
Premium quality MPEG-4 Camera/Server
iCanView110/110W
Just Plug-in network cable.
You'll get live video & audio streaming data anytime & anywhere.

Directions

iCanView110 is designed for indoor use only. When using iCanView110 outdoors or in n 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 iCanView110 A/V Server. Especially keep the A/V server out of reach from children.

Do not disassemble iCanView110. You will be excluded from After Service when disassembled.

Use only the power adapter provided with the iCanView110.

If you would like to use the iCanView110 A/V server 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 generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures :

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into 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 expressly 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
2004-7	1.1	
2004-12-29	1.3	Supporting PC - Removed Window 98SE Modifications and new features in Admin page Network, Motion detection, Encryption, Upgrade
2005-2-21	1.3.8	Removed periodic ftp transfer.

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1. Introduction

1.1. Overview

The iCanView110 is a state-of-the-art network camera (and simultaneously a 1-channel A/V server) which transmits both video and audio data in real time with high-resolution at high frame rate. This is possible through MPEG4 CODEC technology, which provides data transmission at high compression rates with high data resolution via networks. The iCanView110 can be connected, controlled and monitored from a remote location through an IP address. Unlike CCTV or DVR, the iCanView110 is easy to install and also cuts costs and space without any additional installation. Based on Embedded Software Solution (Embedded Web Server, Embedded Streaming Server, Network Protocol), the iCanView110 ensures high performance and stability and provides integration of various Internet solutions.

iCanView110 is a model having Ethernet interface while iCanView110W is a model having embedded WiFi interface.

1.2. Features of iCanView110

- 1 channel real time Video/Audio streaming based on **MPEG-4 video and ADPCM audio**.
- 1 channel Bidirectional Audio between iCanView110 and Client PC for two-way communication
- The viewer assists **recording and playback functions**.
- 1 Alarm sensor input/1 relay output
- Motion detection – Up to 3 motion detection regions.
  Motion detection can initiate video recording, which is sent to the user through FTP and/or E-mail.
- Resolution : - NTSC Video - PAL/SECAM : support
  640x480(for still image/small motion)/640x240 for 1 channel, 320x240/176x144 for 4 channels.
  704x576(for still image/small motion)/704x288 for 1 channel, 352x288/176x144 for 4 channels
- Remote P/T/Z control
- Remote software upgrade over Network
- Ease of use and convenient user interface.
- Embedded WiFi interface (iCanVeiw110W only) – IEEE 802.11b

1.3. Applications of iCanView110

- Security surveillance (buildings, stores, factories, parking lots, banks, government facilities, military, etc.)

- Real time Internet broadcasting (resort areas, events, etc.)
- 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
iCanView110(W)	iCanView110 Network Camera/Server	
Power adapter	Input : 100~250V 50-60Hz Output : +12V, 1.0A	
AC power cable	AC 250V, 10A~16A	
LAN cable	2m LAN cable – Crossover type	For direct connection between the server and PC.
Antenna	3 dBi Omni-antenna	iCanView110W only
CD-ROM	Software & User's Guide	
Quick Reference Guide	Quick installation guide	Will be provided
Warranty		Will be provided

2.2. Preview

iCanView110/110W	IP-Installer	i-NVR
		
1CH MPEG-4 Network Camera/Server	PC software to allocate an IP address to the iCanView110	PC software to view and record the A/V streaming data transmitted from iCanView110

2.3. Physical description

2.3.1. Front View

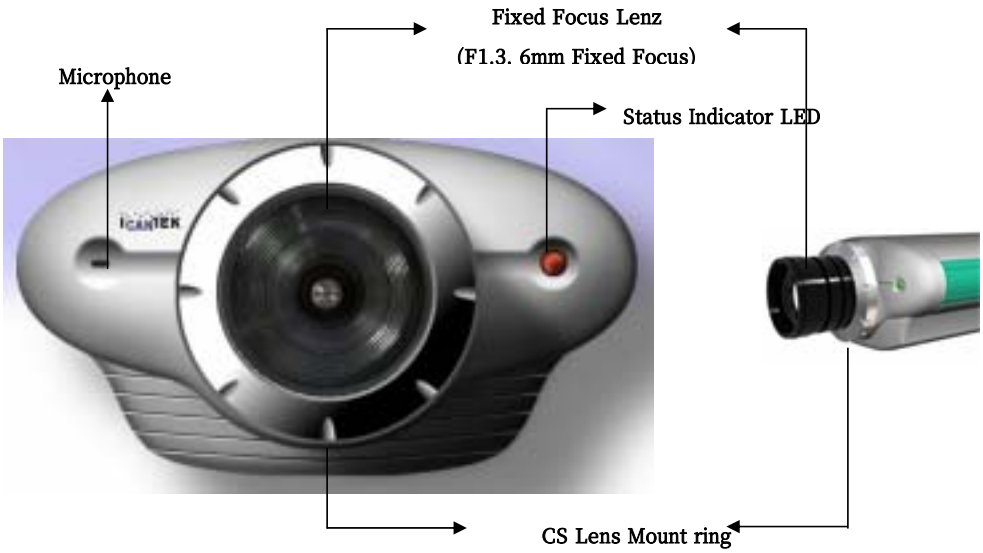


Figure 2-1. Front view of iCanView110

• **Lens Assembly :** It is a fixed focus lens with CS type mounting fixture. It can be replaced with other types with C/CS mounted fixed focus lens or DC IRIS lens.

• **Status Indicator LED :** Status indicator LED shows the status of iCanView110 in 3 different colors.

① Green : Green color indicates that iCanView110 is in normal operating condition. Continuous green light indicates that iCanView110 is ready for transmitting data. Flickering green light means that someone is connected to iCanView110.

② Red : Red light flickers or stays continuously on when the hardware of iCanView110 is in abnormal condition.

③ Orange : Orange light flickers or stays continuously on when software of iCanView110 is in abnormal condition.

Status indicator LED temporarily lights red then returns to green when applying power to iCanView110, which is normal condition.

- **Microphone :** Picks-up sound from the environment for transmission over the network..
- **Mount Ring :** Used for attaching lens unit to iCanView110.

2.3.2. Rear panel

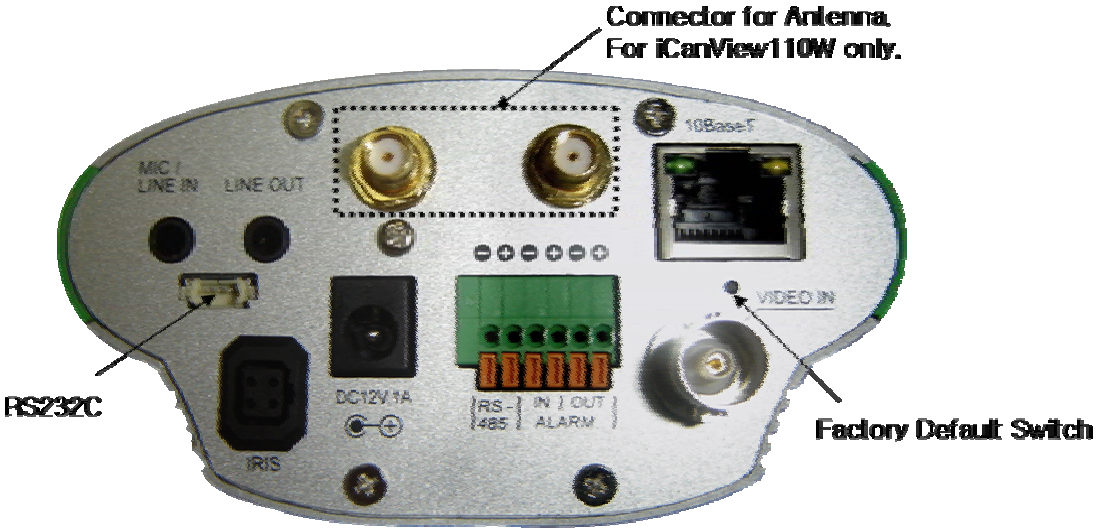


Figure 2-2. Rear Panel of iCanView110/110W

- **MIC /LINE IN :** It is used to connect external audio source or microphone to iCanView110. If external audio is connected, embedded microphone will be disabled.

- **LINE OUT** : It is used for connecting external 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.

- **10Base-T** : 10Mbps Ethernet connector (RJ-45).

- **LINK LED :** Green light means that network cable is in normal condition.

- **LAN LED**: When there is traffic on the LAN, yellow light flickers.

• **RS-232C (3 pins)** : Used only by developers for development and production. Not for use by end users.

• **DC12V, 1A**: Power input of iCanView110. 12V/1A

• **DC-IRIS** : Plug in the cable attached on standard DC-Iris lens.

• **RS-485 and ALARM IN/OUT :** Is is used for connecting P/T/Z and alarm devices to iCanView110. Pin assignments are :

Pin 1	RS-485 Negative (-) input
Pin 2	RS-485 Plus (+) input
Pin 3	Alarm In (-)
Pin 4	Alarm In (+)
Pin 5	Alarm Out (-)
Pin 6	Alarm Out (+)

- RS-485 : Used for connecting Pan/Tilt and Zoom devices having RS-485 interface standard.
- Alarm In : It is used for connecting external alarm sensors such as the infrared sensors, heat sensor, magnetic sensors, etc.
- Alarm Output : It is used for connecting external alarm generators such as sirens, flashing light, etc. When activated, relay output configures a closed circuit
-

• **VIDEO-IN :** Video input for video device(DVD, TV and etc) (composite NTSC, PAL, SECAM)

• **Factory Default Switch :** There is a switch provided for returning the network camera to factory default state. Press the switch through a tiny hole above the Video-In connector using sharp tool for a few seconds while power is applied.

• **Antenna Connector :** Connector for connecting 3dBi antenna supplied with iCanView110W

Refer to detailed information of Alarm in/Out to 6.1. ALARM-IN and ALARM-OUT in this guide

2.4. PC Requirements

AV streaming data from iCanView110 can be observed through i-NVR program which is a viewing & recording program running on 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 2000 or later	Windows 2000 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	10/100 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 iCanView110 to your PC or network by using one of the following method**
   i. Connect your PC and iCanView110 using the Cross Type LAN cable provided with iCanView110 or
   ii. Connect iCanView110 and PC to same LAN using Direct Type cable.

2. **Apply power to iCanView110**
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]** in this CD**,** respectively.

4. **Assign IP address to iCanView110 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 iCanView110 in Administrator Mode for initial parameter set-up.

All parameters are set to factory default state when iCanView110 is delivered to you. 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 the A/V Server in Administrative Mode]**. Among the parameters, the parameters in the following table should be set-up in proper values. Detailed information for the parameters in Administrator Mode is found in [**5. Configuring the A/V Server 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	Define the resolution of the video transmission from iCanView110.	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	It indicates the number of frames to be transmitted per second.	
	Video Rate	It indicates the bandwidth allowed for video transmitted from iCanView110.	
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 expose 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 inputs and output signals to iCanView110.

iCanView110 does not function properly if there is no video and audio input.

Refer to the following table. You have to connect at least one Video In.

Connectors	Function	Signal description	Number
Video In	Input video	Analog video outputs from analog	1

	connector	CCTV camera, DVD, TV etc., (NTSC/PAL/SECAM)	
LINE-In/MIC	Audio in	Connect microphone or output from audio devices.	1
Line Out	Audio out for speaker	When in bi-directional audio mode, Audio signal from remote site is available from this connector. Use speaker with amplifier.	1
Alarm In	Connecting Alarm Sensor	IR sensor, Motion Sensor, Smoke Detector…	2
Alarm Out	Connecting Alarm alerting device	Siren, Flashing Light, …	2
RS485	PTZ device control	Remote P/T/Z control having RS485 interface.	1
10Base-T	Network connection	Connect iCanView110 to Ethernet connector from Hub, PC, ADSL or Cable modem.	1

5. Remote video connection to iCanView110

You can connect to iCanView110 in video mode by running "i-NVR" program on your PC. Detailed information of using "i-NVR" can be found in [i-NVR User's Guide].

3. Connecting the iCanView110

iCanView110 supports LAN, xDSL, and Cable modem. It also support shared IP network where single IP is shared by many devices using IP sharing device. Refer to **[IP-Installer User's Guide]** for details of setting the IP address for the iCanView110 by using the "IP-Installer".

3.1. Connecting to LAN

In case of connecting the iCanView110 to LAN, it is generally connected as follows**{Figure 3-1.}**

Figure 3-1. Connecting the iCanView110 to LAN

1. After applying the power, connect the LAN cable and assign an IP address to iCanView110 by using the IP-Installer.
2. To assign an IP address to the iCanView110, run the IP-Installer in the PC connected in the same subnet as iCanView110 is connected.
3. Check if you can receive video data when connecting to iCanView110 using the viewer program.

3.2. Connecting to xDSL Modem

1. Apply power and connect the PC and iCanView110 using crossover LAN cable provided with the system.
2. Setup network parameters by running "IP-Installer."

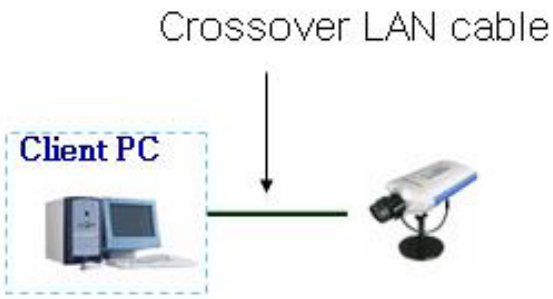


Figure 3-2. Direct connection using crossover LAN cable

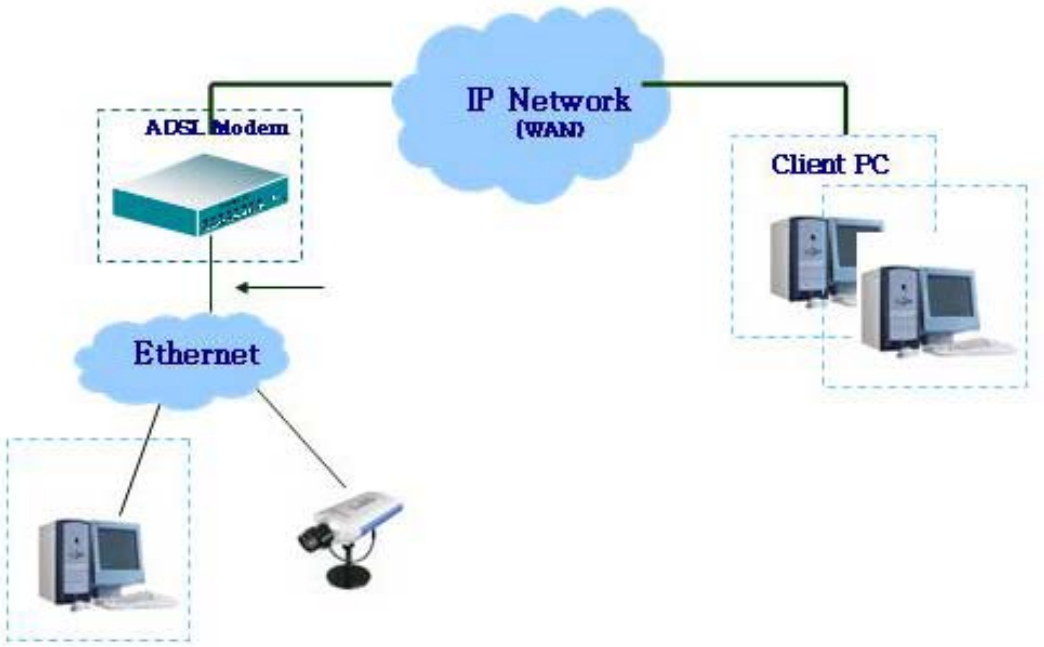


Figure 3-3. Connecting the iCanView110 to ADSL Modem

3. Remove the crossover LAN cable and connect the iCanView110 to the network using regular LAN cable. Check if you can receive video data when connecting to iCanView110 using the viewer program.

When fixed IP address is assigned to the xDSL, 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 iCanView110 to xDSL Modem, usually regular LAN cable is required. But since some xDSL Modems has crossover connections, please contact your xDSL provider for detailed information.

3.3. Connecting to Cable Modem

1. Apply power and connect the PC and iCanView110 using crossover cable provided with the system.
2. Setup network parameters by running "IP-Installer". {Refer to Figure 3-4}.

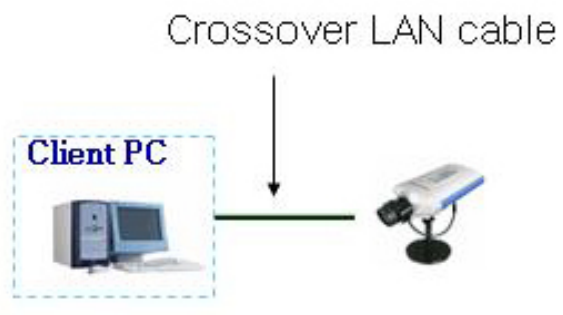


Figure 3-4. **Direct connection using crossover LAN**

3. Remove the crossover cable and connect the iCanView110 to the network using regular LAN cable as shown in Figure 3-5. Check if you can receive video data when connecting to iCanView110 using the viewer program.

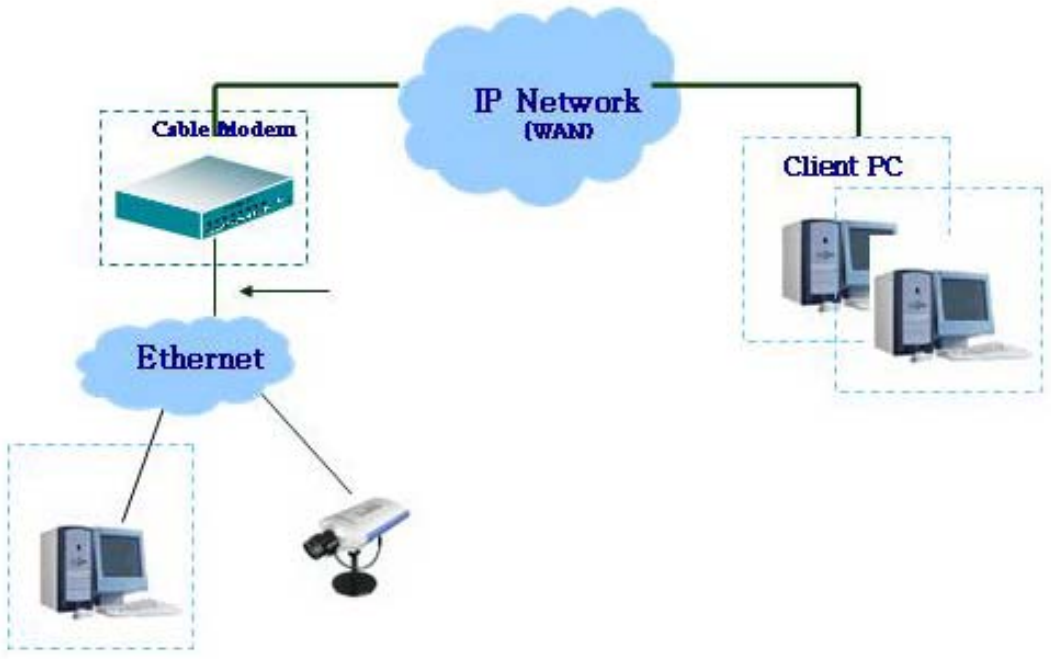


Figure 3-5. Connecting the iCanView110 to Cable Modem

When fixed IP address is assigned to the 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 the iCanView110 to cable modem, usually regular LAN cable is required. But since some cable modems has crossover connections, please contact your cable modem service provider for detailed information.

4. IP-Installer

iCanView110 needs an IP address for connection to the network(Internet/Intranet). IP-Installer is a PC program developed to assign an IP address and setup network parameters to digital video security network products such as Network Camera and A/V Server. IP-Installer is provided in a CD supplied with iCanView110 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

5. Configuring the A/V Server in Administrative Mode

5.1. Log On

There are 2 ways of connecting to iCanView110 administrative mode. One is through standard internet browser(Internet Explorer) and the other is through "**i-NVR**" program.

1. Using Internet Explorer

You can log on to the server by clicking admin mode button or from your internet browser.

Type in as the followings in the address window of the Internet Explorer.

http:///[iCanView110 IP address]/admin.htm

Example: http://172.16.64.133/admin.htm

삭제됨: 7

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

http:///[iCanView110 IP address]:[port]/admin.htm

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

삭제됨: 7

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 Admin 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 iCanView110.

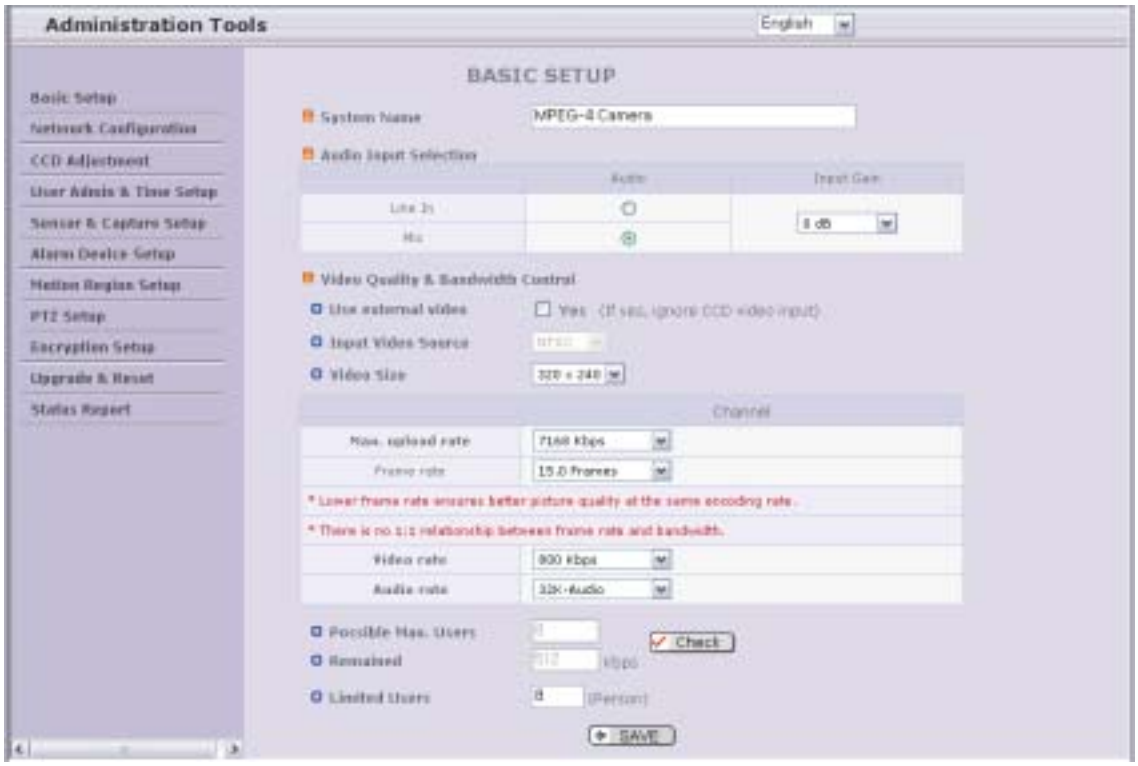


Figure 5-3. Basic Setup

• **Language Selection**: You can select a language in the admin page.

- Supported languages : English, Korean, Japanese, Chinese, Spanish

• **System Name**

It is the name of the iCanView110. It is same as the one set-up by IP-installer. You can reassign the system name in admin mode.

• **Audio Input Selection**

- Select the type of input audio for each channel. Line In is used for connecting audio output from audio devices. Mic is used for connecting the output of microphone.
- Input Gain : Set the gain of the input audio.

• **Video Quality & Bandwidth Control**

- Input Video : Select the analog video standard for input. Select one from NTSC, PAL, SECAM.

- Video Size : Select a video size for transmission. Allowed video size is different for each video standard.
  - NTSC(30 frames/sec Max.) : 176x144 / 320x240 / 640x240 / 640x480.
  - PAL/SECAM (25 frames/sec Max.) : 176x144 / 352x288 / 704x288 / 704x576

- Max upload rate
  Assign maximum bandwidth of the uplink for the network connected to iCanView110.
- Frame rate
  Assign number of video frames 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, check 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 is same as those used setup by "**IP-Installer**".

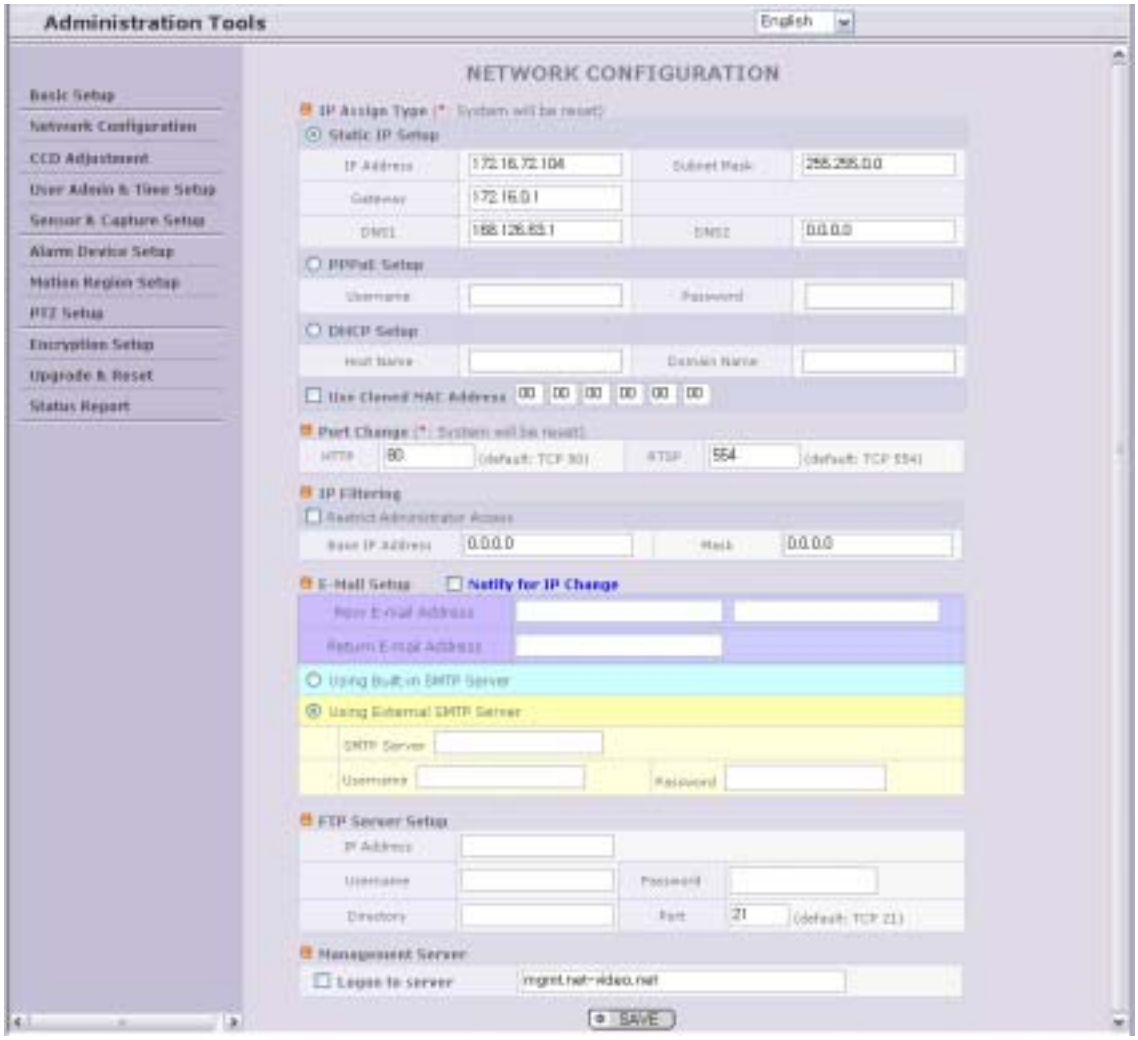


Figure 5-4. Network Configuration

- **IP Assign Type :** The network types supported by the iCanView110 are LAN(fixed IP), PPPoE, and DHCP(automatic IP allocation)

- When the network environment is fixed IP, select 'LAN' in the network type, and put the IP address, Subnet Mask, Gateway, DNS1 and DNS2 assigned by the network administrator or ISP. DNS2 is used when DNS1 does not work.

- 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 network service provider.
- When the network environment is "automatic IP allocation by DHCP", select 'DHCP' in the network type.
  • Refer to **[IP-installer user's guide]** for "Clone MAC".
  • Refer to **[IP-installer user's guide]** for "Host name and domain for Cable Modem".

• **Port Change :** You can change the HTTP port, FTP port and RTSP port numbers. The RTSP port is used to connect the "Viewer" to the iCanServer410.
Each port should have a number below # 65535.
- **HTTP :** default "80"
- **RTSP :** default "554"

• **IP Filtering** : You can restrict the access to the administrator page from IP addresses beyond certain IP address range.
- **Restrict Administrator Access** : Check 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.

- **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. 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 by the receiving e-mail server.

- **Notify for IP Changed** : 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".

• **FTP Server Setup :** Setup IP address, Username, Password and Directory of FTP 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 for various support including name service for 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 number based IP address. This feature is particularly useful when your video server is using dynamic IP address. Input valid Management Server name for the service.

You must open an account on the management server and register your network camera under your account to use this feature. Domain name of your network camera can be assigned when you register your video server to the management server under your account.

One of the server available is mgmt.net-video.net. For the opening of an account visit **www.net-video.net** .

5.4. Wireless Configuration

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

• Wireless LAN Setup

Set up parameters for wireless LAN.

- **Use Wireless LAN** : Select "Enable" to use wireless interface. If "Disable" is selected, Ethernet interface is used instead of wireless LAN interface.
- **SSID** : Enter the ID of the wireless LAN access point to be connected, when wireless LAN interface is selected.
- **Use WEP** : Select the mode of WEP. If WEP is not used select "Disable"
- **Key Value** : Set the value of WEP Key.
- **Wireless Power** : Set the maximum transmission power level of Wireless LAN.

• WLAN Information

Information regarding wireless LAN interface is displayed.

- **MAC Address** : Indicates MAC address of the Wireless LAN card.

- **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 the 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.

Click "SAVE" to save the parameter after you finish the parameter setting.

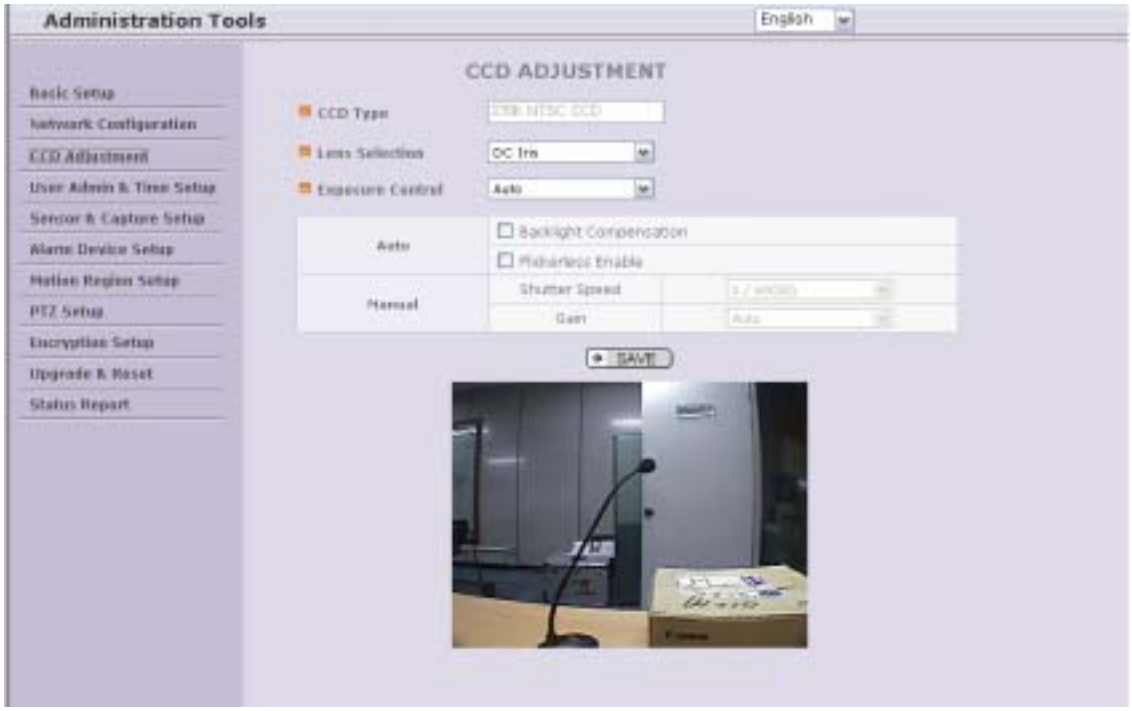


Figure 5-6. CCD Adjustment

• CCD Type

Either NTSC or PAL type CCD sensor is installed in iCanView110. Type of CCD is identified by the system and shown in this field.

• Lens Selection

Any lens having CS mount type can be installed on iCanView110. Standard iCanView110 is delivered with C mount type fixed lens. In order for the convenience of replacement with CS type, a C-CS adaptor is packaged with iCanView110.

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 is selected when CS Type DC IRIS lens is mounted on your iCanView110.
Non DC IRIS Lens	Non DC IRIS lens is a fixed IRIS lens. This is a standard lens that is installed with iCanView110 unless requested otherwise. Non DC IRIS lens is factory default selection.

- **Exposure Control**

Users of iCanView110 can select either Auto or Manual exposure control. Sub menus in Auto exposure mode are Backlight compensation and Flickerless enable.

Sub menus in Manual exposure are Shutter Speed and Gain Adjustment.

set parameters to control the amount of light reaching CCD sensor to obtain various video

Auto	Adjust the amount of light reaching CCD automatically. If this mode is selected Backlight compensation and Flickerless enable submenus are activated. To apply the sub menu check the box at the left of each sub menu and click "SAVE". □ **Backlight Compensation** When the camera is acquiring video from object with bright backlight, it is hard to identify the details of targeting object since the object appears very dark. Apply backlight compensation mode for this case. Default mode is backlight compensation Off. □ **Flickerless Enable** In case of using NTSC type iCanViewV110 in 50Hz AC regions or using PAL type iCanView110 in 60Hz AC region, video output tends to flicker when iCanView110 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.
Manual	Adjust the amount of light reaching CCD manually. Shutter speed and Gain

	sub menus are activated when this mode is selected. Check the box at the left of each sub menu and click "SAVE" to apply the sub menu. □ **Shutter Speed** Electronic shutter speed can be selected between 1/60 sec and 1/10000 sec for NTSC camera. In case of PAL camera shutter speed can be selected between 1/50 sec and 1/10000 sec. In case of using DC IRIS lens under manual exposure mode, you will not find the difference in brightness by controlling the shutter speed since the opening of the IRIS is automatically adjusted. But in case of NON DC IRIS lens, the brightness of the video will change as you adjust the shutter speed. When you are using your camera under low light condition, set the value to maximum (1/50 or 1/60) to increase the amount of light reaching CCD. □ **Gain** You can adjust the gain of CCD sensor in accordance with the speed of the shutter. If you select Auto, the gain is automatically adjusted in accordance with the situation. Alternatively, you can select one of 10, 16, 22, 28 dB to set the maximum gain. Setting gain to higher value will ensure you to enhance the brightness under low light condition, while it amplifies noise level, too.

5.6. User Admin & Time Setup

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

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

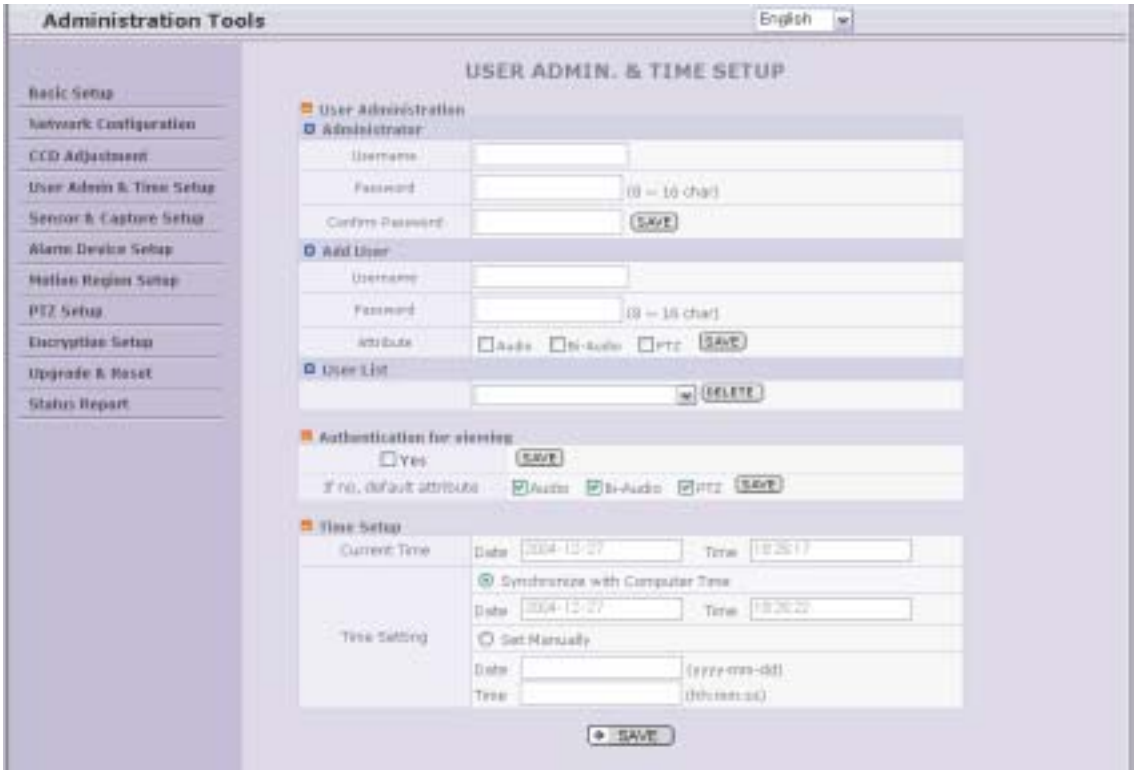


Figure 5-7. User Admin. & Time Setup

• **User Administration**

- **Administrator**

. **Username** : Admin ID. Default ID is "root"

. **Password** : Admin password. The default password is "dw2001".

. **Confirm Password** : Enter the password once more to confirm the password.

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.

- **Add User**
  - . **Username** : Enter the user ID you want to add. Up to 100 users are supported by iCanView110.
  - . **Password**: Enter the user password.
  - . **Attribute** : You can set different system resource access capabilities for each of the user. Attributes are Audio, Bi-directional Audio and Pan/Tilt. For example, if you want a specified user to hear the audio from the iCanView110, 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 – ptz, attribute. you can delete specific user by clicking the "DELETE" button.

• **Authentication for Viewing** : If you want to restrict viewing access to the iCanView110, check "Yes" box and click on "Save". Users need to input ID and password to connect to iCanView110 in viewing mode. (Figure 5-8.)

Figure 5-8. User Authentication in iCanView110

- **If No, default attribute :** If you uncheck the above "**Yes**", every user can access the iCanView110 without restriction with the same attribute set in here. You can enable by checking each attribute and clicking "**Save**" button.

Even if you have added a user through authentication for viewing connection to the iCanView110 will not be enabled unless you check "Yes" in "Authentication for Viewing" and click on the "Save" button.

• Time Setup
- **Current Time**: It shows you the current time of iCanView110.

- **Time Settings** : You can set the time manually or you can synchronize the time to the PC.

Options	Description
"Synchronize With Computer Time"	Synchronize the time with the PC time.
"Set Manually"	You can manually set the time.

5.7. Sensor & Capture Setup

This is the setup page for sensors and video capture conditions, which will be sent to user by FTP or E-mail.

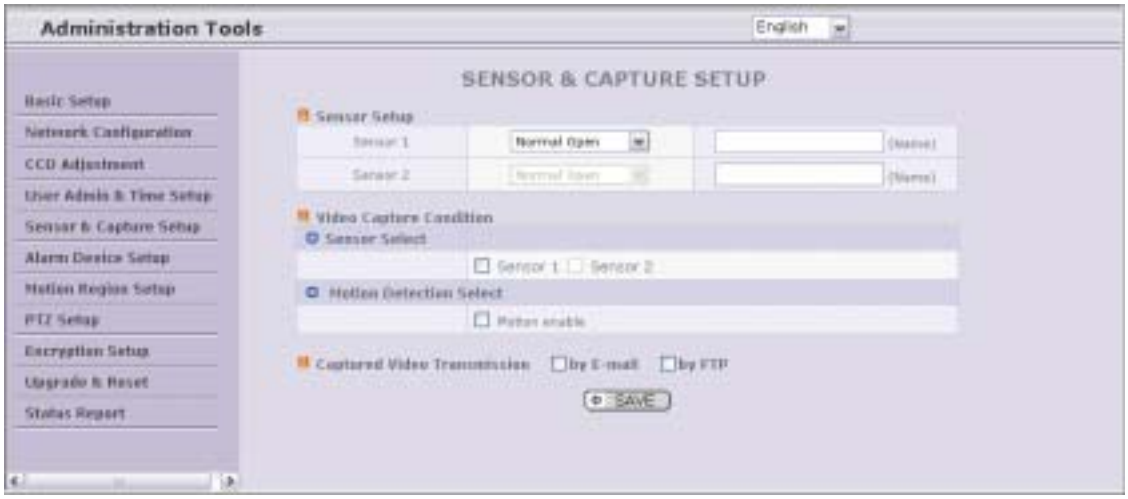


Figure 5-9. Sensor & Capture Setup

• Sensor Setup : A sensor can be connected to iCanView110.

- **Type Selection** : Select sensor type. There are two types of sensors
  . **Normal Open** : "floating" in normal situation, non-floating means an alarm condition.
  . **Normal Close** : "non-floating" in normal situation. Floating means an alarm condition.

• Video Capture Condition : It sets the condition of video recording and transmission via FTP or E-mail. The iCanView110 supports 2 types of conditions :

1. Sensor initiated: when at least one of the sensor detects alarm condition.
2. Motion-Detection initiated : when motion is detected from video channel

Above 2 conditions are mutually independent in operation.

- Sensor Select : Select the sensor that triggers video capture.
- Motion Detection Select : Select the video channel that triggers video capture.

• **Captured Video Transmission** : Select a way of sending captured video. You can send captured video through FTP or E-mail, or both.

- FTP is sent to the **FTP** Server. Refer to **[Section 5.3.]**
- E-mail is sent to the **Recv E-mail address.** Refer to **[Section 5.3.]**

  If the FTP server is not properly assigned in "**Network Configuration" mode**, iCanView110 ignores the video transmission by FTP

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.
Video for periodic recording is sent only to FTP server.

5.8. Alarm Device Setup

Test alarm output and describe the condition of alarm.

Figure 5-10. Alarm Output Setup

• **Alarm Device Test** : Test alarm devices. Press On/Off for testing.

• **Alarm Device Active Condition** : Setup the condition of activating alarm Device. Select sensor or motion detection as the condition.

- **Duration** : Set the duration of Alarm out.
  10 sec, 30 sec, 1 min, 2 min, 5 min, 10 min, 30 min, 1 hour.

5.9. Motion Region Setup

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

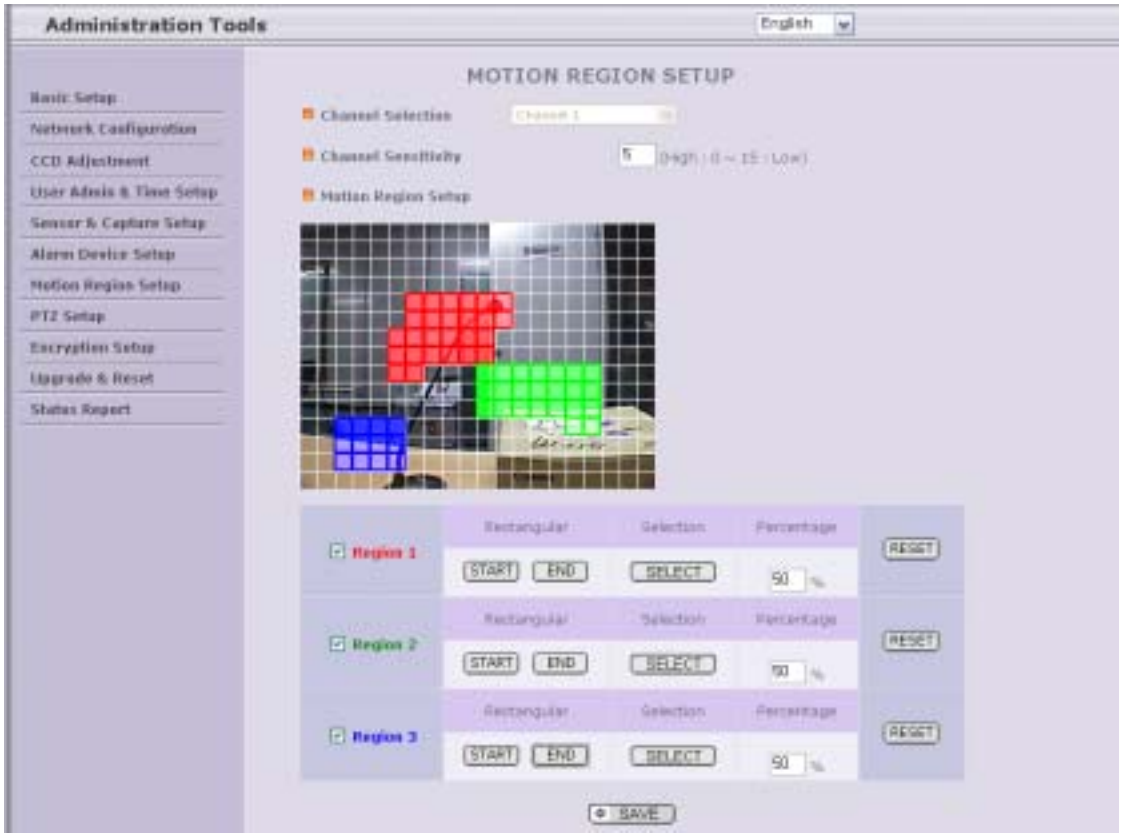


Figure 5-11. Motion Region Setup

• **Channel Selection** : Choose the channel you want to enable motion detection.

• **Channel Sensitivity** : Set the sensitivity in motion detection for each channel.
  - 1 is the least sensitive number, and 66 is the most sensitive number.
  - Sensitivity values can be set to be different among channels, but same sensitivity is applied for regions.

• **Motion Region Setup** : Set up the motion detection region up to 3 per each video channel
  - **Region 1, 2, or 3** : Motion detection is enabled for the channels by checking each box.

. You can set the region by pressing the "START" button, and click one corner of region in the left viewing. It will show the coordinate value automatically. Next you press the "END" button, and click the other diagonal corner.

Regions are shown in three different transparent colors:
red(region 1), green(region 2), blue(region3)
"RESET" button clears the start & end point to (0,0) & (0,0)

. Percent : This value controls the sensitivity of each region.
1 is the most sensitive and 100 is the least sensitive.

5.10. PTZ Setup

Setup and test the PTZ devices.

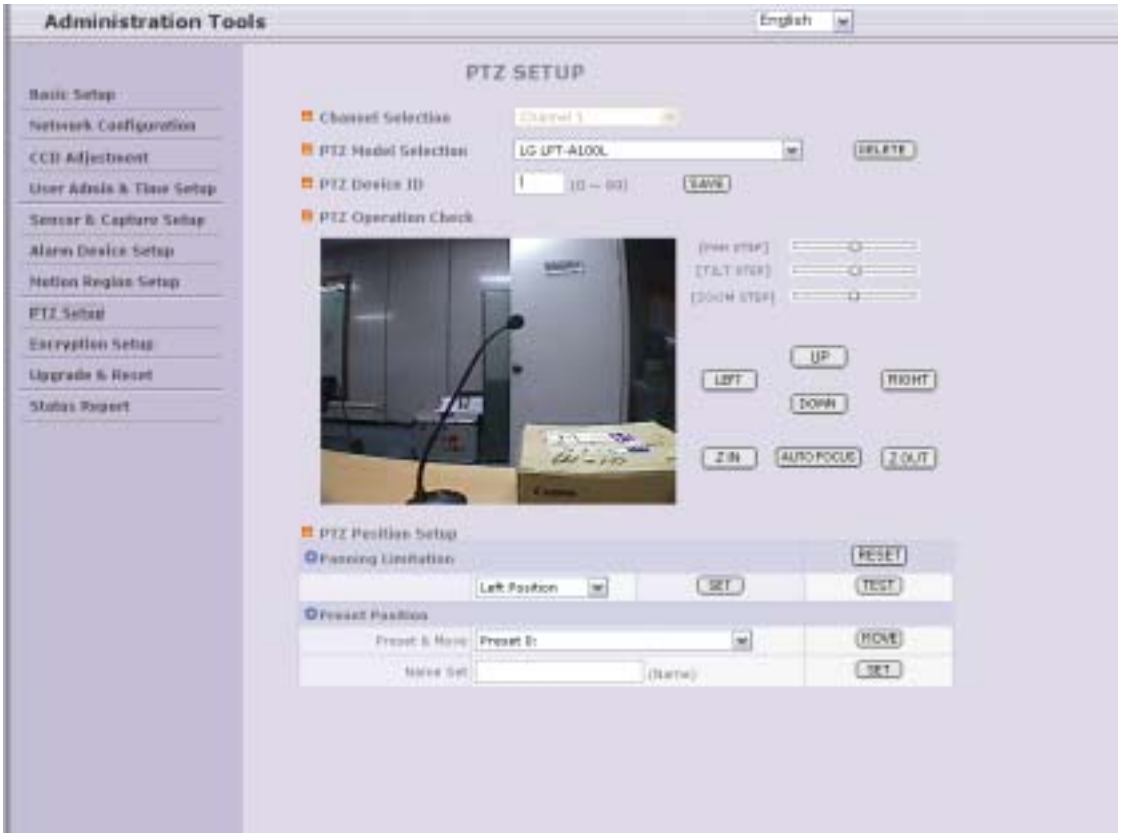


Figure 5-12. PTZ Setup

• **Channel Selection** : Choose the channel having PTZ device.

• **PTZ Model Selection** : Choose the PTZ model for each channel.
Different PTZ model can be applied for each channel.

- **Delete Button : P**ress this button to delete the setup of PTZ.

> Refer to **[5.12 Upgrade & Reset]** for adding new PTZ device.

• **PTZ Device ID** : If your PTZ device needs and ID, input ID in this field.

"Left"/"Right"/"UP"/"DOWN" , "AUTO FOCUS"/"ZIN"/"ZOUT"

• **PTZ Operation Check** : You can check the various operation of the PTZ devices.

"Left"/"Right"/"UP"/"DOWN" , "AUTO FOCUS"/"ZIN"/"ZOUT"

• **PTZ Position Setup** : You can set up the PTZ limitation & preset positions if the PTZ device supports it.

- **Panning Limitation :** set the left/right limitation and test.
- **Preset Position :** set the preset position and test.

<Note> : "PTZ Position Setup" feature is applicable only for the PTZ 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.

• **Key Value** : You can use up to 20 different key codes for the encryption of the data.

- **Generation** : To generate the key value click on "GENERATE" button. The boxes for the Key values will be filled with new values.
- **Saving Key value on the Video server**: Click on SAVE button beneath GENERATE button to save the key value generated by the network camera.

- **Downloading 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.
- **Uploading key value to the video server** : 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.

5.12. Upgrade & Reset

You can upgrade the iCanView110 via the network.

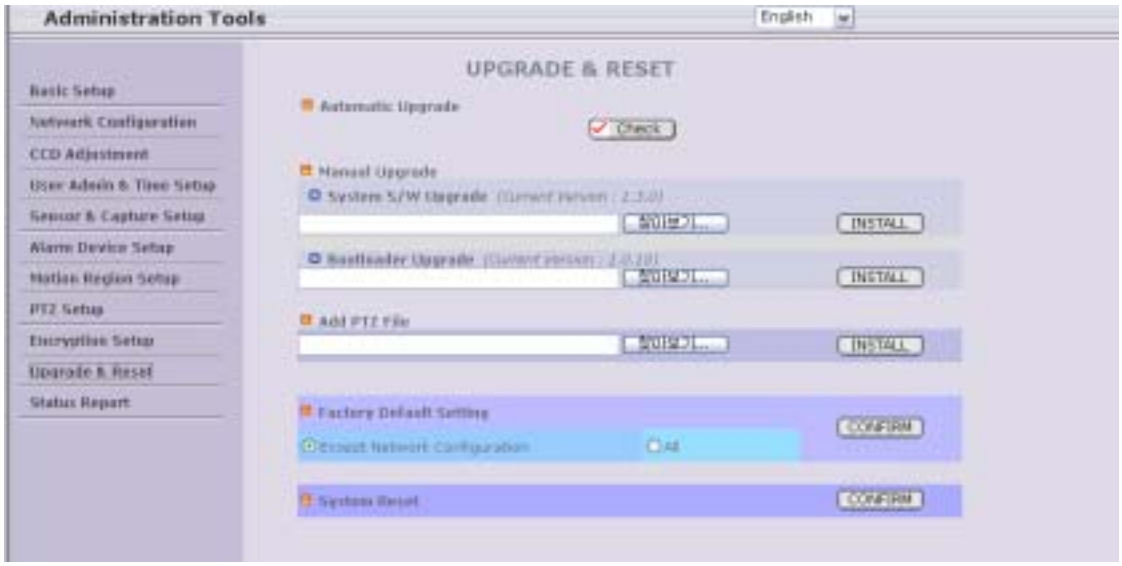


Figure 5-14. Upgrade & Reset

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 iCanView110 System]**

• 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.

.

• Manual Upgrade

- **System S/W Upgrade :** Upgrade the system software installed in the server 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 iCanView110 System]**.
- **Bootloader Upgrade:** Upgrade the bootloader installed in the server via the network.

Bootloader needed for the upgrade can be downloaded from iCanTek's home page. Refer to **[6.4. How To Upgrade Your iCanView110 System]**.

- **Add PTZ File :** Add a new PTZ driver software via the network. PTZ driver can be downloaded from iCanTek's home page. Refer to **[6.4. How To Upgrade Your iCanView110 System]**.

• **Factory Default Setting** : Re-initialize iCanView110 to factory default state. By checking on a Radio button "Except Network Configuration", you can preserve the paramteres for the network. Checking on "All", will return all the parameters to factory default state.

Once iCanView110 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. iCanView110 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.

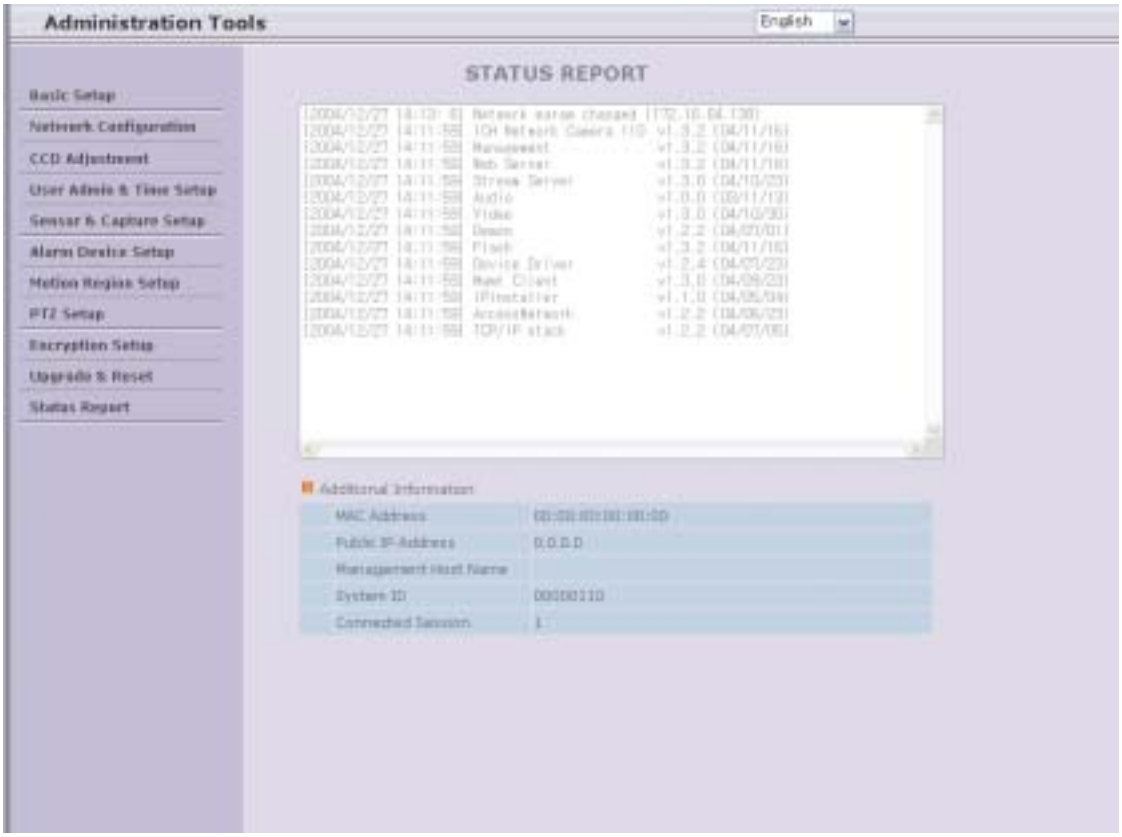


Figure 5-15. Status Report

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

6. Tips for Using iCanView110

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 t is used for connecting alerting device such as loud speaker, flashing light, etc.

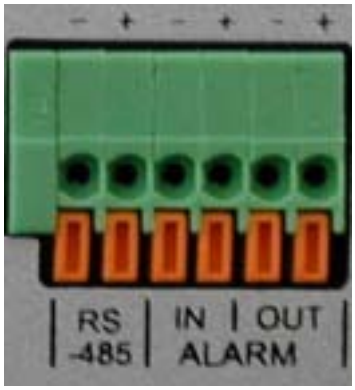


Figure 6-1. ALARM-IN/ALARM-OUT Connector

1. ALARM-IN

Connect the two wires of the sensors. The sensor type can be set in Administrative Mode(Ref. 5.5 & 5.6). Output lines providing on-off switching are connected between "+" and "-" pins. Figure 6-2 shows the input circuit of "Alarm In".

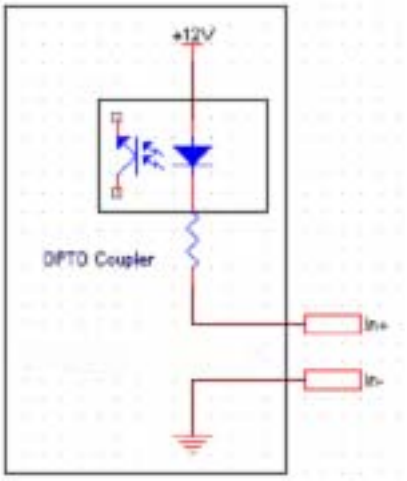


Figure 6-2. SENSOR input of iCanView110

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.

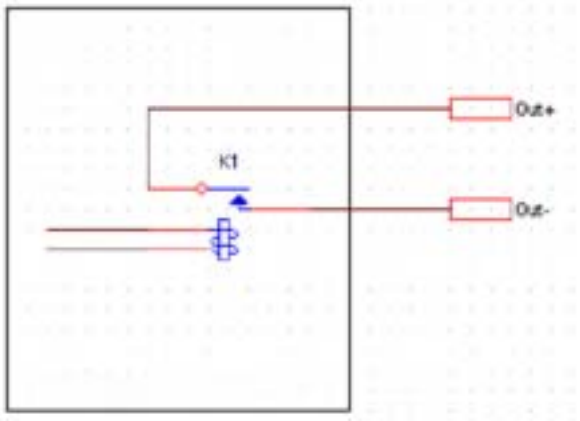
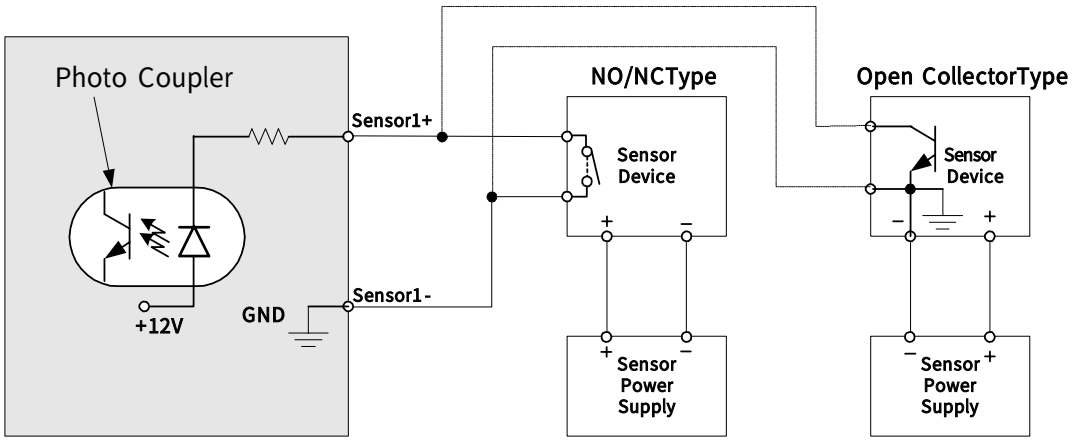


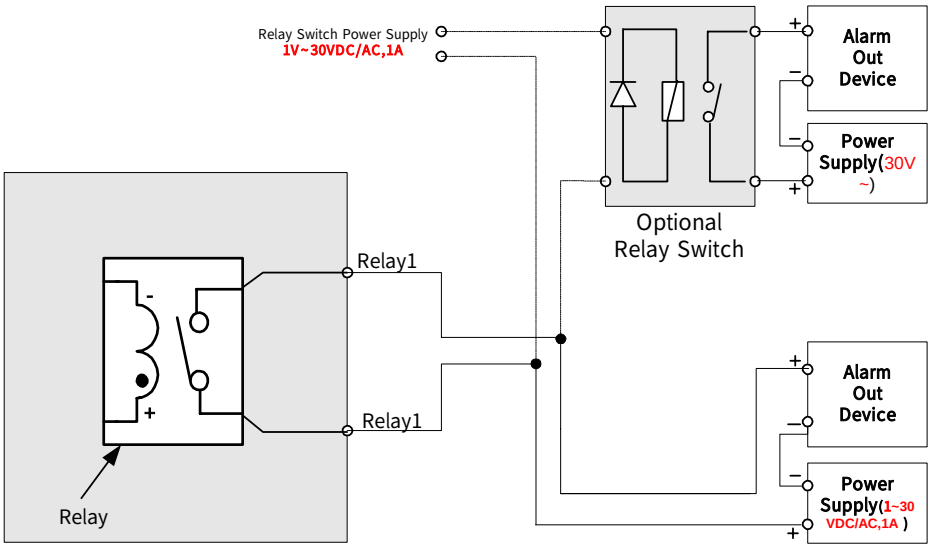
Figure 6-3. RELAY Output of iCanView110

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 iCanView110 is successfully installed.

- **iCanView110 in viewing mode, neither channel name nor video is display and eventually timeout message is shown up.**

Check the power and network connection of iCanView110.

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 iCanView110 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.

- **Name of the channel on iCanView110 is displayed but there is no video.**

Check if there is input video source to the channel. And check if there is a firewall in the network. Check if the network is NAT type.

In case there is a firewall in the network:

1. Try a TCP connection. TCP connection is usually enabled by checking TCP box before connecting to iCanView110. Refer to viewer manual for more detailed operation.
2. TCP causes delay and low network throughput. And you are recommended to use UDP connection for better performance. To use the UDP connection UDP ports from 6970 to 7009 should be open. Ask you network manager for assistance.

If the network is NAT type, you need port mapping. It is be achieved by setting the NAT server to forward all packets coming in through a specific port to iCanView110. You must open UDP Ports from 6970 to 7009.

2. After Successfully Connecting to the iCanView110

- **Video movement is slow.**

In Basic Setup of Admin Mode, lower the "Quality". High quality means more data. You can also set the "Max. Bandwidth" 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. Bandwidth" of the 4 channels to 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 iCanView110.

- **Mosaic phenomenon.**

Mosaic phenomenon occurs when not enough network bandwidth is available considering the resolution and frame rate of the video.
Example is 640x240 video with low Max. Bandwidth.
Users are recommended to adjust resolution and frame rates to lower values for lower bandwidth network.

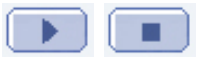
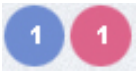
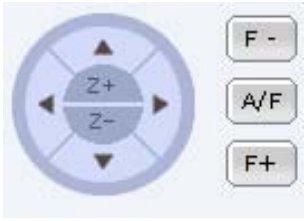
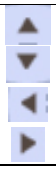
6.3. Web Viewer

iCanView110 is designed to be connected through internet explorer, too. For connection to iCanView110 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 iCanView110

- **Control Panel of Web Viewer**

		Enable bidirectional audio. When bidirectional audio is enabled, voice from your PC is delivered to iCanView110.
		Capture and store the still image on your desk top screen.
		Connect to iCanView110 in administrative mode of iCanView110.
		Rotate the screen by 180 degree.

		Connect to iCanView110.
		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-)
	F-	Move the focus to further position.
	A/F	Auto focus.
	F+	Move the focus to nearer position.

6.4. How To Upgrade Your iCanView110 System

There are two ways of upgrading system software of iCanView110. In most cases it is more convenient upgrade the system software in automatic sequence. But for the case where your iCanView110 cannot be connected to our upgrade server you are recommended to use manual upgrade.

1. Automatic Upgrade

1) Connect to iCanView110 and log on to administrative mode with administrator's ID and Password. Then start "**Upgrade & Reset**" menu.

2) When your system software is older than the latest release, the admin page will indicates the fact by blinking red arrow mark on the right of "**Upgrade & Reset**" menu. Click "**Upgrade & Reset**" menu when the indicator is blinking. You will find a screen as shown in Figure 5-12. Click "**UPGRADE**" button to start the upgrade.

3) The server will notify the end of upgrade process on your screen.

4) Click **Confirm** button on the right of **System Reset** to reboot iCanView110.

5) After the reboot is finished, log on to iCanView110 with administrator ID and password. Then click "**Status Report**" menu to display the current status of iCanView110.

6) Confirm the version number and date of all the system software on your iCanView110.

2. 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.

서식 있음: 글머리 기호 및 번호 매기기

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 iCanView110 by performing "System Reset".

서식 있음: 글머리 기호 및 번호 매기기

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 iCanView110.

서식 있음: 글머리 기호 및 번호 매기기

You can download iCanView110 system software from iCantek's homepage.
http://www.icantek.com