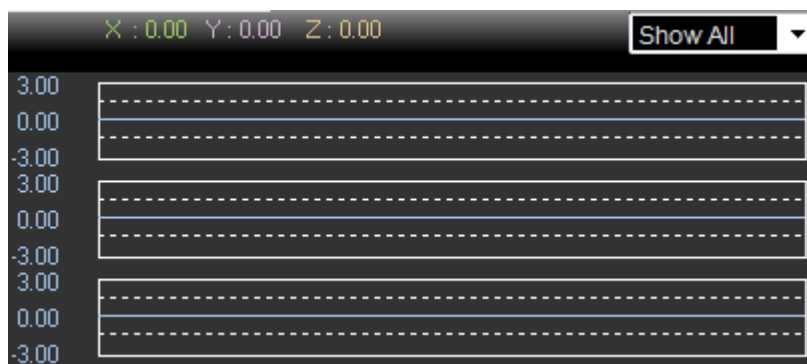


This figure show the g-sensor information



※ The GPS function is only for satellite positioning.

This figure shows the real time speed of the car



This section shows real time information such as event, vloss, relay out or motion detection

The 'Remote Event Log' window displays a table of events. The table has columns for Log ID, Login ID, Type, Message, and Date/Time. A single event is listed: Log ID EL00000001, Login ID admin, Type Notice, Message CH5 Video Loss, and Date/Time 2012/07/10 15:47:26. There are 'Save' and 'Clear' buttons at the top right of the window.

Log ID	Login ID	Type	Message	Date/Time
EL00000001	admin	Notice	CH5 Video Loss	2012/07/10 15:47:26

MR player application operation

Default id/password is admin/1111

At this stage you can select between English or Chinese interface

Login



Login ID

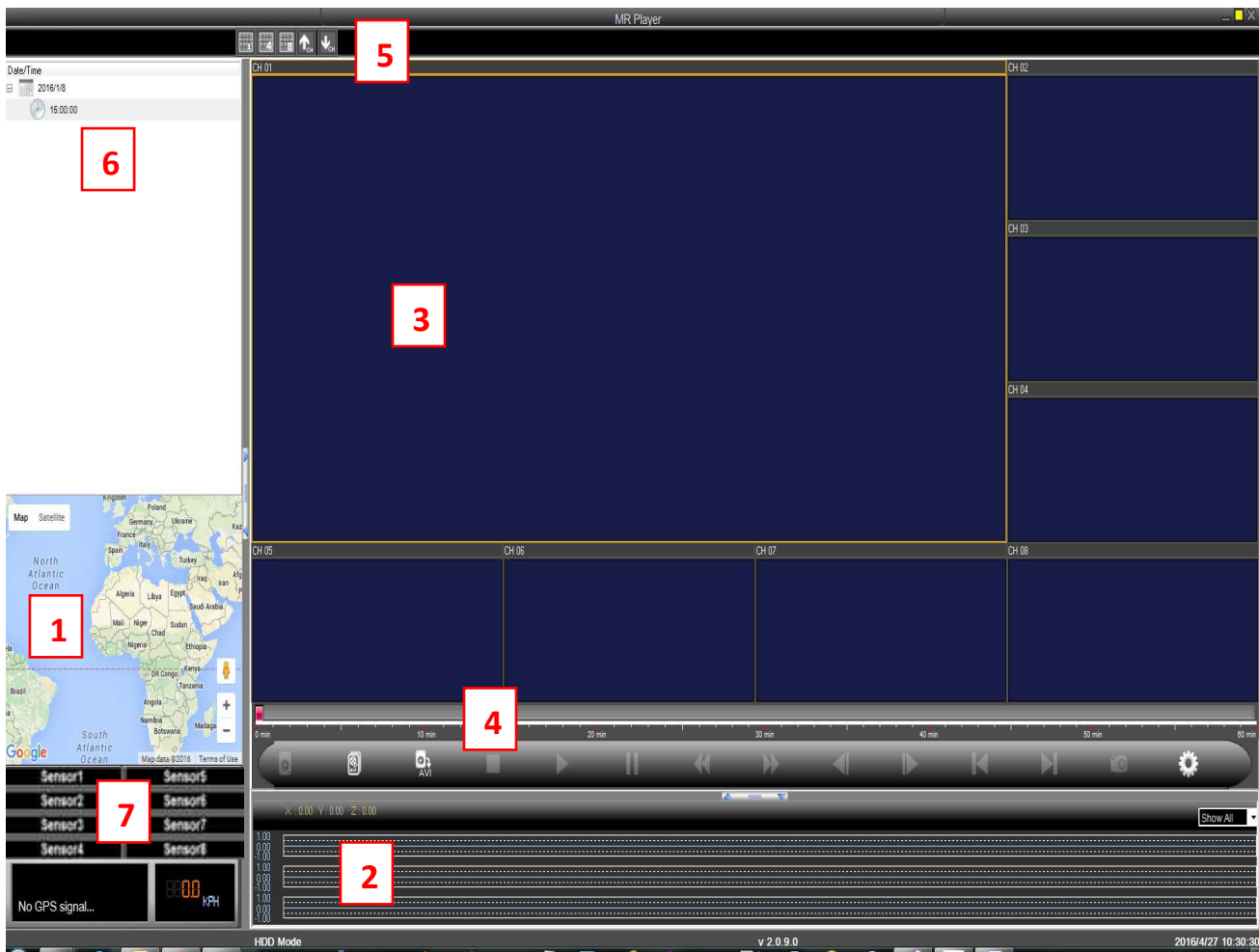
Password

Language

English (English)

 Login

## Program interface



- 1 is showing the position of the car according to Google map database
- 2 is showing G-Sensor information and current speed
- 3 is displaying video
- 4 is the playback bar
- 5 is the video display mode
- 6 is displaying video by date
- 7 is showing Sensor trigger status

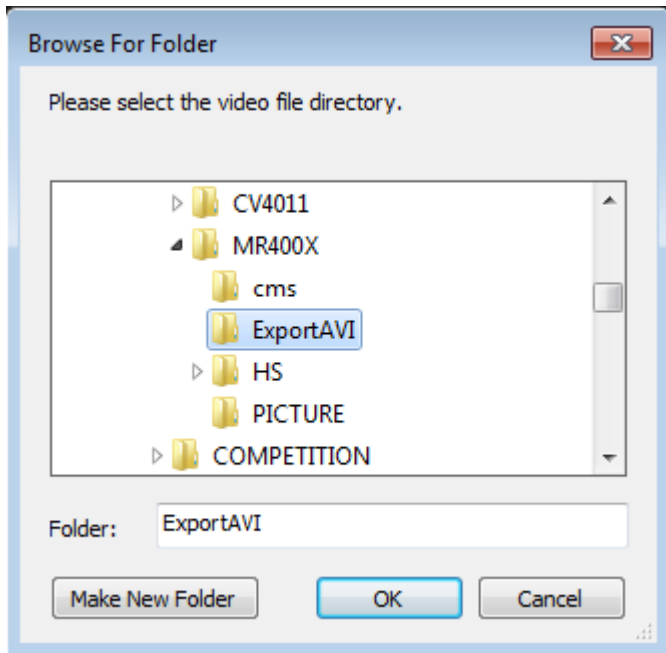


There are two way to open a file:

## Open AVI



To open a file press the first icon and find the folder you store the avi file



You will be able see the recorded files displayed by date

To play a file just double click on the date then a specific time



## Open HDD



After you select the hard disk you will see this display



you can export the video into avi file by pressing the third icon



## Control bar description

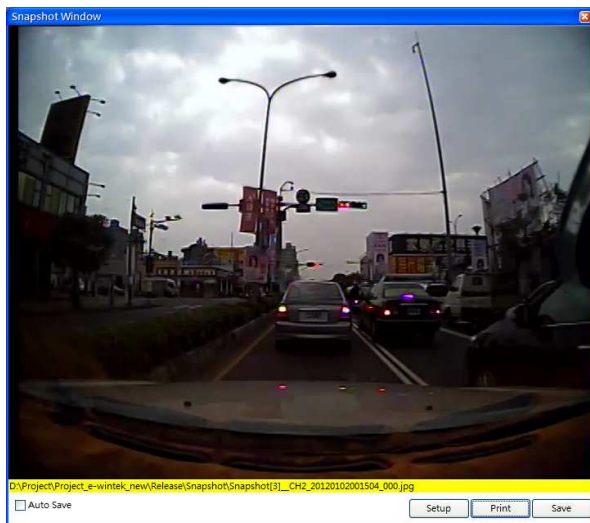


Icon	Description
	Open a avi file in a folder
	Open hard disk containing the video
	Convert a period from the hard disk into AVI format
	Stop the playback
	Playback
	Pause
	Fast Rewind
	Fast Forward
	Step Backward
	Step Forward
	Playback previous file
	Playback next file
	Take snapshot of current video
	System setting

## Snapshot

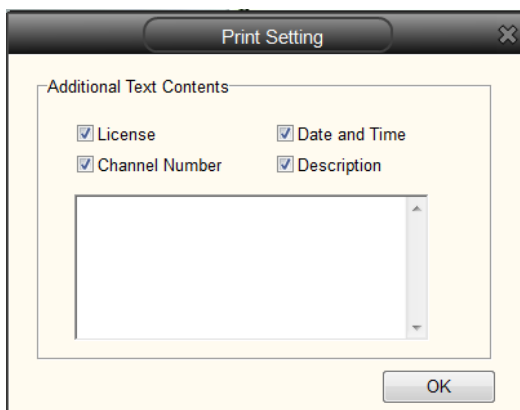


If you press the snapshot icon, a window will pop out



You can save manually or auto save the picture

You can adjust print setting by pressing SETUP button, another window will come out



You can add in your picture print license number, plate number, date and time, and also description (by adding text)

If you press PRINT button, the computer will send the picture to your connected printer.



## Setting

The screenshot shows the 'System Setting' window with the 'User Management' tab selected. The 'AVI Export Path' is set to 'C:\Users\aloun\Documents'. The 'GPS Display Unit' section has two radio buttons: 'Metric' (selected) and 'Imperial'. A 'Save' button is at the bottom right.

Here user can select GPS display unit and also which map use  
If you are in China, please select soso map

The screenshot shows the 'System Setting' window with the 'User Management' tab selected. On the left, there is a 'User List' section showing 'admin'. The main area is titled 'User Setting' and contains three input fields: 'User Name', 'Password', and 'Confirm Password'. Below these fields are two buttons: 'Add / Modify User' and 'Delete User'. A 'Save' button is at the bottom right.

In this section you can manage your different account, by changing administrator password or add new account. There are no limits of number of account  
You can also delete user.

## APPENDIX A\_Compatible Devices

※ To avoid problem of compatibility, please use below suggested SD cards. Furthermore, riser card to micro SD won't be accepted.

Brand	Capacity	Level		Speed
Transcend ( Premium-9181AA )	32G	CLASS 10	UHS-1	45MB/s (300x)
Transcend ( C68976 )	32G	CLASS 10	UHS-1	30MB/s (200x)
SanDisk(Ultra)	32G	CLASS 10	UHS-1	48MB/s
PATRIOT(LX Series PSF32GSDHC 10-PC)	32G	CLASS 10	UHS-1	10MB/s
SONY(SF-32UY)	32G	CLASS 10	UHS-1	40MB/s

※ To avoid problem of compatibility, please use below suggested HDD.

Brand	Model number	Capacity
Seagate	ST500LT012	500G
WD	WD3200BUCT	320G
	D5000BUCT	500G
	WD5000LUCT	500G
	WD7500BPKX	750G
	WD10JFCX	1T
OSHIBA	MK3265GSX	320G
	MK3276GSX	320G
	MQ01ABF050	500G
	MQ01ABD100	1T
	MQ01ABB200	2T