DIRECTOR

4CH NVR HDD MOBILE DVR

FEATURES:

- Built-in high performance Hisilicon chipsets, coded with H.264 standard, high compression rate and image qulity
- 4CH AV Inputs with NVR 1080P/720P/960H/D1/CIF optional, 1CH synchronized AV output, 1CH VGA output
- 4CH local recording with 1080P resolution in real time

Power:

- Professional In-Vehicle power design,8-32V DC Wide Voltage Range
- Multi protection circuits like under-voltage, short, reversed plug-in
- Smart power management system, shutdown under low voltage, low consumption

Data Storage:

- Special file management system to encrypt and protect the data
- Proprietary technology to detect the bad track of the hard drive which can make sure the continuity of video and long service life of the hard drive
- Built-in ultracapacitor, avoid data loss and sd card damage caused by sudden outage
- Support 2.5 inch HDD/SSD, maximum 2TB
- Support SD card storage, maximum 256GB
- Support hard disk heating

Transmission Interface:

- Support 4G transmission,
  - Support wireless download by WiFI

Technical parameter:		
Item	Device parameter	Performance
System	Main processor	Hi3520DV300
	Operating system	Embedded Linux OS
	Operating language	Chinese/English
	Operating interface	GUI, support mouse
	Password security	User password/Admin password
Audio & Video	Video standard	PAL/NTSC
	Video compression	H.264
	Image resolution	1080P/720P/960H/D1/CIF
	Playback quality	1080P/720P/960H/D1/CIF
	Compound mode	A variety of ways
	Decoding ability	1ch 1080P real time
	Recording quality	Class 1-6 optional

	Image display	Single/QUAD display optional
	Audio Compression	G.726
	Audio recording	Audio & Video synchronized recording
Recording & Playback	Recording mode	Manual/Alarm
	Video bit rate	Full frame 4096Mbps，6 classes image quality optional
	Audio bit rate	8KB/s
	Storage media	SD card + HDD/SSD storage
	Video inquiry	Inquiry by channel/Recording type
	Local playback	Playback by file
Firmware upgrading	Upgrading mode	Manual/Automatical/Remote/Emergency Recovery
	Upgrading method	USB disk/Wireless network/SD card
Interface	AV input	4ch aviation interface
	AV output	1ch VGA video output, 1ch aviation AV output
	Alarm input	4 digital inputs (4 Positive/Negative trigger)
	HDD/SSD	1 HDD/SSD (up to 2TB, support hot plug/unplug)
	SD card	2 SDXC High speed card (up to 256GB)
	USB interface	1 USB 2.0 (support U disk/mouse)
	Ignition input	1 ACC signal
	UART	1 485
	LED Indication	PWR/RUN/GPS/NET
	Disk lock	1
	Debug port	1
	RJ45	1
Function extention	GPS/BD	Support detecting antenna Plug in/Unplug/Short circuit
	4G	Supports LTE
	WIFI	2.4GHz
Others	Power input	8~32V DC
	Power output	5V 300mA
	Power consumption	Standby 3mA Maximum consumption 30W @12V 2.5A @24V 1.25A
	Working temperature	-20 --- 70℃
	Storage	1080N 1.2G/h/channel 720P 1G/h/channel 960H 750M/h/channel
	Dimension	162mm*180mm*50.5mm

1 User Login

1.1 Starting System

Power On/Off

After the power is on, the system will perform a basic system check and will enter the real-time loading display interface. Please be patient. Once the system is loaded, you will see a wizard interface.

2 Setup Wizard

Setup Wizard：The setup wizard can guide you to set up the NVR general parameters, such as user management, system settings, CMS settings, hard disk format, etc to implement the basic functions of the NVR, if you need to personalize the settings, you can log in to the main menu to set.

2.1 Wizard GUI

Well recommended that you can complete the NVR basic configuration via Set up Wizard for first time start up, like the picture below:
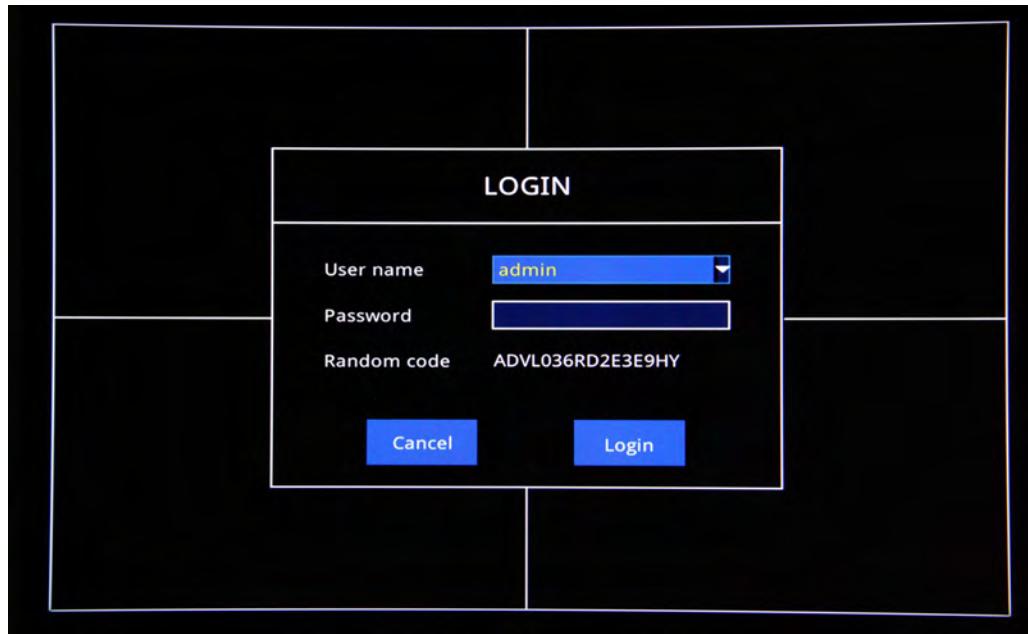
2.4 Basic Setup

Date/Time、Date Format、Time Format、Time Zone、PAL/NTSC、Language to set up based on your requirement，Like Picture Below：
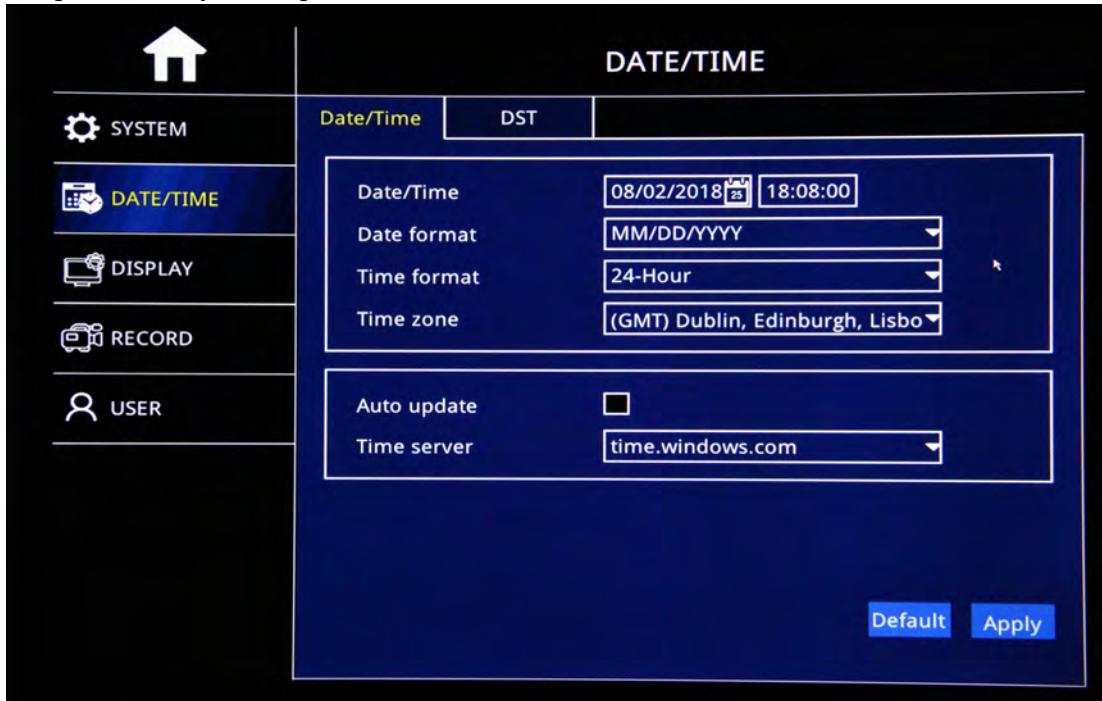
➢ **Date/Time Setup**：Click calendar Button to settle current date
➢ **Date Format**：有"MM/DD/YYYY"、"YYYY-MM-DD""DD/MM/YYYY" Optional
➢ **Time Format**："24-Hour"/"12-Hour" Format Optional．
➢ **Time Zone**：Set Up time zone based on your relative time zone
➢ **Noted**：After Time Zone Set up, the device time will automatically adjust to be the time of relative time zone．
➢ **Video Format**："PAL"/"NTSC"Optional

。
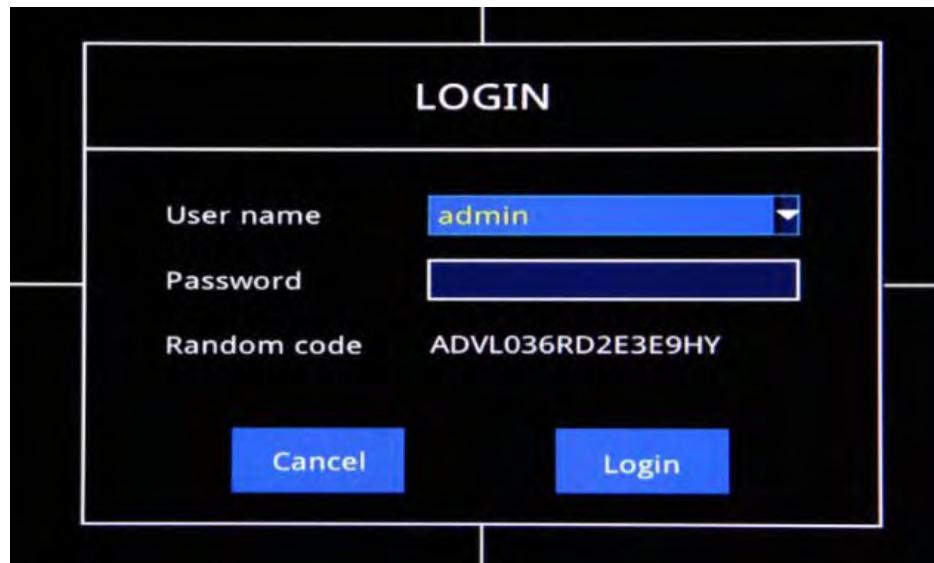
4.2 Main Menu Operation
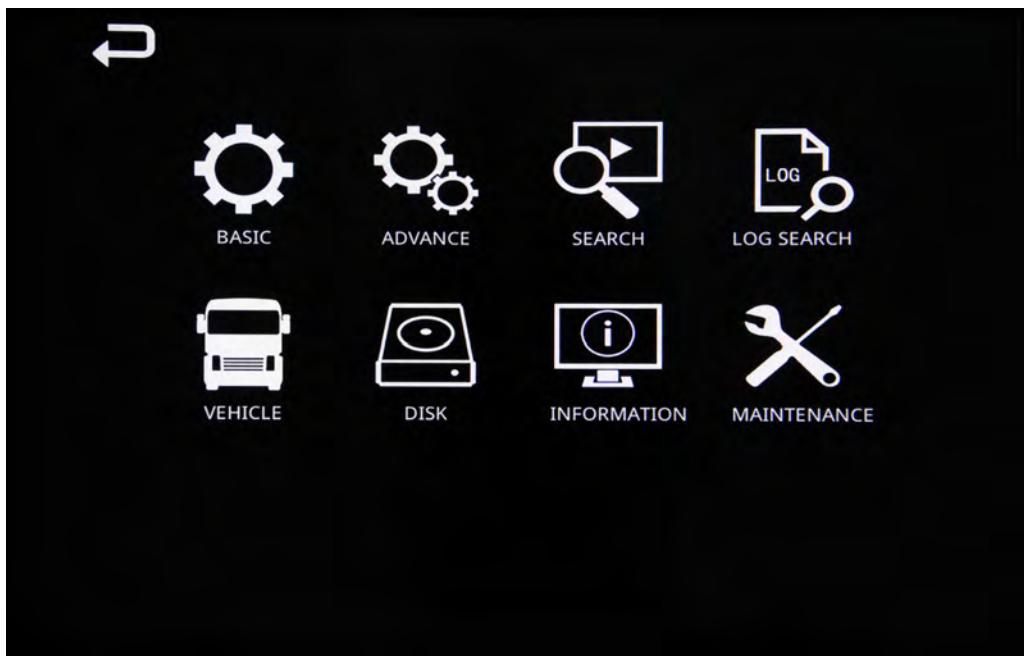
After login,Click left mouse to come into relative setup
Module,like the picture below:

➢ Basic Setup：Including：System Setup，Date/Time Setup，Display
   Setup,Record Setup and User setup。
➢ Advance Setup：Including：Alarm Setup，Network Setup，Network Application
   Setup，PTZ Setup，IPC Cams setup and Snapshot。
➢ Video Query：Search and Display Recorded video.
➢ Log Search：Query the operation Logs and Alarm log
➢ Saved in Local System.
➢ Vehicle Management：Vehicle info and Delay time setup

- Disk Management：HDD and USB Storage.
- Information:Check Device, Network,Online User,Record and Cams info
- Maintenance：Auto Maintain,Firmware Upgrade,Standby,Reboot,Export/Import Setting etc

5 Basic Setup

5.1 System Setup：
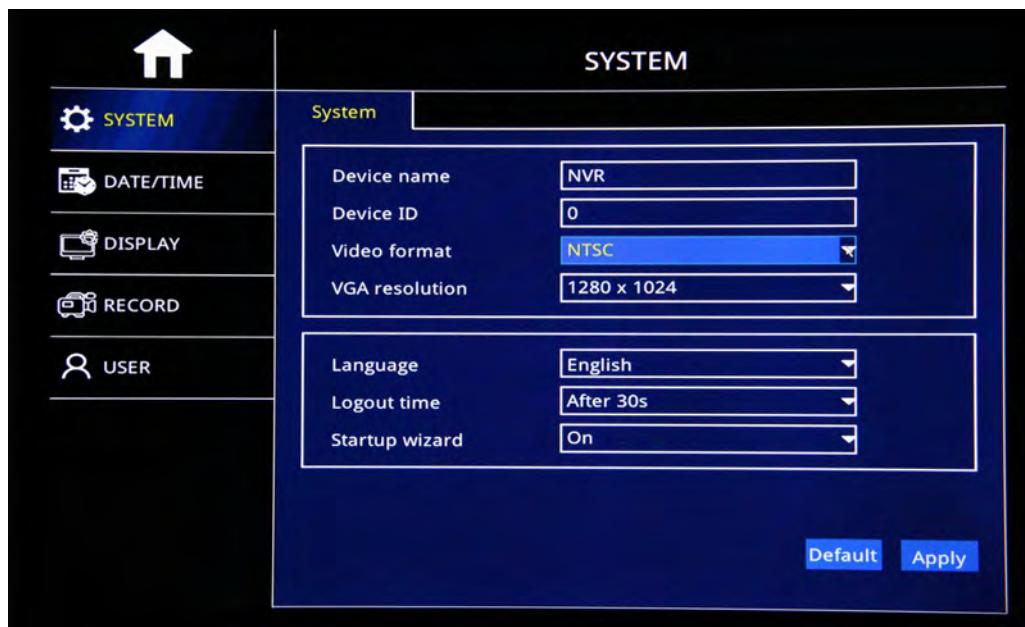
- Device Name：Edit Device name
- Video Format：PAL/NTSC adjustable.
- VGA Resolution：1024×768、1280*1024、1366*768、1440*900、720P and 1080P adjustable based on your monitors
- Langue：Chinese，English，Russia etc to set up
- Logout Time："30s"、"1 minutes"、"3 minutes"、"5 minutes"、"10 minutes"、"Never" adjustable to log out system.
- Setup Wizard：On/Off to start/Stop Setup Wizard while start up
- Noted: After setup,Click"Apply"and Click "Default" to return
- Factory default setup.

5.2   Date/Time Setup

5.2.1 SystemDate/Time Setup
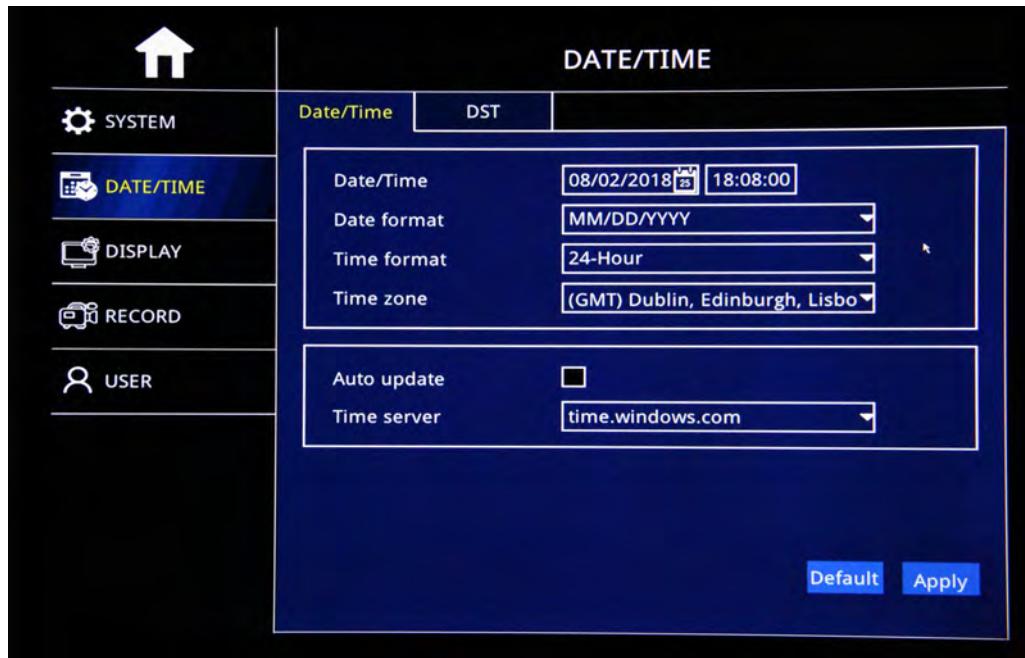
- ➢ Date/Time Setup：Click calendar Button to settle current date
- ➢ Date Format："MM/DD/YYYY"、"YYYY-MM-DD""DD/MM/YYYY" Optional
- ➢ Time Format："24-Hour"/"12-Hour" Format Optional.
- ➢ Time Zone：Set Up time zone based on your relative time zone
- ➢ Noted：After Time Zone Set up, the device time will automatically adjust to be the time of relative time zone.
- ➢ Auto Update：After check "Auto update" to start the function,the
- ➢ Device will Calibrate and synchronize the time of Time Server
- ➢ Time Server：Set up relative Tim Server under down box.
- ➢ Noted: After set up, Click "Apply" to make it effective.

5.2.2 DST Setup

➢ Enable：After check, Enable DST time work
➢ Mode：Check "Week" or "Date" Mode to settle DST Start and End time
➢ Offset：Based on Specific DST time,Faster or Slower 1 hour or 2 hours
➢ From：DST Time Starting time
➢ To:DST time Ending time
➢ After the setup, Click "Apply"

5.3Display Setup

5.3.1 Channel Setup
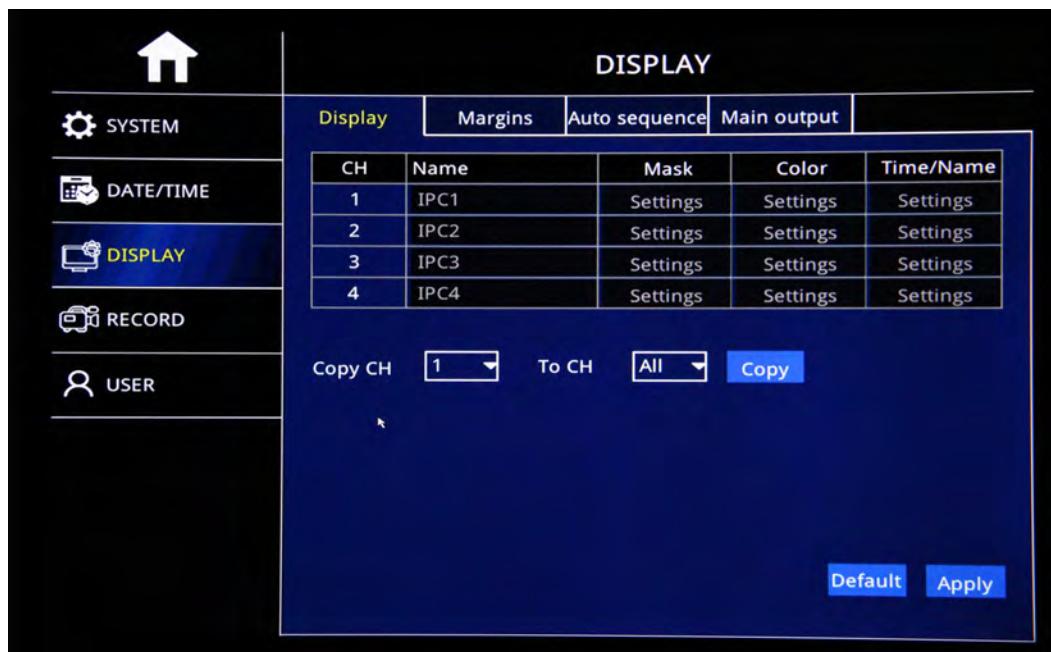
➢ CH：Channel No.

➤ Channel Name：Change Channel Name to Display

➤ Color：Click"Setting"to settle Brightness,Contrast,Hue and Saturation, After Setup, Click "Apply",like the Picture below:

➤ OSD：Click "Setting"to Settle OSD time and Name

➤ Copy：After Set up 1Ch well, copy the same setting to Specific Channel or All Channels

5.3.2　Margin Setup
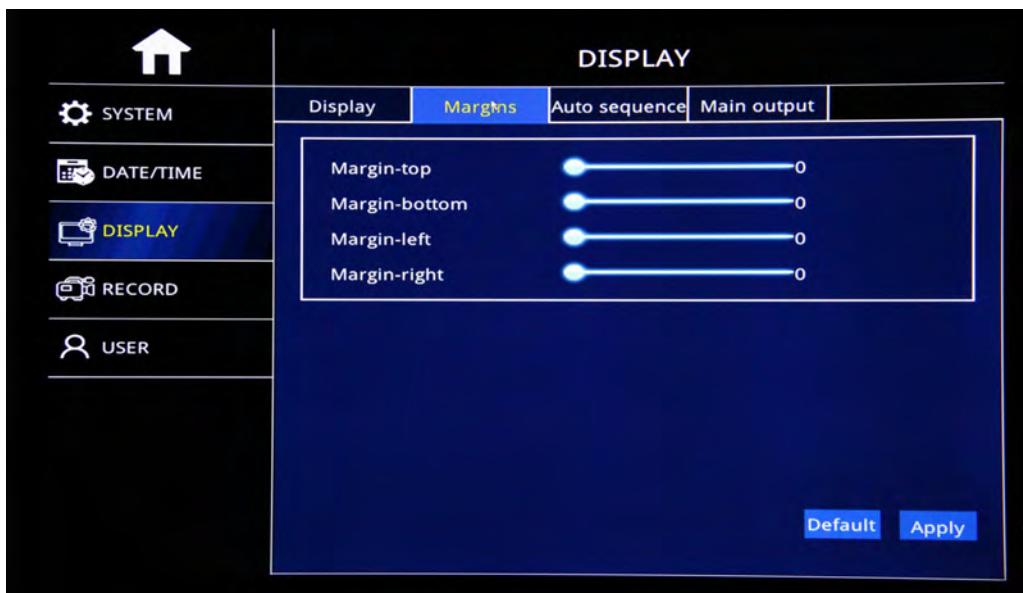
➤ Margin Setup：Settle Video Display Margin on Monitor

5.3.3　Auto Sequence

Optional 2 templates or Customize auto Sequence channel to cruise

- ➢ Sequence： Add auto Sequence No.
- ➢ Mode：1*1、2*2 Model Optional。
- ➢ Channel：Settle any non-repeating channels.
- ➢ Time：Cruise interval time:1-300S Optional.

5.3.4 Main Output
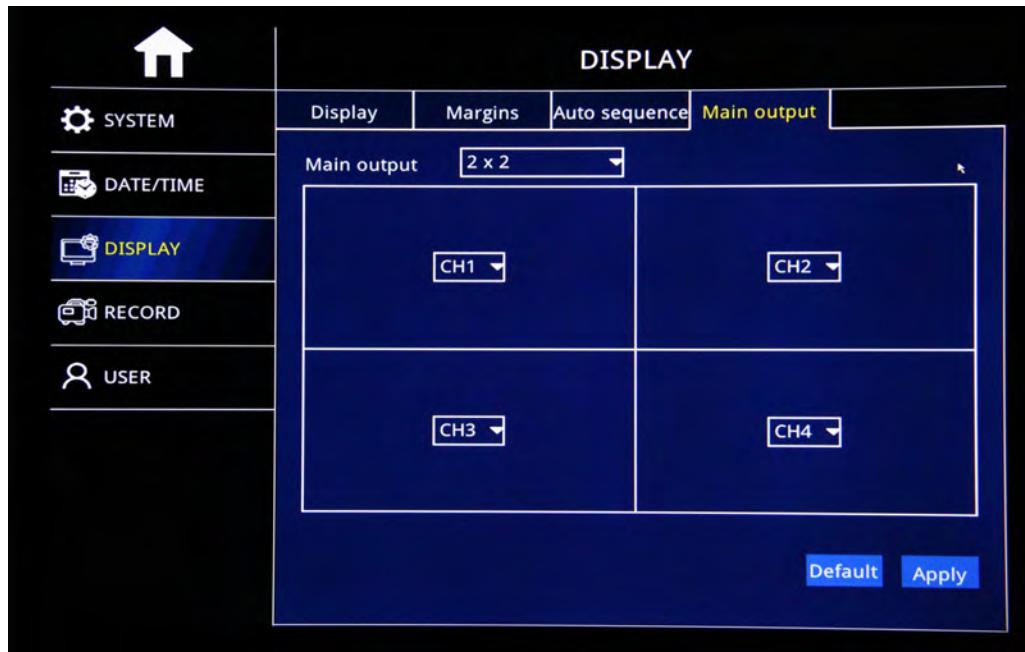
- ➢ To Set up default split screen to show on Monitor.
- ➢ Default Main output:2*2 output image, and 1*1 Output image Optional(Single Image)

5.4　Record Setup

3.4.1　Basic Setup

- ➢ Channel：Video Channel
- ➢ Enable：Check Enable to Start Channel record function, or No Record
- ➢ Audio：Check Audio to start Audio record function or No audio record
- ➢ Record Mode："Always" and "Schedule" Mode Optional.
- ➢ Copy：After one channel setup well, copy the channel same setup to specific channel or all channels.

5.4.2　Bit Rate

➢ Channel：Video Channel

➢ Resolution：CIF/720P/1080P Optional

➢ Frame Rate：PAL：1-25Frames，NTSC：1-30 Frames Optional

➢ Video Quality：Best，Better，Good，Normal，4classes Optional

➢ Copy：After one channel setup well, copy the channel same setup to specific channel or all channels.   Best,Better,Good,Normal

5.4.3   Schedule
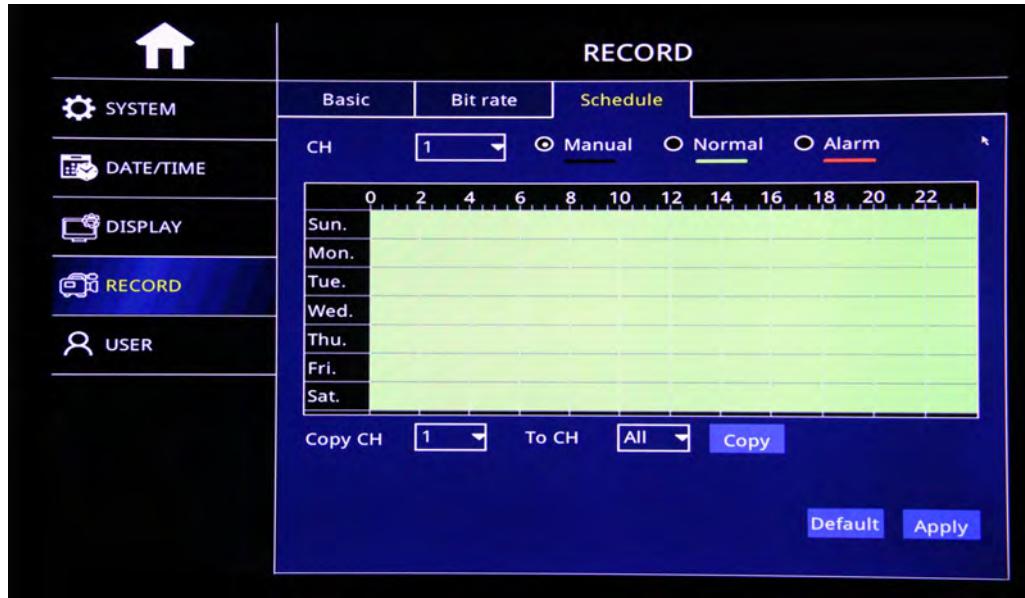
➢ After Stat up, Factory default real-time record

➢ Channel：Video Channel

➢ "Manuel","Normal"and"Alarm"Mode optional

➢ Double Click Record Setup Area to settle schedule time.

➢ Copy：After one channel setup well, copy the channel same setup to specific channel or all channels.

5.5 User Setup

5.5.1 Add Users

Add New user and configuration light

Basic：Setup User Name，Password，Retype Password,User Type
Authority：Settle the right
4 Advance Setup

6.1 Network Setup

6.1.1 Lan Setup
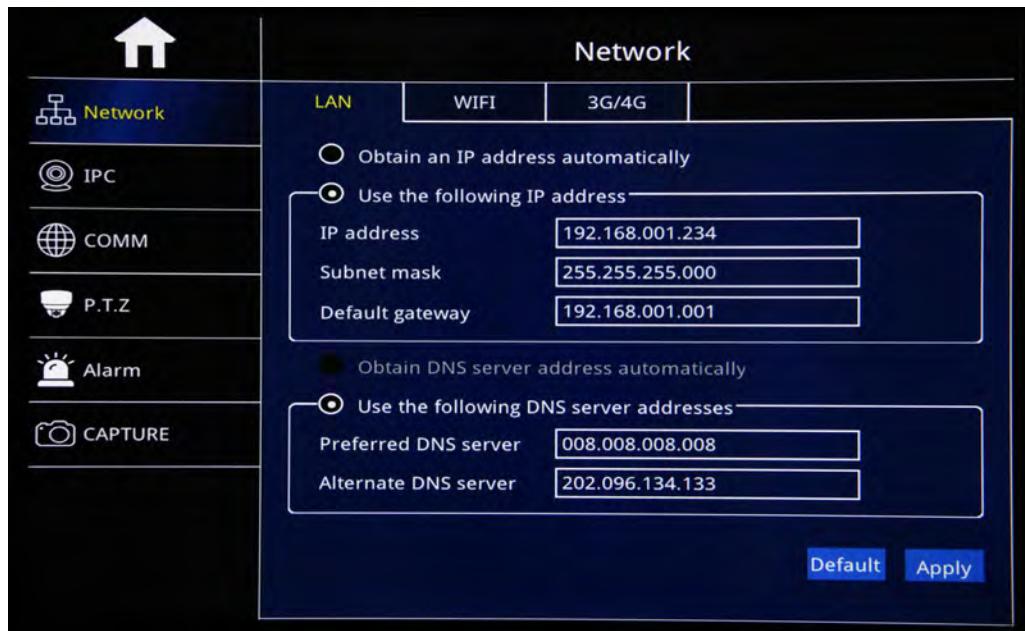
- ➢ Obtain an IP address automatically
- ➢ Settle Static IP: IP address,Subnet Mask, Default Gateway
- ➢ Obtain DNS Server Address automatically
- ➢ Settle DNS Server Address
- ➢ Preferred DNS Server：Input Preferred DNS Server,which is the same as DNS Setup of Lan of Computer.
- ➢ Alternative DNS Server:Input Alternative DNS Server,which is the same as DNS Setup of Lan of Computer.
- ➢ Noted：After Setup , click"Apply".

6.1.2 WIFI Setup

After "Enable"WIFI, Device will auto detect WIFI hotspot,like Mobile Phone to connect with WIFI.
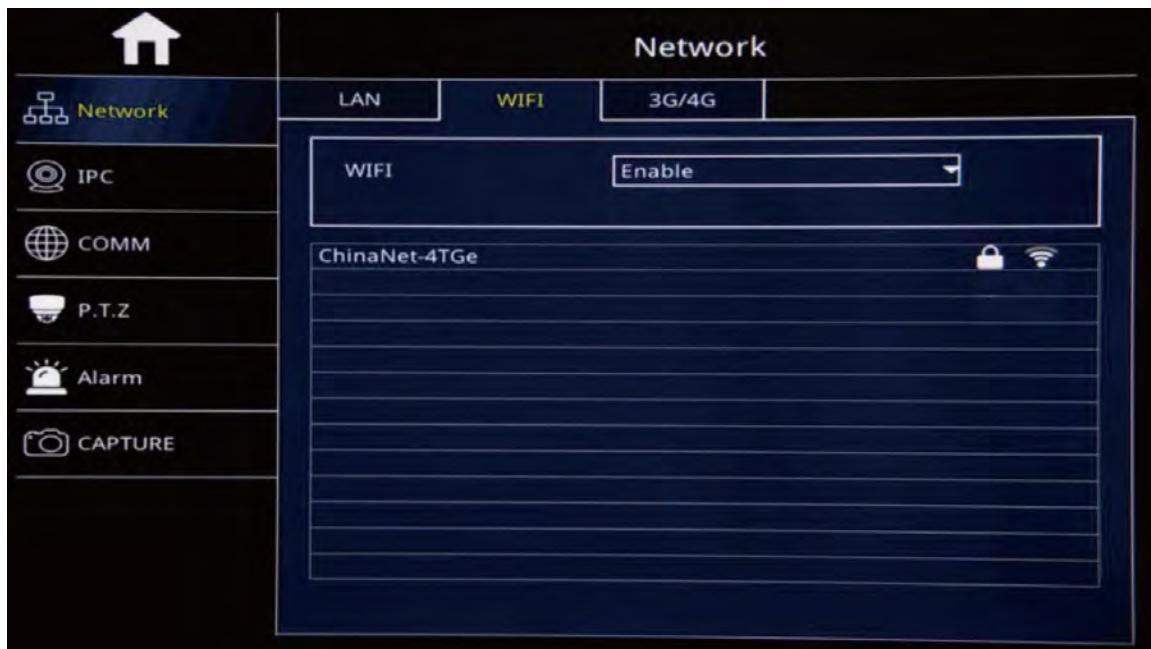
6.1.3 3G/4G Setup
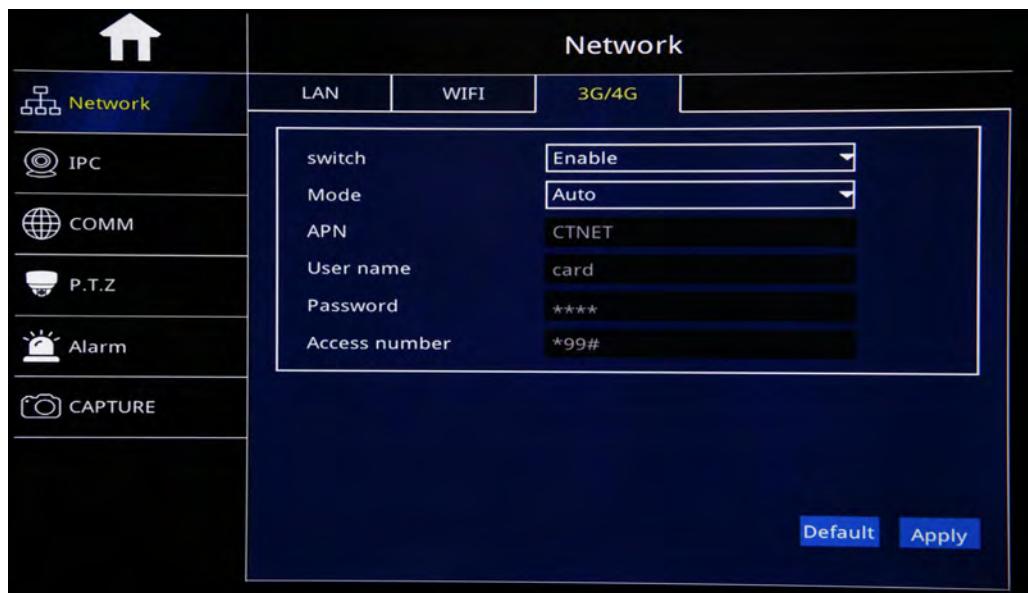
➢ Switch: "Enable":Start 3G/4G Function; "Disable": Shut off 3G/4G Function
➢ APN：Input APN of Sim card
➢ User Name: If yes, Pls kindly input Sim Card user name
➢ Password: If yes, Pls kindly input Sim Card Password
➢ Access Number: Input Dial-Up Number of Sim card

6.2 IPC Cams Set up

Check Channel and click " " Search Button and search out IPC cams address list

Check the IPC to set up and click "Ok"

Add IPC address by manual: Click Edit Button" "to add IPC cams.
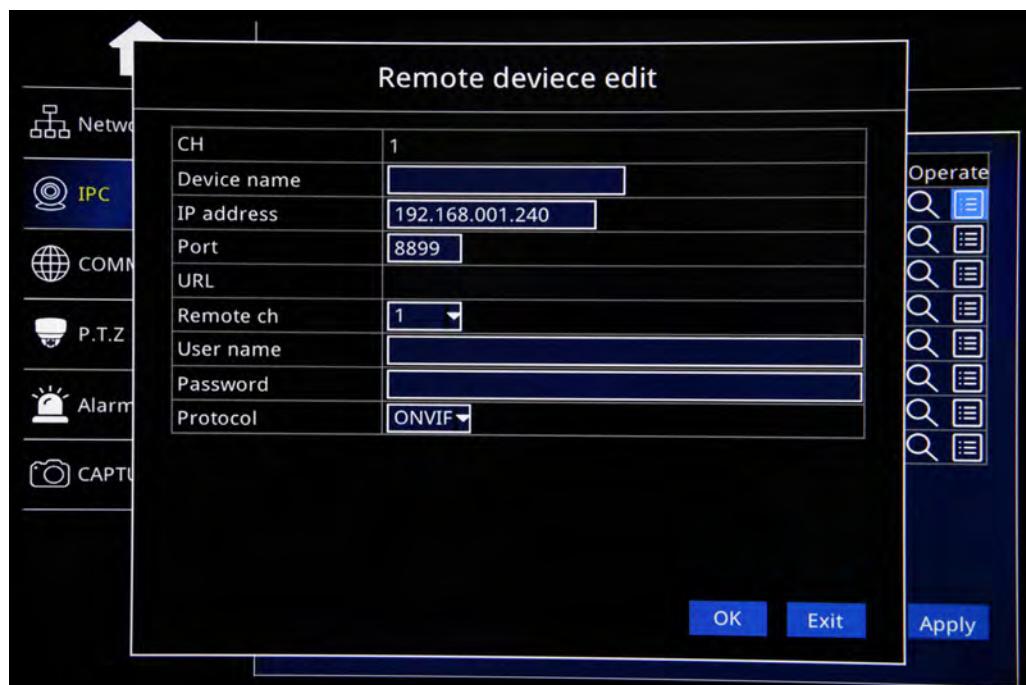
- CH：IPC cam Relative Channel
- Device Name：IPC Cam Name
- IP Address：Camera IPC address
- Port：IPC Cam Port
- URL:(Null)
- Remote CH：No Use
- User Name：IPC Cams User name
- Password：IPC Cams Password
- Protocol：Default ONVIF

6.3Network Application

6.3.1 CMS
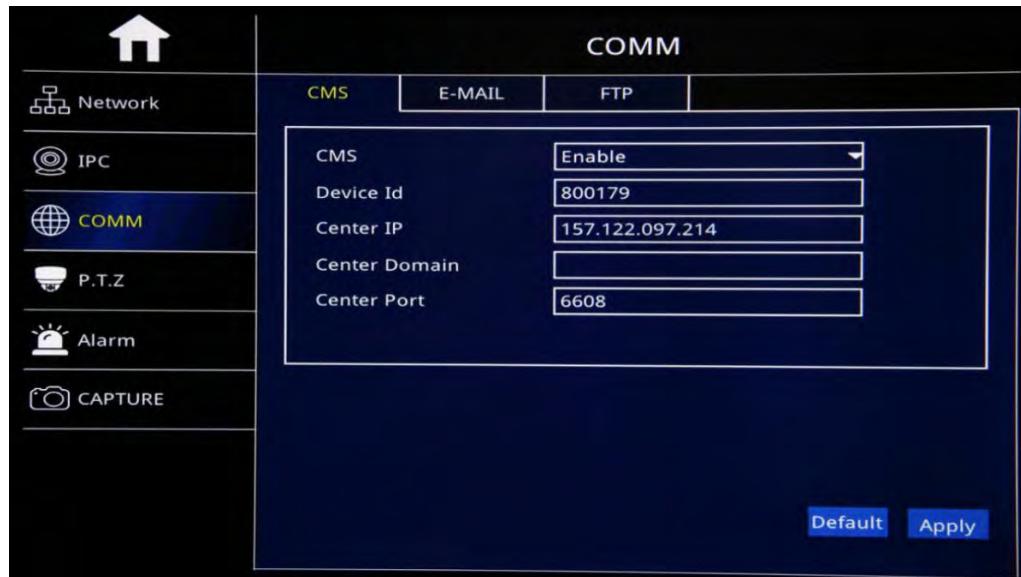
- CMS：Enable：Start CMS Server Function，Disable： Stop CMS Server Function.
- Device ID：Device Unique ID
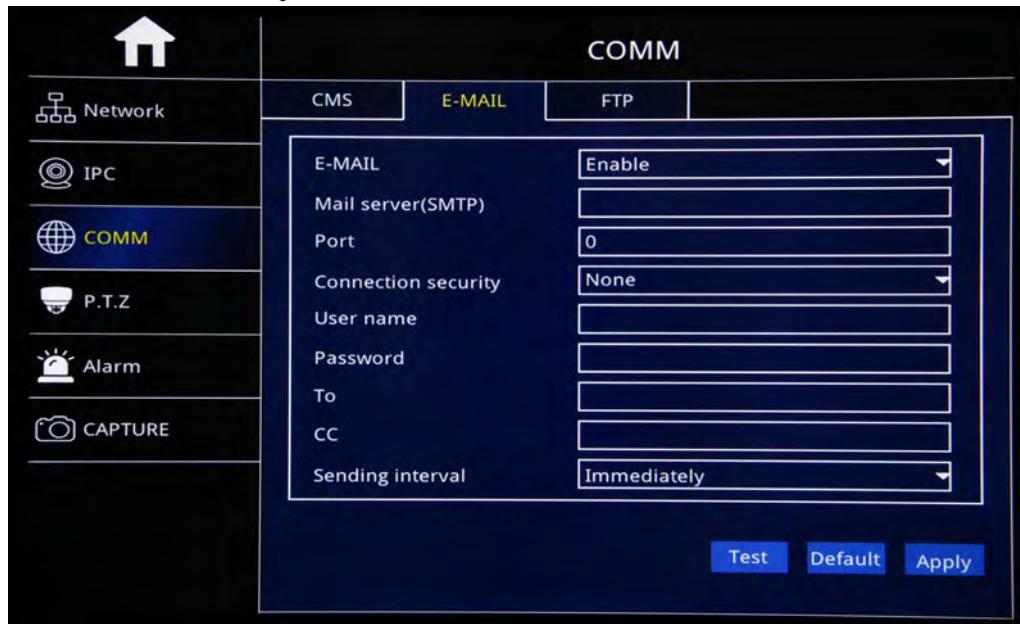
- Center IP: Server IP address
- Center Domain Name：If use Server IP, Do not Need to set up
- Center Port：Default Port:6608

6.3.2 E-MAIL

- E-MAIL：Enable： Start E-Mail function，Disable:Stop E-mail function.
- Mail Server(SMTP): Input Settle Email's SMTP

➢ Connection Security: "None","SSL/TLS"Optional
➢ User Name: Email's address
➢ Password： Email's Password
➢ To: Receiver's Email address
➢ CC: Copy Email's address
➢ Sending Interval: Immediately
➢ After Setup, click"Apply"

6.3.3 FTP
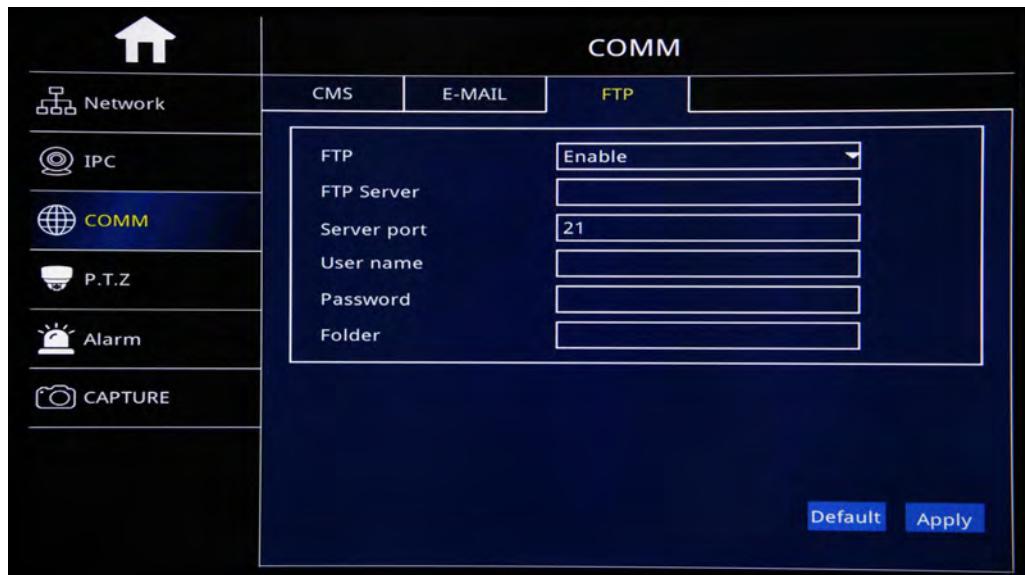
➢ FTP：Enable: Start FTP Function, Disable: Shut off FTP Function.
➢ FTP Server：Input FTP Server （CMS Server IP）
➢ FTP Port：Input FTP Port.(Find in Server configuration file)
➢ User Name：FTP User Name （CMS user name）
➢ Password：FTP Password (CMS Password)
➢ Folder：Name FTP Folder Name
➢ Noted：Alarm linkage FTP,Transfer video,Timing Snapshot,linkage to FT
➢ To transfer Picture.

6.4 P.T.Z
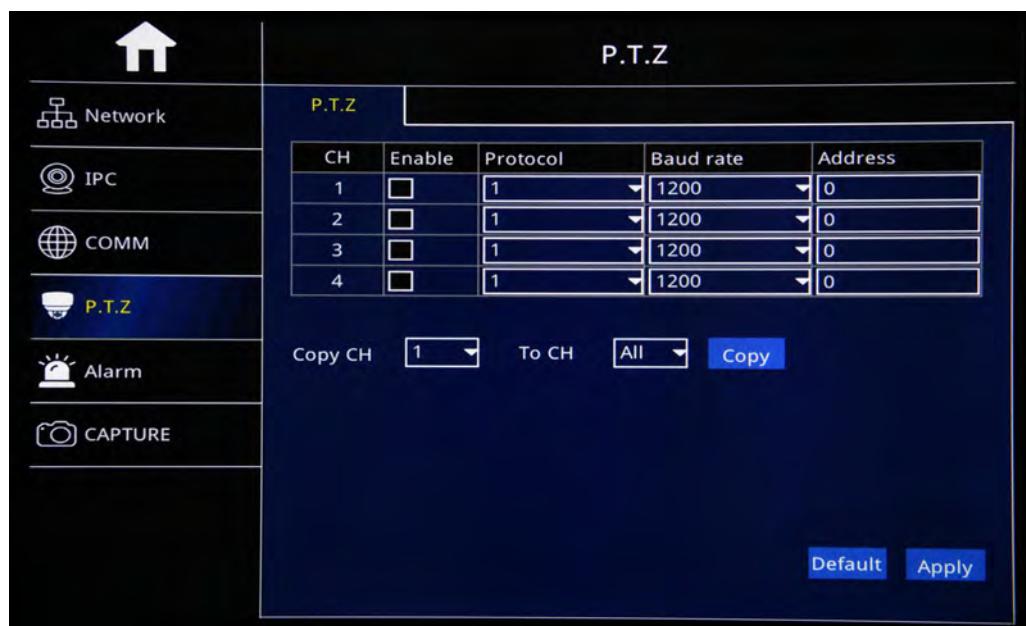
- ➢ Channel：Video Channel
- ➢ Enable：Check to Start PTZ function
- ➢ Protocol："PELCO"and"PELCO-D"Optional
- ➢ Baud Rate：Relative PTZ Baud Rate，"1200"、"2400"、"4800"、"9600"
- ➢ Address：Relative PTZ Address
- ➢ Copy: Copy PTZ Setup to specific PTZ or ALL PTZ
- ➢ After Setup, Click"Apply".

6.5 Alarm Setup

6.5.1 Motion Detection

Alarm Trigger when there is an object movement in the specified detection area.
- ➢ CH：Video Chanel。
- ➢ Enable：Check to start Motion detection function
- ➢ Sensitivity："1"——"8"Optional,"1" means highest Sensitivity，"8"means lowest Sensitivity
- ➢ Area：Settle Motion detection area

- Green Color：Represent Motion detection area,while object move,
- It will move.
- Grey：No-Motion detection Area,No Alarm trigger
- 5)Schedule：Pls kindly refer Page39 Sensor Alarm Setup

Trigger Setting：Pls kindly refer Page40 Sensor Alarm setup.
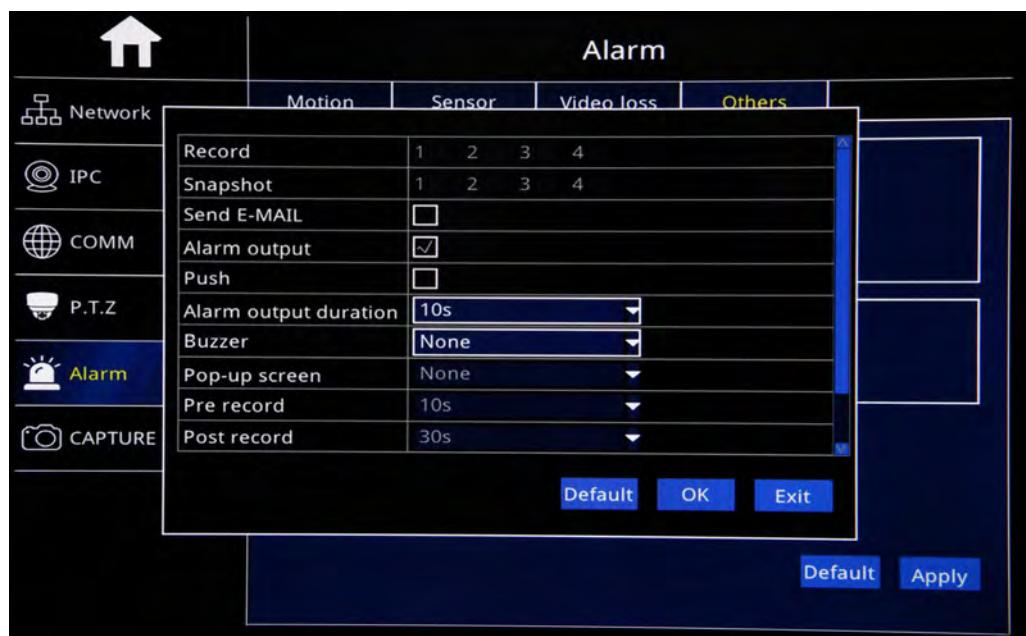
6.5.2 Sensor Alarm

I/O Sensor Alarm

- ➢ ID：Sensor Serial No.。
- ➢ Enable：Check to start Sensor alarm function
- ➢ Type：No.O: Keep Open, NO.C: Keep Close to setup
- ➢ Sensor Name：Edit Sensor Name
- ➢ Settle Alarm time range, Check "None" or Alarm to
- ➢ To drag mouse to settle time zone, Red Color means Alarm time,
- ➢ Black Color means No Alarm time。
- ➢ Copy: Copy the same setup to specific CH or All CHs.
- ➢ After Setup, click "OK".

Trigger :Alarm Linkage While alarm trigger，and click setting to go on setup,like the picture below:

➢ Record：Check relative channel for alarm linkage record
➢ Snapshot：Check relative channel for alarm linkage snapshot
➢ Send E-mail：Check to send settled Email while alarm trigger
➢ Alarm output：Check to start Alarm linkage output function
➢ Alarm Output Duration:10S,30S,1 minute,3 minutes,5 minutes,10 minutes，15 minutes,30 minutes optional.
➢ Buzzer：None,10S,30S,1 minute,3 minutes,5 minutes,10 minutes，15 minutes,30 minutes optional.
➢ Pop-Up Screen：Settle Amplifying Channel,1-16 channel Optional
➢ Pre-Record：None,10S,30S,1 minute,3 minutes,5 minutes,10 minutes，15 minutes,30 minutes optional.
➢ After Setup, click "OK"

6.5.3 Video Loss

Alarm Trigger while Video lOss

➢ CH：Video Channel

➢ Enable: Check to start Video loss function

➢ Trigger：Alarm Linkage while alarm trigger and click"Setting" to set up. Pls kindly refer page 40 to go on setting.
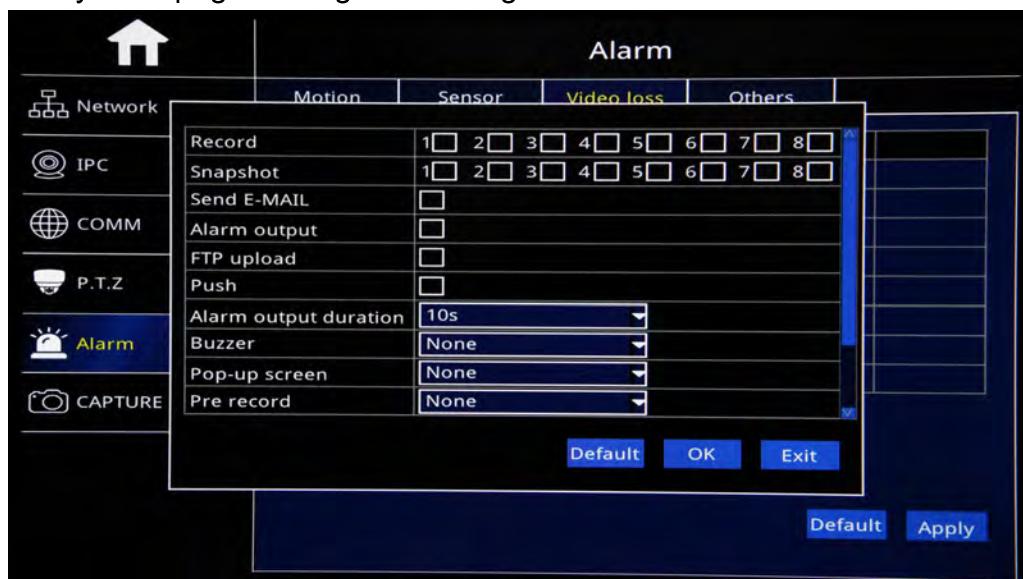
6.5.4 Other

➢ Disk Error：Enable: Start Disk Error Alarm, Disable: Shut off Disk Error Alarm
➢ Disk Full:Start HDD Full Alarm, Disable: Shut off Disk Full Alarm
➢ Trigger: Alarm Linkage while alarm trigger and click"Setting" to set up. Pls kindly refer page 40 to go on setting.
➢ IP address conflict：Enable: Start IP address conflict alarm,Disable: Shut off IP address conflict alarm
➢ Trigger: Alarm Linkage while alarm trigger and click"Setting" to set up. Pls kindly refer page 40 to go on setting.

6.6 Capture
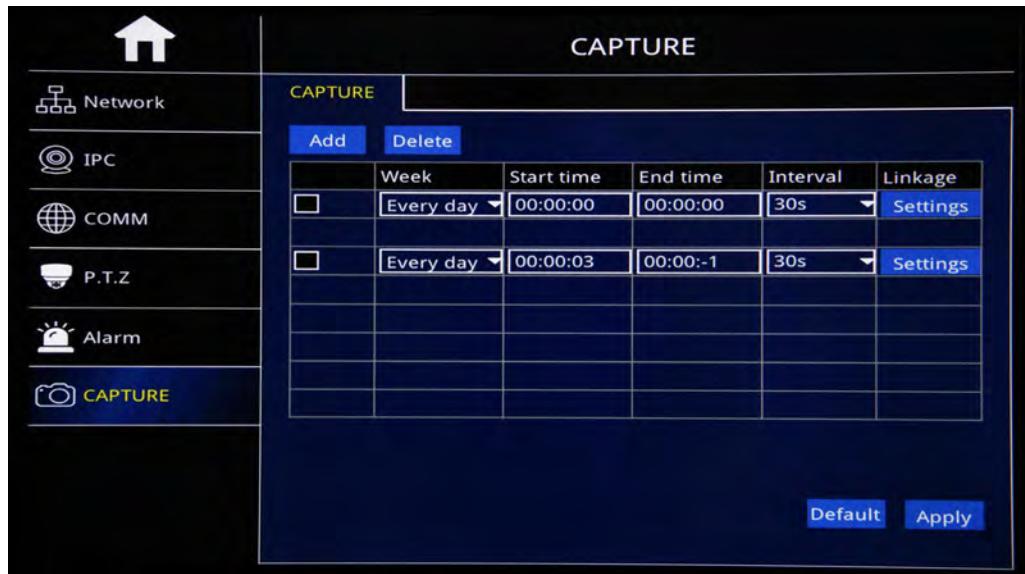
➢ Click "Add" to go on "Capture" setup.
➢ Image Processing: Send E-mail/FTP Upload Optional
➢ Channel Linkage: Settle linkage snapshot channels
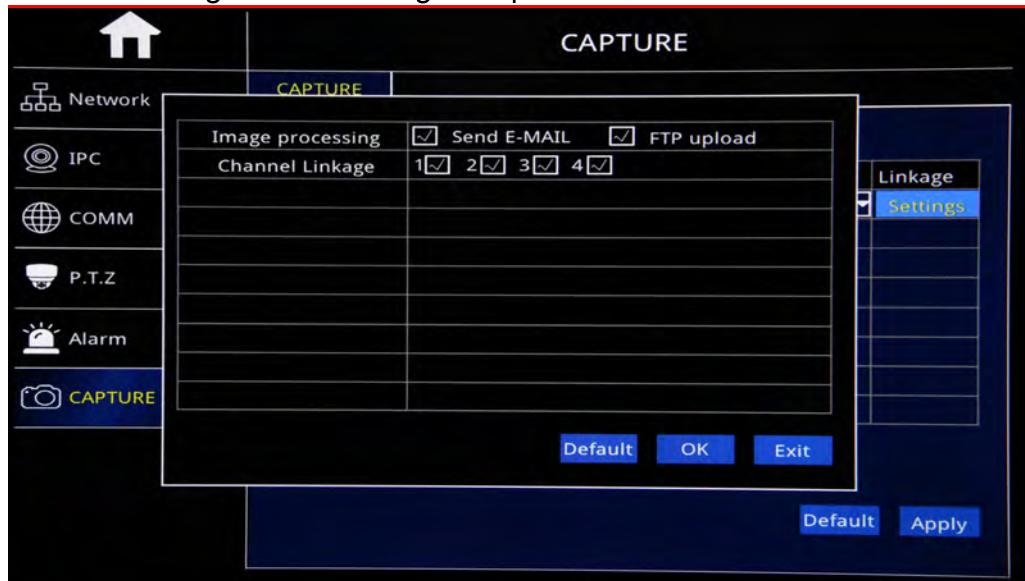
7 Search
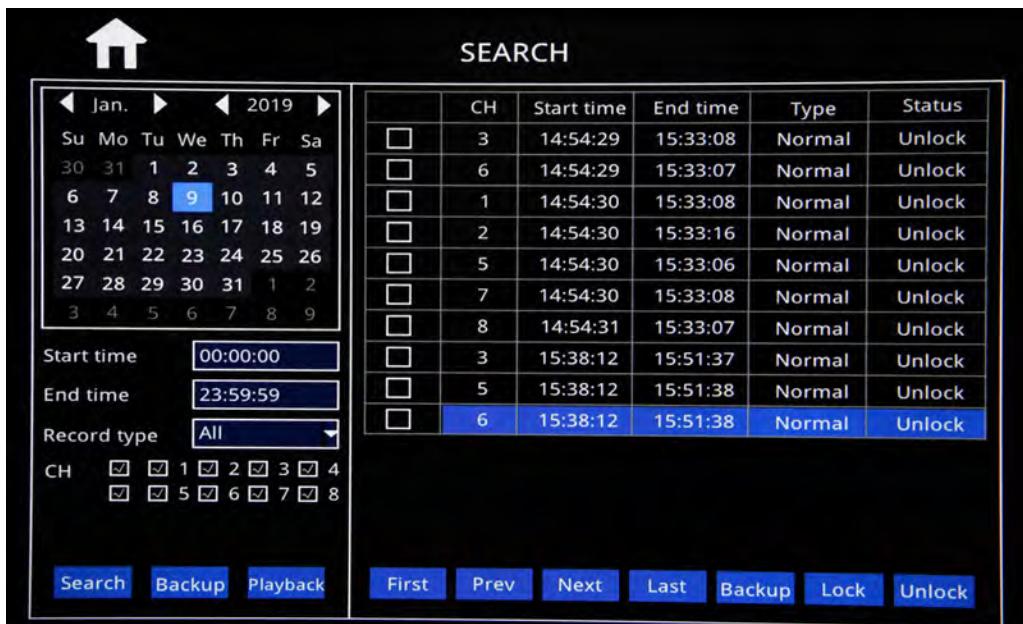
➢ After Login "Search",will auto search out current recorded video file and show on the right corner,like the picture above,If NO current recorded video, will be empty.

➢ Calendar in Left Corner:

   A.Green Color Date means it has recorded video,

   B.Blue Color Date means it is Current Day video,

   C.Grey&White Color Date means it has not video,

   D.Red Color date means it has Alarm videos

   Noted: For the1st time to login, System show Blue Color date,ie.Current Day.

➢ Record Type：All, Alarm and Normal Optional

➢ CH：Settle CHs to Search；

➢ Search: After the setup above(including Start time and End time Setup), Click search to search out Blue Color Date video and show on right color box.

➢ Back UP: Back Up recorded video into U-Disk or external HDD in H.264 or AVI format.

➢ Playback:After setting the "Start time" and "End time",Click "Playback"to show the picture as follows:

"Clear": Clear out already checked Channels once a time
"Playback": Playback already checked channels

 After click "Playback" Button, it will show the Playback GUI below,which has 2 parts: Control Bar and Time Bar。

Control Bar:

: Exit Playback

: Reduce—Zoom In Control Bar

:Minimize—Zoom Out Control Bar

:Fastback—Fast Play backward

:Pause

: Playback Frame by Frame

: Slow Play

: Fast forward Play

:Digital Zoom—Drawing a Special area to zoom int

:Volume—Adjust audio output volume

:Cut out Video, 1st click to start Cut out video and become blue; 2nd Click to end cutting

function and return back to normal

:Back up the playback video

Time Bar:

: Zoom Out Time Bar

: Zoom in Time Bar

Time Area:

White Number means Hour, like the example above:12,13,14,15,16,17

Green Number Means Minutes, Like the example above:15,30,45

Video Area:
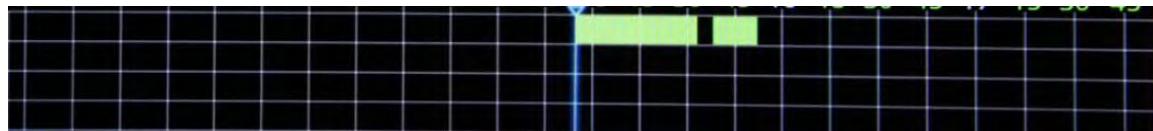
Black Color：No Video recorded

Green Color： Normal Video recorded

Red Color: Alarm Video recorded

➢ Lock：Lock file to protect and No delete. Check Video file and Click "Lock",the "Status"shows "Lock", Done.

➢ Unlock：Unlock the lock file to release the protection. Check Lock file and click "Unlock", "Status" show "Unlock", Done.

8 Log Query

- ➢ Type: "All", "Alarm" and "Device"Operation Logs Optional
- ➢ Back Up: Click Back Up button to copy Relative Logs into U-Disk via USB Port
- ➢ Clear： Clear Off searched Logs on Right corner box.

9 Vehicle

9.1 Vehicle info

- ➢ Device ID：Device ID to connect with Platform for remote monitoring； （Only Administrator Account can edit）
- ➢ Company Name：The company Name which device belongs to
- ➢ Vehicle Licence：Vehicle Licence Plate Number where device is installed.
- ➢ Driver Name：Driver Name of the Vehicle；
- ➢ Line Number：The Line Number of the Vehicle Running

9.2 Power Setup

- ➢ Power Mode: Ignition /Timer Mode Optional and Default Ignition Mode.
- ➢ Ignition Mode: After the ignition start, device start to record at the same time.
- ➢ Timer Mode: The device start to record at the settled time
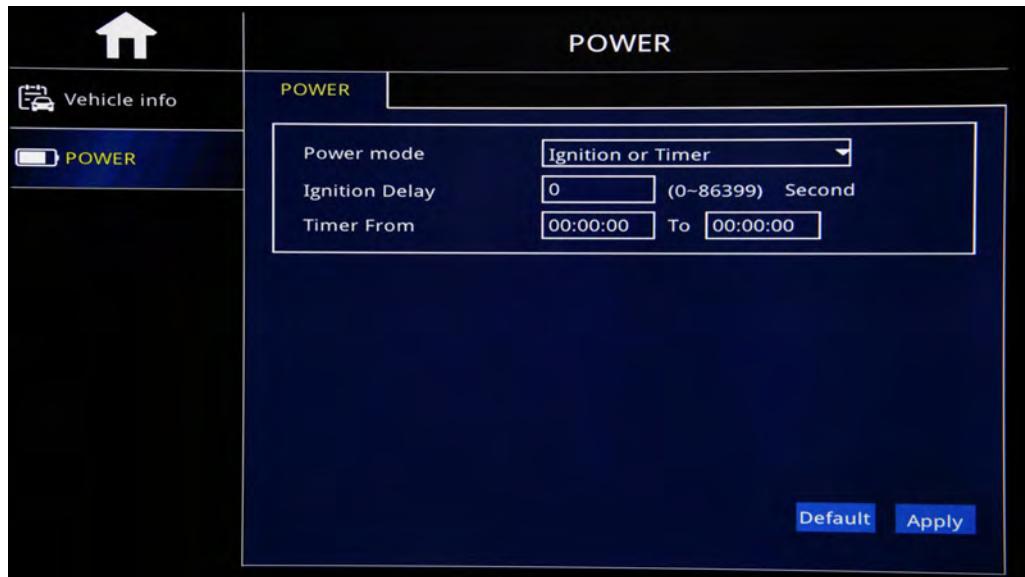
- ➢ Ignition Delay：While user check Ignition Mode
- ➢ Can settle up ignition Delay, time Ranging 1s to 86399s, and click "Apply",lwhich means after ignition off, the device keep work until at settled time and shut off automatically
- ➢ Time from..to：While User choose Timer Mode, Can settle the Start time
- ➢ And End time and click"Apply", Which means that Device will start　at
- ➢ Start time and shut off at end time automatically.
- ➢ Noted: The Function only can be effective after restart.

➢ From：Settle Start time, the device will start at the settled time automatically.
➢ 2.To：Settle End time, he device will shut off at the settled time automatically.

10.HDD
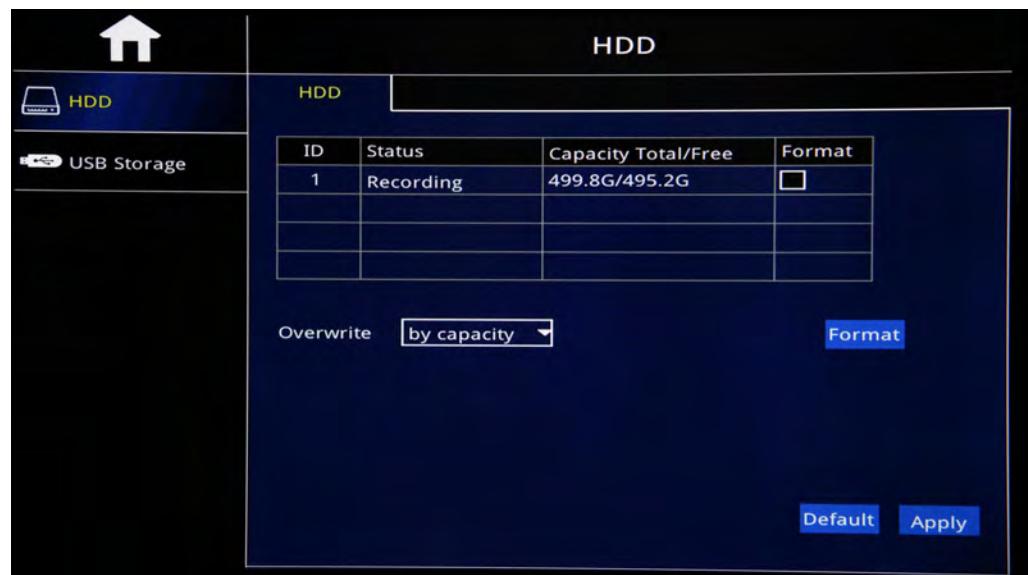
➢ HDD：Showing HDD status,Capacity etc info.
➢ Overwrite："By Date"，"By Capacity" and "Never" Modes Optional
➢ Format：Check the relative HDD to click "Format" to Format HDD
➢ USB Storage: Well connected U-Disk with USB Port to back up recorded video/Upgrade,support Hot Plugin/Plug out.
➢ Noted: Need Format for 1st time use.
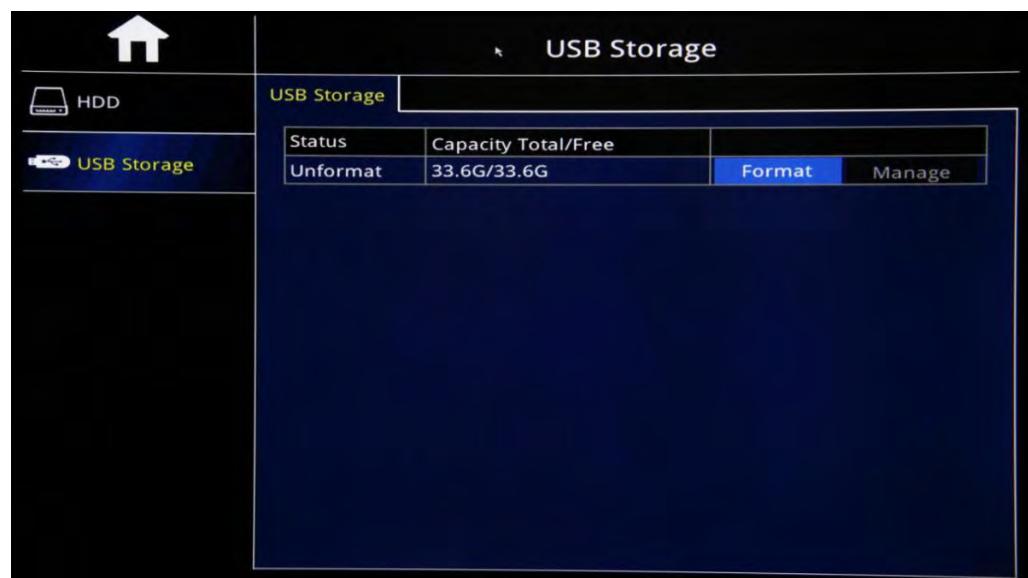
11 Information

11.1   Device

- ➢ Device Name：Check Device Name
- ➢ Device ID：Check Device ID
- ➢ Device Serial No.：Check factory Device Serial No.
- ➢ Firmware Version：Check Firmware Version
- ➢ MAC address：Check Device MAC address
- ➢ QR Code：Scan Device Serial No and download Phone APP.

11.2   Network Status

11.2.1 LAN Status
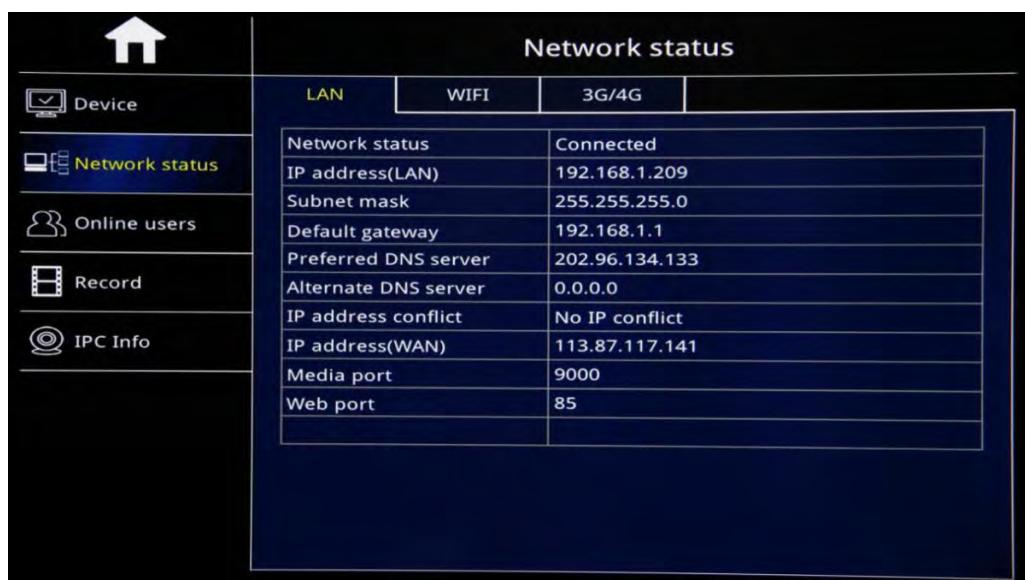
11.2.2 WIFI Status
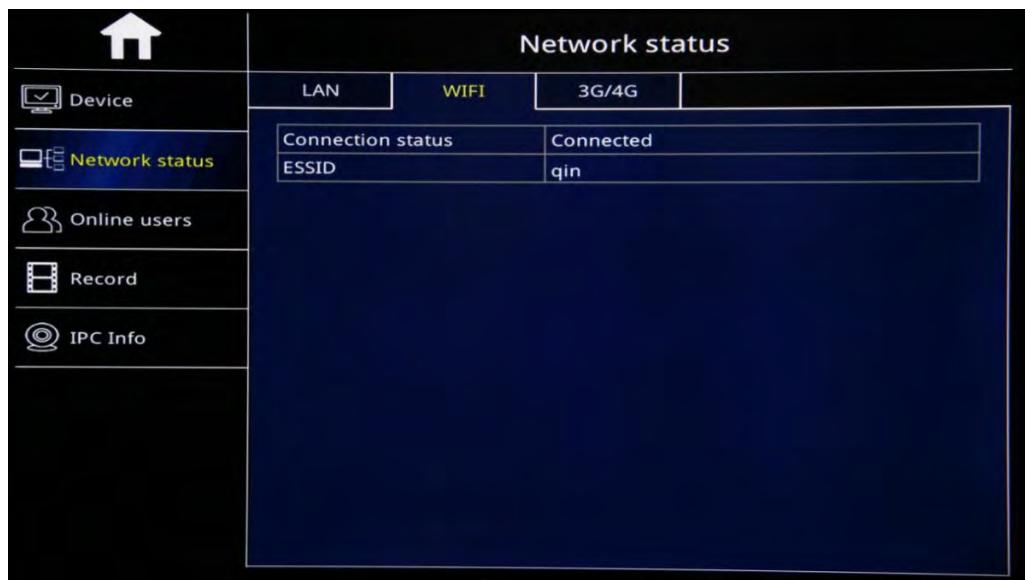
11.2.3 3G/4G Status
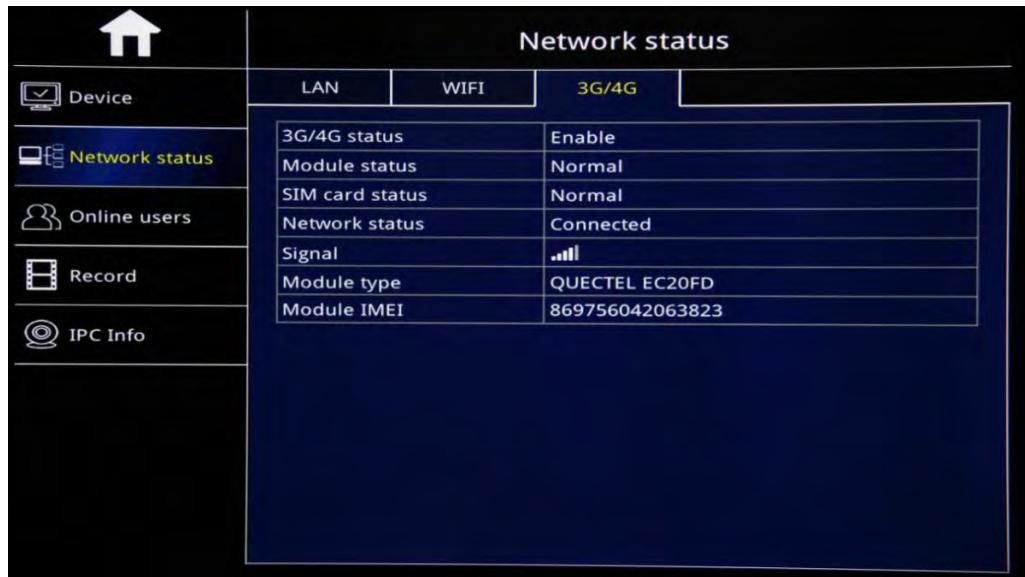
11.3 One Line Users

To Record users info to remote visit Device by Platform in Computer or Server, including User name,IP address, Login time and Disconnect time.
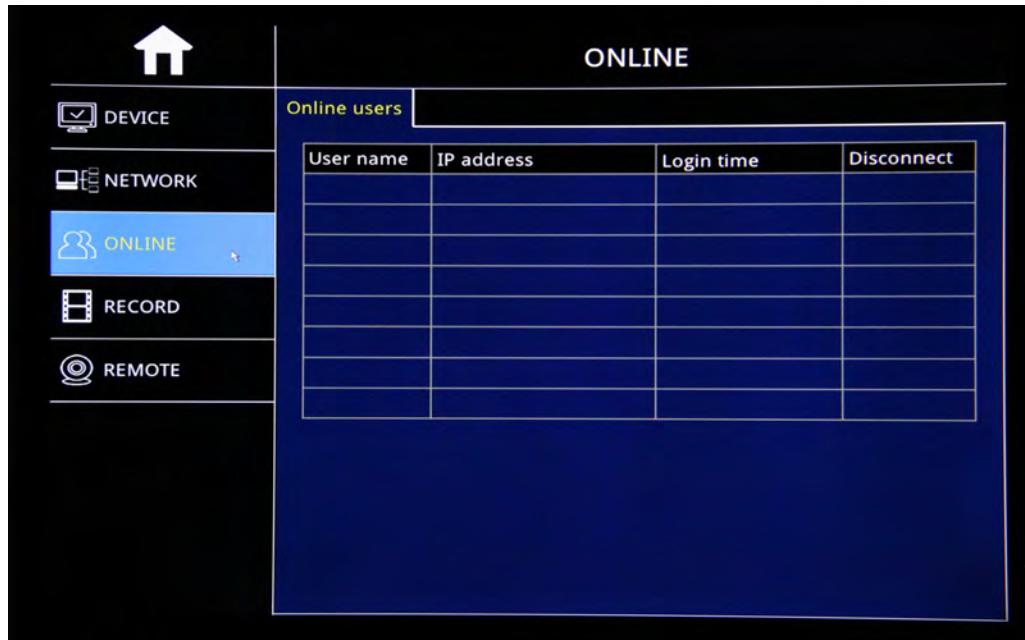
11.4 Record Info
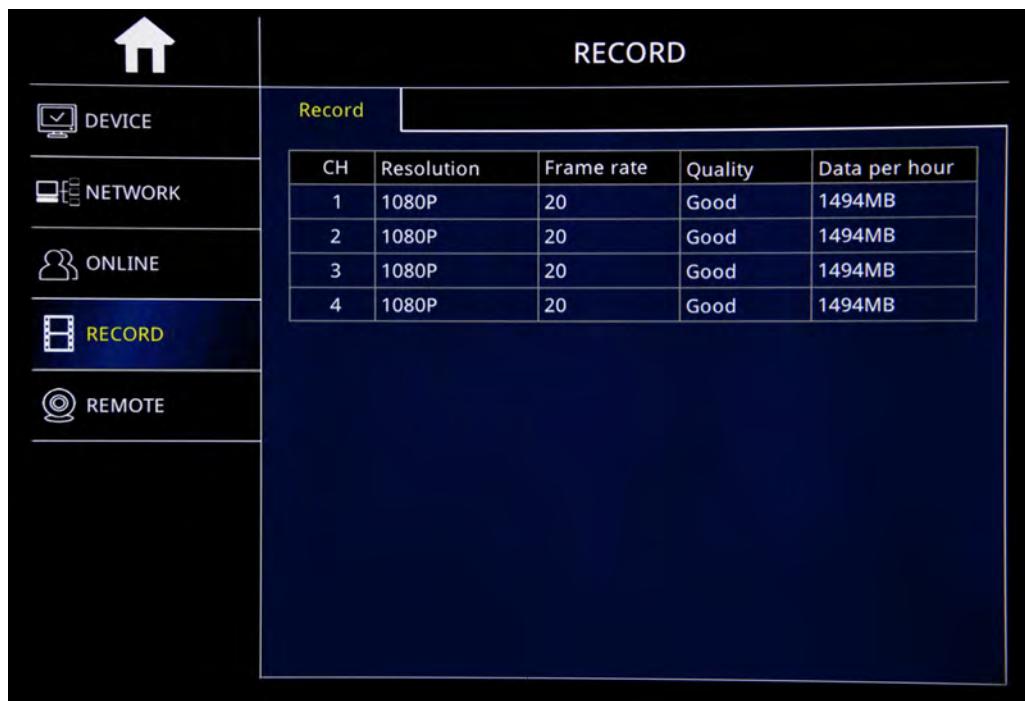
Based the Setup of Each Channel, including Resolution,Frame Rate and Quality to calculate how much date occupied per Hour of each channel, ie: data per hour.

11.5 Cam Status
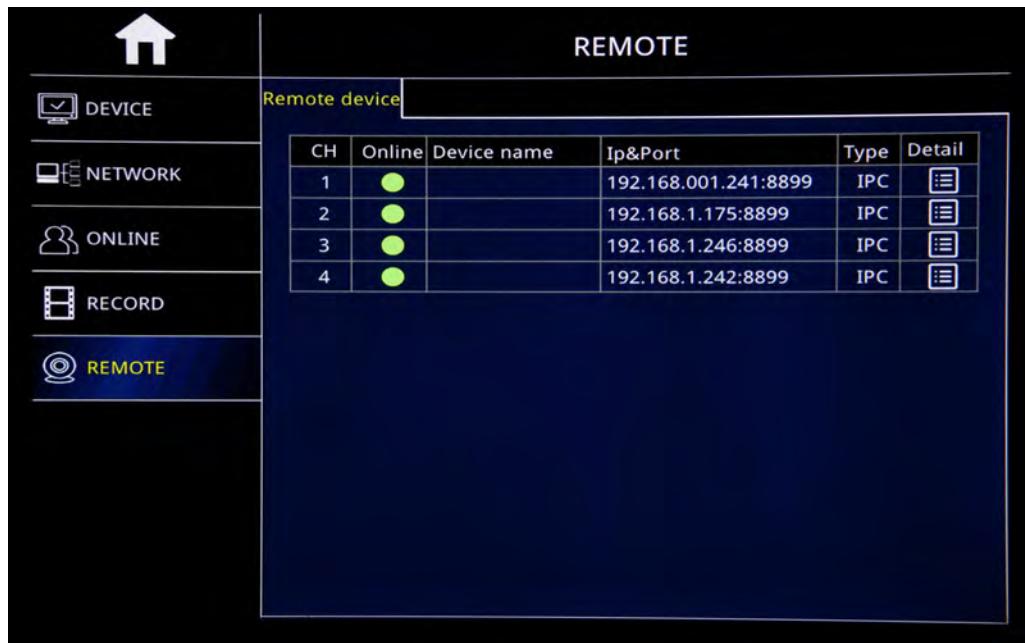
To Show Cams status, Cams device Name, IP & Port,Camera type and other detail info.

12 Maintenace

12.1Basic
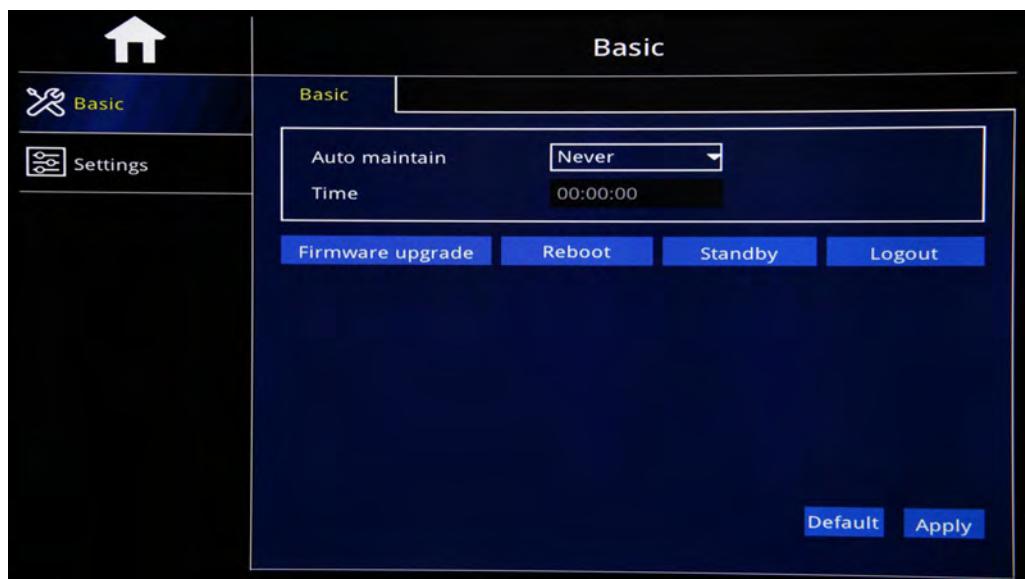
Auto Maintain
➢ To Settle Device Restart Maintain
➢ Never: Device never goes on Restart Maintain unless by manual
➢ Month: After choose " Month" Maintain, Will show a time Box to go on time setup,which means device will go on Restart maintain at settled time very Month

- Week:After choose " Week" Maintain, Will show a time Box to go on time setup,which means device will go on Restart maintain at settled time very Week
- Day:After choose " Day" Maintain, Will show a time Box to go on time setup,which means device will go on Restart maintain at settled time very Day
- 10.1.2 Firmware Upgrade
- To Create a Folder and Name"upgrade"in U-Disk，Copy upgrade file into the folder
- 2）Insert U-Disk into USB Port of Device, and Click "Firmware
- Upgrade". System will Scan U-Disk and start to upgrade. While
- Upgrading, Do not put out of U-Disk
- Noted：After set up, click"Apply".

Reboot
Reboot the device
Standby
After click Standby, Device come into sleep mode.
Logout
Click"Logout" and "OK"to logout system,next time,need to input password to log in

12.2　Maintain
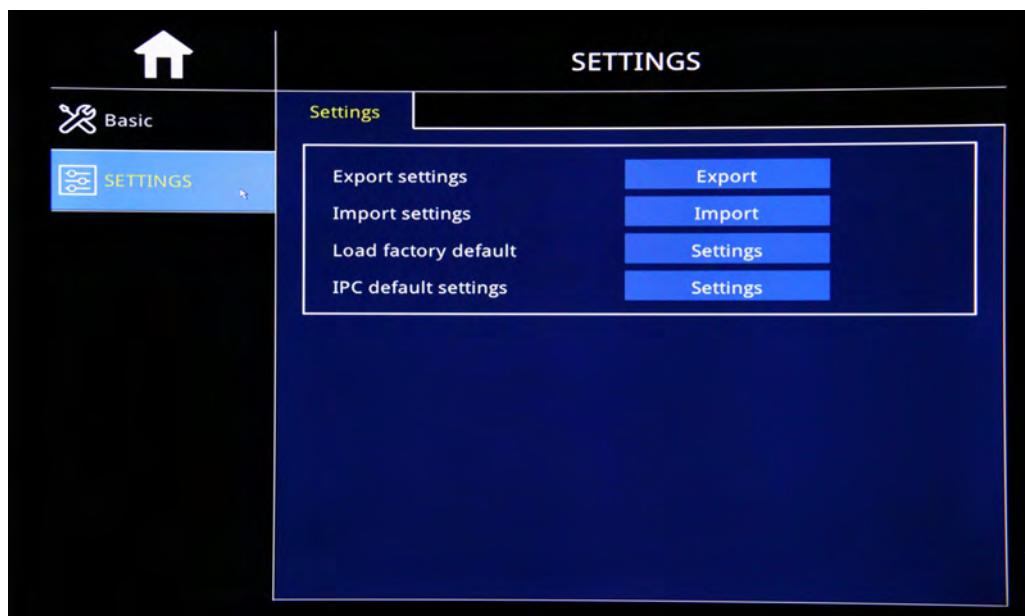
- **Export Setting：**Copy Device Setup into U-Disk to import the same setting into Other devices
- **Import Setting：**Import other device setting into the device via U-Disk.
- **Load Factory Default：**
  Load Factory Default of System Setup, Display setup,Maintain Setup,Alarm Setup,Network setup,Time Setup,Record Setup etc,which you can check them separately or ALL and click" Apply" to make it effective.

- ➢ **IPC Default Settings：**
    Load IPC Default Setting of System, Display,Image,Stream and
    Alarm,which can check and click"Apply"to make it effective.

FCC WARNING

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception,

which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-- Consult the dealer or an experienced radio/TV technician for help.

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum 20cm distance between the radiator and your body: Use only the supplied antenna.