

User Manual

IPw-TX



Camera Server

I. Preface

IPw-TX is a 1 channel video server. It has built in web server. User views real-time video via IE browser. IPw-TX supports MPEG-4 and M-JPEG video compression which provides smooth and high quality video. The video can be stored in the SD card and replayed remotely.

IPw-TX is an easy-to-use video server which can connect any kind of analogue camera to fit the customer's need.

II. Product Specifications

- MPEG4/ M-JPEG compression
- Supports SD card for local recording
- Wireless network connection [Optional]
- 2-way audio
- Support PTZ control
- Online firmware upgrade
- Real-time video recording
- Compatible with Microsoft Windows Media Player

Product Specifications

| Hardware | |
|-------------------------|---|
| CPU | ARM 9 ,32 bit RISC |
| RAM | 64MB |
| ROM | 8MB |
| Video in/ out | 1 in/ 1 out, BNC connector |
| Audio in/ out | 1 in/ 1 out |
| I/O | 2 inputs / 2 Relay outputs (COM. & N.O. & N.C.) |
| RS-485 | 1, for PTZ control |
| RS-232 | Yes |
| Power Consumption | DC 12V, 1A, 4W |
| Dimensions | 134mm (W) x 42mm (L) x 107mm (D) |
| Network | |
| Ethernet | 10/ 100 Base-T |
| Wireless (Optional) | 802.11b/g |
| WEP | 64/ 128 bit |
| Network Protocol | HTTP, TCP/ IP, SMTP, FTP, PPPoE, DHCP, DDNS, NTP |
| System | |
| Video Resolution | NTSC: 720x480, 352x240, 176x120 PAL: 720x576, 352x288, 176x144 |
| Image snapshot | Yes |
| Full screen monitoring | Yes |
| Compression format | MPEG-4/ M-JPEG |
| Video bitrate adjust | CBR, VBR |
| Motion Detection | Yes, 3 different areas |
| Triggered action | Mail, FTP, Save to SD card |
| Pre/ Post alarm | Yes, configurable |
| Remote PTZ control | Yes |
| Security | Password protection |
| Firmware upgrade | HTTP mode, can be upgraded remotely |
| Simultaneous connection | Up to 10 |
| Audio | Yes, 2-way |
| SD card management | |
| Recording trigger | Motion Detection, IP check, Network down (Wire connection only) |
| Video format | AVI, JPEG |
| Video playback | Yes |

| | | |
|--------------------------|-----------|--|
| File Management | | Yes, can be deleted or overwrite |
| Web browsing requirement | | |
| OS | | Windows 2000, XP, 2003, IE 6 or above |
| Hardware | Suggested | Intel-C 2.0G, RAM: 512MB, Graphic card: 64MB |
| | Minimum | Intel-C 1.6G, RAM: 256MB, Graphic card: 32MB |

III. Product Installation

A. Hardware Installation

- i. Connect power adaptor



- ii. Connect Ethernet cable



- iii. Set up the network configurations according to the network environment. For further explanation, please refer to chapter VI, "Network Configuration for IPw-TX".

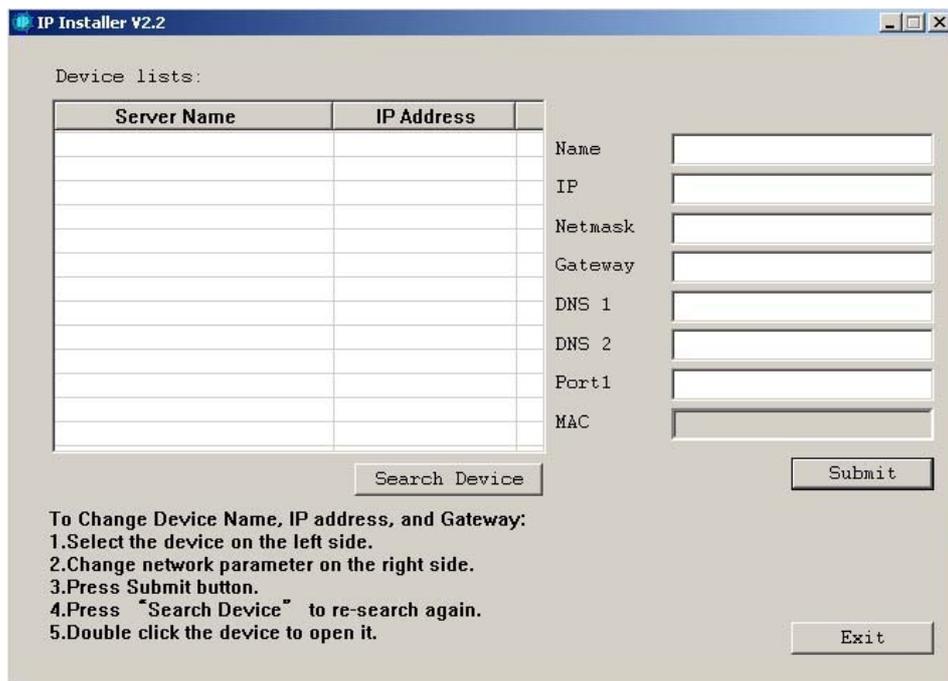
B. IP Assignment

- i. Use the software, "IP Installer" to assign the IP address of IPw-TX.

- ii. There are two languages for the IP installer
 - a. IPInstallerCht.exe: Chinese version
 - b. IPInstallerEng.exe: English version
- iii. There are 3 kinds of IP configuration.
 - a. Fixed IP (Public IP or Virtual IP)
 - b. DHCP (Dynamic IP)
 - c. Dial-up (PPPoE)
- iv. Execute IP Installer
- v. For Windows XP SP2 user, it may popup the following message box. Please click "Unblock".



- vi. The GUI of the IP Installer:



- vii. IP Installer searches all the IP cameras which connect to the intranet and lists on the left side of the IP Installer. Just click the “Search Device” to re-search again.
- viii. Click one of the IP camera listed on the left side. The network configuration of this IP camera will show on the right side. Change the parameter and click “Submit”. The following dialogue box will show. Just click “OK”. It will change the IP and reboot the camera.



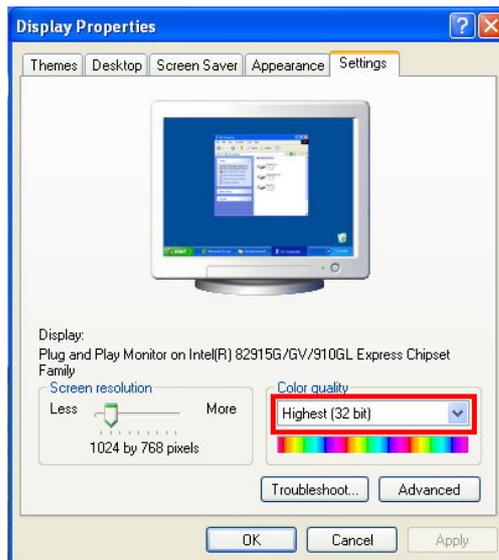
- ix. Click “Search Device” to research the IP camera. Double click the IP camera listed on the left side. It will open an IE browser and connect to this IP camera directly.

C. Monitor Setting

- i. Right-Click on the desktop. Select “ Properties”



- ii. Change color quality to highest (32bit).



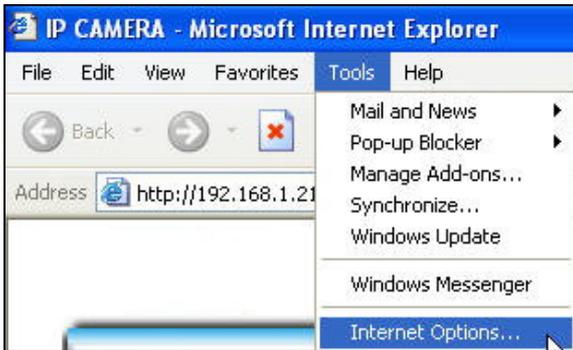
D. Install ActiveX control:

For the first time to view the camera video via IE, it will ask you to install the ActiveX component.

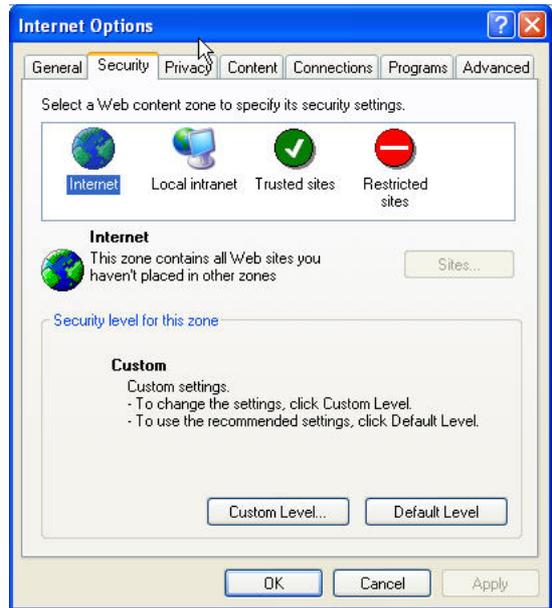
If the installation failed, please check the security setting for the IE browser.

- i. IE → Tools → Internet Options... → Security Tab → Custom Level... → Security Settings → Download unsigned ActiveX controls → Select "Enable" or Prompt.
- ii. IE → Tools → Internet Options... → Security Tab → Custom Level... → Initialize and script ActiveX controls not marked as safe → Select "Enable" or Prompt.

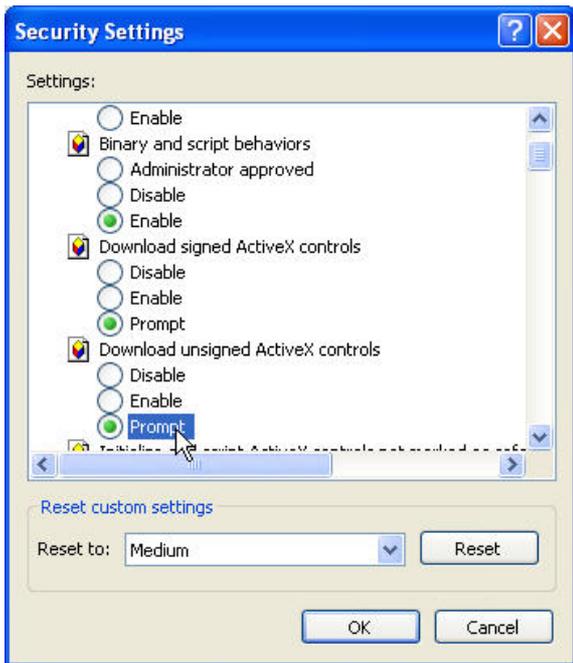
1



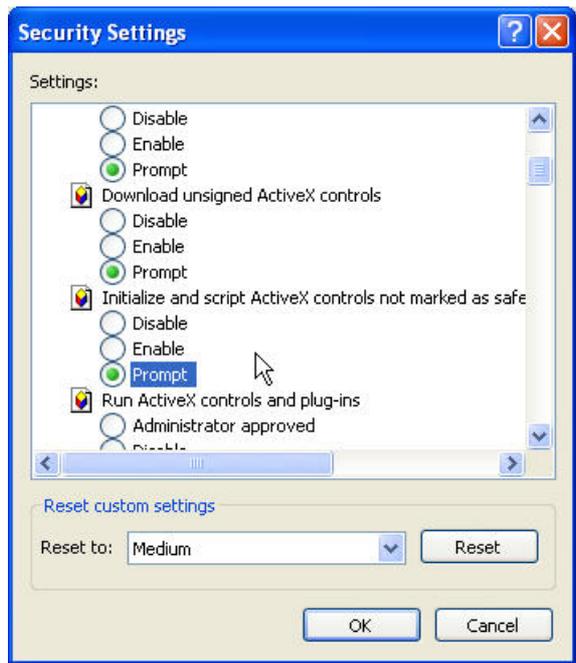
2



3

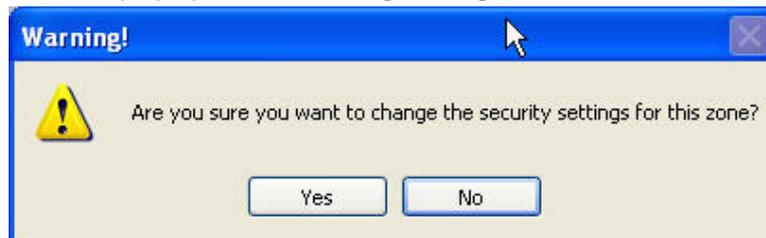


4



5

When popup the following dialogue box, click "Yes".

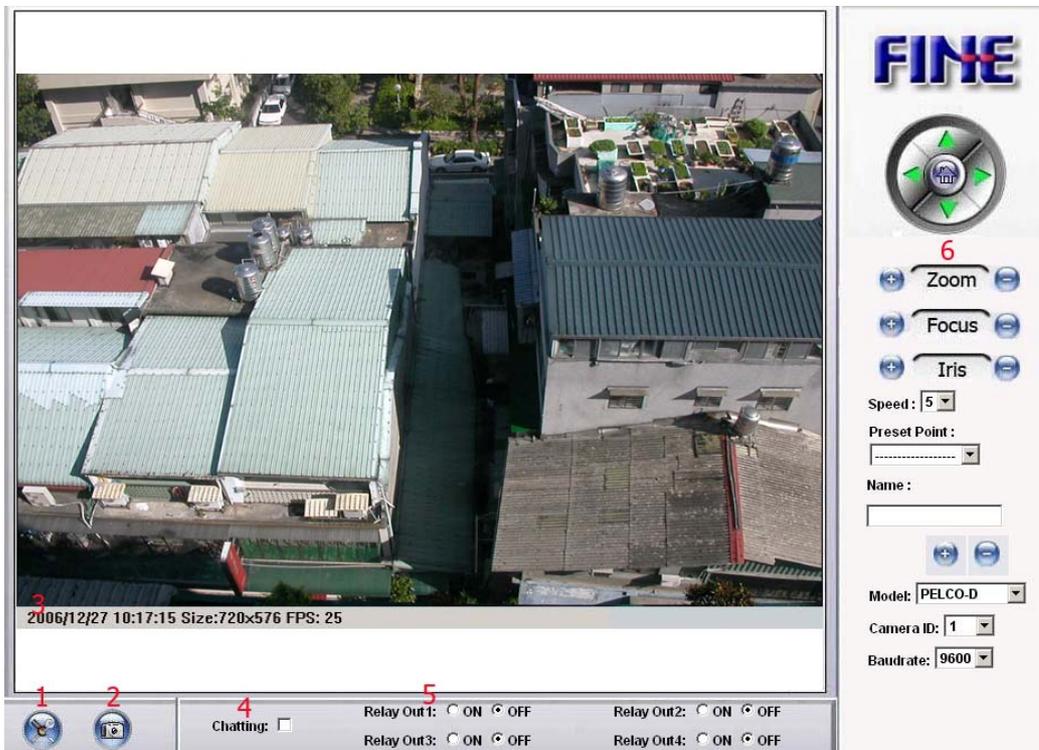


IV. Live Video

Start a IE browser, type the IP address of the IP camera in the address field. It will show the following dialogue box. Key-in the user name and password. The default user name and password are “admin” and “admin”.



When connect to the IPw-TX ◦ The following GUI shows.



1. : Get into the administration page
2. : Video Snapshot
3. Show system time, video resolution, and video refreshing rate
4. IPw-TX supports 2-way audio. Click the “Chatting” check box. The you can use microphone which connect to the PC to talk to server side, which is IPw-TX side.
5. Control the relay which is connected to this video server.
6. Select PTZ protocol to control the PTZ camera which it connected to this video server. The PTZ function will be slightly different depends on which protocol to use.

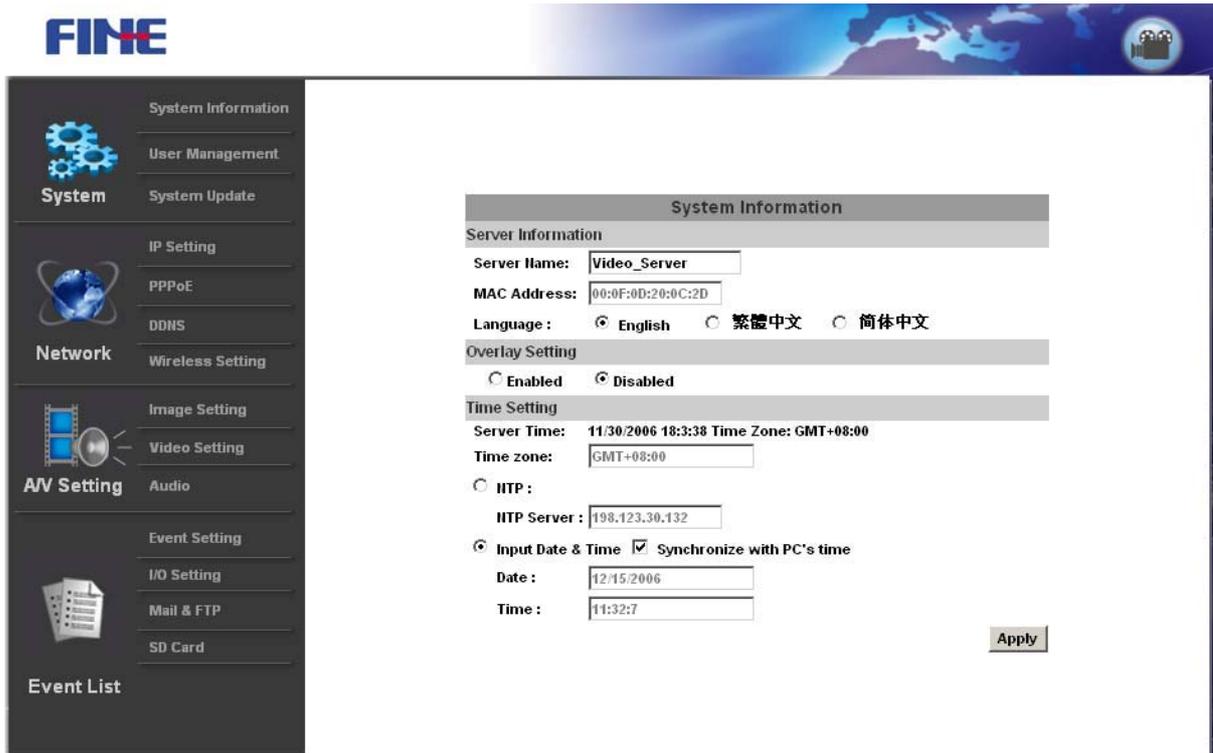
Right-Click the mouse on the video, it will show a pop-up menu.



1. Snapshot: Save a jpg picture
2. Record Start: Record the video in the local PC. It will ask you where to save the video. To stop recording, right-click the mouse again. Select “Record Stop”. The video format is AVI. Use Microsoft Media Player to play the recorded file.
3. Mute: Turn of the audio. Click again to turn on it.
4. Full Screen: Full-screen mode.

V. Configuration

Click  to get into the administration page. Click  to back to the live video page.



The screenshot shows the FINE camera administration interface. The left sidebar contains a menu with categories: System (System Information, User Management, System Update), Network (IP Setting, PPPoE, DDNS, Wireless Setting), AV Setting (Image Setting, Video Setting, Audio), and Event List (Event Setting, I/O Setting, Mail & FTP, SD Card). The main content area displays the 'System Information' configuration page. The 'Server Information' section includes fields for 'Server Name' (Video_Server), 'MAC Address' (00:0F:0D:20:0C:2D), and 'Language' (English selected, 繁體中文, 简体中文). The 'Overlay Setting' section has radio buttons for 'Enabled' and 'Disabled' (selected). The 'Time Setting' section shows 'Server Time' (11/30/2006 18:33:38), 'Time Zone' (GMT+08:00), and 'Time zone' (GMT+08:00). The 'NTP' section has radio buttons for 'NTP' and 'Input Date & Time' (selected), with a checked 'Synchronize with PC's time' option. Fields for 'Date' (12/15/2006) and 'Time' (11:32:7) are present. An 'Apply' button is at the bottom right.

A. System

i. System Information

Set up the camera name, select language, and set up the camera time.

- a. Server Name: This is the Camera name. This name will show on the IP Installer.
- b. Select language: There are English, Traditional Chinese, and Simple Chinese to select. When change, it will show the following dialogue box for the confirmation of changing language.

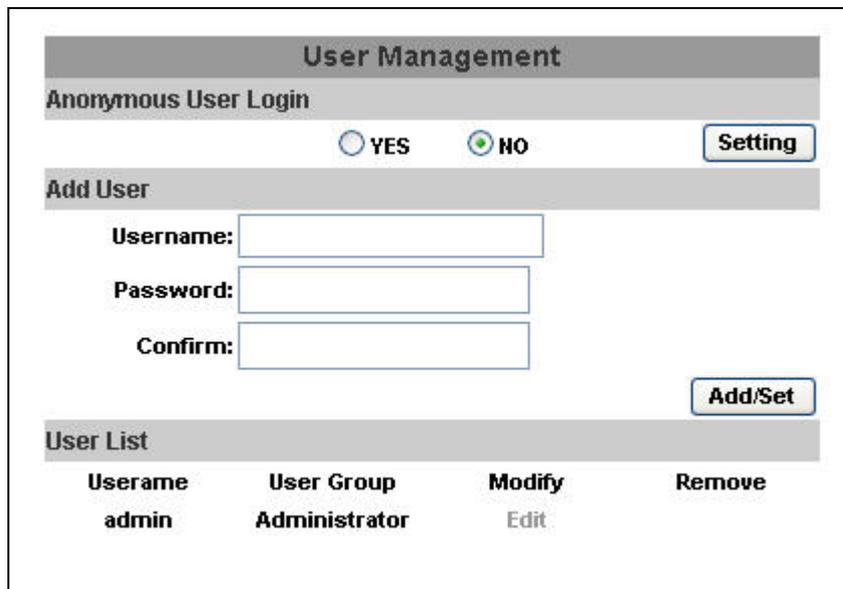


c. Server time setting: Use NTP or Input Date & Time manually.

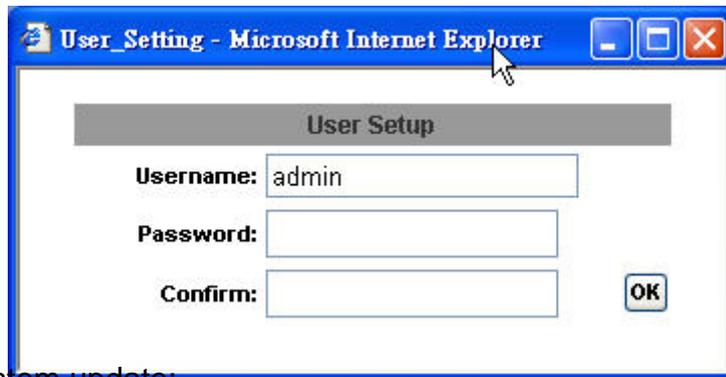


ii. User Management

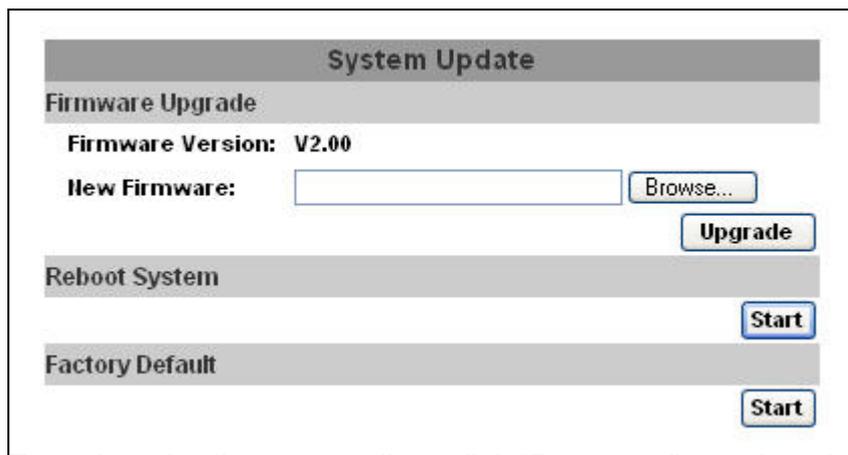
IPw-TX supports three different users, administrator, general user, and anonymous user.



- a. Anonymous User Login:
Yes: Allow anonymous login
No: Need user name & password to access this IP camera
- b. Add user:
Type the user name and password, then click “Add/Set”.
- c. Click “edit” or “delete” to modify the user.



- iii. System update:



To update the firmware online, click “Browse...” to select the firmware. Then click “Upgrade” to the procedure.

Reboot system: re-start the IP camera

Factory default: delete all the settings in this IP camera.

B. Network

- i. IP Setting
IPw-TX supports DHCP and static IP.

IP Setting

IP Assignment

DHCP

Static

IP Address:

Subnet Mask:

Gateway:

DNS 0:

DNS 1:

Port Assignment

Web Page Port:

Video Port :

Audio In Port :

Audio Out Port :

- a. Static IP : Type IP address, subnet mask, gateway, and DNS manually.
- b. DHCP : Using DHCP, IPw-TX will get all the network parameters automatically.

1.1.1 PPPoE:

PPPoE

PPPoE Setting

Enabled Disabled

Username:

Password:

Send mail after dialed

Enabled

Subject:

Select "Enabled" to use PPPoE.

Key-in Username and password for the ADSL connection.

Send mail after dialed: When connect to the internet, it will send a mail to a specific mail account. For the mail setting, please refer to "Mail and FTP" settings.

ii - DDNS:

IPw-TX supports DDNS (Dynamic DNS) service.

- a. DynDNS ;

DDNS

DDNS Setting

Enabled Disabled

Provider:

Hostname:

Username:

Password:

Schedule Update: **Minutes**

State

Idle

Schedule Update: Feature of DDNS schedule update is designed for IP products which installed behind the ICS or NAT devices. Update range from every 5 (minutes) to 5000 (minutes) and 0 remain to off.

1. Enable this service
 2. Key-in the DynDNS server name, user name, and password.
 3. Set up the IP refreshing rate.
 4. Click "Apply"
- b. Camddns service:

DDNS

DDNS Setting

Enabled Disabled

Provider:

Username:

Schedule Update: **Minutes**

State

Idle

Schedule Update: Feature of DDNS schedule update is designed for IP products which installed behind the ICS or NAT devices. Update range from every 5 (minutes) to 5000 (minutes) and 0 remain to off.

1. Key-in user name.
 2. Click "Apply".
- c. DDNS Status
1. Updating: Information update
 2. Idle: Stop service

3. DDNS registration successful, can now log by <http://<username>.ddns.camddns.com>: Register successfully.
 4. Update Failed, the name is already registered: The user name has already been used. Please change it.
 5. Update Failed, please check your internet connection: Network connection failed.
 6. Update Failed, please check the account information you provide: The server, user name, and password may be wrong.
- iii 、 Wireless Setting (This section is for IPw-TX / wireless only)
IPw-TX / wireless supports 802.11 b/g wireless connection.

Wireless Setting

Wireless Setting

Enabled Disabled

MAC Address: 00:11:E2:03:36:B4

Mode: Infrastructure

Operation Mode: Auto

SSID: Video Server

DHCP : Enabled Disabled

IP Address: 192.168.0.200

Subnet Mask: 255.255.255.0

Gateway: 192.168.0.254

Security : None

Apply

- a. Click “Enabled” to enable wireless connection
- b. Follow the wireless AP you use to set up the parameter in this page.
- c. For operation mode, it will detect the wireless mode, or you can select by yourself.
- d. To use static IP, disable the DHCP.
- e. IPw-TX supports “WEP” and “WPA-PSK” security encryption.

Wireless Setting

Wireless Setting

Enabled Disabled

MAC Address: 00:11:E2:03:37:48

Mode: Infrastructure

Operation Mode: Auto

SSID: HUNT

DHCP: Enabled Disabled

IP Address: 192.168.2.120

Subnet Mask: 255.255.255.0

Gateway: 192.168.2.1

Security: WEP

WEP Setting

Authentication: Open System

Encryption: 64 bit

Key Type: HEX (10 character max)

Key 1: 0224652555

Key 2:

Key 3:

Key 4:

Apply

Wireless Setting

Wireless Setting

Enabled Disabled

MAC Address: 00:11:E2:03:37:48

Mode: Infrastructure

Operation Mode: Auto

SSID: HUNT

DHCP: Enabled Disabled

IP Address: 192.168.2.120

Subnet Mask: 255.255.255.0

Gateway: 192.168.2.1

Security: WPA-PSK

WPA-PSK Setting

Encryption: TKIP

Pre-Shared Key: (ASCII format, 8-63)

Apply

C.Multimedia

i. Image Setting

Camera



Image Setting

Brightness: 0

Contrast: 0

Hue: 0

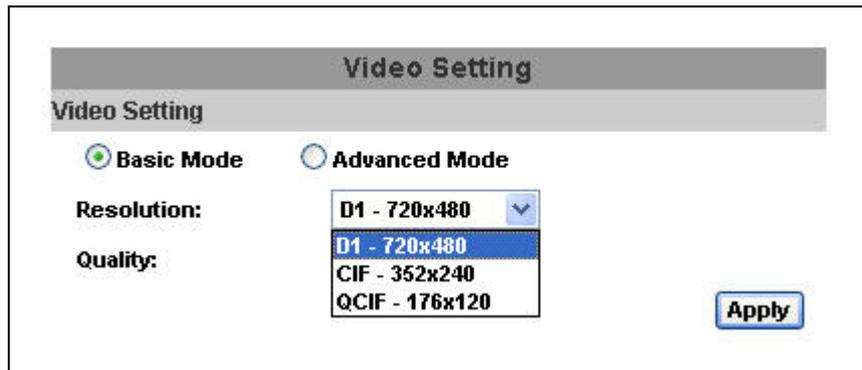
Saturation: 0

Default

Adjust “Brightness”, “Contrast”, “Hue”, “Saturation” and “AE Reference” to get clear video.

ii. Video Setting

a. Basic Mode:



1. Resolution:

There are 3 resolutions to choose.

Full D1 – 720X480 (NTSC), 720X576 (PAL)

CIF – 352X240 (NTSC), 352X288 (PAL)

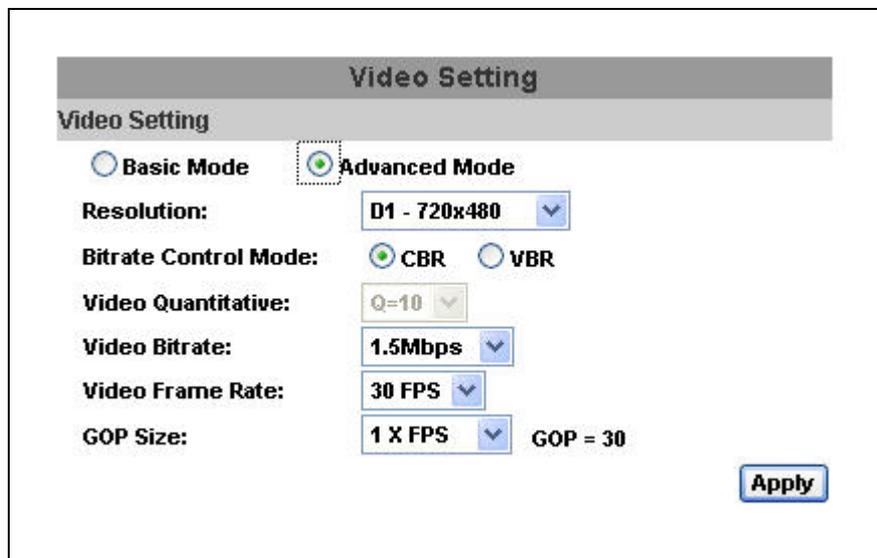
QCIF – 176X120 (NTSC), 176X144 (PAL)
2. Quality:

There are 5 levels to adjust, The higher the quality is, the bigger the file size is.
3. Video System:

Please select 60 (Hz) if you are in America, Taiwan...

Please select 50 (Hz) if you are in Europe, China...

b. Advanced Mode:



1. Resolution:

There are 3 resolutions to choose.

Full D1 – 720X480 (NTSC), 720X576 (PAL)

CIF – 352X240 (NTSC), 352X288 (PAL)

QCIF – 176X120 (NTSC), 176X144 (PAL)
2. Bitrate Control Mode

There are CBR [Constant Bit Rate] and VBR [Variable Bit Rate] to use.

CBR : 64Kbps~4Mbps ◦

VBR : Q=3~30 ◦

3. Video Frame Rate

The video refreshing rate per second.

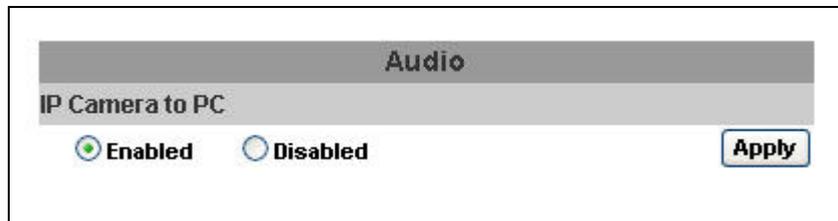
4. GOP

It means "Group of Pictures". The higher the GOP is, the better the quality is.

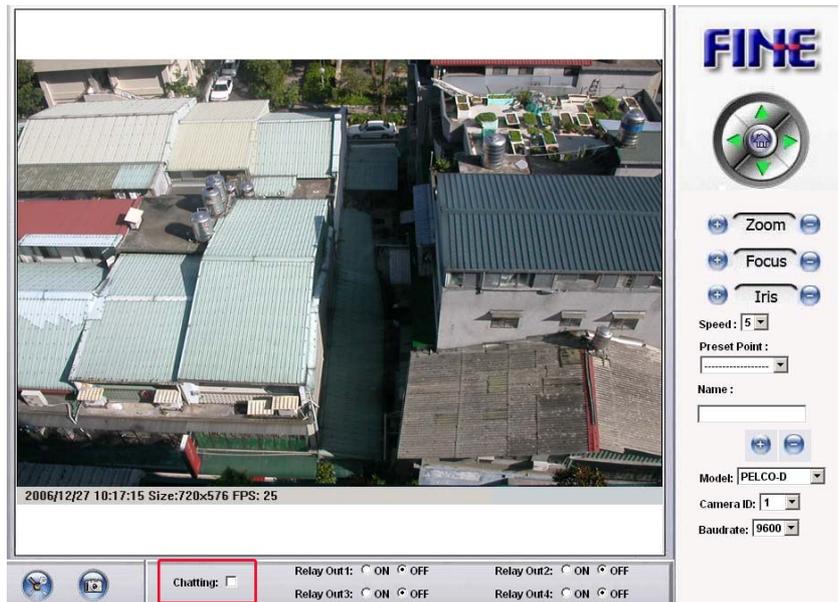
iii 、 Audio:

IPw-TX supports 2-way audio.

- a. For IP camera to local PC, select “Enable” to start this function.



- b. For local PC to IP camera, check “chatting” in the browsing page.



The Audio will not be smooth when enable SD card recording function simultaneously.

D.Event

IPw-TX provides multiple event settings.

- i. Event Setting
 - a. Motion Detection

The screenshot displays the 'Event Setting' window for 'Motion Detection'. At the top, there's a video feed of a street scene with three colored detection areas: Area 1 (blue), Area 2 (green), and Area 3 (red). Below the video, the 'Area Setting' section shows three columns for Area 1, Area 2, and Area 3. Each column has a 'Sensitivity' dropdown set to '5'. Underneath, there are checkboxes for 'E-mail', 'FTP', 'Out1', 'Out2', and 'Save to SD card'. Area 1 has 'Save to SD card' checked. The 'Subject' field contains 'IP Camera Warning!' and the 'Interval' is set to '10 sec'. Below this is a 'Network Dis-connected' section with a 'Save to SD card' checkbox. The 'Network IP Check' section has 'IP Check' set to 'Disabled', 'IP Address' set to 'www.google.com', and 'Interval' set to '10 sec'. There is also a 'Save to SD card' checkbox for IP Check. An 'Apply' button is located at the bottom right.

IPw-TX allows 3 areas motion detection. When motion is

triggered, it can send the video to some specific mail addresses, transmit the video to remote ftp server, and save video to local SD card. To set up the motion area, click "Area Setting". Using mouse to drag the area. The same operation for area 2 and 3.

- b. Network Disconnected

When the network is down, it will save the video to local SD card.

This function is only available for wired connection.

- c. Network IP check

For the use of recording software, IPw-TX supports the

detection of this connection. Whenever the connection is down, it records the video to SD card. Make sure the video recording is continuous. To use this function, key in the IP address of the PC which is installed the recording software, enable the function of "Save to SD card", then click "Apply".

ii 、 I/O Setting

IPw-TX has 2 outputs. When input is triggered, it can send the video to some specific mail addresses, transmit the video to remote ftp server, trigger the relay, and save video to local SD card.

I/O Setting

Input Setting

Input 1 Action: E-mail FTP Out1 Out2 Out3 Out4 Save to SD card

Input 2 Action: E-mail FTP Out1 Out2 Out3 Out4 Save to SD card

Subject: GPIO In Detected!

Interval: 10 sec

Output Setting

Mode Setting: OnOff Switch Slide Switch

Interval: 10 sec

Apply

iii 、 Mail & FTP

To send out the video via mail of ftp, please set up the configuration first.

Mail & FTP

Mail Setting

Mail Server:

Username:

Password:

Sender's Mail:

Receiver's Mail:

Bcc Mail:

FTP Setting

FTP Server:

Username:

Password:

Port: 21

Path: /

Apply

iv、SD card

Please Insert SD card before use it. Make sure pushing SD card into the slot completely.

Note: The use of the SD card will affect the operation of the IPw-TX slightly, such as affecting the frame rate of the video.



a. Playback:



1. It will show the capacity of the SD card. Click the date listed on this page. It will show the list of the video.

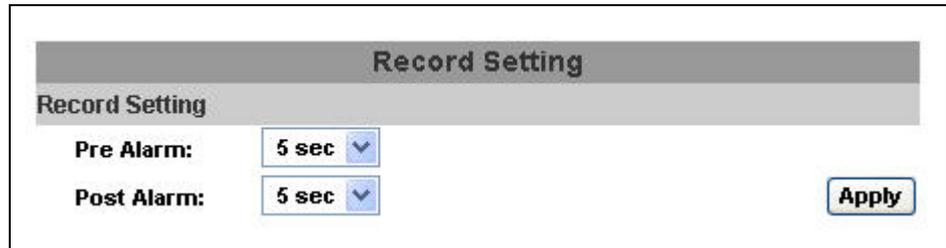
| 2006/04/17 | | | Del |
|------------|-------------|-----------------------|--------------------------|
| Time | Video | Event Type | <input type="checkbox"/> |
| 09:05:22 | 090522f.avi | Network Dis-connected | <input type="checkbox"/> |
| 09:05:52 | 090552f.avi | Network Dis-connected | <input type="checkbox"/> |
| 09:06:22 | 090622f.avi | Network Dis-connected | <input type="checkbox"/> |
| 09:06:52 | 090652f.avi | Network Dis-connected | <input type="checkbox"/> |
| 09:07:22 | 090722f.avi | Network Dis-connected | <input type="checkbox"/> |
| 09:07:52 | 090752f.avi | Network Dis-connected | <input type="checkbox"/> |
| 09:08:22 | 090822f.avi | Network Dis-connected | <input type="checkbox"/> |
| 09:08:51 | 090851f.avi | Network Dis-connected | <input type="checkbox"/> |
| 09:09:21 | 090921f.avi | Network Dis-connected | <input type="checkbox"/> |
| 09:09:51 | 090951f.avi | Network Dis-connected | <input type="checkbox"/> |

1 2 3 4 5

2. The video format is AVI. Click the video to start Microsoft Media Player to play it.
3. To delete the video, check it, then click **Del**. When the SD card

is full, it will remove the oldest video automatically.

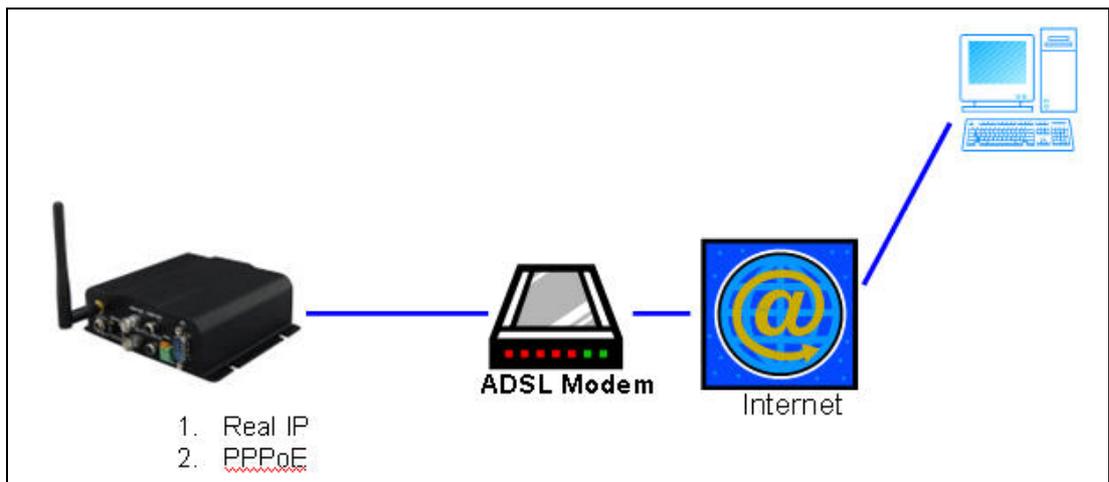
b. Record Setting



The Pre/ Post Alarm are adjustable in WB-8211SD.

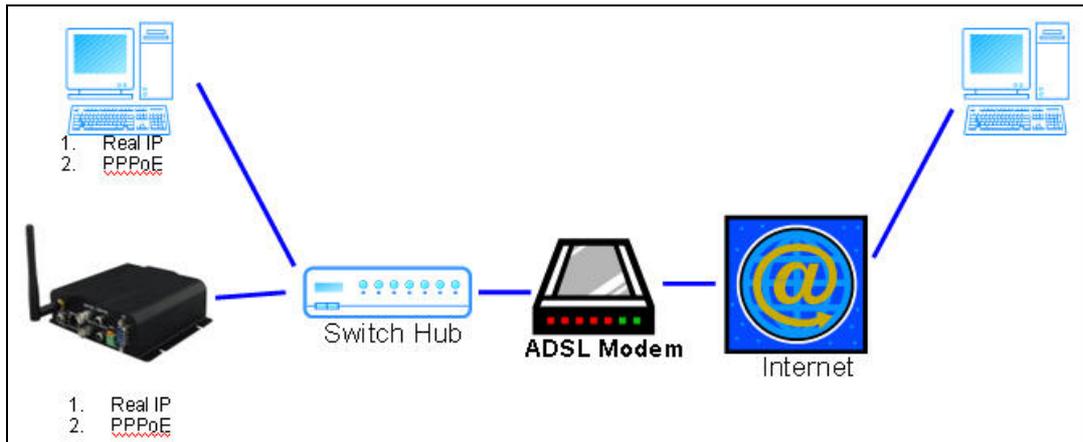
VI. Network Configuration

1. Configuration 1:

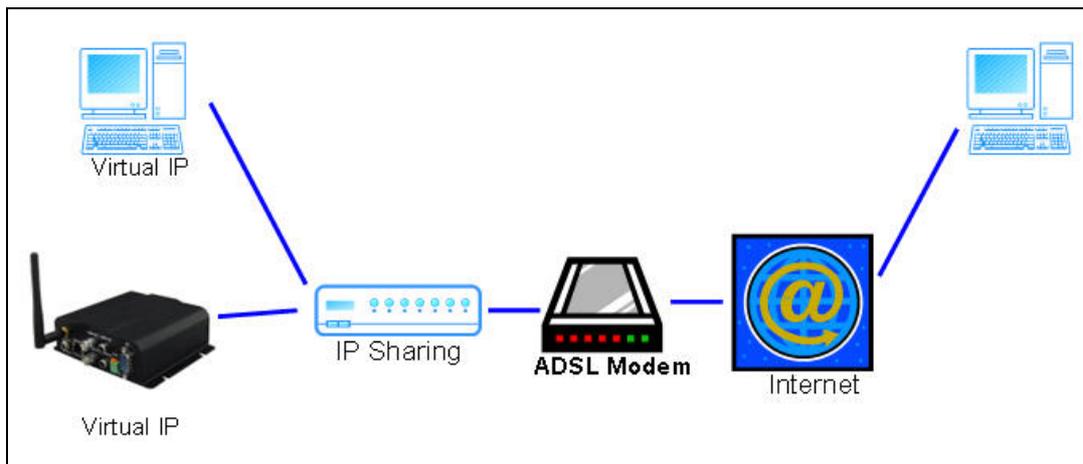


- A. Internet Access: ADSL or Cable Modem
- B. IP address: One real IP or one dynamic IP
- C. Only IPw-TX connects to the internet
- D. For fixed real IP, set up the IP into IPw-TX. For dynamic IP, start PPPoE.

2. Configuration 2:



- A. Internet Access: ADSL or Cable Modem
 - B. IP address: More than one real IP or one dynamic IP
 - C. IPw-TX and PC connect to the internet
 - D. Device needed: Switch Hub
 - E. For fixed real IP, set up the IP into IPw-TX and PC. For dynamic IP, start PPPoE.
3. Configuration 3:



- A. Internet Access: ADSL or Cable Modem
- B. IP address: one real IP or one dynamic IP
- C. IPw-TX and PC connect to the internet
- D. Device needed: IP sharing
- E. Use virtual IP, set up port forwarding in IP sharing.

VII. Factory Default

1. To recover the default IP address and password, please follow the following steps.

2. Press and hold the button in the back of IPw-TX.



3. Power on the camera. Don't release the button during the system booting.
4. It will take around 30 seconds to boot the camera.
5. Release the button when camera finishes proceed.
6. Re-login the camera using the default IP (<http://192.168.1.200>), and user name (admin), password (admin).

Appendix I

SD Card Recommended

| | |
|-------------------------|-----------|
| SanDisk 128M | OK |
| Tracend 128M 80X | OK |
| SanDisk 256M | OK |
| SanDisk 512M | OK |
| SanDisk 1G | OK |
| SanDisk 2G | OK |

| | |
|-------------------------|-----------|
| SanDisk 4G | OK |
| Tracend 256M 80X | OK |
| Tracend 512M 80X | OK |
| Tracend 1G 80X | OK |
| Tracend 2G 80X | OK |
| Tracend 4G 80X | OK |