Honeywell

HD Network Box Camera

Operation manual

HICC-1600T

HICC-2600T

Contents

CAUTION

- Non-technician should not try to operate this camera before reading this manual carefully. (This manual are subject to change without prior notice.)

- Cut the power supply off before operating the device to avoid damage caused by mal-operation.

- Interior of the camera are precision optical and electrical instruments. Heavy pressure, shock and other incorrect operations should be prevented. Otherwise, may cause damage to product.

- Please do not use the product under circumstances where the limits exceed the maximum specified temperature, humidity or power supply specifications.

- Contents in this manual may be different from the edition that you are using. Should any unsolved problem occur given that the product is used according to this manual, please contact our technical support department or your product suppliers.

- This manual content will be updated unscheduled, our company reserves the right to do manual contents update without further notice.

- The default username for this device is "admin", and the password is blank. Default IP address is 192.168.1.188, HTTP port is 80, device port is 5050.

PACKING LIST

Check if the packing contents match the packing list on receiving the products. The packing list is as below.

Part	Quantity
HICC-1600T / HICC-2600T	1
Mounting kit	1
Operation manual	1
Certificate of approval	1
CD	1

Contact your local retailer if anything is missing in your package.

1 Introduction

Performance Characteristics Features

- 720P @ 30fps [HICC-1600T]
  1080P @ 30fps [HICC-2600T]
- H.264, and MJPEG simultaneously (Dual-encoders)
- H.264 high profile – saves bandwidth and storage
- Built-in ICR for day & night surveillance without color shift
- WDR, 3DNR, DC IRIS, and Anti-flicker
- Comprehensive I/O ports: audio in, audio out, video out, Alarm In, Alarm Out, RJ45, TF, RS485 and USB
- Built in Power over Ethernet (PoE); 100Base-T Ethernet
- Event triggering – camera tampering, Motion detection, Network lose, Alarm Input, Video Lose
- Event trigger action – SNAP, Record video in TF, send to FTP, send to Email, External output activation, voice alert, go preset and tour, notify to CMS.
- Compatible with Honeywell Universal Surveillance (HUS) Platform and NVRs
- ONVIF Profile S compliant

2 Hardware Installation

System requirement

- LAN or WAN Internet to connect server, via PC Ethernet (network card or network cable) TCP/IP protocol （Windows /NT/2000/XP) connect , suggest Internet Explorer 5.0 version or later.

- Monitor and PC configuration:

    CPU: PⅢ or latter, RAM: 512M or latter(Above DirectX8.1)

- Monitor: 17",1024×768 resolution
- Operation system: Windows NT, Windows2000, Windows XP

Installation environment

Installation environment requirements

Far away from high-temperature resource and environment, improper place for ventilation; avoid install on shaky place.

Recommend operating environment

Temperature:-20 ~ +55℃
Humidity: Max 85%RH

Hardware installation steps

Please make sure LAN and WAN are working order before installation of the IP camera . After checked all the network system in good condition, keep your hands clean and dry, following the steps bellow.

- Unpack the box to check the goods
- Take out all goods which needed for installation from the box
- SD card installation steps as below.

Micro SD card installation site

Figure 2   1

Insert Micro SD card following the direction shown in Figure 2-2

Figure 2   2

- Connect related cables according to actual need (Power line, network line, audio line etc.)
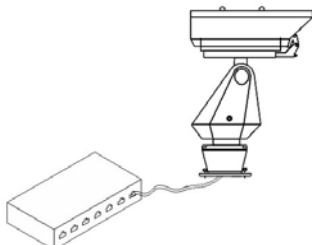- Connect the power supply

Please read the **Note** carefully, any question you should contrast us without hesitation.

Note:

- When open the box, please check all of parts carefully, confirm the parts in the box as same as packing list.
- Please read the user manual carefully before the installation.
- Make sure to turn off all the power when install the camera
- Please confirm the power transformer, avoid the device damage with unmatched power source
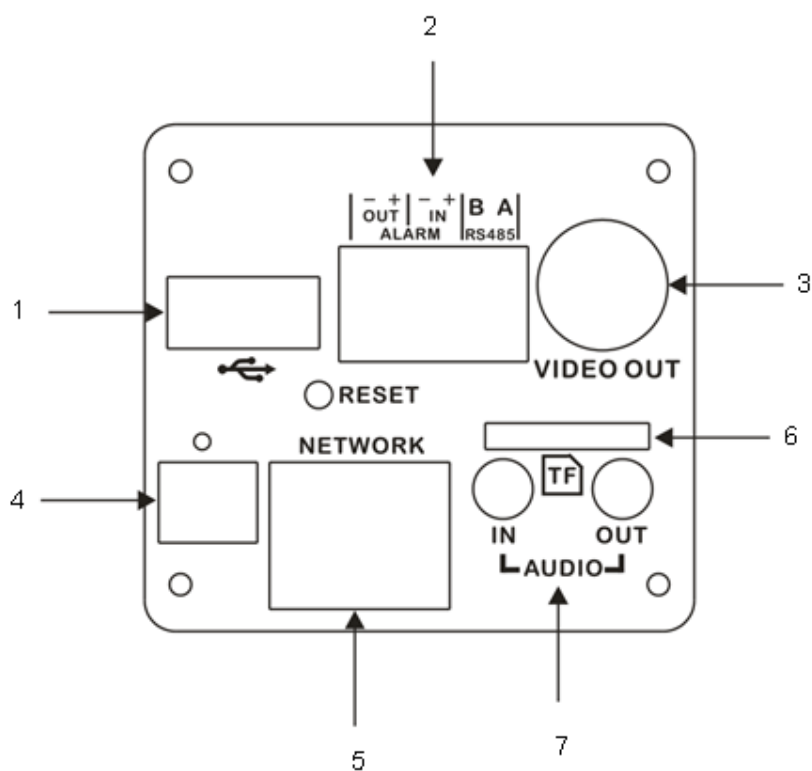
Network connection

- LAN connection
  Use one network line to connect IP camera with concentrator or switchboard of the LAN.

- WAN connection
  Use one network line to connect IP camera with Router or XDSL Modem/Cable Modem. as shown bellow.

- Connect the power supply

  The IP camera will be automatic start once power is connected.

Connection instruction

1. USB port
2. Alarm output, 485 A/B port
3. Analog video output
4. Power supply input, DC12V/ AC24V
5. RJ45 network port (Support POE power supply)
6. TF card
7. Audio input/ output

3 Operating Guide for IP Camera

Set the IE Browser

If you visit IP camera for first time, Please set the IE browser.

Setting method: Open the IE browser, click Internet Option into the "Security" page, click the "Custom Level", and then follow steps to set the

IE browser
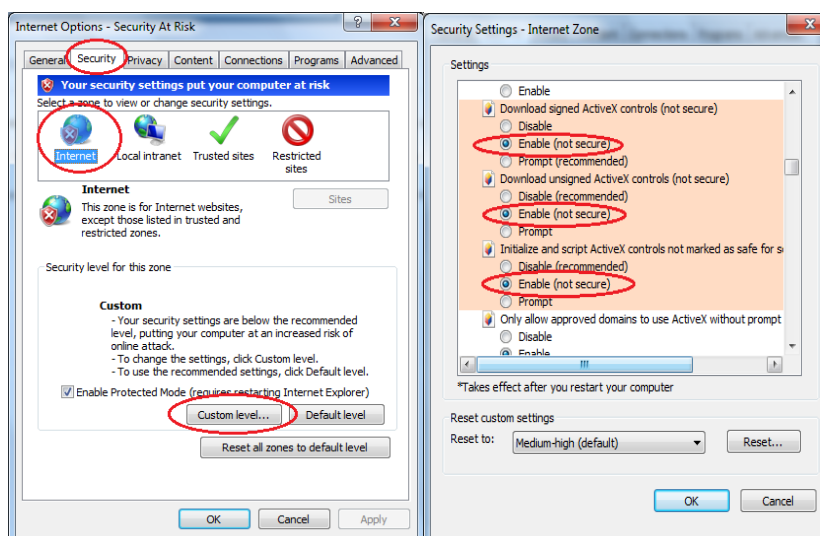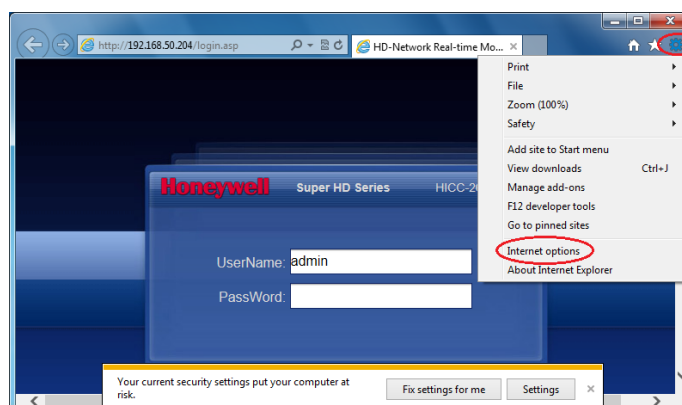
Download and Install ActiveX

You need to install ActiveX Control when you visit IP camera for the first time through IE browser.

ActiveX installing method:

Download installation

Input the IP address of IP camera (default address http://192.168.1.188.) in Internet Explorer to enter into login page, users can refer to the " NETWORK SETTINGS" under "SETUP" menu to set the network.

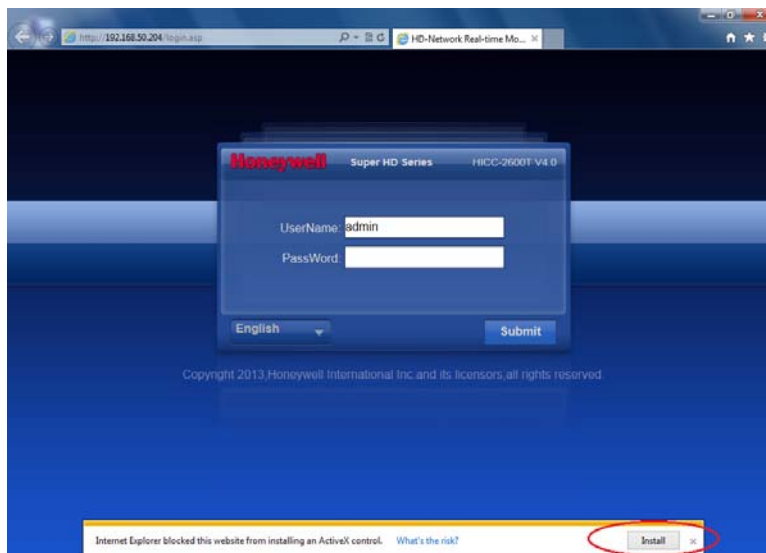Notice the below information hint, click " Install". As Figure 3-1

Figure 3   1

A file download dialog will pop out, click "Next" to installation. As figure 3-2.

Figure 3   2

Select the ActiveX installation and storage file, the default installation and storage file is c:\Program Files\webactivex, and click "Next" to enter next dialog. As figure 3-3
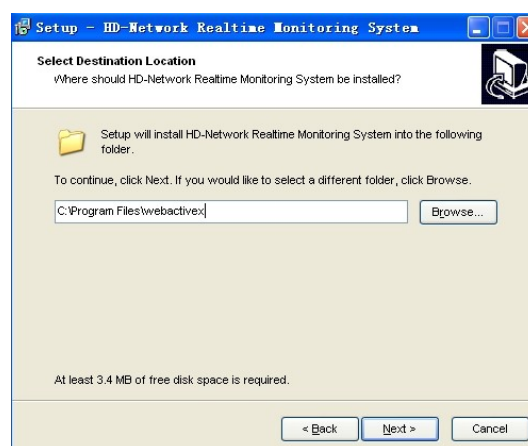

Figure 3-3

Click " Install" to enter into the next dialog. As figure 3-4.

6

Figure 3-4

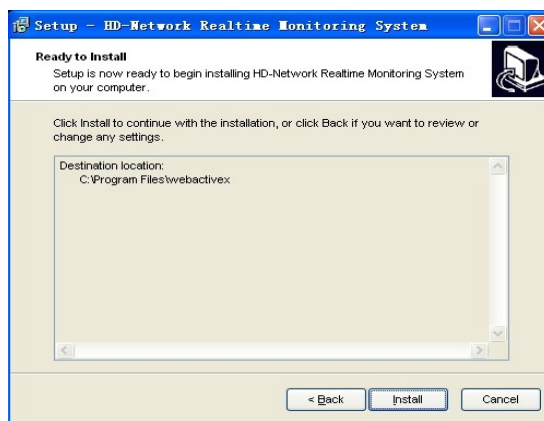Click "Finish" to complete the ActiveX installation. As figure 3-5.

Figure 3-5

Login

Reopen Internet Explorer after ActiveX installation completes, input IP address(http://192.168.1.188,) of the IP camera to turn to login page, enter username (default setting is admin) and password (default setting is 123456), then click "Submit" to go to main interface. As figure 3-6.
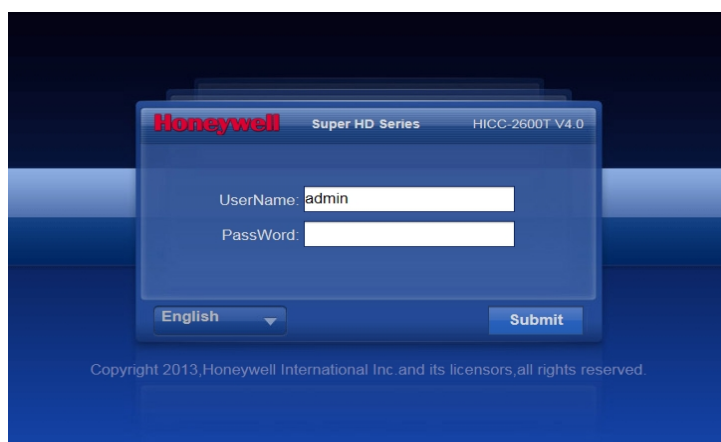

Figure 3 6

Live view

Live preview interface as figure 3-7.

Figure 3   7

In the Live view interface, users can do operations such as voice intercom, listen, full-screen preview, video record, alarm information check, PTZ and lens control, brightness, contrast, preset setting, cruise, track setting and etc.

- Voice intercom：Connect sound pick-up device on the audio input port and active loudsperker on the audio outport port, then click the talkback icon. Turn on the voice intercom switch and the icon shows as , the talkback between PC and IP camera can be performed. Audio input setting as default mode.

- SNAP: click button, snap the current image and save it in .JPG format automatically to the storage directory of snapped images. The default path is C:\Program Files\PREVIEW, and the storage path is changeable.

- Full Screen: Live preview in full screen, press keyboard ESC to exit from full screen display.

- Record: ON/ OFF selectable. When select ON, the icon turn blue as ., and device do video recording and saved in the appointed files as I8 format

- Alarm Info: Warns light flashing when camera device inform alarm. Support kinds of alarms record, and setup or remove the alarm setting,clear the alarm information.

- Zoom-in: Use the mouse to do local zoom for the video display area by scrolling the mouse wheel.

- PTZ control: Up/ down/ left/ right/ auto/ adjust the PTZ rotate speed, etc. As figure 3-8.

- Lens control: Do scaling, focus, iris operation, as figure 3-8.

- Brightness: Adjust the image brightness. As figure 3-9.

- Contrast: Adjust the image contrast. As figure 3-9.

- PTZ setting: Set the preset, cruise, tracking, etc. As figure 3-10.

   Preset setting: Adjust the camera to the appointed angle and location through directional buttons, and then select a preset number on the preset drop down list, click to set it.

   Clear preset:Select a preset number which needed to delete on the preset drop down list, then click to clear it.

   Call preset: Select a preset number which needed to call on the preset drop down list, then click to call it.

   Cruise: 255 presets addable, cruise time 1-255s adjustable, cruise speed 1-10 levels selectable. All cruise tracking can be call and delete independently.

Tracking path setting: Select a tracking number on the tracking drop down list, then click [pencil icon] , after a series PTZ operation, click [pencil icon] to complete and storage the tracking.

Clear tracking path: Select a tracking number on the tracking drop down list, click [x icon] to clear it.

Call tracking path: Select a tracking number on the tracking drop down list, click [arrow icon] to call it.

- Cyclotron arrow: Restore the default parameters. As figure 3-10.

Figure 3   8

Figure 3-9
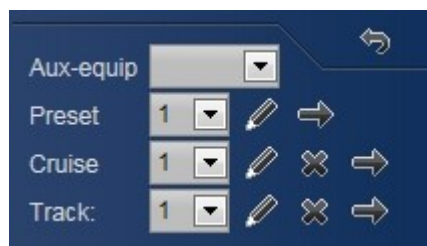
Figure 3   10

System specification setting

Device Info

IP Camera "Device Info" interface as figure 3-11.
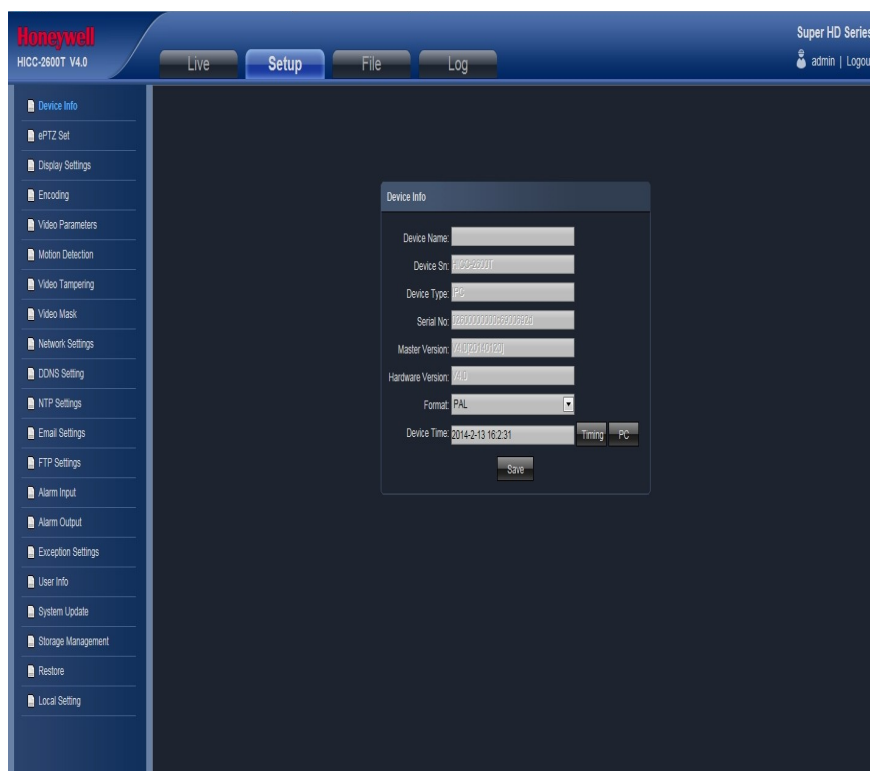
Figure 3   11

- Device Name: Edit the camera name
- Device Sn: Display the device Sn
- Device Type: Display the device type
- Serial No. : Display the product serial No.
- Master Version: Display the software version date
- Hardware Version: Display the hardware version number
- Format: Switch to select the PAL and NTSC image scanning system
- Device Time: Set and display the device current time
  After all parameters setting completed, click "Save" and then it comes into effect immediately.

PTZ setting

IP Camera "ePTZ Set" interface as figure 3-12.
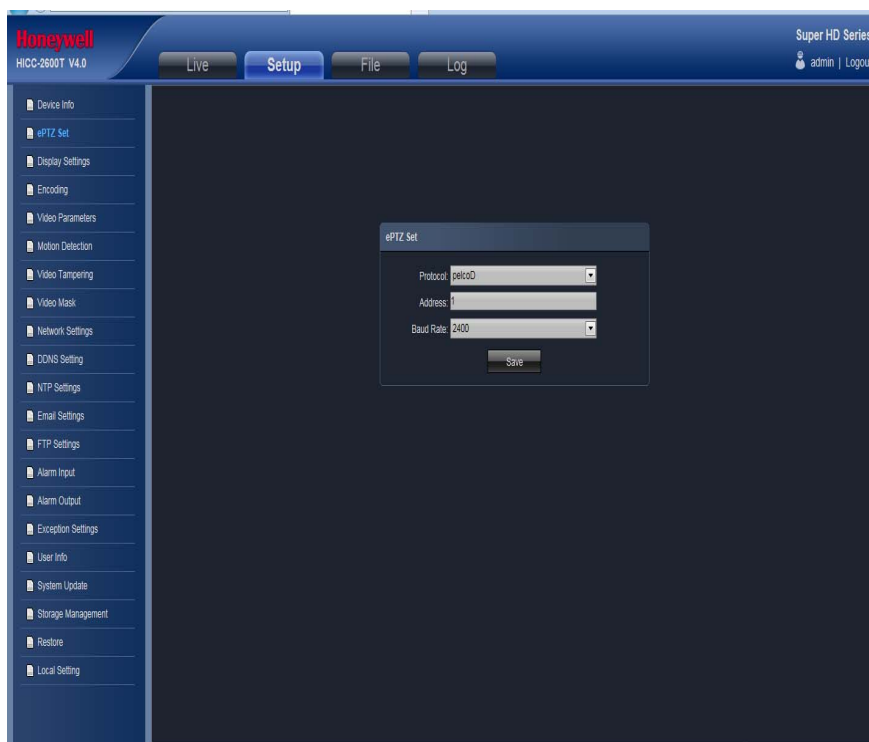
Figure 3-12

- Protocol: Support Pelcod，Pellcop，PellcoF protocol
- Address: 0-255 adjustable
- Baud Rate: Serious baud rate selectable
- Operation method: Connect analog high speed dome at the IP camera AB port, set the protocol and baud rate, and control the high speed dome through IPC preview interface
  After all parameters setting completed, click "Save" and the it comes into effect immediately.

Display settings

IP Camera "Display settings" interface as figure 3-13.
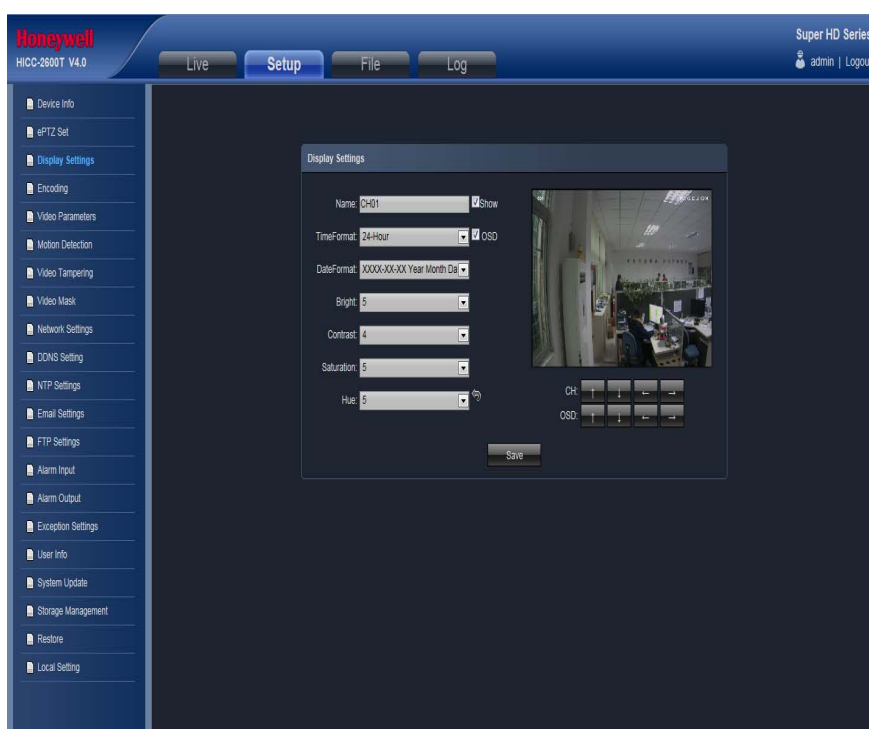
Figure 3-13

- Name:Modify the appointed channel name

- Time Format: Select different time display mode for the appointed channel
- Date Format: Select different date display mode for the appointed channel
- Bright: Adjust the brightness for the appointed channel
- Contrast: Adjust the contrast for the appointed channel
- Saturation: Adjust the saturation for the appointed channel
- Hue: Adjust the hue for the appointed channel
- Title Location: Set the channel title location for the appointed channel
- Date Adjustment: Set the channel date location for the appointed channel
- Cyclotron arrow: Restore the default parameters
  After all parameters setting completed, click "Save" and the it comes into effect immediately.

### Encoding

IP Camera "Encoding" setting interface as figure 3-14.
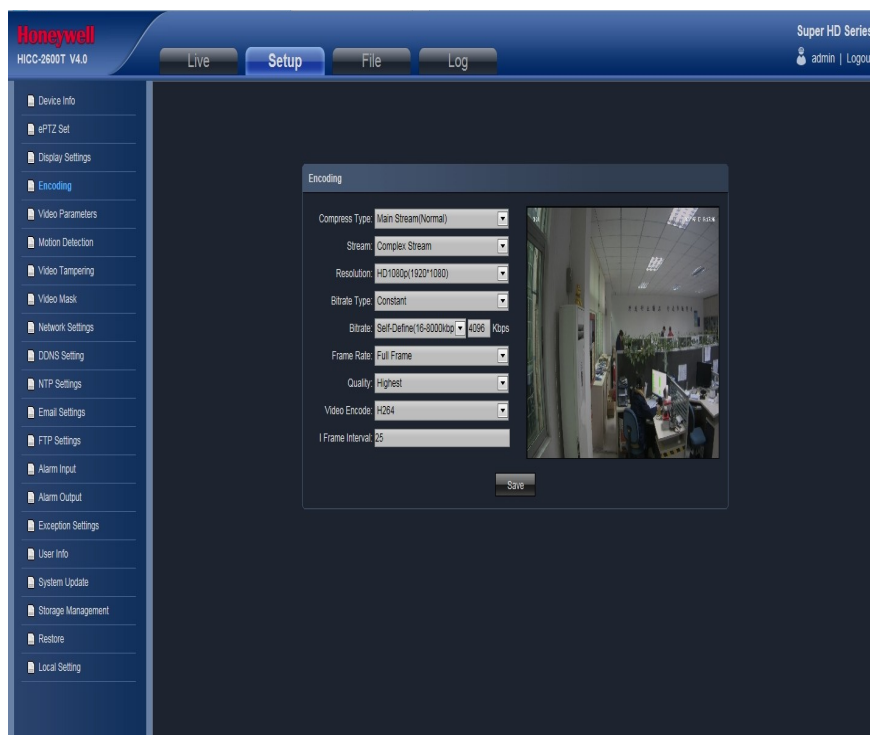
<div align="center">**Figure 3-14**</div>

- Compress type: Main Stream(Normal)/ Sub Stream/ Main Stream(Event) selectable
- Stream: Including complex stream/ video stream two types
- Resolution: According to the front camera supported, how the camera resolution type supported, the corresponding resolution will selectable
- Bitrate Type: Constant/ Variable selectable
- Bitrate: Set different bitrate for different channels
- Frame Rate: Select different frame rate in the drop-down list,, default is "Full Frame"
- Quality: Select different image quality according to your need, default is "Highest"
- Video Encode: H.264/ MJPEG two kinds of video encode format
- I frame Interval: Set the I frame internal time

After all parameters setting completed, click "Save" and the it comes into effect immediately. ("**Setup**" setting will change the front camera parameters directly)

Video Parameters

IP Camera "video Parameters" setting interface as figure 3-15.
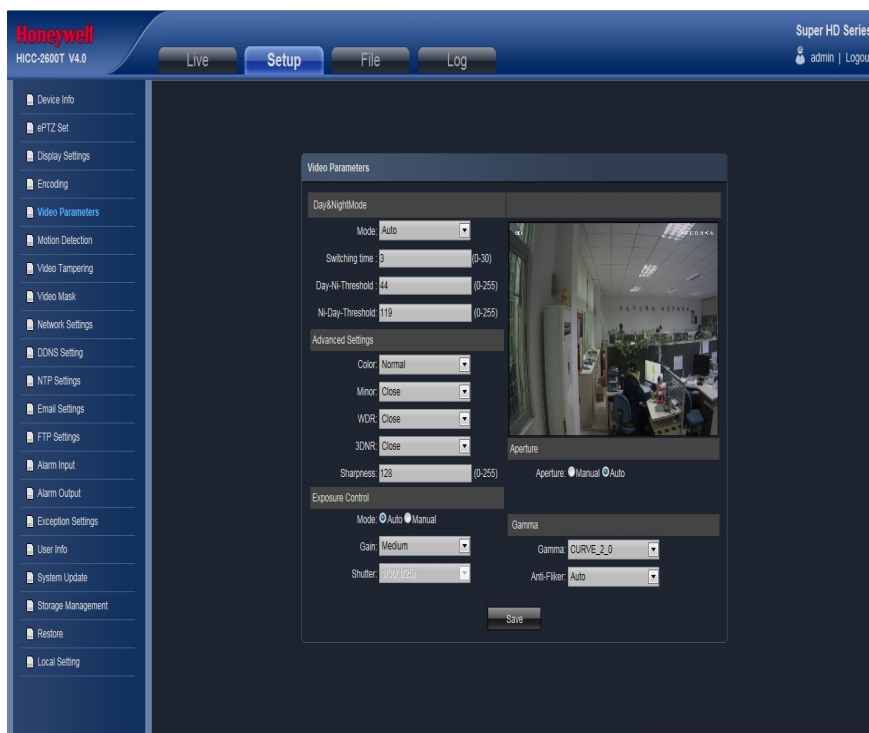
Figure 3-15

- Day&Night Mode: Outside Trigger/ Auto/ Color/ Black White four kinds of mode selectable. Non infrared IP cameras default mode is Auto, and infrared IP cameras default mode is Outside Trigger. According to the IP camera type and actual scene to select the Day&Night mode.
- Switch time: Day&Night switch delay time, 0-30s selectable, and default is 3s.
- Day-Ni-Threshold: 0-255 selectable, users adjust it according to the need, default is 44.
- Ni-Day-Threshold: 0-255 selectable, users adjust it according to the need, default is 119.
- Color: Normal/ Bright/ Nature three options, default is Normal.
- Mirror: Close/ Horizontal Mirror/ Vertical Mirror/ 180° Rotation four options, default is Close.
- WDR: Close/ Low/ Medium/ High four options, default is Close.
- 3DNR: Close/ Low/ Medium/ Higher/ High five levels, default is Close.
- Sharpness: 0-255 selectable, default is 128.
- Gain: Low/ Lower/ Medium/ Higher/ High selectable, default is Medium. The higher of the Gain, the more of the sharpness.
- Sharpness: Auto, 1/30(25)-1/10000, the default is Auto
- Exposure Control Mode: Auto/ Manual selectable, default is Auto.
- Gamma: CURVE_1_6，CURVE_1_8,CURVE_2_0,CURVE_2_2 totally four modes, default is CURVE_2_0
- Anti-Fliker: Auto, 50hz, 60hz, the default is Auto

    After all parameters setting completed, click "Save" and the it comes into effect immediately.

Motion Detection

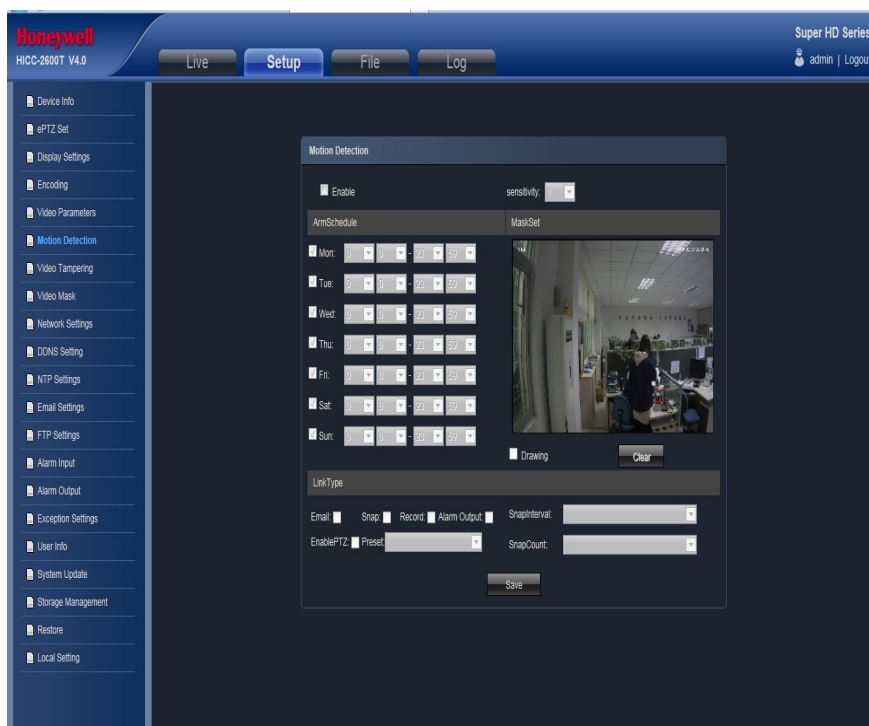   IP Camera "Motion Detection" setting interface as figure 3-16.

Figure 3-16

- Enable: Select whether open the motion detection function.
- Alarm Schedule: Set the alarm schedule from Monday to Sunday.
- Drawing: Click Drawing, then set the detective area.
- Clear: Click Clear to clear the current detective areas.
- Sensitivity: The higher of the sensitivity, the obvious of the motion detective.
- Email: Send Email to appointed mailbox when alarm triggered.
- Snap: Snapshot and install the picture in the HDD when alarm triggered.
- Alarm Output: There is a warner connect the alarm output port, alarm triggered the embedded relay switch to make alarm output.
- Enable PTZ: Alarm input to link the PTZ motion.
- Preset: Alarm input to link the preset.
- Snap Interval: Set the snapshot interval time
- Snap Count: Set the snapshot count in every second
  After all parameters setting completed, click "Save" and the it comes into effect immediately.

Video Tampering

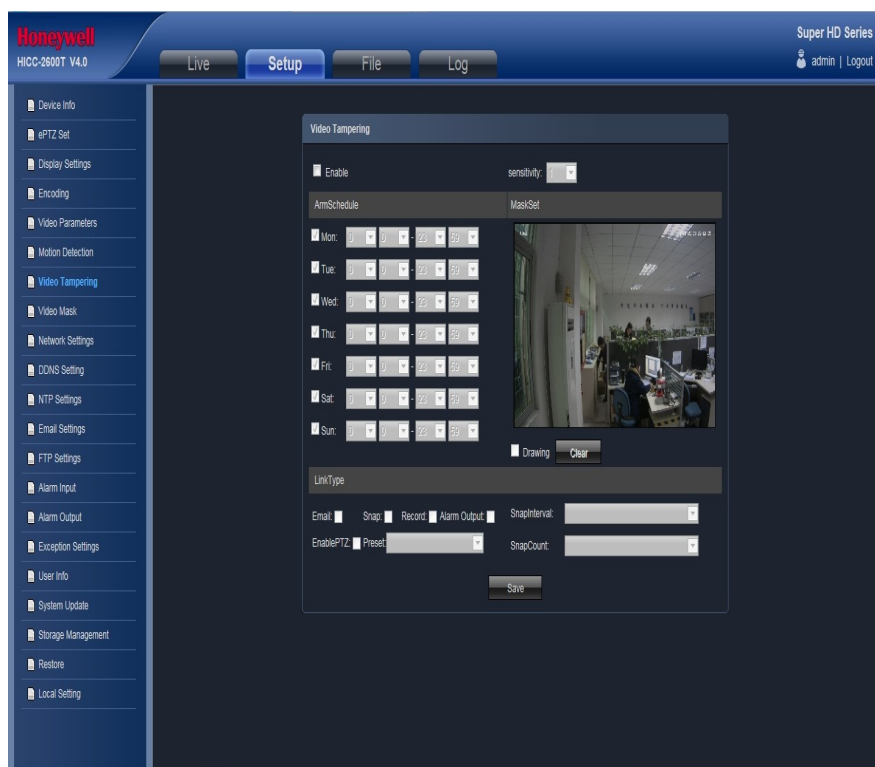IP Camera "Video Tampering" setting interface as figure 3-17.

Figure 3-17

- Enable: Set whether open the video tempering
- Alarm Schedule: Set the alarm schedule from Monday to Sunday.
- Drawing: Click Drawing, then set the video tampering area.
- Clear: Click Clear to clear the current video tampering areas.
- Sensitivity: The higher of the sensitivity, the obvious of the video tampering effect.
- Email: Send Email to appointed mailbox when alarm triggered.
- Snap: Snapshot and install the picture in the HDD when alarm triggered.
- Record: Video record and installed in the HDD or send as FTP to keep when alarm triggered.
- Alarm Output: There is a warner connect the alarm output port, alarm triggered the embedded relay switch to make alarm output.
- Enable PTZ: Alarm input to link the PTZ motion.
- Preset: Alarm input to link the preset.
- Snap Interval: Set the snapshot interval time
- Snap Count: Set the snapshot count in every second

After all parameters setting completed, click "Save" and the it comes into effect immediately.

Video Mask

IP Camera "Video Mask" setting interface as figure 3-18.

Figure 3-18

- Enable: Click to determine whether to operate the video mask function
- Drawing: Click **Drawing** to select the mask area.
- Clear: Click **Clear** to delete the current channel video mask setting
  After all parameters setting completed, click "Save" and the it comes into effect immediately.

Network Settings

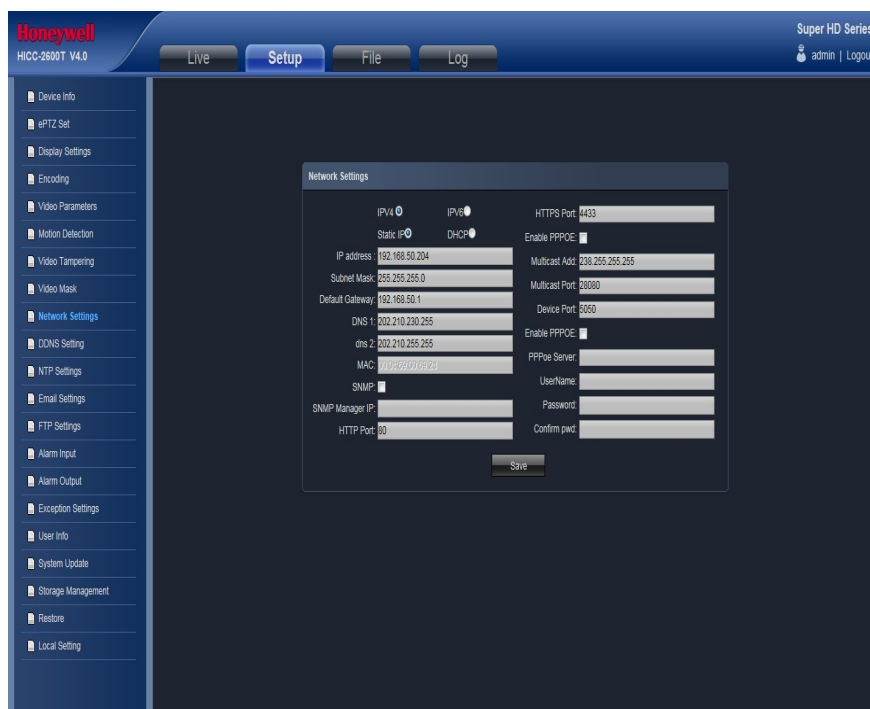IP Camera "Network Settings" interface as figure 3-19.

Figure 3-19

- IPV4: IP protocol version No. is 4
- IPV6: IP protocol version No. is 6
- Static IP: The device IP address is permanent
- DHCP: Click DHCP, when turn on the router's DHCP, the camera will get the IP address from router automatically
- IP address: Input the corresponding numbers to change the IP address

- Subnet Mask: Input the corresponding IP subnet mask
- Default Gateway: Input the corresponding gateway address
- DNS 1: DNS server IP address
- DNS2: DNS server standby IP address
- SNMP: To detect whether it will cause any management attention as device connected on the network
- SNMP Manager IP: Input the corresponding SNMP manager IP address
- HTTP Port: Input the corresponding port (Default is 80)
- HTTPS Port: Input the corresponding port (Default is 4433)
- Enable PPPOE: When click Enable PPPOE, the device and HTTP port will mapping to the router automatically
- Multicast Add： Input the corresponding multicast address
- Multicast Port：Input the corresponding multicast port (Default is 28080)
- Device Port: Input the corresponding device port (Default is 5050)
- Enable PPPOE: Click to enable PPPOE server
        PPPOE server: Input the PPPOE server number
        Username: Input the username
        Password: Input the password
        Confirm pwd: Input the password again to confirm it
    After all parameters setting completed, click "Save" and the it comes into effect immediately.

DDNS Setting

DDNS is implemented through a dynamic domain resolution server. It requires a PC with fixed IP address on the Internet, on which the dynamic domain resolution server runs. IP Camera network setting interface as below:
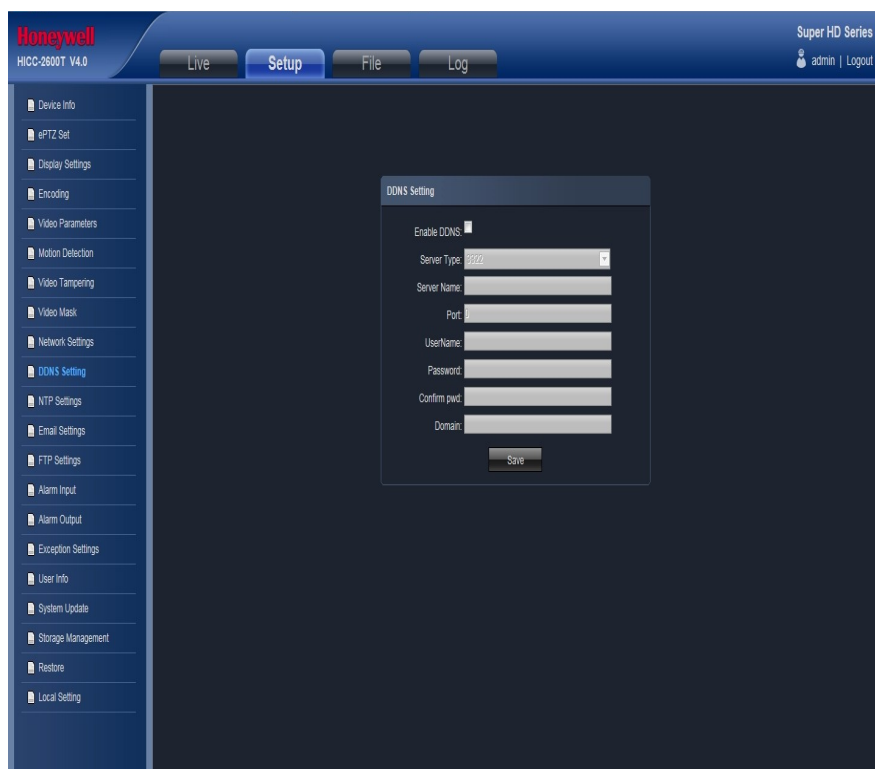
- Enable DDNS: Click to determine whether to use Dynamic Domain Name Server
- Server Type: Select DDNS server type (There are Dyndns/ PeanutHull/ NO-IP/ 3322/ DnsDynamic five types selectable)
- Server Name: Input server name, for example, member.3322.org
- Port: Input port No.
- Username: Input user name
- Password: Input password
- Confirm pwd: Input the password again to confirm it
- Domain: Input the standby domain
    After all parameters setting completed, click "Save" and the it comes into effect immediately.

NTP Settings

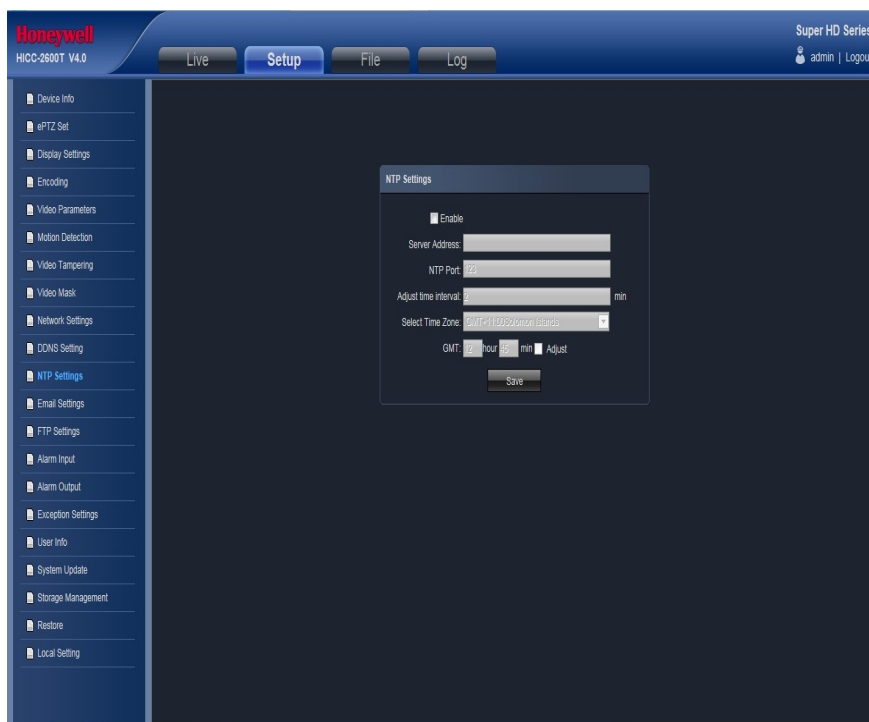IP Camera "NTP Settings" interface as figure 3-21.

Figure 3-21

- Enable NTP: Click to determine whether to use NTP
- Server Address: Input NTP server IP address
- NTP Port: Only TCP transmission supported, default is 123
- Adjust time interval: Input the interval time
- Select Time Zone: Different area time format selectable
- GMT: Adjust the time more exact
  After all parameters setting completed, click "Save" and the it comes into effect immediately.

Email Settings

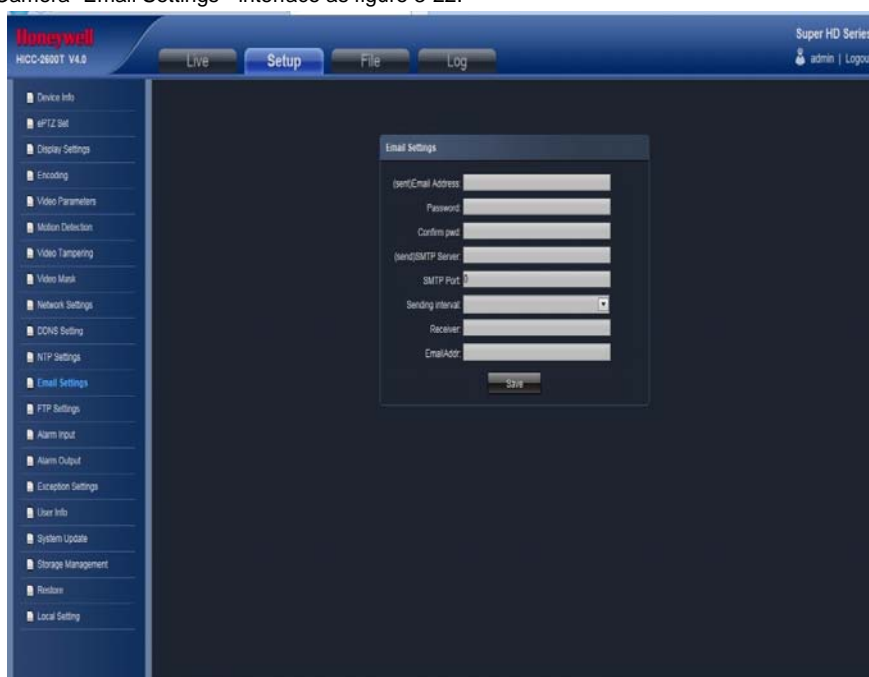IP Camera "Email Settings" interface as figure 3-22.

Figure 3-22

- (sent)Email Address: Input the address of the outbox
- Password: Input the the password of the outbox
- Confirm pwd: Input the password again to confirm it
- (sent)SMTP Server: Input the smtp server address of the outbox
- SMTP Port: Input the smtp server port of the outbox
- Sending interval: Input the sending interval time
- Receiver: Input the mail receiver name
- Email Addr: Input the address of the inbox
  After all parameters setting completed, click "Save" and the it comes into effect immediately.

FTP Settings

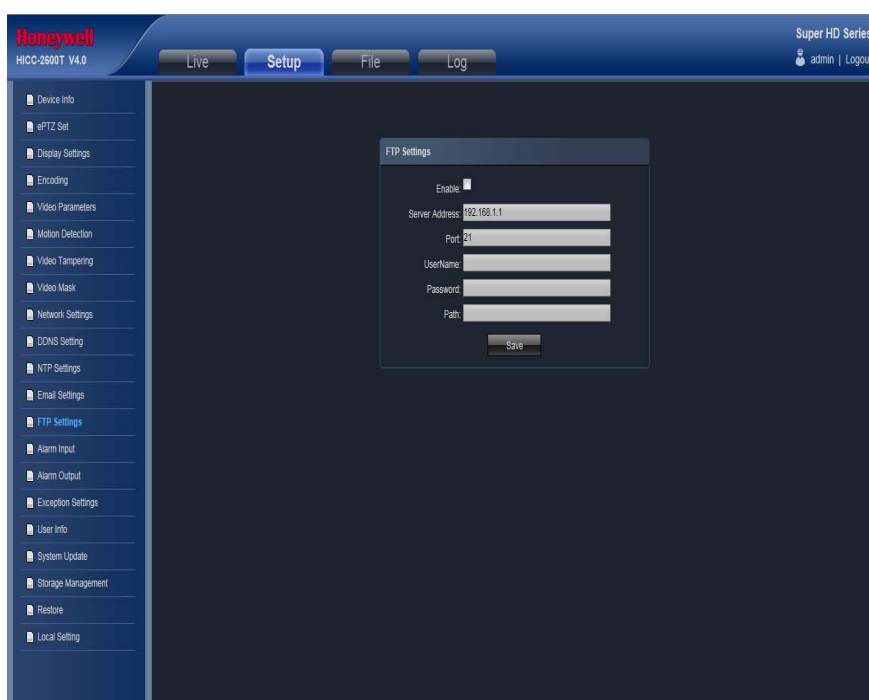IP Camera "FTP Settings" interface as figure 3-23.

Figure 3-23

- Enable: Click to determine whether to use FTP
- Server Address: Input the upload server address
- Port: Input the server port, default is 21
- Username: Input the upload username
- Password: Input the upload password
- Path: Input the upload file path
  After all parameters setting completed, click "Save" and the it comes into effect immediately.

Alarm Input

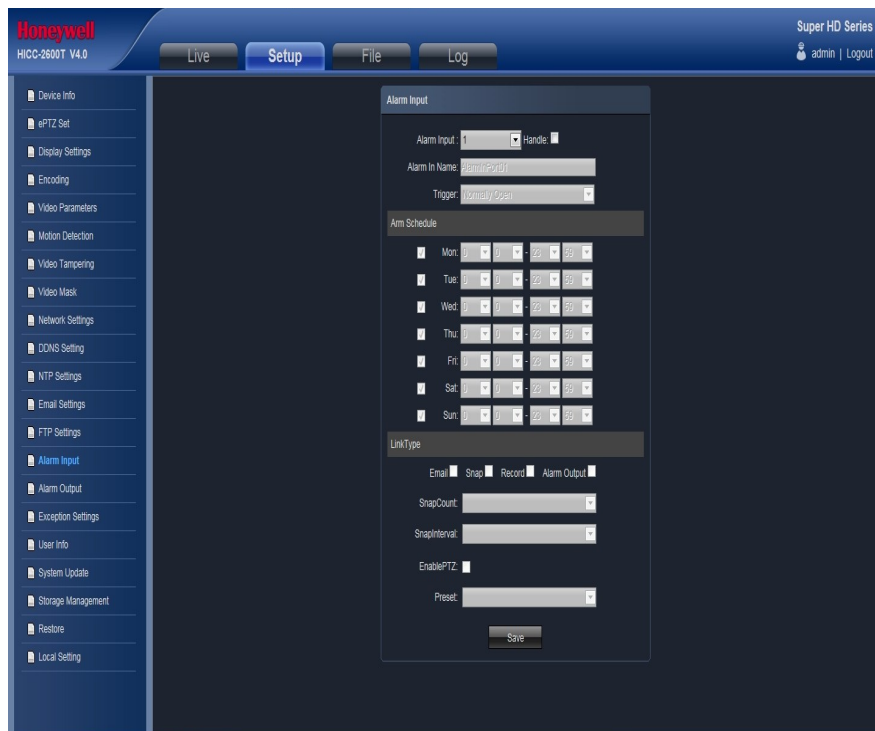IP Camera "Alarm Input" setting interface as figure 3-24.

Figure 3-24

- Alarm Input: Select the alarm input number
- Alarm In Name: Input alarm input name
- Trigger: Select the alarm statue: Normal Open/ Normal Close
- Alarm Schedule: Alarm schedule can be set from Monday to Sunday
- Email: Click Email, then it will send Email to appointed mailbox when alarm triggered
- Snap: Click Snap, snapshot the current image picture when alarm triggered
- Record: Click, it will do video record automatically when alarm triggered
- Alarm Output: There is a warner connect the alarm output port, alarm triggered the embedded relay switch to make alarm output.
- Snap count: Set the snapshot count in every second
- Snap Interval: Set the snapshot interval time
- Enable PTZ: Click Enable PTZ, it will linkage PTZ operation when alarm input
- Preset: set the linkage preset point
  After all parameters setting completed, click "Save" and the it comes into effect immediately.

Alarm Output

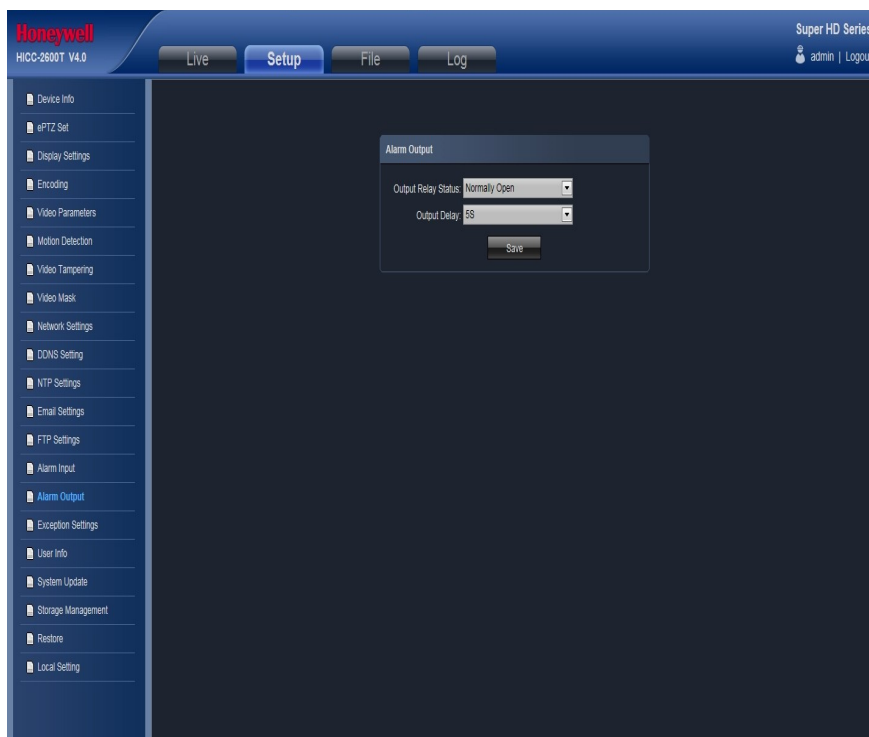IP Camera "Alarm Output" setting interface as figure 3-25.

Figure 3-25

- Output Relay Status: Normally Open/ Normally Close selectable
- Output Delay: Select the alarm output time(Alarm delay output when alarm triggered)
  After all parameters setting completed, click "Save" and the it comes into effect immediately.

Exception Settings

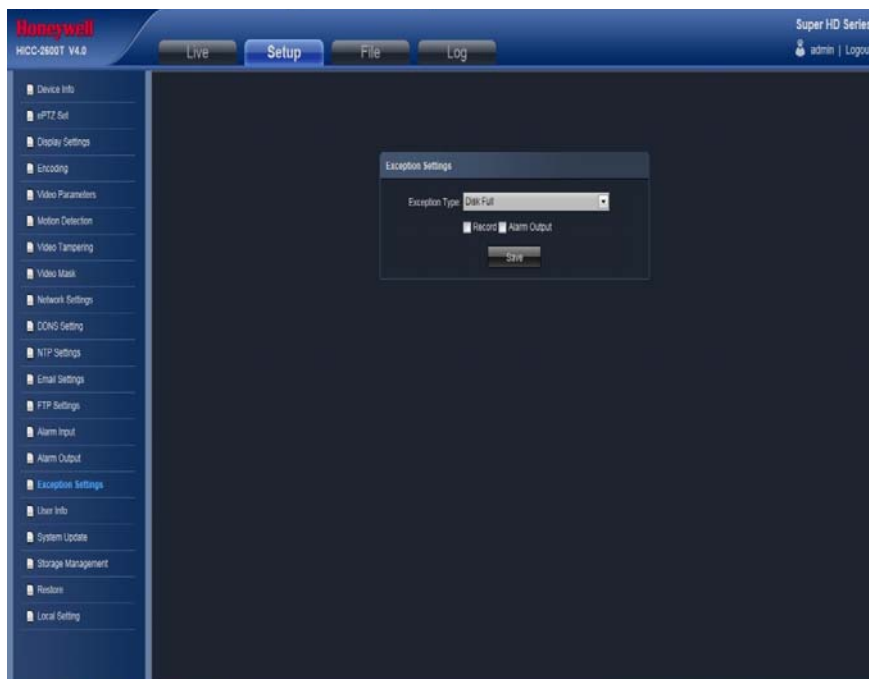IP Camera "Exception Settings" interface as figure 3-26.

Figure 3-26

- Exception Type: Disk full/ disk fault/ network broken/ IP address conflict/ Illegal access/ video signal exception types selectable
- Record: Click Record, it will do video record as any exception type triggered the alarm output
- Alarm Click Alarm Output, it will Linkage other alarm devices as any exception type triggered

After all parameters setting completed, click "Save" and the it comes into effect immediately.

User Info

IP Camera "User Info" setting interface as below, admin is the administrator (default), default indicates general users, booth and login with permissions authorized to default users(default).
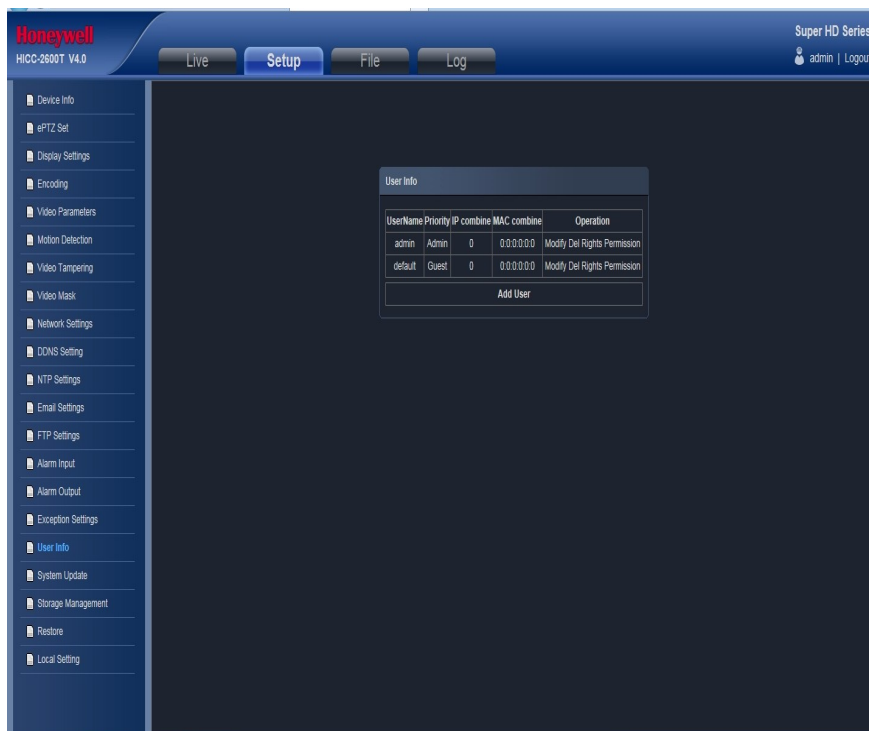
● Modify: Modify the new user password, user type, IP combine, MAC combine
● Del: Delete the new user
● Rights Permission: permission assignment for new user
● Add User: Add a new user
  After all parameters setting completed, click "Save" and the it comes into effect immediately.

System Update

IP Camera "System Update" setting interface as figure 3-28.
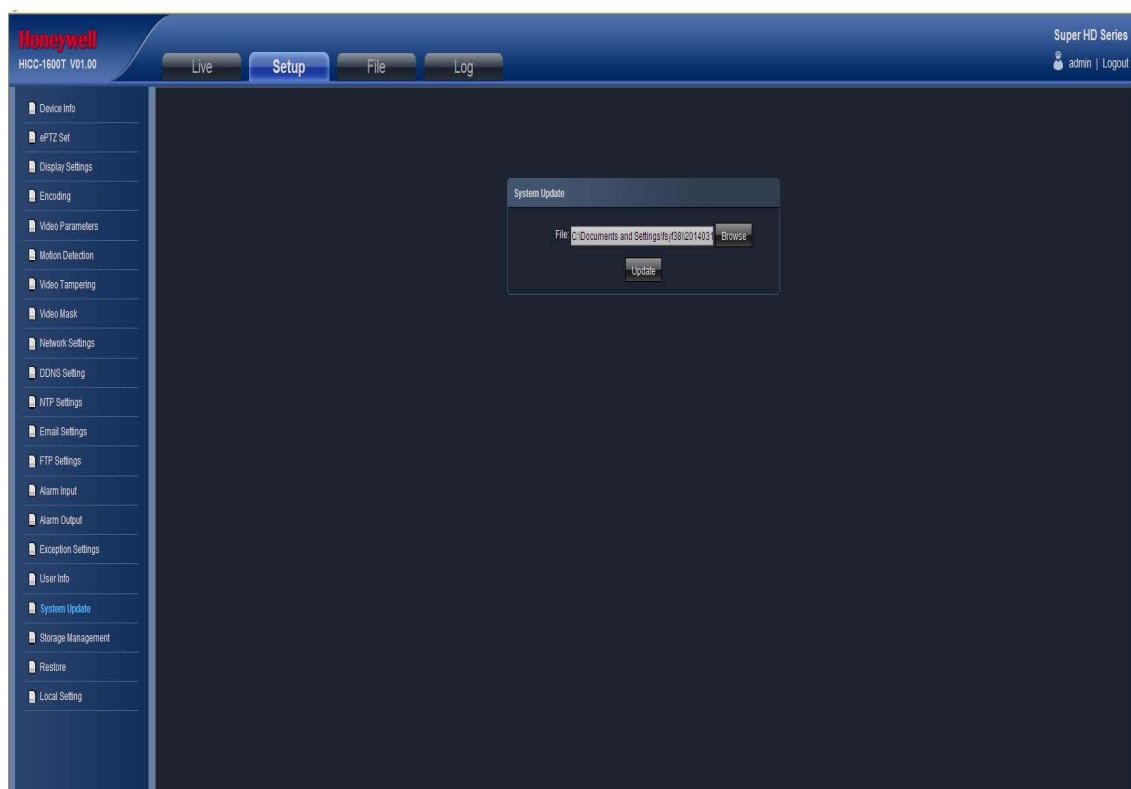
● File: Click Browse to find and select the upgrade kit, then click Update.

> ⚠ Non-technician should not try to operate system upgrade, do not turn off the power during upgrade process.

Storage Management

IP Camera "Storage Management" setting interface as below, you can check current HDD capacity/ spare capacity/ status, and do HDD formatting.

Note: Turn off the power supply when insert or take out the TF card
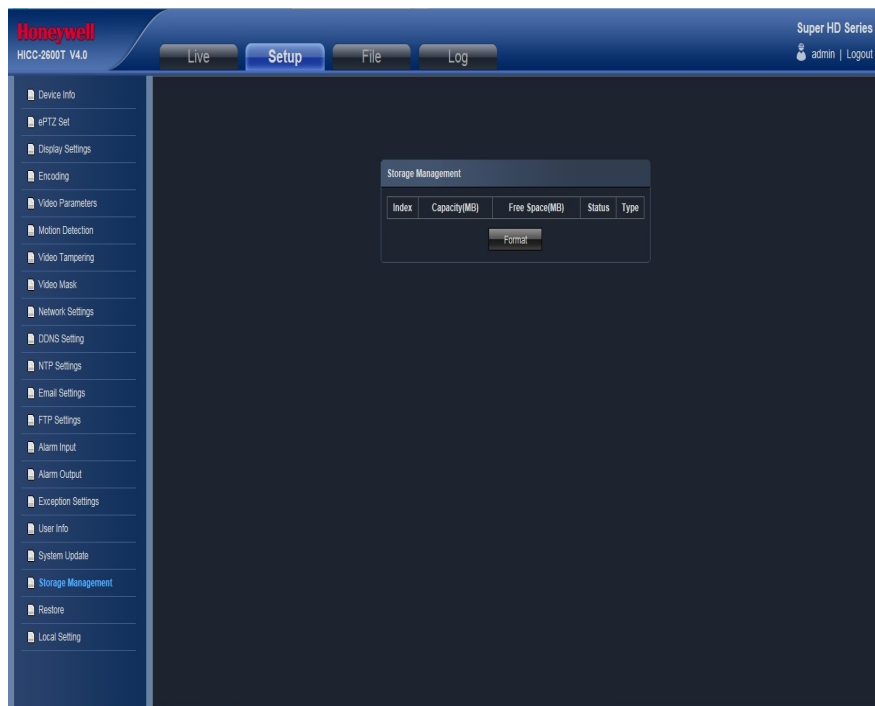
Figure 3-29

Restore

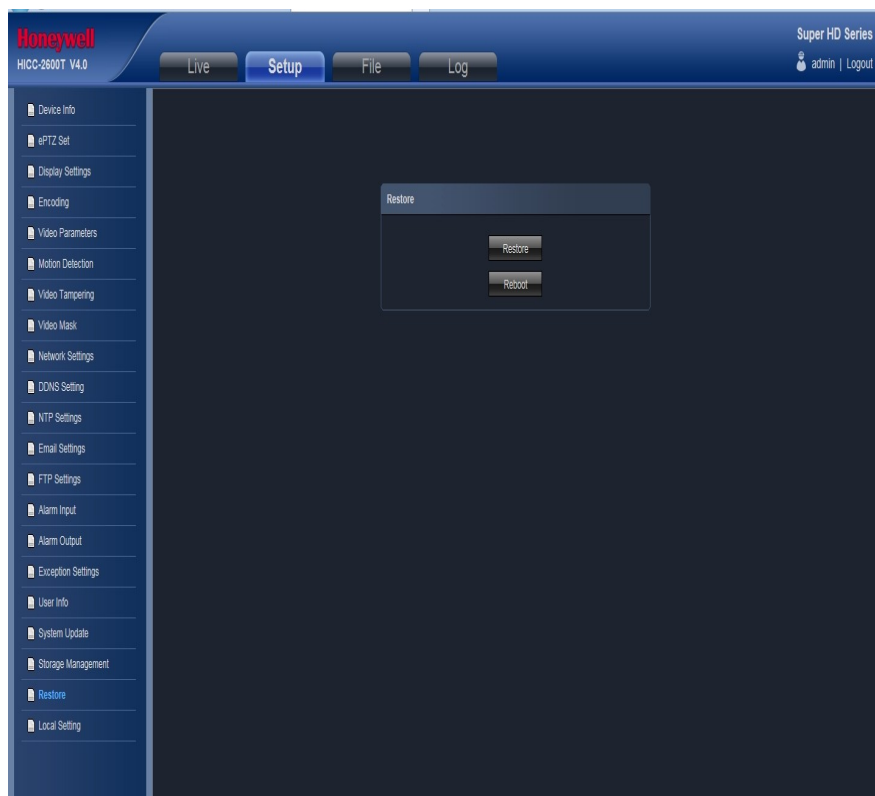IP Camera "Restore" setting interface as figure 3-30.

Figure 3-30

- Restore: Restore to factory setting
- Reboot: Reboot the devices

Local Setting

IP Camera "Local Setting" interface as figure 3-31.
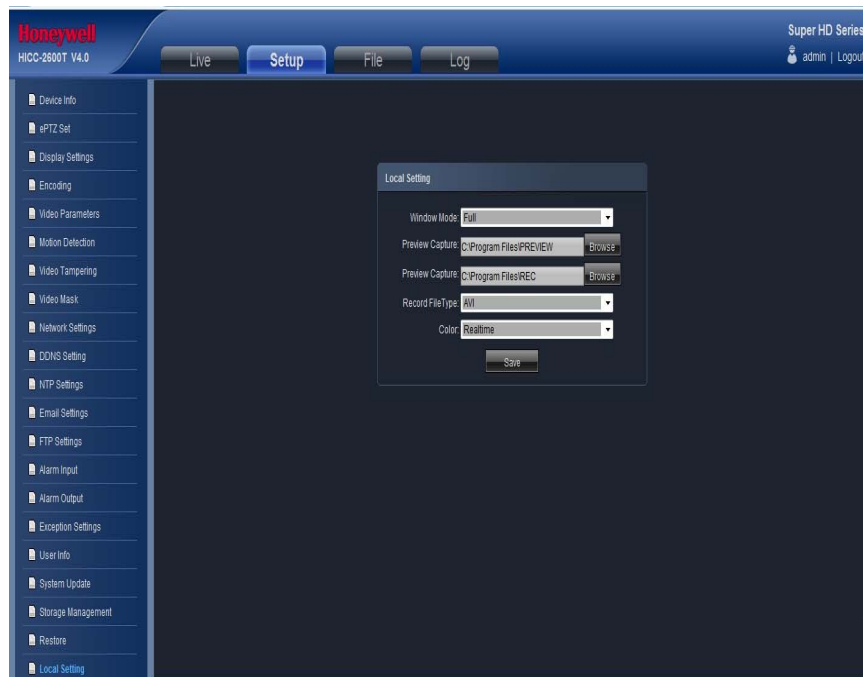
Figure 3-31

- Window Mode: Set the preview window mode(Full/ 4:3/ 16:9)
- Preview Capture: Select the preview capture file storage path
- Preview Capture: Select the preview video record file storage path
- Record File Type: AVI/ I8 format selectable
- Color: Realtime/ Smooth way two types selectable
  After all parameters setting completed, click "Save" and the it comes into effect immediately.

File management

IP Camera "File management" setting interface as figure 3-32.

Figure 3-32

- Search: Select the search start time, click ![Search] button, the video record and snap image file will display(Double click the file to check details)

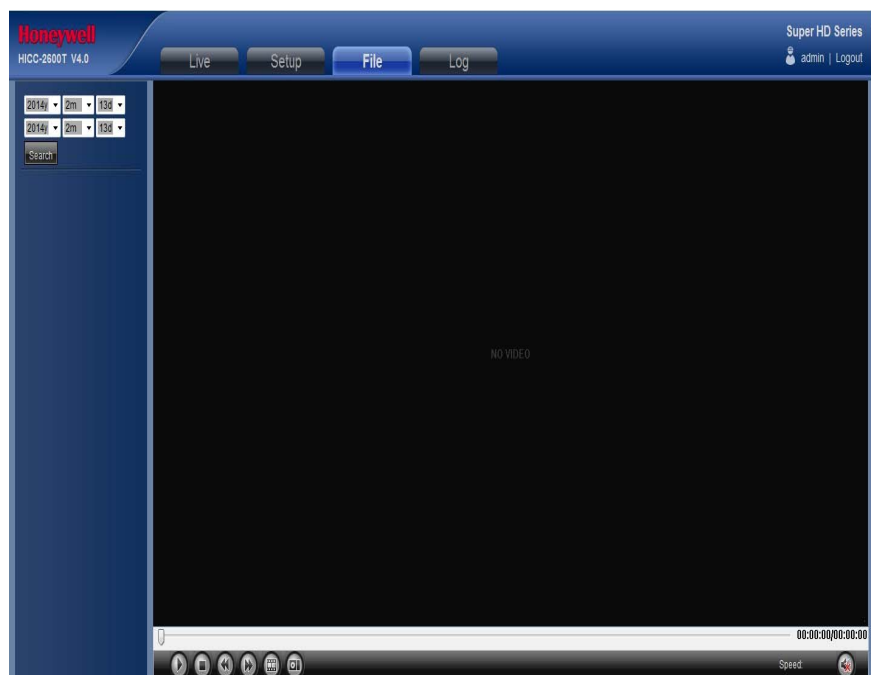- Start: Click ![icon] button to play the backup video image file

- Stop: Click ![icon] button to stop the the play

- Slow: Click ![icon] button to slow play the backup video image file

- Fast: Click ![icon] button to fast play the backup video image file

- Frame: Click ![icon] button to play the backup video image file by frame

- Capture: Click ![icon] button to snap the backup video image during display

- Voice: Click ![icon] button to select turn on/off the voice during backup video image display

Log search

IP Camera "Log" setting interface as figure 3-33.

Figure 3-33

- Main Type: There are All/ Alarm/ Exception Settings/ Operation/ Additional Information four types selectable
- Start Time: Set the start time
- End Time: Set the end time
- Page Num: Set the log numbers on each page
- Search: Search the corresponding logs

1 Appendix

SPECIFICATIONS

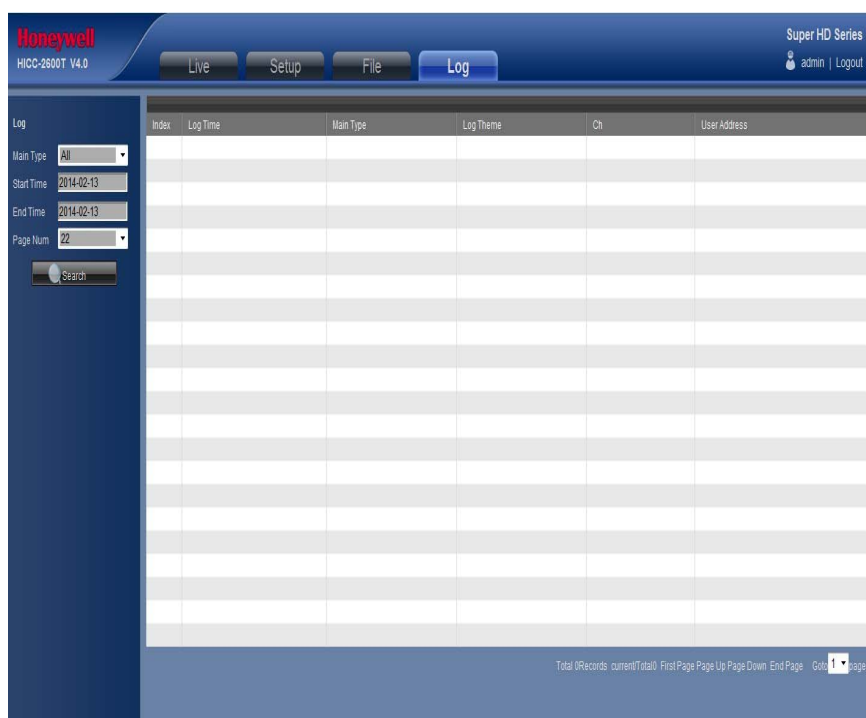| Camera	HICC-1600T	HICC-2600T
Image Device	Sony 1/3" Exmor™ image sensor	Sony 1/2.9" Exmor™ image sensor
Effective Pixels	1280 x 720 pixels	1920X1080 pixels
Lens Interface	CS/C	
Iris	DC Iris	
ICR	Mechanical, TDN	
Min. Illumination	Color: 0.01lux/F1.4(AGC ON) B/W: 0.001lux/F1.4(AGC ON)	Color: 0.02lux/F1.4(AGC ON) B/W: 0.005lux/F1.4(AGC ON)
IP Video		
Video Compression	H.264, and MJPEG simultaneously (Dual-encoders)	
Video Profile	H.264 high profile	
Profile Setting	Every video profile has Independent CBR/ VBR/ GOP/ Frame rate setting	
Frame Rate	1280x720, 720x576, 320x240 @ 30/25fps	1920X1080,1280x720, 720x576, 320x240 @ 30/25fps
Electronic Shutter	Auto mode / Manual mode 1/25~1/30000 Second	
Iris Exposure Control	Auto mode / Manual mode	
AGC	LOW/MID-LOW/MID/MID-HIGH/HIGH	
WDR	OFF/LOW/MID/HIGH	
3-DNR	OFF/LOW/MID/HIGH	
Color Mode	Normal/Natural/Bright	
Image Setting	AE, AWB; 3D Noise reduction; Digital WDR; Color, brightness, sharpness, contrast, Hue; Mirror/Flip; Privacy Masks; Text, time and date overlay	
Streaming	Simultaneously multi-profile streaming; Streaming over UDP, TCP, HTTP, or HTTPS; M-JPEG streaming over HTTP (server push); Controllable frame rate and bandwidth; Constant and variable bit rate (MPEG4 / H.264);	
On Screen Display	Text, time and date overlay;	
Audio		
Audio Encoder	RTSP: G.711 64kbps,	
Audio Streaming	One-way or two-way	
Audio Input	External audio in	
Audio Output	Speaker Out	
Network		
Supported Protocols	IPv4, IPv6, TCP, UDP, HTTP, HTTPS, SMTP, FTP, NTP, DNS, DDNS, DHCP, ARP, Bonjour, UPnP, RTSP, RTP, RTCP, IGMP, PPPoE, ICMP, SNMP	
Security	Password protection, HTTPS encrypted data transmission, user access log	
Users	8 simultaneous unicast users	
Ethernet	10/100M auto negotiation	
System Integration		
Supported Interface	ONVIF Profile S	
Event Detection	Alarm in, motion detection, Network Lose detection, camera tampering, Video lose	

Motion Detection	1-zone video motion detection with Sensitivity options	
Privacy Mask	4-Zone	
Camera Tampering	Camera Cover or Mask	
Events Action	SNAP, Record video in TF, send to FTP, send to Email, External output activation, voice alert, go preset and tour, notify to CMS.	
General		
OS	Windows XP or later	
Browser	IE 8.0 or later	
Supported Platform	Honeywell Universal Surveillance (HUS) and NVRs	
Power Supply	12V DC or 24V AC ±10% external power adapter	
PoE	IEEE 802.3af	
Power consumption	Max 4W	Max 5W
Connectors	RJ-45 10Base-T/100Base-TX; 1 power jack; 1 alarm input and 1 output; Audio out; Audio input; Video out; Factory default reset; TF card, USB and RS485	
Operating Temperature	-20°C to 55°C	
Operating Humidity	0% - 90% (non-condensing)	
Dimensions	74.6mm(L)*47mm(W) x 47mm(H)	
Certificate	CE, FCC	

Network Interface of IP Camera

The default network ports of IP camera are:

| TCP	80	Web port
	5050	Communication port, audio/video data transmission port, talkback data transmission port
UDP	5050	Audio/video data transmission port
Multi-cast port	28080	
Onvif port	8000	
Rtsp port	554	
RTSP port	8002	
Search port	10000	
Telnet port	23	
Onvif search port	3702	
Video stream port	5051	
Playback, upgrade, search port	5052	
Mobile visit port	5053	
Https protocol port	4433	

Default Network Parameters

Default network parameters

Cabled Network:
    IP Address: 192.168.1.188
    Data Port: 5050
    Subnet mask: 255.255.255.0
    Web port： 80
    Gateway: 192.168.1.1
    DHCP: OFF

IP Camera DDNS

DDNS description

DDNS(Dynamic Domain Name System) means that DDNS is implemented through a dynamic domain resolution server. It requires a PC with fixed IP address on the Internet, on which the dynamic domain resolution server runs. All internet users can view the IP camera via a fixed IP address.

IP Camera DDNS analytical process
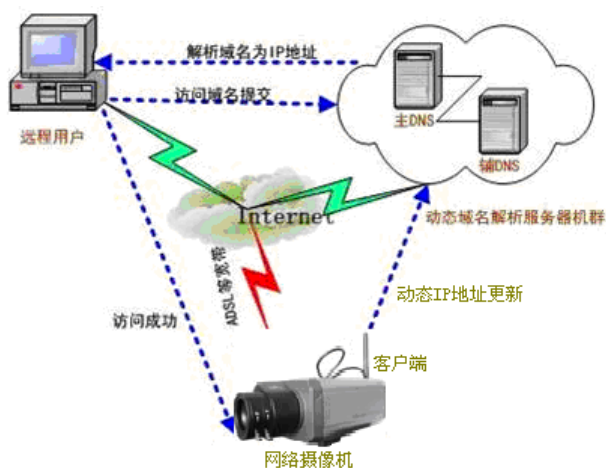
Visit IP camera under different network environments

Users visit the IP camera through LAN/ WAN. The following directions will tell you how to operate the IP camera through LAN/ WAN.

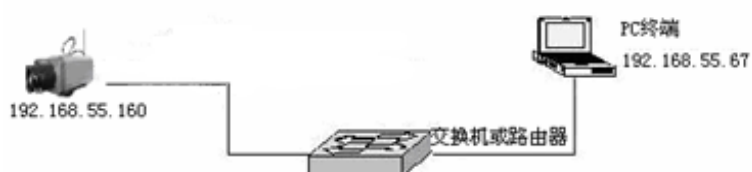## LAN

There two ways to connect IP camera: Static IP/ Dynamic IP

Static IP

Static IP means the webmaster distribute a LAN inner IP address to the IP camera. Keep your PC IP address same as the camera IP address and to implement access.

Network topological graph as follows:：

Network setting reference:

Setting procedure:

1. Log in IP camera via the IE browser (the default IP is 192.168.1.188)

2. Switch to the page " Network Setting" interface, input the IP address. Default is 192.168.1.50

3. Fill in subnet mask, the default is 255.255.255.0

4. Fill in gateway address, the default is 192.168.1.1

After input all parameters, click "Save", then the device restart, Input the device IP address at the IE browser to visit the camera.

Dynamic IP

Dynamic IP means that IP camera obtains IP address from DHCP server. See below picture for the network topology:
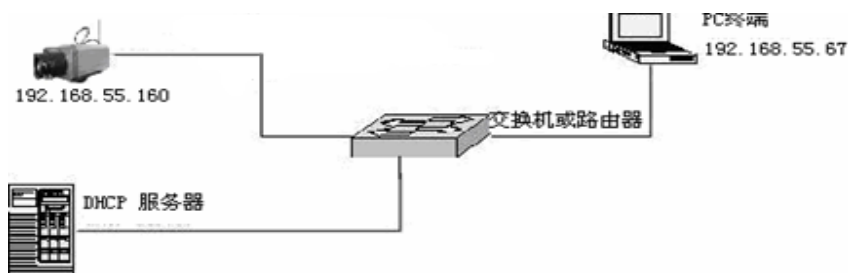
Please refer to below picture for the network settings:

Log in IP camera via IE browser. Then turn to " Network Setting" interface, click DHCP"

After setting all the parameters, click save and restart to make the parameters valid.

Internet

There are three ways to connect IP camera to the Internet.

1. Fixed IP mode

2. ADSL broadband and router share online mode(Dynamic get the IP address mode)

3. PPPOE dial-up access

After IP camera is connected to Internet, remote Internet users can visit it directly via domain name or IP address.

Fixed IP mode

See below picture for the network topology:

Please refer to below picture for the network settings:

Setting steps:

1.   Log in IP camera via crossover cable direct connection.(For details, please refer to "Hardware Installation")

1. Switch to the page network settings, fill in the device IP address requested from network service provider in to Basic Parameters, such as 218.84.31.168

2. enter correct subnet mask. Such as 255.255.255.0

3. enter correct gateway address. Such as 218.84.31.131

After setup completes, click Save and restart the device, then connect it to public network so that all Internet users can visit the IP camera remotely via entering http://218.84.31.168 to IE browser

Broadband and router sharing Internet access mode (dynamic obtainment of extranet IP address mode) like ADSL and so on.

If you select router dial-up to connect internet, see below picture for the network topology:
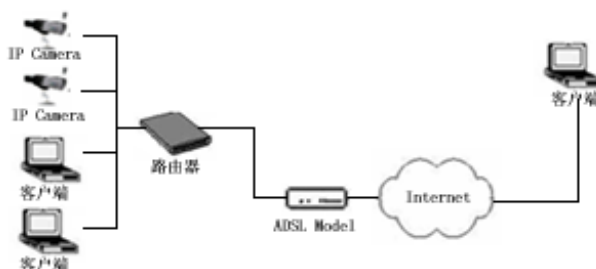
Users can set up DDNS domain name service at the same time. Fill the username and password which were applied in the DDNS server into the DDNS setting item, implement port mapping from the router. The router determines and points to the IP camera that need to be visited according to different ports, long-distance Internet user can visit the IP camera on the network via domain name directly.

Please refer to below picture for the network settings:

DDNS setting procedure：

1. Login DDNS server (Such as http://www.no-ip.com), register accounts and password.

2. Click DDNS (It is selectable when server provider is blank)

3. Select DDNS server provider, such as no-ip

4. Input the DDNS login username

5. Input the DDNS registered password

6. Input the domain name applied on the DDNS server, such as video.no-ip.net

7. Input the DDNS address, such as dynupdate.no-ip.com

8. Input the DDNS port, default is 80.(Suggested users keep it)

After all parameters setting completed, click "Save"and devices comes into effect.

Port mapping setting procedure

TP-LINK TL-WR340G illustration:

1. Ask network administrator for the IP address of the router (i.e. LAN gateway address), login user name and password, then log in the router. The main interface is as follow:

2. Open "Forwarding", select "Virtual Servers" as below picture shows:
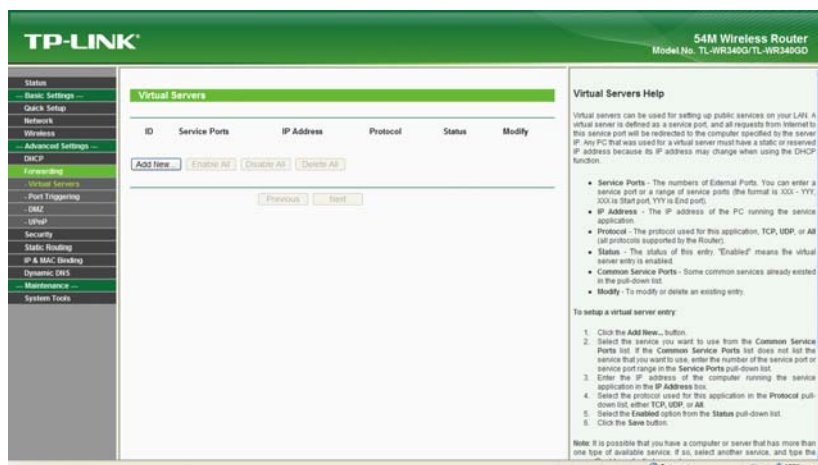
3. Select "Add New Items", enter the IP address of the IP camera (e.g.192.168.1.100), port (e.g. 85), status (valid) and other information, click save, see below picture:
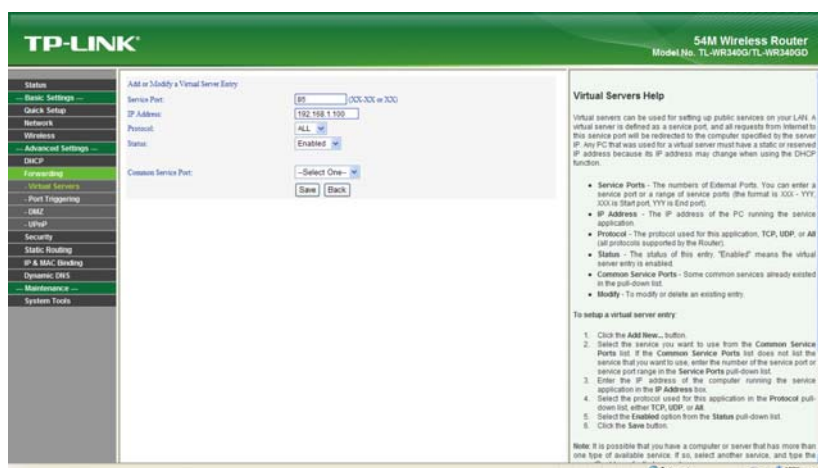
4. After save successfully, below screen appears:
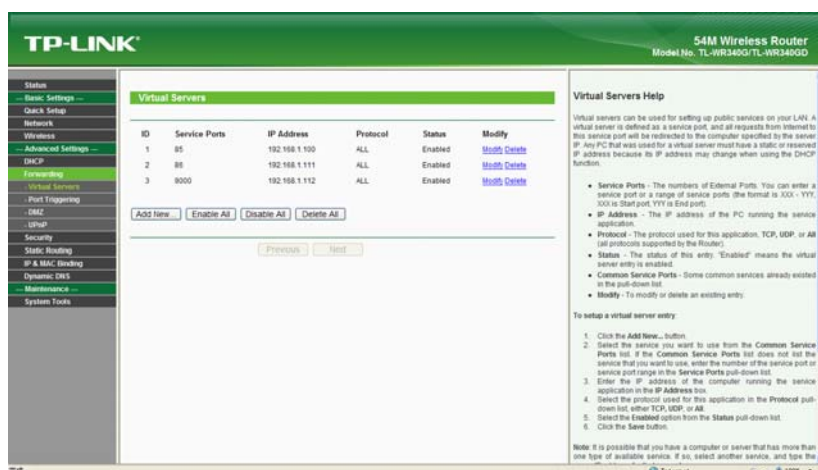
5. If DDNS is successfully set in "Network Settings" of IP camera, direct visit to the IP camera can be realized via entering http://test.mvddns.net:85 into IE browser.

PPPOE dial-up access

For IP camera dial-up access, see below picture for the network topology:
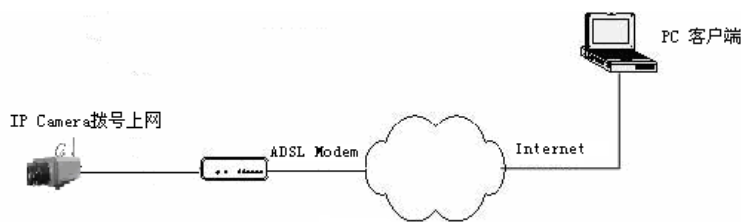
Setup steps:

1. Log in IP camera via crossover cable direct connection.(For details, please refer to **Hardware Installation**)

2. Set PPPOE parameters.(for details, please refer to **PPPOE settings**)

3. Connect IP camera to Internet.

4. If DDNS service is successfully set for the device, the device can be visited via entering domain name into IE browser.

Frequently asked questions

1. Forget password

There is a **RESET** button on the back panel /connection wire of the IP camera, press it for 5 seconds at powered situation to restore all default parameters (Factory Settings), user name and password are both "admin".

Please don't press **RESET** if you are not a professional operator.
After reset, all parameters will restore factory settings (except for the physical network address).

2. IP camera audio/video function fails after abnormalities or abnormal power cut   occur during upgrade, core edition is V4.0.0.0 (Backup file).

Connect the power cord and network cable of IP camera, press on RESET button and release it after 10 seconds, system will run the back-up programmer automatically. After enter into the back-up programmer, upgrade system. After upgrade completes, the IP camera will work normally. The back-up programmer offers only upgrade and parameter setup functions, audio and video functions are not available.

3.No video image displayed in IE browser.

Possible reason: ActiveX not installed

Solution: ActiveX must be installed when visiting IP camera for the first time via Internet Explore.

How to install: Visit IP camera, click **Download Address**, file download dialog will pop up, select **Run** or **Save** to download. After download finishes, installation interface will pop up, click **install**, the installation of ActiveX will start automatically, "Register OCX success" dialog box will pop up to remind the completion of installation process.

4.Fail to visit IP camera via IE after upgrade.

Solution: Delete the caching of Browser:

Open IE→click **Tool**→select "Internet Options"→click **delete files** button in "Internet temporary files"→ select "delete all offline contents"→click **OK** and re-log in IP camera.

5.The images do not flow.

Possible reason 1: The frame rate of IP camera is too low.

Solution: Increase the video frame rate

Possible reason 2: Too many users are viewing the images.

Solution: Block some clients or reduce the video frame rate.

Possible reason 3: The bandwidth is low.

Solution: Reduce video frame rate or video compression bit rate.

5.Fail to visit IP camera via IE browser.

Possible Reason 1: Network is disconnected.

Solution: Connect your PC to network, checking whether it works properly or not. Check whether there is cable failure or network failure caused by PC virus, until PCs can be connected with the command of Ping.

Possible reason 2: IP Address has been occupied by other devices

Solution: Stop the connection between IP camera and Network, hook up IP camera to PC separately, reset IP address according to the proper operations recommended.

Possible reason 3: IP addresses are in different subnets.

Solution: Check IP address, subnet masking address of the DVS and the settings of Gateway.

Possible reason 4: Physical address of network conflict with IP camera

Solution: Modify the physical address of IP camera.

Possible Reason 5: Web port has been modified

Solution: Contact Network Administrator to obtain related information.

Possible Reason 6: Unknown

Solution: Press RESET to restore default settings then connect it again, the default IP address is 192.168.55.160, subnet mask is 255.255.255.0

6.The color of images is abnormal (green or other colors).

Sometimes IP camera images cannot display properly for the difference between Graphics Cards, the images appears to be green or other colors, then you should run the programme Config.exe (or run C:\windows/ system32\Config.exe)to set the following parameters of display buffer: auto-detection, used display card memory or system memory, then reopen IE and connect IP camera.

7.There is no sound while monitoring.

Possible Reason 1: No audio input connection

Solution: Check audio connection of the host

Possible Reason 2: The audio option of IP camera is off

Solution: Check audio parameter settings to see if you have opened the audio.

8.Search NVS software cannot find device.

Possible reason: Search NVS software adopts multicast protocol to perform searching. But the firewall forbids multicast data packet.

Solution: Disable the firewall.

9.Image processing doesn't work properly.

Possible Reason 1: System issue, DirectX function is disabled, which will cause slow display of images and abnormal color.

Possible Reason 2: Hardware issue, graphics card doesn't support image acceleration and hardware zooming functions.(For hardware issue, the only solution is to replace graphics card)

Solution: Install DirectX image drive, then Start→Run→input "**Dxdiag**"order.

Enable DirectDraw speedup, Direct3D speedup, AGP veins speedup in DirectX function. If they cannot be enabled, that means DirectX installation fails or hardware not supportive.

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