



DG-SC4600PI / DG-SC4600I
MEGAPIXEL BOX IP CAMERA WITH IR CUT
FILTER and POE/NON POE
User Manual

V1.0
2012-04-09

As our products undergo continuous development the specifications are subject to change without prior notice

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Safety

This equipment is designed with the utmost care for the safety of those who install and use it. However, special attention must be paid to the dangers of electric shock and static electricity when working with electrical equipment. All guidelines of this and of the computer manufacturer must therefore be allowed at all times to ensure the safe use of the equipment.

Federal Communication Commission Interference Statement

FCC Part 15

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the FCC Rules. These limitations 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 a different outlet from that to which the receiver is connected.
- Consult your local distributors or an experienced radio/TV technician for help.
- Shielded interface cables must be used in order to comply with emission limits

Changes or modifications to the equipment, which are not approved by the party responsible for compliance could affect the user's authority to operate the equipment.

FCC Caution

This equipment must be installed and operated in accordance with provided instructions and a minimum 20 cm spacing must be provided between computer mounted antenna and person's body (excluding extremities of hands, wrist and feet) during wireless modes of operation.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the authority to operate equipment.

Federal Communication Commission (FCC) Radiation Exposure Statement

This equipment complies with FCC radiation exposure set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20cm (8 inches) during normal operation.

The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The equipment version marketed in US is restricted to usage of the channels 1-11 only.

INDEX

1. Product Information	8
1-1 Product Introduction.....	8
1-2 Safety Information.....	9
1-3 System Requirements.....	10
1-4 Package Contents.....	10
1-5 Get Familiar with your new Network Box IP Camera	11
1-6 Installation of the Network IP Camera.....	14
2. Using Network IP Camera by Web Interface	17
2-1 Locate the IP address of Network IP Camera.....	17
2-2 Connect to IP Camera's Web User Interface	19
2-3 Viewing Live Video.....	23
2-4 Client Settings.....	26
3. Advanced Configuration	28
3-1 System.....	30
3-2 Security	32
3-3 Network.....	34
3-3-1 "General" Setup Page	34
3-3-2 Advanced Setup Page.....	37
3-4 IP Filter.....	39
3-5 Video.....	41
3-5-1 Image Setting	42
3-5-2 Video Setting.....	44
3-5-3 Overlay Setting.....	46
3-6 Audio	48

3-7 Motion	49
3-8 PTZ Control.....	51
3-9 Event.....	53
3-9-1 Settings	54
3-9-2 Media	56
3-9-3 Event Server	57
3-10 Recording to SD Card.....	61
3-11 Log	62
3-12 Device Info	63
3-13 Maintenance	64
3-14 Language	65
4. Using SKYROS iView software.....	66
4-1 Installing SKYROS iView Software	66
5 Getting familiar with SKYROS iView Software.....	73
5-1 Configure SKYROS iView	80
5-1-1 Device	81
5-1-2 Recording.....	84
5-1-3 System	87
5-1-4 Schedule	90
5-1-5 Event.....	93
5-1-6 Security	95
5-2 Video Playback	98
5-2-1 Start Video Playback.....	98
5-2-2 Advanced Search	99
5-2-3 Event Search.....	103

5-2-4 Video Playback	106
6 Appendix	109
6-1 Specification.....	109
6-2 Troubleshooting	110
6-3 Glossary.....	111

1. Product Information

1-1 Product Introduction

DG-SC4600I & DG-SC4600PI are 3 Megapixel Box type IP cameras with CMOS sensor. With its 3 Megapixel image resolution and H.264 compression, users can stream high quality video at low bandwidth. The IR cut filter offers a true image quality during day/night operations. This IP camera has 2 Digital inputs for receiving triggers from external devices for notifying about an activity in the area covered by the camera. It can also send a Digital output to an external device, if the IP camera detects an activity.

DG-SC4600PI supports PoE, which helps in easy installation by eliminating the need of a dedicated power source for the camera.

Other features of this Network IP Camera include:

- Ultra-high resolution 3 Megapixel CMOS image sensor.
- Analog video (BNC) output, works with conventional video devices such as TV Monitors, analog DVR, etc.
- Digital input / output interface lets you connect peripherals such as external alarm, sensor, etc.
- Audio input / output interface, lets you listen to voices from remote places as well as speak to people in remote places.
- Built-in SD-card slot for local storage, which can act like a stand-alone DVR.
- Two Way audio.
- 3GPP Mobile Surveillance Supported.
- RS-485 communication supported.
- ONVIF Compliant.
- Supports IEEE802.3af Power over Ethernet (PoE) standard (DG-SC4600PI only).

1-2 Safety Information

In order to keep the safety of users and your properties, please follow the safety instructions as mentioned below. The warranty will become void if you disobey these safety instructions.

- This Network IP Camera is sophisticated electronic device; **DO NOT** drop it from a height
- **DO NOT** place this IP Camera at hot / humid places, and avoid direct sunlight.
- Accessories of this IP Camera like power supply are dangerous to small children. **KEEP THIS IP CAMERA OUT OF REACH OF CHILDREN.**
- Make sure lens set is secured when you're using this IP Camera, lens set may fall down if it's not properly secured, and cause damage to human and the camera itself.
- If you want to use this IP Camera at any place that may be spilled by water or dirt, a secure and water-proof camera housing is required.
- **DO NOT** pull any cord that is connected to this IP Camera by force.
- The IP Camera will get heated up when used for a long time. (This is normal and is not a malfunction). **DO NOT** put this IP camera on paper, cloth, or other flammable materials.
- **DO NOT** connect powered cable to IP Camera's DI/DO contacts.
- If the IP Camera falls into water when powered, **DO NOT** attempt to retrieve it back by yourself! Find a qualified electrical technician for help.

1-3 System Requirements

- Windows XP, Vista or Win 7 operating system (both 32 or 64 bits version)
- 2GB of system memory
- 1GB of Display card memory
- 20GB of available hard disk space on system drive

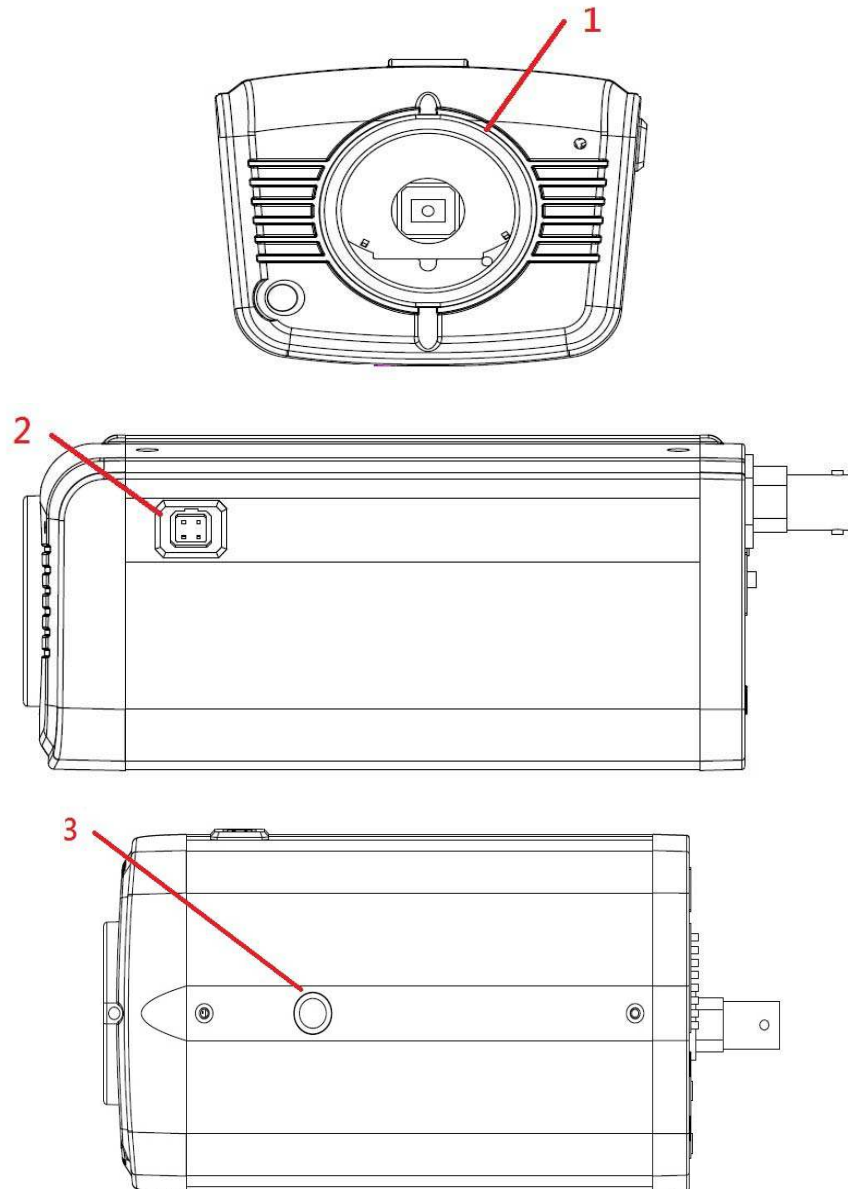
1-4 Package Contents

Before you start using this IP camera, please check if there's anything missing in the package, and contact your dealer of purchase to claim for missing items:

- DG-SC4600I / DG-SC4600PI Megapixel Box IP Camera (1 No.)
- Switching Power Adapter (12V DC, 2A)
- Installation Guide CD (includes User Manual, Utility & Firmware)
- Quick Installation Guide
- Mounting Kit
- C - Mount Fixed 6.0 mm Lens

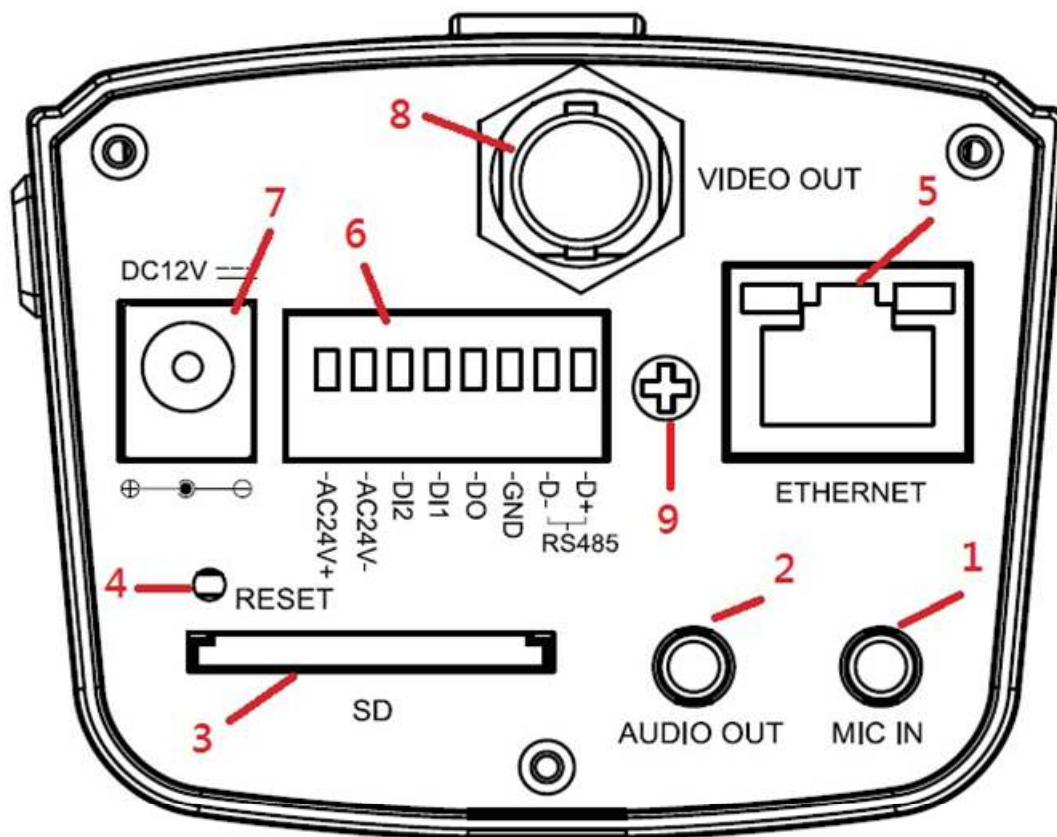
1-5 Get Familiar with your new Network Box IP Camera

Front View



Item	Description
1. Lens mounting slot	Mounts C-mount or CS-mount Lens
2. Iris control port	Connects to lens with iris control cable
3. Mounting hole	Connects to tripod or pan-tilt camera cradle to secure the IP camera. There's another mounting hole located at the opposite side of IP camera's body.

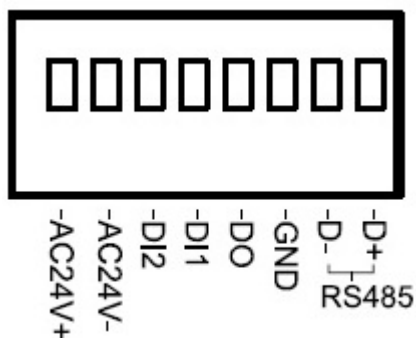
Rear View



Item	Description
1. MIC IN	Connects to external microphone to input audio signal to IP camera. Use 3.5mm audio cable.
2. AUDIO OUT	Connects to external audio amplifier to output voice. Use 3.5mm audio cable.
3. SD	Inserts SD card for video recording. Maximum 32GB of SD-HC card supported.
4. RESET	When the IP camera is not functioning properly, you can use a pen or similar object to press this reset button to reset the IP camera. You can also press and hold this button till the power LED goes off to clear all settings of IP camera, including administrator password, then the IP camera will download default settings automatically.
5. ETHERNET	Connect to your local area network by Ethernet cable. Left LED: LAN connectivity Right LED: Power Indicator
6. DI/DO (Digital Input / Digital Output)	Digital input / output dry contacts. Connects to external peripherals by wire. See next page for pin definitions. WARNING: DO NOT CONNECT POWERED CABLE!

7. DC12V	Connects to 12VDC power adapter output.
8. VIDEO OUT	Output video signal, connect to external video devices.
9. DC lens drive	Adjust the DC lens driving ability.

DI/DO PIN ASSIGNMENT



Item	Description
D+	RS485 signal positive (+)
D-	RS485 signal negative (-)
GND	Signal ground
DO	Digital Output #1
DI1	Digital Input #1
DI2	Digital Input #2
AC24V-	AC 24V power input negative (-)
AC24V+	AC 24V power input positive (+)

To insert or release a wire, press the button of the PIN you wish to insert or release.

1-6 Installation of the Network IP Camera

Please follow the instructions mentioned below to setup your new IP camera.

1. Connect the lens to IP camera. Fix the circular ring to the sensor by moving the ring in clockwise direction carefully until it is fixed.

**NOTE: In this step, please keep lens set and camera's CMOS sensor clean!
Do not touch lens and CMOS sensor by finger!**



2. Hold the lens as shown below and twist lens set clockwise carefully and slowly until it is fixed.



3. Connect Ethernet cable to LAN port.



This Ethernet port supports IEEE 802.3af PoE standard. It gets power when it is connected to PoE switch.

4. Plug DC power adapter to power outlet on the wall.

5. Connect DC power cable to IP Camera's DC power connector.



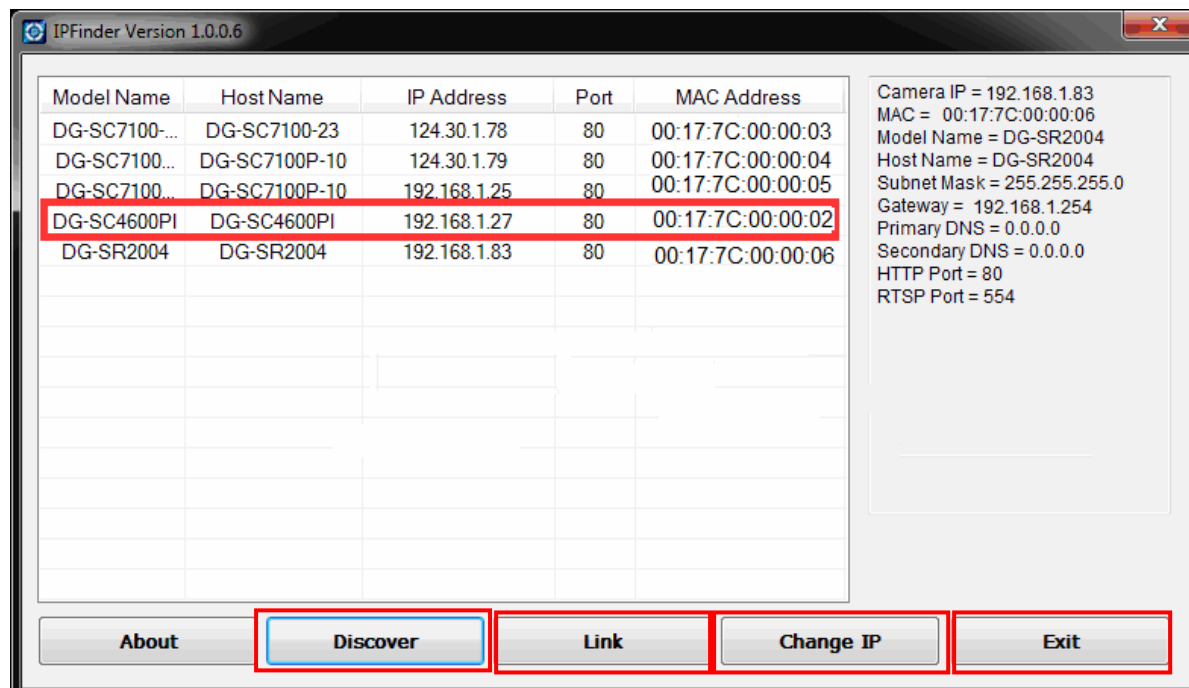
If everything is ok, you should see the left LED light on LAN port lit up. If not, please recheck every step and try again, or ask your dealer of purchase for help.

2. Using Network IP Camera by Web Interface

2-1 Locate the IP address of Network IP Camera

You can use your new Network IP Camera by its web user interface via web browser. You must know the IP address of IP Camera before you can connect to it. The IP Camera will use DHCP server on your local network to obtain an IP address automatically by default. So, you can check your DHCP server's IP address lease table to find the IP address of IP Camera.

You can also use the utility named 'IPFinder.exe' to find the IP address of IP Camera, which is located on CD-ROM.



Press 'Discover' button to search for all IP Cameras on your local network (make sure all IP Cameras are powered on and are connected to the local network first). When you find any IP Camera, you can click on it and click 'Link' button to connect to it by your web browser.

If you need to change a certain IP Camera's IP address, you can also click on the IP Camera whose IP address you need to change, then click 'Change IP' button to change selected IP Camera's IP address setting.

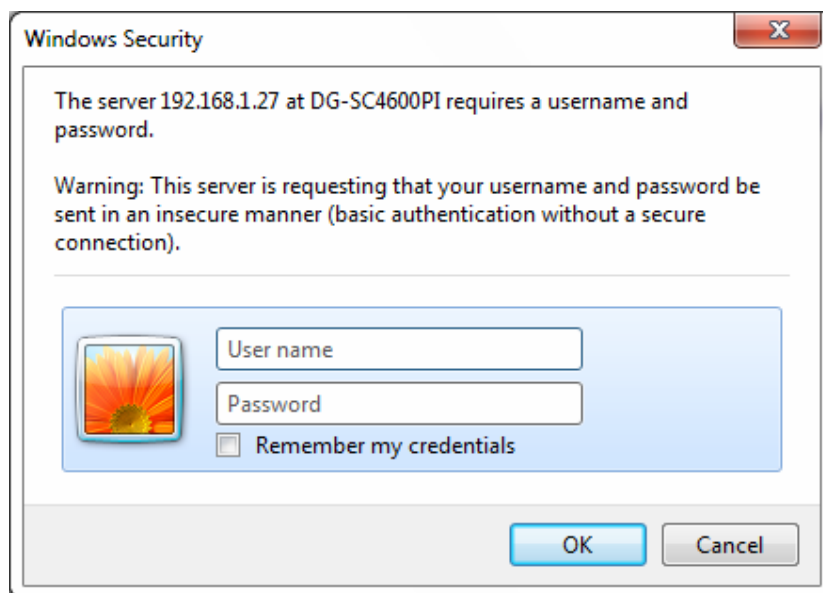
If you no longer need to use this utility, click 'Exit' button to close it.

Note:

If you have several network connections, such as "Wireless Function", disable the "Wireless Functions" or other network connections that are not connected to the IP camera, as IP finder may fail to search IP camera.

2-2 Connect to IP Camera's Web User Interface

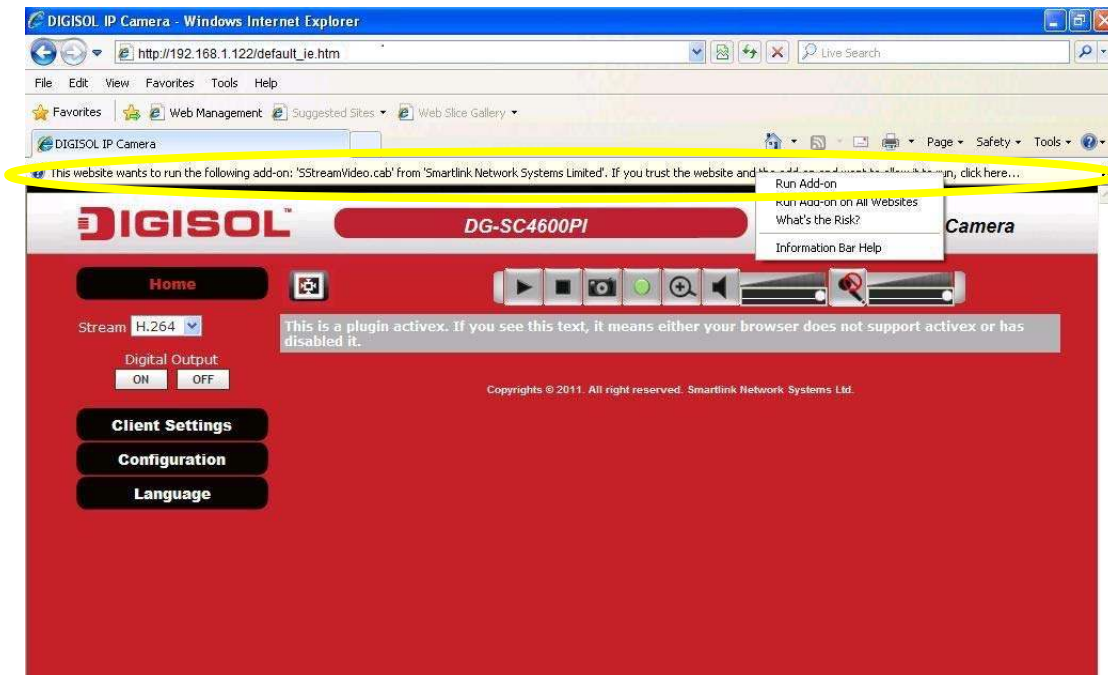
When you know the IP address of IP Camera, you can connect to it by Internet Explorer web browser by entering its IP address in the address bar. The user login screen will appear when you get connected:



IP Camera's administrator username and password are both 'admin' (lower case) by default. Click 'OK' button or press 'ENTER' key on your keyboard when you finish entering username and password.

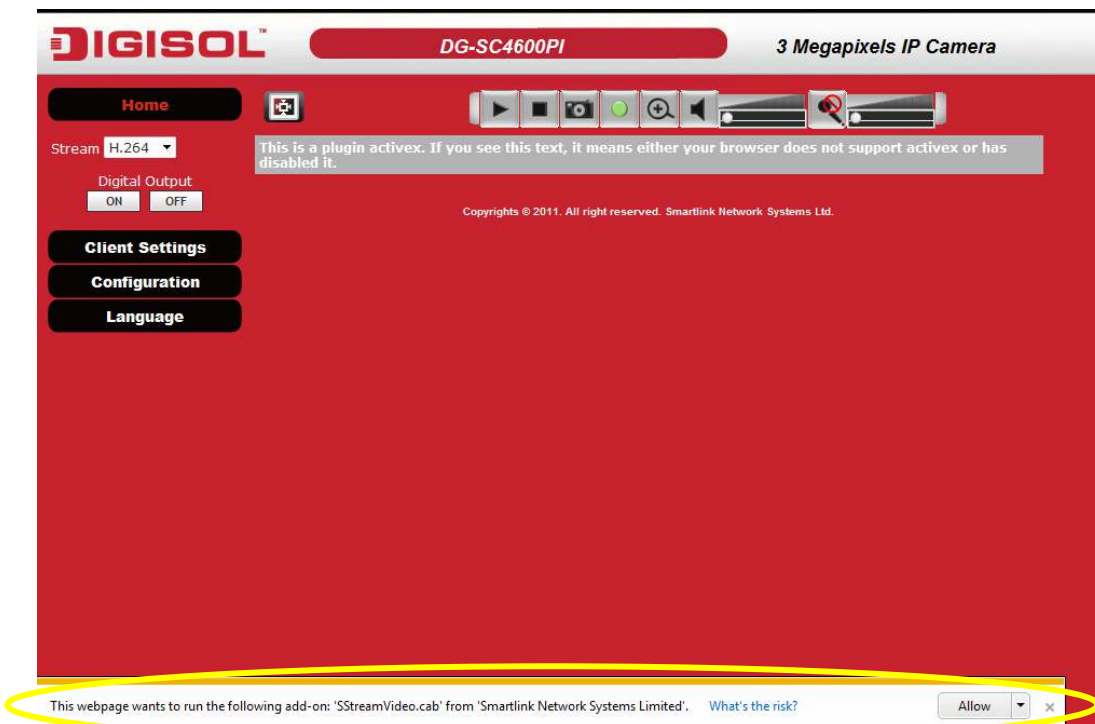
When you connect to IP Camera for the first time, you'll see the following message. This message prompts you that you need to install ActiveX plug-in before you can see the video from IP Camera.

For IE 8:

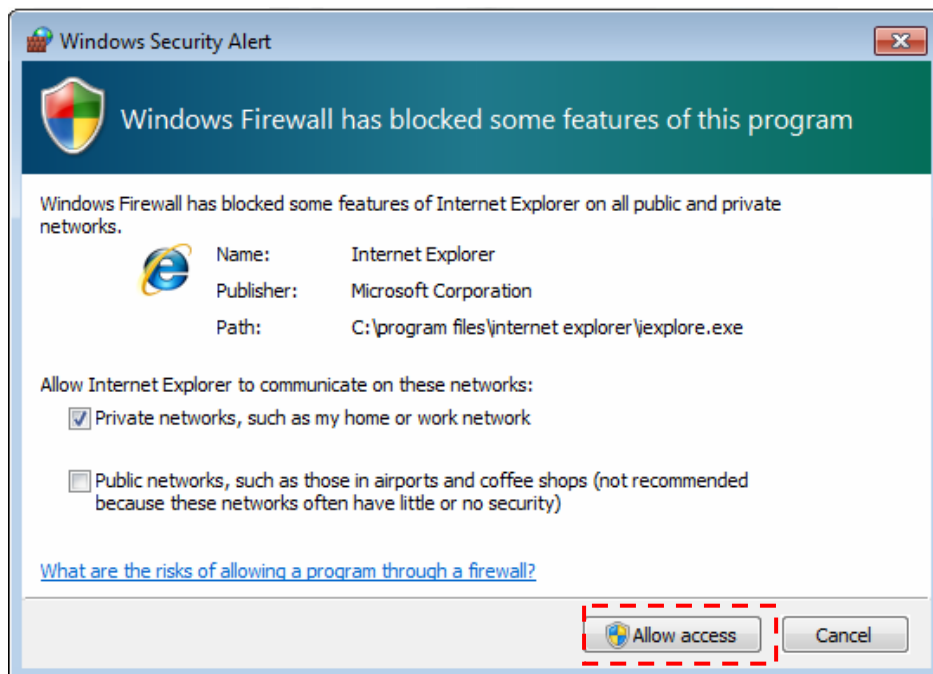


Right click the indication bar and click: “Run Add-on” for All Users on This Computer to install ActiveX plugin.

For IE 9:

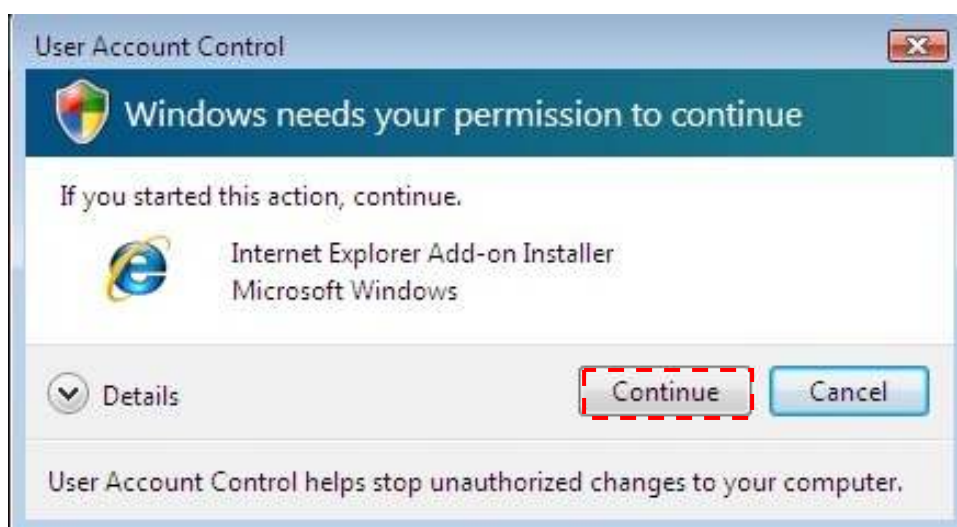


Click 'Allow' button located at the bottom of IE to install ActiveX plugin.
If you're prompted that Windows Firewall has blocked some features of this program' as shown below.



Click 'Allow access' or IP Camera will not be able to function properly.

When you're installing Internet Explorer plug-in, you may also be prompted if you want to allow changes to be made to your computer:



Click on Continue. It will display the screen shown below:



Click 'OK' to allow changes.

After ActiveX plug-in is installed, you should be able to see the video stream from camera.

**NOTE:**

If this is the first time you are using this IP Camera, you can jump to [section 4](#) for instructions on Setup Wizard, which will guide you to complete the software setup of your new IP Camera.






2-3 Viewing Live Video







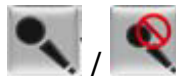
After ActiveX control is installed, you can view IP camera's video by web browser. Just connect to IP camera by web browser and login, and then you can see live video from IP camera:



There are various controls on the web page; here are descriptions of every control item:

Item	Description
'Home' button	This button is visible in all setup pages of IP camera, and you can go back to live video view by clicking this button when you're in other tab.
Stream	Select video stream type: H.264 or MJPEG. MPEG4 option is visible, when you navigate to Video-> video settings and enable the 'MPEG4' option. H.264 requires less network bandwidth and this will help when network connection is slow.
Digital Output (ON / OFF)	Switch digital output interface on or off.
Client Settings	Open 'Client Setting' menu.
Configuration	Open 'Configuration' menu.

Language	Opens language menu, you can switch web interface to other language. Available languages: English, Simplified Chinese, Traditional Chinese
Original size / Fit screen 	Switches live image view between original size (full size: 3M pixels) and fit screen (smaller size). If you want to see video in detail, switch to original size. If your computer monitor's resolution is not enough and you want to see full image view, switch to fit screen and image size will adjust automatically.
'Connect' button 	Start live video view.
'Disconnect' button 	Stop live video view.
'Snapshot' button 	Take a snapshot and save image file on your computer. When you click this button, a new window will appear:  Click 'Save' button when you see the image you wish to save, and you'll be prompted to indicate the folder on your computer to save image file. If you don't want to save image file, click 'Cancel'.

<p>‘Start Video Record’ button</p> 	<p>Click this button to record video and save video file on your computer. The recorded file by default will be saved at C:\Program Files\Recording. To change the path for saving video files go to Client settings-> Storage option->folder and change the path there.</p>
<p>‘Enable Digital Zoom’ button</p> 	<p>This function will enlarge video view digitally from 1X to 10X, so you can see objects in video in detail.</p> <p>Note: Digital zoom uses computer algorithm to enlarge the video and some details may be lost.</p>
<p>Enable / Disable mute button</p> 	<p>When mute is enabled () , you will not hear the voice from IP camera; If you want to hear voice from IP camera, click this button to disable mute ().</p> <p>You can drag the slide bar () beside enable/disable mute button to adjust audio playback volume.</p>
<p>Start / Stop talk Button</p> 	<p>Start or stop playing your voice through IP camera’s audio output. When talk is stopped, people at IP camera will not hear you.</p> <p>Note: You need a microphone connected to your computer, and computer’s mixer setting must enable microphone recording, or there will be no output from the IP camera.</p>

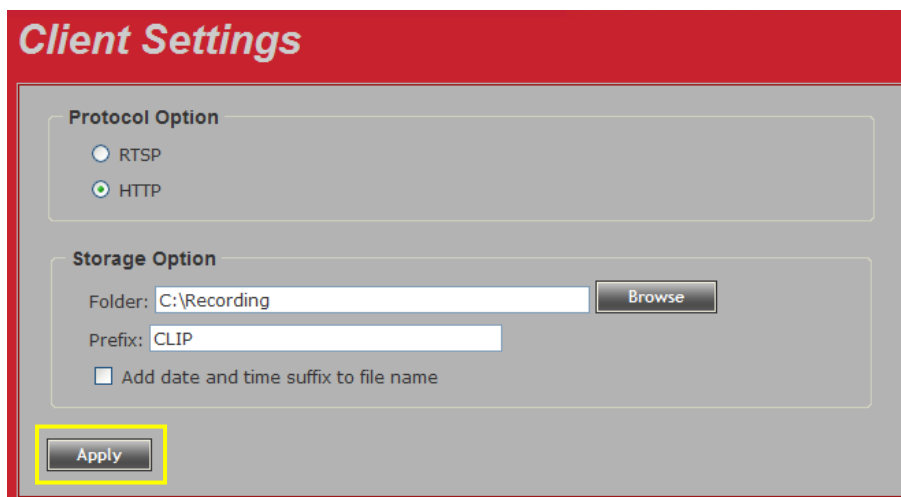
2-4 Client Settings

In 'Client Settings' menu, you configure basic IP camera settings like data transfer protocol and data storage folder.

To access 'Client Settings' menu, click '**Client Settings**' button on the left of the web page as shown below.



The following screen will appear:



The 'Client Settings' configuration page is shown. It has a red header with the title 'Client Settings'. The main content area is a light gray box with the following sections:

- Protocol Option:** Two radio buttons are present: 'RTSP' (unselected) and 'HTTP' (selected).
- Storage Option:**
 - Folder:** A text input field containing 'C:\Recording' and a 'Browse' button.
 - Prefix:** A text input field containing 'CLIP'.
 - Add date and time suffix to file name:** An unchecked checkbox.
- Apply:** A button at the bottom left of the configuration box, highlighted with a yellow rectangle.

Here is the description of every setup item:

Item	Description
RTSP	Select this option to use RTSP (Real-Time Streaming Protocol) to transfer video data.
HTTP	Select this option to use HTTP (Hyper-Text Transfer Protocol) to transfer video data. If you don't know which one you should use, select 'RTSP'.
Folder	Select a folder on your computer to save recorded video. Click 'Browse' button and you'll be prompted to select a folder.
Prefix	When saving video files, the characters you typed in 'Prefix' field will be used as leading characters of video file's name. For example, the default setting of 'Prefix' is 'CLIP', and video file's name will be 'CLIP.avi'
Add date and time suffix to file name	Check this box to add date and time to the ending part of video file's filename, so you can see the date and time the video file is created directly from its filename.

When you finish with above settings, click 'Apply' button to save changes.

3. Advanced Configuration

If you wish to configure IP camera's settings, you can access IP camera's 'Configuration' menu, which provides various kinds of system setting.

To access configuration menu, click '**Configuration**' button on the left of the webpage.

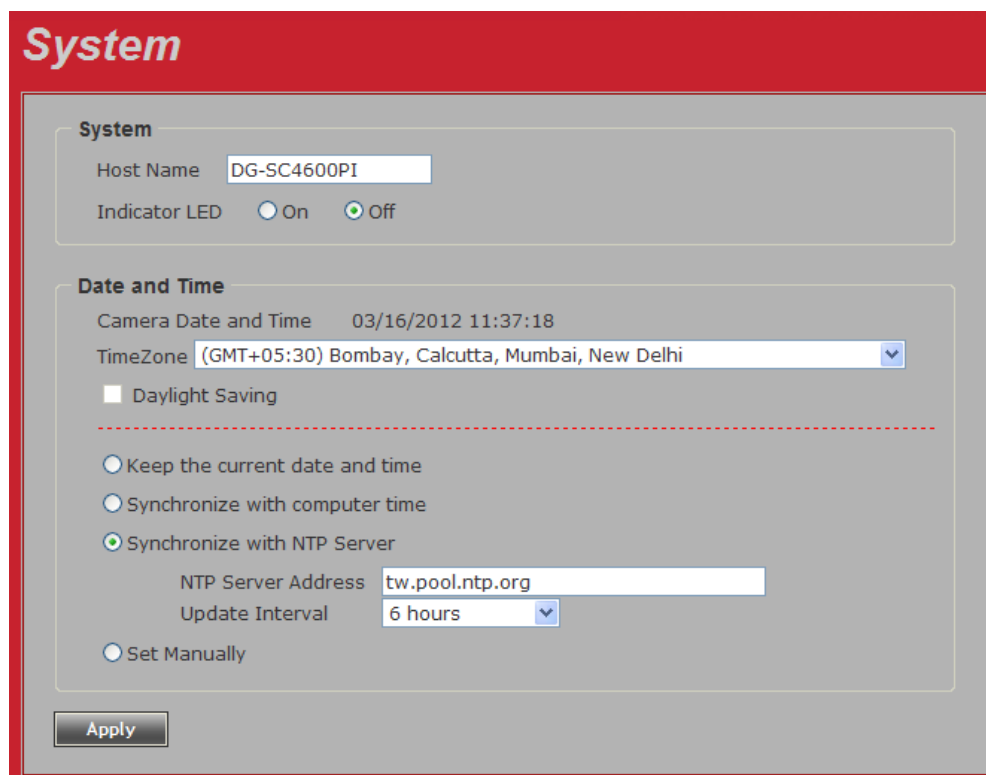


The 'Configuration' submenu will appear, please pick a setup item you wish to configure.



3-1 System

In this menu, you can configure basic IP camera settings like hostname and time.



Here is the description of every setup item:

Item	Description
Host Name	Input the IP camera's hostname here, it can be any meaningful words or characters that will help you to identify this IP camera. You can use IP camera's installation location as host name, and this will help you to identify IP camera when you have many IP cameras installed.
Indicator LED	The LED lights located at the back of IP camera is switched on by default. But, if you don't want other people to know the status of this IP camera (so they will know this IP camera is operating etc.), you can select 'Off' and LED lights will be switched off.
Timezone	Select the time zone of residence from dropdown menu to keep correct date and time.

Daylight Saving	If the area you live uses daylight saving, check this box; otherwise do not check this box to keep correct time.
Keep the current date and time	Select this option and date / time setting will not be changed when you click 'Apply' in the page. You can check 'Camera Date and Time' item in this page to know IP camera's current date and time setting.
Synchronize with computer time	Select this item and IP camera will use your computer's time as its time.
Synchronize with NTP Server	Select this item and IP camera will keep its date and time setting synchronized with specified time server (NTP server). Please input NTP server's IP address or host name in 'NTP Server Address' field, and select time update interval from 'Update Interval' dropdown menu. Please note that if this IP camera can't access Internet, you must have a time server on local area network, or set the time manually.
Set Manually	Set IP camera's date and time manually. Please set current date and time by 'Date' and 'Time' dropdown menu.

When you finish with above settings, click 'Apply' button to save changes.

3-2 Security

In this menu, you can configure IP camera's login account. There are three kinds of account:

Administrator (Can view IP camera's video and make changes of camera setting)

User (Can view IP camera's video and see settings, but can't make any change)

Guest (Can view IP camera's video only)

There can be multiple users, but only one administrator is allowed, and you can't change administrator's user name (it will always be 'administrator').

Security

Administrator

Password

Retype Password

* Administrator password length must be between 4 and 8 characters.

Account List

Account List
New Account

User Name

Password

Retype Password

Authority

* User name length must be between 1 and 32 characters.
* Password length must be between 4 and 8 characters.

Here is the description of every setup item:

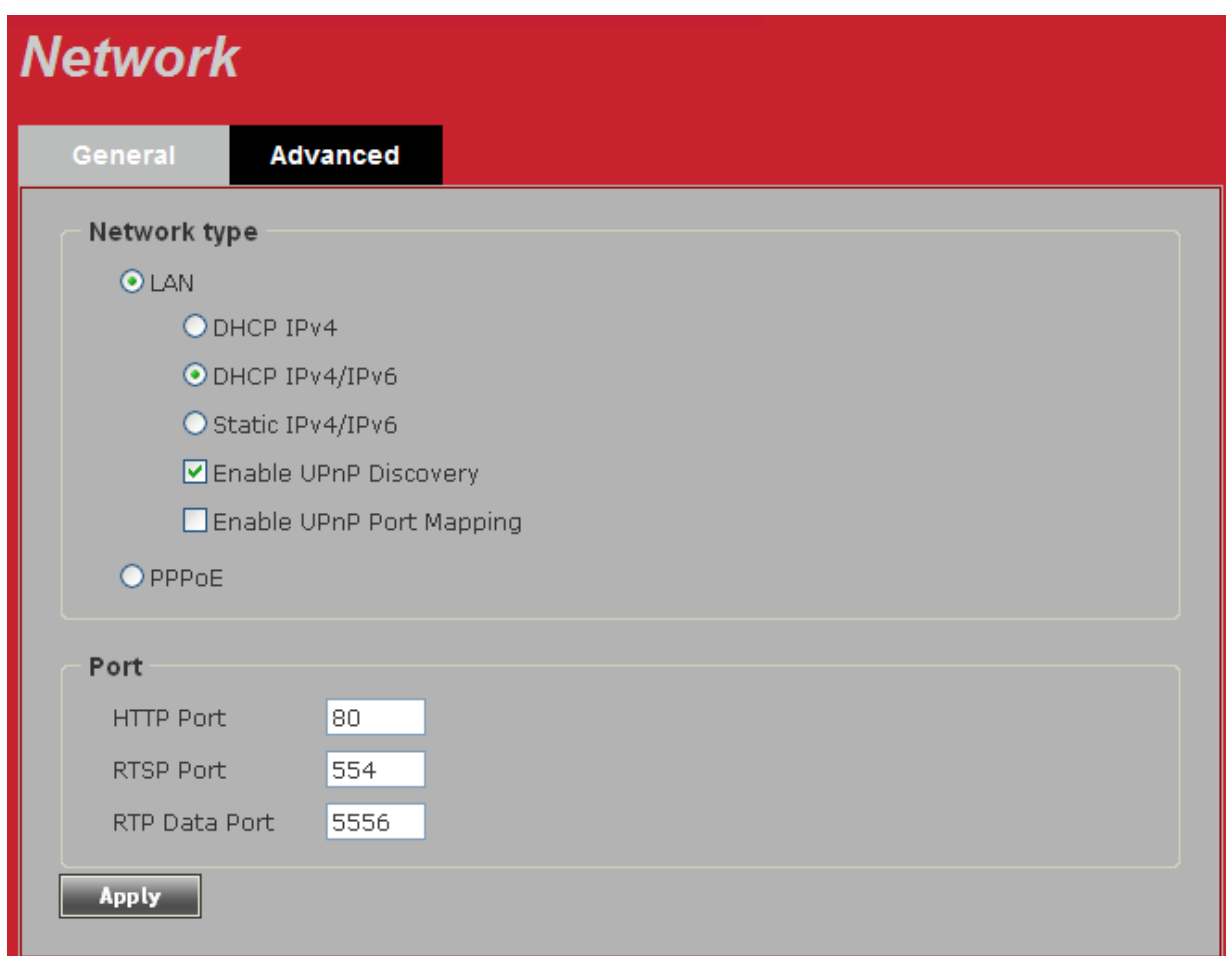
Item	Description
Password / Retype Password (Administrator)	Input administrator's new password in both 'Password' and 'Retype Password' field, and click 'Modify' button to change administrator's password. Note: Don't forget administrator's password! Or you'll need to reset all IP cameras' settings to recover administrator's password.
Account List	It lists all users existing in IP camera. If you want to remove one user, click it in the list, and then click 'Remove' button. If no user is existing, 'New Account' message will be shown here.
User Name	Input new user's username here. User name must be greater than 1 character and less than 32 characters.
Password / Retype Password	Input this user's password in both 'Password' and 'Retype Password' field.
Authority	To define this user's access privilege, select 'User' or 'Guest' in dropdown menu. When you finish inputting new user's information, click 'New' button to create a new user.

3-3 Network

You can configure the network camera's general and advanced network settings here.

3-3-1 "General" Setup Page

Setup IP address for this IP camera. This IP camera supports both IPv4 and IPv6 IP address.



The screenshot shows the 'Network' configuration page with the 'General' tab selected. The 'Network type' section has radio buttons for LAN, DHCP IPv4, DHCP IPv4/IPv6 (selected), and Static IPv4/IPv6. There are checkboxes for 'Enable UPnP Discovery' (checked) and 'Enable UPnP Port Mapping' (unchecked). A 'PPPoE' option is also present. The 'Port' section contains input fields for 'HTTP Port' (80), 'RTSP Port' (554), and 'RTP Data Port' (5556). An 'Apply' button is at the bottom.

Section	Item	Value
Network type	LAN	<input type="radio"/>
	DHCP IPv4	<input type="radio"/>
	DHCP IPv4/IPv6	<input checked="" type="radio"/>
	Static IPv4/IPv6	<input type="radio"/>
	PPPoE	<input type="radio"/>
Enable UPnP	Enable UPnP Discovery	<input checked="" type="checkbox"/>
	Enable UPnP Port Mapping	<input type="checkbox"/>
Port	HTTP Port	80
	RTSP Port	554
	RTP Data Port	5556

Here is the description of every setup item:

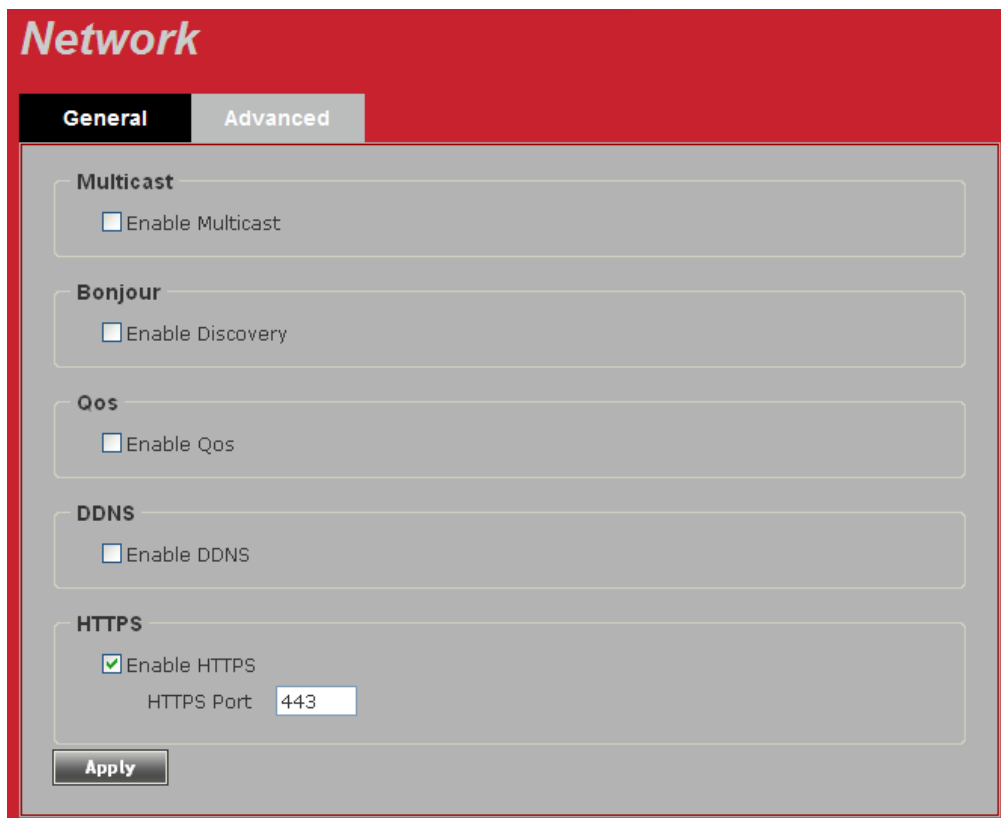
Item	Description
LAN	<p>Select this option to assign an IP address to LAN port (or obtain an address from DHCP server automatically).</p> <p>Available options are:</p> <p><i>DHCP IPv4</i>: Obtain an IPv4 IP address from DHCP server on LAN automatically.</p> <p><i>DHCP IPv4 / IPv6</i>: Obtain both IPv4 and IPv6 address from DHCP server on LAN automatically.</p> <p><i>Static IPv4 / IPv6</i>: Assign an IPv4 / IPv6 address to IP camera manually. If you don't have a DHCP server on your local area network, you must use this option to specify an IP address.</p> <p>IP Address(IPv4): Input IPv4 IP address IP Address(IPv6): Input IPv6 IP address Prefix Length: Input IPv6 IP address' prefix length (0-128) Subnet Mask: Input subnet mask Gateway: Input gateway address Primary DNS: Input DNS server's IP address Secondary DNS: Input backup DNS server's IP address, you can leave this field blank.</p> <p><i>Enable UPnP Discovery</i>: Check this box to enable other devices on network to discover the presence of this IP camera by UPnP. It's recommended to enable this function.</p> <p><i>Enable UPnP Port Mapping</i>: When UPnP is enabled, check this box to enable UPnP's port mapping.</p>
PPPoE	<p>Select this option to use PPPoE to connect to network. You have to input PPPoE username and password assigned by network operator to get connected.</p>

HTTP Port	Input IP camera's web connection port number here. When this port number is changed, you need to change web browser's port number you used to connect to IP camera. For example, IP camera's IP address is 192.168.2.3, and if you changed HTTP port number to 82, please input 'http://192.168.2.3:82' in web browser's address bar to access IP camera's web configuration interface.
RTSP Port	Input RTSP port number. When this port number changes, you must change corresponding settings in external network devices (NVR or CMS software) so they can receive this IP camera's video.
RTP Data Port	Input RTP data port number here.

When you finish with above settings, click 'Apply' button to save changes.

3-3-2 Advanced Setup Page

You can setup advanced network settings in this page. This page is intended for advanced settings only, and this IP camera will work fine even if you don't make any changes to this page.



Here is the description of every setup item:

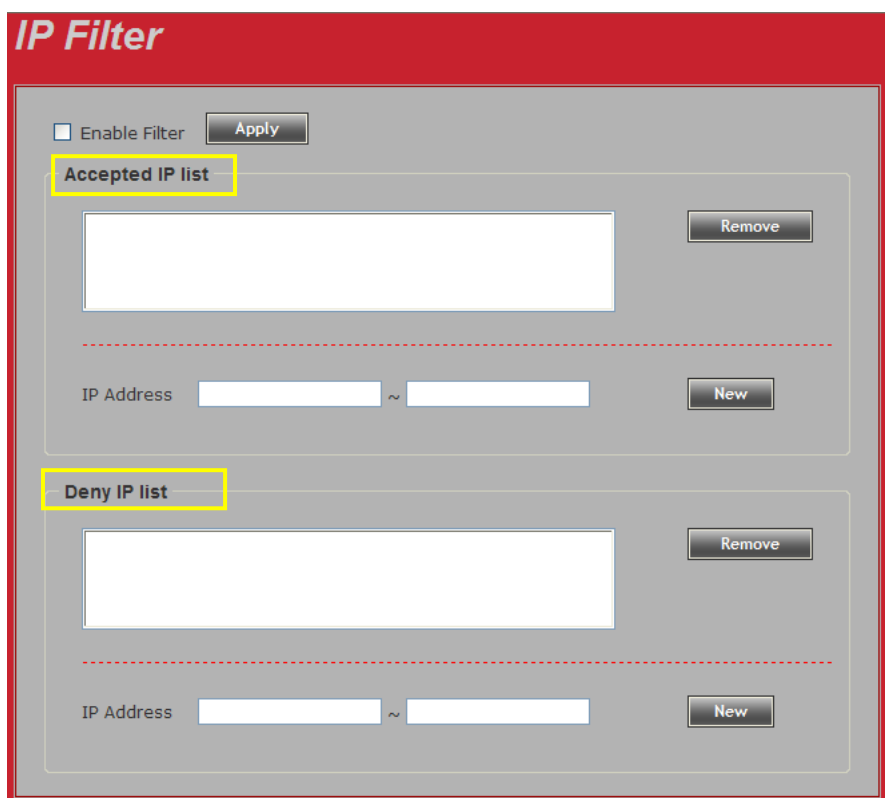
Item	Description
Multicast	<p>Enable video multicast:</p> <p>Multicast Group Address: Input multicast group address here, must be an address between 232.0.0.0 to 232.255.255.255.</p> <p>Multicast video port: Input port number for video multicast here.</p> <p>Multicast RCTP video port: Input port number for RCTP video here.</p>

	<p>Multicast audio port: Input port number for audio here.</p> <p>Multicast RCTP audio port: Input port number for RCTP audio here.</p> <p>Multicast TTL: Input TTL value for multicast here.</p>
Bonjour	If you're using Mac OS and you have Bonjour installed, you can use it to discover this IP camera.
QoS	<p>Enable QoS to improve the data transfer priority of this IP camera (Your local area network must support QoS).</p> <p>You can select Video / Audio's QoS DSCP value (0 to 63), or both video and audio.</p>
DDNS	<p>Enable DDNS support if your ISP assigns dynamic IP address to you. You must register a dynamic IP service first. Currently this IP camera supports DynDNS and TZO dynamic IP service.</p> <p>Provider: Select dynamic IP service provider.</p> <p>Host Name: Input the host name you obtained from dynamic IP service provider.</p> <p>User name: Input user name used to login dynamic IP service provider.</p> <p>Password: Input the password used to login dynamic IP service provider.</p>
HTTPS	Check 'Enable HTTPS' box to enable HTTPS channel to encrypt transferred data. You can also define HTTPS port number in 'HTTPS Port' field if you don't want to use default value '443'.

When you finish, click 'Apply' to save changes.

3-4 IP Filter

When this IP camera is directly connected to Internet and not protected by firewall, this function acts like a mini built-in firewall to protect the safety of this IP camera and avoid attacks from hackers.



Here is the description of every setup item:

Item	Description
Enable Filter	Check this box to enable IP address filter, uncheck this box to disable this function.
Accepted IP list	Here lists all IP address that can build connections to this IP camera. If you want to remove a set of IP address from the list, click on the IP address and click 'Remove' button.
IP Address (Accepted IP list)	Input the starting and ending IP address of IP camera you wish to accept connections here. IP camera will only accept connections established from these IP addresses. If you want to specify one IP address only, input the same IP address in both field. Click 'New' button to add IP address into accepted IP list.
Deny IP list	Here lists all IP address that cannot build connections to

	this IP camera. If you want to remove a set of IP address from the list, click on the IP address and click 'Remove' button.
IP Address (Deny IP list)	<p>Input the starting and ending IP address of IP camera you wish to deny connections here. IP camera will deny connections established from these IP addresses.</p> <p>If you want to specify one IP address only, input the same IP address in both field.</p> <p>Click 'New' button to add IP address into deny IP list.</p>

When you finish with above settings, click 'Apply' button to save changes.

3-5 Video

You can adjust the image of the IP camera in this menu.

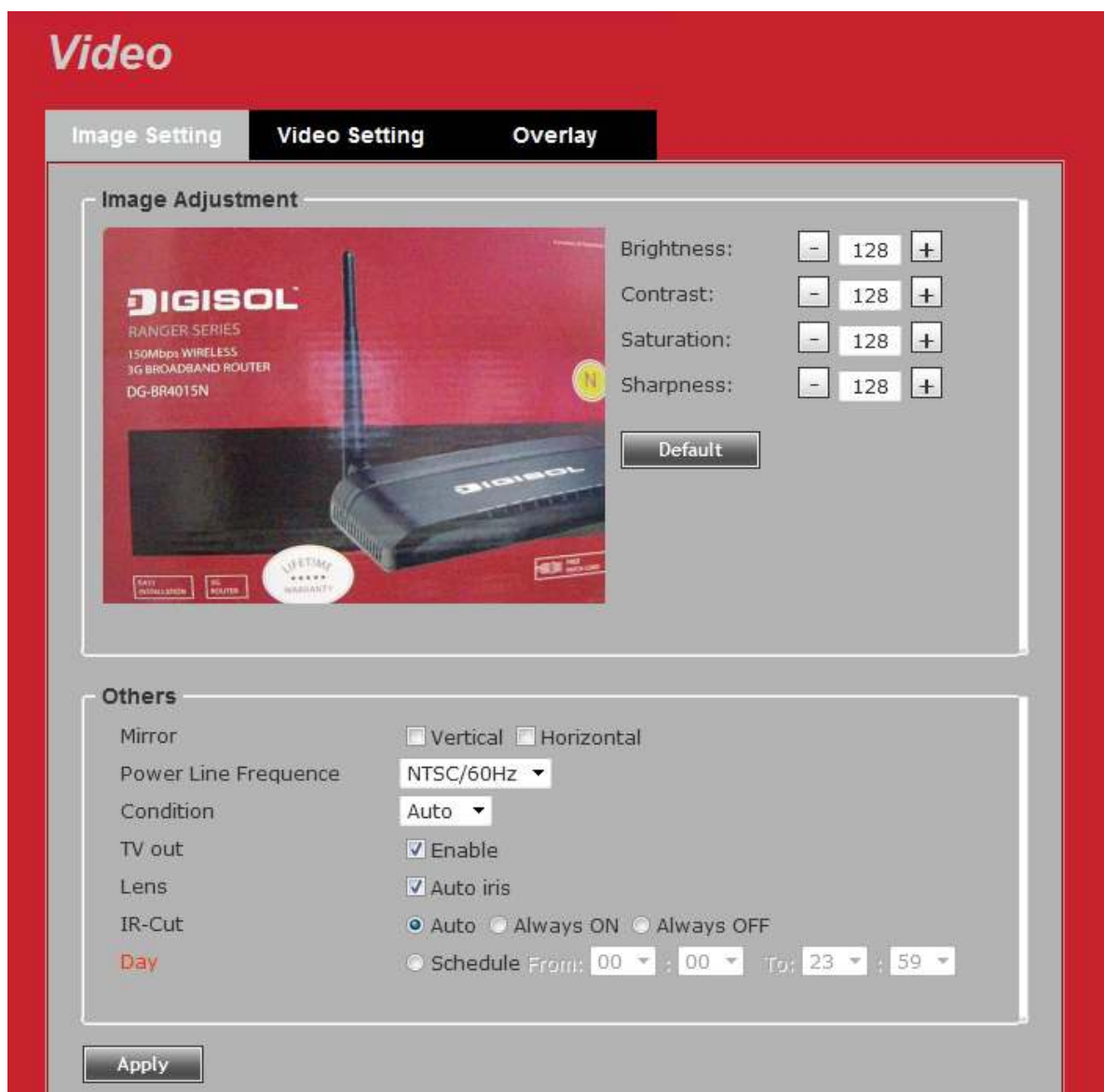


There are 3 sub-menus in this menu: Image Setting, Video Setting, and Overlay, which can be accessed by tabs on the top:



3-5-1 Image Setting

You can adjust the image parameters in this page.



Here is the description of every setup item:

Item	Description
Brightness / Contrast / Saturation / Sharpness	Control the image parameters. Click '-' to decrease value, or click '+' to increase value. You can also input the value in the field directly. The maximum value these fields can accept is 255.
Default	Set all above values to default value '128'.

Mirror	Check 'Vertical' or 'Horizontal' box to flip the image vertically or horizontally, this will help to correct the orientation of image when IP camera is hanged bottom-up by camera holder. You can click both 'Vertical' and 'Horizontal' box at the same time.
Power Line Frequency	Select the frequency of power line of the place you're using this IP camera. This will help to reduce the flicker of certain lights in the image.
Condition	Select the condition that you'll be using this IP camera from dropdown menu. <ul style="list-style-type: none">- Auto: IP camera will adjust its parameters automatically.- Night: You'll be using this IP camera in dark places where lights are insufficient.
TV Out	Click "Enable" box to enable its "VIDEO OUT" function for connections and video sending to TV monitors or DVR's.
Lens	While connecting with an auto iris lens, and if you would like to have clear images from "VIDEO OUT", please click "Auto iris" to enable this feature.
IR-cut	This IP camera has an inbuilt IR-cut filter to reduce the effect of IR lights (which will change the color of image and makes it look different than what you see through your eye) in Day Mode. You can select the behavior of IR-cut filter: <ul style="list-style-type: none">- Auto: IR filter will act automatically. If you don't know if you should use IR filter, select this option.- Always ON: IR filter is always on.- Always OFF: IR filter is always off.
Day	IR-cut filter will only be switched on when there's sunlight. You can define the starting and ending time when IR-cut filter should be switched on by selecting 'Schedule' and define starting and ending time from dropdown menu.

When you finish with above settings, click 'Apply' button to save changes.

3-5-2 Video Setting

You can adjust the video transfer parameters in this page.

Video

Image Setting
Video Setting
Overlay

Main Stream

☒ H.264

Video Resolution 640x480 (VGA)

Frame Rate 30 fps

Rate Control ☒ Video quality Normal

☐ Bitrate 1500 kbps * number must be between 512~4000.

☐ MPEG4

MJPEG

Video Resolution 640x480 (VGA)

Frame Rate 30 fps

Video quality Normal

Mobile View

☒ Disable

☐ 3GPP without Audio

☐ 3GPP with Audio

*One snapshot is supported when resolution is under 720P.

Apply

Here is the description of every setup item:

Item	Description
H.264 /MPEG4	Select the compression of main stream: H.264 / MPEG4.
Video Resolution	Select video resolution. - H.264: 2048x1536 (QXGA) / 1920x1080 (1080p) 1280x960 (960p) / 1280x720 (720p) 720x480 (D1) / 640x480 (VGA) 320x240 (QVGA)

	<ul style="list-style-type: none"> - MPEG4: 1920x1080 (1080p) / 1280x960 (960p) 1280x720 (720p) / 720x480 (D1) 640x480 (VGA) / 320x240 (QVGA) - MJPEG: 1280x720 (720p) / 720x480 (D1) 640x480 (VGA) / 320x240 (QVGA) <p>NOTE: 2048x1536 (QXGA) video resolution is not displayed when video encoder is 'MPEG4'.</p> <p>Please note that MJPEG is not displayed when the resolution of "H.264" & "MPEG4" is higher than 1280x720 (720P)</p> <p>When network speed is insufficient, selecting a lower video resolution will help.</p>
Frame Rate	<p>When network speed is insufficient, selecting a lower frame rate will help.</p> <p>NOTE: 30fps is not available for QXGA (2048x1536) when video encoder is 'H.264' & 720P (1280x720) when video encoder is MJPEG.</p>
Rate Control	<p>Select video bit rate. You can modify Rate Control by both 'Video quality' and 'Bitrate':</p> <ul style="list-style-type: none"> - <i>Video quality</i>: There are 5 levels of video quality, select 'very high' to improve video quality but consumes more network bandwidth, and selecting 'very low' will decrease video quality and consumes less network bandwidth. - <i>Bitrate</i>: Input video's bit rate directly. It must be an integer between 512 and 4000. Higher bit rate provides better video quality, but consumes more network bandwidth.

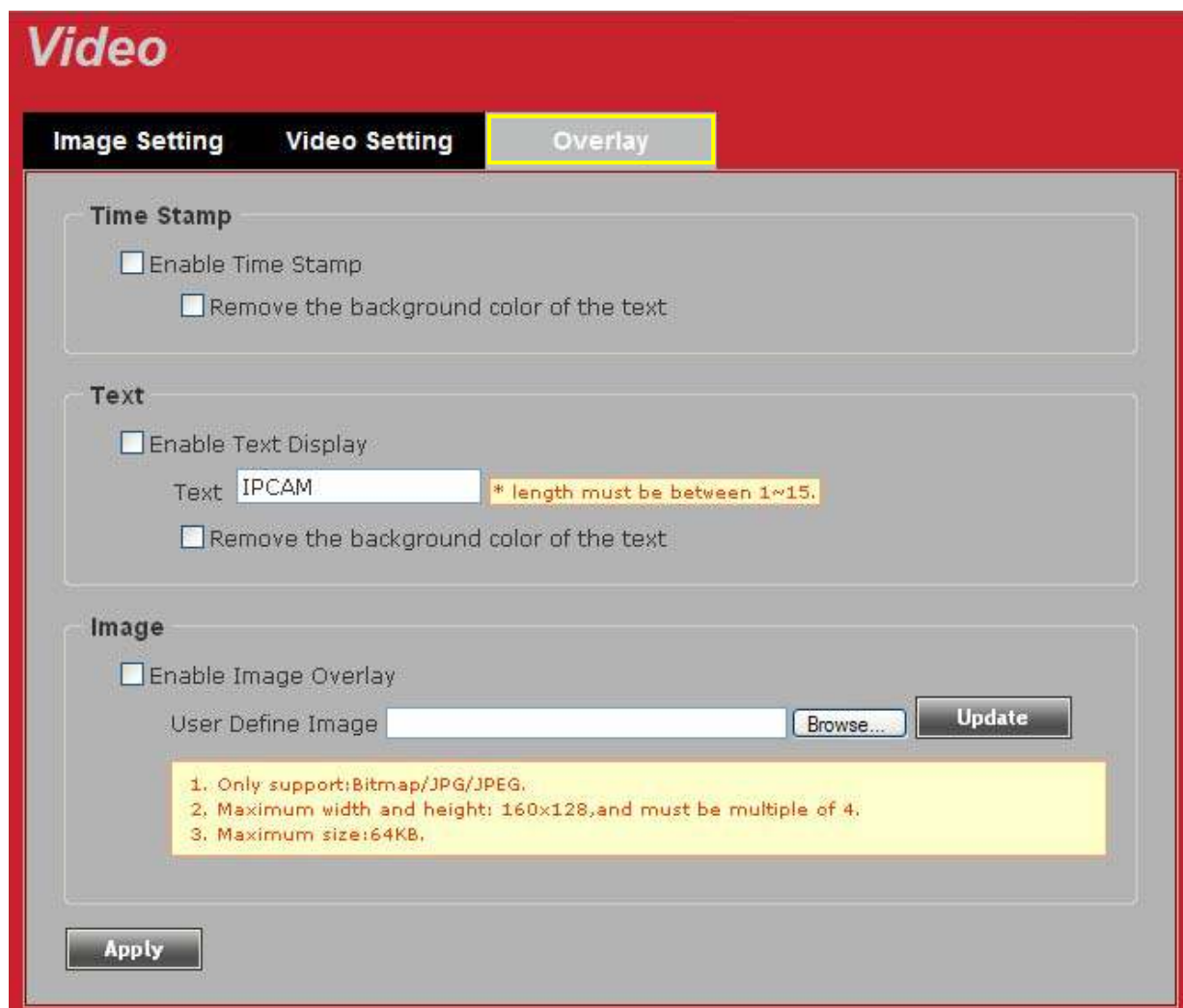
When you finish with above settings, click 'Apply' button to save changes.

Note:

MJPEG options are only available for portable devices like cell phone.

3-5-3 Overlay Setting

You can adjust the video overlay parameters in this page.



Here is the description of every setup item:

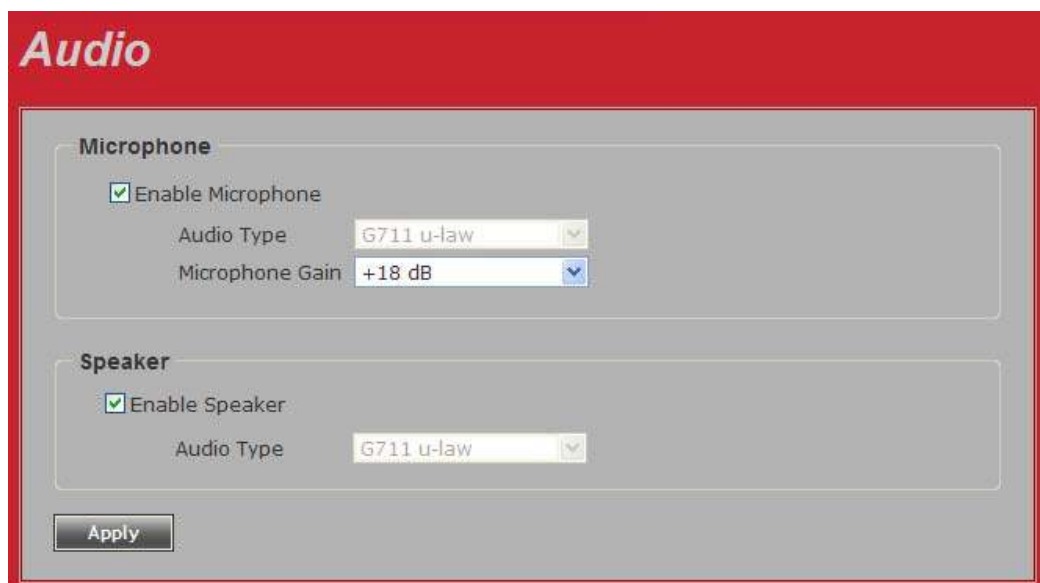
Item	Description
Enable Time Stamp	Check this box to enable overlaying time stamp on video.
Remove the background color of the text (for Time Stamp)	Check this box to remove time stamp's background color which will help the readability of time stamp text in some cases.
Enable Text Display	Check this box to display certain text on video, this will help when you need to identify certain IP camera when you have a lot of IP cameras.

	Please input the text in 'Text' field. You can input up to 15 characters.
Remove the background color of the text (Text)	Check this box to remove custom text's background color which will help the readability of text in some cases.
Enable Image Overlay	<p>Check this box to overlay a specific image on video, so you can show certain text / picture on the video and help people to identify this IP camera. Click 'Browse' button to pick a picture on your computer, then click 'Update' button to use the picture. Please note that there are certain restrictions:</p> <ul style="list-style-type: none">- Select .bmp / .jpg / .jpeg image files only.- Image's resolution should be less than 160 x 128, and can be divided by 4.- Accepts image files only upto 64KB in size.

When you finish with above settings, click 'Apply' button to save changes.

3-6 Audio

You can adjust audio input / output parameters here.



Here is the description of every setup item:

Item	Description
Enable Microphone	Check this box to enable microphone. If you don't want to hear voice from IP camera, you can un-check this box to disable it.
Audio Type (Microphone)	The format is fixed as G.711
Microphone Gain	<p>If the voice received by microphone is too loud or silent, you can use this function to improve voice volume, so you can hear voice from IP camera more clearly.</p> <ul style="list-style-type: none"> - Select 0 dB and IP camera will do nothing on the voice. - Select +6dB to +18 dB to amplify the voice.
Enable Speaker (Speaker)	Check this box to enable speaker. If you don't want people at IP camera to hear you, you can uncheck this box to disable it.
Audio Type (Speaker)	The format is fixed as G.711

When you finish with above settings, click 'Apply' button to save changes.

3-7 Motion

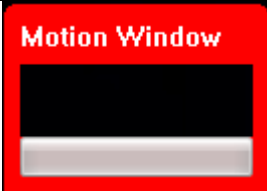
This IP camera is capable to detect object's motion, so IP camera will only record when there's motion and save disk storage space.

Motion detection is performed by examining the movement of objects in rectangular motion detection area. You can define up to 3 motion detection areas.



Here is the description of every setup item:

Item	Description
Enable Motion Detection	Check this box to enable motion detection.
Enable (Window 1 to Window 3)	Check this box to enable this motion detection window. You can select window 1 to 3 to enable up to 3 motion detection windows. When a motion detection window is enabled, a rectangular screen will appear on camera's view, with its title on the top. - To move / resize a motion detection window:

	 <ul style="list-style-type: none"> - Move: Use the mouse to drag the title text. - Resize: Use the mouse to drag the four corners (upper-left/right, lower-left/right) to resize it. If you only want to adjust width or height, drag the four sidebars (top, bottom, left, and right).
Title (Window 1 to Window 3)	Input characters in title field to change motion detection area's title text so you can identify it. Please note that you have to click 'Apply' button and the text will change.
Percentage	Select the percentage of pixel change that will trigger motion detection alert. Select a lower percentage and you can detect tiny changes in motion detection area.
Sensitivity	Select the sensitivity level that will trigger motion detection alert. Select a higher sensitivity and you can detect tiny changes in motion detection area.

When you finish with above settings, click 'Apply' button to save changes.

3-8 PTZ Control

RS-485

If you mount the IP camera on pan-tilt camera cradles that support pan-tilt control via RS-485 connection, you can use this function to control pan-tilt camera cradle so you can control the orientation of IP camera from remote place.

RS-485

☒ Enable RS-485

Port Setting

Baud Rate
9600 bps
Data Bits
8
Parity
None
Stop Bit
1

Type

☐ Use Pelco-D
☒ Use Custom Protocol

Custom Commands

Home		Test
Up		Test
Down		Test
Left		Test
Right		Test

Extended Command

	Command Name	Hexadecimal Message	
Command 1			Test
Command 2			Test
Command 3			Test
Command 4			Test
Command 5			Test

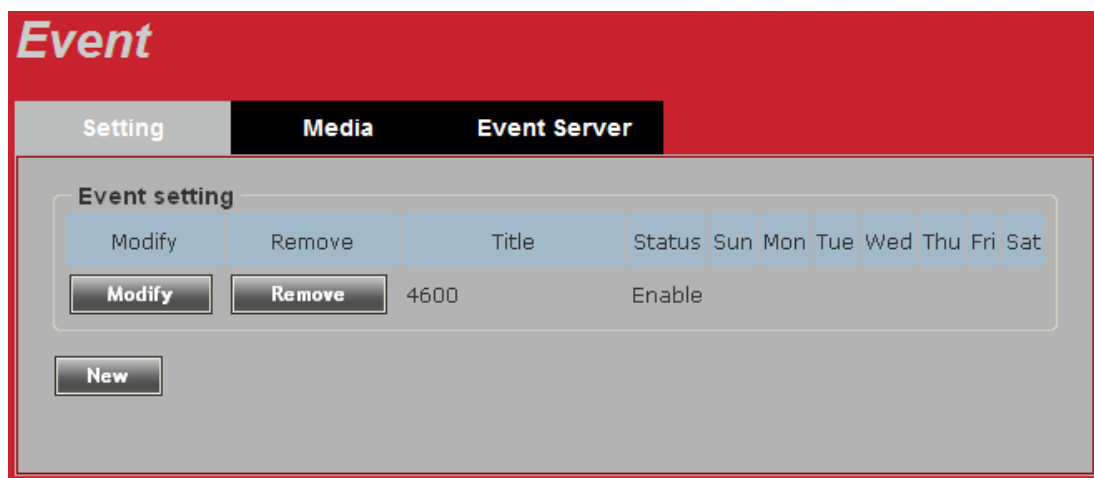
Apply

Here is the description of every setup item:

Item	Description
Enable RS-485	Check this box to enable RS-485 functionality.
Use Pelco-D	Select this option and RS-485 interface will output pan-tilt control signal in Pelco-D format. This format is widely accepted by most of pan-tilt camera cradles. You can also input pan-tilt camera cradle's address code in 'Address' field. This code must be identical to pan-tilt camera cradle's address code.
Use Custom Protocol	When the pan-tilt camera cradle does not support Pelco-D protocol, you can define a protocol's detail by this function. Please refer to pan-tilt camera cradle's user manual to define the protocol. <ul style="list-style-type: none">- Baud Rate: Select data baud rate of RS-485 interface that pan-tilt camera cradle will accept. When the length of RS-485 connection is very long (longer than 200M), it's not recommended to use high speed connection (greater than 2400bps).- Data Bits: Select data bits of RS-485 connection.- Parity: Select parity bit: odd, even, or space.- Stop Bit: Select stop bit: 1 or 2.- Home/Up/Down/Left/Right: Input the command string used to move pan-tilt camera cradle to home or up/down/left/right position. You can click 'Test' button to send command string for testing.- Command 1 ~ 5: You can define extra pan-tilt camera cradle control strings here by giving it a name (Command Name) and command string (Hexadecimal Message). You can also click 'Test' button to send command string for testing.

When you finish with above settings, click 'Apply' button to save changes.

3-9 Event



When there's an event, you can use this setup page to define what IP camera should do, like send an Email or trigger digital output to activate external alarm.

There are three setup pages:



1. Setting: Define a new event and manage events.
2. Media: Define what kind of media file should be saved to designated path.
3. Event Server: Define the details of remote server.

Please refer to following sections for detailed instructions.

3-9-1 Settings

This page lists all existing events. You can click ‘Modify’ button to edit an existing event, or ‘Remove’ to delete an existing event.

To create a new event, just click “New” button to add an Event setting.

Event

Setting
Media
Event Server

Event setting

Modify	Remove	Title	Status	Sun	Mon	Tue	Wed	Thu	Fri	Sat
<button>Modify</button>	<button>Remove</button>	4600	Enable							

New

Setting

☐ Enable Setting

Title

Trigger

☐ Motion Detection

☐ Digital Input 1 High

☐ Digital Input 2 High

Schedule Time

☐ Enable Schedule Time

☐ Sun
☐ Mon
☐ Tue
☐ Wed
☐ Thu
☒ Fri
☐ Sat

Time: ☒ Always

☐ From 00 : 00 To 23 : 59

Action

☐ Enable FTP

☐ Enable EMAIL

☐ Enable Samba(Net Storage)

☐ Enable SD CARD

☐ Trigger digital output for 01 second(s)

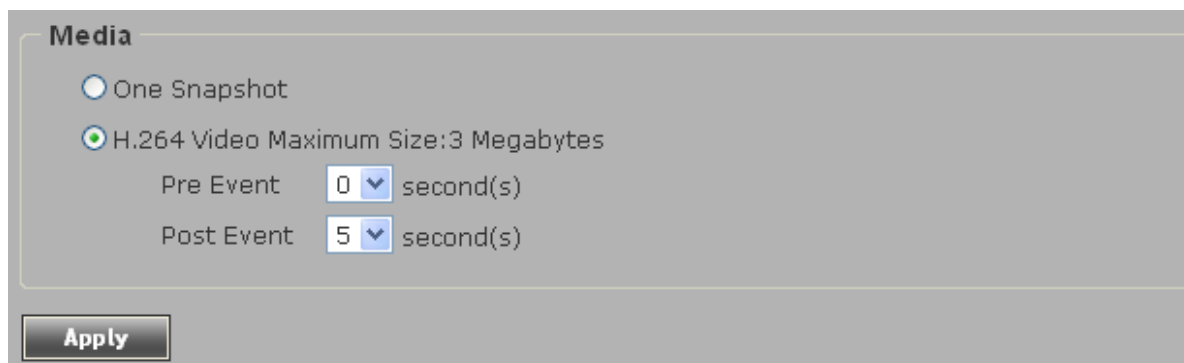
Apply

To add a new event, click 'New' button and the description of every setup item is listed below:

Item	Description
Enable Setting	Check this box to enable this event. If you just want to disable this event temporarily, you can uncheck this box to disable the event without deleting it.
Title	Input any description text for this event so you can identify it quickly. You can use alphabets, numbers, and symbols include: ! \$ - . @ ^ _ ~ (Note: no spaces allowed) .
Motion Detection	Check this box and this event will be activated when one of the motion detection windows detects motion.
Digital Input 1 ~ 2	Check this box and this event will be activated when digital input 1 or 2's input signal is high or low (select from dropdown list).
Enable Schedule Time	Check this box and this event will be activated when designated weekday and time is reached. You also have to check weekday box, and select time from dropdown list. If you select 'Always' as time, this event will be activated throughout the day.
Enable FTP	Check this box and IP camera will save file on FTP server (refer to 'FTP Server' setting in 'Event Server' tab) when this event is activated.
Enable EMAIL	Check this box and IP camera will send an Email to designated recipient address (refer to 'SMTP Server' setting in 'Event Server' tab) when this event is activated.
Enable Samba (Net Storage)	Check this box and IP camera will save file on samba server (refer to 'Samba Server' setting in 'Event Server' tab) when this event is activated.
Enable SD CARD	Check this box and IP camera will save file on SD card when this event is activated. A working SD card must be inserted into IP camera in advance.
Trigger digital output for xx second(s).	Check this box and IP camera will trigger digital output to 'high' state for xx seconds when this event is activated, where 'xx' seconds must be defined by the dropdown list.

3-9-2 Media

You can define what kind of media file should be saved to designated path.



Here is the description of every setup item:

Item	Description
One Snapshot	Save a picture file when event is triggered.
H.264 Video	<p>Save a H.264 video clip. You can also select the recording length before and / or after the time when event is triggered in 'Pre Event' and 'Post' Event'. For example, if you set 'Pre Event' to '5' and 'Post Event' to 5', and an event is triggered at 14:10:30, then the video file will be 10 seconds long, starting from 14:10:25 to 14:10:35.</p> <p><i>Tips: You may want to know what happened before event is triggered in many cases, especially when object is outside of motion detection window.</i></p> <p>Note: If the "Pre Event" set to "0" second, the "Post Event" cannot be set to "0" second.</p>

When you finish with above settings, click 'Apply' button to save changes.

3-9-3 Event Server

You can define the details of remote media server: FTP (File), SMTP (Email), and Samba (File).

A Samba server can be any computer running windows operating system with network neighbor function enabled. Many stand-alone network file servers also support samba server function.

Event

Setting Media Event Server

FTP Server

☒ Enable FTP Server

FTP Server

Port

User Name

Password

File Path Name

☐ Enable Passive Mode

Test FTP

SMTP Server

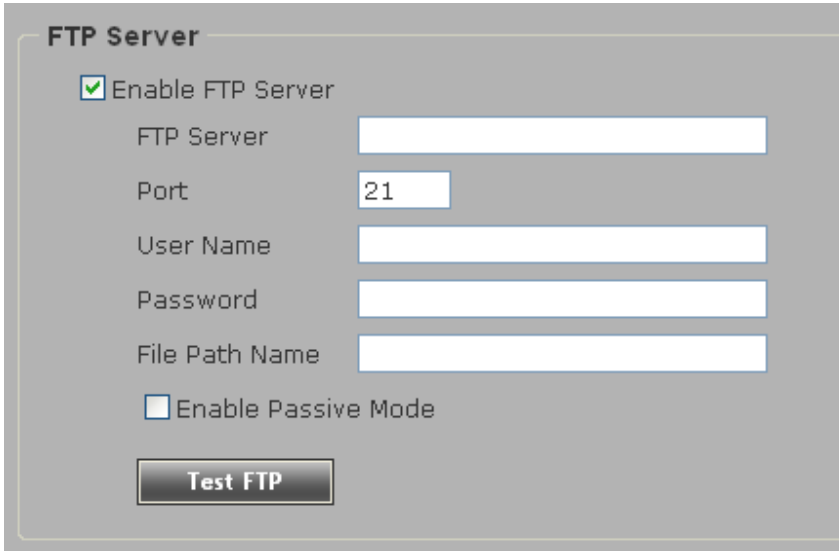
☐ Enable SMTP Server

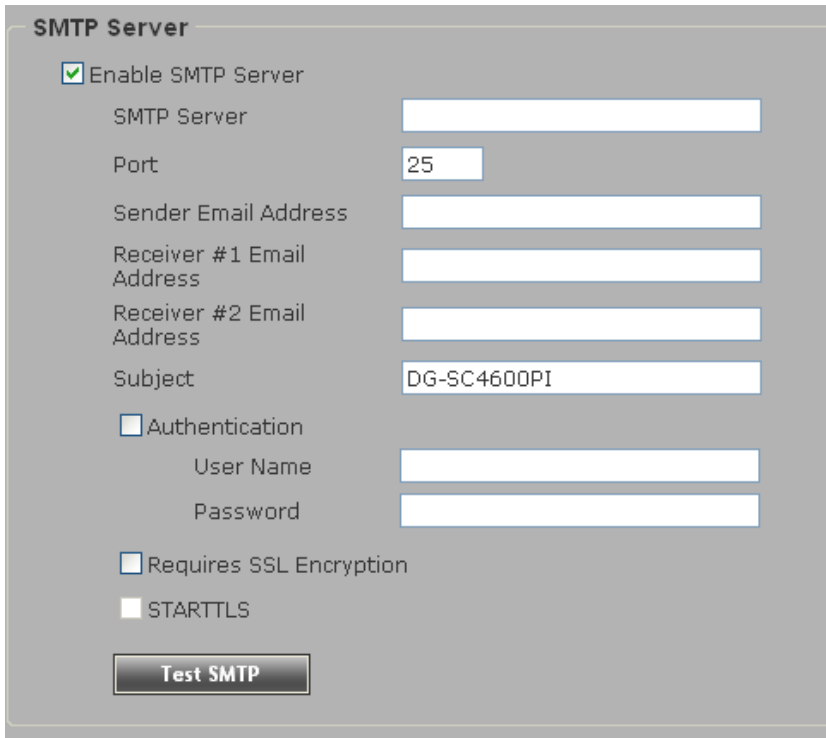
Samba Server

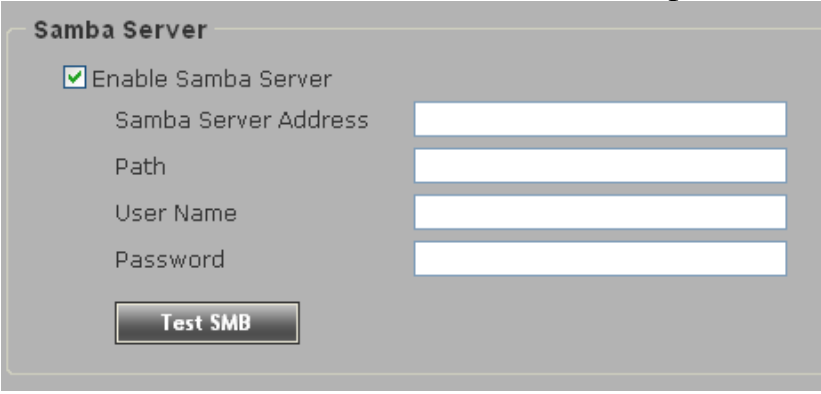
☐ Enable Samba Server

Apply

Here is the description of every setup item:

Item	Description
Enable FTP Server	<p>Check this box to enable FTP server upload.</p>  <ul style="list-style-type: none"> - FTP Server: Input FTP server's IP address or hostname. - Port: Input FTP server's port number. In most cases it should be default value '21'. - User Name: Input FTP server's username. - Password: Input FTP server's password. - File Path Name: Input the path where you want to save file on FTP server, like 'upload/record'. If you want to save file on this FTP user's home directory, you can leave this field blank. - Enable Passive Mode: Check this box to force IP camera to communicate with FTP server in passive mode (Some FTP Server may only work when you check this box, while others don't). - Test FTP: Click this button to test FTP server settings above immediately.

SMTP Server	<p>Check this box to enable Email alert.</p> <ul style="list-style-type: none"> - SMTP Server: Input SMTP server's IP address or hostname. - Port: Input SMTP server's port number. In most cases it should be default value '25'. <div data-bbox="491 463 1321 1198">  </div> <ul style="list-style-type: none"> - Sender Email Address: Input the sender's email address that will appear in the Email sent by IP camera. This will help you to identify the Email sent by this IP camera, and may help when you have anti-spam software installed (you can set this Email address to 'White List' in your anti-spam software) - Receiver #1 Email Address: Input primary recipient's Email address. This field is required. - Receiver #2 Email Address: Input backup recipient's Email address. This field is optional. - Subject: Input Email title that will appear in the Email sent by IP camera. This will help you to identify the Email sent by this IP camera. - Authentication: Check this box when authentication is required by the Email server you're using. You also need to
-------------	--

	<p>input Email server's username and password in corresponding field.</p> <ul style="list-style-type: none"> - Requires SSL Encryption: If your Email server requires SSL encryption, check this box. Please note that some Email servers use different port number than standard port 25 when SSL encryption is used. - STARTTLS: If your Email server requires STARTTLS encryption, check this box. Please note that some Email server uses different port number than standard port 25 when STARTTLS encryption is used. - Test SMTP: Click this button to test SMTP server settings above immediately.
Samba Server	<p>Check this box to enable Samba server file upload.</p>  <ul style="list-style-type: none"> - Samba Server Address: Input Samba server's IP address or hostname. - Path: Input the path where you want to save file on Samba server, like 'upload/record'. If you want to save file on this user's home directory, you can leave this field blank. - User Name: Input Samba server's username. - Password: Input Samba server's password. - Test SMB: Click this button to test Samba server settings above immediately. <p><i>Tips: Some samba server does not have username and password check, you can just input samba server address and path to access the file storage space.</i></p>

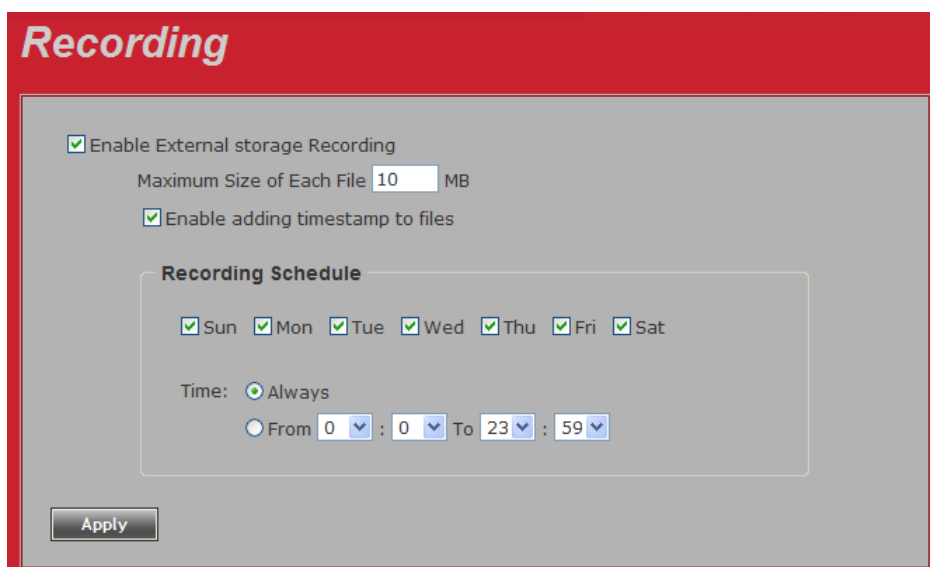
When you finish with above settings, click 'Apply' button to save changes.

3-10 Recording to SD Card

When a SD card is inserted into IP camera, you can save video files on it.

Note:

- 1. Be sure that the SD Card format should be FAT32. The NTFS format cannot be supported by this camera.**
- 2. Unlike motion detection, this function will record video at specified time period on selected weekday(s).**



Here is the description of every setup item:

Item	Description
Enable External storage Recording	Check this box to record video on SD card.
Maximum Size of Each File	Input the maximum size of every video file from 1MB to 50MB. IP camera will start a new video file when a recording video file reaches the size limit stated here.
Recording Schedule	Define the recording schedule. You can check Sun to Sat boxes to represent a weekday, and specify time period in 'From' and 'To' field. Select 'Always' to record 24 hours in selected weekday(s).

When you finish with above settings, click 'Apply' button to save changes. It will create a folder called Backup on SD card in which the recorded video files get stored.

3-11 Log

You can check the usage log of IP camera here.

Log

System Log

Item	Date and Time	Event
1.	03/16/2012 15:10:43	[Recording]:Recording Start
2.	03/16/2012 15:10:42	[RTSP SERVER]:Start one session<192.168.1.122>
3.	03/16/2012 15:10:41	[PortMapping]:Success
4.	03/16/2012 15:10:41	[RTSP SERVER]:Stop one session<192.168.1.122>
5.	03/16/2012 15:10:34	[NET]:UPnPDisable
6.	03/16/2012 14:55:11	[Recording]:Recording Action
7.	03/16/2012 14:55:11	[Recording]:SD CARD Free Space:2699008KByte
8.	03/16/2012 14:54:57	[Recording]:Recording Action
9.	03/16/2012 14:54:57	[Recording]:SD CARD Free Space:2709280KByte
10.	03/16/2012 14:54:44	[Recording]:Recording Action
11.	03/16/2012 14:54:43	[Recording]:SD CARD Free Space:2719584KByte
12.	03/16/2012 14:54:30	[Recording]:Recording Action
13.	03/16/2012 14:54:30	[Recording]:SD CARD Free Space:2729888KByte
14.	03/16/2012 14:54:16	[Recording]:Recording Action
15.	03/16/2012 14:54:16	[Recording]:SD CARD Free Space:2740160KByte
16.	03/16/2012 14:54:06	[Recording]:Recording Action
17.	03/16/2012 15:07:45	admin login on 192.168.1.147
18.	03/16/2012 15:04:57	[Recording]:Recording Action
19.	03/16/2012 15:04:50	[Recording]:SD CARD Free Space:2246720KByte
20.	03/16/2012 15:03:27	[Recording]:Recording Action

First page
Previous
Next
Final page

Remove

In this page, you can click:

1. First page / Final page: Jump to first / final page of log.
2. Previous / Next: Jump to previous or next page of log.
3. Remove: Clear log. You'll be prompted for confirmation.

3-12 Device Info

You can check the information and network settings of this IP camera. This information is very useful when you need to repair or fix the problem of this IP camera.

An example of device info page looks like this:

Device info

Basic

Camera Name	DG-SC4600PI
Firmware version	1.01.70
MAC	00:17:7c:00:11:23
Camera Date and Time	03/16/2012 15:13:38

H.264

Video Resolution	640x480 (VGA)
Video Quality	Normal
Frame Rate	30 fps

MJPEG

Video Resolution	640x480 (VGA)
Video Quality	Normal
Frame Rate	30 fps

Audio

Microphone In	Enable
Microphone Gain	+18 dB
Speaker Out	Enable

Mobile View

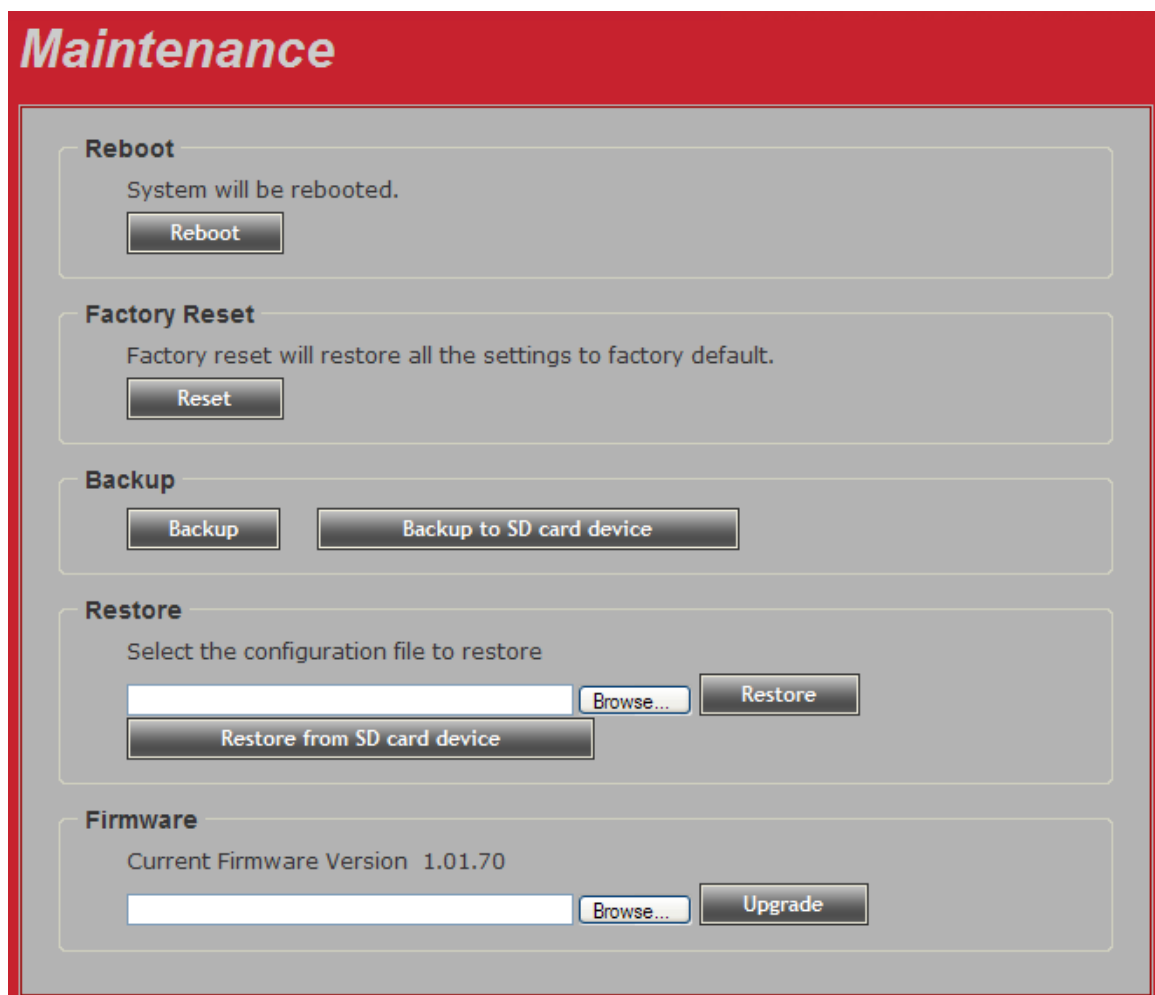
3GPP Enable	Disable
-------------	---------

Network

IP MODE	DHCP IPv4/IPv6
IP Address(IPv4)	192.168.1.122
IP Address(IPv6)	
Subnet Mask	255.255.255.0
Gateway	192.168.1.254
Primary DNS	192.168.221.2
Secondary DNS	192.168.222.29

3-13 Maintenance

You can do some maintenance job about this IP camera here.



Maintenance

Reboot
System will be rebooted.

Factory Reset
Factory reset will restore all the settings to factory default.

Backup

Restore
Select the configuration file to restore

Firmware
Current Firmware Version 1.01.70

Here is the description of every setup item:

Item	Description
Reboot	Click this button to reboot the IP camera. This function is useful when you find IP camera is not working properly.
Reset	Clear all settings of IP camera and reset to factory default setting.
Backup	Backup IP camera's setting and save it on your computer.
Backup to SD card device	Backup IP camera's setting and save it on SD card. A SD card must be inserted into SD card slot when you click this button, or you'll receive an error message.
Restore	Restore a previously-saved configuration file saved on your

	computer. Click ‘Browse’ button to select a file on your computer first, then click ‘Restore’ button.
Restore from SD card device	Restore IP camera’s configuration which is previously-saved on SD card.
Upgrade	Upgrade IP camera’s firmware. Click ‘Browse’ button to select a firmware image file on your computer first, then click ‘Upgrade’ button.

3-14 Language

You can change the display language of web interface.

Click ‘Language’ button and select one language. More languages may be available in latest firmware file.



4. Using SKYROS iView software

4-1 Installing SKYROS iView Software

The SKYROS iView software provides various functions like video recording. After this software is installed, you can use your IP camera to safeguard your property. Please follow the below mentioned instructions to install the SKYROS iView software.

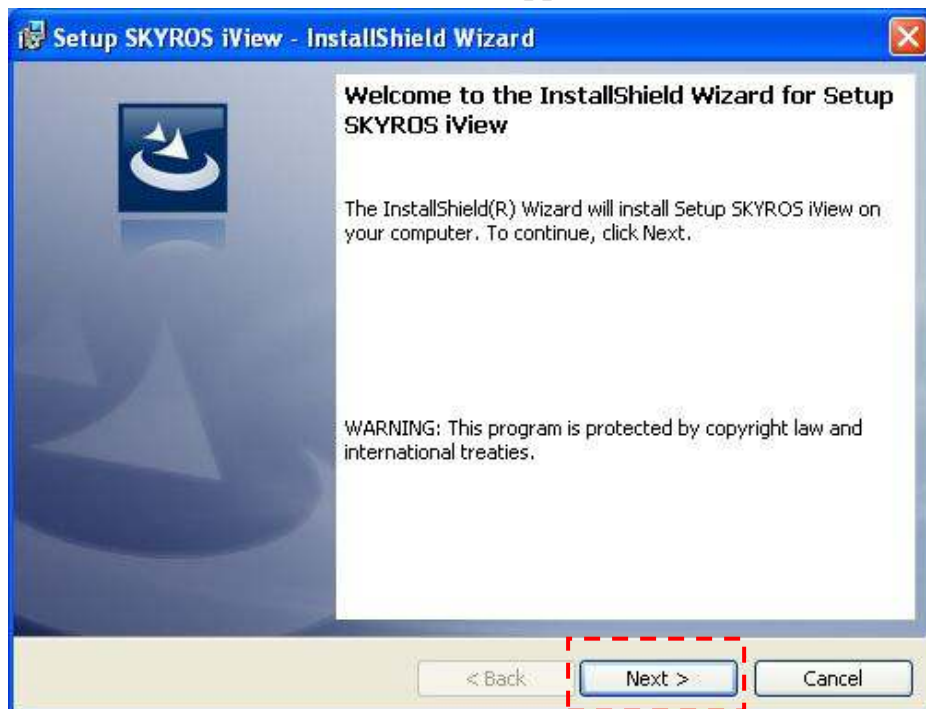
1. Please insert the Installation Guide CD supplied in the product package.



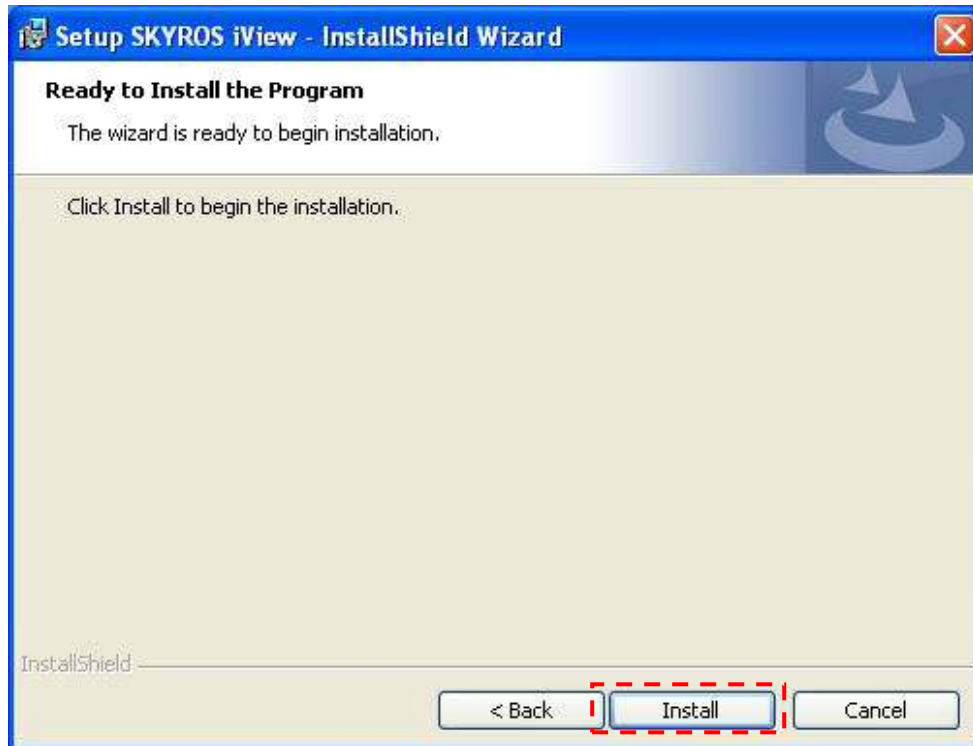
2. Double click on 'Setup.exe' to install the '**SKYROS iView**' software. The wizard as shown below will appear.



3. The screen as shown below will appear. Click '**Next**' to continue.



4. Now, click on '**Install**' as shown below.



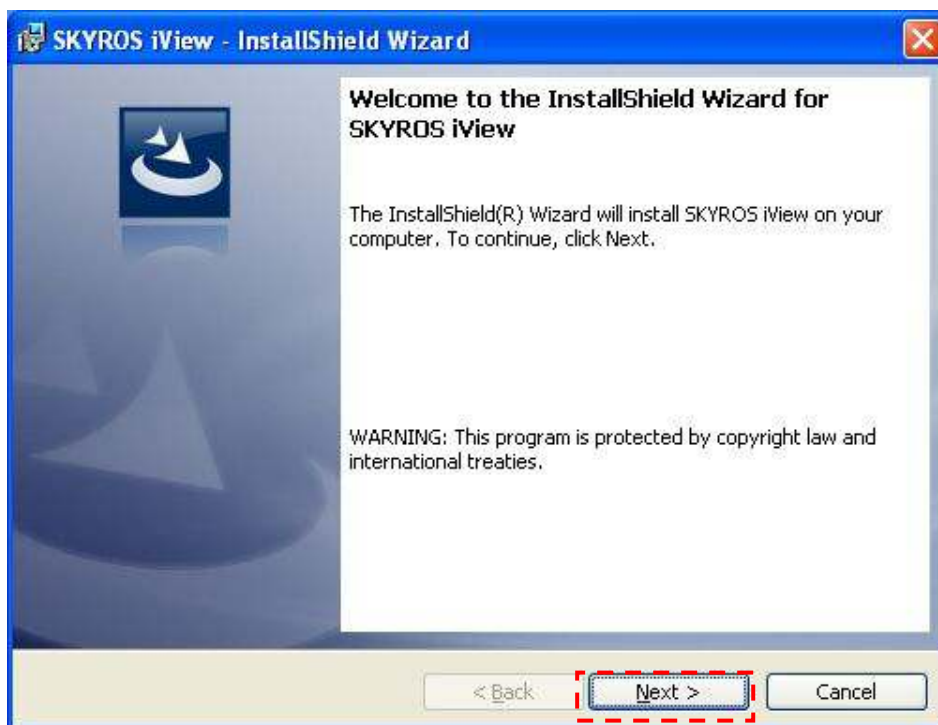
5. Please wait while installation is being performed. This may take few minutes, please be patient.



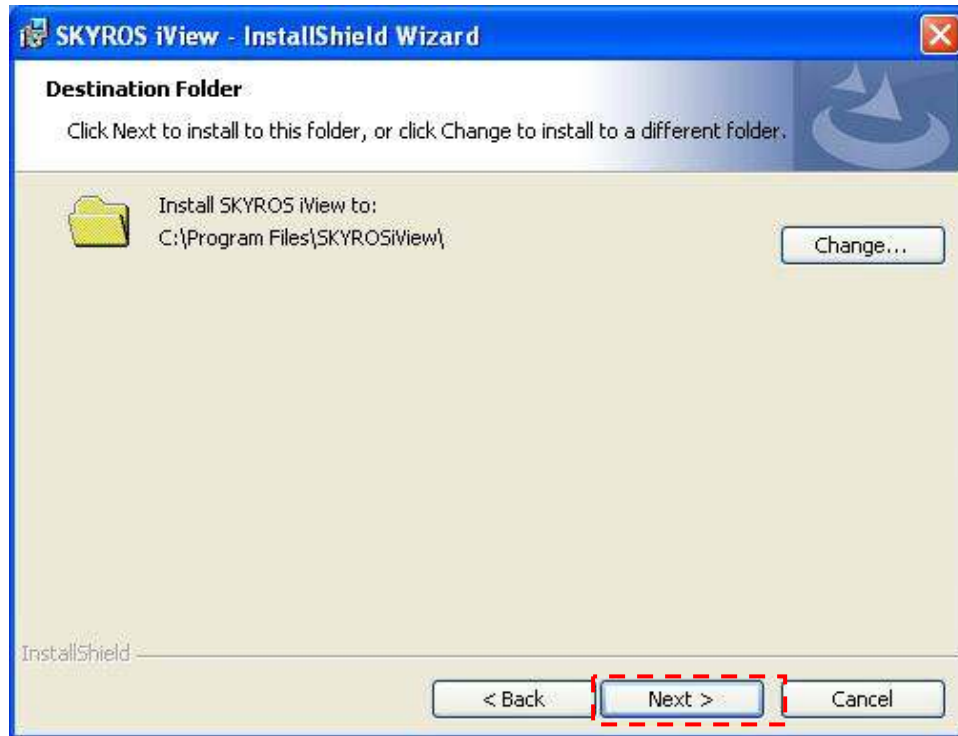
6. Second part of installation will start automatically.



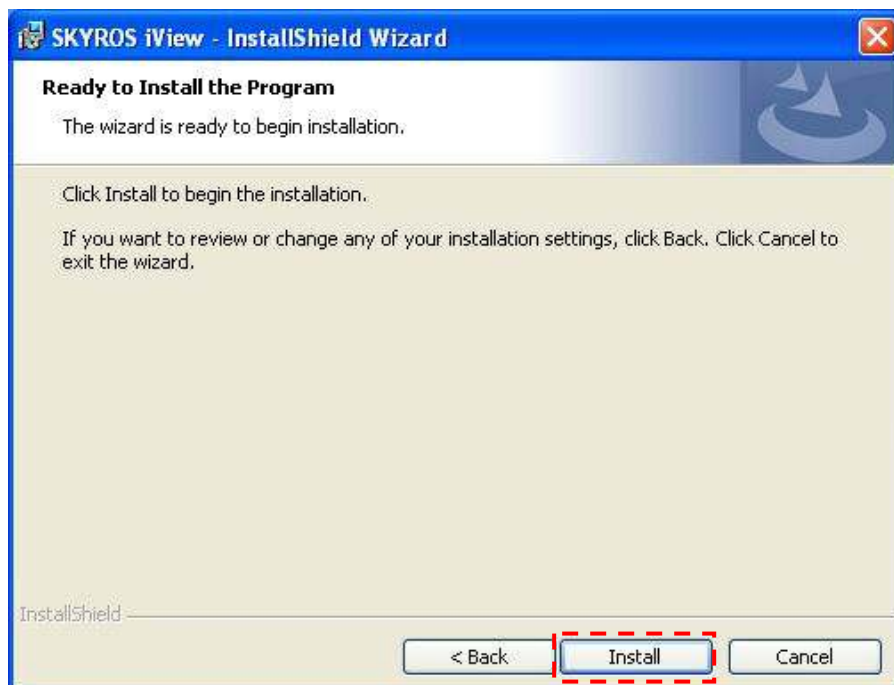
7. A new setup window will appear, please click '**Next**' button to continue.



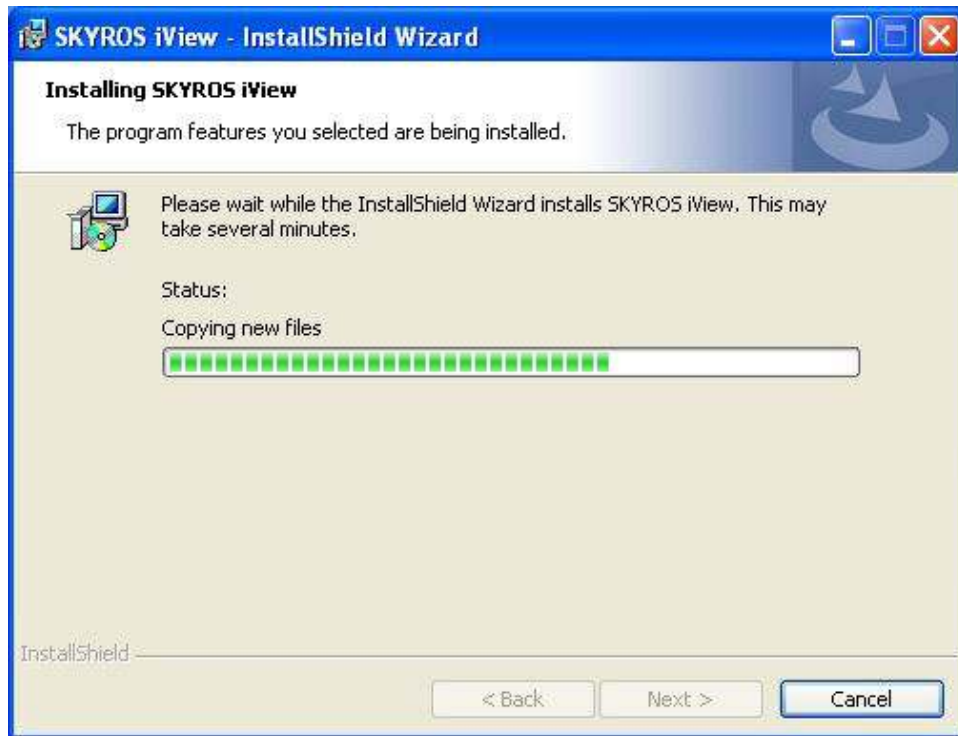
8. Now, click on '**Next**' as shown below.



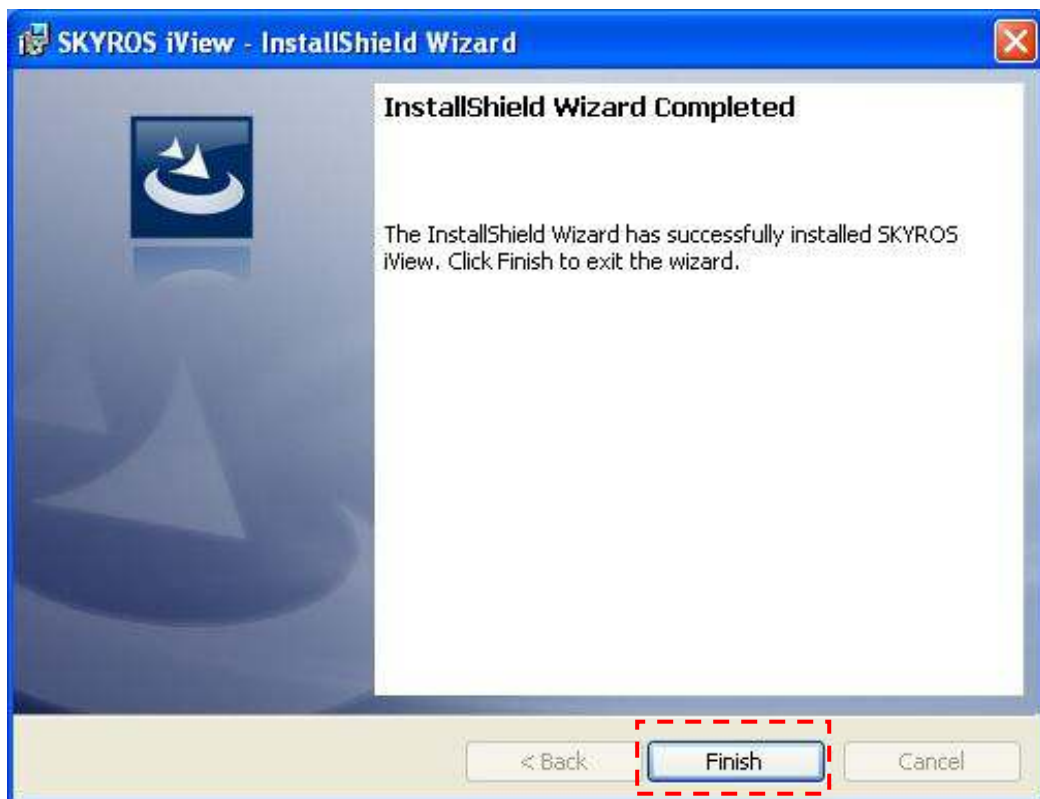
9. The screen shown below will appear. Click on '**Install**' as shown below.



10. Installation will take few minutes, please be patient



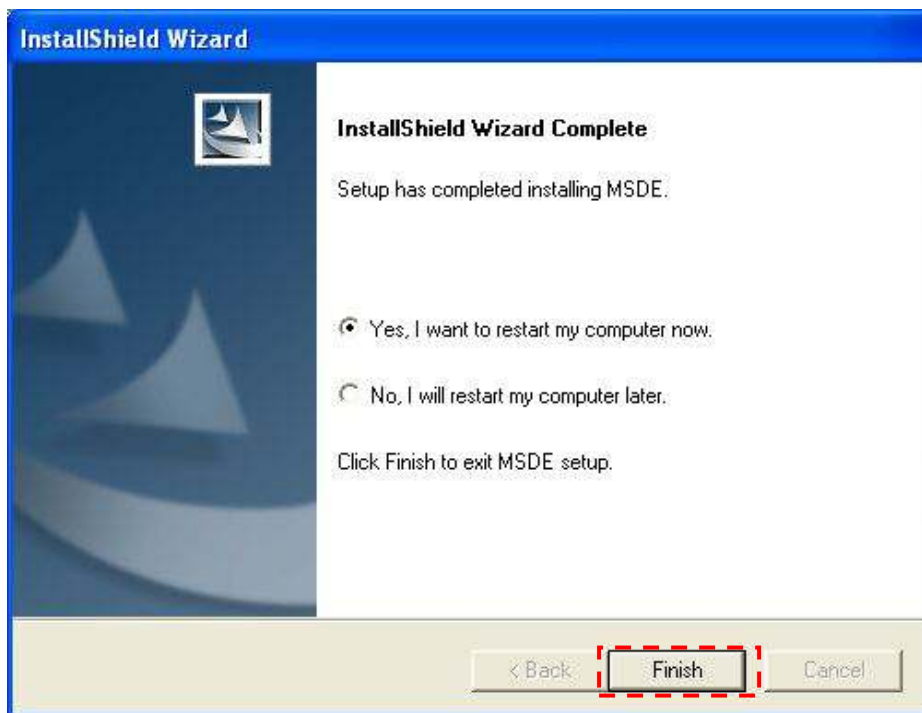
11. Click '**Finish**' when you see this message.



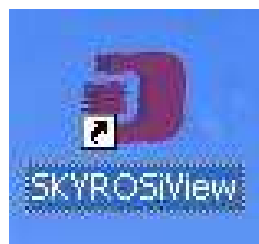
12. MSDE (Microsoft SQL Database Engine) installation procedure will start at the same time. Please wait until it completes.



13. Following screen will appear. Click on 'Finish'.



A new icon will appear on your computer's desktop, you can double click on it to start SKYROS iView.

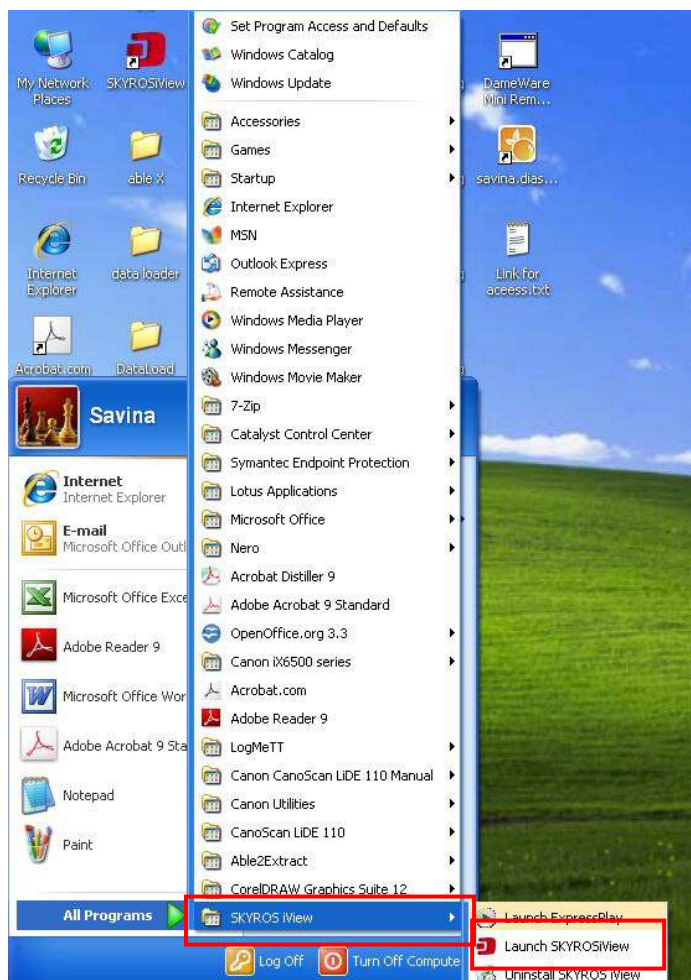


5 Getting familiar with SKYROS iView Software

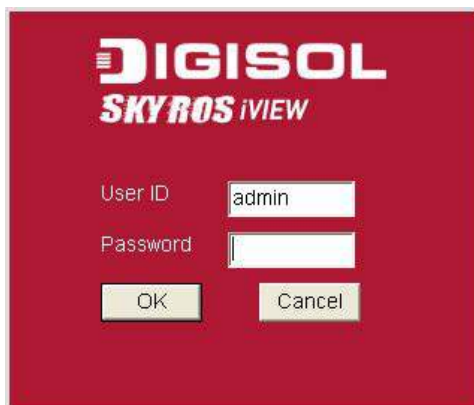
To start SKYROS iView, double click SKYROS iView icon on your computer's desktop:



Or click 'Start' button of Windows, and select 'All Programs' -> 'SKYROS iView' -> 'Launch SKYROS iView'



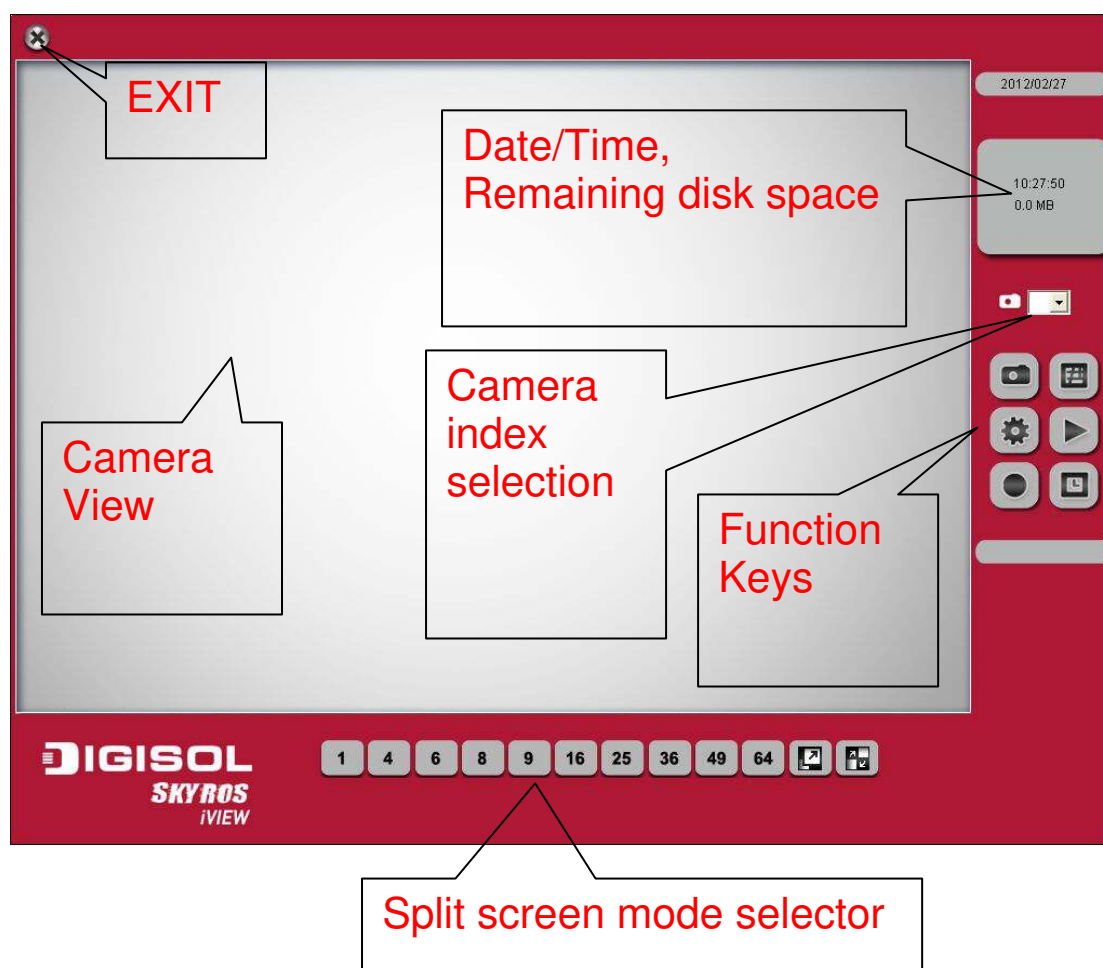
SKYROS iView login screen will appear as shown below.








The login screen features the DIGISOL SKYROS iVIEW logo at the top. Below it, there are two input fields: 'User ID' with the text 'admin' and 'Password' which is empty. At the bottom, there are two buttons: 'OK' and 'Cancel'.

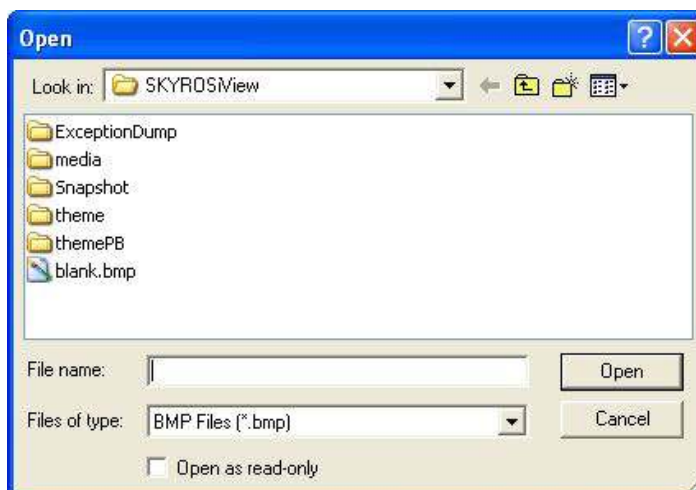
Default user ID is 'admin' and default password is none (leave it blank), click 'OK'.

The main window of SKYROS iView will appear:

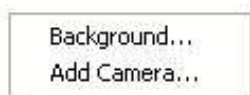


The description of every item is listed below:

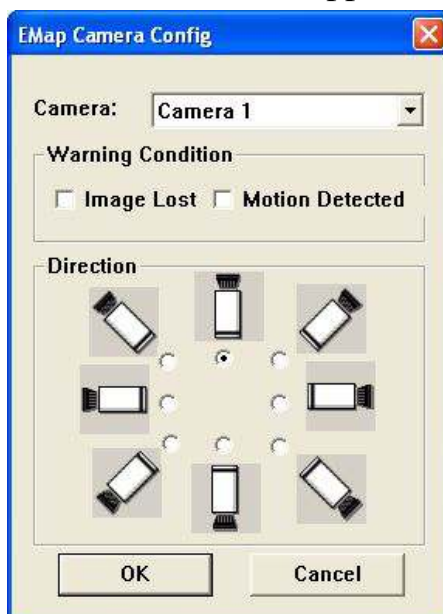
Item	Description
Split-screen mode selector 	<p>SKYROS iView supports from 1 to 64 cameras split views. The video from IP camera will display in split screen display cells, and you can view up to 64 IP cameras at the same time. Click the button to select the number of IP cameras you wish to view on display.</p> <p>If the number of IP cameras is less than the number of split screens, unused display cell will be displayed blank to indicate it's not being connected to any IP camera.</p>
Full screen 	Click this button to display video from IP cameras in full screen mode. All control buttons will be hidden, only IP camera's video will be displayed. To leave full screen mode, press 'Esc' key on your keyboard.
Camera Scan 	When you click this button, SKYROS iView will scan the camera for the video display, and switch to next camera's video after few seconds, and so on.
Snapshot 	Take a snapshot of selected IP camera and save the picture on your computer. When you click this button, the picture of IP camera selected in 'camera index selection' dropdown menu will be saved.
EMAP 	Display the EMAP (Electronic map) image on camera view area, which indicates the position and orientation in physical environment of every IP camera. To set a picture as EMAP's background picture: Right click on the EMAP display area, and you'll be prompted to select a picture on your computer:









Select the file, and click 'Open' button to use the picture as background picture. To add a camera, right click on the background picture and select 'Add Camera...'



A new window will appear:



Select the camera you wish to add from 'Camera' dropdown list, and check the box 'Image Lost' and / or 'Motion Detected', then select the direction of camera icon, this will help you to remember the

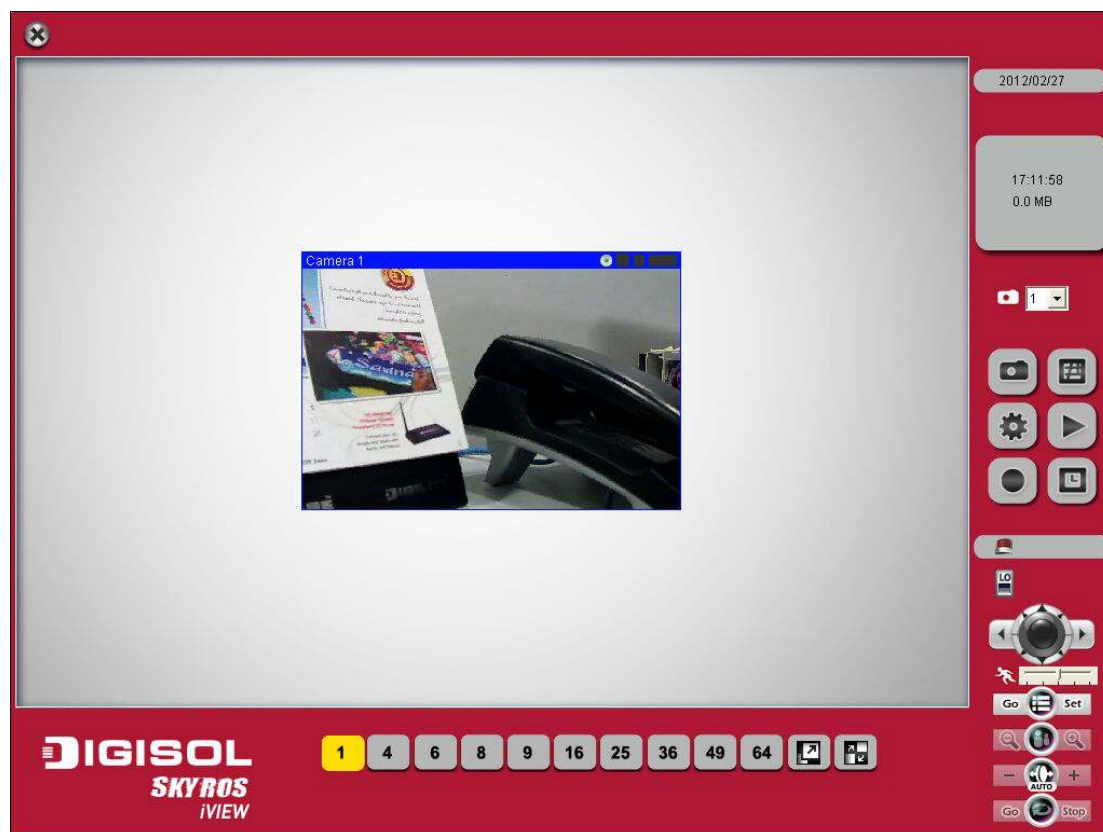
	<p>orientation of camera on the EMAP. After you click 'OK' button, a camera icon will appear on EMAP with its camera number indicated:</p>  <p>You can add more cameras to EMAP by repeating procedures listed above.</p>
<p>Configuration</p> 	<p>Enter SKYROS iView configuration page. See next section for detailed instructions.</p>
<p>Playback</p> 	<p>Playback recorded video. A new video playback window will appear. See section 5-2 for detailed instructions.</p>
<p>Recording</p> 	<p>Start / stop video recording. When recording video, this button will appear as red.</p>
<p>Schedule</p> 	<p>Enable schedule recording. You must define schedule in advance before you can enable schedule recording.</p>
<p>Camera index Selection</p> 	<p>Here lists all IP cameras you have, select one camera from dropdown list for snapshot.</p>
<p>Date / Time, Remaining Disk Space</p>	<p>Displays current date, time, and remaining disk storage space.</p>

Logout, Minimise, Exit,
ver. 1.0.3









Click this button to exit, minimize or log out from SKYROS iView. You can also view the software version number here.

All camera's video will be displayed in 'Camera View' area:




(This example picture shows a camera view with only 1 IP camera configured)
To select an IP camera, click its video and it will be highlighted; some IP cameras support additional control, and a control panel will appear at the bottom right area of SKYROS iView.

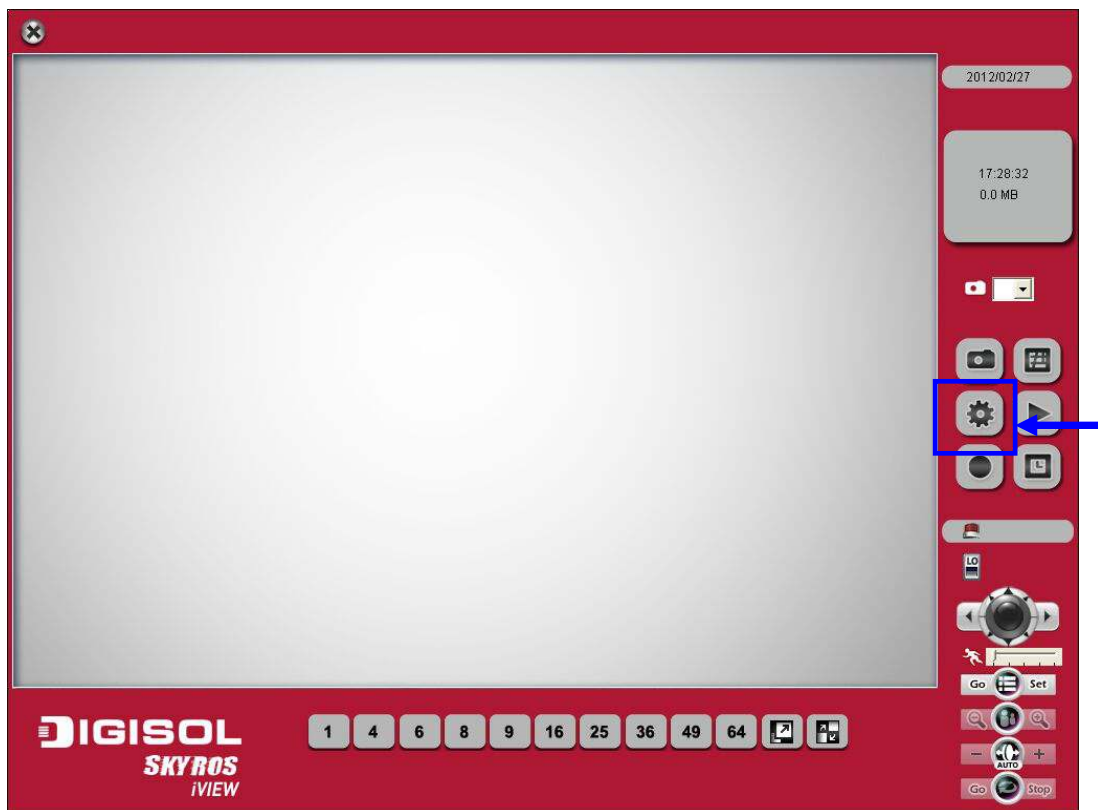
The description of the items is listed as follows:

Item	Description
Pan / Tilt control 	Click the direction arrow to control camera's pan / tilt.
Pan / Tilt speed 	Drag the slide bar to adjust the pan / tilt speed when you click pan / tilt control arrow.
Preset Control 	Click 'Go' to move the camera to the preset point and click 'set' to define the highlighted preset point.
Zoom 	Optical zoom control. Click + or - to control zoom level. This function is only available for supported cameras.
Auto Focus 	Click + or – to adjust the focus. This function is only available for supported cameras.
Cruise control 	Click 'Go' button to start camera cruise and click 'Stop' button to stop cruise. This function is only available for supported cameras.

5-1 Configure SKYROS iView

Before you can use SKYROS iView, you must configure at least 1 IP camera.

To enter configuration menu, click 'Configuration' button  in SKYROS iView main menu as shown below:



The configuration menu will appear. There are 6 sub menus in the configuration menu:

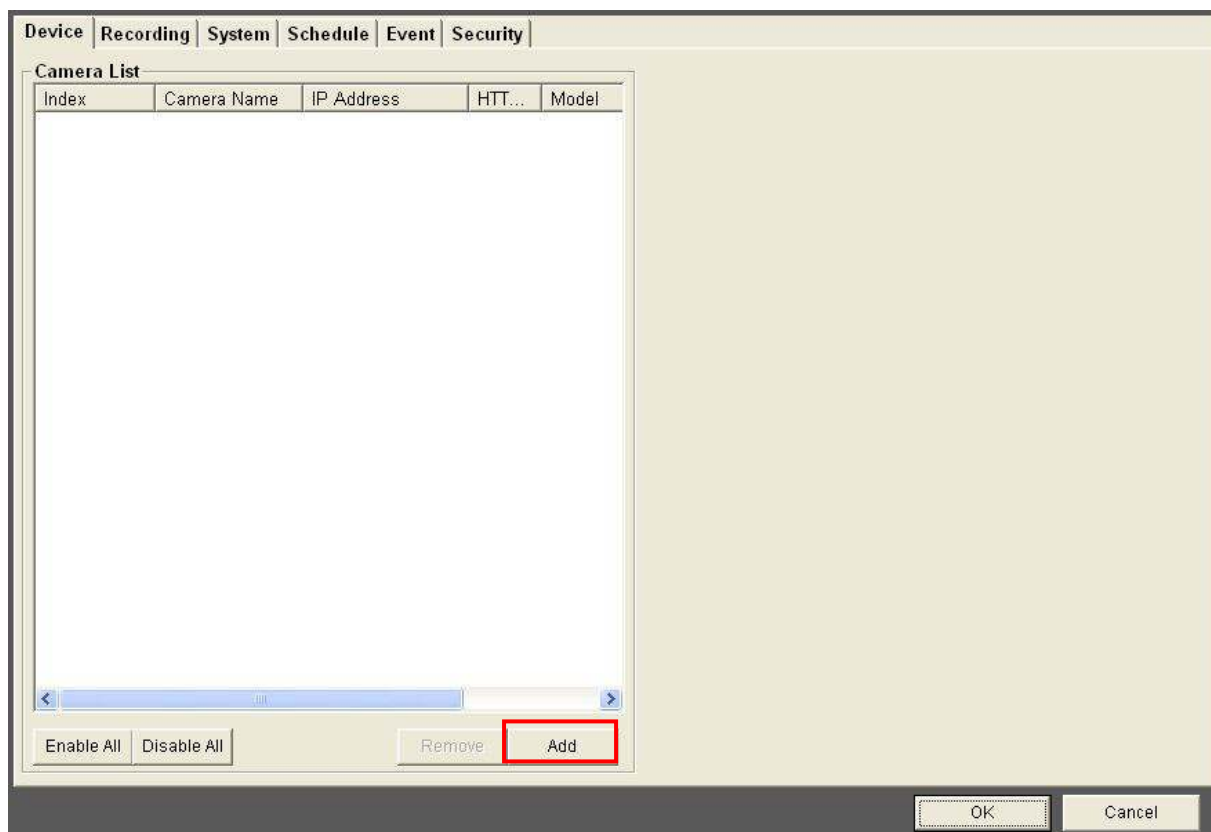
- Device (Add or remove IP camera / video server)
- Recording (Configure video recording)
- System (Configure system wide settings)
- Schedule (Configure schedule recording)
- Event (Configure event recording)
- Security (Configure SKYROS iView user list)

Detailed description of every sub menu will be given in following sections.

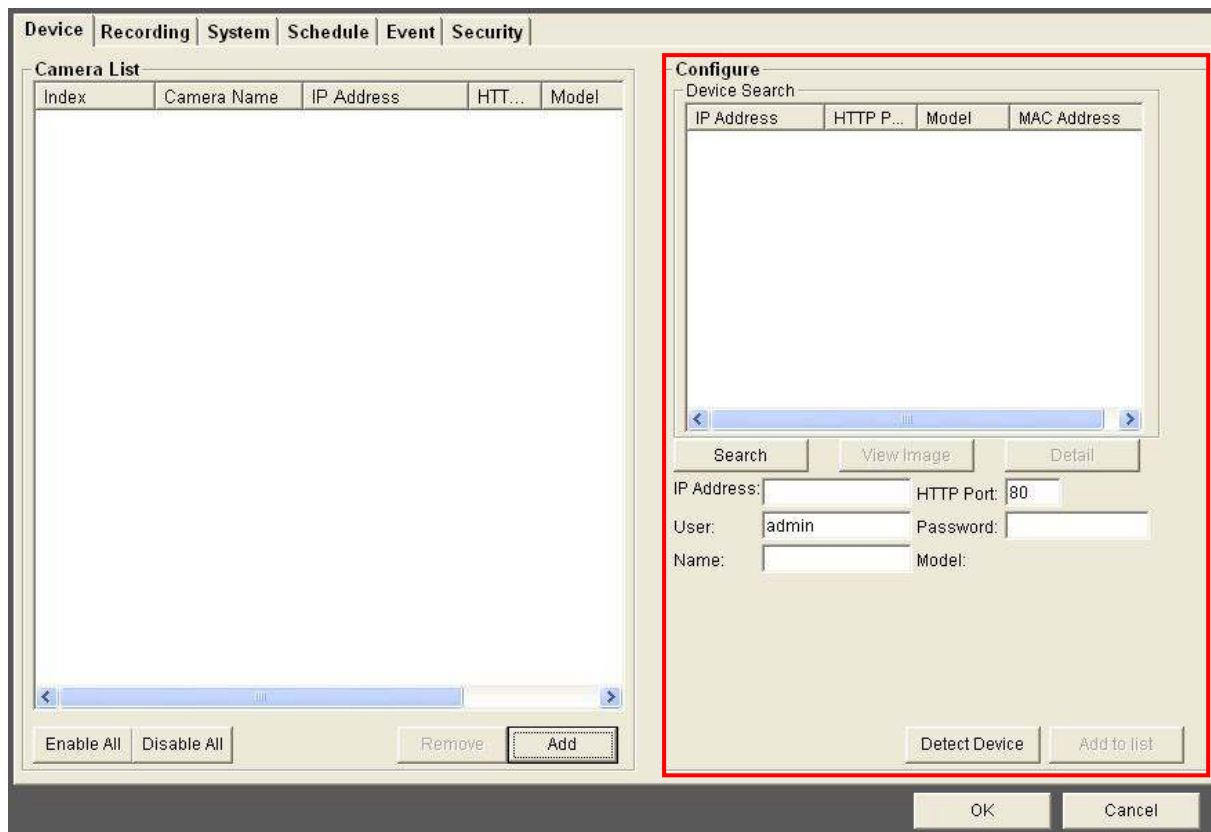
5-1-1 Device

You should configure at least one IP camera / video server before you can use SKYROS iView, and you can manage all IP cameras / video servers here.

To add a new IP camera, click '**Add**' button:



IP camera setup window will appear on the right:



If your IP camera is located on local area network, click '**Search**' button. Wait for few seconds or few minutes until the search is complete, and all IP cameras found on your local area network will be listed:



In this example, an IP camera has been found at IP address 192.168.2.99. Add the password of the respective IP camera and click on 'Detect Device' to verify the settings before you click '**Add to list**' button. You can repeat above procedures to add all IP cameras you wish to connect.

When an IP camera is found, you can also select it in the list and:

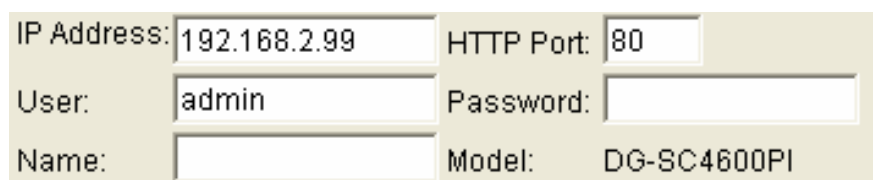
- View Image: View the live image from selected IP camera.
- Detail: Connect to selected IP camera's web configuration menu.



Check '**Enable Camera**' to enable this camera in SKYROS iView.

If the IP camera you wish to add is not located on local area network, you have to input the details of IP camera manually:

Input the network settings of IP camera, including IP address, HTTP port number, user name / password.



After you find an IP camera add it manually, click 'Add to list' button and the IP camera will be listed in SKYROS iView as shown below:

Camera List				
Index	Camera Name	IP Address	HTT...	Model
<input checked="" type="checkbox"/>	Camera1	192.168.2.99	80	DG-SC4600PI

Every IP camera has a check box, indicating if it is enabled. If a camera is not enabled, it will not be displayed in SKYROS iView's video view.

You can also manage the IP camera list by the following functions:

- **Enable All:** Enable all IP cameras in the list.
- **Disable All:** Disable all IP cameras in the list.
- **Remove:** Remove selected IP camera.

When you select an IP camera in the list, you can also click ‘**Update to list**’ button to update its information, like IP address and user name / password.

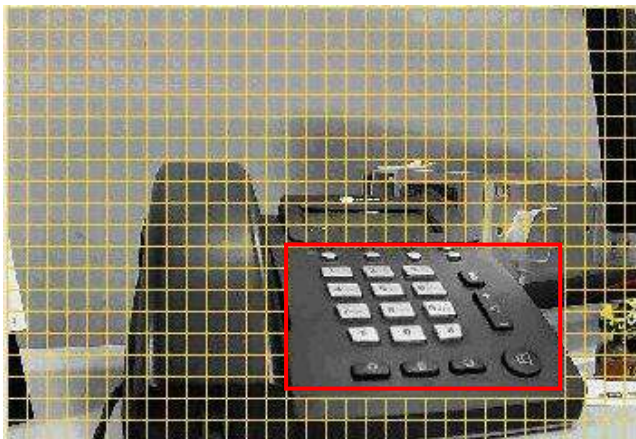
5-1-2 Recording

You can specify the video recording behavior for all IP cameras: recording all the time, motion detection, or not recording at all.

Please note that if you don't have any IP camera added in the camera list, You will not be able to enter this setup menu.

[illegible]

The description of every item is listed as follows:

Item	Description
Select Camera	Please select an IP camera from the list to setup its recording behavior. SKYROS iView will attempt to connect to selected IP camera, if it's not connectable, you will receive an error message later.
Record Mode	<p>You can decide the recording behavior for this IP camera:</p> <ul style="list-style-type: none"> • Monitor only, not record: SKYROS iView will not record video of this IP camera. • Round The Clock: SKYROS iView will record video of this IP camera all the time. • Motion Detection: SKYROS iView will only record video when motion is detected. • Apply to All Cameras: Click this button to apply current record control settings to all IP cameras on the list.
Motion Detection Setting	<p>Sets motion detection area and sensitivity. Please select an IP camera from the list, and its video will appear with a grid pattern:</p>  <p>Use the mouse to click blocks on the grid pattern to assign the areas you wish SKYROS iView to detect / ignore motion. SKYROS iView will detect motion for areas which are NOT covered by blocks only.</p>

To add or erase blocks:



To add blocks, click + button; to erase blocks, click - button. Click '**Reset**' button to reset motion detection blocks to default setting. You can also change the color of block if the color is similar to the IP camera's video and its difficult for you to identify the blocks by clicking the color brick between + and - button:



Drag red, green, and blue slide bar to set color, and click '**Set**' button to save changes, click '**Default**' button to reset settings, and click '**Cancel**' to leave this menu without saving changes.

You also have to setup sensitivity:

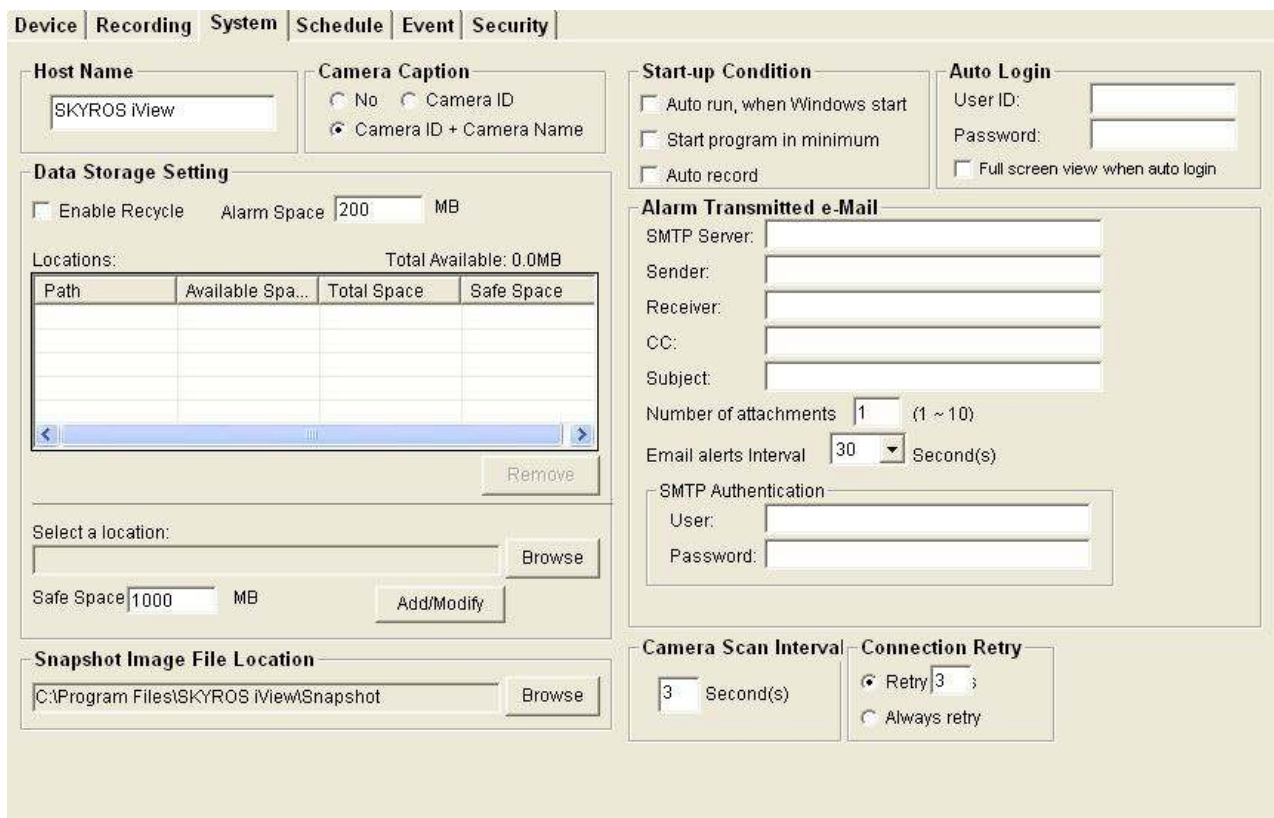


Drag the slide bar to setup sensitivity level from 1 to 10. Larger number indicates more sensitivity. To apply this motion detection settings to all IP cameras, click '**Apply to All Cameras**' button.

When you finish the setting, click '**OK**' button to save changes you made, or click '**Cancel**' button to discard all settings you made.

5-1-3 System

You can configure system-wide configuration in this sub menu.



The description of every item is listed below:

Item	Description
Host Name	The host name by default is 'SKYROS iView'.
Camera Caption	Add a text caption on camera view or not: <ul style="list-style-type: none"> No: Do not display caption on camera view Camera ID: Display Camera's ID Camera ID + Camera Name: Display both camera's ID and camera's name.
Data Storage Setting	Setup hard disk data storage: <ul style="list-style-type: none"> Enable Recycle: Check this box and the latest recording video will overwrite oldest recorded video file automatically. If you didn't check this box, SKYROS iView will stop recording when

	<p>data storage space is full.</p> <ul style="list-style-type: none"> • Alarm Space: When data storage space is less than the size you specified here, you'll receive an alarm message to notify that you should do something to prevent running out of storage space. • Locations: Lists all data storage space configured. You can add / modify spaces below. • Browse: Select a drive or folder on your computer for recording data storage. You can also create a new folder when you're prompted to select a drive or folder on your computer. • Safe Space: Specify the lower limit of storage space you specified. When remaining storage space is less than the size you specified here, SKYROS iView will stop recording. • Add/Modify: You can click this button to add the drive / folder you specified above to storage space list, or select an existing storage space in the list to change its parameters then click this button to update its parameter. • Remove: Select a pre-defined storage space and click this button to remove it from the list.
Start up Condition	<p>Select the behavior of SKYROS iView when computer starts up. You can select multiple options you want to use:</p> <ul style="list-style-type: none"> • Auto run, when Windows start: Check this box and SKYROS iView will run automatically when computer starts. • Start program in minimum: Start SKYROS iView as minimized window. • Auto record: Start video recording automatically when SKYROS iView starts.
Auto Login	<p>Input the user ID and password to login SKYROS iView automatically. This function is useful when you want to start recording automatically when computer starts.</p> <ul style="list-style-type: none"> • User ID: Input user ID used to login SKYROS

	<p>iView, must have adequate privileges to perform the action you wish to execute.</p> <ul style="list-style-type: none"> • Password: Input user's password. • Full screen view when auto login: Switch to full screen display mode when auto login.
Alarm Transmitted email	<p>Send an Email notification with picture when alarm is triggered (motion is detected):</p> <ul style="list-style-type: none"> • SMTP Server: Input the IP address or host name of SMTP server (mail server) you wish to use. • Sender: Input the sender's email address in sent email. This will help you to identify the email sent by SKYROS iView. For some SMTP servers, you must set a sender email address of the same domain name. • Receiver: Input the email receiver's address here. • CC: input additional email receiver's address here. • Subject: Input the subject of sent email. This will also help you to identify the email sent by SKYROS iView. • Number of attachments: Input the number of snapshot attachments that will sent with email, so you can see the image of camera by email (1 to 10 attachments only). Email alerts Interval: Input the time interval between two emails. A new email will not be sent within the interval you specified here even if a new event is detected. • User: Input the user name for SMTP authentication. Input only when it's required by your SMTP server, you can leave it blank if it's not required. • Password: Input the password used by SMTP authentication.
Camera Scan Interval	Input the time interval to wait between camera scan.
Connection Retry	Decides the behavior when SKYROS iView lost communication with IP camera:

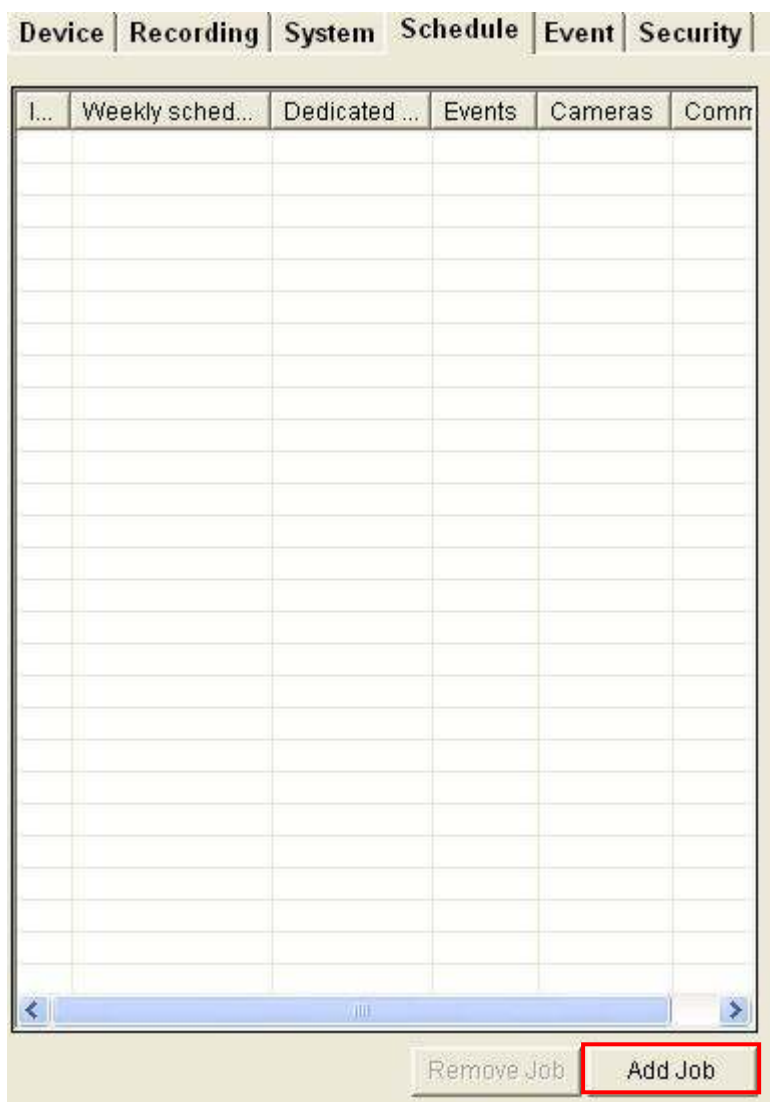
	<ul style="list-style-type: none"> • Retry: Retry for the time you specified here. • Always retry: Retry to connect to IP camera until successfully connected.
--	--

When you finish with the settings, click ‘OK’ button to save changes you made, or click ‘Cancel’ button to discard all settings you made.

5-1-4 Schedule

You can configure recording schedule in this sub-menu.

When you enter this sub-menu for first time, click ‘**Add Job**’ button to add a new schedule recording job:



A new window will appear on the right:

Weekly Schedule

Clock (hour)

ADD
DEL

00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23

Sun
Mon
Tue
Wed
Thu
Fri
Sat

Events

☐ Record
Round-The-Clock

Dedicated Schedule

Start: 2012/02/27 00:00

End: 2012/02/27 23:59
Add/Modify

Time Period:

Remove

Cameras/Devices


1

Comment:

Add to list

You can configure a new schedule recording job here.

The description of every setup item is listed below:

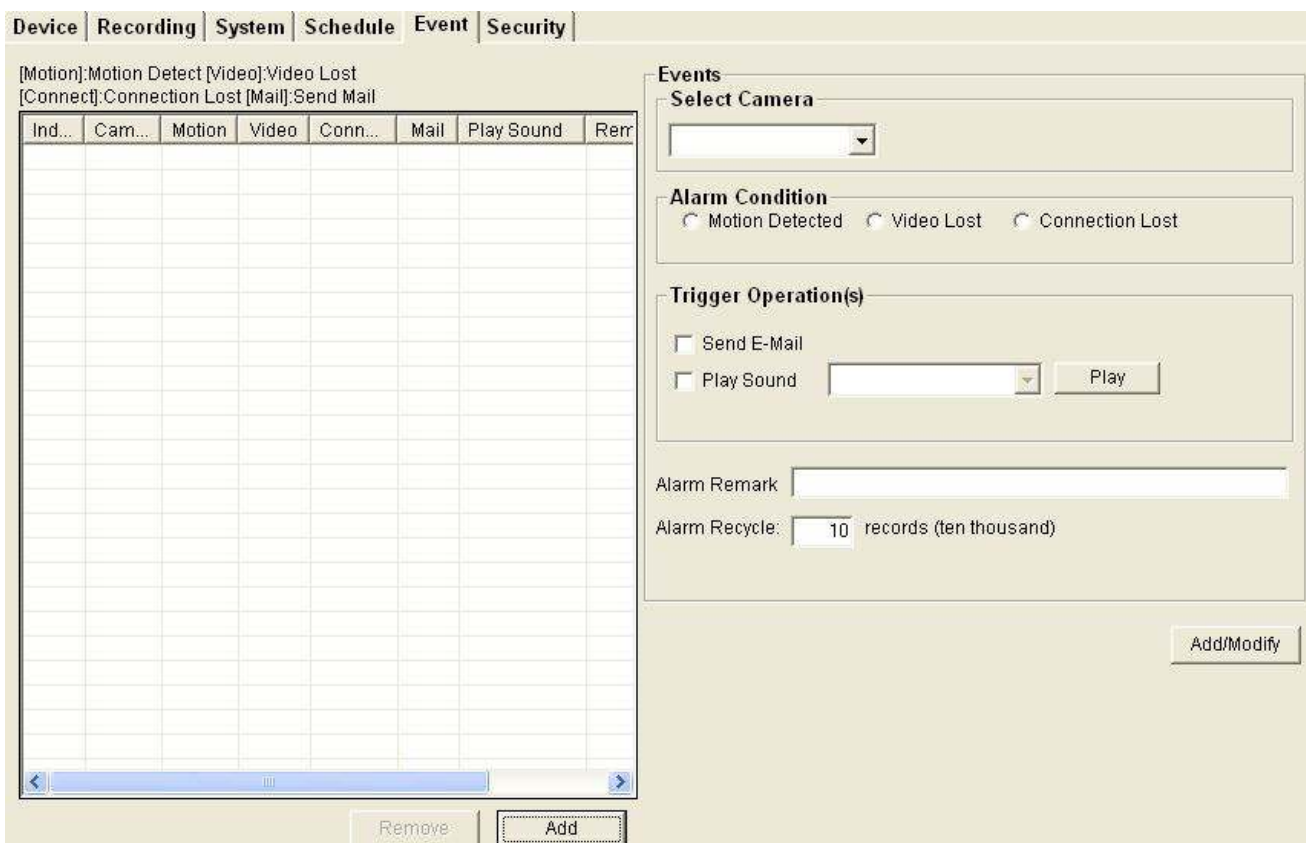
Item	Description
Weekly Schedule	<p>Select the time period in a week of this schedule. There are total 48 x 7 blocks in a week schedule, where every block represents half an hour.</p> <p>You can use mouse to click on the block to add or delete time period. If recording is activated in that time period, the block will appear as light blue.</p> <p>To add or delete a time period, select 'ADD' or 'DEL' first, then click the time period block. In order to start the schedule recordings click the schedule button  on the main screen of the software.</p>
Events	<p>Select the event to trigger recording:</p> <p>Round-The-Clock: Recording is time activated (according to schedule).</p> <p>Motion Detection: Recording is motion-activated.</p> <p>DI Input: Recording is activated by DI (Digital Input) signal located on IP camera. IP camera must have DI port and not every IP camera is equipped with DI.</p>
Dedicated Schedule	<p>If you just want to add a new recording schedule between certain time and this schedule will only happen once but not every week, you can use this function to specify a time period.</p> <p>Select 'Start' and 'End' date / time, and click 'Add/Modify' button to add the time period to the list. You can also select an existing time period and make changes, and click 'Add /Modify' button to save changes.</p> <p>To remove an existing schedule, select an existing schedule, and then click 'Remove' button.</p>

Comment	You can input some text to help you to memorize the purpose of this schedule.
Cameras/Devices	Check all IP cameras that will be activated by this schedule.
Add to list	Click this button to add this schedule to the list.

When you finish the settings, click ‘OK’ button to save changes you made, or click ‘Cancel’ button to discard all settings you made.

5-1-5 Event

SKYROS iView can send you an alarm email message so you can know something happened on the IP camera (motion detected, video lost, or connection lost). A sound can be played to notify the operator at the computer where SKYROS iView is installed, too.



To add a new event, click ‘Add’ button, and a new window will appear on the right for you to setup a new event.

To remove an existing event, select an event in the list and click '**Remove**' button.

The description of every setup item is listed below:

Item	Description
Select Camera	Select the IP camera to define its event detail.
Alarm Condition	<p>Define the type of event which will trigger an alarm:</p> <ul style="list-style-type: none">• Motion detected: Alarm will be triggered when motion is detected at this IP camera.• Video lost: Alarm will be triggered when video server's external camera signal is lost.• Connection Lost: Alarm will be triggered when network connection to this IP camera is lost. <p>You can select only one alarm condition here.</p>
Trigger Operation(s)	<p>Define the action which will be taken when alarm is triggered:</p> <ul style="list-style-type: none">• Send E-Mail: an email will be sent when alarm is triggered.• Play Sound: Play a sound on the computer where SKYROS iView is installed. To add a new sound file, copy the .wav file to the following directory: C:\Program Files\SKYROS iView\media <p>You can click 'Play' button to play the sound file you selected.</p>
Alarm Remark	You can input descriptive text here to help you to remember the purpose of this event.
Alarm Recycle	Alarm record list will be recycled after every ten thousand records by default. This value can be changed for availability of more alarm records.

When you finish setting, click '**Add/Modify**' button to add this event to the list.

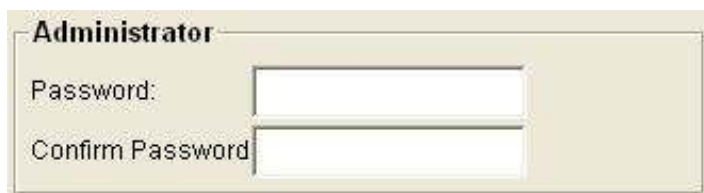
5-1-6 Security

You can add or remove users which are allowed to access SKYROS iView.

[illegible]

There are two kinds of users in SKYROS iView: *Administrator* and *user*. Administrator can configure SKYROS iView, while user can only view video of camera, and perform limited system configuration (schedule, record, camera map and video playback).

Administrator's user ID is always '**admin**' and cannot be changed. You can only change admin's password in Administrator's '**Password**' and '**Confirm Password**' field.



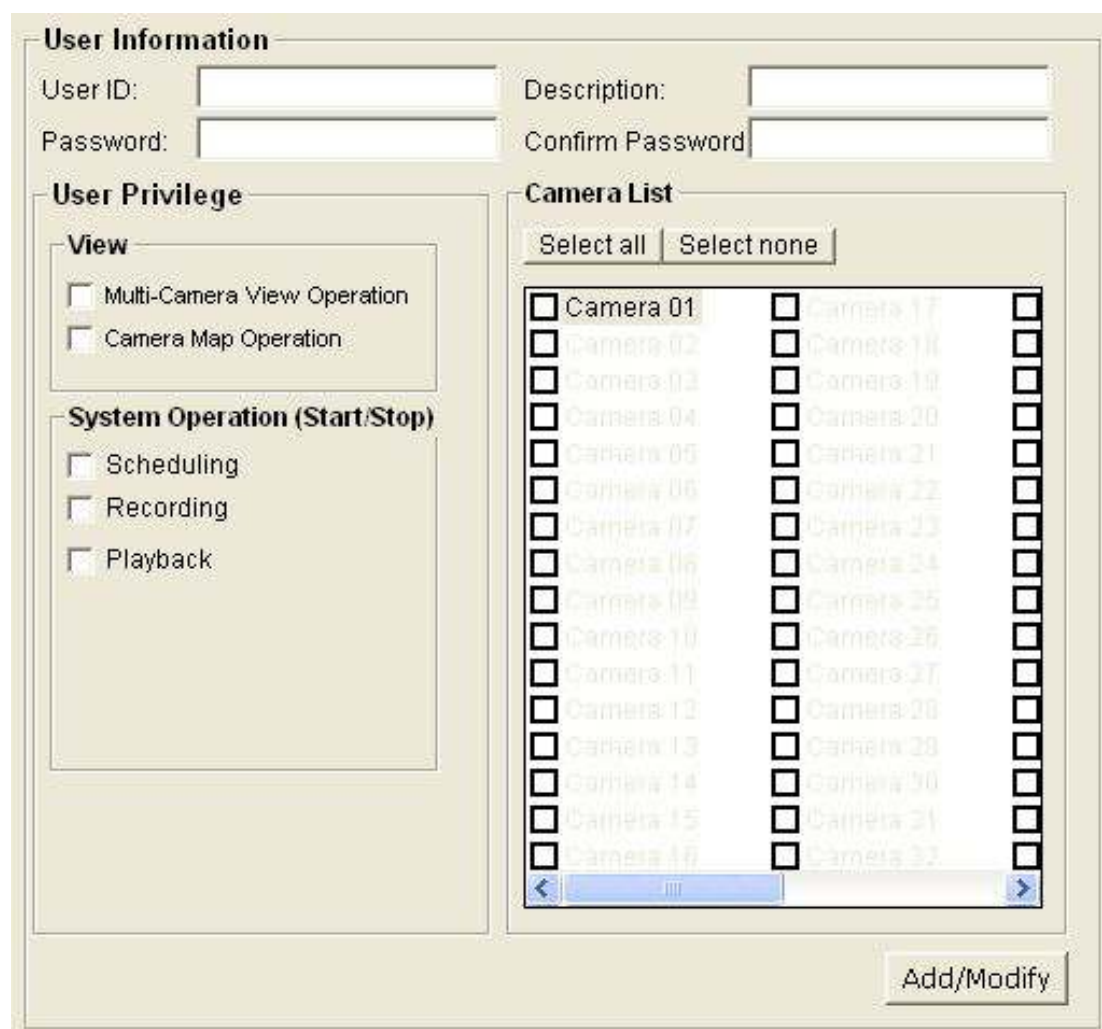
Administrator

Password:

Confirm Password:

Please input the same password in both fields for confirmation.

To add a user, click '**Add**' button, a new window will appear on the right:



User Information

User ID: Description:

Password: Confirm Password:

User Privilege

View

☐ Multi-Camera View Operation

☐ Camera Map Operation

System Operation (Start/Stop)

☐ Scheduling

☐ Recording

☐ Playback

Camera List

Select all Select none

<input type="checkbox"/> Camera 01	<input type="checkbox"/> Camera 17	<input type="checkbox"/>
<input type="checkbox"/> Camera 02	<input type="checkbox"/> Camera 18	<input type="checkbox"/>
<input type="checkbox"/> Camera 03	<input type="checkbox"/> Camera 19	<input type="checkbox"/>
<input type="checkbox"/> Camera 04	<input type="checkbox"/> Camera 20	<input type="checkbox"/>
<input type="checkbox"/> Camera 05	<input type="checkbox"/> Camera 21	<input type="checkbox"/>
<input type="checkbox"/> Camera 06	<input type="checkbox"/> Camera 22	<input type="checkbox"/>
<input type="checkbox"/> Camera 07	<input type="checkbox"/> Camera 23	<input type="checkbox"/>
<input type="checkbox"/> Camera 08	<input type="checkbox"/> Camera 24	<input type="checkbox"/>
<input type="checkbox"/> Camera 09	<input type="checkbox"/> Camera 25	<input type="checkbox"/>
<input type="checkbox"/> Camera 10	<input type="checkbox"/> Camera 26	<input type="checkbox"/>
<input type="checkbox"/> Camera 11	<input type="checkbox"/> Camera 27	<input type="checkbox"/>
<input type="checkbox"/> Camera 12	<input type="checkbox"/> Camera 28	<input type="checkbox"/>
<input type="checkbox"/> Camera 13	<input type="checkbox"/> Camera 29	<input type="checkbox"/>
<input type="checkbox"/> Camera 14	<input type="checkbox"/> Camera 30	<input type="checkbox"/>
<input type="checkbox"/> Camera 15	<input type="checkbox"/> Camera 31	<input type="checkbox"/>
<input type="checkbox"/> Camera 16	<input type="checkbox"/> Camera 32	<input type="checkbox"/>

The description of every setup item is listed below:

Item	Description
User ID	Input the user ID used to login SKYROS iView
Description	Input any descriptive text to help you to memorize the purpose of this user ID.
Password / Confirm Password	Input this user's password in both fields.
User Privilege	Defines the privilege of this user (Check the boxes that you wish to give privilege): Multi-Camera View Operation: Allows multi-camera view. Camera Map Operation: Allows to show E-MAP. Scheduling: User can start or stop schedule recording. Recording: User can start or stop video recording. Playback: User can playback saved video.
Camera List	Select IP cameras you wish to allow this user to view.

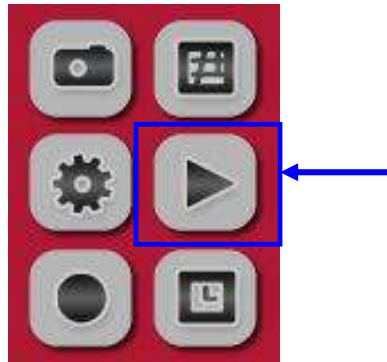
When you finished settings, click 'Add/Modify' button to add this new user.

You can also select an existing user and change his / her user information, then click '**Add / Modify**' button to save changes for this user.

5-2 Video Playback

5-2-1 Start Video Playback

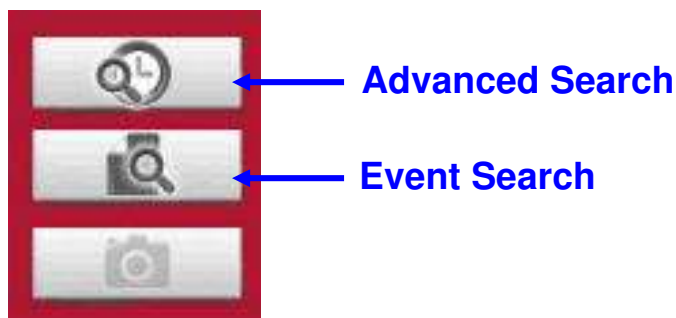
To view recorded video, you can click '**Playback**' button in SKYROS iView's main screen:



A new window will appear:



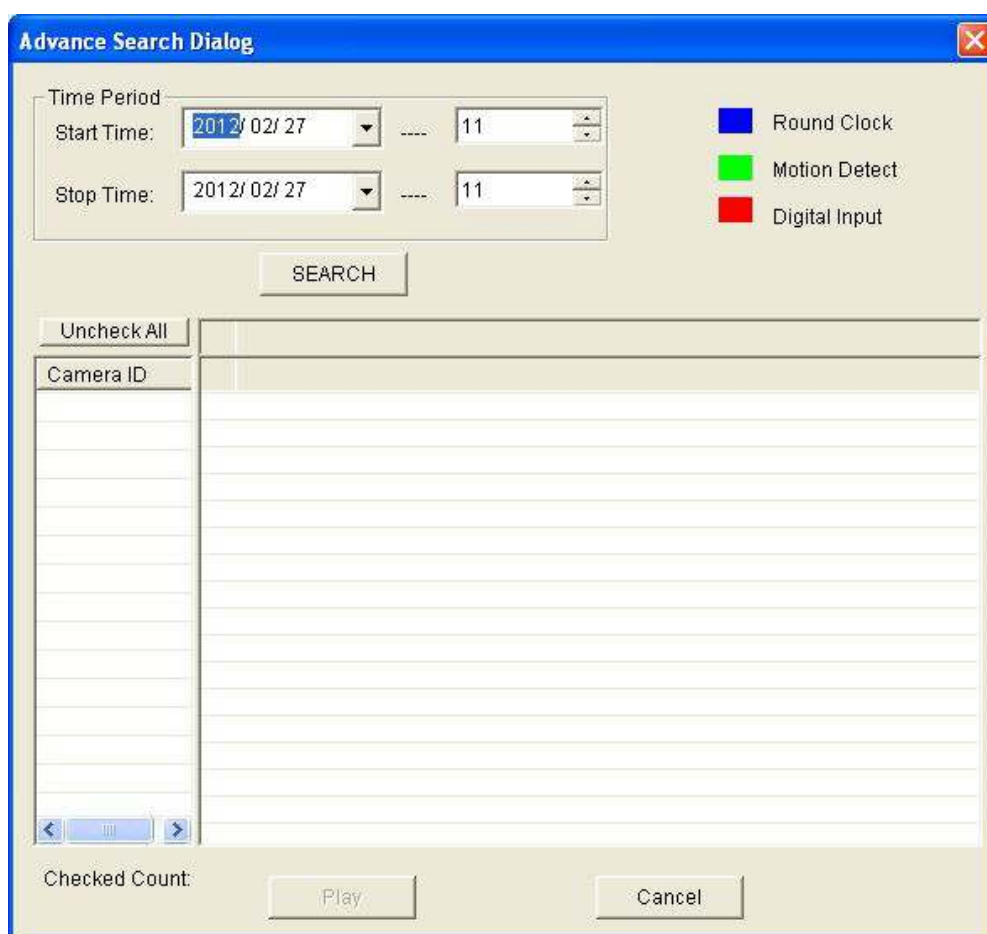
To play a recorded video, you can use one of following two functions:



Please refer to following chapters for detailed instructions of every search mode.

5-2-2 Advanced Search

You can search for recorded video within specific time period, and get a list of record modes of all IP cameras.

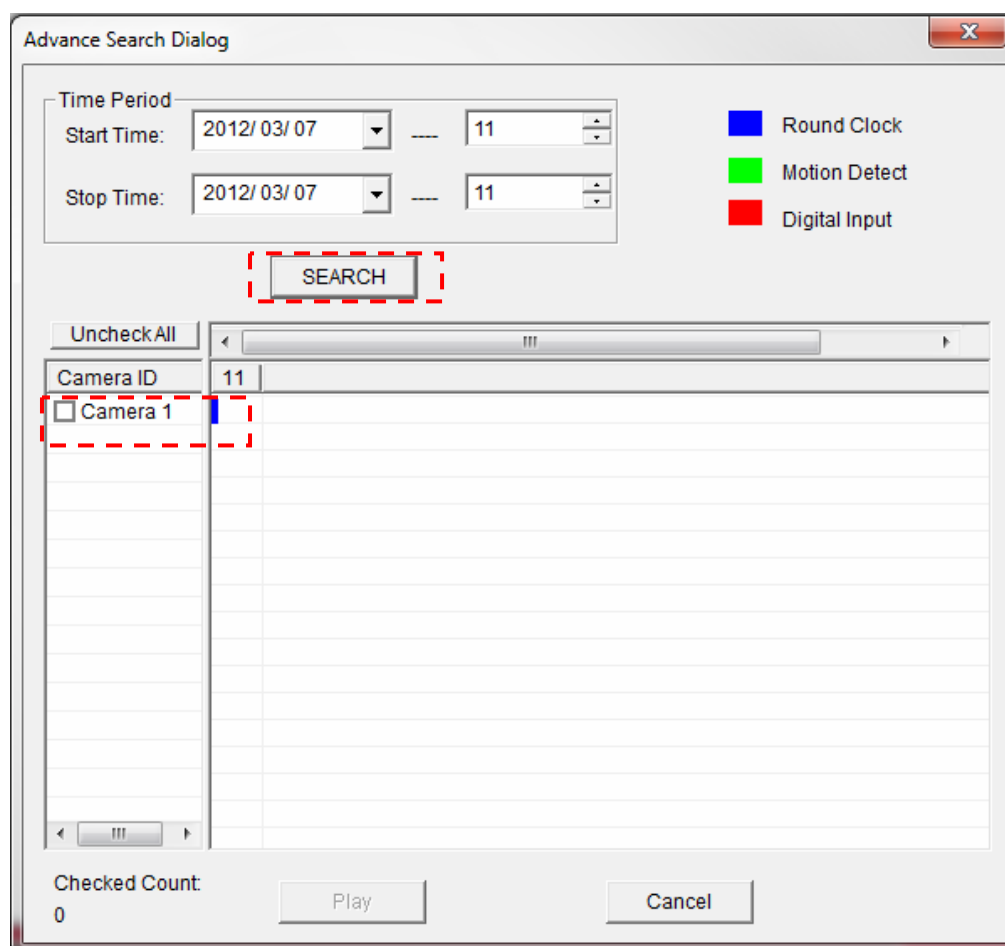


When you enter this menu, please specify start time and stop time:



(You can input 0-23 in 'Hour in a day' field by keyboard directly).

When you finish, click '**SEARCH**' button to search for recorded video, and You will get a similar output like this:



In this picture, a recorded video of ‘**Camera 1**’ has been found at 12 o’clock. A blue mark indicates it’s a ‘**Round Clock**’ (manual) recording. Other record types include:

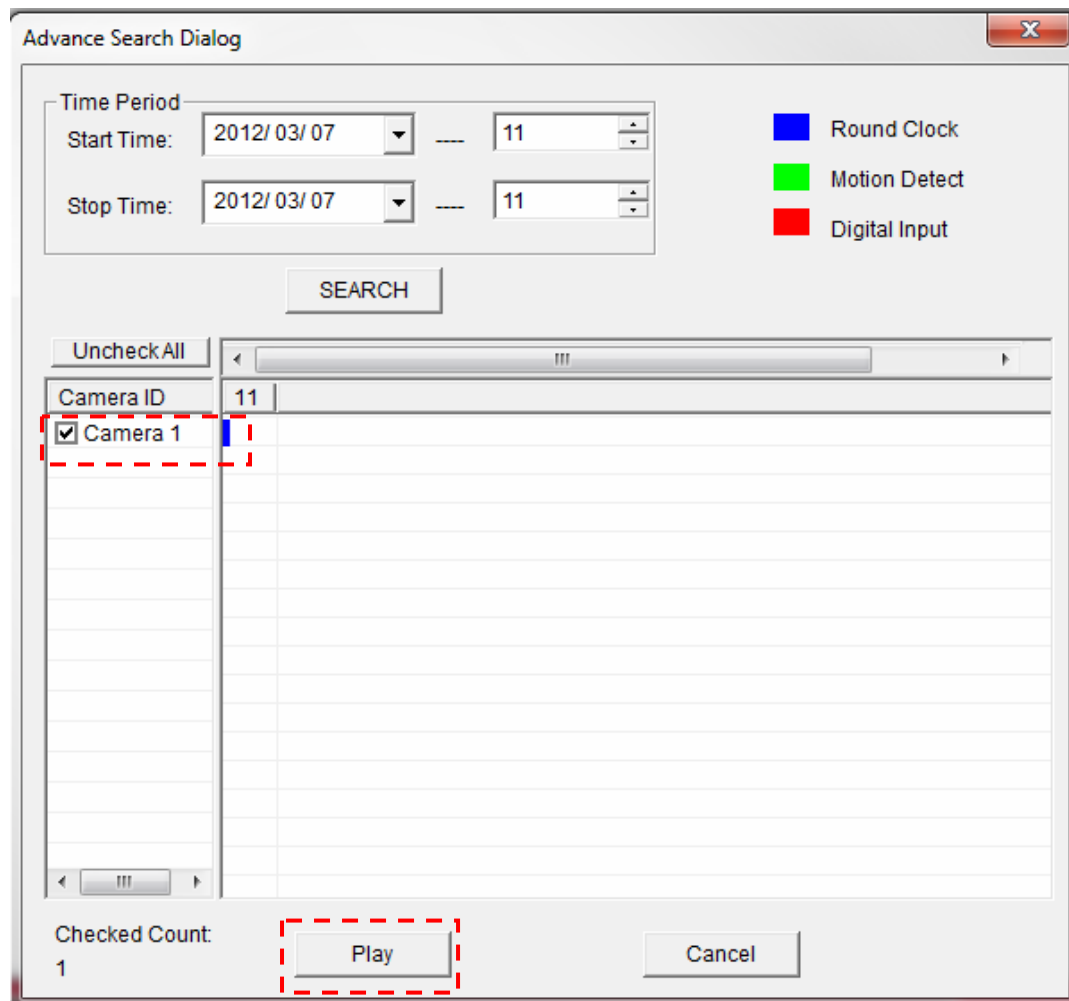


Blue: Manual Recording

Green: Recording is triggered by motion

Red: Recording is triggered by Digital Input

To view the video, check the box of camera ID, then click ‘**Play**’ button.



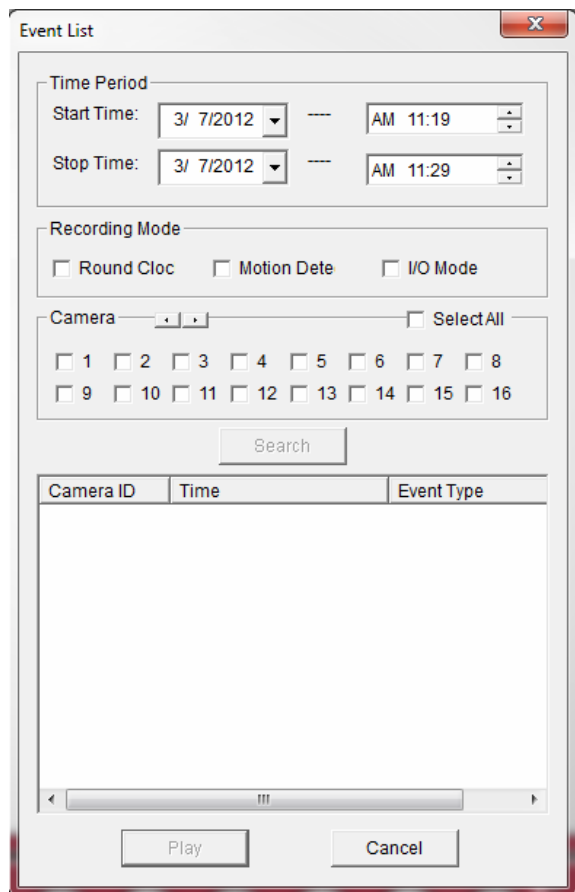
And the video will be prepared for playback.



For instructions of video playback, please see [section 5-2-4](#) for detailed instructions.

5-2-3 Event Search

You can search for video for playback by triggering event: round the clock, motion detection, or digital input.

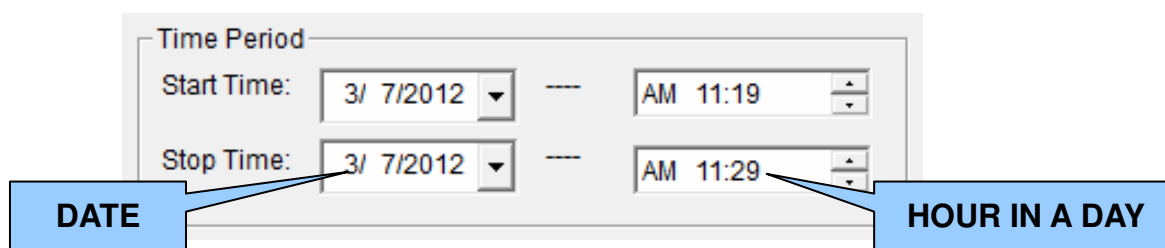


The 'Event List' dialog box contains the following sections:

- Time Period:**
 - Start Time: 3/ 7/2012 AM 11:19
 - Stop Time: 3/ 7/2012 AM 11:29
- Recording Mode:**
 - ☐ Round Clac
 - ☐ Motion Dete
 - ☐ I/O Mode
- Camera:**
 - ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8
 - ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16
 - ☐ Select All
- Search:** A button to initiate the search.
- Table:** A table with columns 'Camera ID', 'Time', and 'Event Type'.
- Buttons:** 'Play' and 'Cancel' buttons at the bottom.

To search for video, you have to specify:

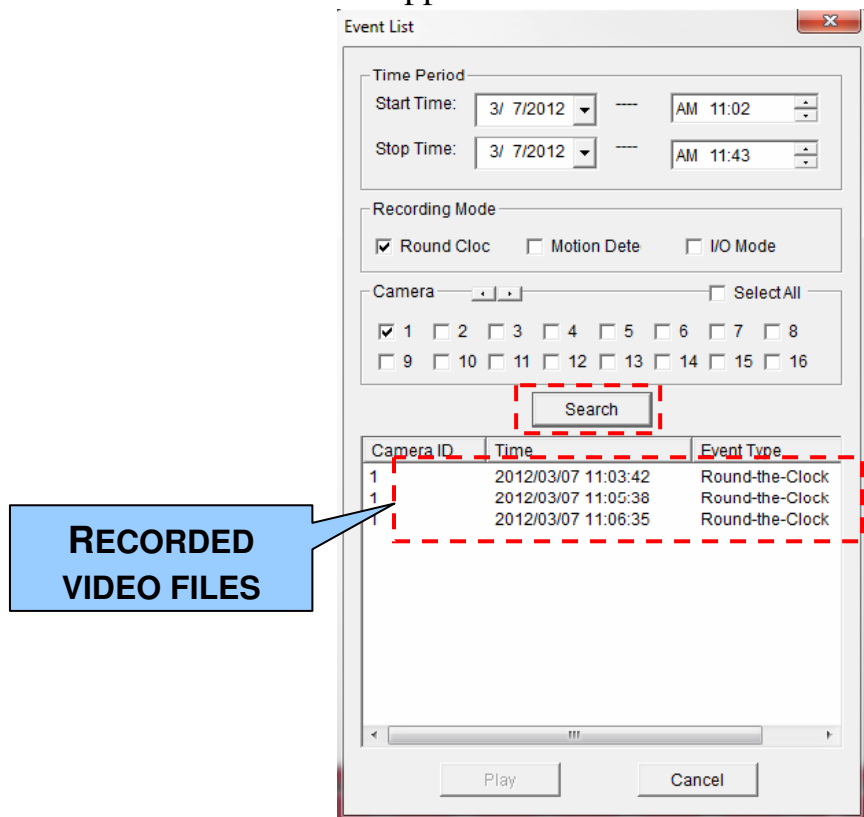
- 1) To search for video, you have to specify the Start and End time under Time Period:



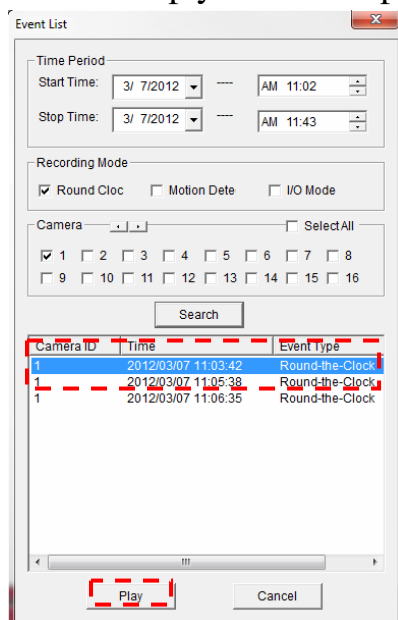
The 'Time Period' section of the dialog box is shown with two callout boxes:

- DATE:** Points to the date dropdowns (3/ 7/2012) for both Start and Stop times.
- HOUR IN A DAY:** Points to the time dropdowns (AM 11:19 and AM 11:29) for both Start and Stop times.

When you finish, click ‘Search’ button to search for recorded video, and a list similar to this will appear:



You can select the video clip you wish to play, and click ‘Play’ button.







For instructions of video playback, please see [section 5-2-4](#) for detailed instructions.

5-2-4 Video Playback




When a video is loaded, the video playback screen will look like this:



The description of every setup item is listed as below:

Item	Description
Close Window	Click X mark to close video playback window.
Video Playback Control	<div data-bbox="576 1352 671 1453"></div> Start video playback <div data-bbox="576 1503 671 1603"></div> Skip to the ending position of video clip. <div data-bbox="576 1653 671 1753"></div> Skip to next video frame <div data-bbox="576 1803 671 1904"></div> Pause a playing video, click the same button to resume video playback

	<div data-bbox="584 235 678 331" data-label="Image"></div> <div data-bbox="678 295 997 336" data-label="Text">Stop video playback</div> <div data-bbox="584 378 678 474" data-label="Image"></div> <div data-bbox="678 439 1123 479" data-label="Text">Skip to previous video frame</div> <div data-bbox="584 501 678 598" data-label="Image"></div> <div data-bbox="678 555 1268 595" data-label="Text">Skip to the beginning position of video</div>
Speed Control	<div data-bbox="574 618 769 817" data-label="Image"></div> <p>When video is stopped, you can click + or – button to adjust video playback speed: from 1/4 to 4x speed. You cannot adjust video playback speed when video is playing.</p>
Image processing	<div data-bbox="574 1041 710 1108" data-label="Image"></div> <div data-bbox="710 1070 1484 1220" data-label="Text"> <p>Click this button to take a snapshot picture of current video playback position. A new window will appear:</p> </div> <div data-bbox="574 1220 1316 1601" data-label="Image"></div> <p>You can adjust image brightness / contrast by dragging corresponding slide bar, or click ‘Gray Scale’, ‘Sharpness’, ‘Soften’ to adjust image parameters. You can click ‘Save as’ button to save current image (you’ll be prompted for image saving location), or click ‘Print’ to print current image to printer. To go back to previous menu, click ‘Cancel’.</p>

	Click ' Reset ' to reset image parameters back to default value.
Time	 Displays the current time.  displays video zoom in,  displays video zoom out.

6 Appendix

6-1 Specification

- Image Sensor: 1/2.5" 3 Mega pixel Color CMOS sensor
- Max Resolution: 2048x1536@20fps
- Min. Illumination: 1 Lux /F1.4
- Lens: CS mount Lens
- Night vision function: Built-in removable IR cut filter
- Video Compression: H.264 HP/MP/BP, MPEG-4 SP, MJPEG
- Image resolution: QXGA (2048 x1536): 20 fps
1080p (1920 x 1080): 30 fps
960p (1280 x 960): 30 fps
720p (1280 x 720): 30 fps
VGA (640 x 480): 30 fps
QVGA (320 x 240): 30 fps
- Network Processor: DSP base (DaVinci TM320DM368)
- Operation temperature: 0-50 Degree C
- Audio: 2 Way audio support
- Alarm Input/ Output: 2 x D/I, 1 x D/O
- Network Supported Protocols: TCP/IP,IPV6,UDP,ICMP ,DHCP ,NTP ,DNS
DDNS, SMTP, FTP, HTTP, HTTPs
Samba, PPPoE, UPnP, Bonjour,
RTP, RTSP, RTCP, IPV4

6-2 Troubleshooting

Please don't panic when you find that this IP Camera is not working properly. Before you send this IP Camera back to us, you can do some simple checks to save your time:

Problem description	Possible solution(s)
Can't connect to IP Camera	<ul style="list-style-type: none">• Please check the IP address of IP Camera again.• Please make sure the network cable is correctly connected to your local area network.• Please make sure power cable is correctly connected to IP Camera.• Please make sure IP Camera is switched on (the LED lights on IP Camera will lit up).
No IP Camera found	<ul style="list-style-type: none">• 'Auto search' function only works on IP Cameras located on local area network.
No image	<ul style="list-style-type: none">• If the place where IP camera is installed is too dark, try to add some lights when possible.• Check if there's anything covering the lens.

6-3 Glossary

MJPEG: Motion JPEG or M-JPEG is a digital video sequence that is made up of a series of individual JPEG images. (JPEG stands for Joint Photographic Experts Group). The quality of the image is guaranteed, regardless of movement because the captured video is a series of separately compressed JPEG images that can be extracted individually. The compression level can be adjusted to control image quality and file size.

MPEG4: is a video and audio compression technology found in many IP network camera models. The MPEG4 compression standard aims to deliver superior image quality while optimizing bandwidth.

H.264: H.264 is the latest compression technology that significantly reduces the file size of high-quality video images. Offers higher video resolution than Motion JPEG or MPEG-4 at the same bit rate and bandwidth, or the same quality video at a lower bit rate.

PPPoE (Point-to-Point Protocol over Ethernet): Is a network protocol for encapsulating Point-to-Point Protocol (PPP) frames inside Ethernet frames.

TCP / IP (Transmission Control Protocol/ Internet Protocol): TCP is used along with the Internet Protocol (IP) to transmit data as packets between computers over the network. TCP is a connection-oriented protocol, which means that a connection is established between the two end-points and is maintained until the data has been successfully exchanged between the communicating applications.

DDNS (Dynamic DNS): Used to create a fixed domain name for dynamic internet IP address. A domain name is a meaningful and easy-to-remember name for an Internet address. Normally used when the ISP has provided you with dynamic internet IP address to access the camera remotely.

SMTP (Simple Mail Transfer Protocol): SMTP is used for sending and receiving e-mail. SMTP authentication is an extension of SMTP, whereby the client is required to log into the mail server before or during the sending of email. It can be used to allow legitimate users to send email while denying the service to unauthorized users, such as spammers.

FTP (File Transfer Protocol): FTP is an application protocol that uses the TCP/IP protocols, used to exchange files between computers/devices on networks. Network cameras with embedded operating systems use FTP to send camera images to an authorized user's computer or web site.

UPnP (Universal Plug & Play): A set of computer network protocols that allow the automatic peer-to-peer detection of devices on the network. Allows the discovery of UPnP-enabled devices in a network environment.

RTSP (Real Time Streaming protocol): RTSP is a control protocol for Internet streaming of audio and video. Mostly used for remote viewing of live or stored security camera video over the Internet. RTSP can be considered as a "remote control" for controlling the media stream delivered by a media server. RTSP servers typically use RTP as the protocol for the actual transport of audio/video data.

CMOS Sensor (Complimentary metal-oxide semiconductor): Is an image sensor available in many IP network cameras with less circuitry hence consumes less power, produces higher frame rate & is less costly as compared to CCD sensors.

Pan/Tilt: IP cameras with panning capabilities can move back and forth horizontally in order to monitor wider areas. In many cases a camera's panning functionality can be controlled remotely from network PC using video management software. Tilt refers to an IP camera's ability to be directed up and down in a vertical plane. The camera lens can be aimed at a specific part of a scene, and in many cases the tilt can be controlled remotely.

Frame Rate: The frame rate is used to describe the frequency at which a video stream is updated is measured in frames per second (fps). If you want more accurate video then the frame rate should be kept high. Lower the frame rate, lesser the image details.

Gain Control: When camera produces a quality picture, it needs a sufficient amount of light to produce a minimum stable picture, in case the light condition reduces to a certain level, there is insufficient light to the camera to create a quality video picture. AGC (Automatic gain control) increases the amount of amplification in these conditions to bring the video signal up to the minimum required level. Besides increasing picture signal, AGC also helps to reduce noise and picture attenuation.

Daylight saving time (DST): It is practiced especially in countries such as Australia, Canada and the United States to save energy because it refers to a time for saving daylight during the summertime so that afternoons have more daylight and mornings have less. Typically clocks are adjusted forward one hour near the start of spring and are adjusted backward in autumn.

QoS & IP filtering: Quality of service plays an important role while viewing video over the data network, this IP camera supports QoS parameters which can help prioritize the video traffic along with the managed switches/ routers in the network to ensure best delivery of the video when running multiple applications over IP network. The IP camera can either white list or blacklist an IP address. This restricts unauthorized access to the IP camera.

Infrared (IR) cut-off filters: They are used with color CCD or CMOS imagers to produce accurate color images. An IR cut-off filter blocks the transmission of the infrared while passing the visible. This can be done with two optical techniques: absorption or reflection. Absorptive filters are made with special optical glass that absorbs near infrared radiation. Reflection type filters are short-pass interference filters that reflect infrared light with high efficiency.

True day/night function: This IP camera has an IR cut filter which offers true image during operation in Day/Night mode. Under day light operations, the IR cut filter filters the IR Ray from the image and offers a true color image. During night operations the IR cut filter is removed automatically and provides a monochrome image.

This product comes with One Year warranty. For further details about warranty policy and Product Registration, please visit support section of **www.digisol.com**