iCanView230/230W

MPEG4 Network Camera

Full D1 resolution with true de-interlace filter produces brilliant, artifact free video. Using state-of-the- art MPEG-4 (video) and synchronized ADPCM (audio) encoding, the iCanView230 affords superior video quality and improved network performance.

The iCanView230 outperforms the competition when compared to other network cameras using still picture encoding technology (i.e. M-JPEG, or Wavelet encoding), or MPEG-4 units using basic encoding technologies.

iCanTek's superior cross bit rate encoding technology, ixBR Control® (iCanTek Cross Bit Rate), delivers powerful bandwidth control. With ixBR digital video streams more fluidly because the data is encoded and streamed at a constant rate, yet retains all the rich data of variable bit rate encoding!

iCAN TEK
Internet Communication & Network Technology

Directions

iCanView230/230W are designed for indoor use only. When using iCanView230/230W outdoors or in an environment that exceeds the limited range, you must separately use a water-resistant case.

Be careful not to cause any physical damage by dropping or throwing the iCanView230/230W. Especially keep the device out of reach from children.

Do not disassemble iCanView230/230W. You will be excluded from After Service when disassembled.

Use only the power adapter provided with the iCanView230/230W.

If you would like to use the iCanView230/230W for security, monitoring, please check the legal regulations within the country.

Note

This equipment has been tested and found to comply with the limits for a Class A 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 generate, 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 and outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help.

Caution

Any changes or modifications in construction of this device which are not explicitly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This appliance and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter. A minimum separation distance of 20 cm must be maintained between the antenna and the person for this appliance to satisfy the RF exposure requirements.

Revision History

Date	Rev No	Description
2006-08-14	1.0	Creation of the document

Table of Contents

1. Introduction

1.1. Overview

The iCanView230/230W is a state-of-the-art network camera which transmits synchronized video and audio data in real time with D1 resolution at full frame rate. This is possible through MPEG4 CODEC technology, which provides high quality video with highly compressed data streams. The iCanView230/230W can be connected, controlled and monitored from a remote location through an IP connection over internet or intranet. Unlike CCTV or DVR, the iCanView230/230W is easy to install and owner will experience cost and space savings in the installation owing to the state of the art technologies embedded in the system. Based on Embedded Software Solution (Embedded Web Server, Embedded Streaming Server, Network Protocol), the iCanView230/230W ensures unprecedented performance and stability to be an ideal network camera solution for system integration solutions.

iCanView230/230W are offered with standard Ethernet interface while iCanView230/230W is offered with embedded WiFi solution.

1.2. Features of iCanView230/230W

- 1 channel synchronized real time Video/Audio streaming
  MPEG-4 video, ADPCM audio.
- Bi-directional audio communication
  Real time audio communication between iCanView230/230W and Client PC
- The viewer assisted **recording and playback functions**.
- 1 Alarm sensor input/1 relay output
- Motion detection – Up to 3 motion detection zones
  Arbitrary shape motion detection zone
  Motion detection can initiate video recording, which is sent to the user through FTP and/or E-mail.
- Resolution
  - NTSC : 704x480, 352x240, 176x144.
  - PAL/SECAM : 704x576, 352x288, 176x144
- RS-485 interface for Pan/Tilt device connection
- Remote administration control
  Entire operational parameter set up, Software upgrade

- Embedded WiFi interface (iCanVeiw230W only) – IEEE 802.11b/g
- Proprietary PoE (Power over Ethernet) for convenience of installation and cost savings

1.3. Applications of iCanView230/230W

- Security surveillance (buildings, stores, manufacturing facilities, parking lots, banks, government facilities, military, etc.)
- Real time Internet broadcasting
- Remote monitoring (hospitals, kindergartens, traffic, public areas, etc.)
- Teleconference (Bi-directional audio conference)
- Remote Learning
- Weather and environmental observation

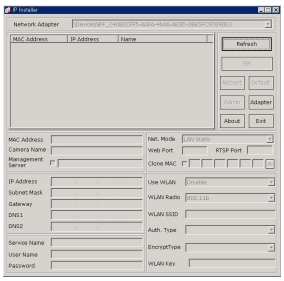
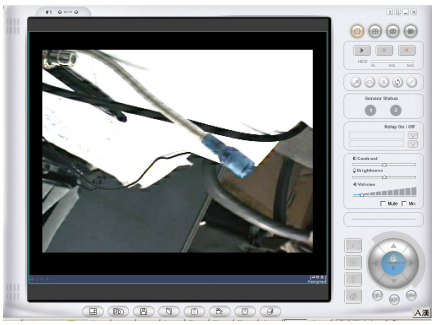
2. Product Description

2.1. Contents

Open the package and check if you have the followings:

Components	Description	Remarks
iCanView230/230W	iCanView230/230W Network Camera	
Power adapter	Input : 100~250V 50-60Hz Output : +12V, 1.0A	Standard Power
AC power cable	AC 250V, 10A~16A	
Antenna		iCanView230W only
CD-ROM	Software & User's Guide	
Quick Reference Guide	Quick installation guide	Will be provided

2.2. Preview

iCanView230/230W	IP-Installer	i-NVR
		
1CH MPEG-4 Network Camera	PC software to allocate an IP address to the iCanView230/230W	PC software to view and record the A/V streaming data transmitted from iCanView230/230W

2.3. Physical description

2.3.1. Front View

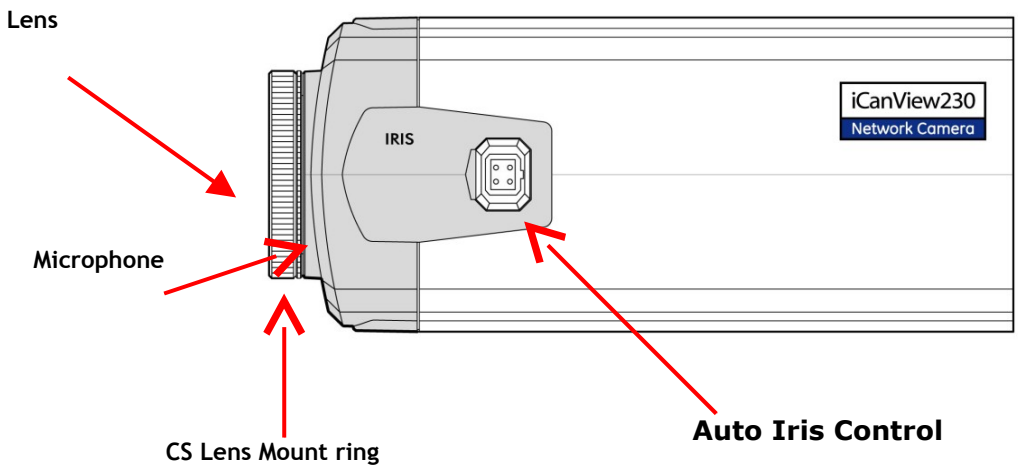


Figure 2-1. Side view of iCanView230/230W

• **Lens :** iCanView230/230W is basically delivered without Lens assembly. Standard C or CS type lens can be accommodated into iCanView230/230W. Either DC Iris lens or Non-DC Iris lens can be used with iCanView230/230W.

• **Microphone :** Picks-up sound from the environment for transmission over the network.
• **CS Lens Mount Ring :** Used for attaching lens unit to iCanView230/230W.
• **Auto Iris Control** : Plug in the cable from standard DC-Iris lens.

2.3.2. Rear panel

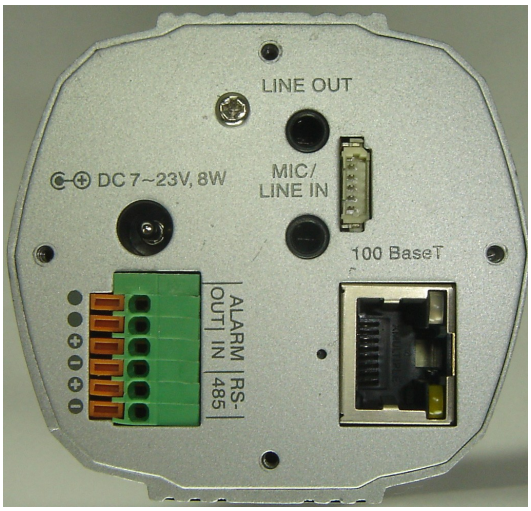


Figure 2-2. Rear views of iCanView230/230W

• **MIC /LINE IN :** Connect external audio source or microphone. If external audio is connected, embedded microphone will be disabled.
Use Standard stereo earphone jack for the connection

Figure 2-3. Pin assignment of the plug for MIC/LINE In (left) and LINE OUT (right)

• **LINE OUT** : Connect speakers with built in amplifier. Audio from remote site is output through Line out in bi-directional audio mode.
Use Standard stereo earphone jack for the connection.

• **100BaseT** : 100Mbps Ethernet connector (RJ-45) with proprietary PoE.

- LINK LED : Continuous yellow light means that network cable is plugged in. It will flicker when there is traffic.

- Status LED: Green color indicates that the camera is in normal operation mode, while RED color indicates that the camera is in abnormal condition.

• **RS-232C & Video-out**
3 Pins from the bottom of the connector are assigned for RS-232 port, while the remaining 2 pins are used for checking composite video output from the camera. Please note that the bottom most pin is numbered as 1.

Pin	Description	Misc.
1	TxD of RS-232C	For debugging & factory use only.
2	RxD of RS-232C	For debugging & factory use only.
3	Ground of RS-232C	For debugging & factory use only.
4	Video out from the camera	For use in installation.
5	Ground for Video out.	For use in installation

• **DC7-23V, 8W**: Power input of iCanView230/230W.
Do not apply power through this power input when power is applied through LAN cable using proprietary PoE.

• **RS-485 and ALARM IN/OUT :** Used for connecting P/T device, sensor, and alarm devices to iCanView230/230W. Note that the bottom most pin is numbered as 1. Pin assignments are as follows

Pin	Description	Misc.
1	RS-485 Negative (-)	
2	RS-485 Plus (+)	
3	Alarm In (-)	NC/NO selectable in admin mode.
4	Alarm In (+)	NC/NO selectable in admin mode.
5	Alarm Out	Relay output : closed circuit in alarm to indicate alarm status.
6	Alarm Out	

- RS-485 : Used for connecting Pan/Tilt and Zoom devices having RS-485 interface standard.
- Alarm In : Connect external alarm sensors such as the infrared sensors, heat sensor, magnetic sensors, etc. NC/NO selectable in the admin page.
- Alarm Out : It is used for connecting external alarm generators such as sirens, flashing light, etc. When activated, relay output configures a closed circuit.

Please refer to Section 6.1 for more detailed description on the Alarm In/Out connections.

• **Reset** : **Factory Default Switch**
There is a switch provided for returning the network camera to factory default state. Press the switch about 3 seconds through a tiny hole at the left of the 100BaseT connector using tools with sharp tip for a few seconds while power is applied.

• **Antenna Connector :** Connector for connecting 3dBi antenna supplied with iCanView230W

2.4. PC Requirements

AV streaming data received from iCanView230/230W can be decoded or stored in a PC running i-NVR program which is a viewing & recording program for a PC. Minimum requirement of the PC is

described below:

	Minimum	Recommended
CPU	Pentium III 700	Pentium IV 1.2G above
Main Memory	128 MB	256MB above
Operating system*	Windows 2,000 or later	Windows 2,000 or later
Web browser	Internet Explorer 5.0	Internet Explorer 5.0 above
Resolution	1,024 X 768	Higher than 1,024 X 768
Network	10 Base-T Ethernet	100 Base-T Ethernet

* Operating Systems supported : Windows 2000 Professional
Windows XP Professional / Windows XP Home Edition

2.5 Quick Installation Guide

Brief information for rapid installation is provided in this section. For more detailed information you are recommended to refer to pertinent documentations provided with the product or refer to iCanTek's home page **(http://www.icantek.com)**

1. **Connect iCanView230/230W to LAN by using one of the following method**
   1) If you have power adaptor and PoE injector, connect the network camera and PC as illustrated in Figure 2.4. Both power and network connection is made with a single LAN cable.
   2) If you have power adaptor with PoE, connect the network camera and PC as illustrated in Figure 2.5. Both power and network connection is made with a single LAN cable.

   - The propriety PoE (Power over Ethernet) adds convenience in installing the network camera by providing both power and LAN connection using single LAN cabling.

   3) If you have standard power connect the network camera and PC as illustrated in Figure 2.6.

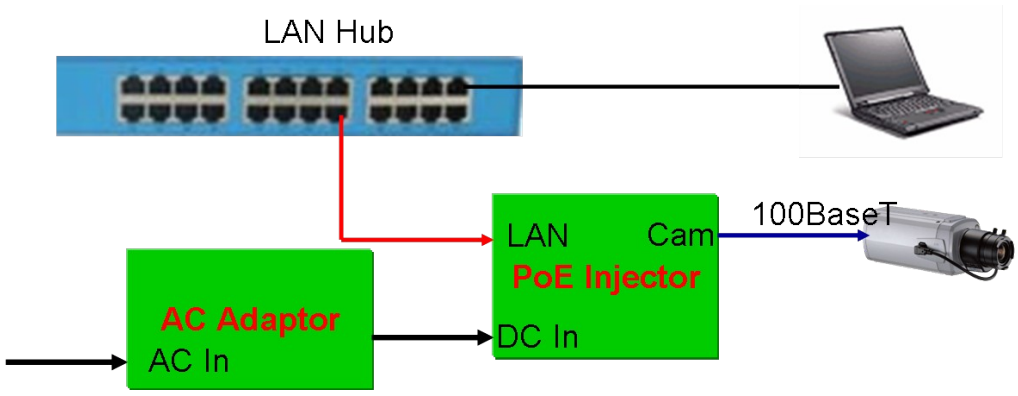


Figure 2-4. Connecting Network camera and PC using PoE Injector

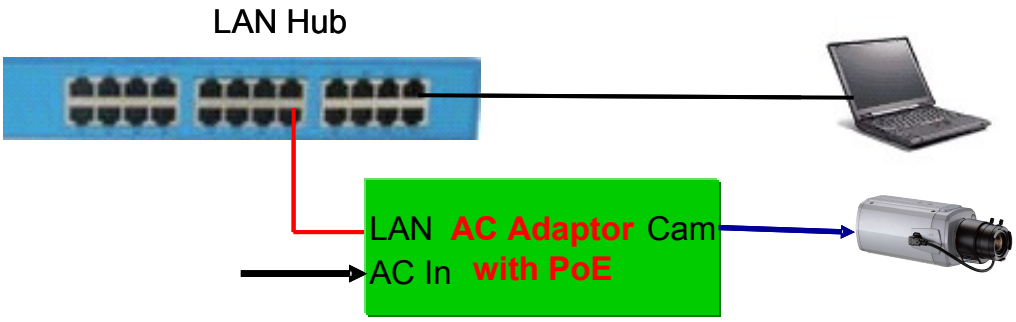


Figure 2-5. Connecting Network camera and PC using PoE Adaptor

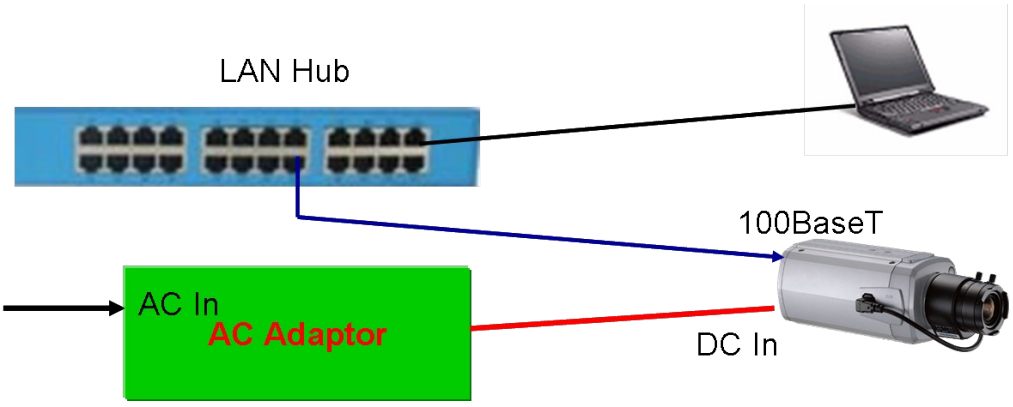


Figure 2-6. Connecting Network camera and PC without using PoE

<Caution>

The products of iCantek does not support standard PoE. Do not connect the network camera directly to a hub supporting standard PoE.

iCantek assumes no responsibility for the damages caused by use of standard PoE device with iCanTek's products.

2. **Apply power to iCanView230/230W**

3. **Install "IP installer" and "i-NVR" on your PC.**
   Detailed information for installing these programs can be found in **[IP-Installer User's Guide]** and **[i-NVR User's Guide],** respectively.

4. **Assign IP address to iCanView230/230W using IP installer.**
   Identify the type of the network environment and set up IP address. Detailed process of setting up IP address can be found in **[IP-Installer User's Guide]**. If network type is xDSL or Cable modem you need supplementary information provided by your ISP.

5. **Connect to iCanView230/230W in Administrator Mode for initial parameter set-up.**

   All parameters are set to factory default state when iCanView230/230W is delivered. You are asked to configure the system for your environment in administration mode. Detailed information of using administration mode can be found in **[5. Configuring iCanView230/230W in Administrative Mode]**. Among the parameters, the parameters in the following table should be set-up with proper values. Detailed information for the parameters in Administrator Mode is found in **[5. Configuring iCanView230/230W in Administrative Mode]**

   [Note]: Set-up values are preserved even the power is turned off.

Page	Parameter	Setup value	Factory default value
Basic Setup	Video Size	Set the resolution of the video transmitted from iCanView230/230W.	Make sure that you press Check button to find out the number of maximum possible simultaneous users then set the number of users smaller than or equal to the number.
	Max Upload Rate	Set this value smaller than the upload speed of your network.	
	Frame Rate	The number of frames to be transmitted per second.	
	Video Rate	Bandwidth assigned for video transmitted from iCanView230/230W.	
User Admin & Time Setup	Administrator name & password	For safety, you are recommended to change these values from factory default. For new connection, you need to input changed values for corresponding fields. Do not disclose these values to others and memorize these values.	Default value Username : root Password : dw2001
User Admin & Time Setup	Current Time	Input correct time in this field.	Default value : 2001/1/1

6. **Connect the input and output signals to iCanView230/230W.**

Connectors	Function	Signal description	Number
LINE-In/MIC	Audio in	Connect microphone or output from audio devices.	1
Line Out	Audio out for speaker	Audio from remote site is available from this connector in bi-directional audio mode. Connect speaker with amplifier.	1
Alarm In	Connecting Alarm Sensor	IR sensor, Motion Sensor, Smoke Detector…	1
Alarm Out	Connecting Alarm annunciating device	Siren, Flashing Light, …	1
RS485	PT device control	Remote P/T/Z device connection having RS485 interface.	1
100Base-T	Network connection	Connect iCanView230/230W to the network, LAN, ADSL or Cable modem.	1

7. **Remote video connection to iCanView230/230W**

   Run **i-NVR** on your PC. Before connecting to iCanView230/230W it is needed to configure the connection information on the i-NVR. More detailed information of using "**i-NVR**" can be found in [**i-NVR User's Guide**].

3. Connecting iCanView230/230W to Network

iCanView230/230W supports LAN, xDSL, and Cable modem. It also supports shared IP environment where single IP address is shared by at least 2 IP devices. Refer to **[IP-Installer User's Guide]** for details of setting the IP address for iCanView230/230W.

3.1. Connecting to LAN

In case of connecting the iCanView230/230W to LAN, it is generally connected as in Figure 3-1.

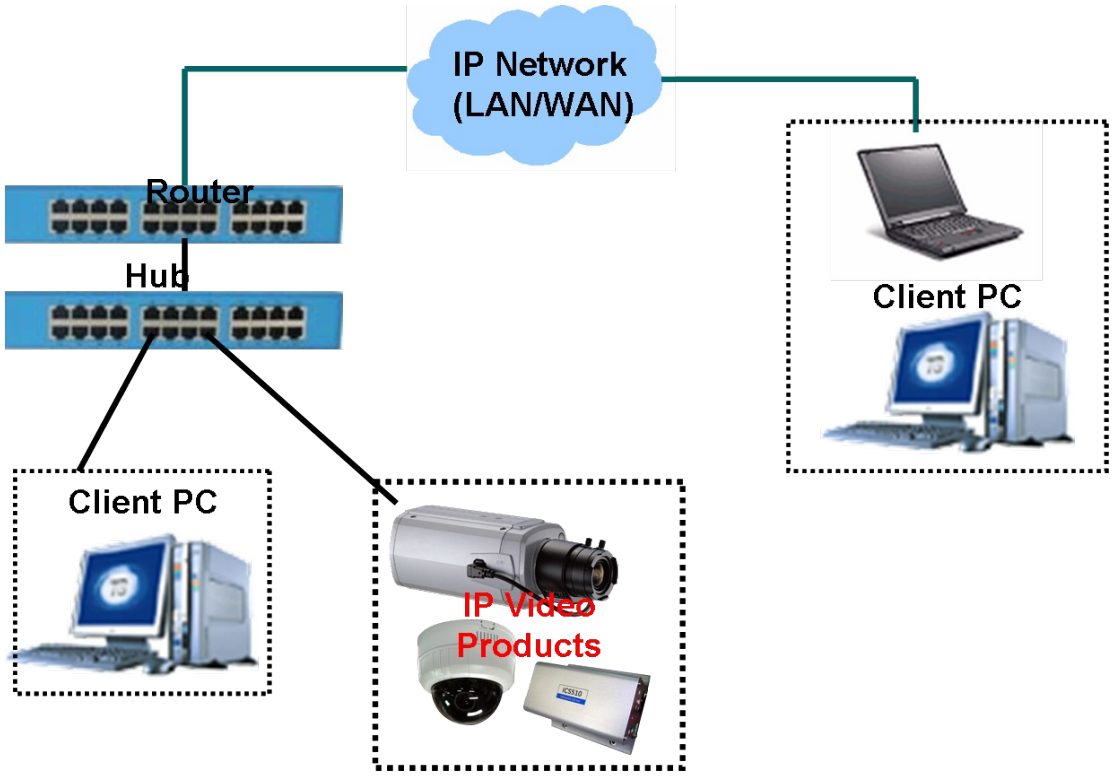


Figure 3-1. Connecting the iCanView230/230W to LAN

1. Follow through steps 1 to 4 in Section 2.5 to assign IP address to iCanView230/230W.
2. Install iCanView230/230W and connect it to desired LAN.
3. Check if you can receive video data when connecting to iCanView230/230W using the viewer program.
4. When one or more IP video products are connected through a IP sharing device (i.e. router) to a larger network (i.e. the internet), in order to access each unit from outside the local area network, each device must have a unique RTSP (Real Time Stream Protocol) and HTTP port number. You must also configure your IP sharing device for "port forwarding". This is to enable the IP sharing

device to forward packet data with unique port number (RTSP and HTTP) to unique internal IP address (local IP address). If you only plan to access multiple units from within a local area network, you do not need to change the RTSP and HTTP port numbers, unless other IP sharing devices sit in-between the client and the IP video products. For more detailed information regarding the use of IP sharing device refer to the document **[Use of Private IP network using IP-sharing-device]**.

3.2. Connecting to xDSL/Cable Modem

1. Follow through steps 1 to 4 in Section 2.5 to assign IP address and other network parameters to iCanView230/230W.
2. Install iCanView230/230W and connect it to xDSL or Cable modem as in Figure 3-2.

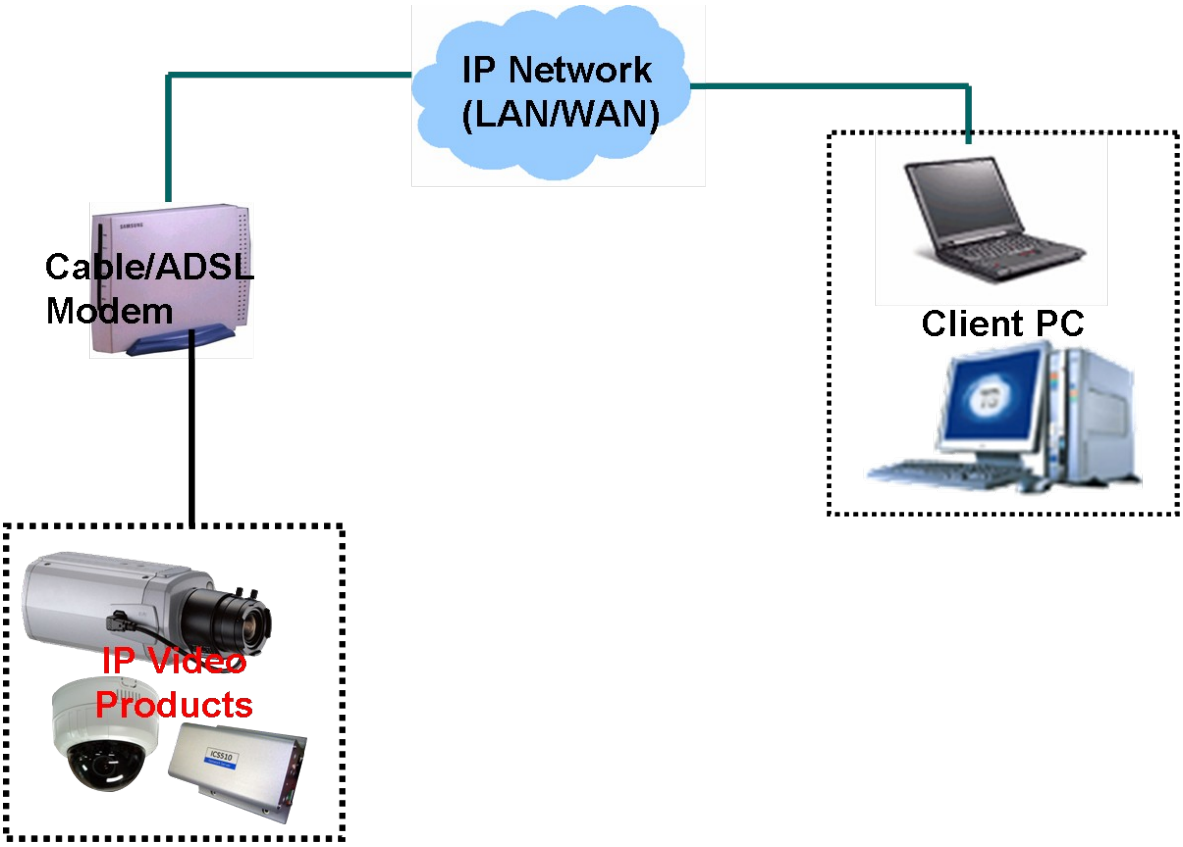


Figure 3-2. Connecting the iCanView230/230W to ADSL Modem

When fixed IP address is assigned to the xDSL or Cable modem, follow the same way as assigning IP address for the case of LAN using IP-installer. To enable the notification of the changed IP address to the user over e-mail when the IP address is changed in floating IP environment, you have to assign the e-mail address when user name and password are

input using IP-installer. **(Management server provides a convenient way of connecting to your network camera under dynamic IP environment. Please refer to the Application note regarding "Management Server" in the CD.)**

When connecting iCanView230/230W to xDSL or Cable modem, usually regular LAN cable is required. But since some modems has crossover connections, please contact your service provider for detailed information.

4. IP-Installer

iCanView230/230W needs IP network parameters for connection to the network(Internet/Intranet). IP-Installer is a PC program for the initial network configuration to IP video products such as Network Camera or A/V Server. IP-Installer is provided in a CD supplied with iCanView230/230W or it can be downloaded from "**www.icantek.com**".

Detailed information of Installing and running IP-installer can be found in [IP-installer user's guide]

4.1. Main window of IP-Installer

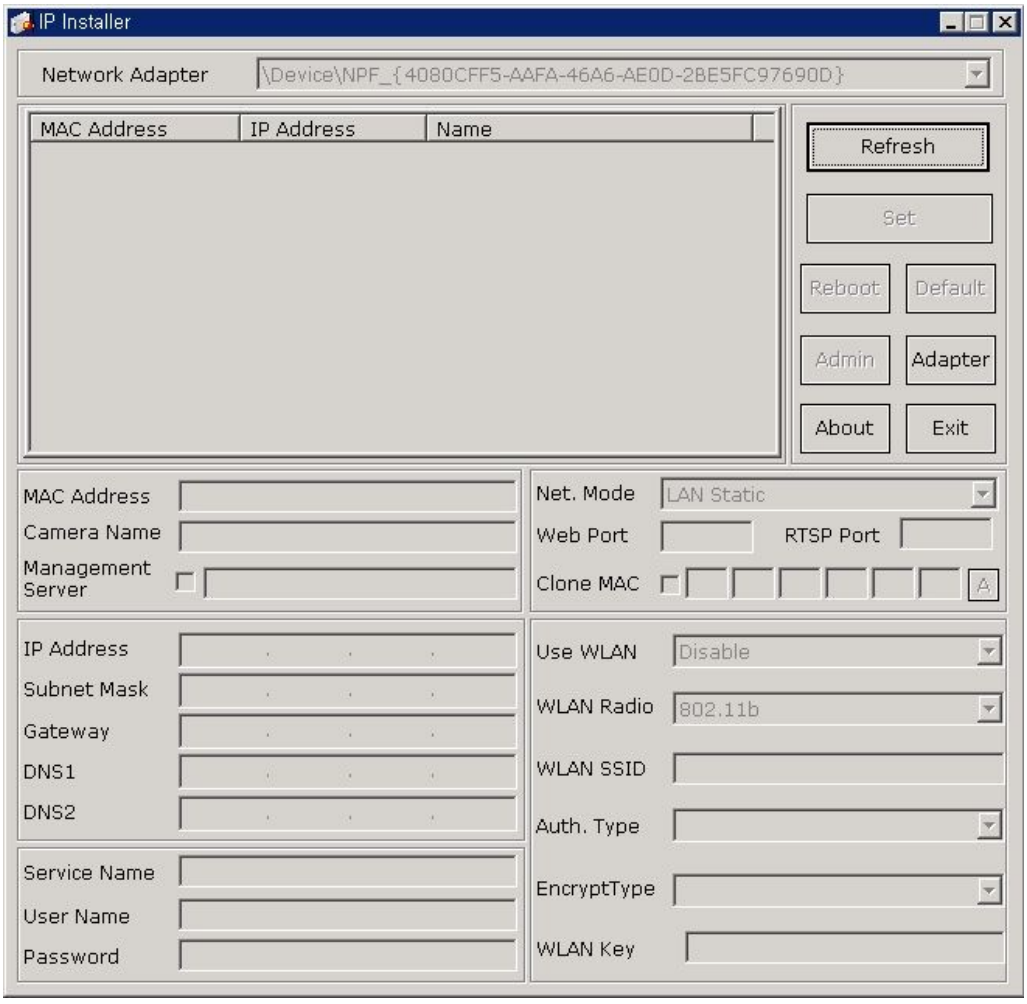


Figure 4-1. IP Installer

All the basic network parameters needed for the initial connection to IP video products can be assigned by IP-Installer. Once the basic parameters are assigned and the initial connection is successfully made, you can connect to the administration page for more sophisticated control of the network parameters and other operational parameters. Refer to Chapter 5 for more details of the administration page.

5. Configuring iCanView230/230W in Administrative Mode

5.1. Log On

There are 2 ways of connecting to iCanView230/230W administrative mode. One is through Internet Explorer and the other is through "**i-NVR**" program.

1. Using Internet Explorer

Type in the connection address of the network camera in the address window of the Internet Explorer as followings:

http://[iCanView230/230W IP address]/admin.htm

Example: http://172.16.64.133/admin.htm

If you changed the HTTP port from default value you can login by typing in:

http://[iCanView230/230W IP address]:[HTTP port]/admin.htm

Example: http://172.16.64.133:8080/admin.htm

2. Log on from "i-NVR"

Select video channel in the viewing window of "**i-NVR**". Selected video channel will be highlighted. Click  button on the right side of the display screen.

Figure 5-1. Select display channel and click "Camera Admin" button for Log on to administrative mode from "i-NVR"

3. Input User Name and Password in the display screen shown in Figure 5-2.

Figure 5-2. Log On Screen

Factory default User Name and Password are set as 'root' and 'dw2001', respectively. Click on "OK" button to enter into the Basic Setup page of Administrative Mode. If you have changed the username and password of the Administrator, you must log on with the changed username and password.

5.2. Basic Setup

Setup the basic parameters of the iCanView230/230W.

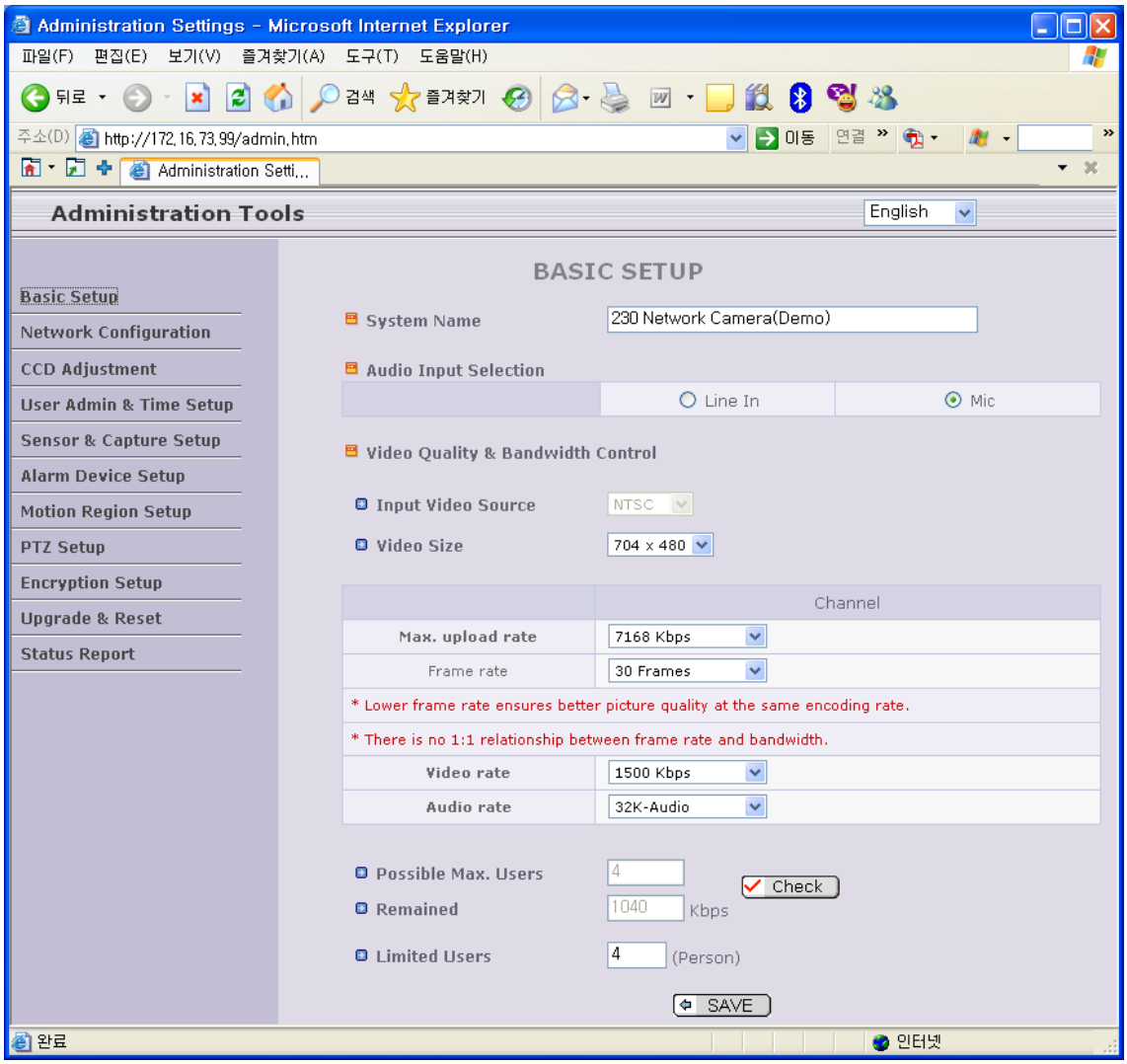


Figure 5-3. Basic Setup

Field/Button	Sub Field /Button	Description
Language		Select a language of your choice
System Name		Logical name of the iCanView230/230W. It is same as the one set-up by IP-installer. You can reassign the system name.
Audio Input Selection		Select the type of input audio. ● Select **Line In** for using Line-out from audio devices. ● Select **Mic** for using microphone.
Video Quality & Bandwidth Control	Input Video	This filed is set by the factory
	Video Size	Select a video size for transmission- ● NTSC(30 frames/sec Max.) : 176x144 / 352x240 /

		704x480. ● PAL/SECAM (25 frames/sec Max.) : 176x144 / 352x288 / 704x576
	Max upload rate	Assign maximum bandwidth of the uplink for the network connected to iCanView230/230W.
	Frame rate	Assign number of video frames to be transmitted for each second. You can improve picture quality by lowering frame rate for the same bandwidth.
	Video rate	Assign bandwidth for transmitting video data.
	Audio rate	Assign bandwidth for transmitting audio data. Audio data is not transmitted if you select "**NA**"
	Check	After you finish set up of video and audio for all the channels, click on this box to obtain the possible maximum number of users (**Possible Max Users**) and remaining network bandwidth (**Remained**) remaining when possible maximum users are connected.
	Possible Max Users	It shows the number of maximum simultaneous connections for the network connection set-up.
	Remained	It shows the network bandwidth remaining when Possible Max Users are connected.
	Limited users	Useful network bandwidth varies according to the condition of the network. This parameter is used to limit the number of the simultaneous connections below the number shown in Possible Max Users.
Save		Save the set-up parameters when the set-up parameters are done.

5.3. Network Configuration

Setup the network parameters appropriately in accordance with your network environment. Many of the parameters in this page are same as those set up by "**IP-Installer**".

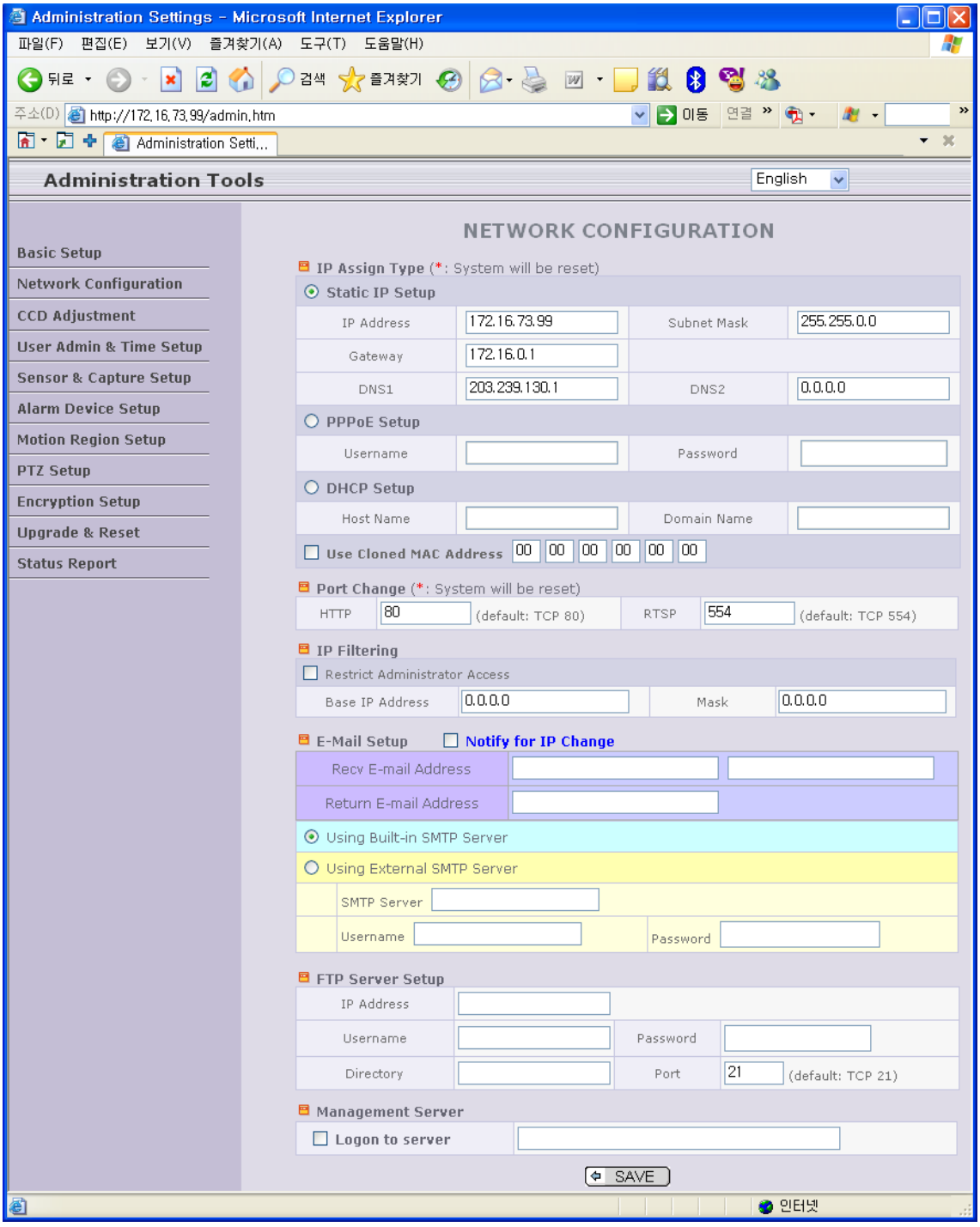


Figure 5-4. Network Configuration

Field/Button	Sub Field /Button	Description
IP Assign Type		The network types supported by the iCanView230/230W are LAN(fixed IP), PPPoE, and DHCP(automatic IP allocation)
	Static IP Setup	When the network environment is fixed IP, select 'LAN' in the network type, and put the IP address, Subnet Mask, Gateway, DNS1 and DNS2. Ask your network administrator or ISP for the information. DNS2 is used when DNS1 does not work.
	PPPoE Setup	When the network environment is PPPoE and IP address is assigned automatically, select 'PPPoE' in the network type. Next, fill in the 'User Name' and 'Password' fields with the values assigned by the ISP.
	DHCP Setup	When the network environment is "automatic IP allocation by DHCP", select 'DHCP' in the network type. For cable modem connection, select this mode. Refer to **[IP-installer user's guide]** for "Host name and domain for Cable Modem
	Clone MAC	Refer to **[IP-installer user's guide]** for "Clone MAC"
Port Change		Each port should have a number below 65535.
	RTSP	The RTSP port is used for transmitting real time audio/video data from the network camera. Default is 554.
	HTTP	HTTP port is used for the connection to the admin page. Default is 80.
IP Filtering		You can restrict the access to the administrator page from IP addresses beyond certain IP address range.
	Restrict Administrator Access	Check at this box to restrict administrative log on.
	Base IP Address	Input IP address of the PC which is intended to be used for log on to administrative mode.
	Mask	This is same as subnet mask. It is used to allow administrative log on only to the PCs located in the same subnet as the base IP address. If you want to allow only one PC to access in administrative mode, set this value to 255.255.255.255.
E-Mail Setup		
	Notify for IP Change	If you check this, the IP address will be sent via E-mail whenever the IP address changes. It is sent to the E-mail address set by "**Recv E-Mail Address"**.
	Recv E-Mail Address	Enter E-mail address to receive information sent from your network camera. This is same as E-mail field in IP-installer.
	Return E-Mail Address	Fill in this field with correct e-mail address to identify the mail sent from the network camera
	Using Built-in SMTP Server	If you are using web mail services having no SMTP server, check the radio button at the left of "**Using Built-in SMTP Server"** and enter valid e-mail address to avoid spam filtering on the receiving e-mail server.
	Using External SMTP Server	If you are using external mail server, fill in the fields with proper parameters.
FTP Server		Setup IP address, Username, Password and Directory of FTP

Setup		server to send data in case of alarm. Default FTP port number is 21.
Management Server		You can register the network camera to the Management Server (DDNS Server) for name service to your network camera.
	Log on to server	Check this box to enable log on to the management server. By log on to the management server your network camera can use domain name instead of numeric IP address. This feature is particularly useful when your network camera is using dynamic IP address. Input valid management server (DDNS Server) name for the service. You must have an account on the management server (DDNS Server) and register your IP video devices under your account to use this feature. Domain name of your network camera can be assigned when you register your network camera to the management server under your account. One of the servers available is **mgmt.net-video.net**. For opening an account, visit **www.net-video.net** .

5.4. Wireless Configuration(iCanView230W Only)

For the case of a network camera having built in wireless LAN it is needed to set up wireless LAN configuration parameters. Click "**Wireless Configuration**".

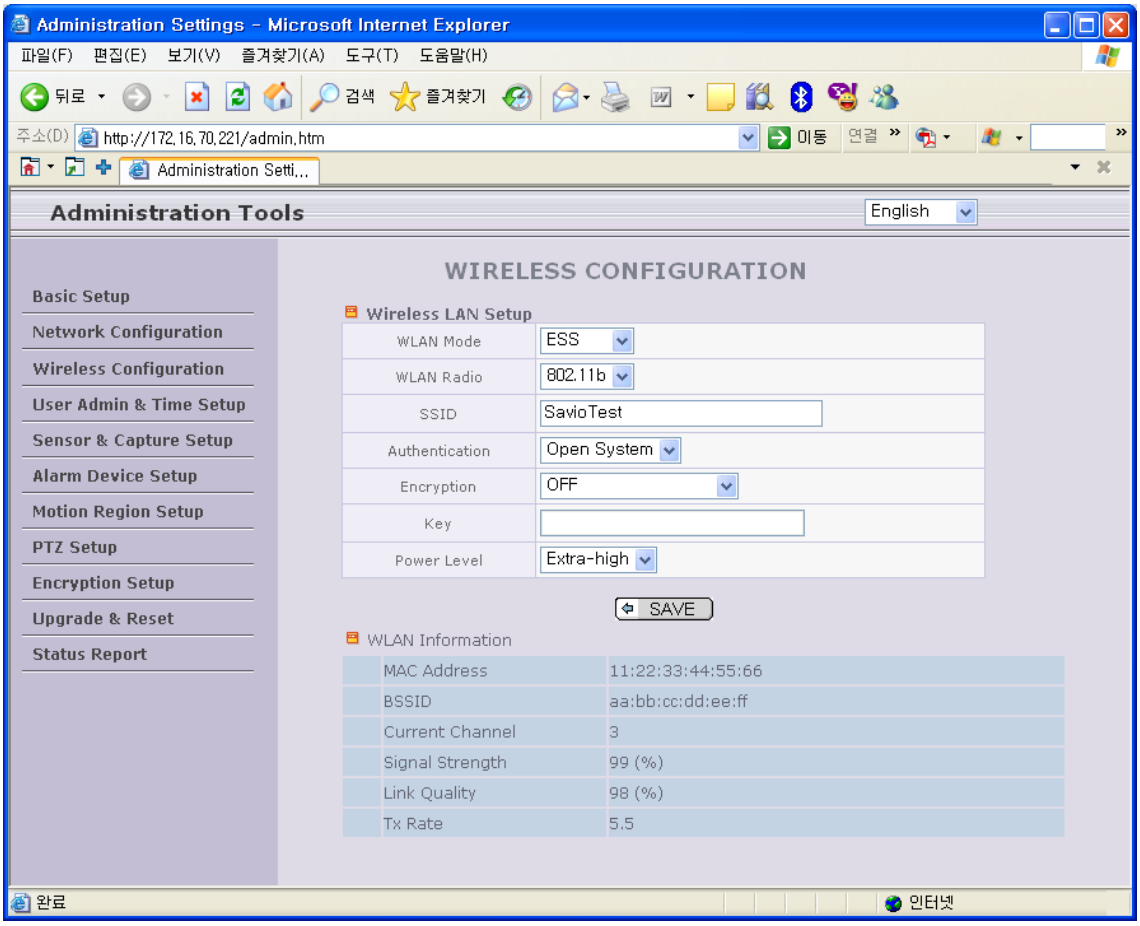


Figure 5-5 Wireless Configuration

Field/Button	Sub Field /Button	Description
Wireless LAN Setup	WLAN Mode	Select "ESS" to use wireless interface. If "Disable" is selected, Ethernet interface is used instead of wireless LAN interface.
	WLAN Radio	Select the mode of Wireless Radio.
	SSID	Enter the ID of the wireless LAN access point to be connected when wireless LAN interface is selected.
	Authentication	Select the type of authentication.
	Encryption	Select the mode of encryption. If encryption is not needed, select "OFF"
	Key	Set the value of encryption key or pre-shared key.
	Power level	Set the maximum transmission power level or wireless LAN.
WLAN	MAC Address	Indicates MAC address of the wireless LAN.

Information	BSSID	Indicates the ID of the connected access point. In general the MAC address of the access point is shown.
	Current Channel	Indicates the channel number of present connection.
	Signal Strength	Indicates the strength of the received signal.
	Link Quality	Indicates the quality of Link level.
	Tx Rate	Indicates the speed of the latest transmission

5.5. CCD Adjustment

You can optimize the quality of input video by adjusting the parameter of CCD. To enter into this mode, click "**CCD Adjustment**" in administrative page. You will find a screen shown in Figure 5-6.

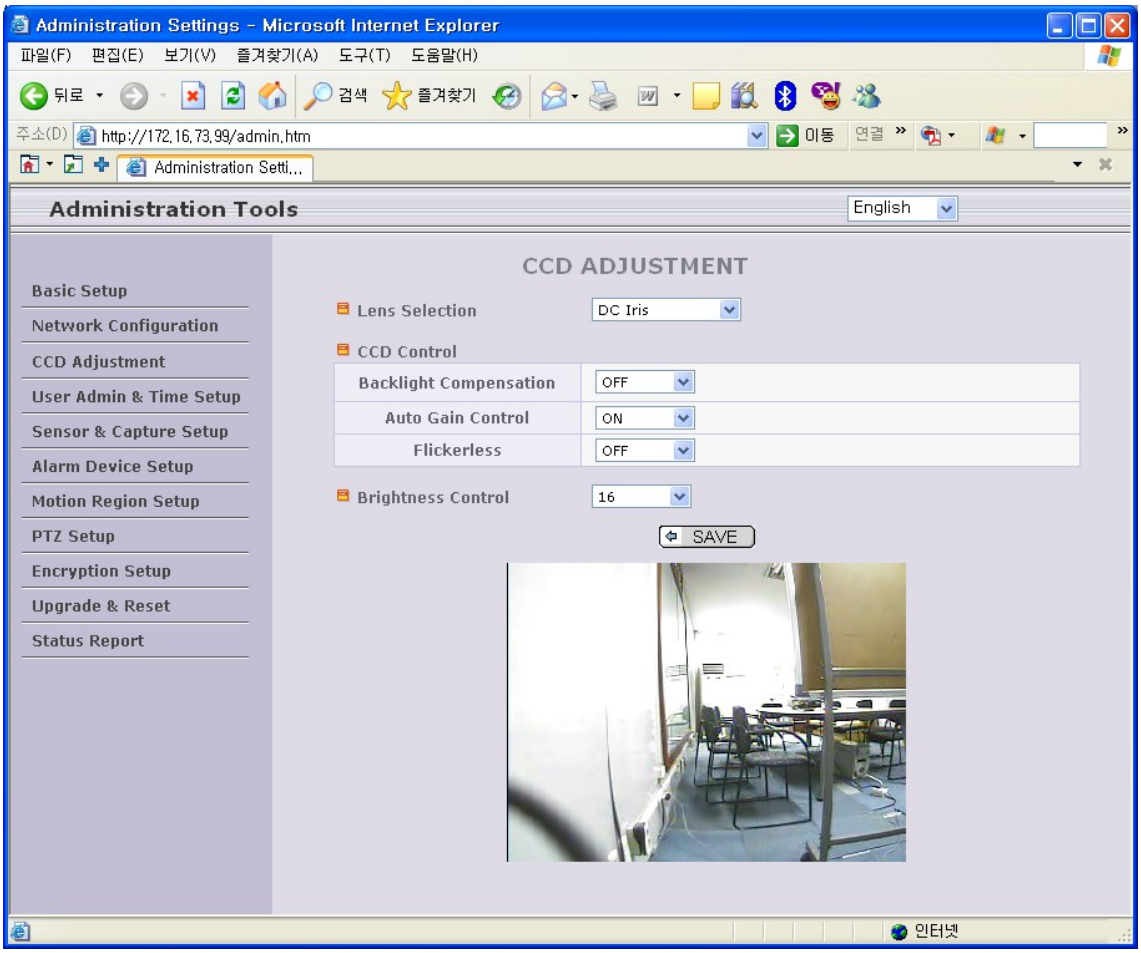


Figure 5-6. CCD Adjustment

Field/Button	Sub Field /Button	Description
Lens Selection		Standard iCanView230/230W is delivered without lens. Any lens having C or CS mount type can be installed on iCanView230/230W. A C-CS adaptor is packaged with iCanView230/230W for accommodating CS type lens. Confirm whether your lens is Non DC IRIS or DC IRIS lens before your selection and then click "**SAVE**" to save your selection.

	DC IRIS Lens	DC IRIS lens is a kind of auto IRIS lens. Opening of IRIS can be adjusted by applying DC voltage. The opening of IRIS is optimally adjusted by detecting the signal level from CCD. This type should be selected when DC IRIS lens is mounted on your iCanView230/230W.
	Non DC IRIS Lens	Non DC IRIS lens is a fixed IRIS lens. Non DC IRIS lens is factory default selection.
CCD Control	Backlight Compensation	When the camera is acquiring video from object with bright backlight, it is hard to identify the details of target object since the object appears very dark. Apply backlight compensation mode for this case. Default mode is backlight compensation Off.
	Auto Gain Control	If you set the value to ON, the gain is automatically adjusted in accordance with the illumination condition.
	Flickerless	In case of using NTSC type iCanViewV230 in 50Hz AC regions or using PAL type iCanView230/230W in 60Hz AC region, video output tends to flicker when iCanView230/230W is used under fluorescent lamps. This mode reduces the flickering phenomena. If this mode is selected, electronic shutter speed is set to 1/100 sec for NTSC camera while it is set to 1/120 for PAL camera to synchronize the shutter speed to AC current. <Note> : Make sure that you apply this mode only when using NTSC camera in PAL region or PAL camera in NTSC region.
Brightness Control		Adjust the amount of light reaching CCD manually. Select the value between 1 and 32. For brighter video select higher number.
SAVE		Click "**SAVE**" to save your selection.

5.6. User Admin & Time Setup

You can change the ID and password of users and also assign different attributes for each user.

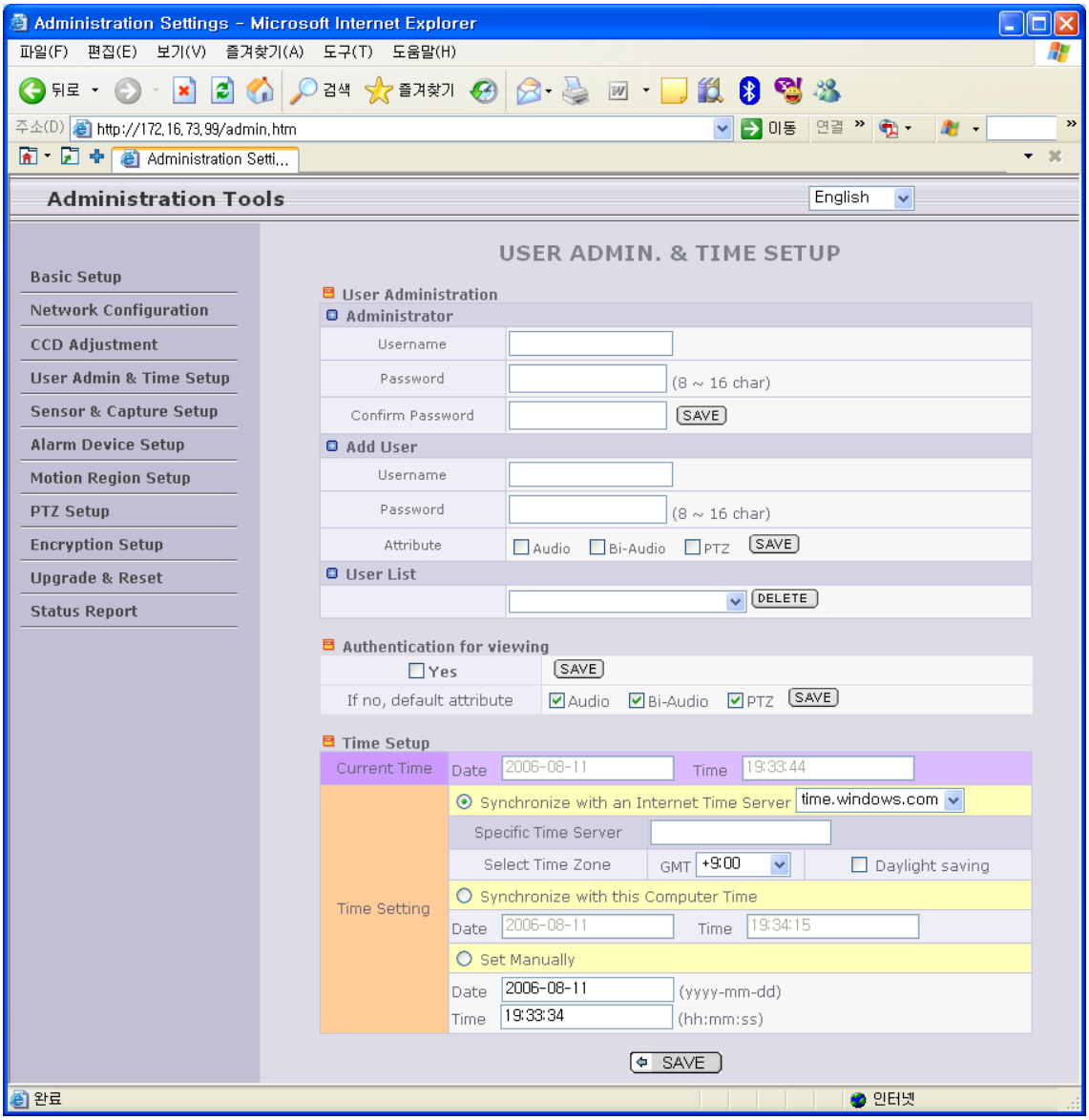


Figure 5-7. User Admin. & Time Setup

Field/Button	Sub Field /Button	Description
User Administration	Administrator Username	Admin ID. Default ID is "root"
	Administrator password :	Admin password. The default password is "dw2001".

	Administrator Confirm Password	Enter the password once more to confirm the password.
	Add User Username	Enter the user ID you want to add. Up to 100 users are supported by iCanView230/230W.
	Add User Password	Enter the user password.
	Add User Attribute	You can set different system resource access capabilities for each of the users. ● Attributes are Audio, Bi-directional Audio and Pan/Tilt control. ● For example, if you want a specified user to hear the audio from the iCanView230/230W, check Audio in the check box.
	User List	You can list "user ids" and " their attributes" here. ● format : user id[A, BA, P] : ■ A – audio, ■ B – bi-directional audio, ■ P – pt(Pan/Tilt), attribute. You can delete specific user by clicking the **DELETE** button.
Authentication for Viewing	YES **SAVE**	If you want to restrict viewing access to the iCanView230/230W, check at the box left to **Yes** and click on **Save**. Users need to input ID and password to connect to iCanView230/230W in viewing mode in a pop up window as shown below..  **Figure 5-8. User Authentication in iCanView230/230W**
	If No, default attribute	If you uncheck for the Authentication for Viewing, all users can access the iCanView230/230W with the same attribute set here. Checked attributes are enabled. Click "**Save**" to save the attribute.
Time Setup	Current Time	It shows you the current time of iCanView230/230W.
	Synchronize with an Internet Time Server	Synchronize the time with the internet time server at the right. When the time server is out of the reach from iCanView230/230W, you can assign time server by filling in **Specific Time Server** field.
	Synchronize	Synchronize the time with the time of the PC.

	With this Computer Time	
	Set Manually	Set the time manually. Fill in the fields with desired formats.
SAVE		Save the set up parameters

If you lost Administrator's ID and password, the only means of recovery is to reset the settings to factory default, but then you lose your previous settings.

5.7. Sensor & Capture Setup

This is the setup page for sensors and video capture conditions. Captured video can be sent to user by FTP or E-mail upon configuration.

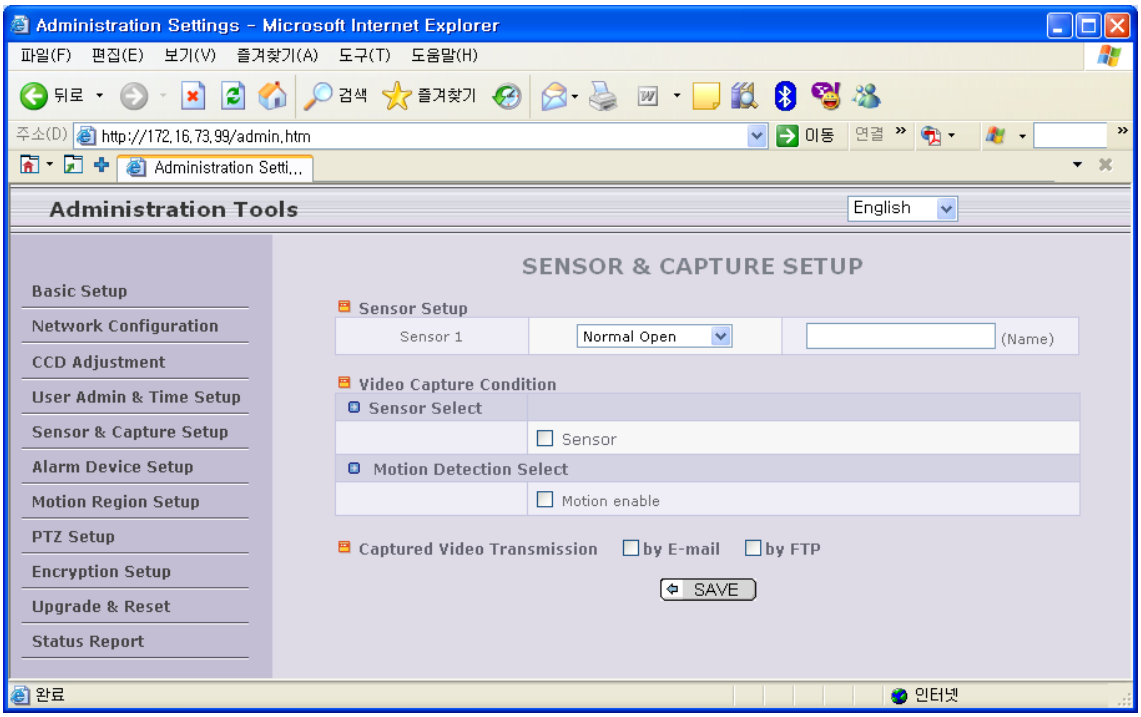


Figure 5-9. Sensor & Capture Setup

Field/Button	Sub Field /Button	Description
Sensor Setup	Sensor 1	Select sensor type. There are two types of sensors which are **Normal Open** and **Normal Close.**
	Name	Input logical name for the sensor.
Video Capture Condition		It sets the condition of video transmission via FTP or E-mail. The iCanView230/230W supports 2 types of conditions which are mutually independent. 1. Sensor initiated: when at least one of the sensor detects alarm condition. 2. Motion-Detection initiated : when motion is detected from video channel
	Sensor	Check to enable Sensor initiated capture.

	Select	
	Motion Detection Select	Check to enable motion detection initiated capture.
Captured Video Transmission		Select a way of sending captured video. You can send captured video through FTP or E-mail, or both. -
	By E-Mail	Check to send captured video by e-mail. E-mail is sent to the **Recv E-mail address.** Refer to **[Section 5.3.]** Captured video data for E-mail consists of intra frames only in consideration of the limited storage space for E-mail account. FTP data contains entire video frames.
	By FTP	Check to send captured video by FTP. FTP is sent to the **FTP** Server. Refer to **[Section 5.3.]** If the FTP server is not properly assigned in "**Network Configuration" mode**, iCanView230/230W ignores the video transmission by FTP
SAVE		Save the setup parameters.

5.8. Alarm Device Setup

Test the alarm output and describe the condition of alarm annunciation.

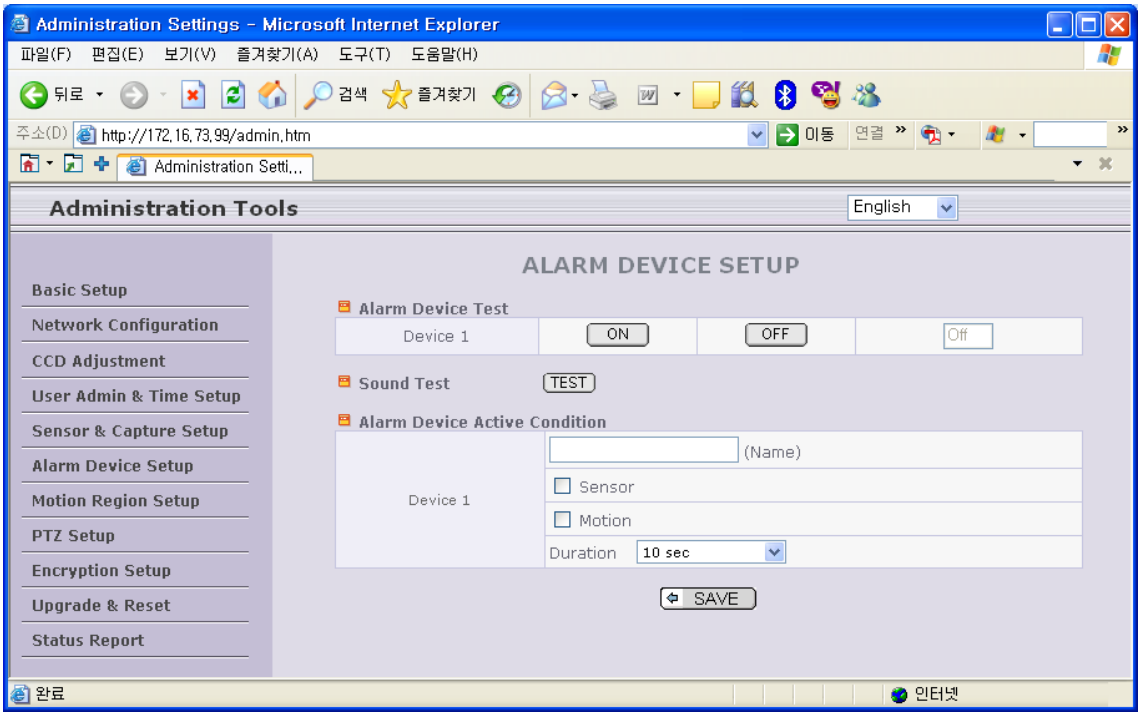


Figure 5-10. Alarm Output Setup

Field/Button	Sub Field /Button	Description
Alarm Device Test		Test alarm devices. Click on On/Off for testing Small box with white background indicates the status of the relay by On/Off.
	ON	On the alarm output (close the relay contact)
	OFF	Off the alarm output (Open the relay contact)
Sound Test		-
Alarm Device Active Condition		Setup the condition of activating alarm device. Select sensor or motion detection as the condition.
	Name	Logical name of the alarm device can be input into the box at the left.
	Sensor	Check at the box at the left of to allow alarm generation upon sensor input.
	Motion	Check at the box at the left to allow alarm generation upon Motion detection
	Duration	Set the duration of Alarm annunciation. 10 sec, 30 sec, 1 min, 2 min, 5 min, 10 min, 30 min, 1 hour.
SAVE		Save the setup parameters.

5.9. Motion Region Setup

Set the motion detection regions. Up to 3 regions can be defined.

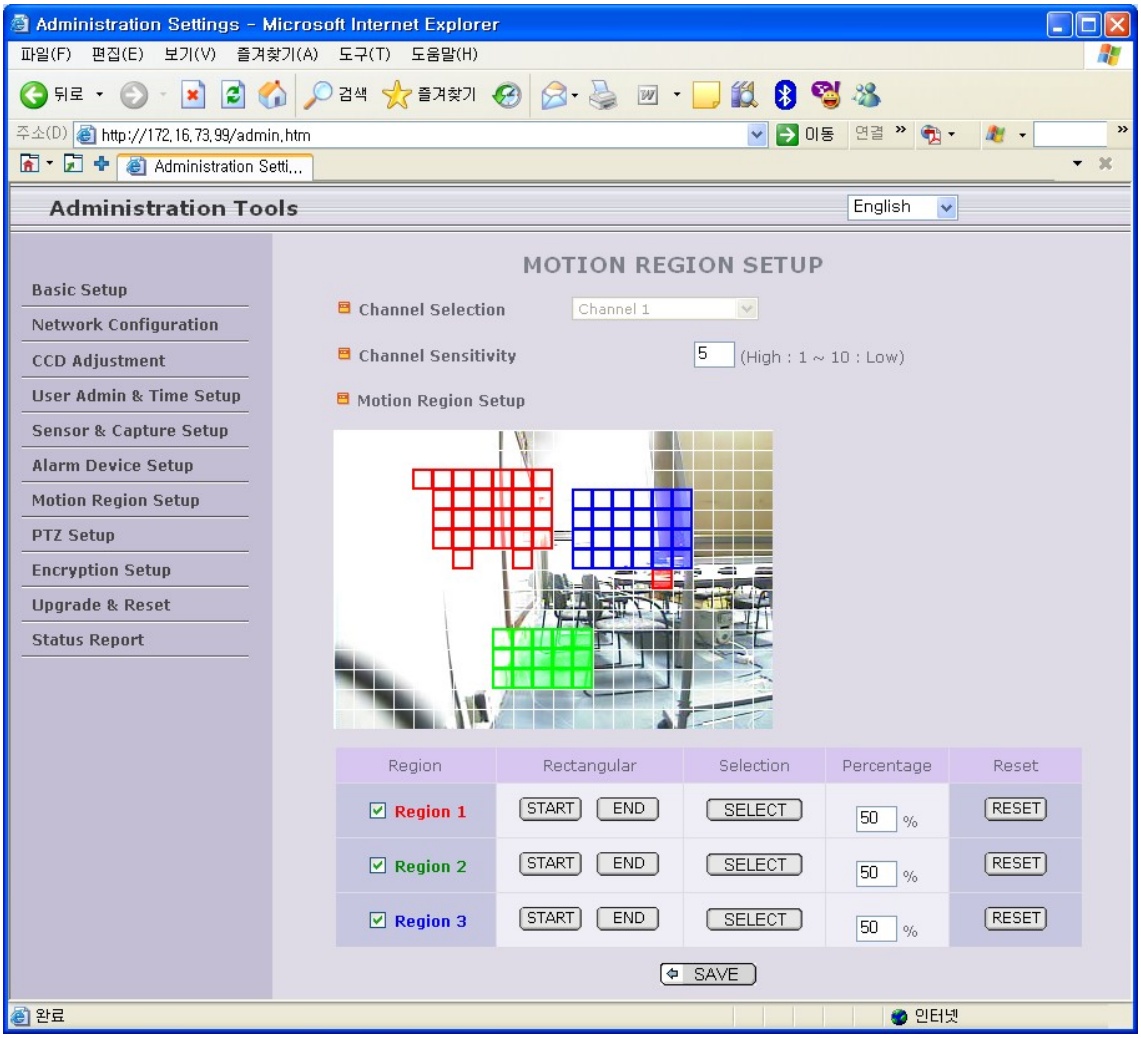


Figure 5-11. Motion Region Setup

Field/Button	Sub Field /Button	Description
Channel Selection		Not applicable.
Channel Sensitivity		Set the sensitivity in motion detection for each channel. 1 is the most sensitive, and 10 is the least sensitive.
Motion Region Setup		Set up to 3 the motion detection zone
	Region 1, 2, or 3	Enable each zone by checking the box at the left of each Region. **. To set the region,**

		1. Click on **START** and click on a box overlaid on the video 2. Click on **END** and click on a box overlaid on the video. 3. The defined motion detection zone will be indicated with corresponding colors. **Legend of the color :** red(region 1), green(region 2), blue(region3).
	START	Enable selection of rectangular zone start.
	END	Enable selection of rectangular zone end.
	SELECT	Click on this button and click on desired rectangle to add or delete the rectangular region to the motion detection zone.
	Percentage	This value controls the sensitivity of each region. 1 is the most sensitive and 100 is the least sensitive
	RESET	Clears the start & end point to (0,0) & (0,0)
SAVE		Save the setup parameters.

5.10. PTZ Setup(Zoom is not applicable for iCanView230/230W)

Setup and test the PT(Pan/Tilt) devices.

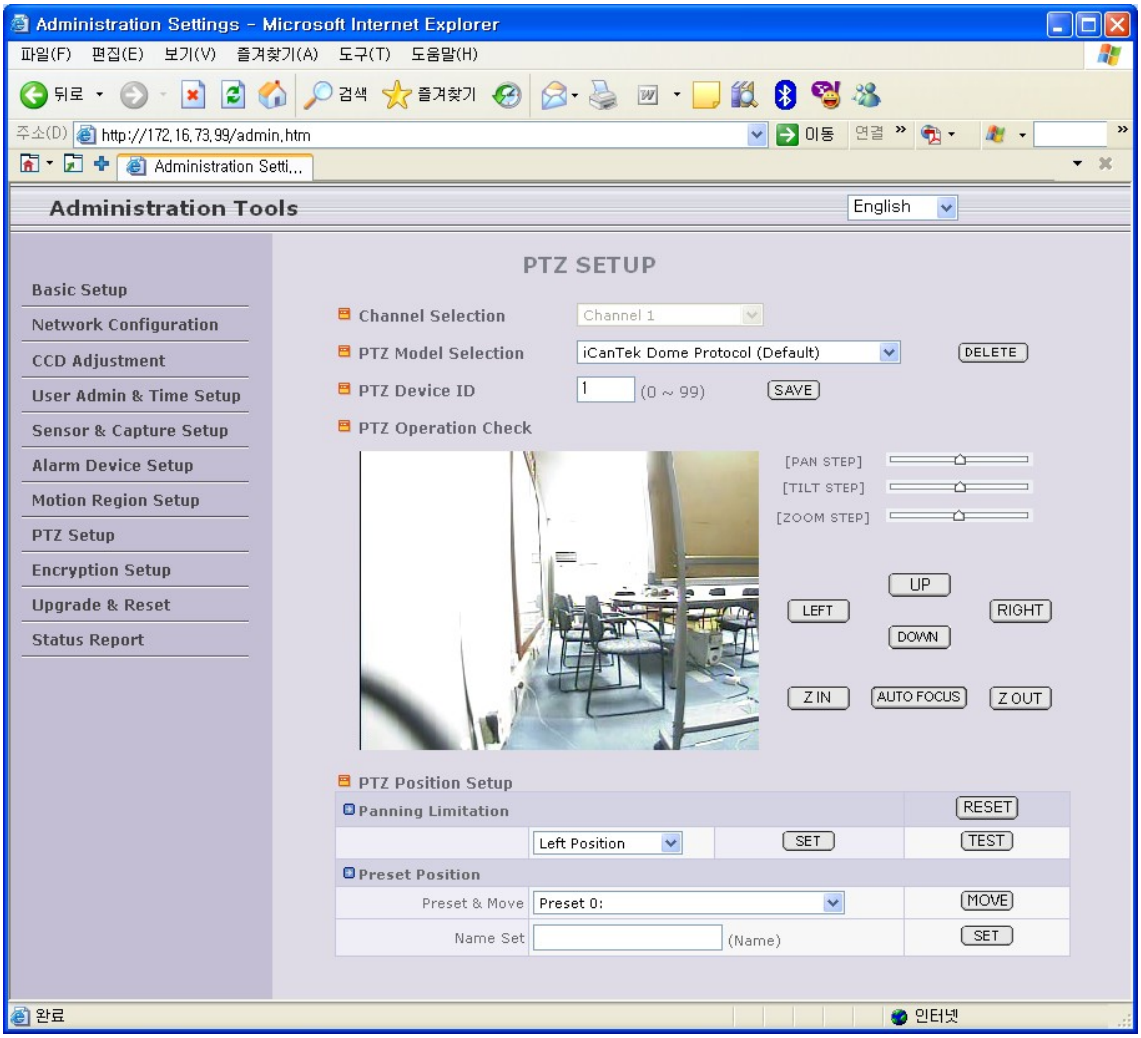


Figure 5-12. PTZ Setup

Field/Button	Sub Field /Button	Description
Channel Selection		Not applicable
PTZ Model Selection		Choose the PT model. Refer to section 5.12 for the addition of PT protocol data.
	Delete Button	Press this button to delete the setup of PT
PTZ Device ID		Your PT device needs an ID, input ID in this field. Click on **SAVE** to save the ID.

		Note that zoom is not applicable for iCanView230/230W.
PTZ Operation Check		You can check the various operation of the PT devices. "Left"/"Right"/"UP"/"DOWN"
PTZ Position Setup		You can set up the PTZ limitation & preset positions if the PT device supports it.
	Panning Limitation	Set the left/right limitation and test. Select Left/Right position before setting.
	Panning Limitation **RESET**	Clear the panning limitation previously set. The panning range will be the same as the PT device allows.
	Panning Limitation **SET**	Set the present position as left or right panning limitation.
	Panning Limitation **TEST**	Test the panning limitation which was set previously.
	Preset Position :	Set the preset position and test.
	Preset Position **Preset & Move**	Select a preset position to move to. Movement to the preset position will be made upon clicking on "**MOVE**"
	Preset Position **Name Set**	Assign logical name for the preset position. Enter into the field and click on SET.
	Preset Position **Set**	Set the present position as a preset position with position number shown at the right of "Preset & Move" and name shown at the right of "Name Set".

<Note> : "PTZ Position Setup" feature is applicable only for the PT devices that support it.

5.11. Encryption Set up

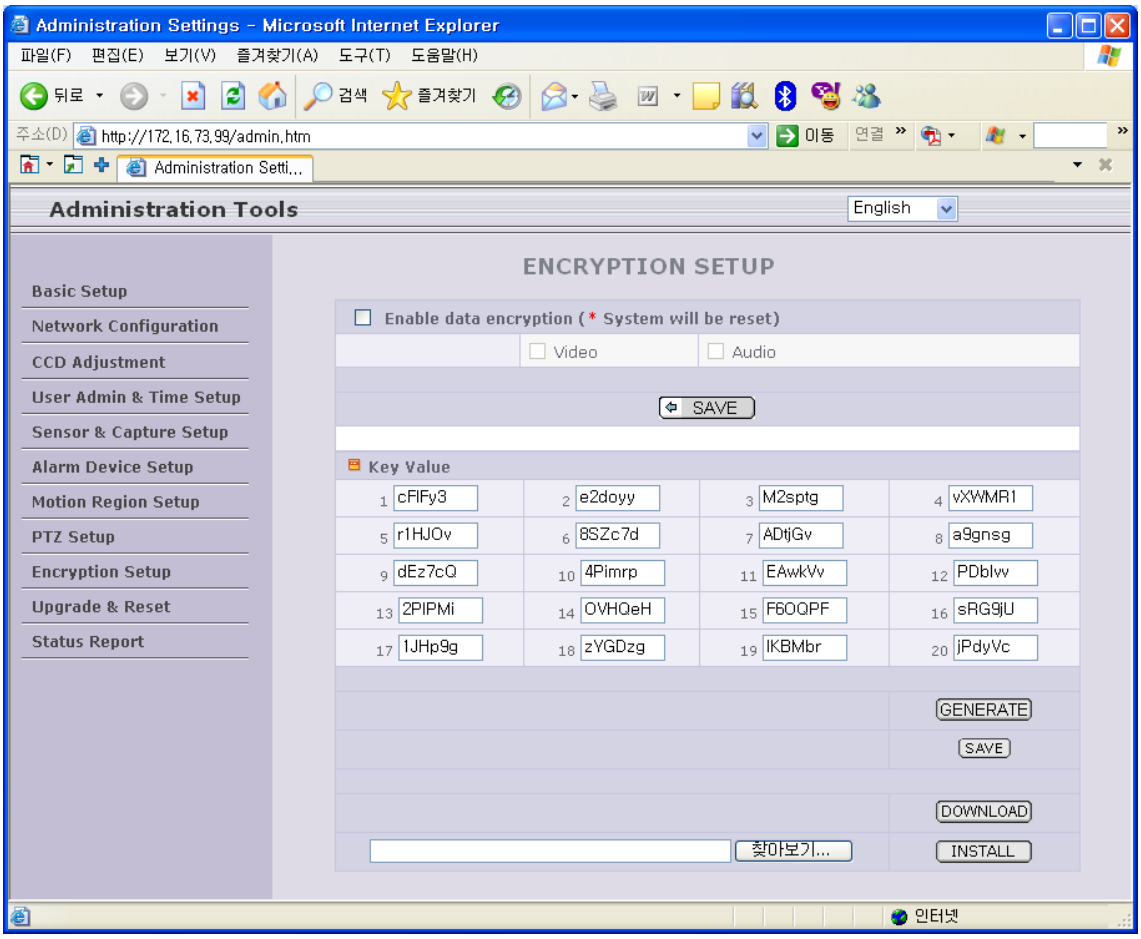


Figure 5-13. Encryption Setup

For additional security to the video and audio data transmitted from the network camera, you can set key codes and use them for encrypting the data from the network camera.

You can selectively activate encryption for the video and audio data. For enabling the encryption, check at the box at the left of the "Enable data encryption" then check at the proper check boxes at the left of "Video" and "Audio". After the selection, click on SAVE button beneath the "Video" and "Audio" check boxes.

Field/Button	Sub Field /Button	Description
Enable Data Encryption		Check at this box to apply data encryption. If it is unchecked encryption is applied on neither video nor

		audio data regardless of the selection below.
	Video	Check to enable encryption on the video data.
	Audio	Check to enable encryption on the audio data.
	SAVE	After the selection, click on SAVE button.
Key Value		You can use up to 20 different key codes for the encryption of the data
	GENERATE	To generate the key value click on "GENERATE" button. The boxes for the Key values will be filled with new values.
	SAVE	**Save Key value on the network camera**: Click on SAVE button beneath GENERATE button to save the key value generated by the network camera.
	DOWNLOAD	**Download Key value to your PC** : The key values can be downloaded and stored as a file to your PC for reference when you make connection. When encryption is enabled, the PC client program will ask for particular key value out of the 20 available key values.
	INSTALL	**Upload key value to the network camera** : The key value stored on your PC can be uploaded to your network camera. This feature is useful when you manage multiple network cameras having same key value sets. Select a file having key values then click on "INSTALL" button to upload the key values. Find file saving the Key value before uploading to the network camera.

5.12. Upgrade & Reset

You can upgrade the iCanView230/230W via the IP network.

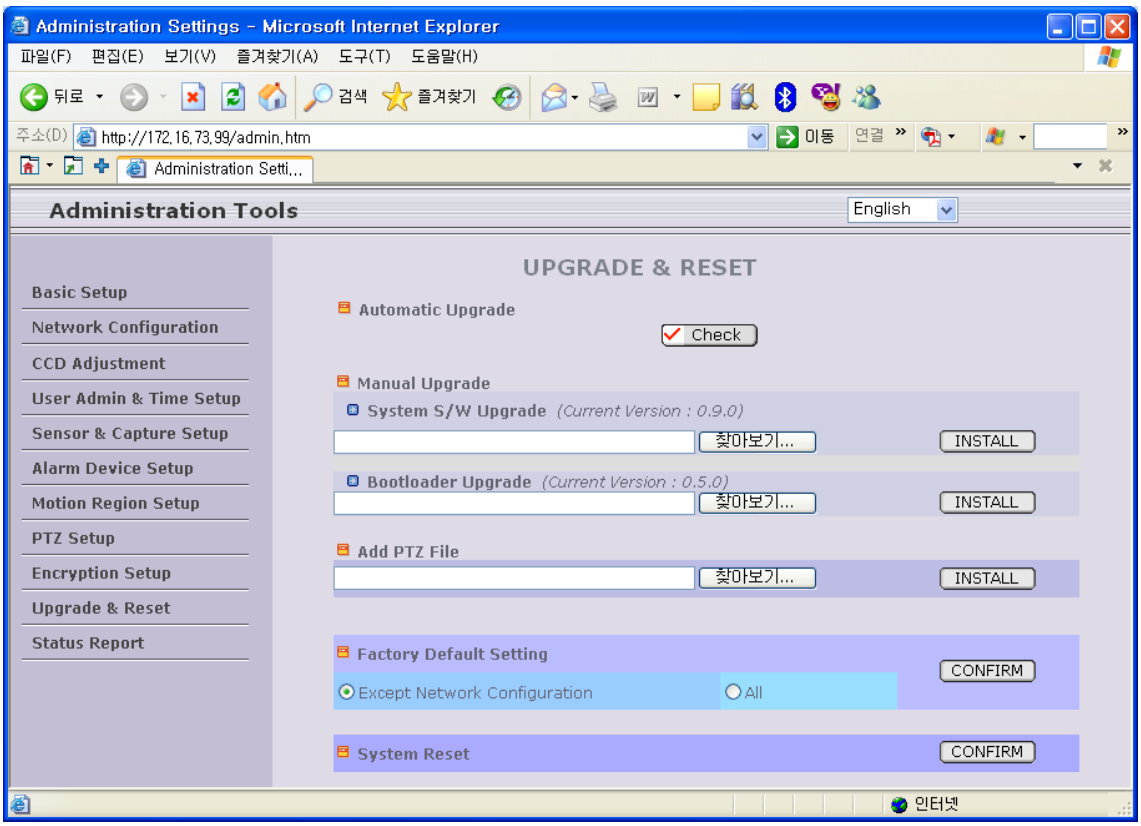


Figure 5-14. Upgrade & Reset

For each of the upgrade of the system component, upgrade code should be downloaded from **iCanTek**'s home page before the system upgrade is performed.

(Refer to **[6.4. How to Upgrade Your iCanView230/230W System]**

Field/Button	Sub Field /Button	Description
Automatic Upgrade		Automatic upgrade is a feature that enables network camera to upgrade to newly released system software by automatically connecting to upgrade server. Click on **check** button to find the availability of upgrade firmware. **Note that automatic upgrade is not supported for standard product.**
Manual Upgrade		Upgrade the system manually.
	System S/W	Upgrade the system software installed in the network camera

	Upgrade	via the network. System software needed for the upgrade can be downloaded from iCanTek's home page. Refer to **[6.4. How To Upgrade Your iCanView230/230W System]**.
	Bootloader Upgrade	Upgrade the bootloader installed in the network camera via the network. Bootloader needed for the upgrade can be downloaded from iCanTek's home page. Refer to **[6.4. How To Upgrade Your iCanView230/230W System]**.
Add PTZ File		Add a new PT driver software via the network. PT driver can be downloaded from iCanTek's home page. Refer to **[6.4. How To Upgrade Your iCanView230/230W System]**.
Factory Default Setting		Re-initialize the network camera to factory default state. By checking on a Radio button "Except Network Configuration", you can preserve the parameters for the network. Checking on "All", will return all the parameters to factory default state. **Once iCanView230/230W is re-initialized as factory default state, it should be set-up again using IP-Installer.**
System Reset		Perform remote reset by clicking the "CONFIRM" button. **All previous connections will be disconnected upon reset. iCanView230/230W does not resume the connections and the users must re-connect to the server manually.**

5.13. Status Report

It shows you system records since the system started.

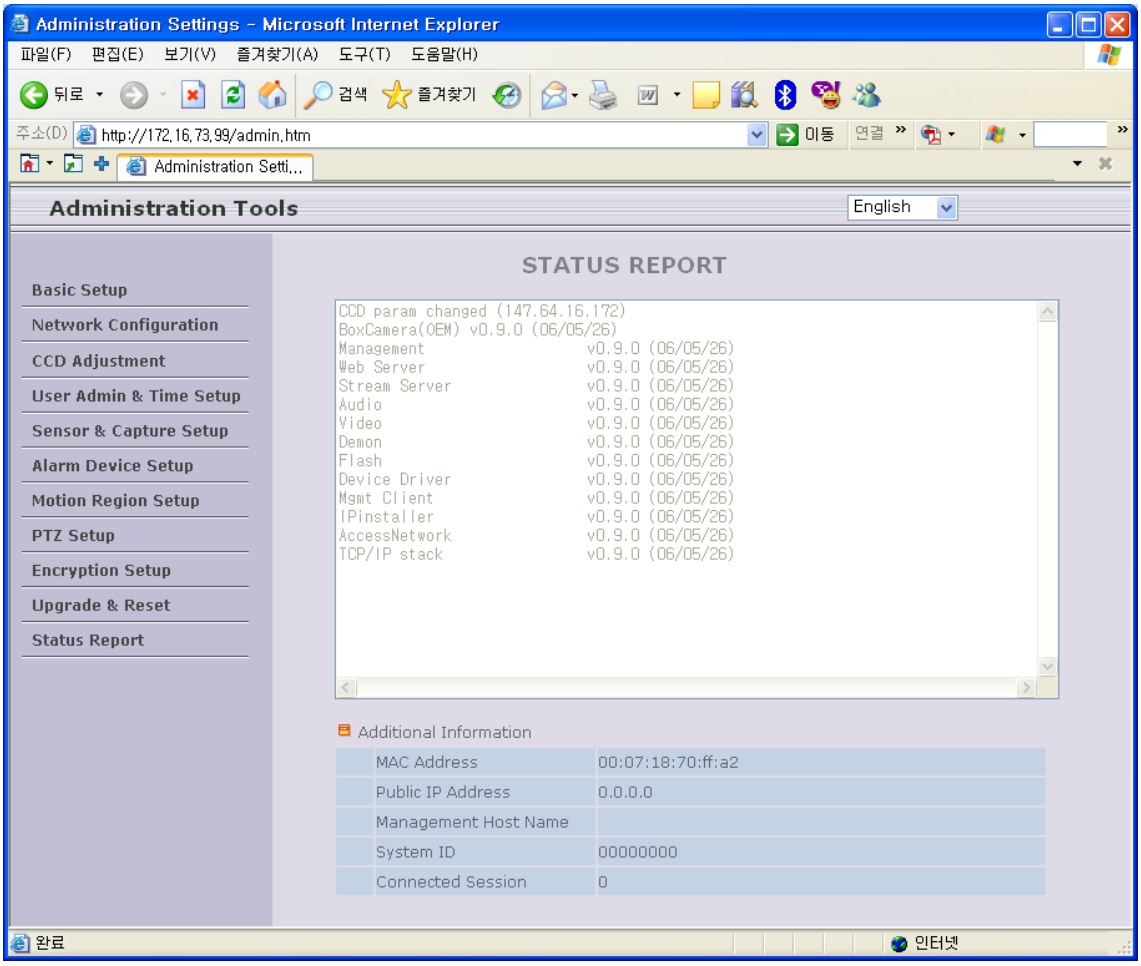


Figure 5-15. Status Report

You can check the problems as well as the versions and event status of the whole system and each module.

6. Tips for using iCanView230/230W

6.1. ALARM-IN and ALARM-OUT

ALARM connectors are used to connect various sensing and alerting devices. Examples of sensing devices are infrared sensors, motion sensors, heat/smoke sensors, magnetic sensor, etc. ALARM-OUT is used for connecting alerting device such as loud speaker, flashing light, etc.

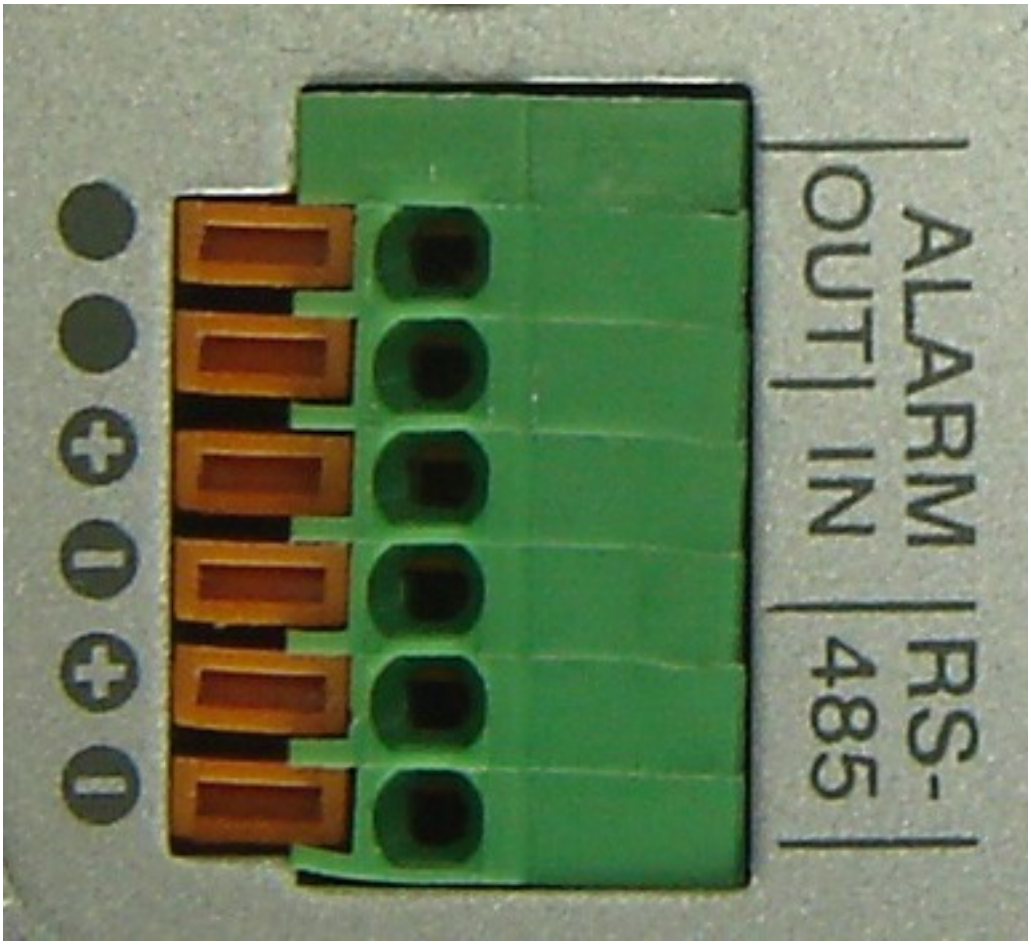


Figure 6-1. ALARM-IN/ALARM-OUT Connector

1. ALARM-IN

Connect the two wires of the sensors to "Alarm In". The sensor type can be set in Administrative mode(Ref. 5.7). Output lines providing on-off switching are connected

between "+" and "-" pins.

Figure 6-2 shows the input circuit of "Alarm In".

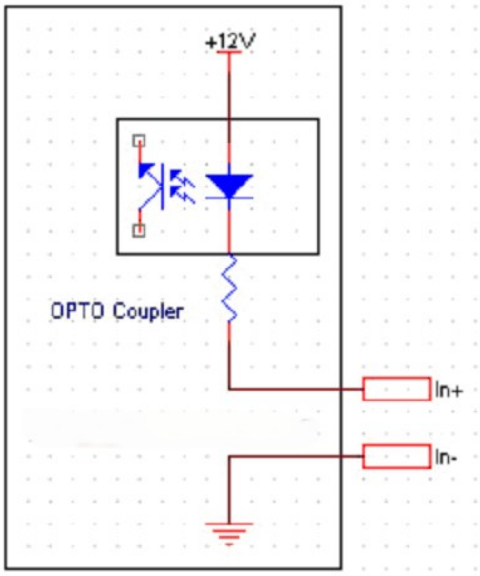


Figure 6-2. SENSOR input of iCanView230/230W

2. ALARM-OUT

A Relay output is provided for connecting alarm devices or for remote on/off devices such as light control. Relay circuits are normal open and circuits are closed upon alarm output or remote on. The relay is capable of switching AC/DC 30V,1A electrical signal.

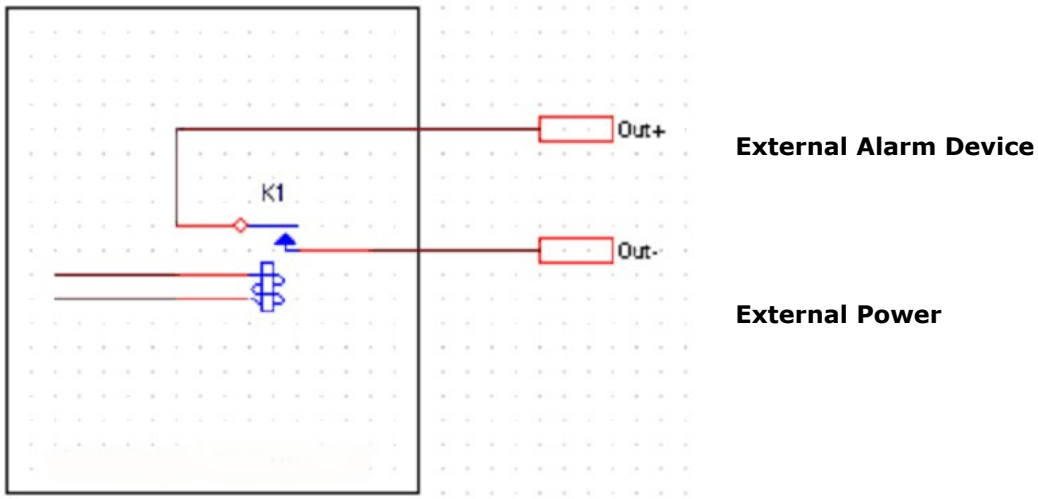
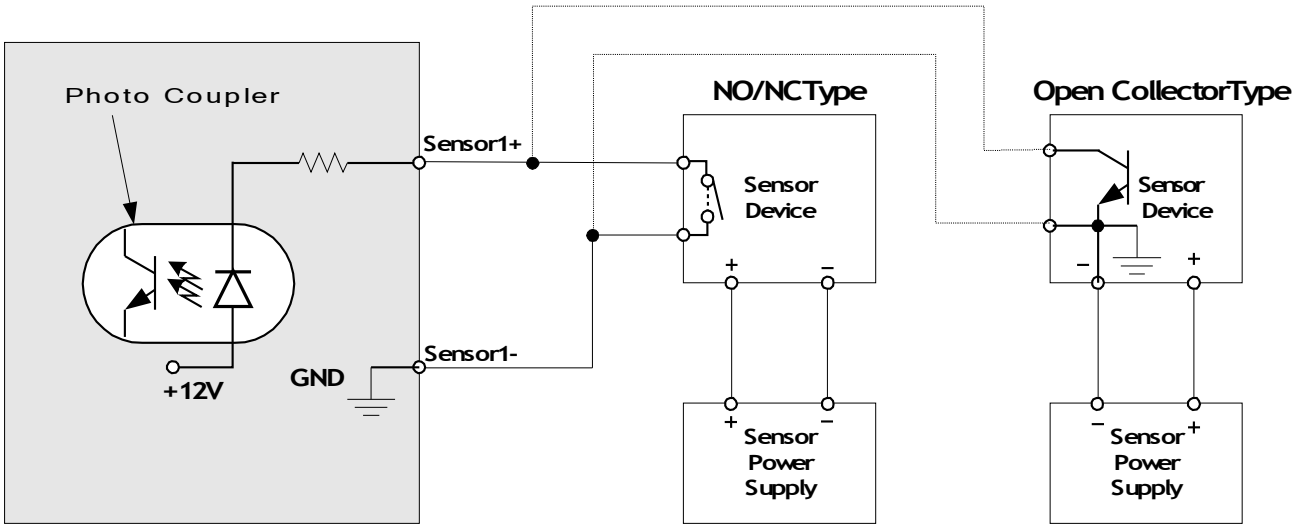


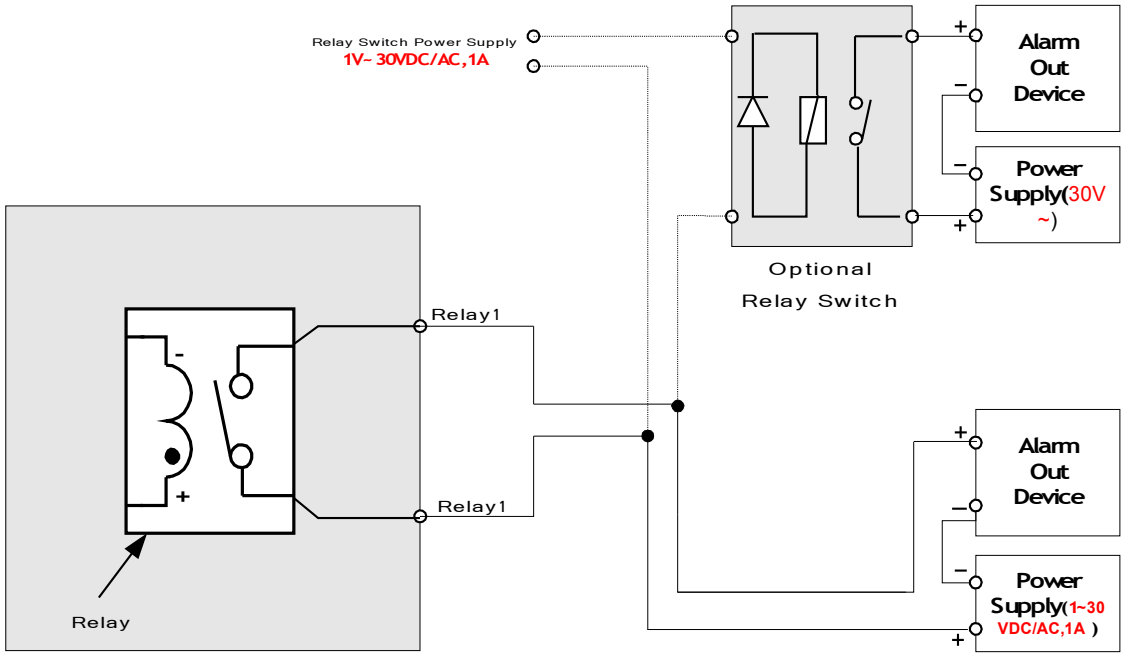
Figure 6-3. RELAY Output of iCanView230/230W

3. Connection of Sensor, Alarm Device

3.1 Connection of Sensor



3.2Connection of Relay



You can use the supported relay output to directly drive a maximum load of 30V AC/DC at 1A. By connecting additionally relay circuitry (such as optional relay switch), it can also drive heavier loads.

6.2. Trouble Shooting

1. After iCanView230/230W is successfully installed.

- **iCanView230/230W in viewing mode, neither channel name nor video is display and eventually timeout message is shown up.**

Check the power and network connection of iCanView230/230W.

To check if the network is properly operating, open the browser and try to connect to any server.

Example) http://www.yahoo.com

Or open the MS-DOS Prompt and type the following.

ping www.yahoo.com

Then press Enter. If you see the " Reply from …" message it means that the network is working properly. To check if the iCanView230/230W is connected, open the MS-DOS Prompt and type the following.

ping [the IP of the server]

Example) ping 192.168.1.112

If you see the "Reply from …" message, it means that the server is properly connected.

If you do not see a Reply message, check if the network cable and power cable are properly connected.

2. After Successfully Connecting to the iCanView230/230W

- **Video movement is slow.**

In Basic Setup of Admin Mode, lower the "Quality". High quality means more data. You can also set the "Max. upload rate" to higher value. But this value must be lower than the maximum upload speed of your network. For example, if the maximum uploading bandwidth of the network is 400Kbps, set the total "Max. upload rate" as 384Kbps. If you set it higher, the video image can be corrupted with artifacts.

Ask your network manager or ISP for maximum uploading bandwidth of the network.

- **The image is dull and I see green, pink dots.**

This could be caused by performance limitation of the PC. Do not run too many programs while running viewer program. The other reason could be missing data while transmission from

iCanView230/230W.

- **Mosaic phenomenon.**

  Mosaic phenomenon occurs when not enough network bandwidth is available considering the resolution and frame rate of the video.

  Example is 704x480 video with low Max. upload rate.

  Users are recommended to adjust resolution and frame rates to lower values for lower bandwidth network.

6.3. Web Viewer

iCanView230/230W is designed to be connected through internet explorer, too. For connection to iCanView230/230W using internet explorer type in IP address or host address in the address input field of the internet explorer.

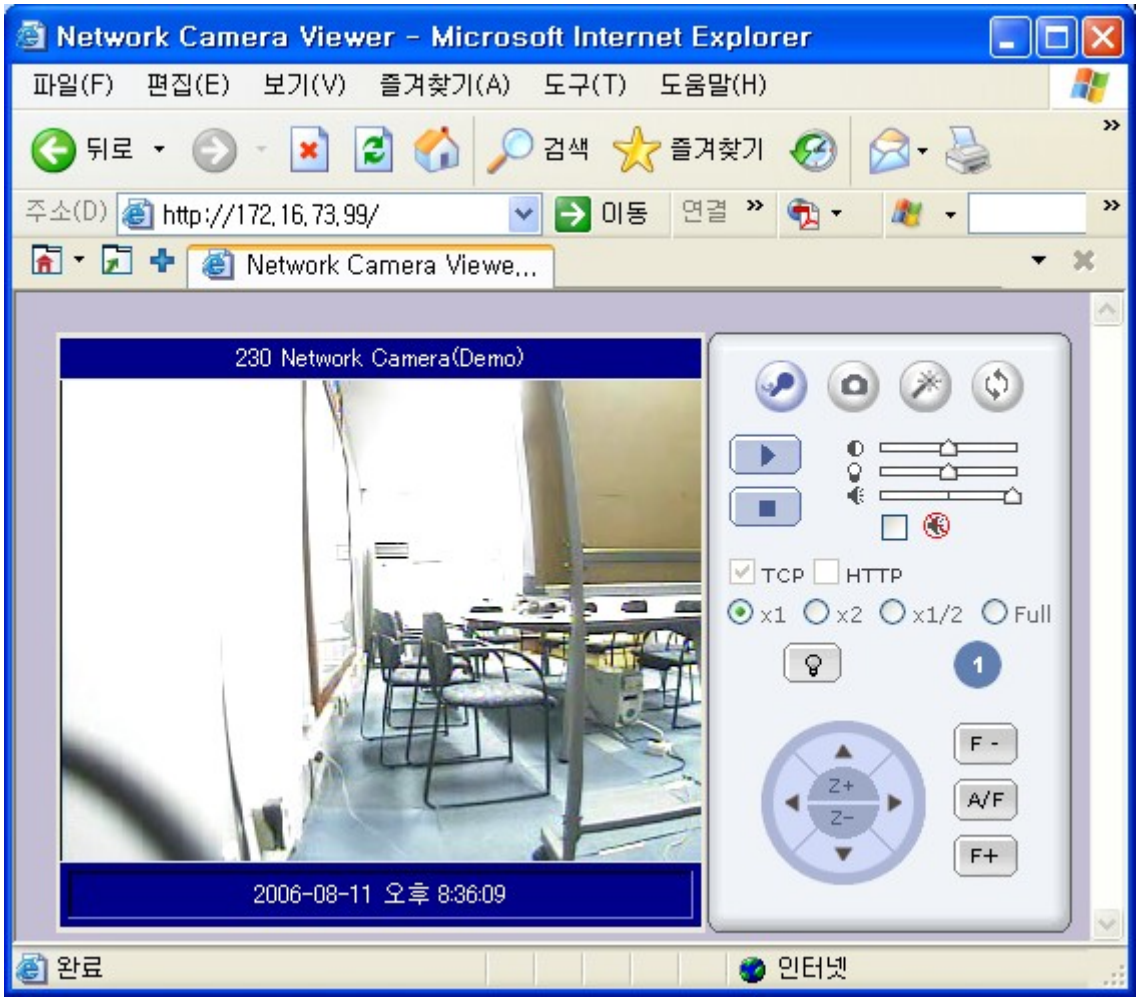
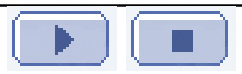
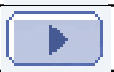
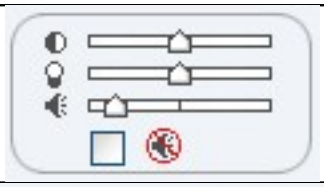
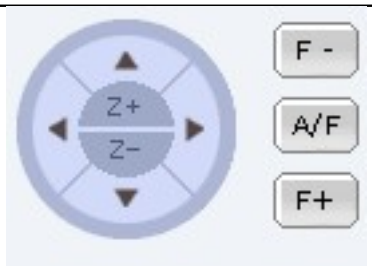


Figure 6-4. Web Viewer of iCanView230/230W

- **Control Panel of Web Viewer**

		Enable bidirectional audio. When bidirectional audio is enabled, voice from your PC is delivered to iCanView230/230W.
		Capture and store the still image on your desk top screen.
		Connect to iCanView230/230W in administrative mode of iCanView230/230W.
		Rotate the screen by 180 degree.
		Connect to iCanView230/230W.
		Stop the connection.
		Contrast, Brightness, and Volume adjustment..
		Check the box to mute the audio.
		Adjust the size of the screen. Normal (x1), Twice (x2), Half (1/2), Full Screen (full)
		On/off the relay by pressing the button
		Shows the status of the sensor. Blue color means that the sensor is in normal state, while red color indicates alarm situation. Number on the button indicates the number of sensor.
		Move the center of the camera in up/down/left/right directions.
	Z+ Z-	Zoom in (Z+) Zoom out (Z-) Not applicable for iCanView230/230w.
	F-	Move the focus to further position. Not applicable for iCanView230/230w.
	A/F	Auto focus. Not applicable for iCanView230/230w.

	F+	Move the focus to nearer position. Not applicable for iCanView230/230w.

6.4. How to Upgrade the iCanView230/230W

Unless otherwise instructed, the owners of the iCanView230/230W are recommended to upgrade the system when upgraded firmware is released using manual upgrade procedure.

Followings are the procedure to apply for the manual upgrade

1) Save the upgrade system software to your PC. Upgrade software can be downloaded from iCanTek's home page or provided in CD.
2) Log on to administrative mode and select "Update & Reset" menu.

3) Click "Browse..." to find the files you want to use for upgrade. This will open a "Choose file" dialogue window. The file extension is "ief".

4) When you've found the file, click "Open." This will select the file and close the "Choose file" dialogue window.

5) Click the "INSTALL" button. An alert message box will pop up. Click "OK" button then it will start uploading the file. This may take some time.

6) Upgrade completion message will appear after the system upgrade has been completed.

7) Reboot iCanView230/230W by performing "System Reset".

8) After rebooting, log on to the server in administrative mode again and click the "Status Report".

9) Check the version number and release date of the iCanView230/230W.

You can download iCanView230 system software from iCanTek homepage. h**ttp://www.icantek.com**