![axis JAPAN]

DV426/DV426-4G
4 Channel DVR Black Box Recorder
with WiFi, GPS & SATA SSD

2YEAR WARRANTY

SPECIFICATIONS

- Record Type	Quad
- 4G:	DV426-4G Only
- GPS:	Yes
- WiFi:	Yes
- Vehicle Tracking:	Yes
- Max Resolution:	1920 x 1080 (100FPS)
- Real Time Recording:	Yes - Auto or Scheduled
- G-Sensor:	Yes
- Motion Detection:	Yes
- AV Output:	VGA, CVBS (RCA Adaptor Included)
- Monitor View:	Normal/Mirror Image Selectable
- Video Compression:	H.264 for High Quality Video
- Reverse Camera Compatible:	Yes
- Camera Connection:	4 x 4-Pin
- Lockable Storage:	Yes - 1 x 2.5" SATA SSD (Not Inc), 1 x 128GB SD Card (Not Inc)
- Operating Voltage:	9 to 36V
- Alarm Inputs:	6 CH
- Alarm Outputs:	2 CH
- Ignition Signal:	Yes
- Speed Signal:	Yes
- Timer Recording:	Yes
- Adjustable Frame Rate & Bit Rate:	Yes
- User Password Protection:	Yes
- Operating Temperature:	-20°C to 70°C
- Power Consumption:	15W (Working)
- Dimensions:	183 x 38 x 148mm
- Includes:	Keys, Antenna Kit, Remote Control, Power Cable, Alarm Cable, USB Cable

1. Specifications

4CH HD DVR		
System	Operating system	Linux
	Operating interface	Graphical menu operation interface(OSD)
	Video permission	Administrator & user setting
Video	Video input	4 x 1080P analog high definition
	CVBS output	1CH 6pin aviation connector output PAL/NSTC
	VGA output	1CH VGA output, 1080P
	HDMI output	NULL
	Video display	1 、2、3、 4
	Video standard	PAL: 25FPS, NTSC: 30FPS
	Compression	H.264 main profile
Audio	Audio input	4 channels
	Audio output	1 channel
	Record format	Synchronized video & audio recording
	Audio compression	ADPCM
Digital processing & storage	Image resolution	Max 4 x 1080P(1920*1080)
	Video bit rate	64kbps~4Mbps/channel
	Storage	56~2700MB/(channel*hour)
	Audio bit rate	32kbps
	Storage	2.5 inch SATA SSD x 1, max 2TB; SD card x 1, max 128GB
Alarm	Alarm input	6 channels
	Alarm output	2 channels, 1 buzzer
	Motion detection	High/low/off sensitivity adjustable
Interface for communication	IR	1 channel
	RS232	1 channel for RFID
	RS485	1 channel for Panic Button
	CAN	2 channels
	RJ45	1 channel
	USB mini-B	1 channel
	USB2.0	2 channels 1channel for copying file(SSD、SD) and firmware upgrade 1 channel for copying SSD file(only for connecting to computer USB)

	USB3.0	NULL
Wireless	2G/3G/4G	optional
	WIFI	optional
	WIFI hotspot/AP	optional
GPS	Internal or external GPS/GLONASS module, coordinate/speed can be encoded in video stream and uploaded to server by wireless communication	
G-Sensor /Gyroscope	Available	six axis sensor
Software	Windows client	Available
	iOS client	Available
	Web portal	Available
Power	Input	10~32V
	Current Draw	12V@3.5A
	Max Power Consumption	60W
	Standby Power Consumption	100mW
Electrical spec	Operating temp. & humidity	-20～70 degree/ <100%
	Super Capacitor	Available
	Clock	Built-in clock, Calendar

2. Precautions

1、Motion detection function is set to OFF by default. Alarm files will be created when there's motion detected when set ON.G-sensor recording is recommended to set ON during driving for emergency recording use. G-sensor level is optional.

2、If the DVR can not boot up, try to remove all storage disks from the DVR, and then restart the DVR to check whether it can boot normally or not.

3、Make sure the yellow ACC wire is connected to the ignition wire and the red V+ wire to the positive pole of the battery. In this case, the DVR can continue to record for sometime after the vehicle engine is off. If the ACC wire (the yellow one) and the V+ wire (the red one) are connected directly to the positive pole of the battery, the DVR will still work even if the vehicle is not started. If the ACC wire and the V+ wire (the red one) are connected directly to the ignition wire of the vehicle, the recording files will be easily damaged when the vehicle engine is off.

4、All the disks must be formatted on the DVR before use.

5、The login user name can not be changed. Password is editable.

6、All types of video files including event recording files will be overwritten by default. If not to overwrite the event files, set [Event Rec. Lock] to OFF. in the menu of [Event Rec.] under [Record].

7、The corresponding types of SENSOR-IN1~6 on the trigger line are as follows:

SENSOR-IN1	SENSOR-IN2	SENSOR-IN3	SENSOR-IN4	SENSOR-IN5	SENSOR-IN6
ALARM INPUT 1~4				Reversal input	Brake input

3. Main Features

Appearance

- Smaller than the previous models.

Controlled by touch screen

- All settings and operations could be done through the monitor if connected with the suggested touch screen.

Video and Audio

- 4 channels * 1080p, 4 video inputs with audio
- 1 CVBS output(1 * 6 PIN OUT) with audio
- Support IPC camera

Recording

- 4-CH Video & Audio Recorder (with image resolution up to 1920 X 1080), and with G-sensor data and GPS data
- Multiple recording modes: power on recording, normal recording, schedule recording, event recording (i.e., G-sensor recording, speed recording, motion detection recording, Alarm recording 1~6, Panic button recording). Cyclic recording and 15 seconds pre-recording are supported.
- Recording files are stored in the SSD or SD card. Cyclic recording is optional.
- Real-time recording of license plate numbers,driving speed,G-sensor/Gyroscope 6D accelerated speed, longitude and latitude, and GPS tracks.

Preview and Playback

- Support single channel, or 4 channels audio and video play simultaneously.
- Support searching recording files by recording date, recording type.
- Able to drag the progress bar when playing back.
- Indicate recording status, alarm status.

Storage Types

- Support SSD, SD cards (SDHC, SDXC)
- If both SSD and SD card are used for storage, SSD will be preferred. SD card can be stored only when SSD is not installed. □
- SD card can be removed conveniently when not in recording or playing status.

Backup

- Support USB disk or USB hard disk to backup copy of recording files.

Network

- Support LAN, WI-FI, 2G/3G / 4G, automatic network switching;

- LAN / Wi-Fi / Cellular connection (default priority: LAN > Wi-Fi > Cellular); auto switch to LAN / Wi-Fi connection when available to save Cellular traffic.

- LAN, WI-FI and 2G/3G/4G have the priority of connections which will switch automatically to save 2G/3G/4G data;

- Wi-Fi supports STATION and AP mode, in which Wi-Fi AP mode supports mobile direct connection devices, which is convenient for preview and configuration on mobile;

- Support remote real-time video stream, image stream pre-view function

- Support alarm recording, alarm information, log information, GPS trajectory automatic upload function, which is convenient for vehicle abnormal conditions analysis and vehicle trajectory tracking;

- Support remote configuration, remote upgrade which achieve real remote control function;

- Support PC Windows Client, mobile IOS and Android APP. Users can remotely monitor vehicles on computer or mobile phone

Alarm

- 6 channels alarm inputs, one channel buzzer output and 2 channels alarm outputs
- Over-speed alarm and accelerated-speed alarm
- Motion detection alarm
- G-sensor alarm
- Panic button alarm

Charger

- 5V, 1.5A output from the USB interface to mobile devices, such as mobile phone.

Security

- User password protection. The DVR can only be accessed with correct password.
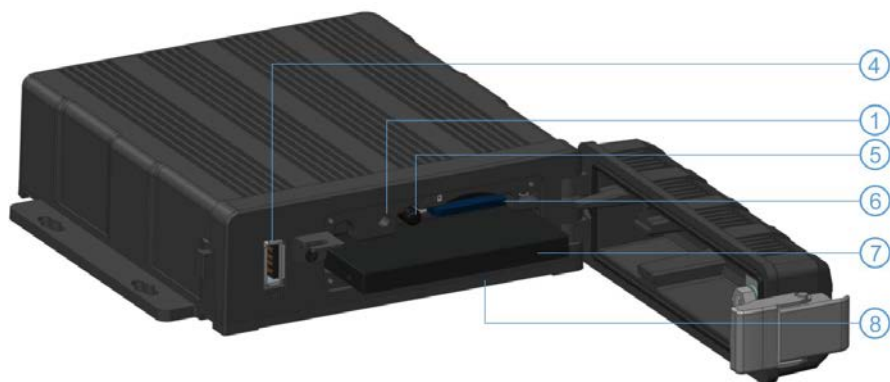- Support account management.

4. Wiring Diagram

BLANK

SD card

SIM card

Disk
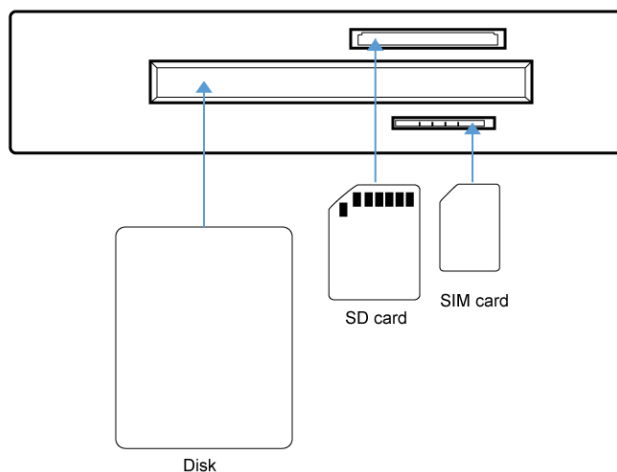
5. Connection - Front Panel

① ② ③

① LED Indicators   ⑤ IR Receiver

② Electronic lock   ⑥ SD Card Slot

③ Front Cover Buckle   ⑦SSD Slot

④ USB3.0 Interface   ⑧ SIM Card Slot

5.1 LED

NULL

5.2 Electronic Lock

- Close the front cover and turn the groove by the key to the icon "off", so as to prevent hard disk drive from moving out. Or turn to the icon "on" to open the front cover.

- Electronic Lock Function: DVR will stop recording and buzzer will beep when the front cover is open.

5.3 Remote Receiver

The IR Receiver is for the DVR to receive command from the remote control. Remote control instructions:

DESCRIPTION	KEY
Not in use	POWER
Switch the screen to channel 1 ~ 4 for live view.	1~4
Switch to quad view.	0/MULTI
Call up main menu	MENU
Upward for MENU selection	Up
Towards to left for MENU selection or MENU setup	Left
Enter the sub-menu to set and confirm	ENTER
Manual recording button	REC
Downward for MENU selection	Down
Exit	ESC
Towards to right for MENU selection or MENU setup	Right
Clear the input info	CLEAR

5.5 SSD card slot

- Hard disk Type: SSD (Max. capacity: 2T)
- Size: 2.5 inches(70*100*7mm).

5.4 SD card slot

- SD card type: The maximum capacity of each card is 128G.
- Insert、remove SD card

  Step 1: Use the key to unlock and open front plate
  Step 2: Insert SD card to SD card slot

5.6 USB Slot

USB 2.0/3.0, Max. Capacity 2T

6. Back Plate

① Cellular Connector, TX/RX ③Wi-Fi Connector
②Cellular Diversity Connector, Rx ④GPS Connector

4 PIN Avation male 1(Label:AVIN1)
5 PIN Avation male 1(Label:CAN BUS)
6 PIN Avation male(Label:VOUT)
4 PIN Avation male 4(Label:AVIN4)
3 PIN Avation male 1(Label:DBUG)
5 PIN Avation male 2(Label:USB)
4 PIN Avation male 3(Label:AVIN3)
10 PIN Avation male(Label:ALARM)
3 PIN Avation male 2(Label:SSD OUT)
4 PIN Avation male 2(Label:AVIN2)
8 PIN Avation male(Label:RS232&RS485)
7 PIN Avation male(Label:LAN)
10 PIN Avation male(Label:VGA OUT)
9 PIN Avation male(Label:POWER)

6.1 Power

● power input

 9 PIN Avation female connect to 9 PIN Avation male on the DVR

● Connection

Connect ignition wire to yellow ACC wire of DVR, battery Positive to V+(Red wire), Negative to GND(black wire)
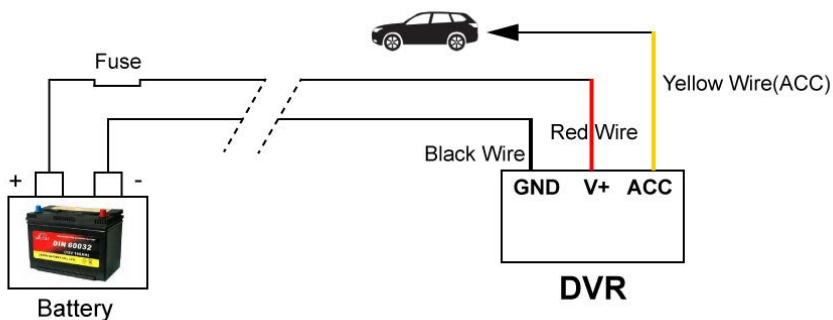
6.2 Camera(AVIN 1~4)

● See below 4 cameras diagram.

● How to connect cameras

Connect 4 cameras on below cable which connects to back plate of DVR

Connect No.1 camera to AVIN1   4PIN Aviation male

Connect No.2 camera to AVIN2   4PIN Aviation male

Connect No.3 camera to AVIN3   4PIN Aviation male

Connect No.4 camera to AVIN4   4PIN Aviation male

6.3 LCD monitor

EDID (Extended Display Identification Data) is automatically acquired when power is turned on.Output resolution of the LCD monitor can be selected. Settings are as follows:

Record	Display	Network	System

System Format

CVBS	NTSC	PAL	AUTO
HD	720P	1080P	AUTO

OK   Cancel

AUTO system format will be recognized as above

System Format		
	CVBS	HD
AUTO	NTSC/PAL	1080P/720P

● 10" HD monitor introduction (Recommended)

● The parameter list of 7/10 inches HD monitor

Description	HD 10.1"Color monitor	HD 7"Color monitor
Features	used for HD DVR	used for HD DVR
Resolution	1024 x 600 (RGB)	1024 x 600 (RGB)
Maximum Number of Cameras	1	1
Audio input	1	1
Audio output (loudspeaker)	1W	1W
HDMI input	/	/
VGA input	1	1
CVBS input	1	1
Trigger	No	No
Max. Brightness	500 cd/m²	450 cd/m²
Contrast	600 : 1	800 : 1
Minimum Operating Temperature	-20ºC, RH 90%	-20ºC, RH 90%
Maximum Operating Temperature	+70ºC, RH 90%	+70ºC, RH 90%
Viewing Angle Monitor	U: 70/ D: 50, R/L: 70/70	U: 75/ D:75, R/L: 75/75
Mirror Function	No	No
Monitor Diameter (mm)	267mm (W) × 159.5mm (H) × 30mm (T).	203mm (W) × 112mm (H) × 28mm (T).
Split Screen	No	No
Volts	10-32V	10-32V
Consumption	less than 8W	less than 5W

6.4 Buzzer

If the DVR is not connected to the monitor, check the DVR's recording status through the buzzer.

Buzzer will alarm if the DVR is not recording under Normal Mode which is set by default. To stop the buzzer from alarming, check whether the DVR is recording under the Normal Mode or not.

Buzzer warning functions are as follows

Buzzer beep alarm will last for a while for all types of alarm event recording.

If the Buzzer beeps intermittently, it means that the DVR is unable to record.

Different beeping modes stand for different working status as below:

a. If the electronic lock is open: one long beep and one short beep

b. Diskless: one long beep and two short beeps

c. Disk file system exception : one long beep and three short beeps

d. If disks are normal but the alarm video files are full : two short beeps and one short beep

e. No camera input: two short beeps , and two short beeps after a second

f. If disks are normal but DVR is not in recording: two short beeps and three short beeps

6.5 Alarm Interface

● Alarm interface cable
  See the picture below
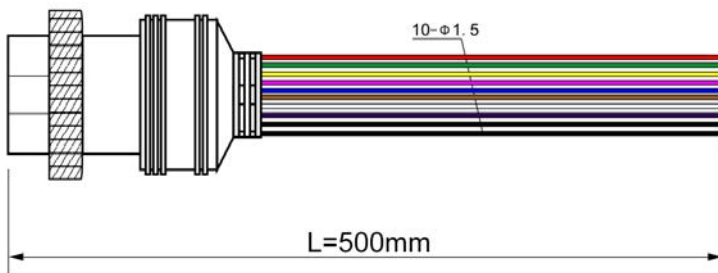

10 PIN female head on the DVR connect to 10 PIN male head

● Pin Definition:

10 PIN	1	2	3	4	5	6	7	8	9	10
Colour	red	pink	blue	gray	white	purple	green	yellow	black	black
Definition	Alarm out2	Alarm out1	Alarm_in 6	Alarm_in 5	Alarm_in 4	Alarm_in 3	Alarm_in 2	Alarm_in 1	GND	GND

1. There are 6 alarm inputs including alarm inputs 1 ~ 4, reversal input, brake input, which can trigger the alarm recording. . Cursor will be displayed when the alarm input channel is working. The first 4 ones can be self-defined by user.
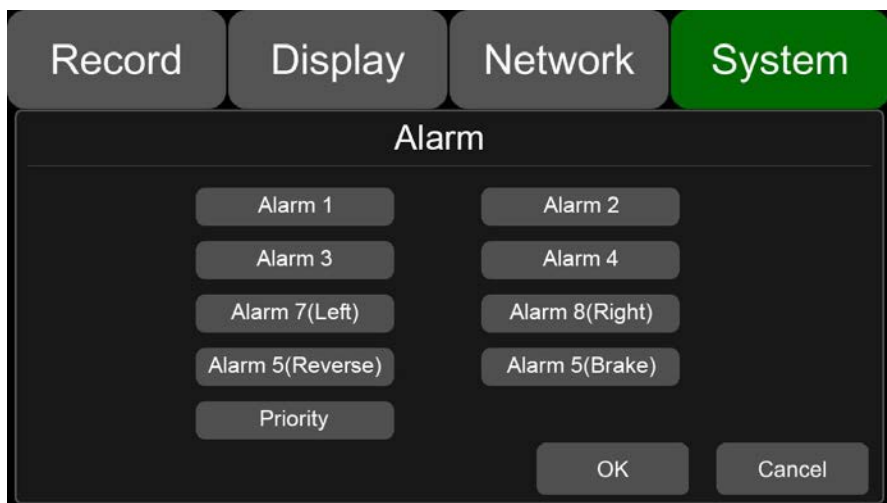
2. Alarm output 1 and Alarm output 2 are 12V output by default, which can be used as a trigger and need to be set up to combine with alarm input . You can also setup BUZZER for the output.

3. If Alarm input 1 is active and combined with Alarm output 1, the Alarm output 1 will output a high-level voltage to trigger other device.

16
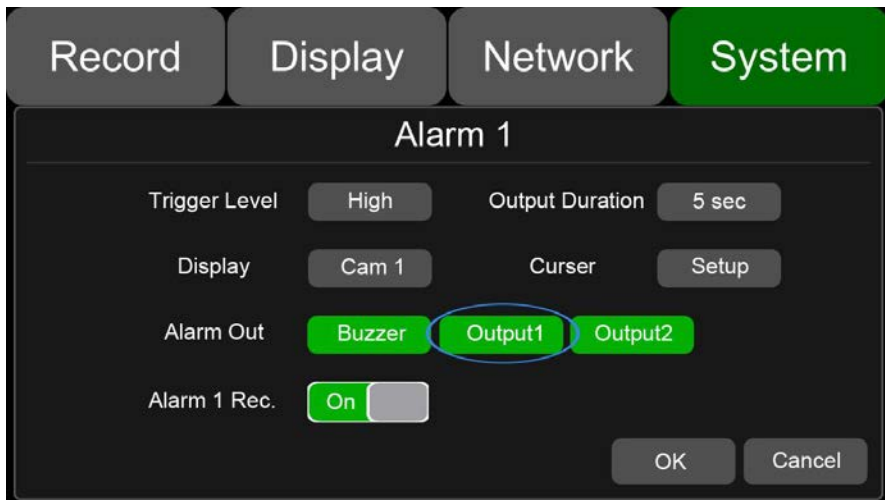
6 Panic button (Optional)

● Overview

The LEDs are used to show the device's working status. But when the device is installed in the vehicle, it is not easy to check the LED on the front panel. Each of the LED indicates the corresponding status. Furthermore, the panic button on the panel makes it easier to trigger alarm for emergency by bookmarking a manual event.

● Pin Definition
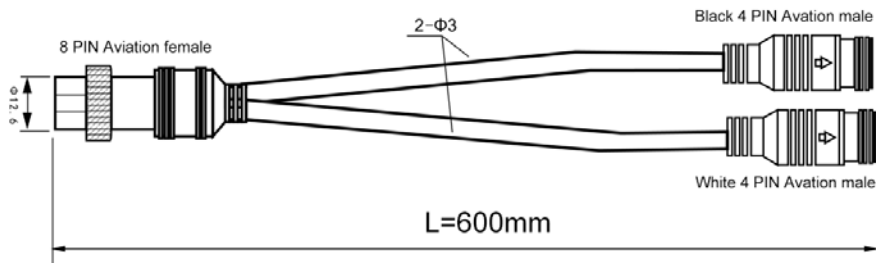
8 PIN female head connect to 8 PIN male head（RS232&RS485） on the DVR

- LED

LED	Color	ON	OFF
VLoss	Amber	Any of the cameras have no signal alarm	Normal Operation
Rec	Soft green	Recording Normal driving	Not recording
GPS	Amber	GPS cannot latch	Normal Operation
Mem	Red	Storage Alarm or no Storage device	Normal Operation
Comm	Amber	Device is not connected to server	Normal operation or device is not connected to server if this feature is disabled
Power	Pale Blue	Device has power	Device does not have power
Error	Red	Error with device	Normal Operation
Event	Red	Event-based Recording (remains lit during Event)	Normal Operation

- Button

    PANIC button, printed as "Bookmark"

    a. When pressed, a manual event will be triggered.

    b. When pressed, the Event LED will be temporarily illuminated.

    If the PANIC button alarm recording cannot be triggered, check if the alarm

recording button is open as shown below:

| Record | Display | Network | System | Record | Display | Network | System |

If the alarm recording was triggered, there will be an alarm sign on the screen, as shown below:
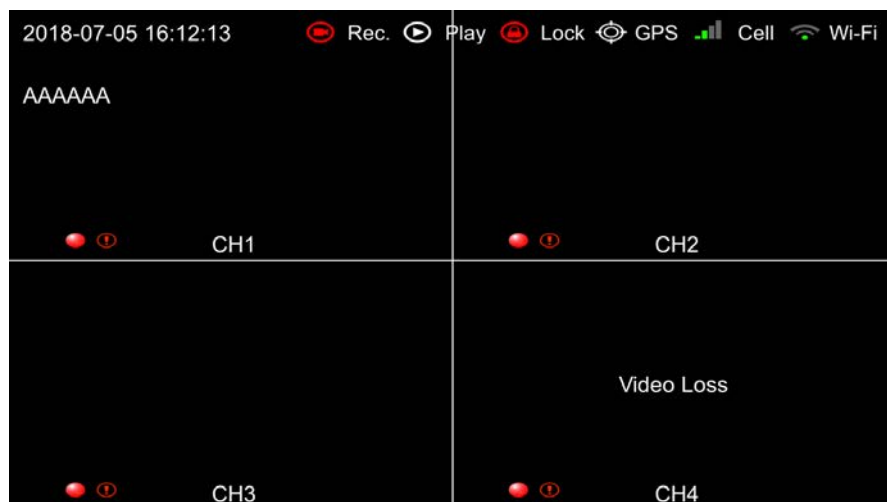
6.7 Built-in GPS antenna

Built-in GPS antenna socket and GPS antenna, as shown in the picture.

7. The Menu

7.1 Menu Introduction

Touch [MENU] on the remote or touch the bottom area, the LOGIN page will be displayed on the LCD screen. The Shortcut Menu will be displayed after login. If you press [MENU] on the remote or Touch the bottom area again, the Main Menu will be displayed.
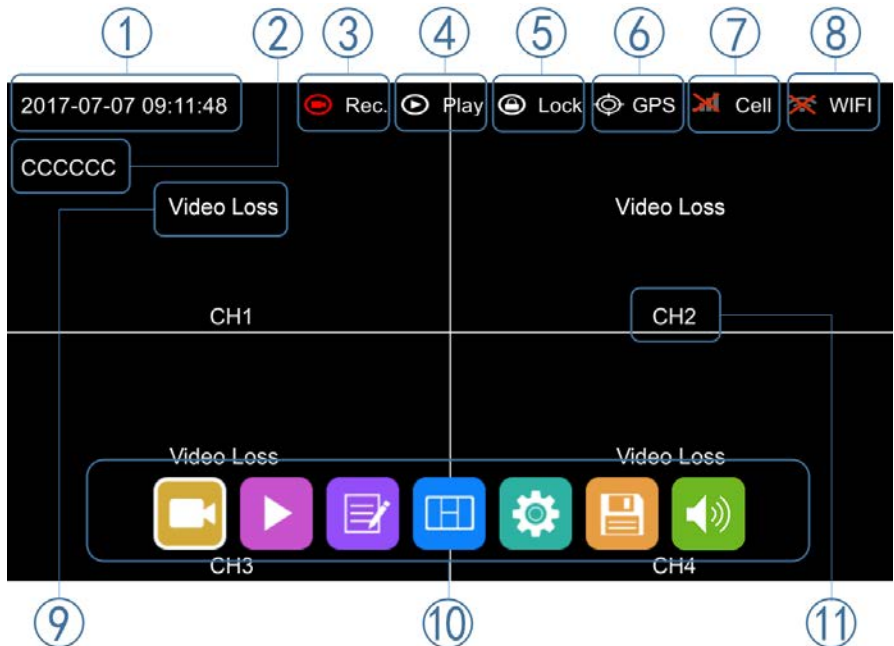
①System Time Display

②License plate number Display

③Recording Sign

The Recording Sign will turn red when recording

④Playback Sign

The Playback Sign will turn red during playback.

⑤Electronic Lock Sign

● Lock indicator turns red when electronic lock is locked and front cover is closed.

● Electronic lock is different from menu lock.

⑥GPS Sign

The GPS Sign will be flashing when connecting. It will be always ON if successfully connected.

⑦Cell Sign

⑧Wi-Fi Sign

⑨Video Loss Sign

⑩Menu

Press [Area 10] to display MENU Sign

⑪ Channel Name Sign

7.2 Menu Lock

- DVR supports two kinds of permissions: admin permissions and guest permissions
- User permissions list

User Name	admin	guest
Password Modification	yes	no
Initial Password	123	321
Permissions	Enter all menus	Enter the menu of Playback , Display mode switching and Volume

- User name cannot be changed, but user password is changeable. (See the following instructions for changing password)
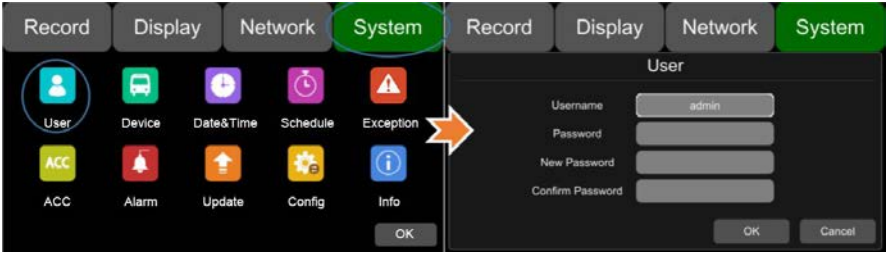
- Username admin and password are needed to change the status of Menu lock. The following picture shows how to change the Menu Lock status from ON to OFF.
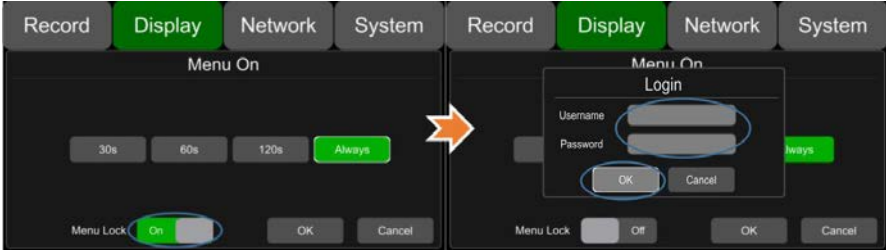
- When the status of Menu Lock is On, username admin and password are needed to enter menus like Record, Playback, Log, System and Disk. With username guest and password, only the Playback menu can be entered.

7.3 Keyboard Operation Instructions
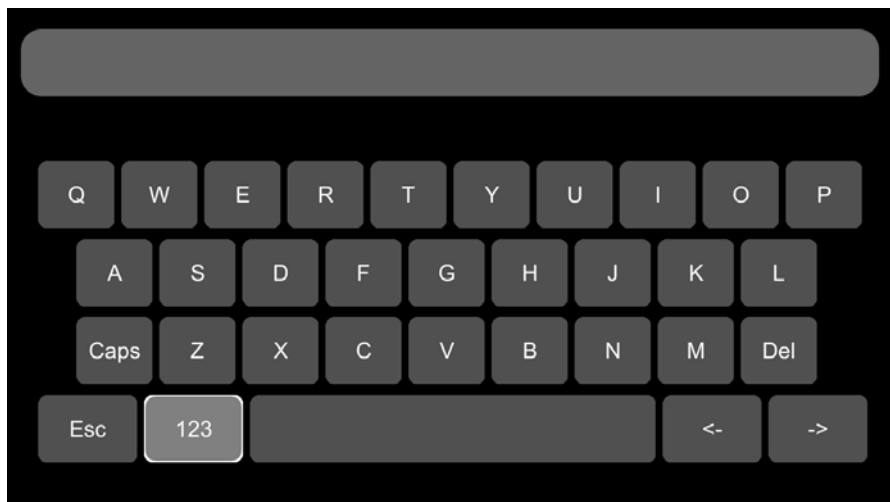
Caps : Switch letter case

Esc : Exit the keyboard interface

Del : Delete the input letters

123 : Switch to the numeric interface

abc : Switch to the English alphabet interface

#+= : Switch to the special character interface

Character Switching Instructions
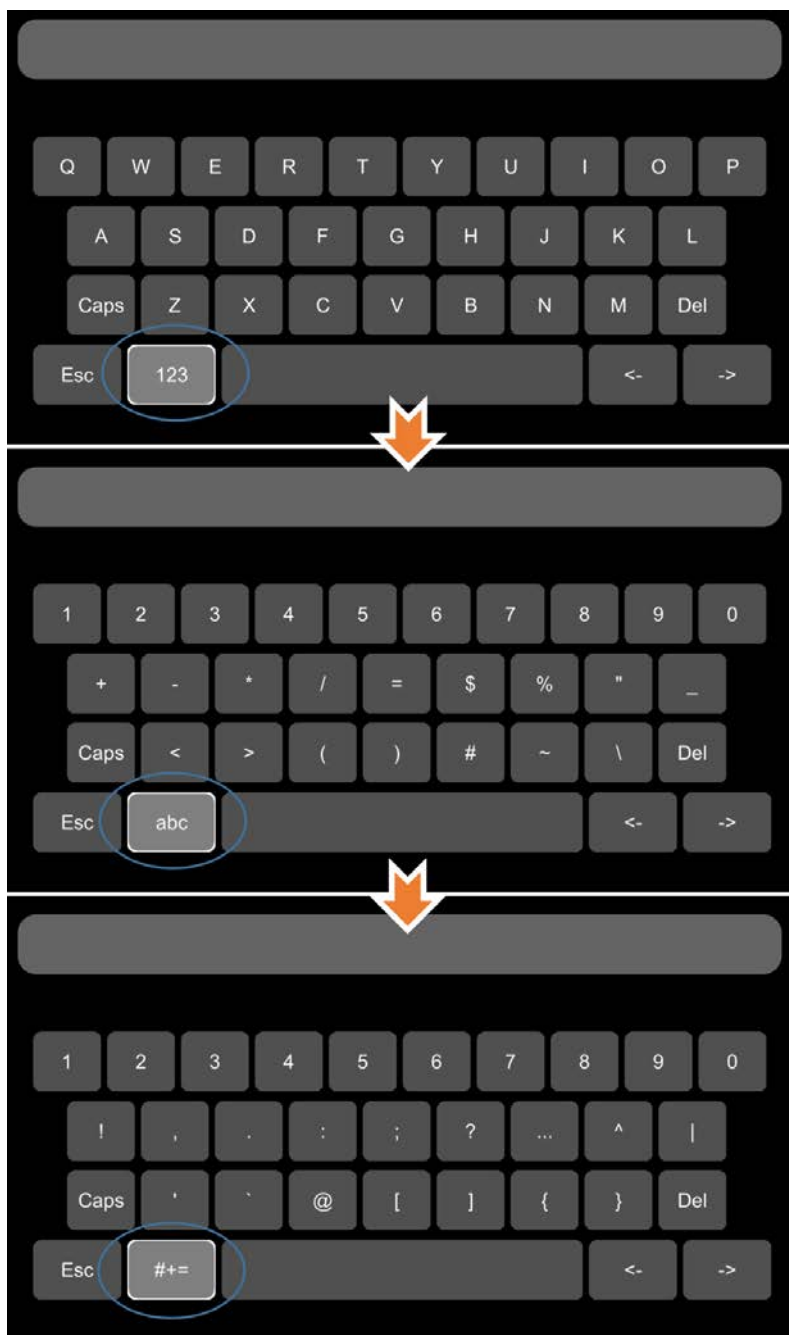
Letter Case Switching Instructions
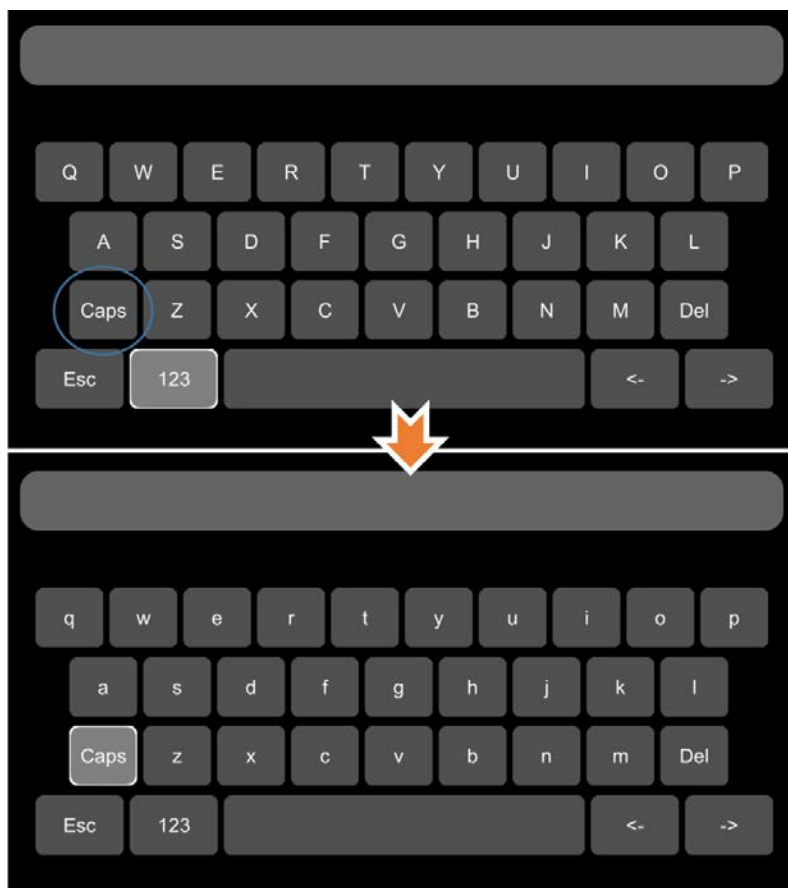
7.4 Manually Record

Touch this icon to start or stop recording. Video files can be found in the Normal list of Player menu.

7.5 Playback

Video Playback button: Touch this icon to enter the calendar menu. Green marked date means it has recording files saved on that day.Select the date to enter the video file list, then select the file and touch Play icon to play video. You can select single or multiple videos at a time. Multiple videos can be played in sequence and can be shifted to the next or the previous one

Specific operation sees below.

| | : Search by month |
| | : Search by year |
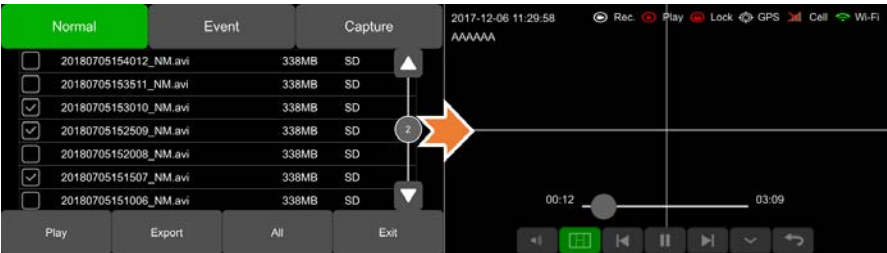
Normal: Normal recording list, including Normal Recording, Power on Recording, Schedule Recording

Event: Alarm recording list, including alarm recording 1~6, Motion detection recording, G-sensor recording, Speed recording, Panic button recording

Type	Recording Time Control Mode	View Position
Normal recording	Manual control	Normal list
Power on recording	Manual control	Normal list
Schedule recording	Pre-setup time	Normal list
Alarm recording 1~6	Event recording setup time	Event list
Motion detection recording	Event recording setup time	Event list
G-sensor recording	Event recording setup time	Event list
Speed recording	Event recording setup time	Event list
Panic button recording	Event recording setup time	Event list

Capture: Screenshot list
Play: Play the selected video files
Export: Export selected video files to USB

27

Exit: Exit

 : Volume adjusting button

 : Switch

 : Play the previous/next video

 : Pause/Resume playing

 : Hide the play menu. And press [Area 1] to display.

 : Exit playing

7.6 Log

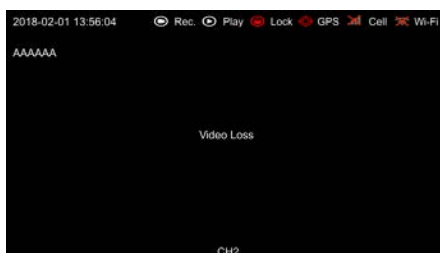 System memo checking, memo output

7.7 Display mode switching

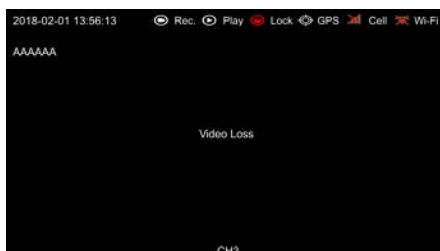 Mode switch button: Touch this icon to enter the Mode switch interface.
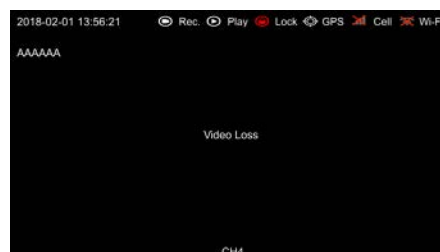
L (CH1)：One-division mode of Camera Left (CH1)
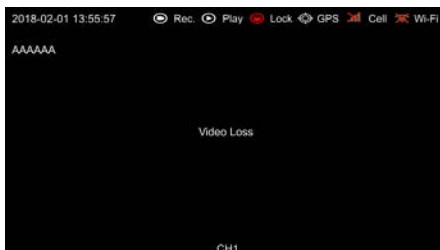
R (CH2)：One-division mode of Camera Right (CH2)
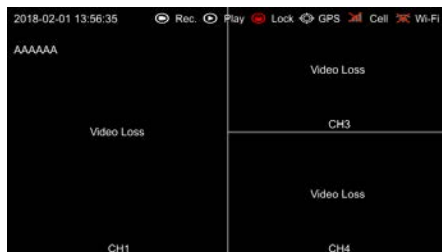

F (CH3)：One-division mode of Camera Front (CH3)

B (CH4)：One-division mode of Camera Back (CH4)
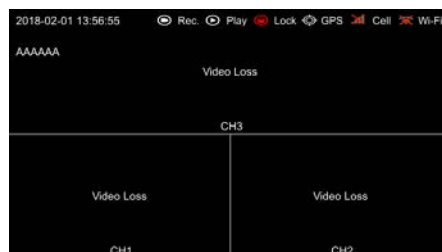
Three-division mode of Camera Left, Front and Back (CH1, CH3, CH4)

Three-division mode of Camera Front, Back and Right (CH3, CH4, CH2)
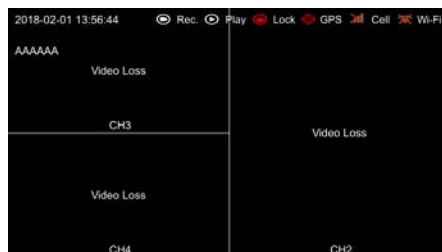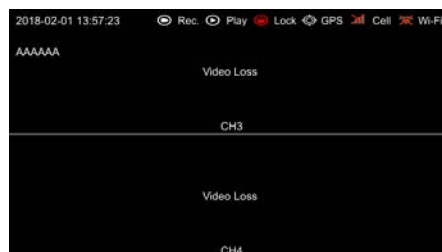

Three-division mode of Camera Front, Left and Right (CH3, CH1, CH2)

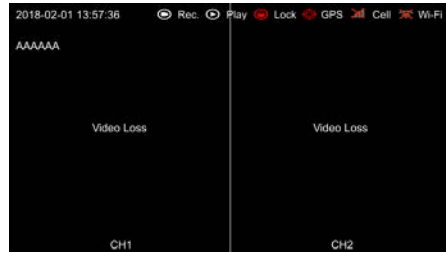Three-division mode of Camera Left, Right and Back (CH1, CH2, CH4)

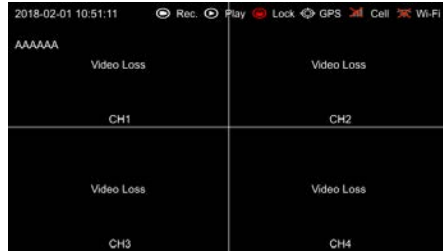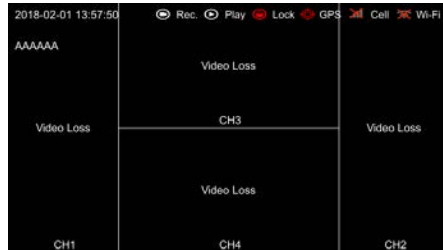：Two-division mode of Camera Front and Back (CH3, CH4)

[image: two-division layout icon] ：Two-division mode of Camera Left and Right (CH1, CH2)

2018-02-01 13:57:36	● Rec. ⊙ Play ● Lock ◆ GPS ▥ Cell ✕ Wi-Fi
AAAAAA	
Video Loss	Video Loss
CH1	CH2

[image: four-division layout icon] ：Four-division mode of Camera Left, Right, Front and Back (CH1, CH2, CH3, CH4)

2018-02-01 10:51:11	● Rec. ⊙ Play ● Lock ◆ GPS ▥ Cell ✕ Wi-Fi
AAAAAA	
Video Loss	Video Loss
CH1	CH2
Video Loss	Video Loss
CH3	CH4

[image: four-division layout icon] ：Four-division mode of Camera Left, Front, Back and Right (CH1, CH3, CH4, CH2)

2018-02-01 13:57:50	● Rec. ⊙ Play ● Lock ◆ GPS ▥ Cell ✕ Wi-Fi
AAAAAA	
	Video Loss
Video Loss	CH3	Video Loss
	Video Loss
CH1	CH4	CH2

Set Default：Set the current selected mode as default.

↩：Exit.

7.8 System

⚙ System settings button: Touch System to enter the setup menu. A prompt dialog will display "Unable to record in set-up mode! Continue?" Touch OK to enter.

2018-07-05 16:14:05　　　● Rec. ⊙ Play ⊕ Lock ⊕ GPS ▂▃▄ Cell 🛜 Wi-Fi

AAAAAA

```
                        Notice
         ────────────────────────────────
         Unable to record in set-up mode!
                      Continue?


               OK              Cancel
```

Video Loss

CH3　　　　　　　　　　　　　　　　　　CH4

7.9 Disk

Disk management button: Touch the disk management icon, then you can view the status of SSD, SD card and USB.
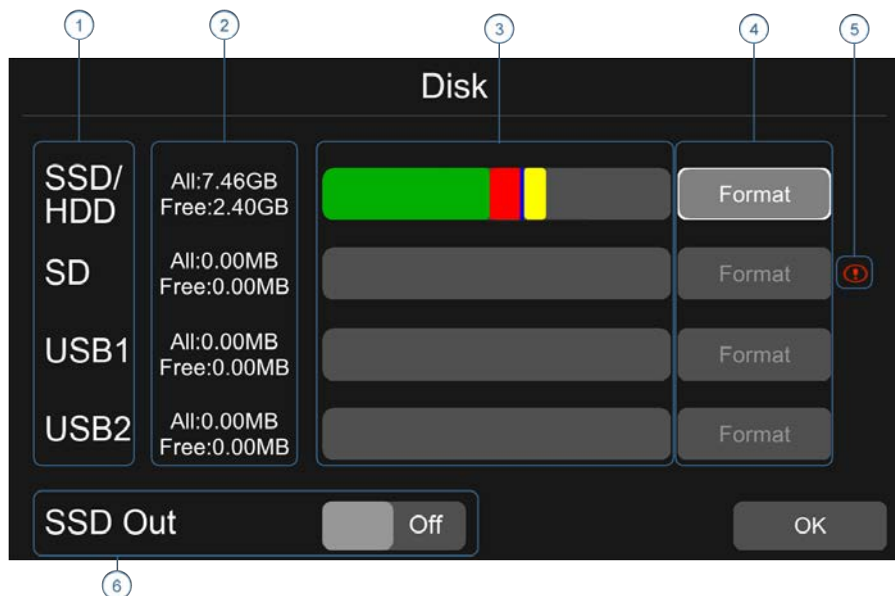
① Disk type

② ALL：The total capacity of disk，free：The remaining capacity of disk
If ALL shows 0.00MB, it means that DVR does not have access to this type of disk

③ Green area shows the capacity of all the recording files in the Normal list
Red area shows the capacity of all the recording files in the Event list
Blue area shows the capacity of all the pictures in the Capture list
Yellow area shows the capacity of all the other files except those above

④ Touch to format the disk.
● A dialog box displaying "Disk data will be deleted! Continue?"will pop up. Press OK to start formatting the disk
● The following picture is an example of formatting USB2
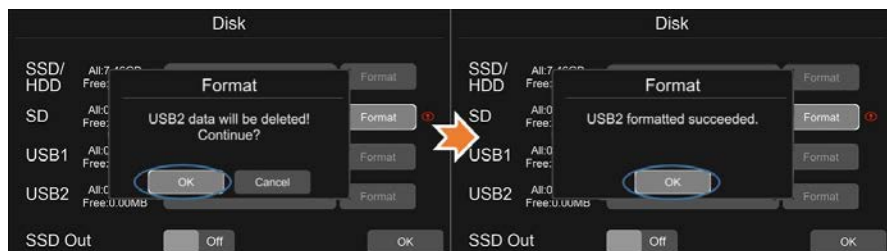
● If the disk cannot be formatted, please check if:
   a. There is a disk in the slot

33

b.   All recordings are set off

c.   The FTP button is set off

⑤ It shows that the disk needs to be formatted before use.

All new disks must be formatted before use.

⑥If SSD Out is ON, the recording files in the disks can be exported to computer via USB cable. Please note that only recordings files can be exported in this way.

7.10 Volume

Volume : value 0~10, Default value is 5.

8. Record Setup

8.1 Power On Rec

 The DVR will start recording after power on when 'Power On Rec' is set to ON. Default is ON.

8.2 Cyclic Rec

 New video files will overwrite the previous ones when disk is full if setting the Cyclic Rec ON. Otherwise, it will stop recording when disk is full. Overwriting will cover all recording files including Event recording files by default.

8.3 Event Rec

Record	Display	Network	System

Event Rec.

Event Rec.　　　On ▢

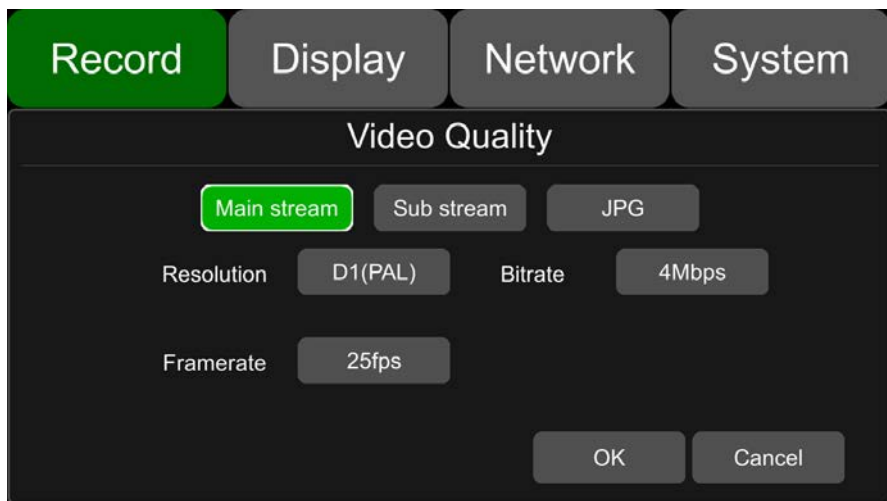Event Rec. Lock　　▢ Off

OK　　　Cancel
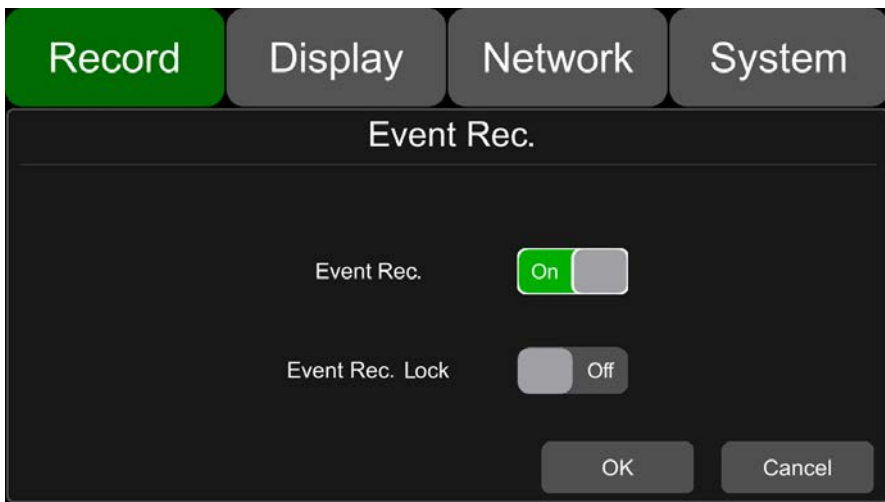
Event Rec. : Event recording type includes motion detection triggered alarm, G-sensor triggered alarm, alarm 1 ~ 6 triggered alarm ,Panic button triggered alarm and over speed alarm. If the Event Rec is ON and corresponding alarm parameters are set, event recording will be activated when the events above are triggered. If the Event Rec is OFF, event recording will not be activated even if event is triggered.

Event Rec. Lock : If both the Event Rec. Lock and the Cyclic Rec. is On and all disks are full, new video files will overwrite the previous ones(all recording files except Event Recording files) .
When the Event Rec. Lock is Off, Cyclic Rec. is On and all disks are full, new video files will overwrite the previous ones (all recording files include Event Recording files) .

8.4 Video Quality

Video Quality　Setup

| Record | Display | Network | System |

Video Quality

| Main stream | Sub stream | JPG |

Resolution D1(PAL)   Bitrate 4Mbps

Framerate 25fps

OK   Cancel

The main stream is used for video storage. The sub stream is used for video backup and network transmission.

① Resolution

There are 5 levels of resolution in main stream menu for option,1080P, 720P, D1 (PAL), D1 (NTSC),AUTO. And 3 kinds of optional resolution in Sub stream menu, CIF (PAL), CIF (NTSC),AUTO. The higher the resolution & the better the video quality is, the larger the video file will be. Therefore, the file size should be taken into account during configuration.

In the Resolution options, AUTO is defined as follows:

Resolution		
	Main stream	Sub stream
AUTO	DVR automatically gets the television mode of the camera, and records in this mode at the corresponding channel	DVR automatically gets the PAL/NTSC television mode of the camera, and records in CIF(PAL)/CIF(NTSC) mode at the corresponding channel

② Bit rate

There are 8 levels of bit rates in Main stream and Sub stream menu for selection, 4Mbps, 2Mbps, 1Mbps, 512Kbps, 256Kbps, 128Kbps, 64Kbps, AUTO. The higher the bit rate and the clearer the image is, the larger the video file will be. Therefore, all factors should be considered comprehensively.

In the Bit rate options, AUTO is defined as follows

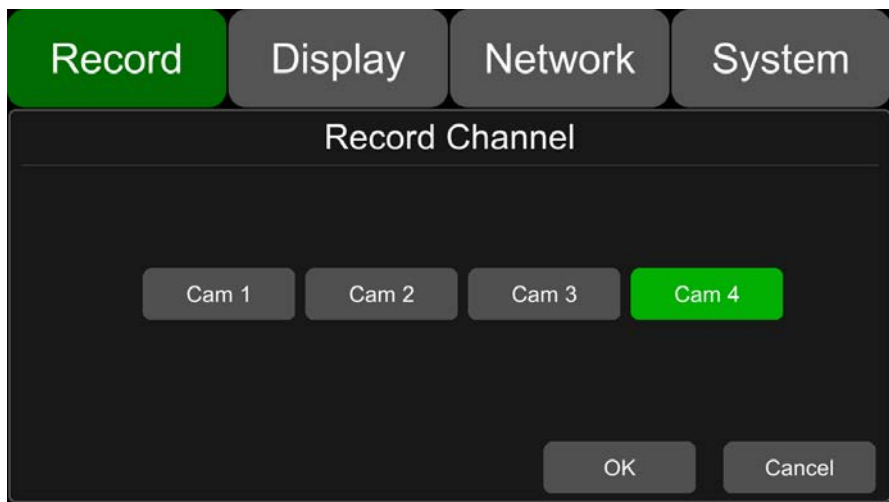| Bit rate		
	Main stream	Sub stream
AUTO	If 1080P camera is connected, the bit rate will be 4Mbps . If 720P camera, 2Mbps. And if D1 camera, 1Mbps.	Whatever cameras are connected, the bit rate will always be 64Kbps.

③ Frame rate

There are 5 levels of frame rates in Main stream and Sub stream menu for option : 28fps, 25fps, 20fps, 15fps, 10fps, 5fps. The higher the frame rates and the smoother the picture is, the larger the video file will be.

SSD/SD capacity	Video Quality	File length
2T	8 * 1080P / 4Mpbs	≈150h
	8 * 720P / 2Mpbs	≈300h
	8 * D1 / 1Mpbs	≈600h
	1 * 1080P / 4Mpbs	≈1200h
	1 * 720P / 2Mpbs	≈2400h
	1 * D1 / 1Mpbs	≈4800h
512G	8 * 1080P / 4Mpbs	≈38h
	8 * 720P / 2Mpbs	≈75h
	8 * D1 / 1Mpbs	≈150h
	1 * 1080P / 4Mpbs	≈304h
	1 * 720P / 2Mpbs	≈608h
	1 * D1 / 1Mpbs	≈1216h

8.5 Record Channel

Record Channel | Setup

Record	Display	Network	System

Record Channel

Cam 1	Cam 2	Cam 3	**Cam 4**

OK   Cancel

After set on recording (including all types) and selecting the recording channels, the corresponding channels will be recorded. If turning off a video channel, the corresponding channel will not be recorded even if the recording function is on.

Note: The config is for normal recording, but not for event recording. Event recording will record all channels by default and it can't be changed.

8.6 Event duration

Event Duration	5s	**10s**	15s

When Event Rec is on, the file length of Event recordings can be set to 5s, 10s, 15s.

8.7 File Length

File Length	**5 min**	10 min	15 min

The video file length can be set to 5mins, 10mins, 15mins.

8.8 Motion Sensitivity

Motion Sensitivity	**Off**	Low	High

Motion detection recording and sensitivity level setting: When there is an object moving and its movement amplitude exceeds the preset motion detection sensitivity level, Motion detection recording will be triggered. For this kind of event recording, the pre-record time will be set as 15s and the post-event time is configured by Event Duration above.

Total video file length = pre-recording file length (default time 15s) + file length (configured by Event Duration).

If motion detection is off, event recording will not be triggered. Motion detection sensitivity can be set to two levels, low / high. Motion detection recording is on when low / high is selected. Motion detection recording is off when OFF is selected.

8.9 G-sensor Sensitivity

G-sensor triggered recording and sensitivity level setting: When the acceleration or gyroscope of the G-sensor reaches the preset sensitivity value, G-sensor recording will be triggered. For this kind of event record or alarm record, the pre-record time will be set as 15s and the post-event time is configured by Event Duration above.
Total video file length = pre-recording file length (fixed 15s) + file length (configured by Event Duration).

If G-sensor triggered recording is off, event recording will not be triggered. G-sensor sensitivity can be set to two levels, low / high. G-sensor triggered recording is on when low / high is selected. G-sensor triggered recording is off when OFF is selected.

	Acce.(mg)	Dece.(mg)	Turn_Acce(mg)	Turn_Gyr(DPS)	Impact(mg)		Filter
threshold (mg)	999	999	999	21	1200	:	0
duration (ms)	100	100	100	220	100		
status (mg)	0	0	-35	0	39		
correction	Setup						

Record Display Network System

OK   Cancel

①Acce.: to monitor rapid acceleration. The value will always be positive.

②Dece.: to monitor rapid deceleration.The value will always be positive.

③Turn_Acce: the acceleration of sharp turn. The value will be positive when turning left, and negative when turning right.

④Turn_Gyr: the angular velocity of sharp turn. The value will be positive when turning left, and negative when turning right.

⑤Impact: the acceleration of impact event. The value will always be positive.

Filter: Acceleration sensor coefficient on the Z-axis.
The value of Impact is calculated as below:

$$abs(X) + abs(Y) + abs(Z)*Fliter$$

(abs(X), abs(Y) and abs(Z) are the datas of the acceleration sensor on X-axis, Y-axis and Z-axis)

After the setting of threshold and duration is finished, the installation settings and the correction of the sensor will be needed. By default,
* If the vehicle accelerates continuously to the +X-axis while driving, and the value of Acce exceeds the threshold for 100ms, the Acceleration Alarm will be triggered.
* If the vehicle decelerates continuously to the +X-axis (or brakes) while driving, and the value of Dece exceeds threshold for 100ms, the Deceleration Alarm will be

triggered.

* If the vehicle turns quickly to the +Y-axis while driving, and the value of Turn_Acce exceeds threshold for 100ms, the Turn_Acce Alarm will be triggered.

* If the vehicle turns quickly to the -Y-axis while driving, and the value of Turn_Acce exceeds threshold for 100ms, the Turn_Acce Alarm will be triggered.

* If the vehicle turns quickly to the +Y-axis while driving, and the value of Turn_Gyr exceeds threshold for 100ms, the Turn_Gyr will be triggered.

The installation of the DVR:

The coodinate system of DVR is shown as below:
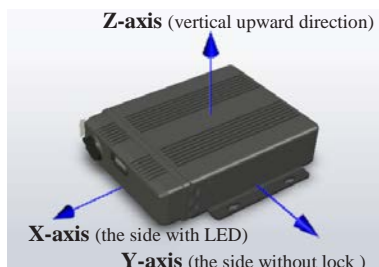
The X-axis is the front of the DVR(the side with LED). The Y-axis is the left side of the DVR(the side without lock). And the Z-axis is the vertical upward direction.

The coodinate system of the vehicle is shown as below:

DVR has various installation postures and inclinations.

For example, if the X-axis of the DVR(the front side) is consistent with the driving direction of the vehicle, this is front installation. If the X-axis of the DVR is opposite to the driving direction of the vehicle, this is reverse installation. And there are other situations, just like lateral fixation.

Therefore, the installation way is needed to be set before using. Besides, there is a situation that the DVR may be slightly tilted, so it is needed to correct the sensor at the same time.

Installation settings and Correction:

Go to "Record - G-sensor sensitivity Setup - Correction Setup" page. See the picture below.
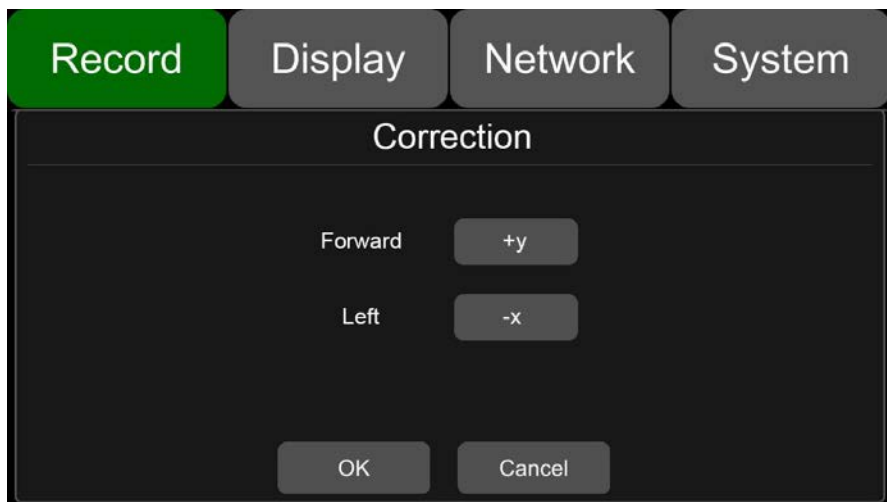
Forward: select the axis that cooincidents with the forward direction of the vehicle when driving.

Left: select the axis that cooincidents with the left direction of the vehicle when driving.

For example, if Forward is set to be +X, and Left is set to be +Y, it means that the forward direction of the DVR is the direction of +X-axis while the vehicle is driving. If Forward is set to be -Z, and Left is set to be +Y, it means that the forward direction of the DVR is the direction of -Z-axis and the direction of +Y-axis is on the left of the vehicle while the vehicle is driving , which means that the DVR is fixed vertically in the vehicle and the bottom of the DVR is facing the front of the vehicle.

After setting, press OK to exit. The vehicle will be still for more than 1 second, and then the correction is finished.

Warning: Before using, you must make sure that you have finished the installation settings and correction. During correction, the vehicle must be on a flat road, and keeping still. And the correction time must be no less than 1 second.
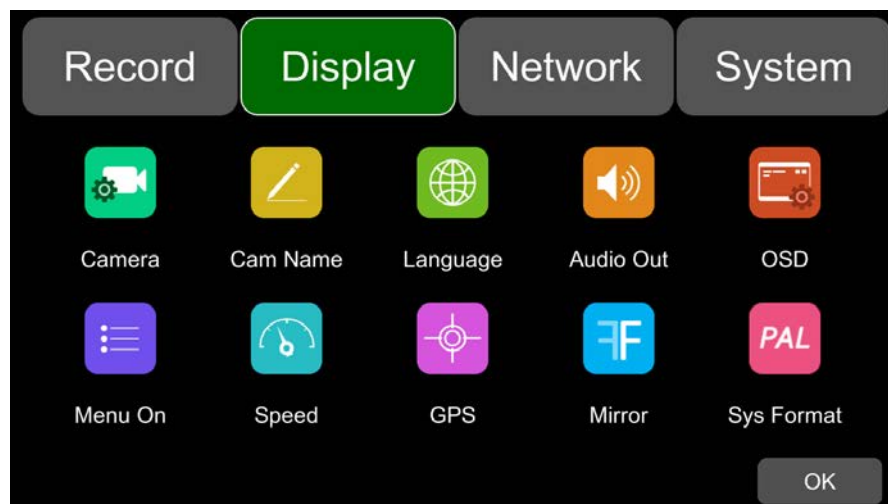
If the DVR is uninstalled and re-installed, or its location changes evidently, the installation location must be reset.

8.10 File Type

File Type	AVI	MSV

File format setting.

9. Display

Record	Display	Network	System

Camera	Cam Name	Language	Audio Out	OSD

Menu On	Speed	GPS	Mirror	Sys Format

OK

9.1 Camera display setting

Camera: Parameter setting for each corresponding camera channel: including brightness, contrast, saturation and hue.All values for default setting are 50. To change the value, drag the bar to left or right to decrease or increase.
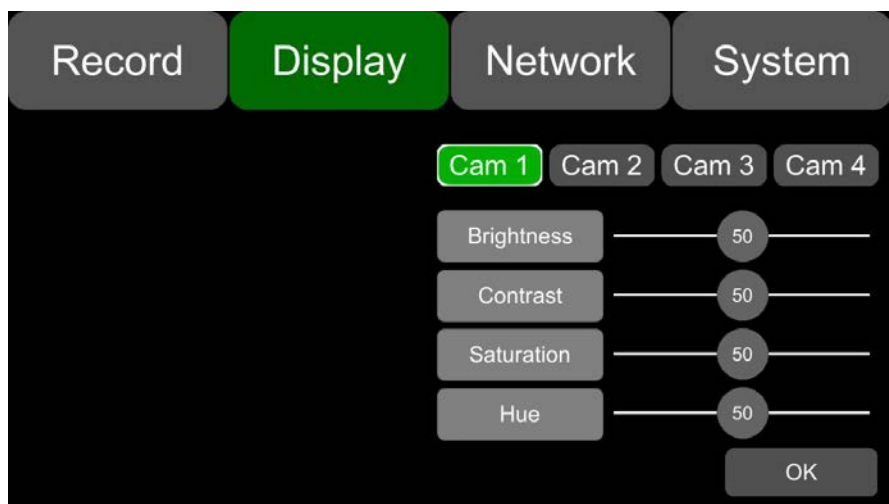
9.2 Camera name setting

Camera name: Set a camera name, then the camera name will be displayed at the bottom of the camera display.

Touch the camera name on the menu, then a keyboard menu will pop up to input a new camera name.

Each camera name contains 8 characters in max. And camera name must NOT be blank.
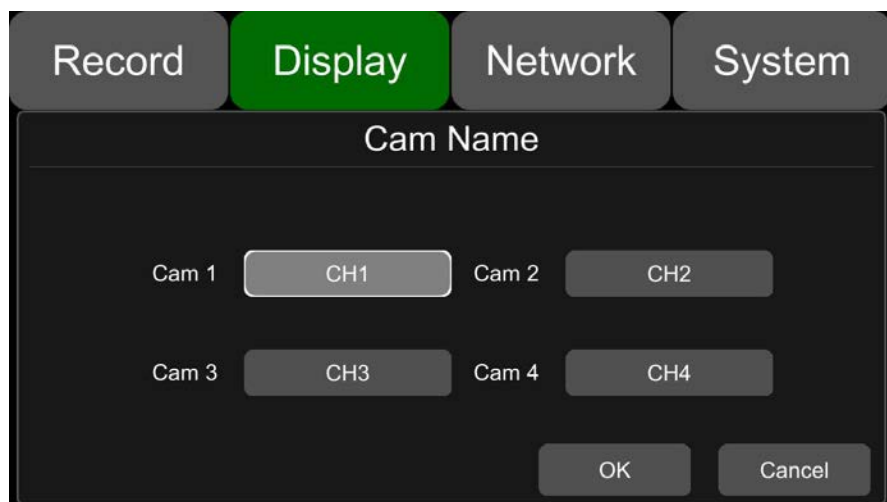
9.3 System Language setting

 Menu Language for option: English, Russian.

9.4 Audio Out
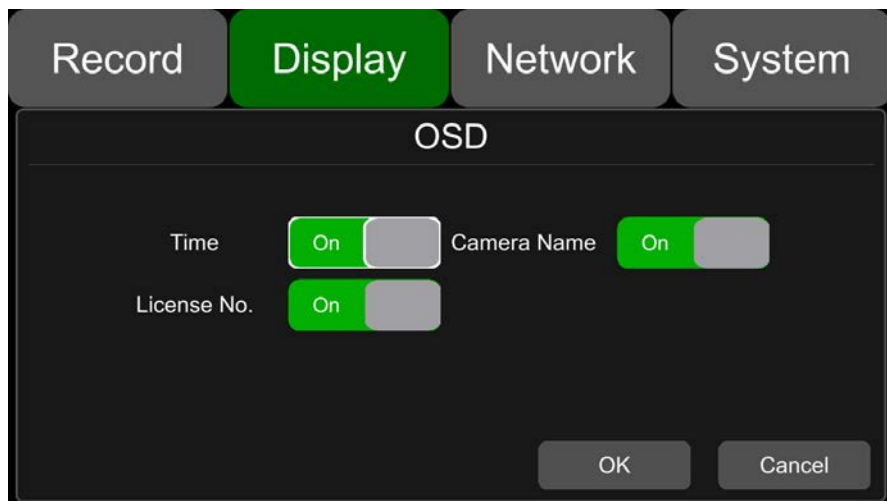
 Audio out: Select the audio output channel in split mode.

9.5 OSD display setting

OSD configuration: Select whether to display time, channel name, license plate in video or not (if On, all the information above will be written in video and can be displayed in playback)

Record	**Display**	Network	System

OSD

Time	On	Camera Name	On
License No.	On		

OK   Cancel

9.6 Menu on

Menu on: Set duration of menu display

Record	**Display**	Network	System

Menu On

| 30s | 60s | 120s | **Always** |

Menu Lock **On**   OK   Cancel
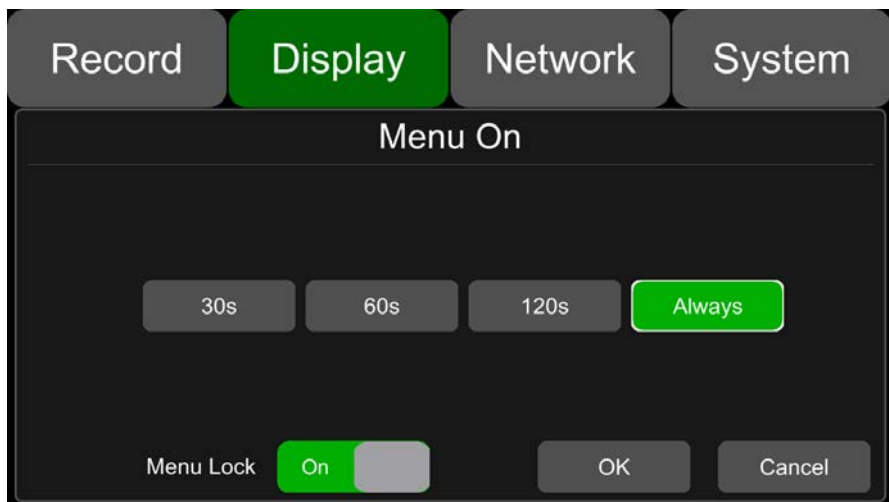
Menu on: Menu on duration can be set to 30s, 60s, 120s and Always. When it is set to 30s, 60s, 120s, it means that the menu will be hidden if there is no operation in 30s, 60s or 120s after it is open. When it is set to Always, the menu will always be there. Please be noted that if enter the menu, the recording will stop. In order not to affect the recording, it is not suggested to set the duration to Always.

Menu lock:
On means permission is required to enter the menu;
Off means permission is not required to enter the menu;
Username admin and password are required if to change the status of the menu lock.

9.7 Speed

Speed setting:
The data source of overspeed comes from GPS. Speed units are optional:, Km/h or Mile/h.
Overspeed is the threshold of overspeed, which can be set by user. Speed refers to the current speed of the vehicle. If the value of Speed exceeds the value of Overspeed, the overspeed alarm recording will be triggered.
The alarm switch is used for setting the overspeed alarm recording ON/OFF. If it is ON, the overspeed alarm recording will be triggered when the vehicle is overspeed. If OFF, the overspeed alarm recording will not be triggered.

9.8 GPS

GPS: When the GPS antenna is properly installed, latitude, longitude and speed will be recorded into video files. The menu provides GPS information of latitude / longitude, detectable satellites, accessible satellite etc.
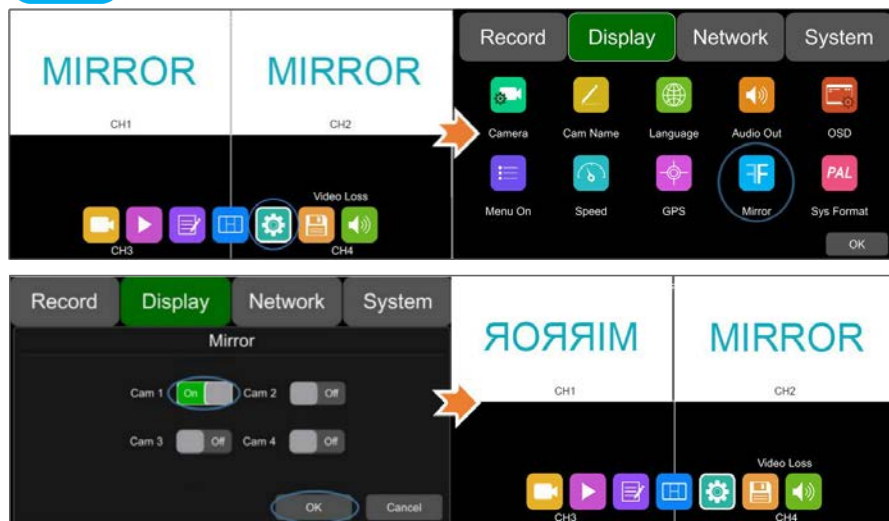

Mode:GPS status. It will be shown as below:

- Connected
- Disconnect
- Locating

9.9 Mirror

ON: Turn on Mirror function
OFF: Turn off Mirror function

10. Network
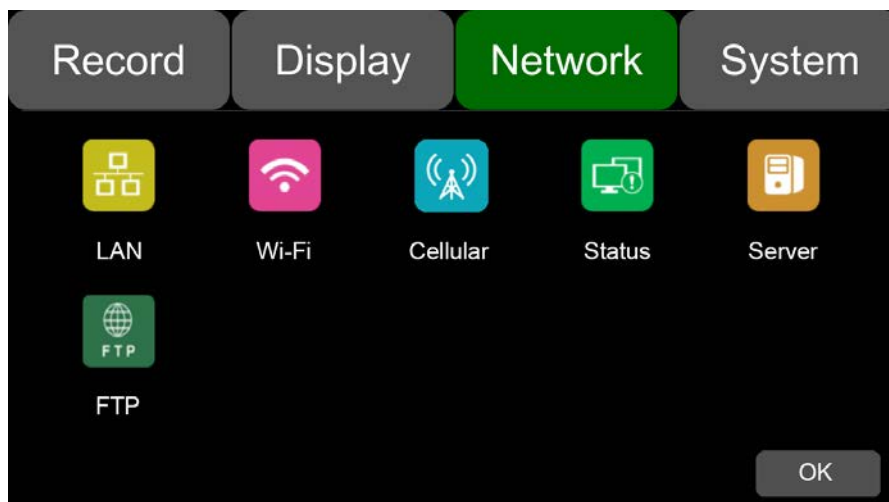
10.1 LAN port and server setting

- DHCP: Dynamic Host Configuration Protocol. To set it on stands for dynamic IPand off, for static IP. Static IP must be manually input with IP address, mask and gateway. MAC address can be automatically assigned or revised.

- Enable LAN

step 1: Connect the LAN cable to the DVR.

step 2: Go to "Network - Cellular" page.

step 3: If DHCP is set to ON, a dynamic IP will be automatically matched. If DHCP is set to Off, input the IP, mask, gateway and MAC manually.
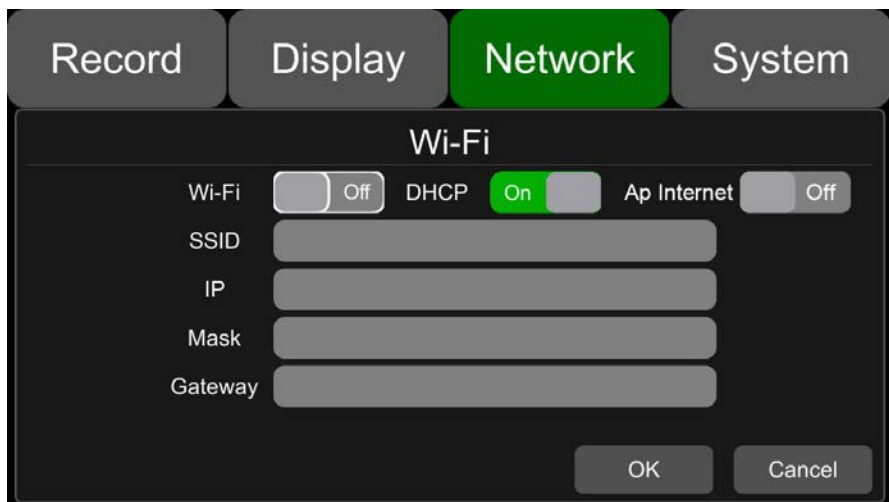
step 4: Touch OK to exit.

step 5: Go to "Network - Server" page and touch the LAN icon.
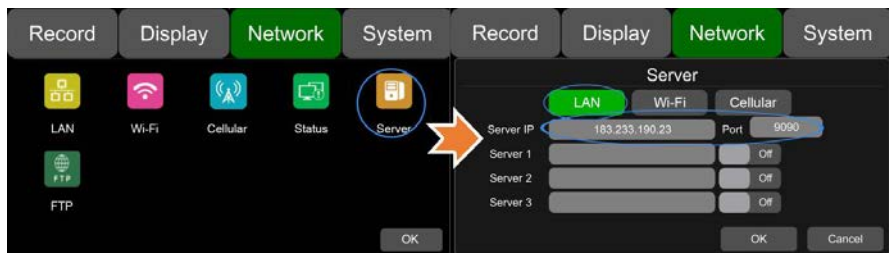
Step 6: Input LAN Server IP and Port. Touch OK to save the setting.

10.2 Wi-Fi network setup and server setup

Wi-Fi： Wi-Fi on/off

DHCP: Dynamic Host Configuration Protocol. To set it on stands for dynamic IPand off, for static IP. Static IP must be manually input with IP address, mask and gateway. MAC address can be automatically assigned or revised.

SSID： Wi-Fi hot spot list

Ap Internet: If it is ON, the hot spot of this DVR can be found on mobile phones.

● Enable Wi-Fi

Step 1: Wi-Fi hot spot available

Step 2: Connect the Wi-Fi antenna at connector ⑥ of device rear panel

Step 3: Go to Wi-Fi setup interface, set Wi-Fi to ON and open the dynamic IP button.

Step 4: Touch SSID sub-menu and the Wi-Fi hot spot shows up. Select the hot spot to connect and input password.
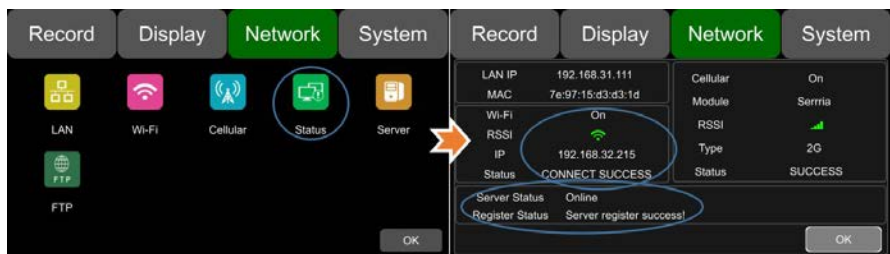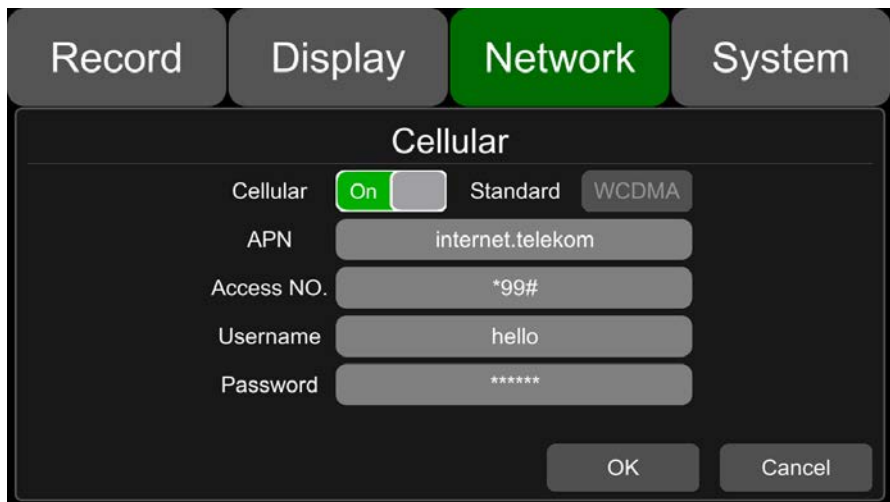

Step 5: Touch OK and quit the Wi-Fi setup interface.

Step 6: Input Wi-Fi Server IP and Port in "Network-Server Setup" page.

Step 7: Wi-Fi network status shows "CONNECT SUCCESS" and server status shows "Online".

10.3 2G/3G/4G control and its network setup

Cellular: Cellular is on, meaning that 2G/3G/4G is on.

Network Standard: WCDMA by default.

APN &Access Number: Normally, the user doesn't need to input user name and password for APN and Access number. The default setting is available. If it can't communicate with the network under the default setting, please consult your local network carrier.

Username &Password: Reversed.

OK: Save the settings and quit.

Cancel: Cancel the settings and quit.

● Enable 2G/3G/4G

step 1: DVR can search 2G/3G/4G signal locally.

Step 2: Connect the 2G/3G/4G antenna at connector ⑤of DVR rear panel.

step 3: Open the DVR front housing and insert the 2G/3G/4G SIM card.

step 4: Go to Cellular setup interface and set Cellular to ON.
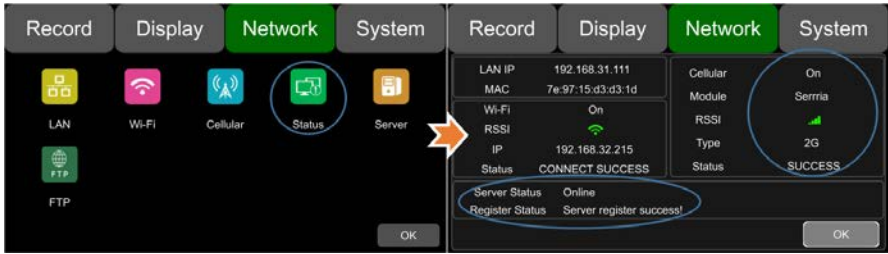

step 5: Input the APN and Access Number correctly. Access Number can be skipped.

Step 6: Touch "OK" to exit.

step 7: Input 2G/3G/4G Server IP and Port in "Network-Server Setup" page.

step 8: Cellular network status shows "Success" and server status shows "Online".

10.4 Network Status

Network Status: Users can check information such as LAN IP address、MAC address、Wi-Fi network status、Wi-Fi IP address、Wi-Fi signal strength、2G/3G/4G network status、 2G/3G/4G signal strength, and Server status.

Additionally, users can verify whether network connection is successful or not.
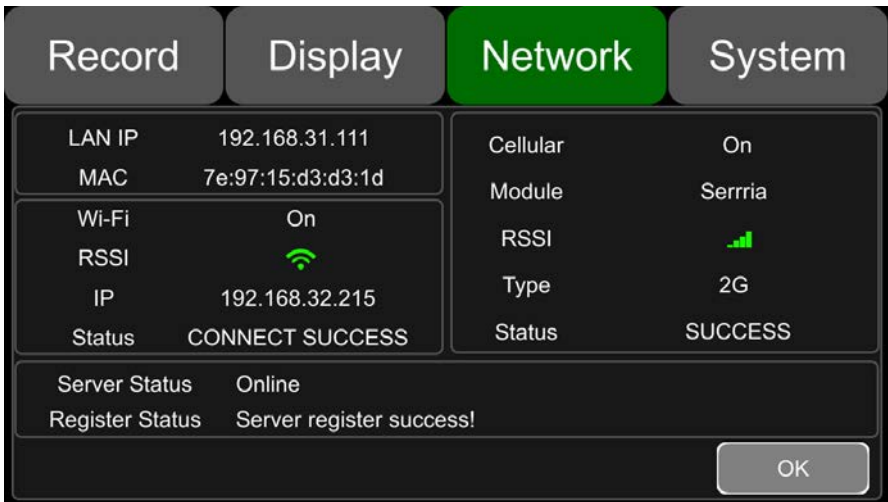
LAN IP: Refers to the static IP set on Network-LAN page or the dynamic IP which is obtained automatically.

MAC: Refers to the static physical address set on Network-LAN page or dynamic physical address which is obtained automatically.

Wi-Fi: Wi-Fi on/off status obtained from Network-Wi-Fi page

Wi-Fi RSSI: Wi-Fi signal strength icon

Wi-Fi IP: Static IP obtained from Network-LAN pages or dynamic IP.

Wi-Fi status: Wi-Fi status will be shown as below:
CONNECT SUCCESS
GETIP ERROR

Cellular : The on/off status of cellular acquired from Network-cellular page

Module: Display the Cellular module brand

Wireless RSSI: 2G/3G/4G signal strength icon

Wireless Type: Display the types of 2G/3G/4G module, the parameters and the

corresponding types are shown as follows

2G: Receive 2G signal

3G: Receive 3G signal

4G: Receive 4G signal

Wireless Status: Value and corresponding meanings

1: Module initialization

2: Module exception

3: No SIMcard

4: Cpin locked

5: Signal abnormal

6: Networking failure

SUCCESS: Networking success

...
Server Status: Online / Offline

10.5 Server

The function of server setting is described as above (10.1,10.2,10.3).

Record	Display	**Network**	System

Server

LAN	Wi-Fi	Cellular

Server IP	183.233.190.23	Port	9090
Server 1			Off
Server 2			Off
Server 3			Off

OK   Cancel

10.6 **FTP**

FTP

Record	Display	**Network**	System

FTP

Username	424ftp	Port	21
Password	******	FTP	Off
Normal File	Off	Cellular	Off
Uploading	0%		
Filename			
Status		OK	Cancel

**Username/Port/Password:** Correct Username / Port / Password of the FTP server must be filled in.

FTP: ON/OFF

Normal File: Two states, OFF and ON

- **OFF:** Upload alarm files only

- **ON:** Upload all files (including Normal Files)

Cellular: Two states, OFF and ON

- **OFF:** Files are not allowed to be uploaded when Cellular is connected to the Internet

- **ON:** Files are allowed to be uploaded when Cellular is connected to the Internet. To save network flow data, please select OFF.
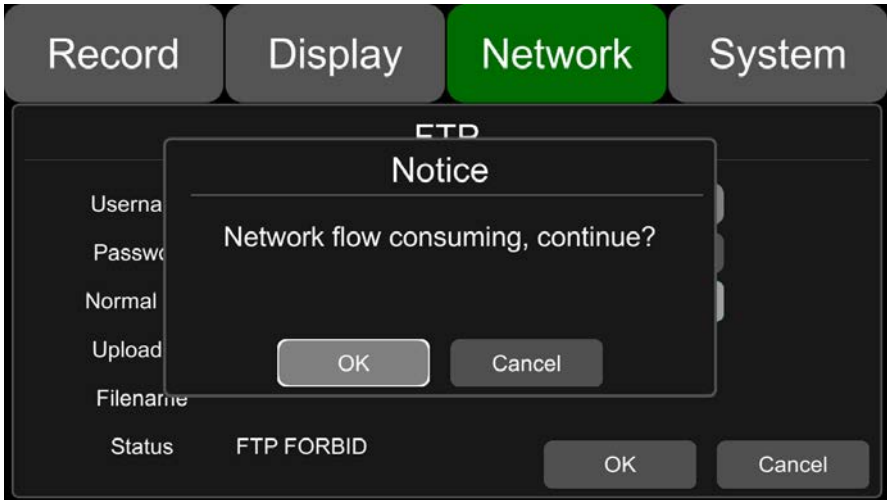
Uploading: Display the progress bar of the uploaded file

Filename: Display the file name of the file being uploaded

Status: Display the working status of the FTP function

Successfully uploaded files can be found on the client as below:

11. System

11.1 Log in setup

Set user name and password for <u>booting up.</u> The initial password is 123.

Record	Display	Network	System

User

Username	admin
Password	
New Password	
Confirm Password	

OK   Cancel

11.2 License plate number setup

Input license plate number

| Record | Display | Network | System |

Device

License No.　　　AAAAAA

Device ID　　　1711280010

OK　　Cancel

11.3 System time setup

Format Setup:

| Record | Display | Network | System |

Dates&Time

	Year	Month	Day
Date	2018	06	21
	Hour	Minute	Second
Time	11	17	38

Format　Setup　Time Sync　Setup

DST　Setup

1	2	3
4	5	6
7	8	9
0	Del

OK　　Cancel

Go to "System - Date&Time - Format_Setup" page.

①Time Zone: time zone setting.

②Date Format: set the format of date.

③24 Hour: if it is ON, time format will be displayed in 24-hour system. If OFF, in 12-hour system.

Time Snyc Setup:

Go to "System - Date&Time - Time Sync_Setup" page.

①GPS: set GPS to ON/OFF

②NTP: set NTP to ON/OFF

③NTP Server: show the URL of the NTP Server

DST Setup:

Go to "System - Date&Time - DST_Setup" page.
①Enable: Set DCT setting to ON/OFF
②Offset: Adjust the offset after enabling DST
③Mode: Select the mode of DST(setup DST according to week or date)
④Start: Set start time of DST
⑤End: Set end time of DST

11.4 Scheduled Recording

Enable: Set scheduled recording ON/OFF.

Start: Set start time of scheduled recording.

End: Set end time of scheduled recording.

Week-day: Set scheduled recording by weekdays. Select the weekdays to set preset.

Scheduled Recording:

* Support up to four appointed tasks. The recording duration is counted in minutes.

* Recording time can overlap.

* The start time of scheduled recording must be set ahead of the end time.

11.5 Exception

Buzzer: Set the buzzer to ON/OFF.

Duration: Set the duration time of the buzzer.

11.6 ACC settings

Current vol.: Voltage of the working DVR

Shutdown vol.: Shutdown voltage function will work after DVR starts working for 1mins. DVR will shut down automaoi.iktically if current voltage is lower than shutdown voltage, and it will reboot only when the voltage is above the value.

ACC Duration: DVR will continue recording for a few seconds after ACC is disconnected.   ACC delay time can be set to be 5s, 60s, 30min or 60min.

11.7 Alarm information setting

Alarm1~Alarm4: Customized alarm recording

Reverse: Reversing alarm recording. Parking line cursor will display when reverse alarm is triggered.

Brake: Brake alarm recording. Brake sign will display when brake alarm is triggered.

Left: Turning-left alarm recording. Turn-left cursor will display when turn left alarm is triggered.

Right: Turning-right alarm recording. Turn-right cursor will display when turn right alarm is triggered.

Priority: Set priorities for Alarm1~Alarm4, Reverse, Brake, Left, and Right.

When different types of alarm are triggered at the same time, alarms with the highest priority will work first.

Trigger Level: There are 3 options of Trigger Level. The options "Low" and " High" are used for turning on alarm function. "Low" is generally used for debugging while "High" will be selected to turn on alarm function for on-road use. "Off" means turning off alarm trigger function.

Duration:　Duration of alarm video recording

**Alarm Out-Buzzer**: Set the Buzzer ON, then it would beep for 5 seconds when alarming.

Alarm Out-Output1: Set it ON, then 12V level output would come from the alarm wire of Output 1

Alarm Out-Output2: Set it ON, then 12V level output would come from the alarm wire of Output 2

Display: A full screen of one channel will display when this channel is triggered.

Curser: See the picture below.
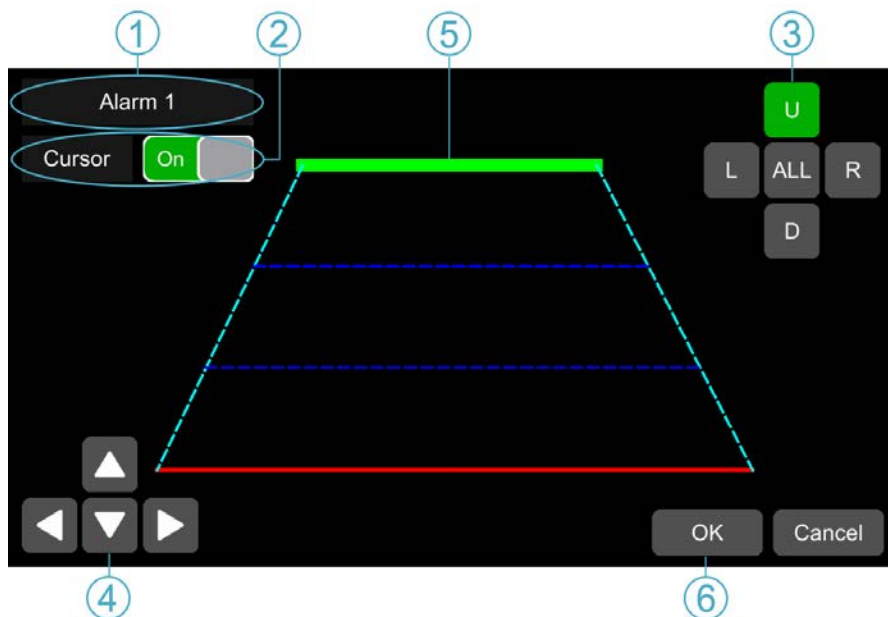
①Camera name of the alarm-triggered channel.

②Press this button to turn on/off curser.

③Line selecting: There are five lines to be selected, Line U(up), Line D(down), Line L(left), Line R(right) and ALL. The button is green if selected. You can use remote control to operate.

④There are four directions to adjust the shape of the cursor, Up,Down, Left and Right.

If Line U(the green one) or Line D(the red one) is selected, the selected line can be moved totally with these direction buttons.

If Line L or Line R is selected, the top point of the selected line can be moved to left or right with Direction Up and Direction Down, and the bottom point of the selected line can be moved to left or right with Direction Left and Direction Right.

⑤Lines of curser. The selected one will be thickened for three times. The two lines in the middle will not be processed.

⑥Touch OK to save the settings and exit. Cancel to exit without saving any settings.

Priority: See the picture below.

: Press it, then the priority value of the selected alarm will be added by 1. The bigger the value is, the lower the priority will be.

: Press it, then the priority value of the selected alarm will be reduced by 1. The smaller the value is, the higher the priority will be.

- Alarms with higher priority will be triggered first.
- 1 is the highest priority, and 8 is the lowest.

- If two alarms A and B are triggered at the same time, and A's priority is higher than B's, then A will record first. After A finishes the recording, if B is still being triggered, B will then record. However, if B is no longer being triggered now, it will not record.
- If alarm B is triggered and at the process of recording, however, alarm A, whose priority is higher than B, is triggered then, B will not stop recording.

11.8 Update

- For single device

Step 1: Copy the folder to USB disk or SD card root directory and insert the USB disk or SD card into DVR.

Step 2: Power off the DVR and reboot it, then it will upgrade automatically. Or in the menu Menu -> System -> Update, touch OK to confirm to upgrade. Both methods can start the upgrade process.
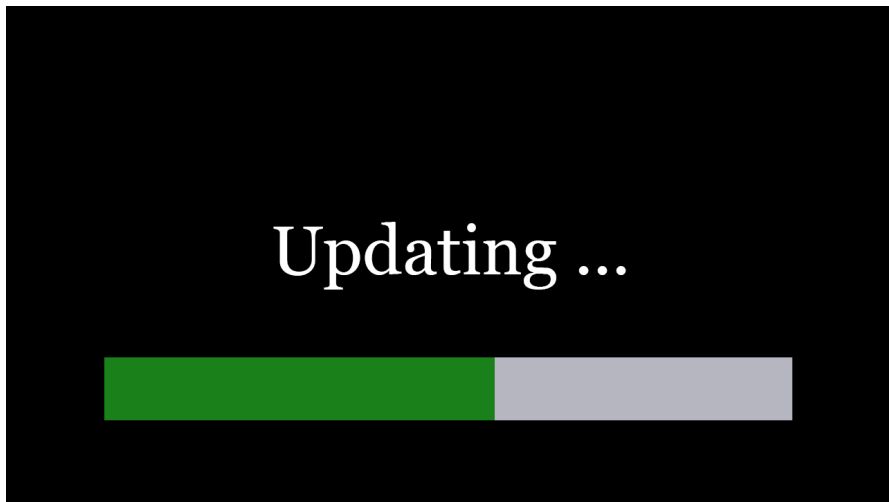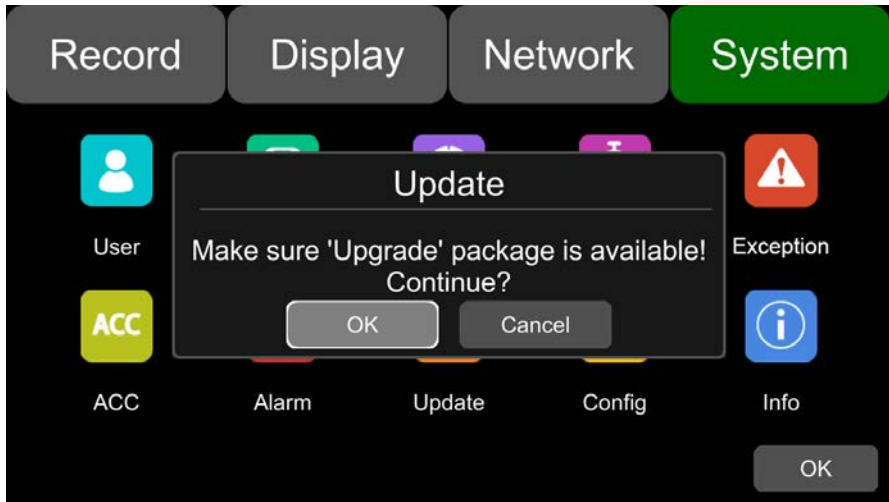
Step 3: When "Update success!" is shown on the DVR monitor, the DVR will reboot automatically.

Update success !

Step 4: After rebooting, please check if the version is the same as the one you copy into "upgrade" folder. Please go to Menu -> System -> Info to check it.

● For batch upgrade

As the upgrade package will be deleted after the upgrade process is done on device, so if you need to upgrade more than one device, please carry out as follows:

Step 1: Rename the package "dvxxx_upgrade_201xxxxxxxxx" to "dvxxx_upgrade_never_rename"("xxx" in the "dvxxx_upgrade_never_rename" is the corresponding product model number)

Step 2: Copy the package to the root directory of USB disk or SD card , and insert it to DVR.

Step 3: Power off the DVR and reboot it, then it will upgrade automatically. Or in the menu Menu -> System -> Update, touch OK to confirm to upgrade. Both methods can start the upgrade process.
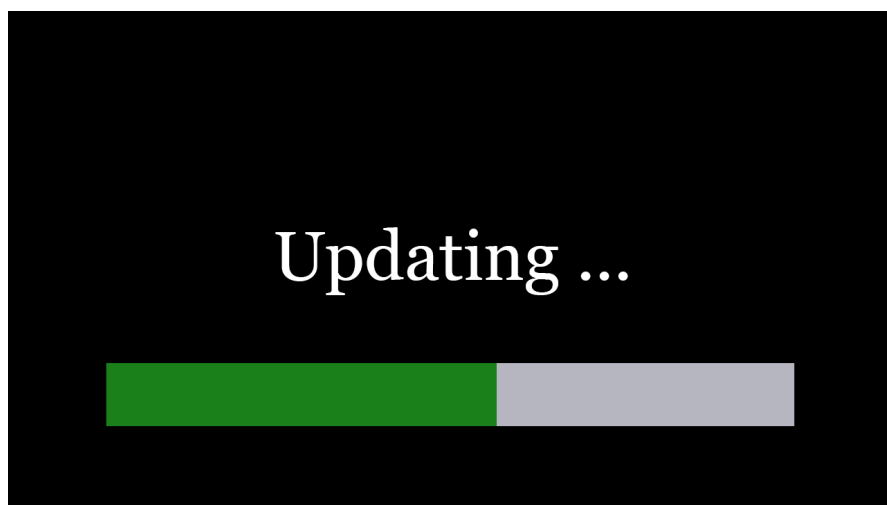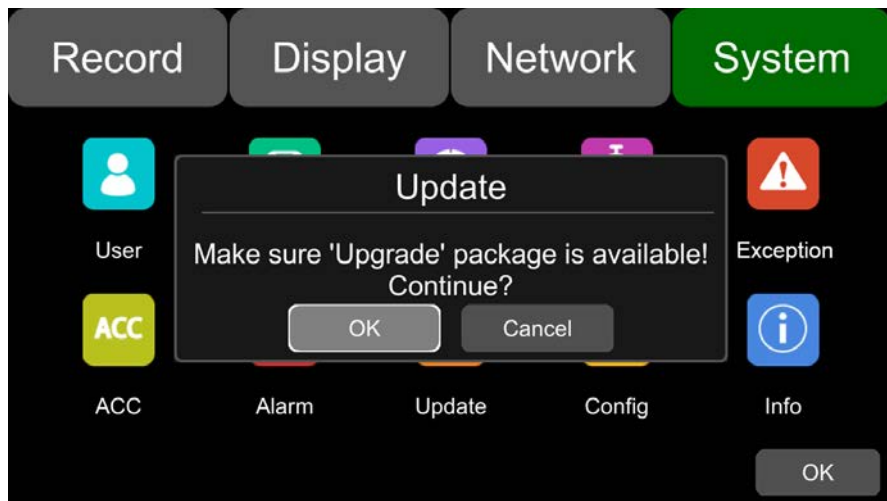
Step 4: After When "Update success!" shows, unplug the USB disk or SD card with upgrade package, then DVR will reboot automatically.

Update success !

Note: If using "dvxxx_upgrade_never_rename" package to upgrade, we must unplug the USB disk or SD card when "update success!" is shown on the screen, or else the DVR will go into infinite loop of upgrade and will not boot up.
SOLUTION: Unplug the USB disk or SD card with upgrade package, and then DVR will stop the upgrade process and boot up successfully.

● Remote upgrade

Step 1：DVR connects to server.

Step 2：Open the Windows client and log in.

Step 3：Find the license number of the target DVR device in the device list of the client, right click and select "Update" to open the Batch Upgrades interface. If you need to upgrade more than one device, you can click the Add button to select other devices. The selected ones will be displayed on the device list to upgrade. If you want to remove devices from the list, please select them and click the Del button.

Step 4 :Select the device to upgrade, and then click the Browser button to select the upgrade package "dvxxx_upgrade_201xxxxxxxxx".
Note: For remote upgrade the package can't be named as "dvxxx_upgrade_never_rename".("xxx" in the "dvxxx_upgrade_never_rename" is the corresponding product model number)

Step 5: Click the Start button to upload the upgrade package. When uploading is finished, the device will start to upgrade automatically. If it is failed to upload, the reason of failure will be displayed in the Remark column in the list.
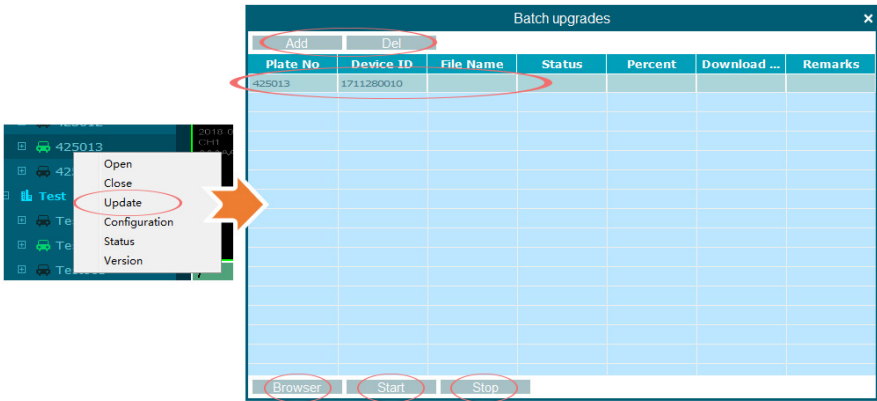
11.9 Configuration

Configuration Import: Import the configuration information from USB memory flash devices.

Configuration Export: Export Log to USB memory flash devices.

Factory Default: Press RESET to restore factory settings.
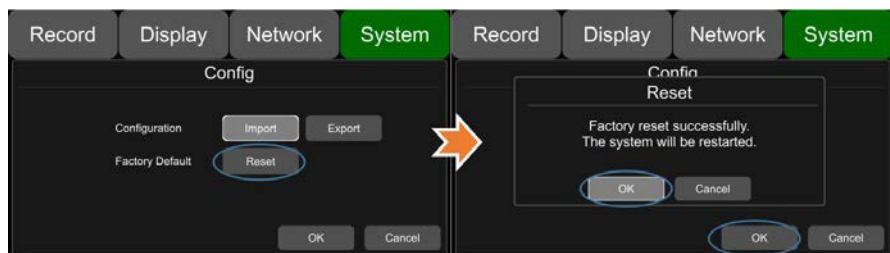
11.10 System Info

System Info：Software version number.

Record   Display   Network   System

Info

SYS Version: 201711281751

MCU Version: 2017112009

UID: 1708230008

OK

12. FAQ

1) The system can't start up?

Check power connection. Please follow the steps below to check the power connection:

1. Check the input power: if the power wire is connected correctly, if the ground wire is connected to the battery, and if the fuse on the power wire is in good condition.
2. Check if the voltage of the ACC signal wire is higher than 6 V.
3. Check if he input voltage of the device is higher than the shutdown voltage set on the screen of HD DVR.

2) The HD DVR restarts uninterruptedly?

Please follow the steps below to check it:

1. Check if the supply voltage of DVR is insufficient. If it is lower than the start-up voltage of the device, the device would restart repeatedly.
2. Restart HD DVR to see if it can work properly this time.

3) Unable to recognize disks ?

1. Check if the disk itself is in good condition and make sure that it is installed and of fine contact.
2. The disk has been formatted by DVR.
3. Restart DVR to see if it can work properly this time.

4) Unable to recognize cameras ?

1. Make sure the camera is intact and the connection is correct.
2. Refit all wires (e.g,DB44 wire & extended wires) between cameras and the device .
3. Restart DVR to see if it can work properly this time.

5) GPS anomaly ?

Check if the GPS antenna is properly installed.

13. APPENDIX

APPENDIX Ⅰ：Abbreviation & Description

Rec.	Record	SD	Secure Digital Memory Card
G-sensor	Accelerometer sensor	USB	Universal Serial Bus
GPS	Global Positioning System	DB44	44PIN connector, A/V Input, Output.IO/ALARM Output
Wi-Fi	WIreless-FIdelity	DB26	26PIN connector, Alarm Input/RS232/RS485
Cam	Camera	ALM	Alarm
AVI	Audio Video Interleaved	VLOSS	Video Loss
OSD	On-Screen Display	COMM	Communication
APN	Access Point Name	ERR	Error
DHCP	Dynamic Host Configuration Protocol	MEM	Memory
SSID	Service Set Identifier	MMSHOW	Media Player
IP	Internet Protocol	FTP	File Transfer Protocol
MAC	Media Address Control	DVR	Digital Video Recorder
RSSI	Received Signal Strength Indication	IR	Infrared Radiation
SSD	Solid State Drive	SYS	System
LED	Light Emitting Diode		

APPENDIXⅡ：Accessories

NULL

APPENDIXⅢ: Compatibility Storage List

- SATA 3.0 SSD

Brand Name	Model Name	SIZE (inch)	Flash Type	Capacity	Interface	Test Read Speed (MB/s)	Test Write Speed (MB/s)
Toshiba	HDTS812	2.5	TLC	120G	SATA3	98.0	119.7
Micron	MTFDDAK960TCC	2.5	TLC	960G	SATA3	67.4	73.8
Samsung	MZ-750120	2.5	TLC	120G	SATA3	94.6	100.9
Samsung	MZ-75E500	2.5	TLC	500G	SATA3	72.5	124.2
Samsung	MZ-7KE1T0BW	2.5	MLC	1T	SATA3	64.9	77.4
SanDisk	SDSSDA-120G	2.5	SLC	120G	SATA3	99.6	70.5
Toshiba	THNSNJ256GCSU	2.5	MLC	256G	SATA3	--	--
Toshiba	THNSNJ512GCSU	2.5	MLC	512G	SATA3	--	--
Toshiba	Q300PRO	2.5	MLC	1T	SATA3	--	--

- SD Card

Brand Name	Model Name	Card Type	Typical Read Speed (MB/s)	Typical Write Speed (MB/s)	Capacity (GB)	Interface	Hot Plug	Test Read Speed (MB/s)	Test Write Speed (MB/s)	Remarks
Lexar	Lexar 128G 633X	SDXC UHS-I	95	45	128	Standard SD	OK	7.1	9.4	Test Read/Write, Update software, HotPlug
SanDisk	SDXXG-032G-ZN4IN	SDHC 10	95	90	32	Standard SD	OK	9.2	12.6	Test Read/Write, Update software, HotPlug
SanDisk	SDSDUNC-128G-ZN6IN	SDHC 10	80	75	128	Standard SD	OK	7.4	11.5	Test Read/Write, Update software, HotPlug

TOSHIBA	THN-N302R0320C4	SDHC 10	90	40	32	Standard SD	OK	6.5	10.1	Test Read/Write, Update software, HotPlug
TOSHIBA	THN-N302R0640C4	SDHC 10	90	40	64	Standard SD	OK	7.8	6.2	Test Read/Write, Update software, HotPlug
TOSHIBA	THN-N302R01280C4	SDHC 10	90	40	128	Standard SD	OK	7.2	9.3	Test Read/Write, Update software, HotPlug
Transcend	Transcend 64GB UHS-I U3	SDXC UHS-I	95	60	64	Standard SD	OK	7.3	10.6	Test Read/Write, Update software, HotPlug
Transcend	Transcend 32GB UHS-I 600X SD	SDHC 10	90	40	32	Standard SD	OK	6.9	7.5	Test Read/Write, Update software, HotPlug
Transcend	Transcend 64GB UHS-I 600X SD	SDHC 10	90	40	64	Standard SD	OK	6.0	6.3	Test Read/Write, Update software, HotPlug
Transcend	Transcend 128GB UHS-I U3	SDHC 10	95	60	128	Standard SD	OK	7.1	9.0	Test Read/Write, Update software, HotPlug

WARRANTY

Congratulations on your purchase of a quality **axis** Mobile Safety System! You're joining thousands of satisfied customers who enjoy & experience the benefits of the products we distribute. In the unlikely event that some technical difficulty arises with your purchase, be assured that we are most anxious to see that the problem is quickly rectified to your satisfaction. Please familiarise yourself with the following simple conditions of our warranty.

This warranty covers faults through component failure or failure of the product to operate in accordance with published specifications. Product failure as a result of unreasonable environmental conditions, accident, misuse, improper installation, unauthorised repair, vehicle electrical or wiring faults or neglect etc, will not be covered by this warranty. Removal and installation costs, if any, would be paid by the owner as well as any freight or postage costs of transporting the product to AudioXtra. AudioXtra shall not be liable or responsible for any loss of use of this product or any form of consequential loss.

CONSUMER WARRANTY

This product is warranted by AudioXtra International Pty Ltd to be free from defects in materials and workmanship under **NORMAL USE** for a period of **TWENTY FOUR MONTHS** from the date of purchase. Battery warranty is 12 months from purchase.

WITHIN 30 DAYS OF PURCHASE DATE: Please return the unit for replacement to our National Service Centre or the Retailer from where you made the purchase. All accessories must be included. Proof of purchase date **must** accompany the products.

AFTER 30 DAYS OF PURCHASE DATE: Warranty repair and service is carried out by our National Service Centre. Repair and service will be carried out at no cost to the owner if proof of ownership and the date of purchase can be verified to the satisfaction of the authorised centre concerned with this repair. This proof should take the form of either:
    a) The warranty card accompanying this product, stamped and dated by the dealer.
    b) A Tax Invoice or Receipt showing full details of original vendor, purchaser, model number and serial number.

COMMERCIAL WARRANTY: A product used in or associated with a commercial application will carry a limited **SIX MONTH** warranty. An abnormal commercial application is one where usage, dust, vibration, heat/cold and other environmental conditions exist at an extreme level.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Please complete details below in the event of warranty service being required.

Purchaser's Name: _____

Purchaser's Address: _____

_____

Model Number: __DV426/DV426-4G__ Serial Number: _____

Dealer Name: _____ Date of Purchase: / /

Dealer Address: _____

_____

Invoice/Sales Docket no: _____

General Hints: To expedite service and prompt return of the equipment, please:
    a) Clearly describe the fault in detail   c) Include your return address
    b) Safety and security pack the unit for transport   d) Provide proof of purchase date as outlined above

audioXtra
PTY LTD

www.audioxtra.com.au

National Service Centre:
10 STODDART ROAD, PROSPECT, SYDNEY NSW 2148 Australia