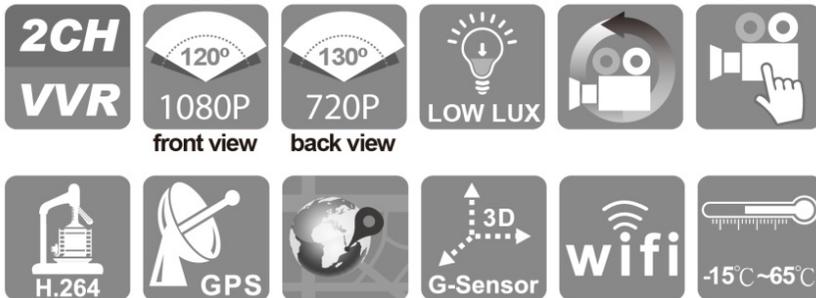


2 CH Vehicle Video Recorder User Manual



3G / 4G (Optional)

2023 JAN V4.0



Safety Precautions

For ensure device working correctly, please test record and play video function before use. Please note that manufacturer, subsidiaries, affiliates, and distributors are not liable for any consequential damages arising from any malfunction of main device accessory. Including the losses cause by memory card that failed to record image or recorded files unable to read on any device.

Before using the product, please ensure that you read the safety precautions below. And always make sure the product is used correctly.

- Please keep device away from children.
- Only using the power supply as manufacture recommended.
- Do not attempt to disassemble, alter or heat the product.
- To avoid the risk of injury, do not touch the interior of the product if it has been dropped or otherwise damaged.
- Stop using the product immediately if it emits smoke, a strange smell, or otherwise behaves abnormally.
- Do not use organic solvents such as alcohol, benzene, or thinner to clean the product.
- Do not let the product come into contact with water (e.g. sea water) or other liquids.
- Do not allow liquids or foreign objects to enter the VVR.
- Do not place the VVR nearby or direct touch flame.
- Do not handle the power cord with wet hands.
- Do not use the equipment in a manner that exceeds the rated capacity of the electrical outlet or wiring accessories. Do not use the damaged power cords or plugs, or the power cords or plugs were not fully plugged into the outlet.
- Do not allow direct or metal objects (such as pins or keys) contact with the terminals or plugs.
- Avoid using, placing or storing the product in the humid or dusty areas

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A. Feature

1. Suitable for record public or private vehicle security video. Apply vehicles as Taxi, cement trucks, container trucks, tank trucks, school buses, police cars, armored cars, ambulances, fire trucks, SUVs, RVs and others.
2. Sony IMX323 Ultra low-light one million high-resolution CMOS sensor.
3. Built-in Supercapacitor offers extensional power supply and ensures video is well stored of critical moment and compact.
4. Insert the card and activate power to start recording without additional operating.
5. Recording vehicle interior and exterior condition simultaneously
6. Complete time, date records that capable displays on the screen directly.
7. Recording driving condition, sound, G-Sensor and GPS data.
8. Front view angle approx. 120 degrees. Back view angle approx. 130 degrees.
9. Recording track of driving routes which can be shown on Google Map when we playback video records.
10. Micro SD memory card Class 10 or above recommend.
11. G-sensor sensitivity can be adjusted according to road situations. When detect a strong shock, system will start emergency recording and keep the files without being overwritten.
12. Professional file formats, without built-in lithium battery, no needs to afraid of heat and bursting concerns, it is the real black box.
13. Carry on 3G dongle for remote surveillance, vehicles operating data can be handling on time.
14. Carry on Wi-Fi dongle for on line video immediately download and backup.

B. Specifications

Terms	Specifications
Sensor	Front 1080P CMOS Sensor Rear 720P CMOS Sensor
Camera view angle	Front camera view angle approx.120° Rear camera view angle approx. 130°
Voltage	(a)Require 5V±5%, 1A Cigarette lighter adapter. Start voltage as 4.7v above. (b)Built-in1.5Fsupercapacity as backup power for file storage.
Operating Temp	-15°C ~ +65°C
Storage device	Recommend using Class 10 above micro-SDHC Card (8G above) MAX TO 128GB.
Recording Frame	Front 1920x1080 Max. Fps as 25/25Fps (NTSC/PAL) Rear 1280x720 Max. Fps as 15/15fps (NTSC/PAL) Auto record when power up system; backward facing lens can be closed by setting of software.
Recording contents	Date, time, image, sound, G-sensor data, GPS data.
Storage format	(a) Specific format for software player. (b) H.264 compression
Microphone	Build-in high sensitivity of single microphone for automatic voice adjustment
Time setting	GPS auto adjustment, use built in calendar clock if no GPS signal.
G-Sensor	Internal 3D G-Sensor
GPS	Built-in GPS, capable connect with G-MOUSE. GPS position, drive route tracking record.
WIFI	Built-in USB WIFI Dongle(2.4G HZ) ◦
Output/input device	(a) VIDEO OUT: TV-Out (1 Vp-p composite video output, 75 ohms) (b) Video Output format: NTSC / PAL alternative.

	<ul style="list-style-type: none"> (c) Force Record Button: For emergency recording. Glows in night time. (d) Red light: Recording indicator. In emergency recording, it flashes more frequently. (e) Green light: GPS connecting light (Flashing light means that 3D positioning is not ready, bright means that 3D already positioning). (f) Blue light: WiFi connection light (flash light means WiFi do not connect, bright means success connect with WiFi). (g) EXT: extra GPS Mouse external jack. Note: under night mode, the infrared ray is on and the indicator light is dimmed.
--	--

C. Accessories

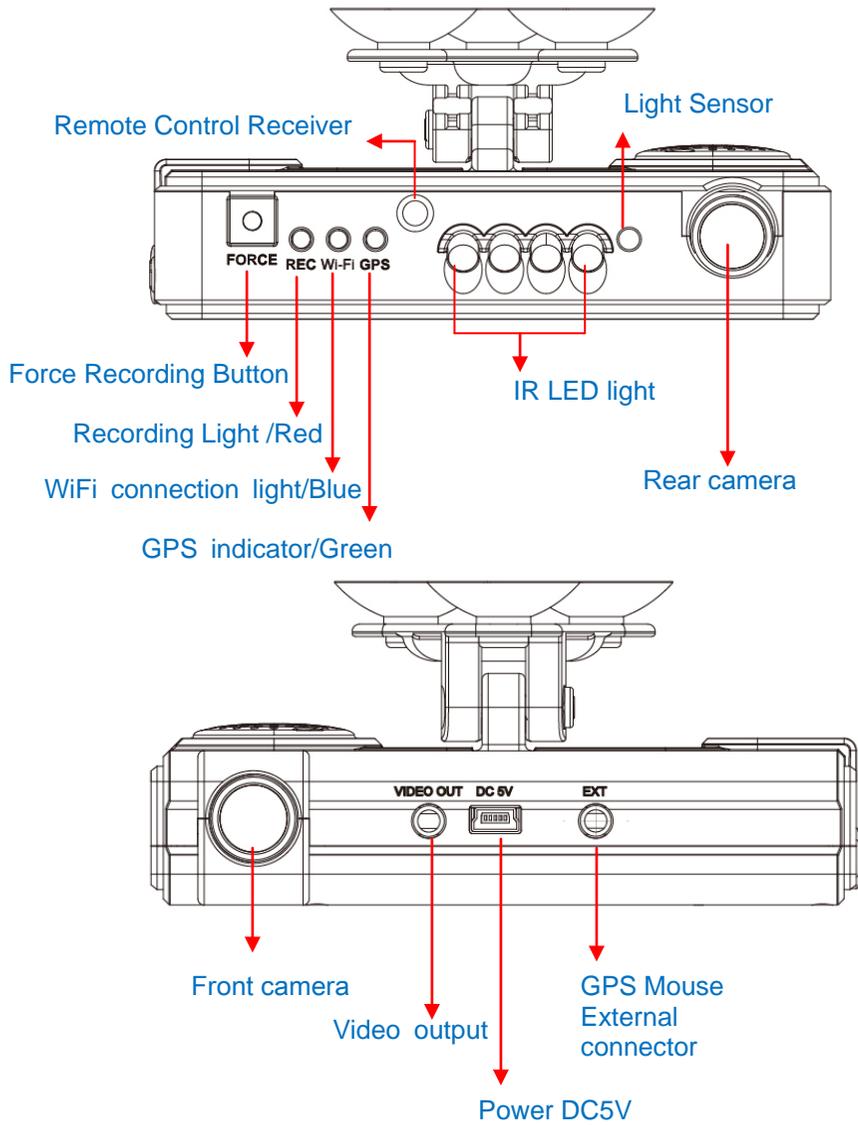
Standard :

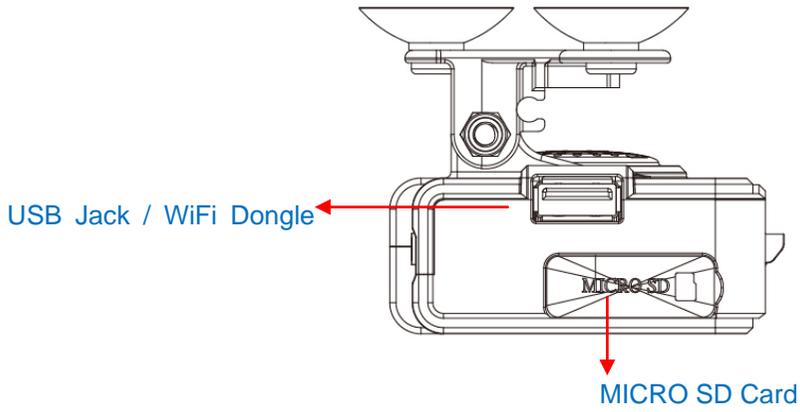
- (a) 5V cigarette Power adapter
- (b) 4 pins, 3.5 inch headphone jack to RCA output cable
- (c) IR remote controller
- (d) Suction cup for bracket holder
- (e) Bracket holder
- (f) Product CD
- (g) Quick start guide
- (h) WiFi Dongle

Optional :

- (a) 8G Class10 Above micro SD Card
(8GB/16GB/32GB/64GB/128GB) .
- (b) External GPS Mouse (4P Phone Jack Connect) .
- (c) Vertical 90° glass vehicle models, such as: tour buses, large trucks, container trucks, fire engines, can be used with AVM-351 bracket.

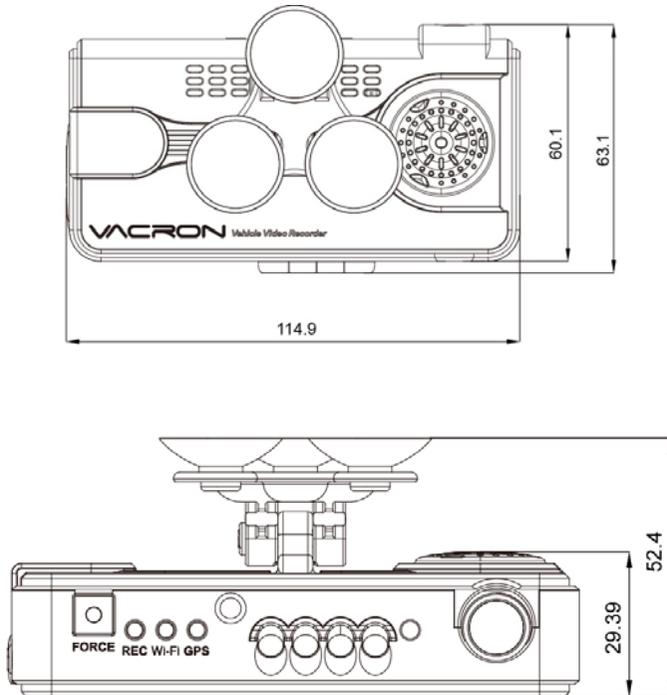
D. Product structure diagram





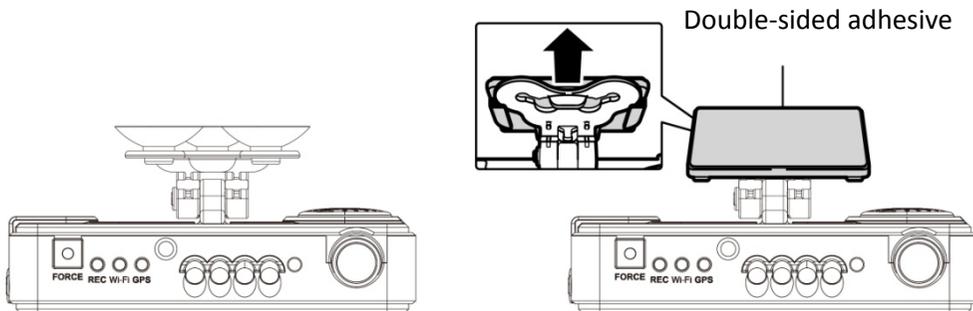
E. Product Dimension

Unit : mm

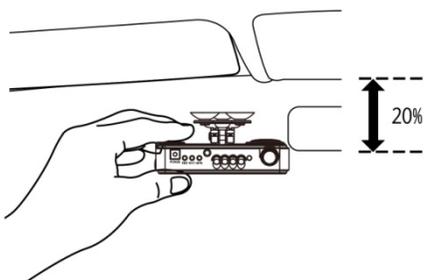


F. Installation

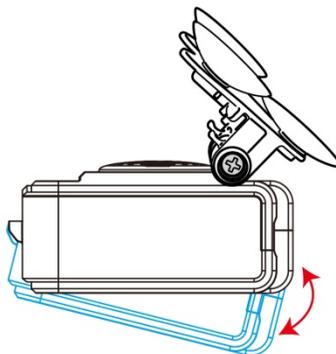
1. Use 「suction cup」 or 「Double-sided adhesive」 install device on vehicle front windshield.



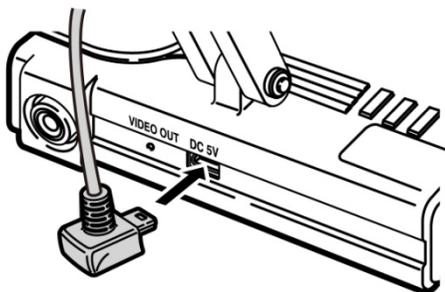
2. Set up the machine in proper position



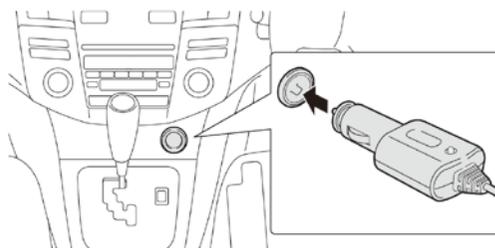
3. Adjust the camera view to proper angle



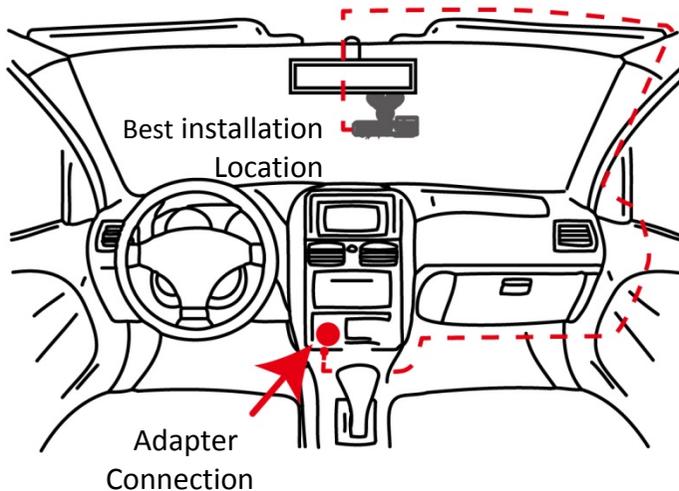
4. Plug the power cable to DC5V connect jack



5. Plug in the cigarette adapter.



6. Device wire installation diagram. During the wire installation, avoid set wire on left side above GPS, please set wire through device front hole to vehicle ceiling to get better GPS signal.

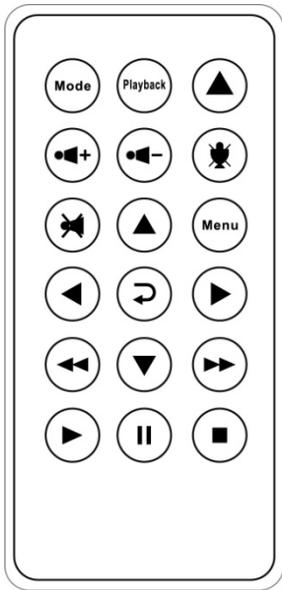


Notices

- (a) GPS positioning accuracy may be affected by the installation position, sun-screen or weather condition.
- (b) For ensure clarity of video, install device in the wiper washable area.
- (c) Automotive front insulation paper with metal components may lead to GPS cannot position.
- (d) Infrared ray start-up time and off time depends on the light intensity, which impact by the installation location, first file cellophane ... and other factors.
- (e) The day and night mode with a delay of about 30 seconds, into the night mode when activate device.
- (f) Before using the memory disk, please format the disk first by the software player. If not, device will automatically erase all data in the memory disk before recording, then recording as default setting.
- (g) To ensure recording quality, please do not use adapter card with Micro SD card. Doing so may lead to bad connection due to shock and vibration
- (h) Memory card has life limit. For ensure it working correctly, please test the memory card on PC Player regularly
- (i) Use new memory card insert device, it will doing professional files format about 2 minutes, and then start recording.

- (j) After SD card format by device or PC player, 8G, 16G, 32G, 64G or 128G SD card all showing 80.5MB storage space under Windows system, other storage space as hidden files, user have to play video records by professional player that offer by manufacturer. The restore SD card also have to use the manufacturer player refer to format/restore memory card chapter.
- (k) The collision and high frequency vibration may cause physical damage to the memory card magnetic field, resulting in video intermittent or unable playback. it is recommended that regular inspection and backup important data.
- (l) If the device power consumes more than the standard USB single-hole output 500mA, the computer power supply may be insufficient, and it requires buying additional DC 5V / 1A above the power supply wire.
- (m) Devices video output normally divided into two systems: NTSC or PAL. Ensure using suitable system according to different devices and monitors.

G. Remote controller



Buttons		Functions
▲	Force recording button	Manually establish a recorded file which cannot be overwritten
Mode	Mode button	Full screen / Half screen spilt shift
Menu	Menu button	Firmware version of the device displayed
🐛	Mute button	Audio recording On/Off

◆ Introduction of OSD Interface: (Video output from connecting TV-OUT line to the device):

(1) Press Mode button in Live view interface switch CH1 front camera, CH2 rear camera and dual front and rear camera image as below:



Front camera image(CH1)

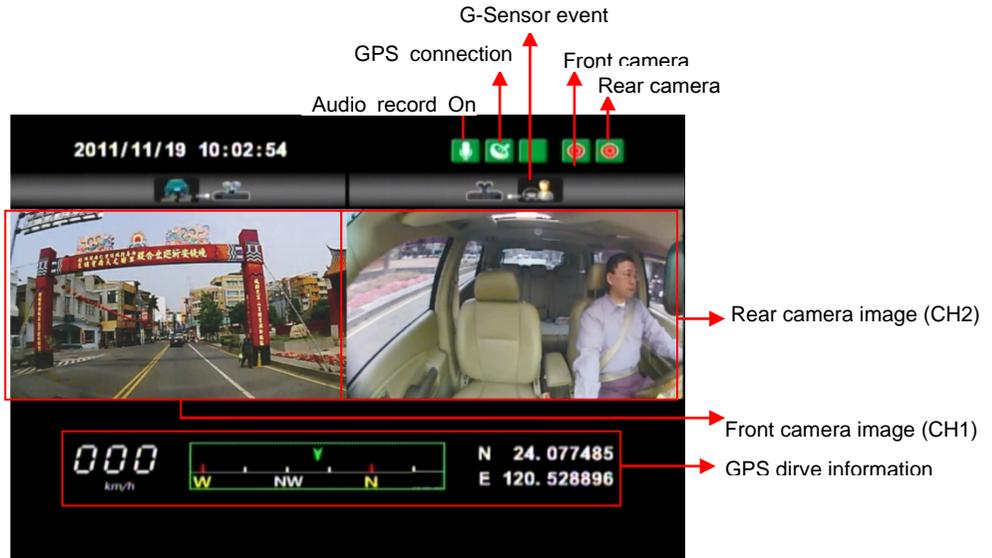


Rear camera image(CH2)



Front &Rear camera image display

(2) Illustration Description



1. Event Record:  Appears in the top right side of LIVE screen, it means that G-Sensor didn't receive abnormal signal. When you press the record button  from the remote control or click  this icon at the right top to force the machine to record manually.

2. Click Menu button on remote controller under LIVE screen to display current software version.

3. In the LIVE screen you can choose whether open the recording or not, click Mute button on remote controller, the icon  will showing on top right of LIVE screen, this icon  stand for stop recording audio, start and being recording the top right screen will showing  icon.

4. GPS display: When  icon appears at the top right of the LIVE screen, it means there is no GPS signal; when the icon  appears in the top right of the LIVE screen, it indicates that the GPS is working.

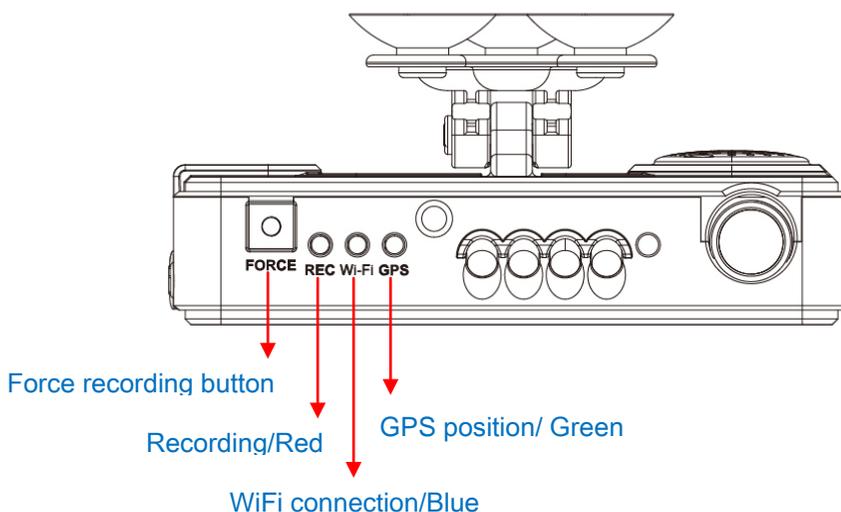
* The boot screen and LIVE screen image may change due to software update or revision without any notice.

H. Recording and stop recording

When the device power on, the screen will show a welcome message for the device starts if connected to TV-Out ; After activated device, software will display current software version as 「Firmware Version : XXXX」 before get into LIVE screen.

a) Power on/ Start recording:

Power on, device activated after 1 minute later. The red light flash indicate device being recording.



Light indicator:

- FORCE: force recording button.
- REC Red light: Stable flicker of red light: On recording
Fast flicker of red light: Force recording
- Wi-Fi Blue light: Blue light stable flicker: Not connect with WIFI, the blue light stable bright: the WIFI is connecting.
- GPS green light: the green light flicker means GPS 3D being positioning, the green light stable bright mean GPS position completed.

b) Power Off/ stop recording

Power off and then remove the memory card to read the recording file in computer.

I. Playback video records

How to read the files from Micro SD card?



1 Turn the rubber cover left and press the Micro SD card with your finger to pop up.



2 Remove the card



3 Insert the Micro SD card into the card reader (please make sure the direction is correct).



4 Connect the card reader to the PC and use the software in CD to play the files.

1. Video playback

Start the program  (you can locate it in the CD-R), Press  button, and choose the memory card player list to play the files.

Note: Direct X 9.0 above is necessary for this program.

2. Main Screen

Viewer interface



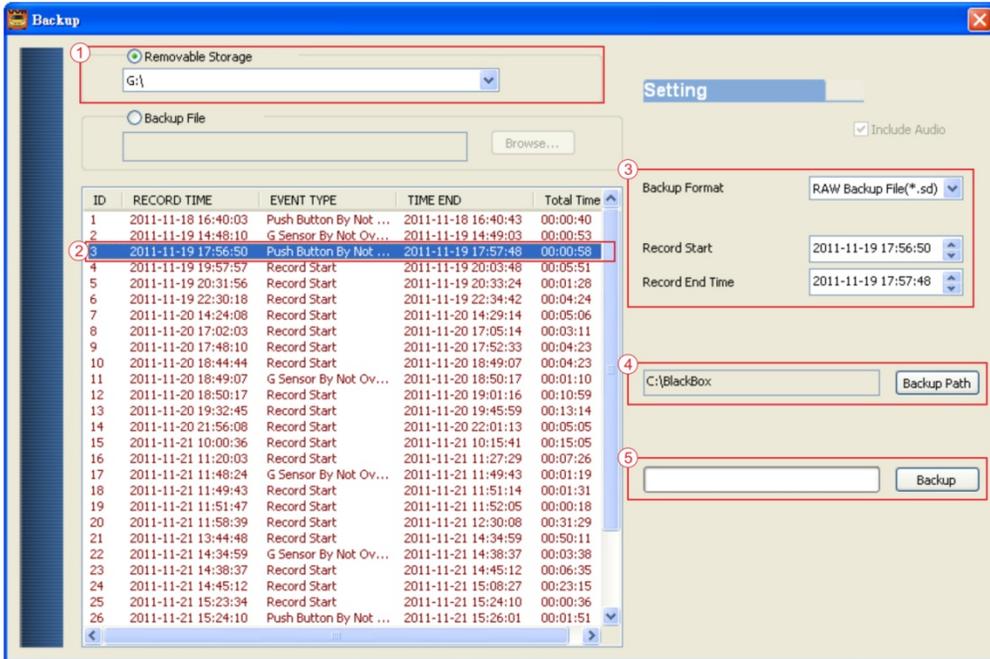
Control Interface Description:

	Pause
	Play
	Stop
	Play backward
	play previous frame
	Play next frame
	Play previous file
	Play next file

	Close
	Minimal screen
	Playback video
	Calendar
	Backup
	Screenshot Tool
	Configuration, device setting
	Tool list, can format memory card, doing language setting.
	G-sensor
	Compass
	Free Google map key type in

- Disk Backup**

Save the recorded files from memory card to your PC, click the button and it will pop up backup window as below.



Step 1: select the SD card location



Step 2: select the records which require to backup

ID	RECORD TIME	EVENT TYPE	TIME END	Total Time
1	2011-11-18 16:40:03	Push Button By Not ...	2011-11-18 16:40:43	00:00:40
2	2011-11-19 14:48:10	G Sensor By Not Ov...	2011-11-19 14:49:03	00:00:53
3	2011-11-19 17:56:50	Push Button By Not ...	2011-11-19 17:57:48	00:00:58
4	2011-11-19 19:57:57	Record Start	2011-11-19 20:03:48	00:05:51
5	2011-11-19 20:31:56	Record Start	2011-11-19 20:33:24	00:01:28
6	2011-11-19 22:30:18	Record Start	2011-11-19 22:34:42	00:04:24

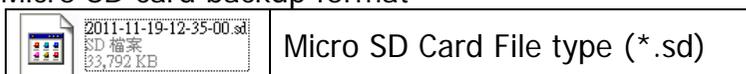
Step 3. Choose the backup file format

- (1) Micro SD Card Backup (*.sd)
- (2) AVI File Backup (*.avi)

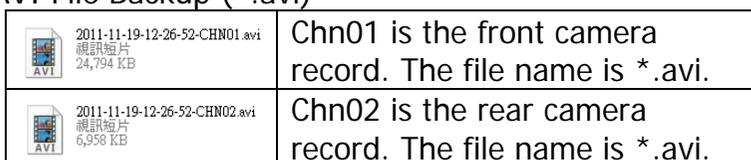


Backup format :

(1) Micro SD card backup format

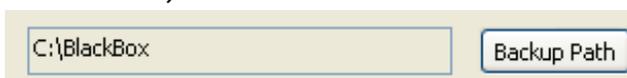


(2) AVI File Backup (*.avi)



★Note: If backup by original format of Micro SD card, the file recorded with location of GPS (longitude and latitude), speed and G-SENSOR. If backup by the format of *.avi, the file recorded date, video and audio. We suggest to backup by original format of Micro SD card.

Step 4. Backup Path: Select your backup destination (e.g.: C:\blackbox)

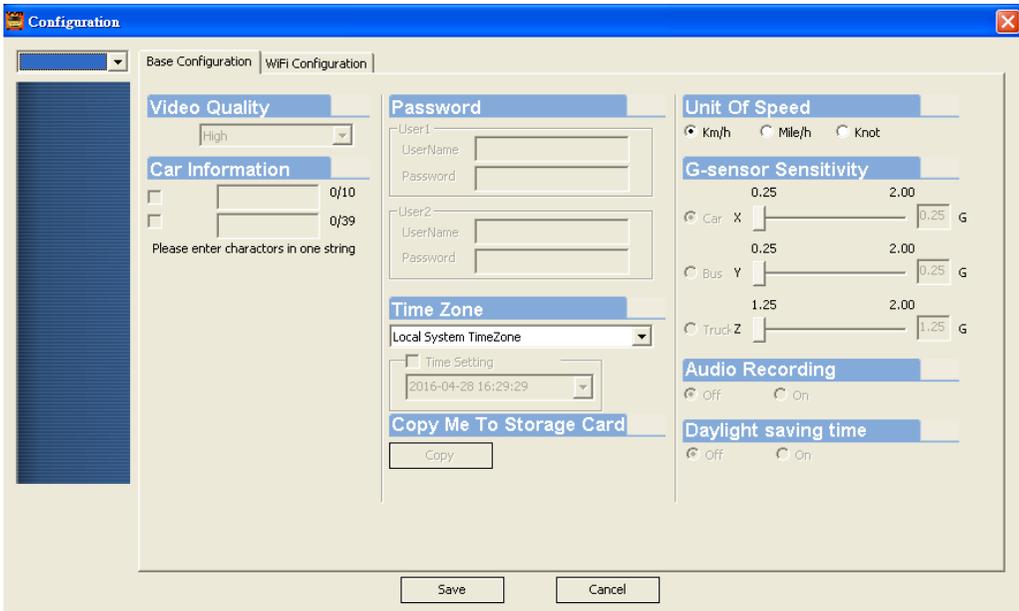


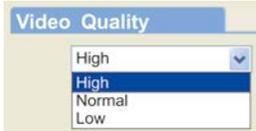
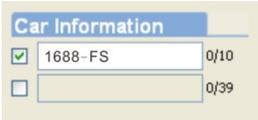
Step 5. Start backup

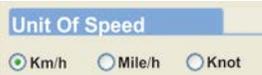
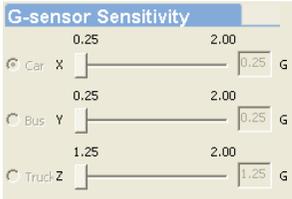


■ Setting 

Insert memory card into adapter card before recording, and then plug in adapter card to PC USB slot. Click and run software to setting recording method, after setting complete, insert the memory card back to device and continue recording.



1.	Video Quality		Select the video quality: High/ Normal / Low
2.	Car Information		The license plate number information can be input here, the film is easy to identify which vehicles to record video record (only English letter and number acceptable.)

3.	Password		<p>Encrypted memory card for prevent other people get any information from this card. Set a password to 15 characters limited, for example: 123456789123456</p> <p>After setting the password, it is required to enter password to access the playback file, setting, formatting memory card.</p> <p>★ Note: Please confirm the font case and record the password to avoid password forgetting.</p>
4.	Time zone		<p>GMT (GPS automatic time correction)</p>
5.	Speed unit		<p>Km/h: kilometer per hour Mile/h: Mile per hour Knot: knot per hour</p> <p>★ Note: 1 KM=0.6214 mile, 1 mile=1.6093KM, 1 Knot =1.853KM</p>
6.	G-sensor Sensitivity		<p>Set for detect strength of vehicle collision, and condition to lead G-sensor sensitivity trigger force recording.</p>

7.	Audio Recording		Audio recording. On: start audio recording / Off: stop audio recording
8.	Daylight Saving Time		Activate it in daylight saving time regions.
9.	Wi-Fi setting		SSID: can type in Wi-Fi connect ID (character and number) Password: Wi-Fi connection password, set password mainly by number, and type in 8 number at least

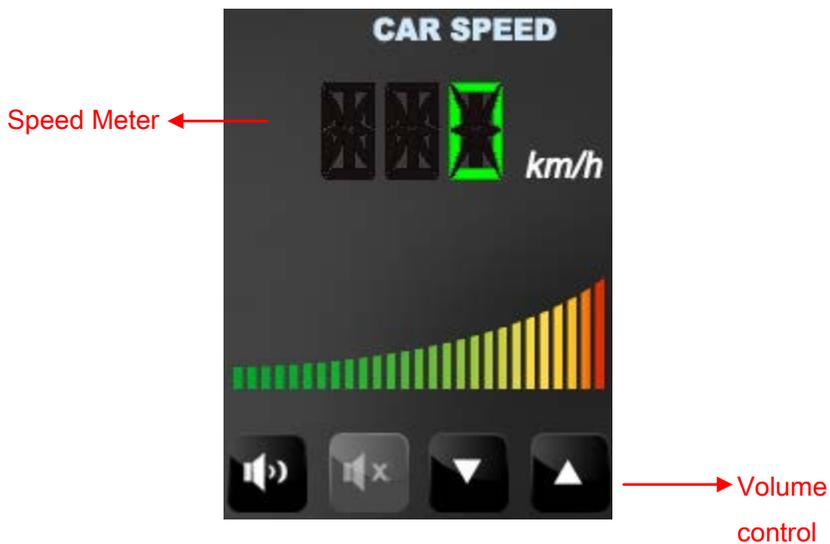
■ Screenshot tool 

While playing the recorded file, you can use this function  to snapshot the picture and save it into your PC. Default saving path for snapshot picture will be in /Snapshot folder.

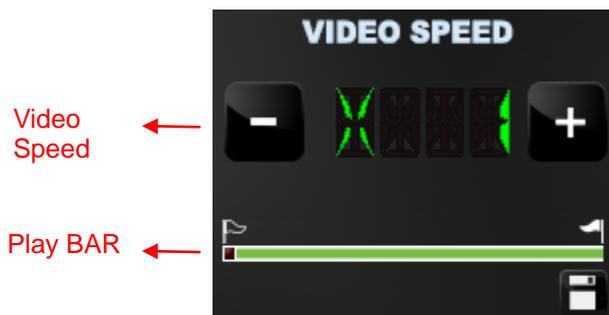
File format as *.bmp



a. Speed Meter & Volume



b. Video Playback



- (1) Play BAR: capable move the play BAR by mouse
The flag above BAR can be move to backup video files.
- (2) Video speed: Support 2x, 4x, 8x fast forwarding and -2x, -4x, -8x slow play mode.

J. Format memory card

When You Should Format Micro SD CARD?

When you use the Micro SD card for the first time or just purchase a new card, you should format it in order to use it correctly. (The bundled Micro SD card has been formatted and tested by the manufacturer already.)

★Note: this record system cannot delete a particular video, backup video before format SD card.

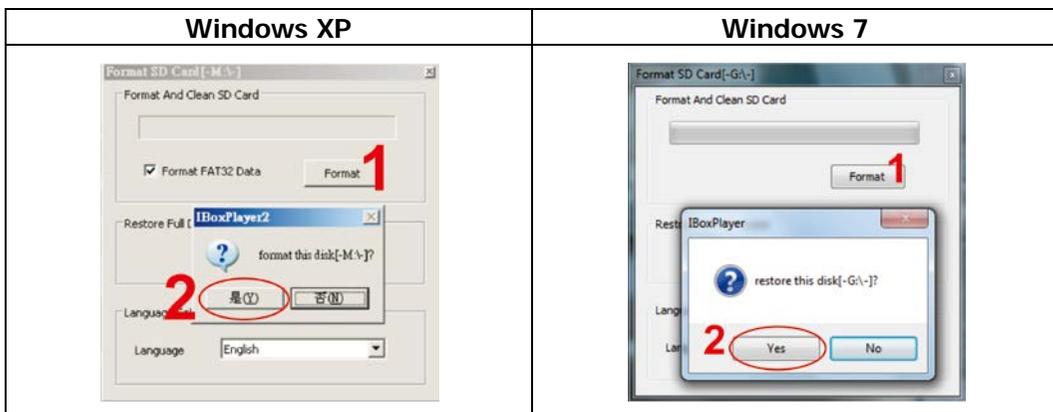
***Notice:**

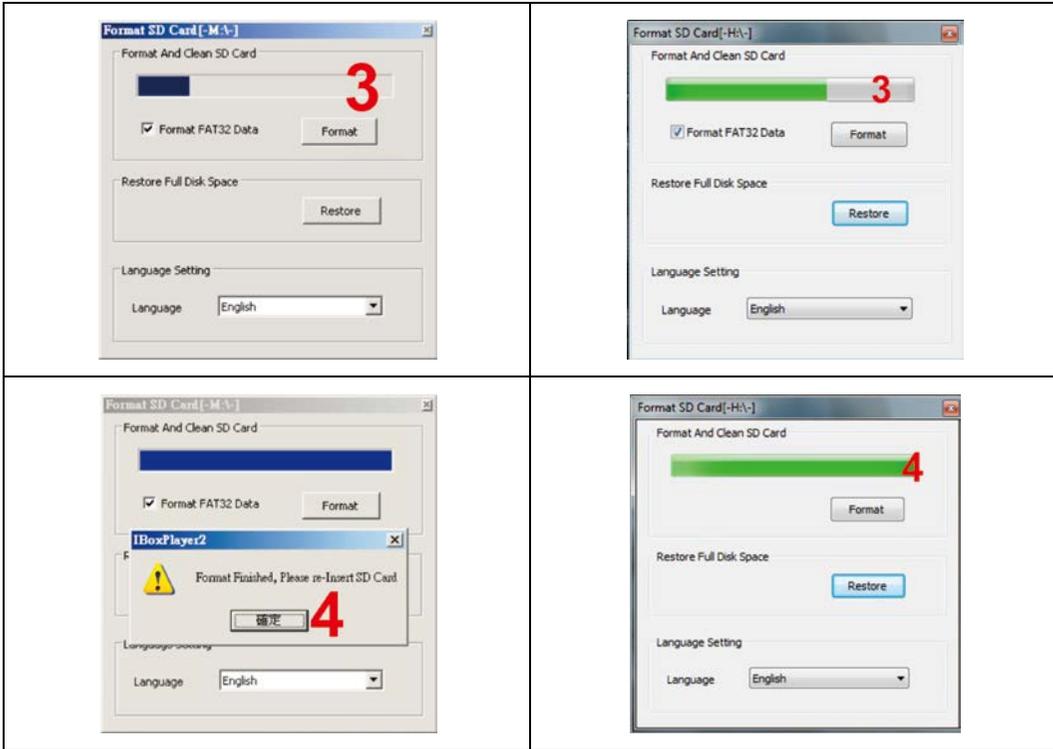
1. Before formatting Micro SD card, please ensure to unlock it first.
2. If the card is unlocked but still cannot be formatted, please run the program as Administrator to prevent from this problem.



Format steps :

- i. Insert the CD in your PC and open the file
- ii. Run  program and click on  "Format Micro SD Card".
- iii. Click on 『Format』 to start formatting the Micro SD card as following steps:





iv. When formatting is completed, please insert the card into the machine for recording.



Open the plastic lid .



Insert the Micro SD card in correct direction.



Press the Micro SD card in until it is set.



Close the plastic lid.

K. Restore memory card

When you have backup the recorded files into PC and want to use the Micro SD card for other purposes, you have to restore it first so it can be used correctly.

*Notice:

1. Before formatting Micro SD card, please ensure to unlock it first.
2. If the card is unlocked but still cannot be formatted, please run the program as Administrator to prevent from this problem.



How to restore memory card?

Steps as below :

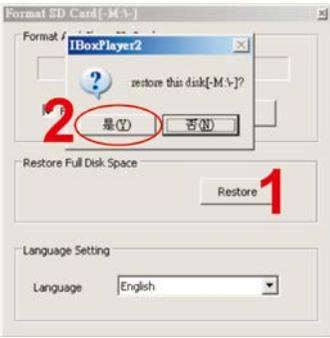


Insert the Micro SD card into the card reader (Please make sure the direction is correct)



Connect the card reader with the PC

- 3、 Insert the CD in your PC and open file.
- 4、 Find and run  program and click on  "Format Micro SD Card".
- 5、 Click on 『Restore』 to restore the Micro SD card. Please see the following steps as reference. After finished, you can use the memory card for other purposes.

Windows XP	Windows 7
	
	
	

L. 3G Client Remote Surveillance (optional)

1. Log In

Please execute 3GClientApp.exe and log in.



Log in page shown as below figure, key in the user account and password to log in the system.

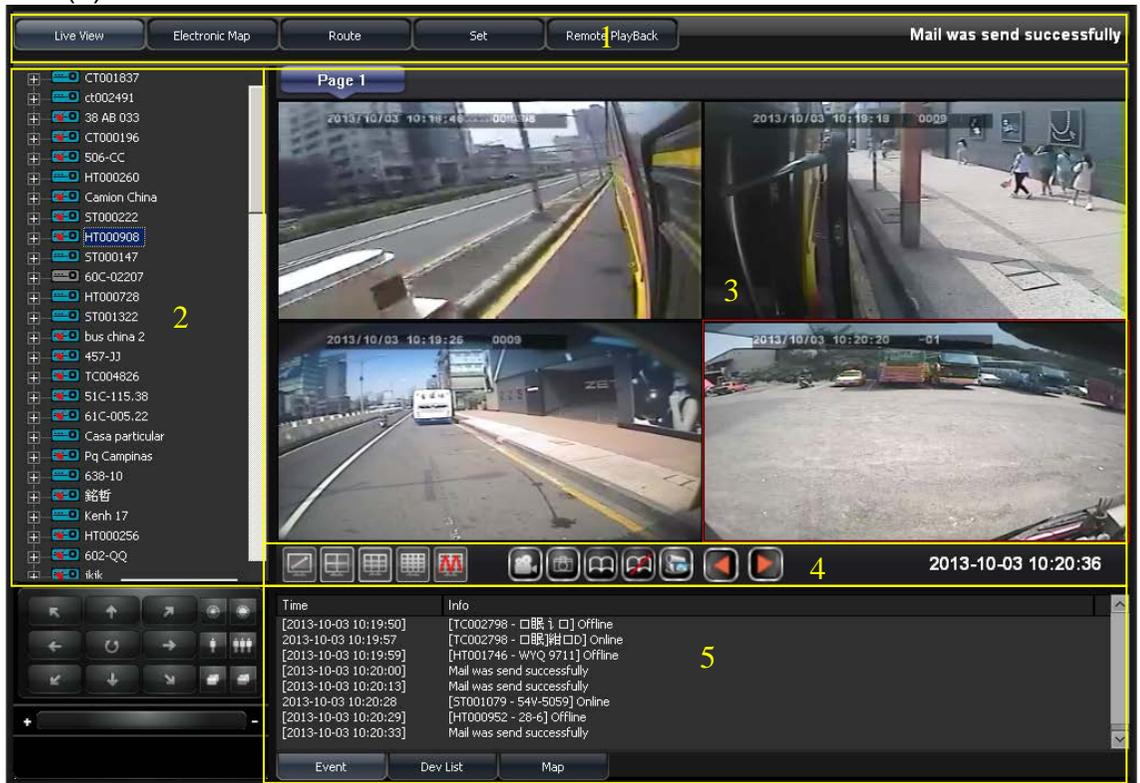
Notice: The version of executed software must be installed DirectX 9.0 or latter.



User Account	User Account
Password	User Password
Central Server IP	Server IP setting on the local device

	Default setting is Taipei Server IP:202.39.134.134
Central Server TCP Port	Server TCP Port(Default Setting:24680)
Central Server UDP Port	Server UDP Port(Default Setting:24681)

(1) Live view



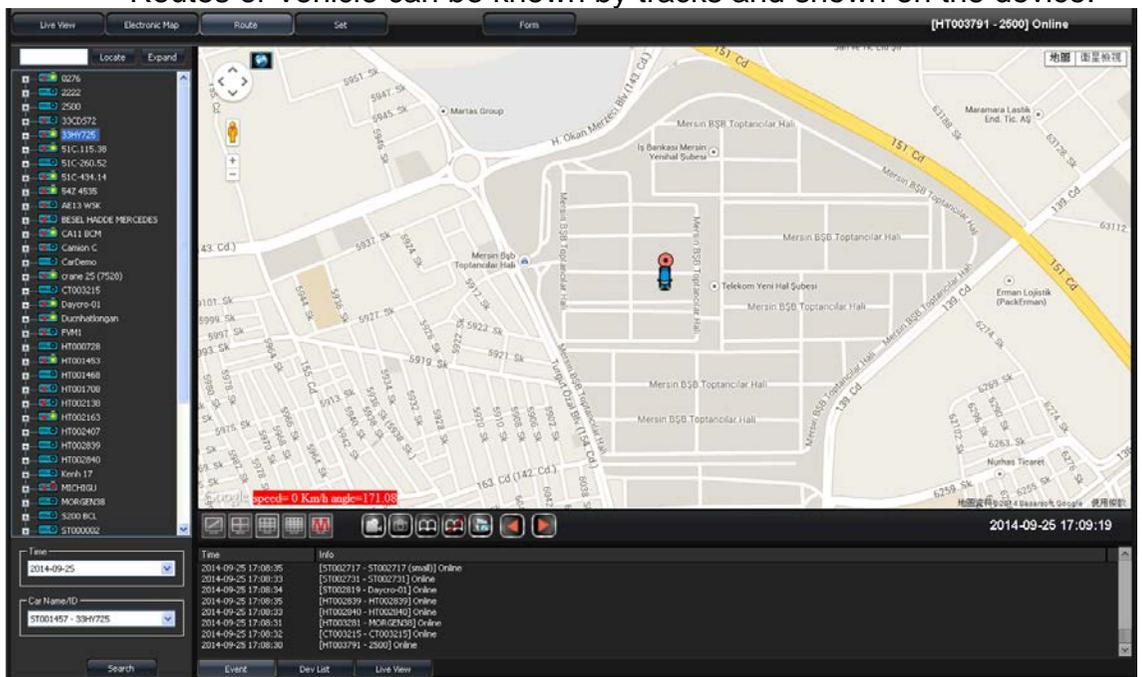
1	Display Operation Interface
---	-----------------------------

2	Device List	
	Device Positioning Light Description	
		The device is not positioning by GPS
		GPS positioning is ready.
		Yellow light is idling status.
	Red light is over speed status	
3	Live view Display	
4	Windows Division/Function Bottom	
5	Events Information/Device List/ Map	

(2) Track Page

※The Device need to use G-mouse for GPS positioning.

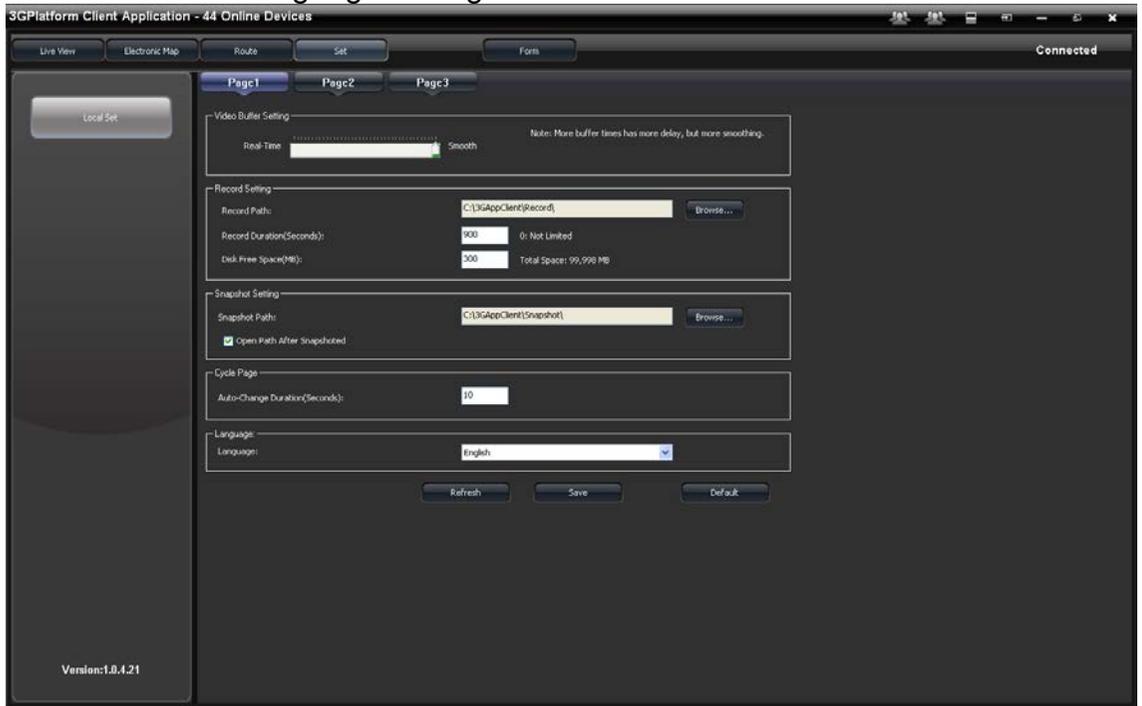
Routes of Vehicle can be known by tracks and shown on the device.



(3) Setting Pages

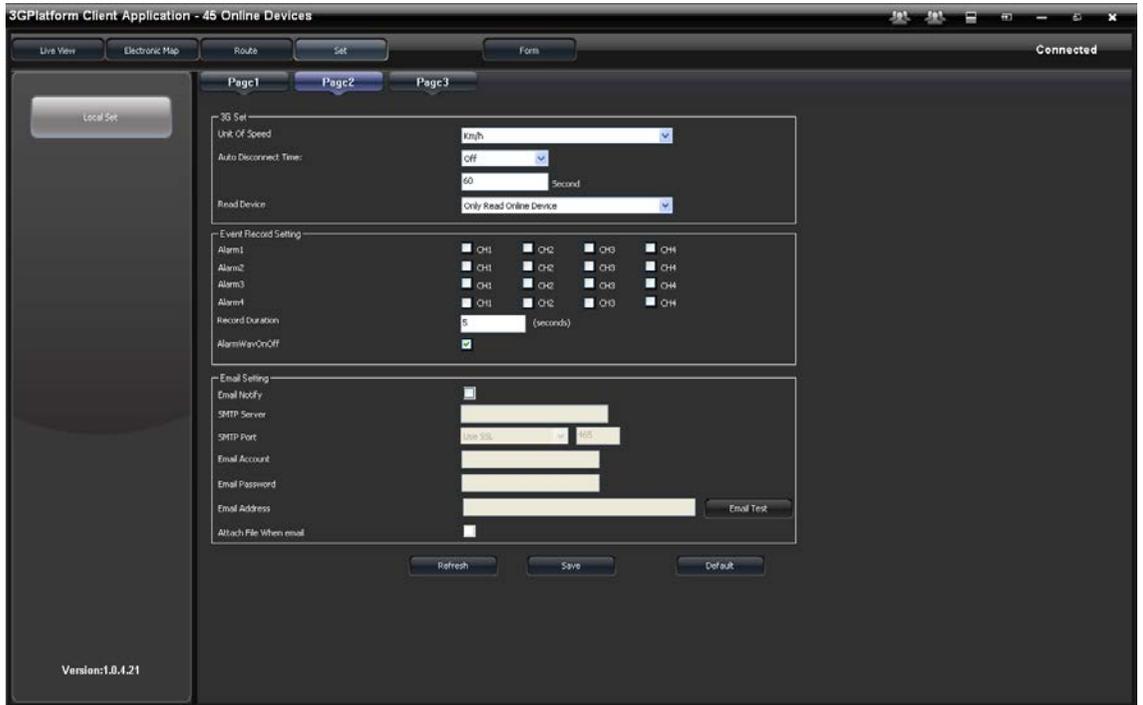
- 1Setting Page 1

For setting parameters included video playing status, image recording setting, timing setting of auto flip and language setting.



Video Playing Setting	Real time→Video smooth priority. Smooth→Image smooth priority.
Recording Setting	Recording storage route, Recording time, HDD(SD/CIF) storage division related setting.
Photo device	Photo storage route setting
Auto Flip	Timing of auto flip setting
Language	3G Client system language setting.

- Setting Page 2
Setting recording, and e-mail.



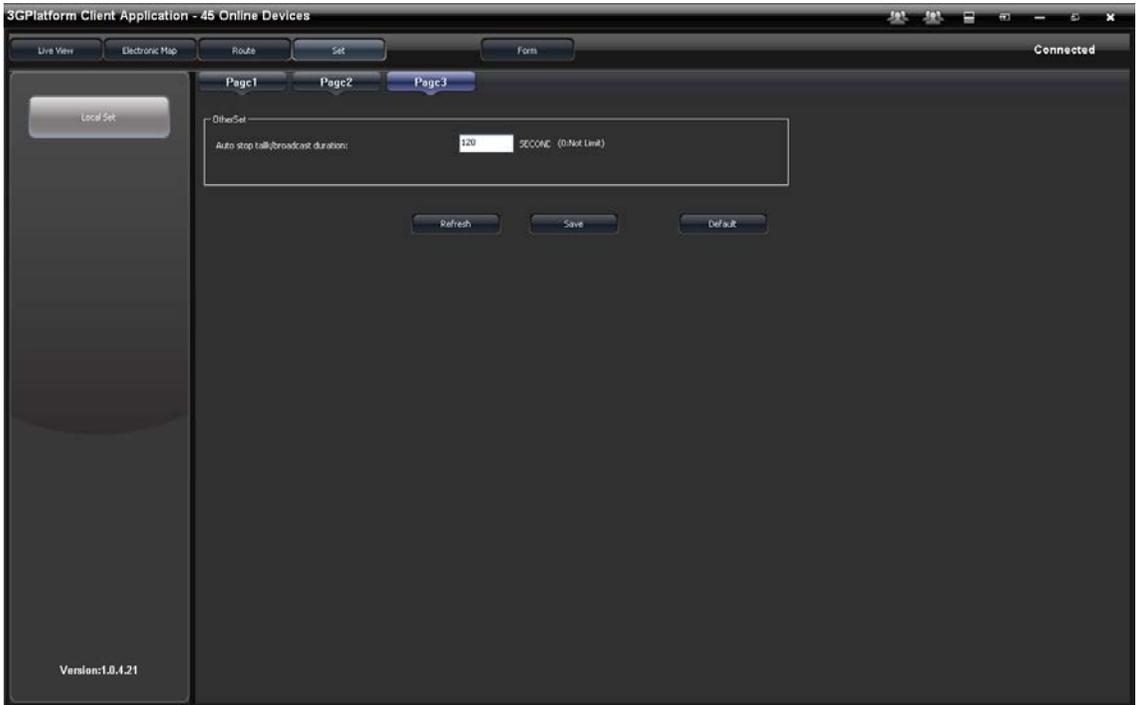
Alarm Events Record Setting	Setting of the default recording channel and timing when alarm switched.												
Mail Setting	<p>Sent Email to the assigned mail box when alarm switched.</p> <table border="1" data-bbox="532 1219 1136 1676"> <thead> <tr> <th colspan="2">Mailing Function Options</th> </tr> </thead> <tbody> <tr> <td>GPIO 0 Alarm</td> <td>Warring 1</td> </tr> <tr> <td>GPIO 1 Alarm</td> <td>Warring 2</td> </tr> <tr> <td>GPIO 2 Alarm</td> <td>Warring 3</td> </tr> <tr> <td>GPIO 3 Alarm</td> <td>Warring 4</td> </tr> <tr> <td>Disk Error</td> <td>HDD out of function</td> </tr> </tbody> </table>	Mailing Function Options		GPIO 0 Alarm	Warring 1	GPIO 1 Alarm	Warring 2	GPIO 2 Alarm	Warring 3	GPIO 3 Alarm	Warring 4	Disk Error	HDD out of function
Mailing Function Options													
GPIO 0 Alarm	Warring 1												
GPIO 1 Alarm	Warring 2												
GPIO 2 Alarm	Warring 3												
GPIO 3 Alarm	Warring 4												
Disk Error	HDD out of function												

		Over Speed	Over speed
		Idle	System Crash
		Video Loss	Video offline
		G Sensor	G sensor switched
		OffLine	Offline

Common use of SMTP Server List

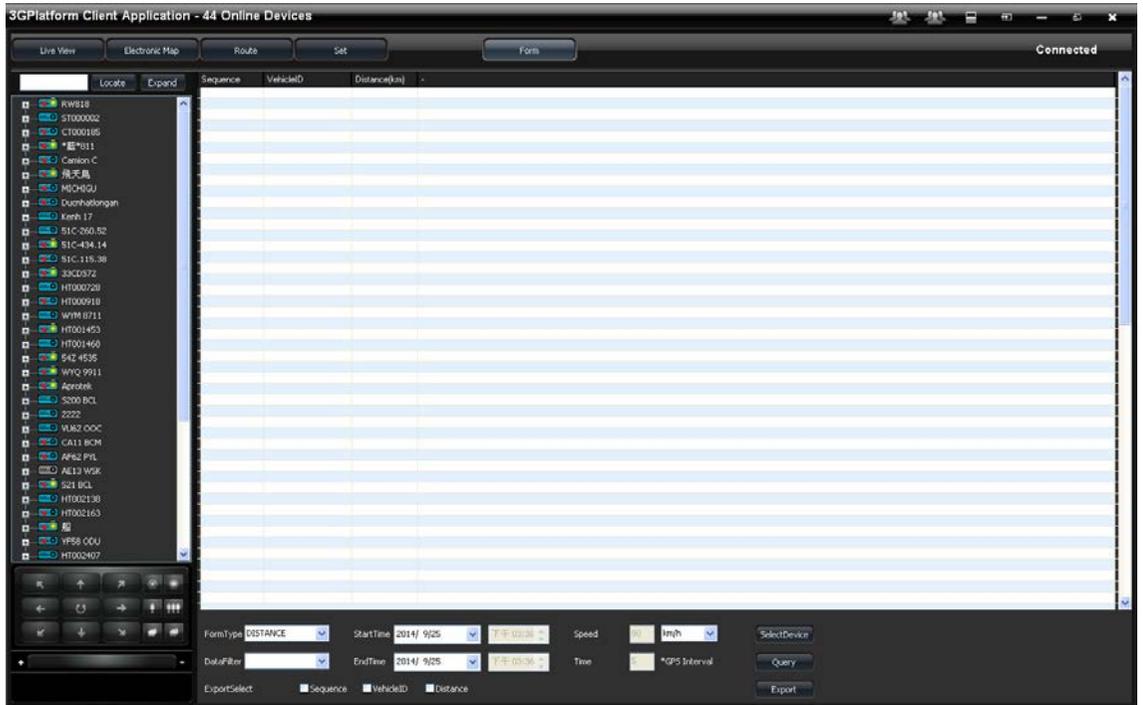
Mail	SMTP	SSL Port	StartTLS
Googlemail	smtp.gmail.com	465	587
Yahoo Mail	smtp.mail.yahoo.com	465	x
Outlook	smtp.live.com	x	587

■ **Setting Page3
3G Relating Function Setting.**



3G Setting	Speed unit setting, Video linking automatic break timing setting, Read device setting.
Others Setting	Communication time disable setting.

(4) Report
Inquiry current device running data.

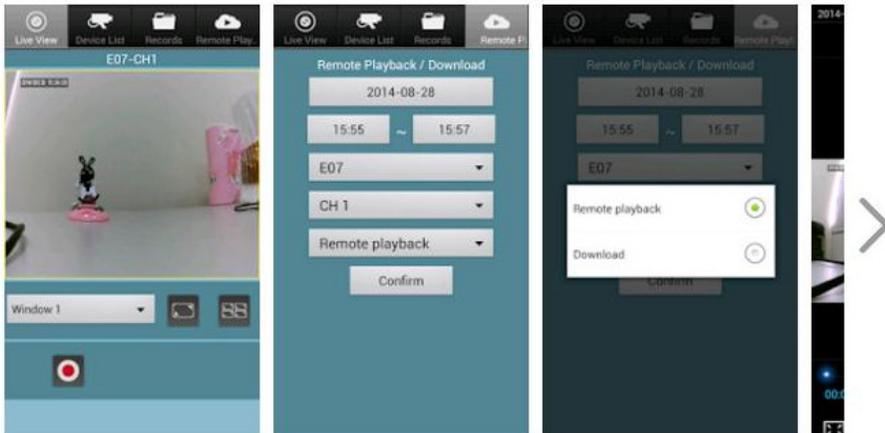


M. WiFi real time video

(1) software acquisition method

For Mobile device user could search the item name "Vacron Player" on the Play store or link and install on Google

Play. <https://play.google.com/store/apps/details?id=com.fuho.E07>



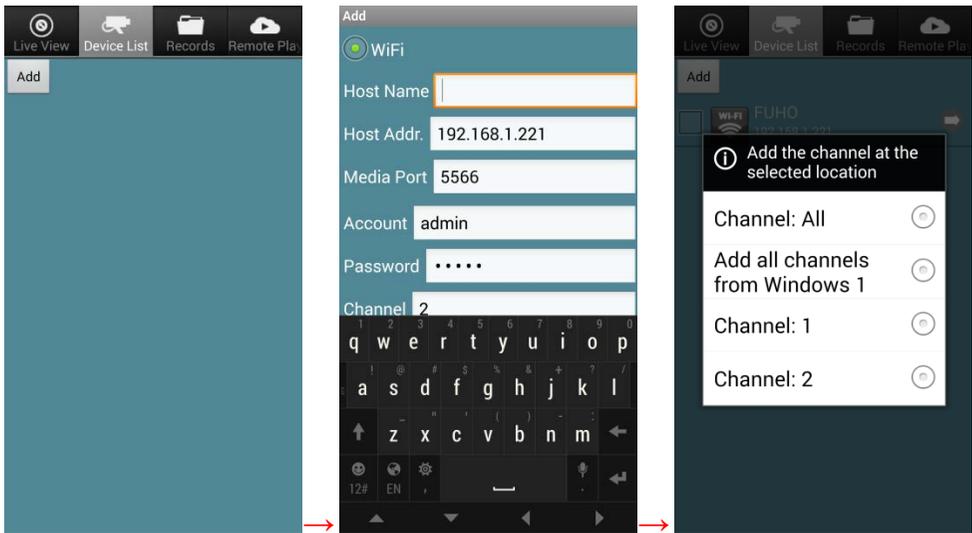
iOS version:

<https://itunes.apple.com/tw/app/vacronplayer/id992412825?l=zh&mt=8>

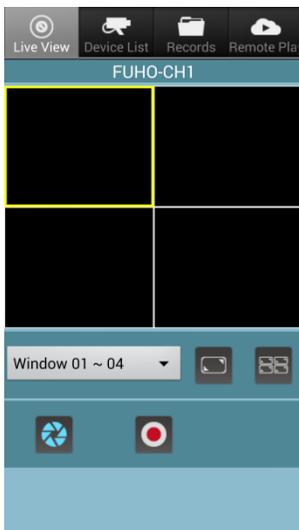
(2) Turn on smart phone WiFi, choose 「SSID」 on searching list, the

default password is 「12345678」.

- (3) Open Vacron APP list, choose device list, add the channel and key in device name.



- (4) Live View

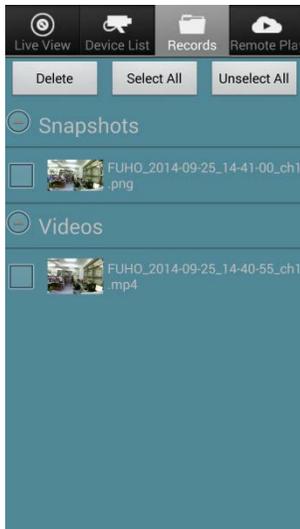
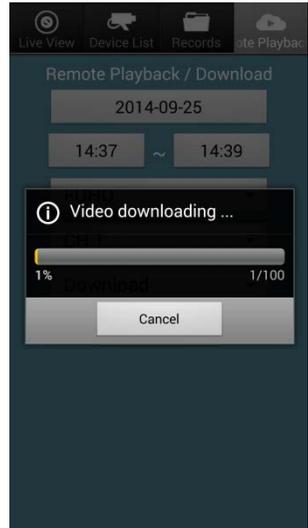
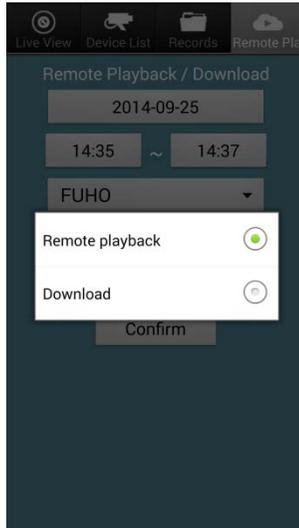


→ Snapshot function



→ Instant video recording functions

(5) Playback/Back up





For more products information,
Please go to Vacron website:
<http://www.vacron.com>

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