

SAMSUNG TECHWIN

NETWORK VIDEO ENCODER

User Manual

SPE-101

The Samsung logo is centered in the middle of the page. It is set against a dark background with intricate, glowing white and grey abstract patterns that resemble light trails or smoke. The word "SAMSUNG" is written in its characteristic bold, sans-serif font, appearing slightly translucent as if it's floating within or attached to the background patterns.

SAMSUNG

CE

The Samsung logo, consisting of the word "SAMSUNG" in a bold, sans-serif font, is enclosed within a black, horizontally-oriented oval shape.

SAMSUNG


Network Video Encoder

User Manual

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Warranty

If the product does not operate properly in normal conditions, please let us know. Samsung Techwin will resolve the problem for free of charge. The warranty period is 3 years. However, the followings are excluded:

- If the system behaves abnormally because you run a program irrelevant to the system operation.
- Deteriorated performance or natural worn-out in process of time

❖ **Design and specifications are subject to change without prior notice.**

❖ **The default password can be exposed to a hacking thread so it is recommended to change the password after installing the product.**

Note that the security and other related issues caused by the unchanged password shall be responsible for the user.

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings, Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety, If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/ accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

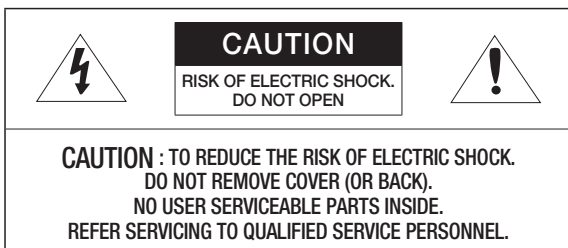


WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE. DO NOT INSERT ANY METALLIC OBJECT THROUGH THE VENTILATION GRILLS OR OTHER OPENINGS ON THE EQUIPMENT.

Apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

CAUTION



EXPLANATION OF GRAPHICAL SYMBOLS



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

Class I construction

An apparatus with CLASS I construction shall be connected to a MAINS socket outlet with a protective earthing connection.

Battery

Batteries(battery pack or batteries installed) shall not be exposed to excessive heat such as sunshine, fire or the like.

It is essential that when changing the battery in the unit, the replacement battery must be of the same type otherwise there may be a possibility of an explosion.

CALIFORNIA USA ONLY

This Perchlorate warning applies only to primary CR (Manganese Dioxide) Lithium coin cells in the product sold or distributed ONLY in California USA. "Perchlorate Material - special handling may apply, See www.dtsc.ca.gov/hazardouswaste/perchlorate."

CAUTION

These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

Please use the input power with just one video encoder and other devices must not be connected.

overview

Please read the following recommend safety precautions carefully.

- Do not place this apparatus on an uneven surface.
- Do not install on a surface where it is exposed to direct sunlight, near heating equipment or heavy cold area.
- Do not place this apparatus near conductive material.
- Do not attempt to service this apparatus yourself.
- Do not place a glass of water on the product.
- Do not install near any magnetic sources.
- Do not block any ventilation openings.
- Do not place heavy items on the product.

User's Manual is a guidance book for how to use the products.

The meaning of the symbols are shown below.

- Reference : In case of providing information for helping of product's usages
- Notice : If there's any possibility to occur any damages for the goods and human caused by not following the instruction
- × Please read this manual for the safety before using of goods and keep it in the safe place.

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PRODUCT FEATURES

- **Multi-Streaming**

This network video encoder can display videos in different resolutions and qualities simultaneously using different CODECs.



- However, MPEG-4 video can not be played on a web page. Use CMS software if you want to play the video on a web page.

- **Support various communication protocols**

- **Web Browser-based Monitoring**

Using the Internet web browser to display the image in a local network environment.

- **Alarm**

If an event occurs, the event video will be sent to the FTP/e-mail address that you have registered.

- **ONVIF Compliance**

This product supports ONVIF.

For more information, refer to www.onvif.org.



Driving network video through global standardization











RECOMENDED PC SPECIFICATIONS

- CPU : Intel(R) Core(TM)2 2.00 GHz or higher
- Operating System : Windows XP, VISTA, 7
Mac OS
- Resolution : 1280X1024 pixels or higher
- RAM : 1GB or higher
- Web Browser : Internet Explorer 7.0 or higher, Firefox, Chrome, Safari
- Video Memory : 128MB or higher

overview

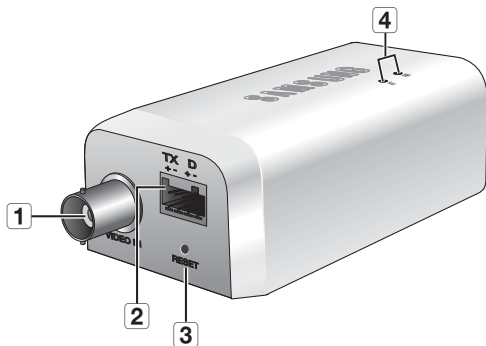
WHAT'S INCLUDED

Please check if your network video encoder and accessories are all included in the product package.

Appearance	Item Name	Quantity	Description
	Network Video Encoder	1	
	Instruction book, Installation CD	1	User manual, Quick Guide, IP Installer S/W Program
	CMS S/W DVD	1	NET-i viewer S/W Program
	Quick Guide	1	
	Tapping screw (M3 X L12)	2	Used for installation on the wall or ceiling
	Small machine screw (M2.6 X L6)	2	Used to fix the product with the bracket or holder
	Bracket	1	Used to fix the product on a ceiling or wall
	Holder	1	Used to fix the product with the housing
	4-pin Terminal Block	1	Used for RS-485/422 communications
	2-pin Terminal Block	1	Used for power connection

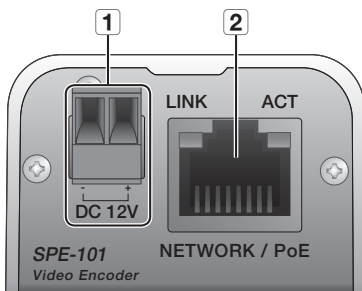
AT A GLANCE

Front Side



Item	Description	
1 Video Input Port	BNC port for video input.	
2 RS-422/485 port	TX+, TX-	RS-422 TX Data line ■ This is not available in RS-485 mode.
	D+, D-	RS-422 RX Data line or RS-485 Data line
3 Reset Button	Hold it down for 5 seconds to return all your settings to the factory default.	
4 Network, Power Indicators	NET	When the network connection is established, the green indicator blinks.
	PWR	Blue : The system is in the booting process. Blinking green : The green indicator blinks if no IP is obtained from the DHCP server. Green : The green indicator turns on if an IP is normally obtained from the DHCP server.

Rear Side



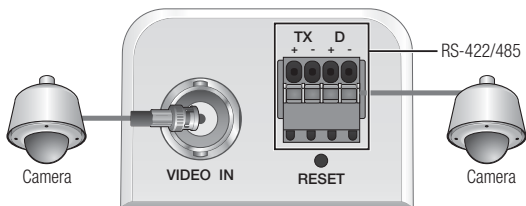
Item	Description
1 Power Port	Used to connect the specified power source.
2 Network Port	Used to connect a PoE or Ethernet cable.

installation & connection

CONNECTING WITH OTHER DEVICE

Connecting the camera

Connect the **[VIDEO IN]** port of the network video encoder to the video output port of the camera.

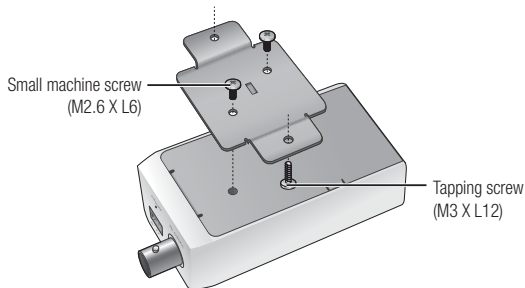


Using the bracket or holder

Align the product with the bracket holes. Insert and tighten the provided small machine screw (M2.6 X L6) to fix the product with the bracket.

This instruction is also applied if using the holder.

- ! Use a provided small machine screws (M2.6 X L6) when installing holder mounting or bracket on the product.
If you use any other screws, it may cause damage to the product.



installation & connection

Connecting to the RS-422/485 device

Connect the external device to the [D+, D-] ports.

You can connect and control PTZ camera that supports RS-422/485 communication.

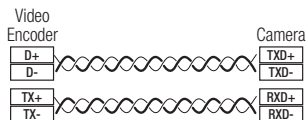
Port	Description	Port	Description
TX+	RS-422 TX Data line ■ This is not available in RS-485 mode.	D+	RS-422 RX Data line or RS-485 Data line
TX-		D-	

Control Signal Connection

- RS-485 Communications



- RS-422 Communications



- Depending on camera's type, connection polarity can be different.
For further information, refer to the corresponding PTZ Camera's documentation.

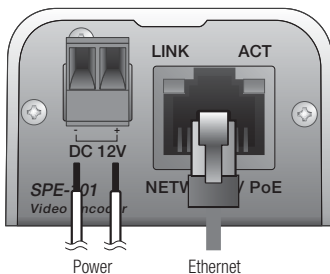
Ethernet Connection

Connect the Ethernet cable to the local network or to the Internet.

Power Supply

Use the screwdriver to connect each line (+, -) of the power cable to the corresponding power port of the network video encoder.

- ! ■ Be careful not to reverse the polarity when you connect the power cable.
You can also use a router featuring PoE (Power over Ethernet) to supply power to the device.
- If PoE and DC 12V are both applied, this device will get supplied with power from PoE.
- If you want to connect an external device, you must turn off the external device before proceeding.



Electrical Resistance of Copper Wire at [20°C (68°F)]

Copper Wire Gauge (AWG)	#24(0.22mm ²)	#22(0.33mm ²)	#20(0.52mm ²)	#18(0.83mm ²)
Resistance (Ω/m)	0.078	0.050	0.030	0.018
Drop Voltage (V/m)	0.028	0.018	0.011	0.006
Recommended Distance (m)	Less than 20	Less than 30	Less than 30	Less than 30

- As shown in the table above, you may encounter a voltage-sag depending on the wire length.
If you use an excessively long wire for network video encoder connection, the network video encoder may not work properly.
 - Network Video Encoder Operating Voltage : DC 12V±10%
 - Voltage drop measurements on the chart above may vary depending on the type and manufacture of the copper cable.

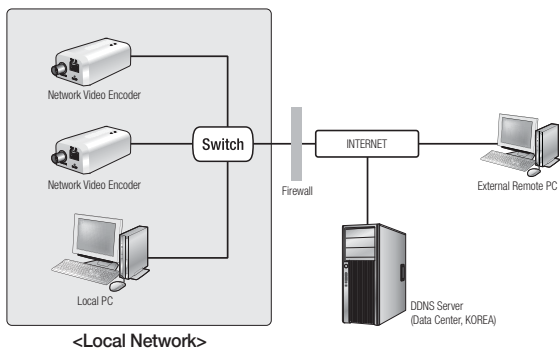
network connection and setup

You can set up the network settings according to your network configurations.

CONNECTING THE NETWORK VIDEO ENCODER DIRECTLY TO LOCAL AREA NETWORKING

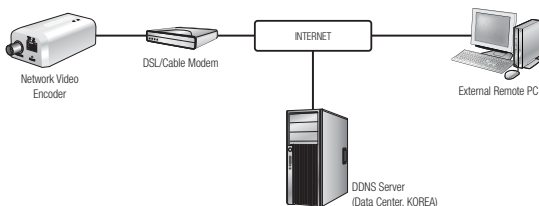
Connecting to the network video encoder from a local PC in the LAN

1. Launch an Internet browser on the local PC.
2. Enter the IP address of the network video encoder in the address bar of the browser.



- A remote PC in an external Internet out of the LAN network may not be able to connect to the network video encoder installed in the intranet if the port-forwarding is not properly set or a firewall is set.
In this case, to resolve the problem, contact your network administrator.
- By factory default, the IP address will be assigned from the DHCP server automatically. If there is no DHCP server available, the IP address will be set to 192.168.1.100. To change the IP address, use the IP Installer.
For further details on IP Installer use, refer to "**Static IP Setup**". (Page 21)

CONNECTING THE NETWORK VIDEO ENCODER DIRECTLY TO A DHCP BASED DSL/CABLE MODEM



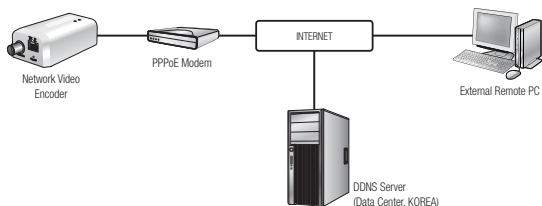
1. Use the cross cable to manually connect between your PC and network video encoder.
2. Run the IP Installer and change the IP address of the network video encoder so that you can use the web browser on your desktop to connect to the Internet.
3. Use the Internet browser to connect to the network video encoder.
4. Move to [**Setup**] page.
5. Move to [**Network**] – [**DDNS**] and configure the DDNS settings.
6. Move to [**Network**] – [**Interface**], and set the network type to [**DHCP**].
7. Connect the network video encoder, which was removed from your PC, directly to the modem.
8. Restart the network video encoder.



- For registering the DDNS settings, refer to "**Registering with DDNS**". (page 41)
- For configuring the DDNS settings, refer to "**DDNS**". (page 40)
- For setting the network type, refer to "**Interface**". (page 39)

network connection and setup

CONNECTING THE NETWORK VIDEO ENCODER DIRECTLY TO A PPPoE MODEM



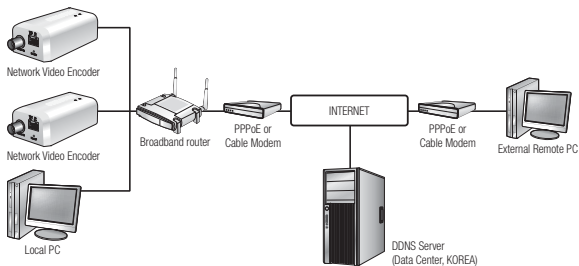
1. Use the cross cable to manually connect between your PC and network video encoder.
2. Run the IP Installer and change the IP address of the network video encoder so that you can use the web browser on your desktop to connect to the Internet.
3. Use the Internet browser to connect to the network video encoder.
4. Move to **[Setup]** page.
5. Move to **[Network] – [DDNS]** and configure the DDNS settings.
6. Move to **[Network] – [Interface]**, and set the network type to **[PPPoE]**.
7. Connect the network video encoder, which was removed from your PC, directly to the modem.
8. Restart the network video encoder.



- For registering the DDNS settings, refer to "**Registering with DDNS**". (page 41)
- For configuring the DDNS settings, refer to "**DDNS**". (page 40)
- For setting the network type, refer to "**Interface**". (page 39)

CONNECTING THE NETWORK VIDEO ENCODER TO A BROADBAND ROUTER WITH THE PPPoE/CABLE MODEM

This is for a small network environment such as homes, SOHO and ordinary shops.



Configuring the network settings of the local PC connected to a broadband router

Configuring the network settings of the local PC connected to a broadband router, follow the instructions below.

- Select : <Network Neighborhood> → <Properties> → <Local Area Connection> → <Properties> → <General> → <Internet Protocol (TCP/IP)> → <Properties> → <Obtain an IP address automatically> or <Use the following IP address>.
- Follow the instructions below if you select <Use the following IP address>:

ex1) If the address (LAN IP) of the Broadband router is 192.168.1.1

IP address : 192.168.1.100
Subnet Mask : 255.255.255.0
Default Gateway : 192.168.1.1

ex2) If the address (LAN IP) of the Broadband router is 192.168.0.1

IP address : 192.168.0.100
Subnet Mask : 255.255.255.0
Default Gateway : 192.168.0.1

ex3) If the address (LAN IP) of the Broadband router is 192.168.xxx.1

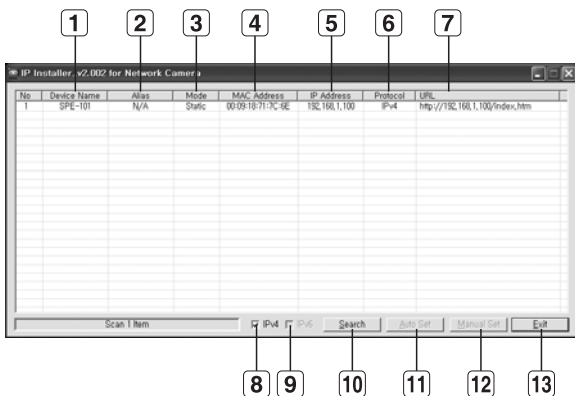
IP address : 192.168.xxx.100
Subnet Mask : 255.255.255.0
Default Gateway : 192.168.xxx.1



- For the address of the Broadband router, refer to the product's documentation.
- Refer to the "**Port Range Forward (Port Mapping) Setup**" section of the Broadband router's documentation. (Page 25)

network connection and setup

BUTTONS USED IN IP INSTALLER



Item	Description
1 Device Name	Model name of the connected network device. Click the column to sort the list by model name. However, search will be stopped if clicked during the search.
2 Alias	This function is not currently implemented.
3 Mode	Displays either <Static> or <Dynamic> for the current network connection status.
4 MAC(Ethernet) Address	Ethernet address of the connected network device. Click the column to sort the list by Ethernet address. However, search will be stopped if clicked during the search.
5 IP Address	IP address. Click the column to sort the list by IP address. However, search will be stopped if clicked during the search. The factory default is "192.168.1.100".
6 Protocol	Network settings of the network device. The factory default is "IPv4". Network device with the IPv6 setting will be displayed "IPv6".

Item	Description
7 URL	Shows URL address.
8 IPv4	Scans for network device with the IPv4 setting.
9 IPv6	Scans for network device with the IPv6 setting. Activated in an IPv6 compliant environment.
10 Search	Scans for network devices that are currently connected to the network. However, this button will be grayed out if neither IPv4 nor IPv6 is checked.
11 Auto Set	The IP Installer automatically configures the network settings.
12 Manual Set	You should configure the network settings manually.
13 Exit	Exits the IP Installer program.



- For the IP installer, use only the installer version provided in the installation CD or use the latest one if available.
You can download the latest version from the Samsung web site (www.samsungipolis.com).

STATIC IP SETUP

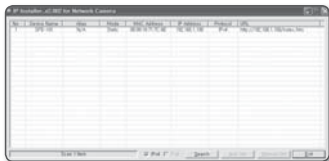
Manual Network Setup

Run <IP Installer_vX.XX.exe> to display the network device search list.
At the initial startup, both [Auto Set] and [Manual Set] will be grayed out.



- Use the IP Installer in version 1.47 or later.
- For network devices found with the IPv6 setting, these buttons will be grayed out as the network devices do not support this function.

- Select a network device from the search result.
Find the MAC (Ethernet) address labeled on the rear of the network device.
Both the [Auto Set] and [Manual Set] buttons will be activated.
- Click [Manual Set].
The Manual Setting dialog appears.
The default values of <IP Address>, <Subnet Mask>, <Gateway>, <HTTP Port> and <VNP Port> of the network device will be displayed.



network connection and setup

3. In the <Address> pane, provide the necessary information.

- MAC (Ethernet) Address : The MAC (Ethernet) address assigned to the network device will be set and displayed automatically so you don't need to assign it manually.



- You can configure the static IP settings only if the DHCP checkbox is unchecked.

Address	<input type="checkbox"/> DHCP	Port	HTTP Port	80
MAC Address	00:09:1B:71:7C:8E	VNP Port	4520	
IP Address	192 . 168 . 1 . 100			
Subnet Mask	255 . 255 . 255 . 0			
Gateway	192 . 168 . 1 . 1			
Password				
OK		Cancel		

If using a broadband router

• IP Address : Enter an address falling in the IP range provided by the Broadband router.

ex) 192.168.1.2~254, 192.168.0.2~254, 192.168.XXX.2~254

• Subnet Mask : The <Subnet Mask> of the Broadband router will be the <Subnet Mask> of the network video encoder.

• Gateway : The <Local IP Address> of the Broadband router will be the <Gateway> of the network video encoder.

Internet Setup	Internet Connection Type	Automatic Configuration - DHCP
Optional Settings (required by some ISPs)	Router Name	Router_3
	Host Name	
	Domain Name	
	WPA	Manual
	Size	1489
Network Setup	Router IP	Local IP Address: 192 . 168 . 1 . 1
		Subnet Mask: 255 . 255 . 255 . 0



- The settings may differ depending on the connected Broadband router model. For more information, refer to the user manual of the applicable router.
- Refer to the "**Port Range Forward (Port Mapping) Setup**" section of the Broadband router's documentation. (Page 25)

If not using a broadband router

For setting <IP Address>, <Subnet Mask>, and <Gateway>, contact your network administrator.

4. In the <Port> pane, provide necessary information.

- HTTP Port : Used to access the network device using the Internet browser, defaulted to 80. Use the spin button to change the HTTP Port value.
- VNP Port : Used to control the video signal transfer, defaulted to 4520.

Address	<input type="checkbox"/> DHCP	Port	HTTP Port	80
MAC Address	00:09:1B:71:7C:8E	VNP Port	4520	
IP Address	192 . 168 . 1 . 100			
Subnet Mask	255 . 255 . 255 . 0			
Gateway	192 . 168 . 1 . 1			
Password				
OK		Cancel		

5. Enter the password.

This is the login password for the "admin" user who accesses the network device. The default password is "4321".



- The default password can be exposed to a hacking thread so it is recommended to change the password after installing the product.
Note that the security and other related issues caused by the unchanged password shall be responsible for the user.

6. Click **[OK]**.

Manual network setup will be completed.

If the Broadband router has more than one network video encoder connected

Configure the IP related settings and the Port related settings distinctly with each other.

Category		Network video encoder #1	Network video encoder #2
IP related settings	IP Address	192.168.1.100	192.168.1.101
	Subnet Mask	255.255.255.0	255.255.255.0
	Gateway	192.168.1.1	192.168.1.1
Port related settings	HTTP Port	8080	8081
	WNP Port	4520	4521



- If the **<HTTP Port>** is set other than 80, you must provide the **<Port>** number in the address bar of the Internet browser before you can access the network video encoder.
ex) http://IP address : HTTP Port
http://192.168.1.100:8080

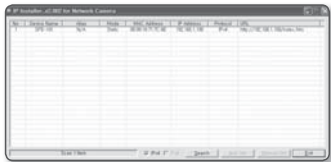
Auto Network Setup

Run **<IP Installer_vX.XX.exe>** to display the network device search list.
At the initial startup, both **[Auto Set]** and **[Manual Set]** will be grayed out.



- Use the IP Installer in version 1.47 or later.
- For network devices found with the IPv6 setting, these buttons will be grayed out as the cameras do not support this function.

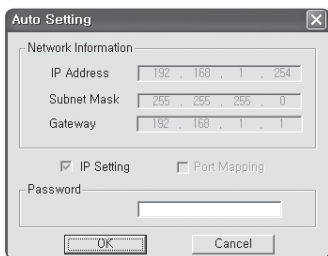
1. Select a network device from the search result.
Find the MAC (Ethernet) address labeled on the rear of the network device.
Both the **[Auto Set]** and **[Manual Set]** buttons will be activated.



2. Click **[Auto Set]**.
The Auto Setting dialog appears.
The **<IP Address>**, **<Subnet Mask>**, and **<Gateway>** will be set automatically.

network connection and setup

3. Enter the password.
This is the login password for the “admin” user who accesses the network video encoder. The default password is “4321”.
 - The default password can be exposed to a hacking thread so it is recommended to change the password after installing the product.
Note that the security and other related issues caused by the unchanged password shall be responsible for the user.
4. Click [OK].
Auto network setup will be completed.



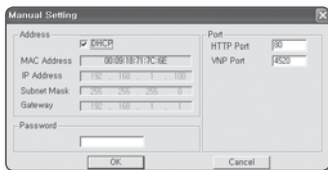
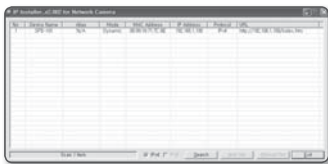
DYNAMIC IP SETUP

Dynamic IP Environment Setup

- Example of the Dynamic IP environment
 - If a Broadband Router, with a network device connected, is assigned an IP address by the DHCP server
 - Network device is connected to a DHCP based modem directly
 - If IPs are assigned by the internal DHCP server via the LAN

Checking the Dynamic IP

1. From a local PC, run <IP Installer> to display a list of network devices that are assigned <Dynamic IP>.
2. Select a network device in the list, and click [Manual Set] to check the <Dynamic IP> of the network device. If you uncheck <DHCP>, you can change IP to <Static>.

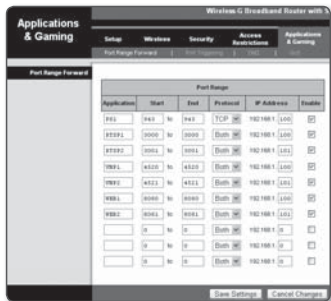


PORT RANGE FORWARD (PORT MAPPING) SETUP

If you have installed a broadband router with a network video encoder connected, you must set the port range forwarding on the Broadband router so that a remote PC can access the network video encoder in it.

Manual Port Range Forwarding

1. From the Setup menu of the Broadband router, select **<Applications & Gaming>** - **<Port Range Forward>**. For setting the port range forward for a third-party Broadband router, refer to the user guide of that Broadband router.
2. Select **<TCP>** and **<UDP Port>** for each connected network video encoder to the Broadband router. Each port number for the Broadband router should match that specified in **<Network>** - **<Port>** from the network video encoder's Setup menu.
3. When done, click **[Save Settings]**. Your settings will be saved.



- Above sample instructions are based on the CISCO's Broadband router (Model: LINKSYS).
- The settings may differ depending on the connected Broadband router model. For more information, refer to the user manual of the applicable router.

network connection and setup

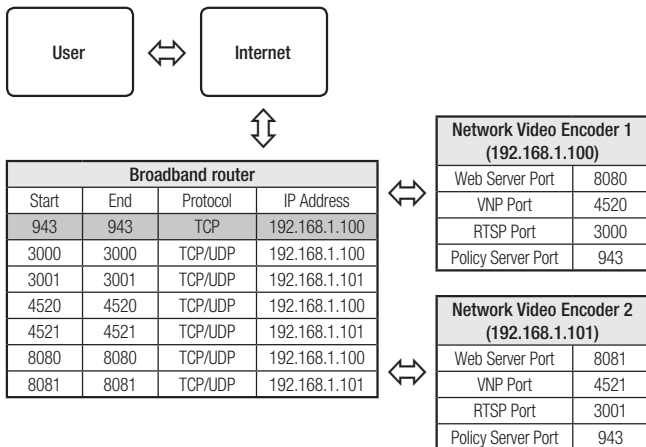
Setting up Port Range Forward for several network video encoders

When several network video encoders are connect to one Broadband router device, you should forward the TCP 943 port of the router to the TCP 943 port of a connected network video encoder.

! If you don't set properly the TCP 943 port of the router, you cannot get any video stream from the web page of the network video encoder.

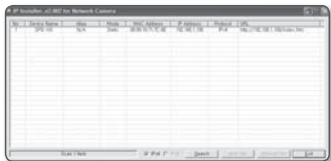
- TCP 943 port is a port for the Silverlight policy server of a network video encoder.
- You can set a rule of Port Forwarding on the Broadband router device through its configuration web page.
- You cannot change the Silverlight policy server port of a network video encoder.
- You can change the ports of the network video encoder except the policy server port through its configuration web page.

When Network video encoder1 and Network video encoder2 are connected to a router :



CONNECTING TO THE NETWORK DEVICE FROM A SHARED LOCAL PC

1. Run the IP Installer.
Searches for connected network devices and displays on the list.
2. Double click the desired network device to connect to.
The Internet browser starts and connects to the network device.



- You can also access the video encoder in such way you type the IP address of the found network device in the address bar of the Internet browser.

CONNECTING TO THE NETWORK VIDEO ENCODER FROM A REMOTE PC VIA THE INTERNET

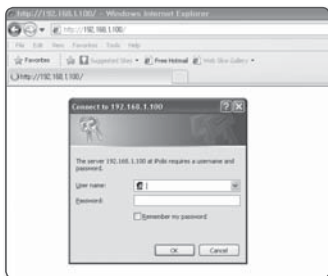
Since using the IP Installer on a remote computer that is not in the Broadband router's network cluster is not allowed, users can access network video encoders within a broadband router's network by using the network video encoder's DDNS URL.

1. Before you can access a network video encoder in the Broadband router network, you should have set the port range forward for the Broadband router.
2. From the remote PC, launch the Internet browser and type the DDNS URL address of the network video encoder, or the IP address of the Broadband router in the address bar.
ex) [http://www.samsungipolis.com/\[Product Domain\]](http://www.samsungipolis.com/[Product Domain])

CONNECTING TO THE NETWORK VIDEO ENCODER

Normally, you would

1. Launch the Internet browser.
2. Type the IP address of the network video encoder in the address bar.
 - ex) • IP address (IPv4) : 192.168.1.100
→ http://192.168.1.100
- the Login dialog should appear.
 - IP address (IPv6) : 2001:230:abcd:ffff:0000:0000:ffff:1111
→ http://[2001:230:abcd:ffff::ffff:1111]
- the Login dialog should appear.



If the HTTP port is other than 80

1. Launch the Internet browser.
2. Type the IP address and HTTP port number of the network video encoder in the address bar.
 - ex) IP address : 192.168.1.100:HTTP Port number(8080)
→ http://192.168.1.100:8080 - the Login dialog should appear.

Using URL

1. Launch the Internet browser.
2. Type the DDNS URL of the network video encoder in the address bar.
 - ex) URL address : http://www.samsungipolis.com/[Product Domain]
- the Login dialog should appear.

To check the DDNS address

If the network video encoder is connected directly to the DHCP cable modem, DSL modem, or PPPoE modem, the IP address of your network will be changed each time you try to connect to the ISP (Internet Service Provider) server.

If this is the case, you will not be informed of the IP address changed by DDNS.

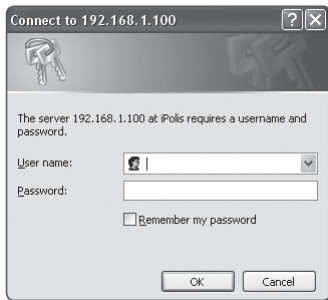
Once you register a dynamic IP-based device with the DDNS server, you can easily check the changed IP when you try to access the device.

To add the IP address to the <DDNS> server, visit www.samsungipolis.com and register your device, and set the DDNS option to <Samsung DDNS> before providing the user ID and password for the DDNS server.

LOGIN

The default user ID is “admin”, and the default password is “4321”.

1. Enter “admin” in the <User Name> input box.
2. Enter “4321” in the <Password> input box.
If the password is changed, enter the changed password instead.
3. Click [OK].
If you have logged in successfully, you will see the Live Viewer screen.



- For security purposes, ensure that you change the password in <System> - <User>.

The administrator ID, “admin”, is fixed and can not be changed.

- The default password can be exposed to a hacking thread so it is recommended to change the password after installing the product.
Note that the security and other related issues caused by the unchanged password shall be responsible for the user.
- If you check the “Remember my password” option when your input is done, in future you will be logged in automatically without being prompted to enter the login information.



- You will experience the best video quality if the screen size is 100%. Reducing the ratio may cut the image on the borders.

web viewer

This network video encoder uses Microsoft Silverlight for displaying the video.

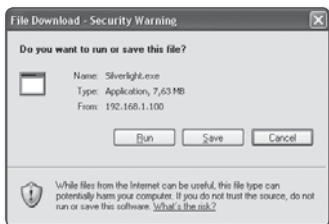
INSTALLING SILVERLIGHT RUNTIME

If your PC has not installed Silverlight Runtime or has just installed an old runtime version, you will be redirected to the Silverlight Runtime installation page automatically when accessing the web viewer.

1. Click **<Click Here>**.



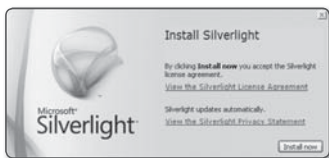
2. When the file download dialog pops up, click **<Run>**.



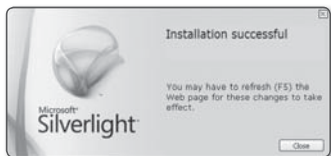
3. When the download is completed, click **<Run>**.



4. The Silverlight Runtime installation page will be displayed. **<Install now>** to proceed with the installation.



5. When done, click <Close>.



6. Close and restart the web browser, and try to access the Web Viewer.
When Silverlight Runtime is properly installed, you will see the Live screen.



- For normal installation, set the Block Popup setting as follows:
ex) **Internet Explorer** → **Tools** → **Block Popup** → **Turn Off Pop-up Blocker (B)**
- However, MAC OS X users who are not connected to the Internet can use the provided installation CD to install Silverlight Runtime (Run the executable "Silverlight_xxx.dmg" in the CD. You will be guided through installation of the software).



USING THE LIVE SCREEN



Item	Description
1 Monitoring	Move to the monitoring screen.
2 Setup	Move to the Setup screen.
3 Viewer Screen	Displays the Live video on the screen.
4 Hide the alarm indicator	<p>Hides the alarm indicator near the border of the viewer screen.</p> <ul style="list-style-type: none"> ■ In the following cases, the alarm message will pop up on the border of the viewer. <ul style="list-style-type: none"> - If an event (motion detection) occurs - If the network video encoder is turned off - If the network is disconnected
5 Camera Menu	Used to retrieve and customize connected camera's Setup menu. For selecting and saving each menu item, refer to " Using the Camera Menu ". (page 33)
6 PTZ	You can control Pan/Tilt/Zoom/Focus of the cameras that are connected to the network video encoder.





Item	Description
7 Digital PTZ	You can use the mouse wheel to activate the digital zooming.
8 Screen Optimization, Full Screen	Adjust the screen to the optimal size, and display the Full Screen icon on the Live screen.
9 Capture	Saves the snapshot as an image file in the .bmp format.
10 Video Format	You can select a profile type in <Video profile> under the <Video> setup menu. <input checked="" type="checkbox"/> If the "Invalid codec" message is displayed, select a profile type from the profile list again.



- If the temperature drops below the operational range, video signal may not be produced. In such cases, please wait for the video.

USING THE CAMERA MENU

Used to retrieve and customize the connected Camera Setup menu.

1. Launch the Web Viewer.
2. Click [**Camera Menu** ()] in the left corner of the Live screen. The camera setup menu appears.
3. Use the Up/Down (▲/▼) buttons to move to a desired item.
4. Click [**Enter** ()]. Then, use the up/down (▲/▼) button to move to a desired item.
5. To access a sub menu item, click [**Enter** ()].
6. To move to previous menu or exit the menu setup, click [**Cancel** ()] button.

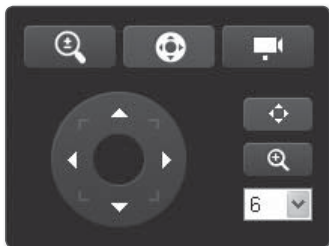


- The camera menu may different depend on camera. For more information, refer to camera's user manual.


To control the PTZ function

You can control the operations of a network camera that supports the PTZ control.

- If the PTZ function is not controllable, check the RS-422/485 connection status of the camera and network video encoder.
1. Press the [PTZ ()] button.
 2. When the PTZ button bar appears on the screen, use the direction buttons to adjust the camera angle, zoom factor or focus to your preference.

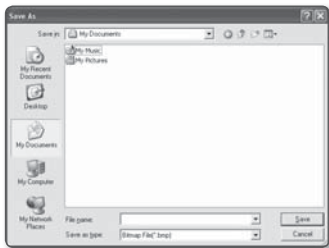


To capture the snapshot

1. Click [] on the scene to capture. The Capture dialog should appear.
2. Click [Save] button. The screenshot will be saved in the specified path.



- If you encounter an interrupted video when capturing the image with IE8 on a Windows 7-based PC, deselect "Turn On Protected Mode" from "Tools – Internet Options – Security".



To fit the full screen

1. Click the [Full Screen ()] button. The corresponding button will be displayed in the Viewer.
2. Click the button. This will fit the Viewer to the full screen.
3. To exit the full screen mode, press [Esc] on the keyboard.

setup screen



SETUP

You can configure the video, network, event and system settings of the network video encoder via the network.

1. In the Live screen, click [Setup ()].
2. The Setup screen appears.

VIDEO SETUP

Video profile

1. From the Setup menu, select the <Video ()> tab.
2. Click <Video profile>.
3. Select a <Video profile> number.
4. Click the input box of each item and enter / select a desired value.
 - The context menu may differ depending on the selected codec type.
 - Default profile : This is the default video profile.
 - Fixed framerate profile : Fix the frame rate of the selected profile regardless of the settings of other profiles.
 - E-mail/FTP profile : Video profile to be transferred to the specified email or FTP site.
 - Only the Motion JPEG codec can be set as the E-mail/FTP Profile.
5. When done, click [Apply ()].



To add a video profile

You can add as many codecs as necessary so that a variety of profiles can be applied according to the recording condition.

1. Select a profile number.
2. Provide the name and select a codec.
3. Specify the conditions under which the codec will be applied.
4. Specify the details of the selected codec including resolution and frame rate.
 - Resolution : Set the video size of the MPEG-4, H.264, and Motion JPEG files.
 - Framerate : Specify the frame rate.
 - Compression : Specify the compression rate of the video.
 - Maximum bitrate : Specify the maximum bit rate of the video.



- As the bit rate can be adjusted limitedly according to the resolution, frame rate and screen complexity, the actual bit rate can be greater than the maximum bit rate. So you must consider the use conditions when setting the value.
- Bitrate control : You can select one from constant bit rate and variable bit rate for compression. Constant bit rate (CBR) varies the video quality and fixes network transfer bit rate, while variable bit rate emphasizes the quality by varying network transfer bit rate.
- Target bitrate : Specify the bit rate at which you will transfer the video.
- Encoding priority : You can set the video transfer method to Framerate or Compression.
- GOP size : Select a GOP size between 1 and 15.
- Profile : You can select the H.264 profiling method.
- Entropy coding : Reduce the possible compression loss due to encoding.
- Multicast (VNP) : Specify the use of the VNP protocol.
 - IPv4 : Enter an IPv4 address with which you can connect to the IPv4 network.
 - Port : Specify the video communication port.
 - TTL : Set the TTL for the VNP packet.
- Multicast (RTP) : Specify the use of the RTP protocol.
 - IPv4 : Enter an IPv4 address with which you can connect to the IPv4 network.
 - Port : Specify the video communication port.
 - TTL : You can set the TTL for the RTP packet.

What is GOP size?



GOP (Group of Pictures) is a set of video frames for MPEG-4 and H.264 format compression, indicating a collection of frames from the initial I-Frame (key frame) to the next I-Frame. GOP consists of 2 kinds of frames: I-Frame and P-Frame.

I-Frame is the basic frame for the compression, also known as Key Frame, which contains one complete image data. P-Frame contains only the data that has changed from the preceding I-Frame.

You can set between 1 and 15 for the MPEG-4 and H.264 CODEC.

PTZ setup


You can move the camera lens and control the zooming operation.

1. Select the <Video ()> tab from Setup menu.
2. Click the <PTZ setup>.
3. Set the preset and serial port.
 - Preset setup : Select a number between 1 and 255, and press Move. The camera angle will be adjusted as specified in the preset.
 - The connected camera should be configured to allow serial port communication.
 - Serial Setup : You can set the RS-422/485 communication mode of the connected camera.
 - The camera and device are connected via RS-422/485 communication ports.
 - The camera will not perform properly if communication related settings of the connected camera are incorrect.
4. When done, click [Apply ()].




setup screen


To add a preset

1. Select the preset number to add.
2. Set the name for the preset.
3. Press the **[Add ()]** button.

To delete a preset




1. Select the preset number to delete.
2. Press the **[Delete ()]** button.

To move the preset

1. Select the preset number to move.
2. Press the **[Move ()]** button.

NETWORK SETUP



Interface

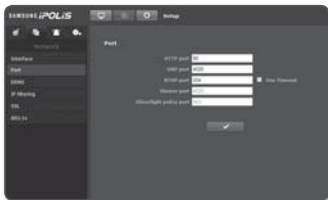
- From the Setup menu, select the <Network ()> tab.
 - Click <Interface>.
 - Set the <Interface> and <IPv6 setup> as necessary.
 - IP type : Select an IP connection type.
 - Manual : Specify the IP address, Subnet Mask, Gateway, DNS1, and DNS2.
 - DHCP : Specify the DNS1 and DNS2.
 - PPPoE : Specify the DNS1, DNS2, ID and password.
 - If you set it to <Manual>, you should specify the IP, Subnet mask, Gateway, DNS 1 & 2 manually.
 - MAC address : Shows the MAC address.
 - IP address : Displays the current IP address.
 - Subnet mask : Displays the <Subnet Mask> for the set IP.
 - Gateway : Displays the <Gateway> for the set IP.
 - DNS1/DNS2 : Displays the DNS(Domain Name Service) server address.
 - IPv6 use : Specify the use of IPv6.
 - Mode
 - Static : Selecting "Static" will activate the <IPv6 address>.
 - Enter the IPv6 address in a specified format.
 - Auto : Automatically obtain the IPv6 address to access the IPv6 network.
 - IPv6 address : Enter the address in a total of 8 parts in hexadecimal notation.
ex) 2001:230:abcd:ffff:0000:0000:ffff:1111
 - When done, click [Apply ()].
-  The IP addressing system will be defaulted to DHCP. If no DHCP server is found, the previous settings will be restored automatically.



setup screen


Port

1. From the Setup menu, select the <Network ()> tab.
2. Click <Port>.
3. Type in each item in the Port menu as necessary.
 - Neither the port range between 0 and 1023 nor port 3702 is available.
 - HTTP port : HTTP port used to access the network video encoder via the web browser. The default is 80(TCP).
 - VNP port : Set a port used to transfer video signals with the Samsung protocols.
 - RTSP port : Used to transfer videos in the RTSP mode; the default is 554.
 - Viewer port : Used to transfer videos to the Web Viewer; the default is 4520.
 - The port range of the Viewer is between 4502 and 4534. If the VNP port is with this effective range, the Viewer port should be specified the same as the VNP port.
 - Silverlight policy port : Silverlight is used to permit to acquire a network connection; the default is 943.
 - You cannot change the Viewer/Silverlight policy server port of a device.
4. When done, click [Apply ()].



DDNS

DDNS is an abbreviation of Dynamic Domain Name Service that converts the IP address of a network video encoder into a general Host Name so that the user can easily remember it.

1. From the Setup menu, select the <Network ()> tab.
2. Click <DDNS>.
3. Select <DDNS>.
4. Type in the DDNS items according to the selected type.
 - Samsung DDNS : Select this if you use the DDNS server provided by Samsung Techwin.



- Public DDNS : Select one of provided public DDNS servers when you use a public DDNS server.
 - Host name : Enter the name of the host (i.e., host name of DynDNS) that is registered with the DDNS server.
 - User name : Enter the user name for the DDNS service. (i.e., user ID that is registered with DynDNS)
 - Password : Enter the password for the DDNS service. (i.e., password that is registered with DynDNS)
5. When done, click **[Apply ()]**.

Registering with DDNS

To register your product with the Samsung DDNS

1. Visit the iPOLiS web site (www.samsungipolis.com) and sign in with a registered account.



2. From the top menu bar, select <DDNS SERVICE><-MY DDNS>.



3. Click **[PRODUCT REGISTRATION]**.
4. Enter the product domain.
 - You must perform the duplicate check for the domain that you entered.



setup screen

5. Select a **<CLASSIFICATION>** and specify the **<MODEL NUMBER>**.
6. Specify the product location with a description if necessary.
7. Click **[REGISTRATION]**.
The product will be added to the product list that you can check.



To connect to the Samsung DDNS in network video encoder setup

1. From the DDNS setup page, set **<DDNS>** to **<Samsung DDNS>**.
2. Provide the **<Host name>** that you specified when registering the product domain with the DDNS site.
3. Click **[Apply ()]**.
When the connection is successfully made, you will see the message of **<(Success)>** on the screen.





Configuring public DDNS in Network video encoder Settings

1. Open the DDNS settings page and select **<Public DDNS>** for **<DDNS>**.
2. Enter the corresponding site's host name, user name and password.
3. Click **[Apply ()]** button.
If the connection properly establishes, **<(Success)>** appears.
4. Once completed with the configuration, click **[Apply ()]** button.

IP filtering



You can create a list of IPs that you want to grant or deny access to them.

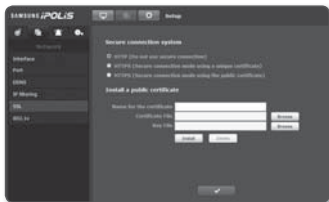
- From the Setup menu, select the <Network ()> tab.
- Click <IP filtering>.
- Select a <Filtering type>.
 - Deny : If selecting this, access from those IPs that are added to the filtering will be restricted.
 - Allow : If selecting this, access from only those IPs that are added to the filtering will be accepted.
- Provide the IP that you want to grant or deny access from.
For IPv4, the default IP address is 0.0.0.0, and the default prefix is 32.
- Select desired IP address to be approved or rejected from the entered IP addresses.
Only the selected IPs are filtered out.
- When done, click [Apply ()].



SSL

You can select a secure connection system or install the public certificate for this purpose.

- From the Setup menu, select the <Network ()> tab.
- Click <SSL>.
- Select a secure connection system.
 - To access the network video encoder using HTTPS mode, you have to type the IP address for the network video encoder in the form of "https://<Network video encoder_IP>".
- Search for the public certificate that you want to install on the network video encoder.
To install the certificate on the network video encoder, you need to provide a certificate name (it can be arbitrarily assigned by the user), certificate file issued from the certification authority and a key file.
 - The <HTTPS(Secure connection mode using the public certificate)> item will be active only if there exists a public certificate installed.
- When done, click [Apply ()].



setup screen

Installing the certificate

1. Enter the certificate name.
2. Select the certificate file to be installed and certificate key, and click **[Install ()]** button.

Deleting the certificate

1. Click **[Delete ()]** button.
2. To delete a public certificate, you should access the network video decoder in the mode of **<HTTP (Do not use secure connection)>** or **<HTTPS (Secure Connection mode using a unique certificate)>**.

802.1x

When connecting network, you can choose whether using 802.1x protocol, and then install the certification.

1. From the Setup menu, select the **<Network ()>** tab.
2. Click **<802.1x>**.
3. Set the **<IEEE 802.1x Setting(EAPOL using EAP-TLS)>**.
 - Enable IEEE 802.1x : Specify the use of the 802.1x protocol.
 - EAPOL Version : Select version 1 or 2.
 - EAPOL ID : Enter the EAPOL ID.
 - EAPOL Password : Enter the EAPOL password.



- !** ■ If the connected network device does not support the 802.1x protocol, the protocol will not operate properly even if you set it.


To install/remove 802.1x related certificates

1. Press the **[Browse ()]** button for each item and select a certificate to install.
2. If no certificate is installed, you will see "Not Available" appearing next to the selected item.
3. Press the **[Install ()]** button to start installation with a message of "Installed" next to the item.
4. Press the **[Delete ()]** button to remove the certificate.

EVENT SETUP

FTP / E-mail

You can configure the FTP / E-mail server settings so that you can transfer the images stored in the network video encoder to your PC if an event occurs.

1. From the Setup menu, select the <Event ()> tab.
2. Click <FTP / E-mail>.
3. Select <FTP configuration> or <E-mail configuration> and enter / select a desired value.
 - FTP configuration
 - Server address : Enter the IP address of the FTP server that you transfer the alarm images to.
 - User ID : Enter the user ID with which you will log in to the FTP server.
 - Password : Enter the user account password for logging into the FTP server.
 - Upload directory : Specify the FTP path where you will transfer the alarm images.
 - Port : The default port of the FTP server is 21; however, you can use a different port number according to the FTP server settings.
 - Passive mode : Select <On> if you need to connect in passive mode due to the firewall or the FTP server settings.
 - E-mail configuration
 - Use SSL : Check this option if you use an email server using SSL.
ex) Google
 - Server address : Enter the IP address of the email server that you use for the email transfer.
 - Use authentication : Select whether to use authorization.
 - User ID : Enter the user ID for logging into the email server.
 - Password : Enter the user account password for logging into the email server.
 - Port : The default port of the email server is 25; however, you can use a different port number according to the email server settings.
 - Recipient : Enter the address of the email recipient.



setup screen

- Sender : Enter the address of the email sender. If the sender address is incorrect, the email from the sender may be classified as SPAM by the email server and thus may not be sent.
- Subject : Enter a subject for your email.
- Body : Provide the text for the message. Attach the alarm images to the email that you are preparing.



4. When done, click **[Apply ()]**.

Motion Detection

You can set target detection region and motion, as well as the alarm signal output.

1. From the Setup menu, select the **<Event ()>** tab.
2. Click **<Motion Detection>**.

To set the Motion Detection

1. Set **<Motion Detection>** to **<Enable>**.
2. Select a sensitivity level of the motion detection. Higher the sensitivity is, the smaller motion is detected.
3. Specify the **<Activation time>**.
 - Always : Always check if a motion detects. It activates in operated mode when the motion detects.
 - If set to Always, the activation time cannot be changed.
 - Only scheduled time : Check if a motion detects at a specified day of the week for a specified time period. It activates in operated mode when the motion detects.
4. Specify an operation that will perform if a motion detects.
 - E-mail sending : Specify the use of the email transfer if a motion detects.
5. Use the drag-and-drop method to specify the detection area on the video. Motion detection is activated in the mask area set.
To delete set area, click **[Delete ()]** button.
6. When done, click **[Apply ()]**.





- The motion detection function may not work properly in the following cases:
 - The object color or brightness is similar to the background.
 - Multiple movements continue occurring at random due to a scene change or other reasons.
 - A fixed object continues moving in the same position.
 - An object hides other objects behind.
 - Two or more objects overlap or one object divides in multiple portions.
 - Too fast object (for a proper detection, one object should be found overlapping between contiguous frames).
 - Reflection / blur / shadow due to a strong light such as direct sunlight, illumination, or headlamp.
 - In severe snow, rain, wind or in dawn / dusk.


setup screen

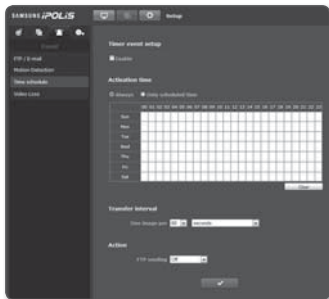
Time schedule

You can configure so that an event will occur at a scheduled time regardless of the actual occurrence of the event.

1. From the Setup menu, select the <Event ()> tab.
2. Click <Time schedule>.

To set the time schedule

1. Set <Timer event setup> to <Enable>.
2. Specify the <Activation time>.
 - Always : Always activates in operated mode at the set interval.
 - Only scheduled time : Periodically activates in operated mode at a specified time and date.
3. Specify the <Transfer interval>.
4. Specify the activation conditions.
 - FTP sending : Specify the use of the FTP transfer if an event occurs.
5. When done, click [Apply ()].




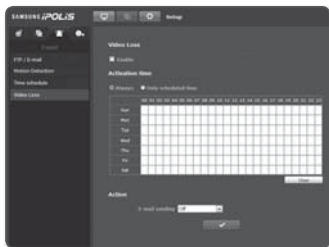
Video Loss

You can set the alarm to be generated on a camera disconnection, which causes a video loss.

1. From the Setup menu, select the <Event ()> tab.
2. Click <Video Loss>.



To set the video loss

1. Set <Video Loss> to <Enable>.
2. Set the activation time and condition.
 - E-mail sending : Specify the use of the email transfer if a video loss.
3. When done, click [Apply ()].



SYSTEM SETUP


Product information

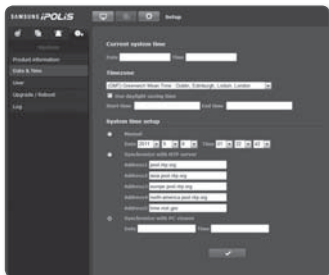
1. From the Setup menu, select the <System ()> tab.
2. Click <Product information>.
3. Check the network video encoder information, or provide details according to your network environment.
 - Device name : Provide a device name that will be displayed on the Live screen.
 - Location : Specify the location where the network video encoder is installed.
 - Description : Provide detailed information about the network video encoder location.
 - Memo : Provide an explanation about the network video encoder for better understanding.
 - Language : Select a preferred language for the network video encoder menus and the Web Viewer OSD.
4. When done, click [Apply ()].



-  ■ Product related information only allows English for input.

Date & Time


1. From the Setup menu, select the <System ()> tab.
2. Click <Date & Time>.
3. Specify the time and date that will be applied to the network video encoder.
 - Current system time : Displays the current time settings of your system.
 - Timezone : Specify the local time zone based on the GMT.
 - Use daylight saving time : If checked, the time will be set one hour before the local time zone for the specified time period. This option will be displayed only in areas where DST is applied.




setup screen

- System time setup : Specify the time and date that will be applied to your system.
 - Manual : Specify the time manually.
 - Synchronize with NTP server : Sync with the time of the specified server address.
 - Synchronize with PC viewer : Synchronize the time with the connected PC.

4. When done, click [Apply ()].

-  If the time settings differ between network video encoder and PC, selecting **<Synchronize with PC viewer>** may still have a difference. So it is recommended to specify the same time settings for both network video encoder and PC.

User

1. From the Setup menu, select the **<System ()>** tab.
2. Click **<User>**.
3. Provide the necessary user information.

- Administrator Password Change : Change the current password for the administrator.
 - The default password can be exposed to a hacking thread so it is recommended to change the password after installing the product.



Note that the security and other related issues caused by the unchanged password shall be responsible for the user.

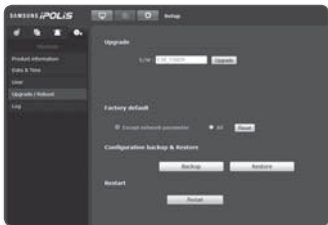


- Guest setup : If **<Guest access>** is allowed, the user with the guest account who accesses the web viewer can view only the Live viewer screen.
 - The ID/password for the guest account is guest/guest, which cannot be changed.
- Current users : You can change the user information and adjust the permission level for a user who is set to **<Enable>**.
 - Video : You can select a video profile in the Live viewer screen.
 - Controls : You can control network video encoder menu buttons.

4. When done, click [Apply ()].

Upgrade / Reboot

- From the Setup menu, select the <System ()> tab.
- Click <Upgrade / Reboot>.
- Select a desired item and set it appropriately.
 - Upgrade : Performs upgrading the system.
 - Factory default : Resets the system to the factory default.
 - Except network parameter : Reset the other settings except for the network settings.
 - All : Resets all settings including the network video encoder settings. (however, the log information will not be reset)
 - The IP addressing system will be defaulted to DHCP if you reset the network video encoder. If no DHCP server is found, the previous settings will be restored automatically.
 - Configuration backup & Restore : Backs up the current system settings before performing the restoration process. The system is automatically restarts after backup or restoration.
 - Restart : Restarts the system.
- When done, click [**Restart** ()].

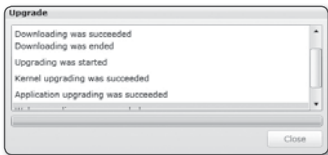


To perform the upgrade

- Click [**Upgrade**].
- Click [**Browse**] and specify a file to upgrade.
- Click [**Send**].
- The “Upgrade” dialog appears where the progression will be shown in the bottom.



- If you forcibly terminate the upgrade process, upgrade will not be completed properly.



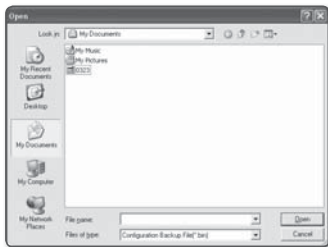
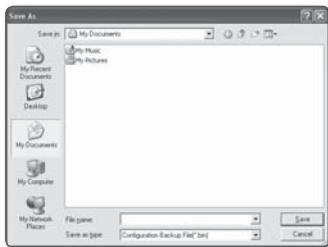
setup screen

To save the current settings and restore the backup settings

1. Click **[Backup]**.
The Save As dialog should appear.
2. Specify the backup path with a proper file name, and click **[Save]**.
The backup file will be saved to the specified path in the format of **“.bin”**.
3. To restore the backup settings, click **[Restore]**.
4. Select a backup file and click **[Open]**.




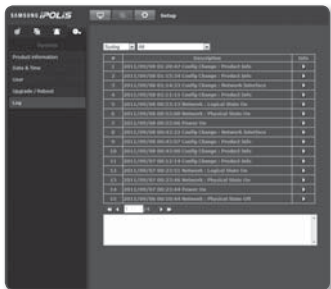
- If you perform the backup or restoration, the web browser will be closed and the network video encoder will reboot.



Log

You can check the system log or event log.

1. From the Setup menu, select the <System ()> tab.
2. Click <Log>.
3. Select a log type.
 - Syslog : You can check the system logs where any system changes are recorded including the time information.
 - Evtlog : You can check the event logs including the time information.
4. From the right log list, select an item to search for.
 - If you select <All> in the top left dropdown list, all logs for the applicable log type will be displayed.
5. If one page can not display all the logs available, use the bottom buttons to move to the previous, next, or the last item.



- 
 - If you want to view the details of a log, click [**Info** ()] in the right column of the log; the log information will be shown in the bottom pane.
 - Each page displays 15 logs with the latest one displayed at the top.
 - The event/system log list can contain up to 1000 logs; after that, the existing logs will be deleted from the oldest one each time a new log is created.

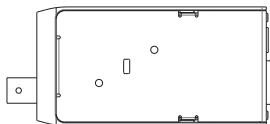
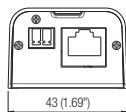
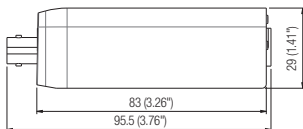
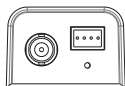
SPECIFICATION

	Items	Description
Operational	Video In	CVBS : 1.0 Vp-p / 75Ω composite, NTSC/PAL Auto Detection
	De-interlacing Filter	Built-in
	Event Trigger	Motion Detection, Video Loss
	Remote Control Interface	1ea RS-422/485
	RS-485 Protocol	SAMSUNG-T/E, PELCO-P/D, Panasonic, VICON, Honeywell, AD, GE, BOSCH, SUNGJIN
Network	Ethernet	RJ-45 (10/100BASE-T)
	Video Compression Format	H.264, MPEG-4, Motion JPEG
	Resolution	NT : 704x480, 640x480, 352x240, 320x240 PAL : 704x576, 640x480, 352x288, 320x240
	Max. Framerate	NT : 30fps / PAL : 25fps
	Video Quality Adjustment	H.264/MPEG-4 : Compression Level, Target Bitrate Level Control Motion JPEG : Quality Level Control
	Bitrate Control Method	H.264/MPEG-4 : CBR or VBR Motion JPEG : VBR
	Streaming Capability	Multiple Streaming (Up to 10 Profiles)
	IP	IPv4, IPv6

Items		Description
Network	Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTSP, NTP, HTTP, HTTPS, SSL, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c(MIB-2), ARP, DNS, DDNS
	Security	HTTPS(SSL) Login Authentication Digest Login Authentication IP Address Filtering User access Log 802.1x
	Streaming Method	Unicast / Multicast
	Max. User Access	10 users at Unicast Mode
	ONVIF Conformance	Yes
	Web Viewer	Supported OS : Windows XP / VISTA / 7, MAC OS Supported Browser : Internet Explorer7.0 or 8.0, Firefox, Chrome, Safari
	Central Management Software	NET-i viewer
Environmental	Operating Temperature / Humidity	-10°C ~ +50°C (+14°F ~ +122°F) / 20% ~ 80% RH
	Ingress Protection	-
Electrical	Input Voltage / Current	12V DC, PoE(IEEE802.3af)
	Power Consumption	Max. 3.2W
Mechanical	Color / Material	White/Mold, Silver/Press
	Dimensions (WxHxD)	W43.0 x H29.0 x D95.5mm (1.69" x 1.41" x 3.76"), Connector included
	Weight	115g

PRODUCT OVERVIEW

Unit : mm (inch)



TROUBLESHOOTING

PROBLEM	SOLUTION
<p>I can't access the network video encoder from a web browser.</p>	<ul style="list-style-type: none"> • Check whether the <Network> settings of the network video encoder are valid and correct. • Check to make sure that all network cables have been connected properly. • If connected using DHCP, verify that the network video encoder is able to acquire dynamic IP addresses without any problem. • If connected using a DDNS URL, verify that the MAC address has been properly entered. • If the network video encoder is connected to a router, verify that port forwarding is properly configured.
<p>Viewer got disconnected during monitoring.</p>	<ul style="list-style-type: none"> • The existing <Web Viewer> connection can be expired if the network setting or configuration of the network video encoder is modified by another user. • Check all network connections. • <Web Viewer> connection may be interrupted by poor network traffic or condition if the network video encoder is connected to a PPPoE network.
<p>I cannot connect to the system using a tab browser of Internet Explorer 7.0.</p>	<ul style="list-style-type: none"> • When you try to connect to the system using a tab browser, the same cookie information is shared, resulting in errors when connected. Therefore, instead of using a tab browser, open a new browser window to connect to the system.
<p>The network video encoder connected to the network is not detected in the IP installer program.</p>	<ul style="list-style-type: none"> • Turn off the firewall settings on your PC and then search the network video encoder again.
<p>Images overlap.</p>	<ul style="list-style-type: none"> • Check whether two or more network video encoders are set to a single multicast address instead of different addresses. If a single address is used for multiple network video encoders, the images may overlap.
<p>No image appears.</p>	<ul style="list-style-type: none"> • If the transmission method is set to multicast, check whether there is a router that supports multicast in the LAN the network video encoder is connected to.

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Component Name	License	License URL
lighttpd 1.4.25	BSD 2.0	http://www.opensource.org/licenses/bsd-license.html
librtsp 1.20	BSD 1.0	
net-snmp-5.4.1	BSD	http://www.net-snmp.org/about/license.html

lighttpd is a secure, fast, compliant, and very flexible web-server that has been optimized for high-performance environments. It has a very low memory footprint compared to other webservers and takes care of cpu-load. Its advanced feature-set (FastCGI, CGI, Auth, Output-Compression, URL-Rewriting and many more) make lighttpd the perfect webserver-software for every server that suffers load problems.

Simple Network Management Protocol (SNMP) is an Internet-standard protocol for managing devices on IP networks. It is used mostly in network management systems to monitor the devices attached to the network for conditions that need administrative attention. Net-SNMP is a suite of applications used to implement SNMP v1, SNMP v2c and SNMP v3 using both IPv4 and IPv6.

For more additional information, send email to help.cctv@samsung.com.

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This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.



Samsung Techwin cares for the environment at all product manufacturing stages, and is taking measures to provide customers with more environmentally friendly products.

The Eco mark represents Samsung Techwin's devotion to creating environmentally friendly products, and indicates that the product satisfies the EU RoHS Directive.



Correct Disposal of This Product (Waste Electrical & Electronic Equipment)

(Applicable in the European Union and other European countries with separate collection systems)

This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. charger, headset, USB cable) should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product and its electronic accessories should not be mixed with other commercial wastes for disposal.



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