

SAMSUNG TECHWIN

# 4CH NETWORK ENCODER (BLADE TYPE)

User Manual

SPE-400B



# 4Ch Network Encoder (Blade Type) 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

## 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 lighting 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.

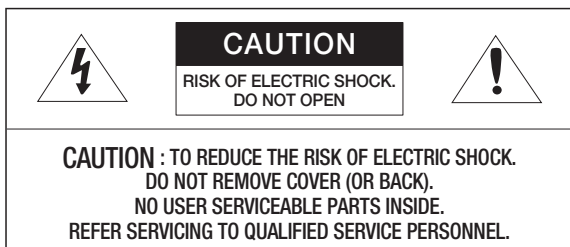


## WARNING

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](http://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 Network Encoder and other devices must not be connected.

# overview

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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 how to use the products

The meaning of the using sign in the book is following

- 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 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-related video will be transferred to the Email specified by the user or the event signal will be sent to the Alarm Out port.

- **ONVIF (Spec 1.01) Compliance**

This product supports ONVIF Core Spec. 1.01.

For more information, refer to [www.onvif.org](http://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

## WHAT'S INCLUDED

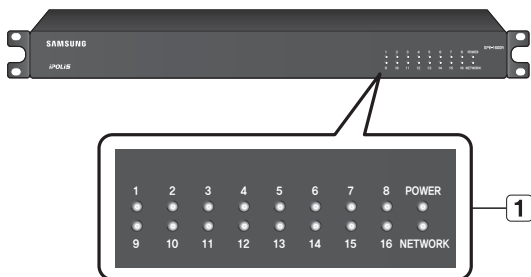
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Please check if your network encoder and accessories are all included in the product package.

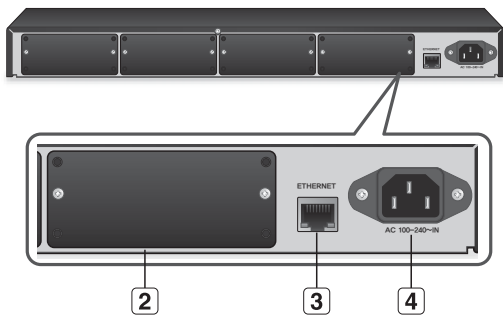
| Appearance                                                                        | Item Name                        | Quantity | Description                                |
|-----------------------------------------------------------------------------------|----------------------------------|----------|--------------------------------------------|
|  | User Manual,<br>Installer S/W CD | 1        |                                            |
|  | CMS S/W DVD                      | 1        |                                            |
|  | Quick Guide                      | 1        |                                            |
|   | Terminal Block                   | 1        | Used for RS-485 or alarm cable connection. |
|  | ASSY-Tapping Screw               | 2        | Used to fix Blade (SPE-400B) with the rack |

## AT A GLANCE

### SPE-1600R Front Side



### SPE-1600R Rear Side



- SPE-1600R is sold separately (unbundled).

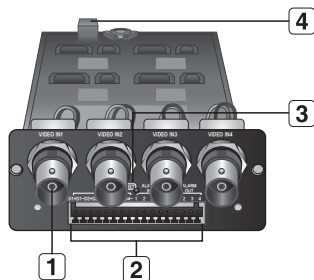
# overview

| Item                                                                                |                                                                                                                                                                                                      | Description                                                                                                                                                                                                                                           |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1</b> Network connection indicator for each channel, Power and Network Indicator | 1~16                                                                                                                                                                                                 | Channels connected to the network will blink the green indicator with the network connection status.                                                                                                                                                  |
|                                                                                     | NETWORK                                                                                                                                                                                              | When network connection is made, it blinks in a different color according to the connection status.<br><br>Green : Blinks in green when connected to 1000 Base-T Ethernet.<br><br>Yellow : Blinks in yellow when connected to 10/100 Base-T Ethernet. |
|                                                                                     | POWER                                                                                                                                                                                                | ON : While the power is on.<br><br>OFF : If the power is off.                                                                                                                                                                                         |
| <b>2</b> Blade (SPE-400B) Slot                                                      | Slot for mounting the Blade (SPE-400B).<br>The slot numbers are 1 through 4, starting from the leftmost one. When the Blade (SPE-400B) is installed, it will be assigned an IP in the numeric order. |                                                                                                                                                                                                                                                       |
| <b>3</b> Network Port                                                               | Used to connect a LAN cable.                                                                                                                                                                         |                                                                                                                                                                                                                                                       |
| <b>4</b> Power Port                                                                 | Used to connect the specified power source.                                                                                                                                                          |                                                                                                                                                                                                                                                       |



- For smooth video transmission, recommend to install in 1000 Base-T Ethernet environment.

# Blade (SPE-400B)

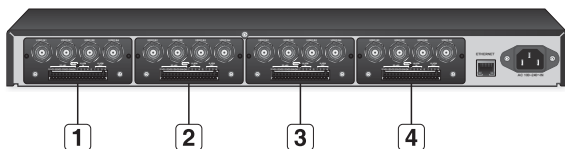


| Item                          | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                           |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| <b>1</b> VIDEO IN (CH 1~CH 4) | Used to connect the BNC video input signal.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                           |
| <b>2</b> I/O Port             | D+ (1~4)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | RS-485 Data Line          |
|                               | D- (1~4)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | RS-485 Data Line          |
|                               | ALARM IN (1~4)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Alarm Input (sensor) Port |
|                               | G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | GND                       |
|                               | ALARM OUT (1~4)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Alarm Out Port            |
| <b>3</b> Reset Button         | <p>Resets the network encoder settings to the default. Press and hold it for about 5 seconds to turn off the system indicator and restart the system.</p> <p><b>!</b> If you reset the network encoder, the network settings will be adjusted so that DHCP can be enabled. If there is no DHCP server in the network, you must run the IP Installer program to change the basic network settings such as IP address, Subnet mask, Gateway, etc., before you can connect to the network.</p> <p>■ For more information on IP settings, refer to "Network Setup". (page 42)</p> |                           |
| <b>4</b> Rack Connector Port  | Used to connect Blade (SPE-400B) to the rack.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                           |

## CHECKING IP

By factory default, the IP of each Blade (SPE-400B) is set to "192.168.1.100~103". If you use IP INSTALLER to check the IPs after inserting all 4 Blades (SPE-400B), you may encounter a redundant IP.

If this is the case, use IP INSTALLER to change the IP manually, or press and hold the <RESET> button on the rear panel for 5 seconds to correct the IP assignment in a numeric order.



| Slot No. | Initial IP        | IP after <RESET>  |
|----------|-------------------|-------------------|
| 1        | 192.168.1.100~103 | 192.168.1.100~103 |
| 2        | 192.168.1.100~103 | 192.168.1.104~107 |
| 3        | 192.168.1.100~103 | 192.168.1.108~111 |
| 4        | 192.168.1.100~103 | 192.168.1.112~115 |

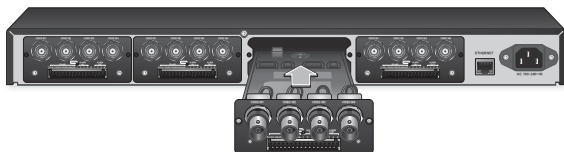
## INSTALLATION

### To install Blade (SPE-400B)

1. Loosen the screws on either side of the cover in the Blade (SPE-400B) compartment for SPE-1600R.



2. Fit Blade (SPE-400B) into both sliding lines as shown and insert it in the arrow direction.

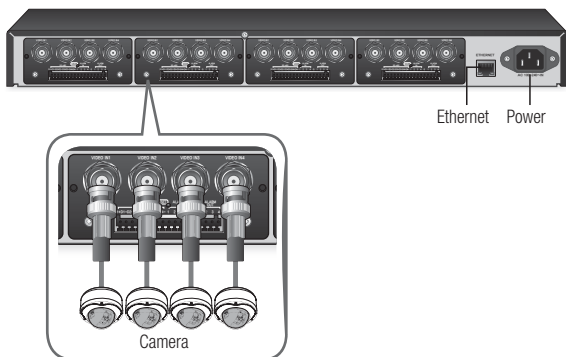


3. Insert the Blade (SPE-400B) until it fits into the connector of the rack, and tighten the screws.



# installation & connection

## CONNECTING WITH OTHER DEVICE



- SPE-1600R is sold separately (unbundled).

### Connecting the camera

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

### Ethernet Connection

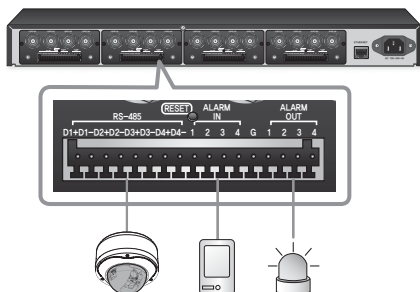
Connect the Ethernet cable to the local network or to the Internet.

### Power Supply

Connect the power cable.

## Connecting RS-485 and Alarm In/Out ports

Connect RS-485 and Alarm I/O cables to the appropriate I/O ports on the rear panel.



| Port           | Description               | Port            | Description      |
|----------------|---------------------------|-----------------|------------------|
| D+(1~4)        | RS-485 Data Line          | D-(1~4)         | RS-485 Data Line |
| ALARM IN (1~4) | Alarm Input (sensor) Port | ALARM OUT (1~4) | Alarm Out        |
| G              | GND                       |                 |                  |

## Connecting to the RS-485 device

Connect the external device to the [RS-485 D+, D-] ports.

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

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

## Connecting to the Alarm Input

Connect one signal cable (out of 2) of applicable sensor to the [ALARM IN] port, and the other to the [G] port.

-  You must use the specific RS-485 alarm I/O ports for each channel.

# installation & connection

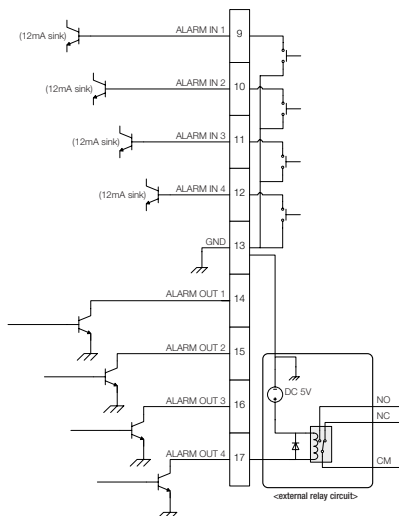
## Connecting ALARM OUT

The alarm output system is a type of open collector that is designed to use an external relay.

The rated maximum value is DC +24V, 100mA.

## Alarm I/O Wiring Diagram

- For controlling the power with electrical contacts, a separate circuit is required.
- Add an external relay circuit(s) as many as needed.
- When adding an external relay circuit, you must install the diodes in parallel to protect the circuit from overvoltage.



## Channel I/O port table

|      | RS-485   | ALARM IN | ALARM OUT |      | RS-485   | ALARM IN | ALARM OUT |
|------|----------|----------|-----------|------|----------|----------|-----------|
| CH 1 | D1+, D1- | 1, G     | 1, G      | CH 3 | D3+, D3- | 3, G     | 3, G      |
| CH 2 | D2+, D2- | 2, G     | 2, G      | CH 4 | D4+, D4- | 4, G     | 4, G      |

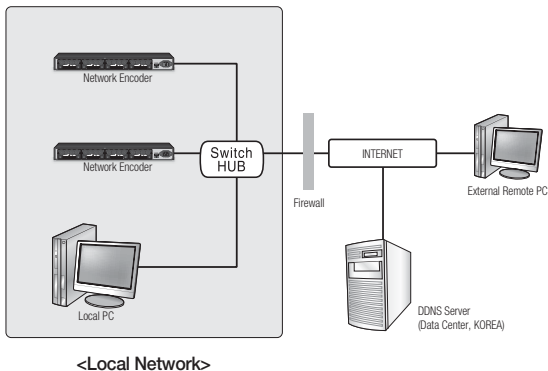
# network connection and setup

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

## CONNECTING THE NETWORK ENCODER DIRECTLY TO LOCAL AREA NETWORKING

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

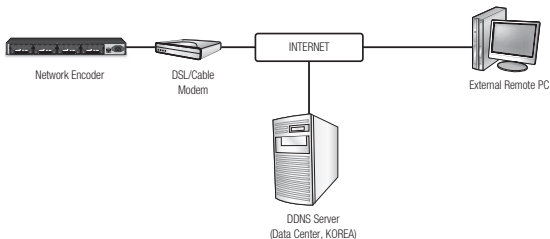
1. Launch an Internet browser on the local PC.
2. Enter the IP address of the network encoder in the address bar of the browser.
  - For information about the default IP of the network encoder, refer to "**Checking IP**". (Page14)



- A remote PC in an external Internet out of the LAN network may not be able to connect to the network 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 192.168.1.100~103. To change the IP address, use the IP Installer. For further details on IP Installer use, refer to "**Static IP Setup**". (Page 24)

# network connection and setup

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

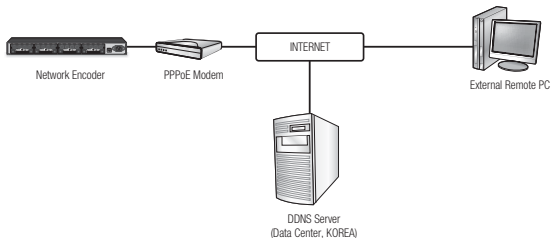


1. Use the cross LAN cable to connect the network cable directly to your PC.
2. Run the IP Installer and change the IP address of the network encoder so that you can use the web browser on your desktop to connect to the Internet.
3. Use the Internet browser to connect to the network encoder.
4. Move 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 encoder, which was removed from your PC, directly to the modem.
8. Restart the network encoder.



- For registering the DDNS settings, refer to **"Registering with DDNS"**. (page 44)
- For configuring the DDNS settings, refer to **"DDNS"**. (page 43)
- For setting the network type, refer to **"Interface"**. (page 42)

## CONNECTING THE NETWORK ENCODER DIRECTLY TO A PPPoE MODEM



1. Use the cross LAN cable to connect the network cable directly to your PC.
2. Run the IP Installer and change the IP address of the network 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 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 encoder, which was removed from your PC, directly to the modem.
8. Restart the network encoder.

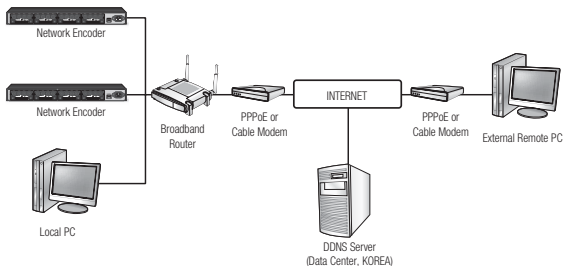


- For registering the DDNS settings, refer to **"Registering with DDNS"**. (page 44)
- For configuring the DDNS settings, refer to **"DDNS"**. (page 43)
- For setting the network type, refer to **"Interface"**. (page 42)

# network connection and setup

## CONNECTING THE NETWORK 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

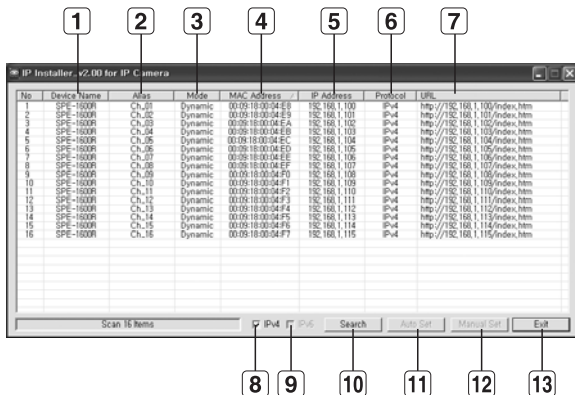
Configuring the network settings of the local PC connected to a Broadband Router, follow the instructions below.

- 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 29)

## BUTTONS USED IN IP INSTALLER



| Item                           | Description                                                                                                                                                                      |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1</b> Device Name           | Model name of the connected network encoder.<br>Click the column to sort the list by model name.<br>However, search will be stopped if clicked during the search.                |
| <b>2</b> Alias                 | Displays the name of the connected device. (Page 53)<br>However, if the device name is the default one <Name>, the channel information of the encoder will be displayed instead. |
| <b>3</b> Mode                  | Displays either <Static> or <Dynamic> for the current network connection status.                                                                                                 |
| <b>4</b> MAC(Ethernet) Address | Ethernet address for the connected network encoder.<br>Click the column to sort the list by Ethernet address.<br>However, search will be stopped if clicked during the search.   |
| <b>5</b> IP Address            | IP address.<br>Click the column to sort the list by IP address.<br>However, search will be stopped if clicked during the search.<br>The factory default is "192.168.1.100~103".  |
| <b>6</b> Protocol              | Network setting for the network encoder.<br>The factory default is "IPv4".<br>Network encoders with the IPv6 setting will be displayed "IPv6".                                   |

# network connection and setup

| Item                 | Description                                                                                                                                                               |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>7</b> URL         | DDNS URL address enabling access from the external Internet. However, this will be replaced with the <IP Address> of the network encoder if DDNS registration has failed. |
| <b>8</b> IPv4        | Scans for network encoders with the IPv4 setting.                                                                                                                         |
| <b>9</b> IPv6        | Scans for network encoders with the IPv6 setting. Activated in an IPv6 compliant environment.                                                                             |
| <b>10</b> Search     | Scans for network encoders that are currently connected to the network. However, this button will be grayed out if neither IPv4 nor IPv6 is checked.                      |
| <b>11</b> Auto Set   | The IP Installer automatically configures the network settings.                                                                                                           |
| <b>12</b> Manual Set | You should configure the network settings manually.                                                                                                                       |
| <b>13</b> 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 product website.

## STATIC IP SETUP

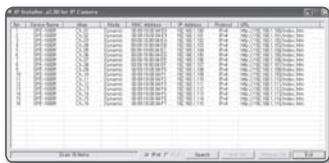
### Manual Network Setup

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



- Use the IP Installer in version 2.00 or later.
- For network encoders found with the IPv6 setting, these buttons will be grayed out as the network encoders do not support this function.

- Select a network encoder in the search list.  
Find the MAC (Ethernet) address labeled on the rear of the network encoder.  
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 encoder will be displayed.



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

- MAC (Ethernet) Address : The MAC (Ethernet) address of the applicable network encoder will be set automatically so you don't need to input it manually.

#### 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 encoder.
- Gateway : The <Local IP Address> of the Broadband Router will be the <Gateway> of the network encoder.



- 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 29)

#### 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 encoder 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.

5. Enter the password.

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

# network connection and setup

## 6. Click [OK].

Manual network setup will be completed.

### If the Broadband Router has more than one network encoder connected

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

ex)

| Category | IP related settings                         | Port related settings |
|----------|---------------------------------------------|-----------------------|
|          | IP Address / Subnet Mask / Gateway          | HTTP Port / VNP Port  |
| CH 1     | 192.168.1.100 / 255.255.255.0 / 192.168.1.1 | 8080 / 4520           |
| CH 2     | 192.168.1.101 / 255.255.255.0 / 192.168.1.1 | 8081 / 4521           |
| CH 3     | 192.168.1.102 / 255.255.255.0 / 192.168.1.1 | 8082 / 4522           |
| CH 4     | 192.168.1.103 / 255.255.255.0 / 192.168.1.1 | 8083 / 4523           |
| CH 5     | 192.168.1.104 / 255.255.255.0 / 192.168.1.1 | 8084 / 4524           |
| CH 6     | 192.168.1.105 / 255.255.255.0 / 192.168.1.1 | 8085 / 4525           |
| CH 7     | 192.168.1.106 / 255.255.255.0 / 192.168.1.1 | 8086 / 4526           |
| CH 8     | 192.168.1.107 / 255.255.255.0 / 192.168.1.1 | 8087 / 4527           |
| CH 9     | 192.168.1.108 / 255.255.255.0 / 192.168.1.1 | 8088 / 4528           |
| CH 10    | 192.168.1.109 / 255.255.255.0 / 192.168.1.1 | 8089 / 4529           |
| CH 11    | 192.168.1.110 / 255.255.255.0 / 192.168.1.1 | 8090 / 4530           |
| CH 12    | 192.168.1.111 / 255.255.255.0 / 192.168.1.1 | 8091 / 4531           |
| CH 13    | 192.168.1.112 / 255.255.255.0 / 192.168.1.1 | 8092 / 4532           |
| CH 14    | 192.168.1.113 / 255.255.255.0 / 192.168.1.1 | 8093 / 4533           |
| CH 15    | 192.168.1.114 / 255.255.255.0 / 192.168.1.1 | 8094 / 4534           |
| CH 16    | 192.168.1.115 / 255.255.255.0 / 192.168.1.1 | 8095 / 4535           |



- 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 encoder.

ex) http://IP address : HTTP Port

http://192.168.1.100:8080

## Auto Network Setup

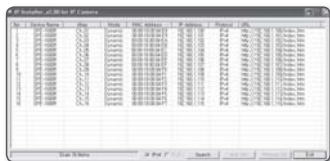
Run <IP Installer\_vX.XX.exe> to display the network encoder search list.  
At the initial startup, both [Auto Set] and [Manual Set] will be grayed out.



- Use the IP Installer in version 2.00 or later.
- For network encoders found with the IPv6 setting, these buttons will be grayed out as the network encoders do not support this function.

1. Select a network encoder in the search list.

Find the MAC (Ethernet) address labeled on the rear of the network encoder.  
Both the [Auto Set] and [Manual Set] buttons will be activated.



2. Click [Auto Set].

The Auto Setting dialog appears.

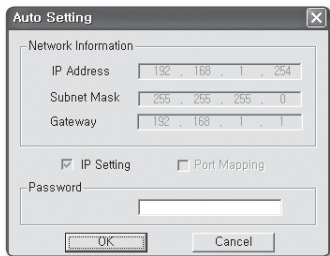
The <IP Address>, <Subnet Mask>, and <Gateway> will be set automatically.

3. Enter the password.

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

4. Click [OK].

Auto network setup will be completed.



# network connection and setup

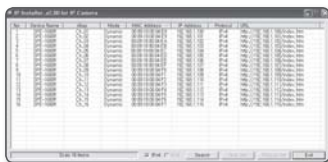
## DYNAMIC IP SETUP

### Dynamic IP Environment Setup

- Example of the Dynamic IP environment
  - If a Broadband Router, with network encoders connected, is assigned an IP address by the DHCP server
  - If connecting the network encoder directly to modem using the DHCP protocols
  - If IPs are assigned by the internal DHCP server via the LAN

### Checking the Dynamic IP

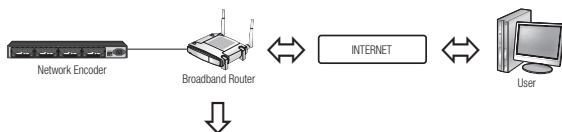
1. Run the IP Installer on the user's local machine to display network encoders allocated with <Dynamic IP> addresses in the list.
2. Select a network encoder in the list, and click **[Manual Set]** to check the <Dynamic IP> of the network encoder. If you uncheck <DHCP>, you can change IP or <Port> to <Static>.





# network connection and setup

Ex) If the network encoder (SPE-1600R) is connected to the router



| Broadband Router |      |          |               |
|------------------|------|----------|---------------|
| Start            | End  | Protocol | IP Address    |
| 943              | 943  | TCP      | 192.168.1.100 |
| 3000             | 3000 | TCP/UDP  | 192.168.1.100 |
| 3001             | 3001 | TCP/UDP  | 192.168.1.101 |
| 3002             | 3002 | TCP/UDP  | 192.168.1.102 |
| 3003             | 3003 | TCP/UDP  | 192.168.1.103 |
| ⋮                | ⋮    | ⋮        | ⋮             |
| 3013             | 3013 | TCP/UDP  | 192.168.1.113 |
| 3014             | 3014 | TCP/UDP  | 192.168.1.114 |
| 3015             | 3015 | TCP/UDP  | 192.168.1.115 |
| 4520             | 4520 | TCP/UDP  | 192.168.1.100 |
| 4521             | 4521 | TCP/UDP  | 192.168.1.101 |
| 4522             | 4522 | TCP/UDP  | 192.168.1.102 |
| 4523             | 4523 | TCP/UDP  | 192.168.1.103 |
| ⋮                | ⋮    | ⋮        | ⋮             |
| 4533             | 4533 | TCP/UDP  | 192.168.1.113 |
| 4534             | 4534 | TCP/UDP  | 192.168.1.114 |
| 4535             | 4535 | TCP/UDP  | 192.168.1.115 |
| 8080             | 8080 | TCP/UDP  | 192.168.1.100 |
| 8081             | 8081 | TCP/UDP  | 192.168.1.101 |
| 8082             | 8082 | TCP/UDP  | 192.168.1.102 |
| ⋮                | ⋮    | ⋮        | ⋮             |
| 8093             | 8093 | TCP/UDP  | 192.168.1.113 |
| 8094             | 8094 | TCP/UDP  | 192.168.1.114 |
| 8095             | 8095 | TCP/UDP  | 192.168.1.115 |

| CH 1 (192.168.1.100) |      |
|----------------------|------|
| Web Server Port      | 8080 |
| VNP Port             | 4520 |
| RTSP Port            | 3000 |
| Policy Server Port   | 943  |

| CH 2 (192.168.1.101) |      |
|----------------------|------|
| Web Server Port      | 8081 |
| VNP Port             | 4521 |
| RTSP Port            | 3001 |
| Policy Server Port   | 943  |

| CH 3 (192.168.1.102) |      |
|----------------------|------|
| Web Server Port      | 8082 |
| VNP Port             | 4522 |
| RTSP Port            | 3002 |
| Policy Server Port   | 943  |

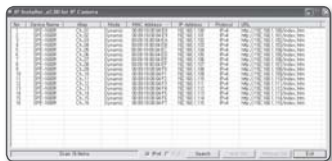
⋮

| CH 16 (192.168.1.115) |      |
|-----------------------|------|
| Web Server Port       | 8095 |
| VNP Port              | 4535 |
| RTSP Port             | 3015 |
| Policy Server Port    | 943  |

## CONNECTING TO THE NETWORK ENCODER FROM A SHARED LOCAL PC

1. Run the IP Installer.  
It will scan for connected network encoders and display a list of them.
2. Double-click a network encoder to access.  
The Internet browser starts and connects to the network encoder.



- Access to the network encoder can also be gained by typing the network encoder's IP address in the address bar of the Internet browser.

## CONNECTING TO THE NETWORK 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 encoders within a Broadband Router's network by using the network encoder's DDNS URL.

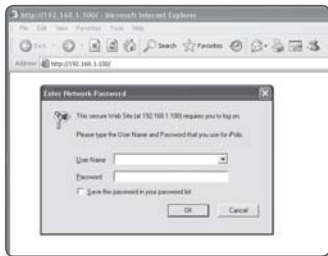
1. Before you can access a network encoder in the Broadband Router network, you should have set the port range forward for the Broadband Router.
2. From the remote PC, launch the Internet browser and type the DDNS URL address of the network encoder, or the IP address of the Broadband Router in the address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

## CONNECTING TO THE NETWORK ENCODER

---

### Normally, you would

1. Launch the Internet browser.
2. Type the IP address of the network 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) : 2001:0230:abcd:ffff::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 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 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 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](http://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 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.
-  If you check the “Save this password in your password list” option when your input is done, in future you will be logged in automatically without being prompted to enter the login information.
-  If you are using Internet Explorer 7.0 or 8.0 as the default web browser, you can view the best quality image with a screen ratio of 100%. Reducing the ratio may cut the image on the borders.

# web viewer

This network 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 → Always allow popups from the current site(A)**
- 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                                                                                                                                        |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1</b> Monitoring               | Move to the monitoring screen.                                                                                                                     |
| <b>2</b> Setup                    | Move to the Setup screen.                                                                                                                          |
| <b>3</b> Viewer Screen            | Displays the Live video on the screen.                                                                                                             |
| <b>4</b> Alarm Output             | Activate the Alarm Out port.                                                                                                                       |
| <b>5</b> Hide the alarm indicator | Hides the alarm indicator near the border of the viewer screen.                                                                                    |
| <b>6</b> 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 37) |
| <b>7</b> PTZ                      | You can control Pan/Tilt/Zoom of the cameras that are connected to the network encoder.                                                            |
| <b>8</b> Digital PTZ              | You can use the mouse wheel to activate the digital zooming.                                                                                       |

| Item                                      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>9</b> Screen Optimization, Full Screen | Adjust the screen to the optimal size, and display the Full Screen icon on the Live screen.                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>10</b> Capture                         | Saves the snapshot as an image file in the .bmp format.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>11</b> Video Format                    | <p>You can select a profile type in &lt;Video profile&gt; under the &lt;Video&gt; setup menu.</p> <p> For IE 6.0 users, press the Browse button next to the &lt;Video profile&gt; dialog and select a profile type again if the selected profile is not played.</p> <p> If the "Invalid codec" message is displayed, select a profile type from the profile list again.</p> |



- 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.



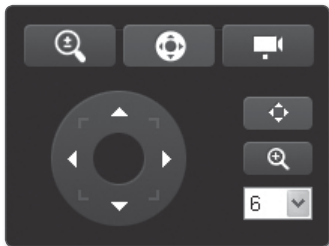
- The camera menu may different depend on camera. For more information, refer to camera's user manual.

## To control the PTZ function

You can control the connected camera that supports the PTZ functions if it is connected to the network encoder.

- If the PTZ function is not controllable, check the RS-485 connection status of the camera and network encoder (Page 17)
- Check if both connected camera and protocol are set properly. (Page 41)

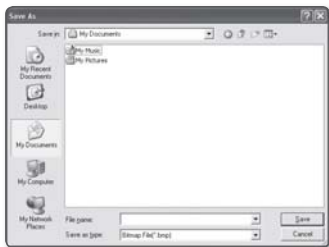
1. Press the **[PTZ (  )]** button.
2. When the PTZ button bar appears on the screen, use the direction buttons to adjust the camera angle, zoom factor or focus to your preference.



## 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 are using the IE8 as the default web browser, select "**Tools-Internet Options-Security**" and uncheck "**Use protected mode**".



## 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

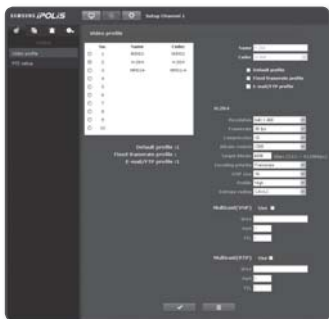
You can configure the video, network, event and system settings of the network encoder in the network.

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 monitoring 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.
  - 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.

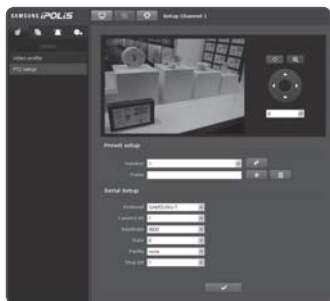
I-Frame is the basic frame for the compression, also known as Key Frame, which contains one complete image data. P-Frame contains only the data that has changed from the preceding I-Frame.

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

## PTZ setup

You can activate the zoom and set the zoom preset as you want.

1. From the Setup menu, select the <Video (  )> tab.
2. Click the <PTZ setup>.
3. Set the preset and serial port.
  - Preset setup : Select a number out of 255 and click Move button to adjust the camera to the angle defined by the selected preset. However, you can specify up to 128 presets for SAMSUNG-E protocols.
    - The connected camera should be configured to allow serial port communication.
  - Serial Setup : You can set the RS-485 communication mode of the connected camera.
    - The camera and device are connected via RS-485 communication ports.
    - The camera will not perform properly if communication related settings of the connected camera are incorrect.
    - SAMSUNG-T/E and Pelco-P/D protocols are supported.
4. When done, click [Apply (  )].



### 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.

# setup screen

## NETWORK SETUP

### Interface

1. From the Setup menu, select the **<Network (  )>** tab.
2. Click **<Interface>**.
3. 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 : If you select **<IPv6 use>**, the mode is enabled.
  - IPv6 address : Obtains the IPv6 address to access the IPv6 network.
4. When done, click **[Apply (  )]**.



-  ■ The IP address allocation will be restored to the default DHCP. At the moment, if it fails to detect a DHCP server within 1 minute, the address will be reverted to the previous setting automatically.

## 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 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 4532. 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 camera.
4. When done, click [Apply (  )].



## DDNS

DDNS is an abbreviation of Dynamic Domain Name Service that converts the IP address of a network 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.



# setup screen

- 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](http://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.



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 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 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.

# setup screen

## IP filtering

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

1. From the Setup menu, select the **<Network (  )>** tab.
2. Click **<IP filtering>**.
3. 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.
4. 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.
5. Select desired IP address to be approved or rejected from the entered IP addresses.  
Only the selected IPs are filtered out.
6. When done, click **[Apply (  )]**.



## SSL

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

1. From the Setup menu, select the **<Network (  )>** tab.
2. Click **<SSL>**.
3. Select a secure connection system.
  - To access the network encoder using HTTPS mode, you have to type the IP address for the network encoder in the form of "https://<Network encoder\_IP>".
4. Search for the public certificate that you want to install on the network encoder.  
To install the certificate on the network 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.
5. When done, click **[Apply (  )]**.



## Installing the certificate

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

## Deleting the certificate**

1. Click **[Delete ( 

# 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 encoder to your PC if an event occurs.

1. From the Setup menu, select the **<Event ( **

# setup screen

---

- 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.  
ex) SMTP. hotmail. com
  - 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.
  - 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** (  ).

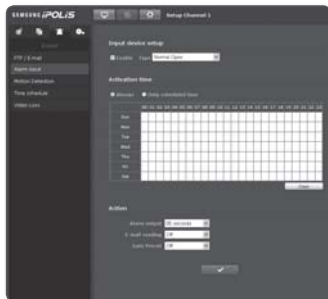
## Alarm input

You can set the alarm input type, activation time, and operation mode.

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

### To set the Alarm input

1. Set **<Input device setup>** to **<Enable>**.
2. Specify the **<Type>**.
  - Type
    - Normal Open : It is normally open, but if it is closed, an alarm will be triggered.
    - Normal Close : It is normally closed, but if it is open, an alarm will be triggered.
3. Specify the **<Activation time>**.
  - Always : Always check if an alarm occurs. It activates in operated mode when the alarm occurs.
  - Only scheduled time : Check if an alarm occurs at a specified day of the week for a specified time period. It activates in operated mode when the alarm occurs.
4. Specify an operation that will perform if an alarm occurs.
  - Alarm output : Specify the alarm output time in the alarm input setup.
  - E-mail sending : Specify the use of email transfer in the alarm input setup.
  - Goto Preset : Moves to the specified preset location when setting the alarm input.
5. When done, click **[Apply (  )]**.



# setup screen

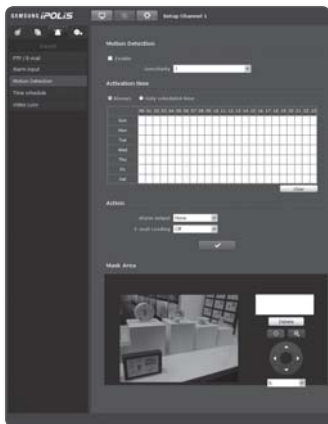
## Motion detection

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. Specify the **<Sensitivity>**.
  - Sensitivity : Sets the sensitivity level of the motion detection.
    - 1 : LOW, 2 : MEDIUM, 3 : HIGH
3. Set the activation time and condition.
  - Refer to the “**Alarm Input**” for how to set the **<Activation time>** and **<Action>**. (page 49)
4. Select whether to display the mask area. You can set maximum of 4 mask areas. To set mask area, drag the designed area with mouse. Motion detection is activated in the mask area set. To delete set area, click **[Delete (  )]** button.
5. When done, click **[Apply (  )]**.



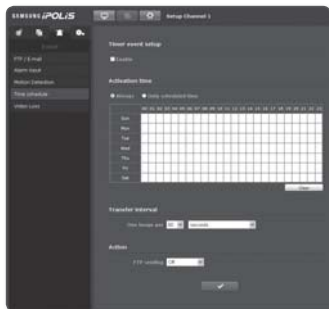
## Time schedule

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 timer event

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 (✔)]**.



# setup screen

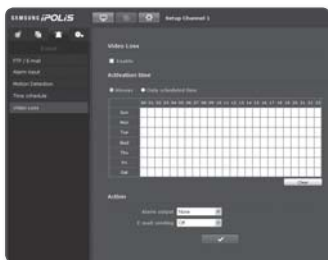
## Video loss

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.
  - Refer to the “Alarm Input” for how to set the <Activation time> and <Action>. (page 49)
3. When done, click [Apply (  )].



# SYSTEM SETUP

## Product information

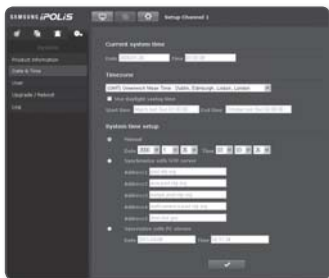
1. From the Setup menu, select the **<System (  )>** tab.
2. Click **<Product information>**.
3. Check the network encoder information, or provide details according to your network environment.
  - Device name : Provide a device name that will be displayed on the Live screen.
  - Location : Specify the location where the network encoder is installed.
  - Description : Provide detailed information about the network encoder location.
  - Memo : Provide an explanation about the network encoder for better understanding.
  - Language : Select a preferred language for the network 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 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 you select the **<Synchronize with PC viewer>**, the standard timezone should be set the same as the current timezone in PC.
- The time setting for each of 4 channels should be specified separately.  
If you want to perform the time sync, select NTP or PC Sync.

## 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.
- Guest setup : If **<Guest access>** is permitted, any guest can access the Web Viewer screen but can view only the Live viewer screen.
- 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 the network encoder menu, PTZ and Alarm buttons.



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

## Upgrade / Reboot

1. From the Setup menu, select the <System (  )> tab.
2. Click <Upgrade / Reboot>.
3. 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 interface/port/DDNS/IP filtering settings.
    - All : Resets all settings including the network encoder settings. (however, the log information will not be reset)
      - If you reset the network encoder, the network settings will be adjusted so that DHCP can be enabled. If there is no DHCP server in the network, you must run the IP Installer program to change the basic network settings such as IP address, Subnet mask, Gateway, etc., before you can connect to the network.
  - 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.
4. When done, click [Restart (  )].

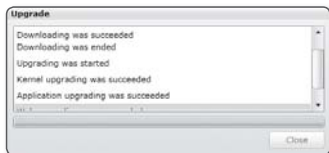


### To perform the upgrade

1. Click [Upgrade].
2. Click [Browse] and specify a file to upgrade.
3. Click [Send].
4. 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.

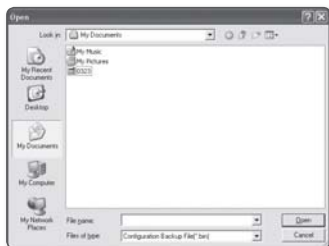


# setup screen

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## To save the current settings and restore the backup settings

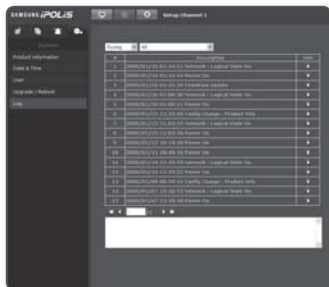
1. Click **[Backup]**.  
The Save As dialog should appear.
2. Specify the backup path with a proper file name, and click **[Save]**.  
The backup file will be saved to the specified path in the format of **".bin"**.
3. To restore the backup settings, click **[Restore]**.
4. Select a backup file and click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



## 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.

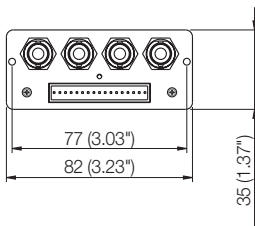
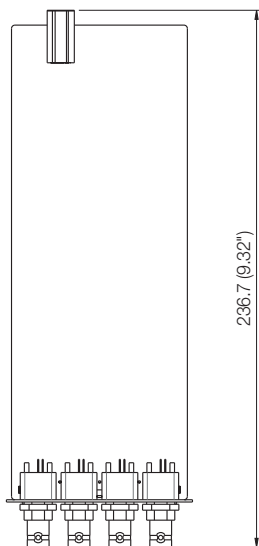
## SPECIFICATION

|             | Items                    | Description                                                                                           |
|-------------|--------------------------|-------------------------------------------------------------------------------------------------------|
| Operational | Video In                 | 4 CVBS : 1.0 Vp-p / 75Ω composite, NTSC/PAL Auto Detected                                             |
|             | Video Out                | -                                                                                                     |
|             | De-interlacing Filter    | Built-in                                                                                              |
|             | Event Trigger            | Motion Detection, Alarm Input, Video Loss                                                             |
|             | Alarm I/O                | Input 4ea / Output 4ea                                                                                |
|             | Remote Control Interface | RS-485 Port x4 (Half Duplex)                                                                          |
|             | RS-485 Protocol          | SAMSUNG-T/E, PELCO-P/D                                                                                |
| Network     | Ethernet                 | 1000BASE-T                                                                                            |
|             | Video Compression Format | H.264, MPEG-4, Motion JPEG                                                                            |
|             | Resolution               | NTSC : 704x480, 640x480, 352x240, 320x240<br>PAL : 704x576, 640x480, 352x288, 320x240                 |
|             | Max. Framerate           | NTSC : 30fps (Per channel) / PAL : 25fps (Per channel)                                                |
|             | Video Quality Adjustment | H.264/MPEG-4 : Compression Level, Target Bitrate Level Control<br>Motion JPEG : Quality Level Control |
|             | Bitrate Control Method   | H.264/MPEG-4 : CBR or VBR<br>Motion JPEG : VBR                                                        |
|             | Streaming Capability     | Multiple Streaming (Up to 10 Profiles)                                                                |
|             | Audio I/O                | -                                                                                                     |
|             | Audio Compression Format | -                                                                                                     |
|             | Audio Communication      | -                                                                                                     |
|             | 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/v3(MIB-2), ARP, DNS, DDNS, ONVIF |
|               | Security                         | HTTPS(SSL) Login Authentication<br>Digest Login Authentication<br>IP Address Filtering<br>User access Log                                        |
|               | Streaming Method                 | Unicast / Multicast                                                                                                                              |
|               | Max. User Access                 | 10 users at Unicast Mode                                                                                                                         |
|               | Memory Slot                      | -                                                                                                                                                |
|               | ONVIF Conformance                | Yes                                                                                                                                              |
|               | Web Viewer                       | Supported OS : Windows XP / VISTA / 7, MAC OS<br>Supported Browser : Internet Explorer 7.0 or Higher,<br>Firefox, Chrome, Safari                 |
|               | Central Management Software      | NET-i viewer                                                                                                                                     |
| Environmental | Operating Temperature / Humidity | 0°C ~ +40°C (+32°F ~ +104°F) / 20% ~ 80% RH                                                                                                      |
|               | Ingress Protection               | -                                                                                                                                                |
| Electrical    | Input Voltage                    | DC 5V                                                                                                                                            |
|               | Power Consumption                | Max. 11W                                                                                                                                         |
| Mechanical    | Color / Material                 | Black / Metal                                                                                                                                    |
|               | Dimensions (WxHxD)               | W82 x H35 x D236.7mm (3.23" x 1.37" x 9.32"), Connector included                                                                                 |
|               | Weight                           | 165g                                                                                                                                             |

## PRODUCT OVERVIEW

Unit: mm (inch)



## TROUBLESHOOTING

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

# OPEN SOURCE ANNOUNCEMENT

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Some software components of this product incorporate source code covered under the BSD license as follows.

| Component Name  | License | License URL                                                                                                           |
|-----------------|---------|-----------------------------------------------------------------------------------------------------------------------|
| lighttpd 1.4.25 | BSD 2.0 | <a href="http://www.opensource.org/licenses/bsd-license.html">http://www.opensource.org/licenses/bsd-license.html</a> |
| librtsp 1.20    | BSD 1.0 |                                                                                                                       |

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 web servers 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.

For more additional information, send email to [help.cctv@samsung.com](mailto:help.cctv@samsung.com).

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    - gLibc, Inetutils
- 

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Version 2, June 1991

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