

**SAMSUNG TECHWIN**

# **NETWORK CAMERA**

User Manual

SNV-3120



# Network Camera

## 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 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.

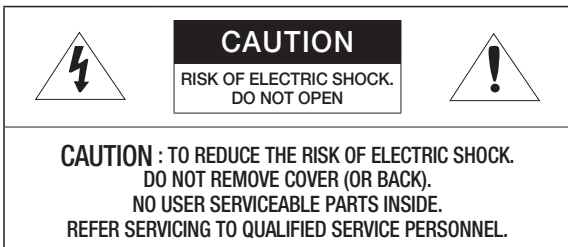


## WARNING

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.

## Disconnection Device

Disconnect the main plug from the apparatus, if it's defected. And please call a repair man in your location.

**When used outside of the U.S., it may be used HAR code with fittings of an approved agency is employed.**

## 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.

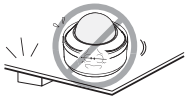
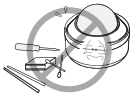
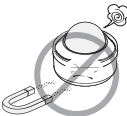
The BNC Out terminal of the product is provided for easier installation, and is not recommended for monitoring purposes.

If you keep the BNC cable connected, a risk of lightening may cause damage or malfunction to the product.

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

# overview

Please read the following recommend safety precautions carefully.

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

User's Manual is a guidance book 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

- **HD Video Quality**

- **Multi-Streaming**

This network camera 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.

- **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 saved to the SD memory, or the event signal will be sent to the Alarm Out port.

- **Intelligent Video Analysis**

Analyzes the event video according to the user-specified rules to recognize the event.

- **ONVIF (Spec 1.02) Compliance**

This product supports ONVIF Core Spec. 1.02.

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



Driving network video through global standardization

## RECOMENDED PC SPECIFICATIONS

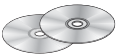
- CPU : Intel(R) Core(TM)2 2.00 GHz or higher
- Operating System : Windows XP, VISTA, 7  
Mac OS
- Resolution : 1280X1024 pixels or higher
- RAM : 1GB or higher
- Web Browser : Internet Explorer 6.0 or higher, Firefox, Chrome, Safari
  - Neither a beta test version unlike the version released in the company website nor the developer version will be supported.
  - On Firefox v3.5 or higher, displaying warning message dialog may cause an error.
  - If connecting to IPv6 in Windows XP, it can cause some problem.  
It is recommended to connect to IPv6 in Windows 7.
- Video Memory : 128MB or higher

## RECOMENDED SD/SDHC MEMORY CARD SPECIFICATIONS

- 2GB ~ 32GB
- To ensure proper recording of video data, we recommend you use a memory card that supports at least read/write speed 10Mbps and Class 6.

## WHAT'S INCLUDED

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

| Appearance                                                                          | Item Name                                        | Quantity | Description                                                     |
|-------------------------------------------------------------------------------------|--------------------------------------------------|----------|-----------------------------------------------------------------|
|     | User Manual,<br>Installer S/W CD,<br>CMS S/W DVD | 2        |                                                                 |
|    | Quick Guide                                      | 1        |                                                                 |
|    | Jack Modular                                     | 1        | LAN cable gender                                                |
|     | Cable for the testing monitor                    | 1        | Used to test the camera connection to a portable display device |
|   | Alarm Cable                                      | 1        | Used to connect to Alarm I/O                                    |
|  | Template                                         | 1        | Product installation guide                                      |

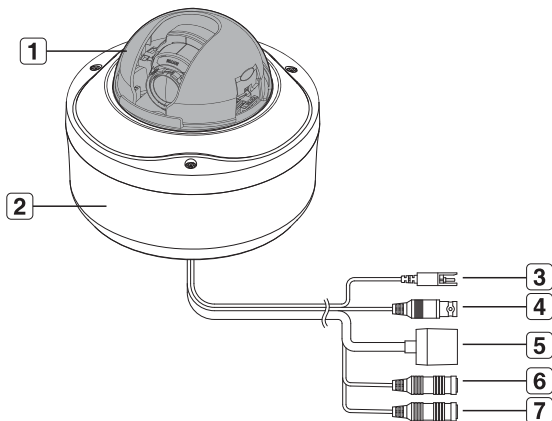
| Appearance                                                                        | Item Name          | Quantity | Description                                                                                                     |
|-----------------------------------------------------------------------------------|--------------------|----------|-----------------------------------------------------------------------------------------------------------------|
|  | ASSY-Tapping Screw | 4        | Used for installation on the wall or ceiling                                                                    |
|  | L Wrench           | 1        | Used to remove/fix the dome cover                                                                               |
|  | Plastic Anchor     | 4        | For fixing a screw, Inserted in a hole (reinforced anchoring force)                                             |
|  | Machine Screws     | 4        | Used for assembling the dome case when installing the product on the pipe, wall mount, etc. or blocking a hole. |



- The Test Monitor Cable is connected to a portable display and used for testing the camera. If you intend to use it for an actual monitoring camera, use the BNC cable instead.

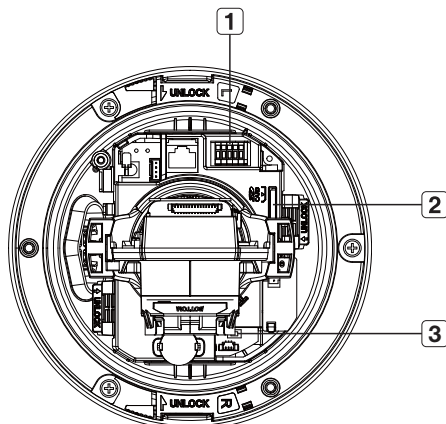
## AT A GLANCE

### Appearance



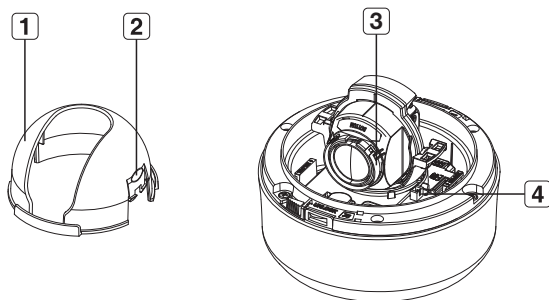
| Item                    | Description                                                       |
|-------------------------|-------------------------------------------------------------------|
| <b>1</b> Dome Cover     | Dome cover for the lens and unit protection.                      |
| <b>2</b> Main unit      | Main unit includes the lens, switch board, PCB boards and screws. |
| <b>3</b> Power Port     | Used to plug the power cable.                                     |
| <b>4</b> Video Out Port | Analog video output port. (for installation)                      |
| <b>5</b> Network Port   | Used to connect a PoE or LAN cable.                               |
| <b>6</b> Audio In Jack  | Used to connect to a microphone.                                  |
| <b>7</b> Audio Out Jack | Used to connect to speakers.                                      |

## Inside



| Item                                | Description                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                         |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| <b>1</b> Alarm In / Out terminals   | ALARM IN                                                                                                                                                                                                                                                                                                                                                                                                                                | Used to connect the alarm input signal.                 |
|                                     | ALARM OUT                                                                                                                                                                                                                                                                                                                                                                                                                               | Used to connect the alarm output signal.                |
|                                     | ALARM COM                                                                                                                                                                                                                                                                                                                                                                                                                               | Common port where the alarm output signal is connected. |
|                                     | GND                                                                                                                                                                                                                                                                                                                                                                                                                                     | Used for earth-grounding.                               |
| <b>2</b> SD Memory Card Compartment | Compartment for the SD memory card.                                                                                                                                                                                                                                                                                                                                                                                                     |                                                         |
| <b>3</b> Reset Button               | <p>Resets the camera settings to the default. Press and hold it for about 5 seconds to restart the system.</p> <p><b>!</b> If you reset the camera, 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> |                                                         |

## Components



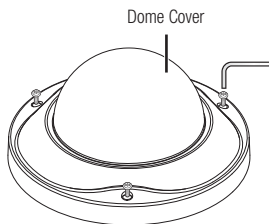
| Item                     | Description                                                                                                  |
|--------------------------|--------------------------------------------------------------------------------------------------------------|
| <b>1</b> Inner Cover     | Cover for the main unit's protection.                                                                        |
| <b>2</b> Side wing hooks | By lifting it while gently pressing the both ends, you can separate the inner cover.                         |
| <b>3</b> Heater          | Activated when the ambient temperature is under 5°C to prevent the dome cover from being covered with frost. |
| <b>4</b> Monitor Out     | Using the test monitor cable, you can connect to a mobile display for camera test.                           |

## INSTALLATION

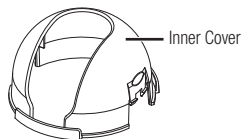
### Disassembling

To connect the alarm in/out, the dome cover and lens cover are to be separated.

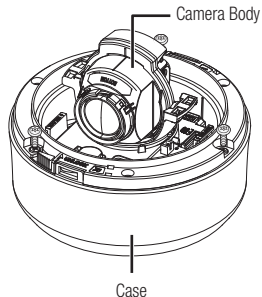
1. Using the L-wrench provided, loosen 3 screws by turning them counterclockwise and separate the dome cover.



2. Lift up the inner cover while gently pressing its both ends to separate it from the unit.



3. Loosen 3 screws by turning them counterclockwise, press both left and right lock releases inwards (in arrow direction) to unlock the stopper, and then separate the camera from the case.



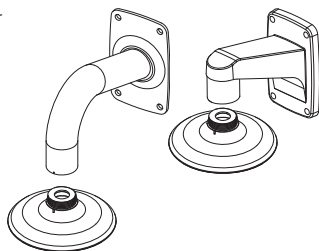
# installation & connection

## Optional Accessories for Installation

For your easier installation, you can purchase appropriate optional accessories available.

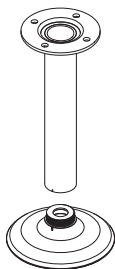
1. WALL MOUNT ADAPTOR(SBP-300WM or SBP-300WM1)/HANGING MOUNT(SBP-300HM1)

This adaptor is used when installing the dome camera onto a wall.



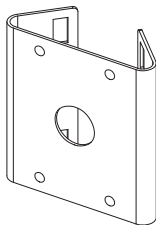
2. CEILING MOUNT ADAPTOR(SBP-300CM)/HANGING MOUNT(SBP-300HM1)

This adaptor is used when installing the dome camera on a concrete ceiling.



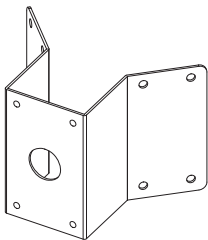
3. POLE MOUNT ADAPTOR(SBP-300PM)

This is an adaptor for WALL MOUNT ADAPTOR (SBP-300WM or SBP-300WM1) installation on a pole whose diameter is bigger than 80mm.



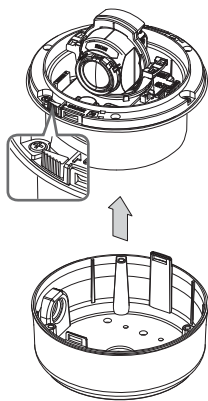
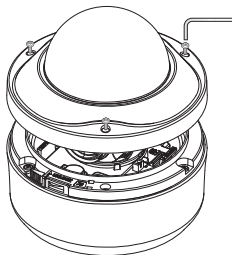


4. CORNER MOUNT ADAPTOR (SBP-300KM)  
This is an adaptor for WALL MOUNT ADAPTOR (SBP-300WM or SBP-300WM1) installation on the corner of wall joint.



### Installing on the ceiling directly

1. Using the L-wrench provided, loosen 3 screws by turning them counterclockwise and separate the dome cover.
2. Loosen 3 screws by turning them counterclockwise, press both left and right lock releases inwards (in arrow direction) to unlock the stopper, and then separate the camera from the case.



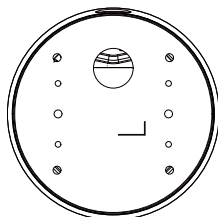
# installation & connection

3. Drill a hole (diameter: 5mm, depth: min 35mm) at a desired position while aligning to a hole of the case bottom and fully insert the provided plastic anchor (HUD 5) into the hole. Align the hole of the case bottom to the inserted anchor, and fasten the ASSY tapping screw (TH M4xL30).

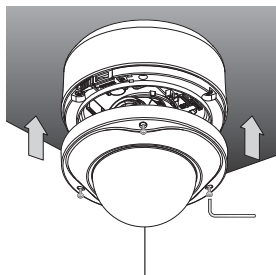


- When assembling the camera case to a junction box, select appropriate screw holes on the case bottom for installation.

4. Connect power and video cables and arrange cable running not to damage or squeeze them, and assemble the camera unit in the reverse way.
5. Adjust the lens aiming to your desired direction.
6. Assemble the Dome Cover.  
For waterproof purpose, fix and secure the bolt using L-wrench provided.

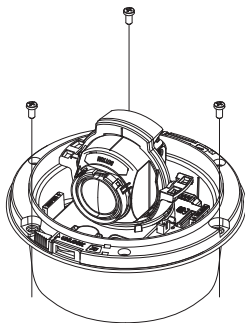


CAMERA FRONT



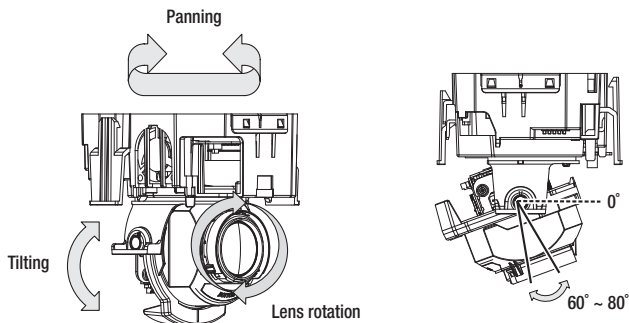
## Flushed installation on the ceiling

1. Using the provided template, drill a hole for the camera unit and fixing holes (diameter 5mm, more than 35mm deep) on the ceiling. Insert the plastic anchors (HUR-5) fully into the fixing holes.
2. Separate the dome cover and case.  
For separating dome cover and case, refer to the “**Installing on the ceiling directly**”.
3. Connect power and video cables and arrange cable running not to damage or squeeze them.
4. Remove the case assembly screws from the camera module.
5. Insert the camera module into the camera hole, and install it by fastening the Tapping Screws (TH, M4xL30) by matching the fixing holes (3 places).
6. Assemble the Dome Cover.  
Refer to the “**Installing on the ceiling directly**”.



# installation & connection

## Adjusting the monitoring direction for the camera



### ❖ Adjusting the monitoring direction

You can adjust the camera direction only when the camera is fixed on the ceiling. Then, turning the camera to the left or right is referred to as “Panning”, while tilting the angle is “Tilting”. For panning, the panning limit is 220° for the clockwise, and 135° for the counterclockwise, a total of 355° enabled; further rotation is stopped by the stopper.

- Adjust the panning angle so that the camera settles in the right horizontal position. You can adjust the panning up to 135° in each one direction, and 220° in the other direction, a total of 355°.
- Adjust the tilting angle so that the camera settles in the right vertical position. You can adjust the tilting between 0° and 90°.
- The total rotation range is 355°. You can make adjustment in one direction up to 125°, and 230° in the other direction.

### ❖ Methods of adjustment

#### • The case of wall installation

- ① After mounting the camera on the wall, adjust the panning angle so that the camera faces a desired direction when tilting.
- ② Adjust the Rotate position to fit the video to the screen borders.
- ③ Then, adjust the tilting angle so that the camera faces the monitoring direction.

#### • The case of ceiling installation

- ① After mounting the camera on the ceiling, adjust the panning angle according to the monitoring direction. You should adjust the panning angle lest that the video be displayed upside down on the monitor.
- ② Adjust the Rotate position to fit the video to the screen borders.
- ③ Then, adjust the tilting angle so that the camera faces the monitoring direction.

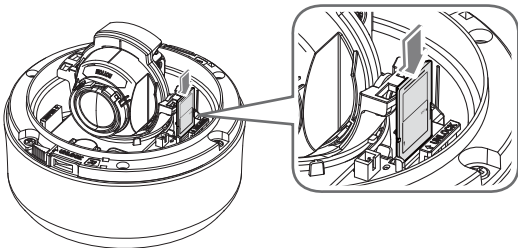


- For smoother Rotate adjustment, set the Tilt position between 60° ~ 80°.

## INSERTING/REMOVING AN SD MEMORY CARD

### Inserting an SD Memory Card

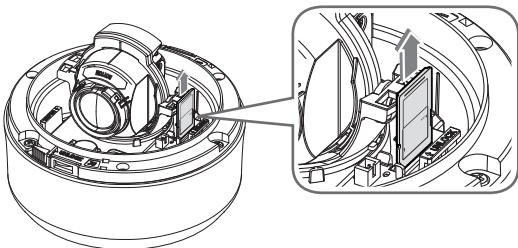
Push the SD memory card in the direction of the arrow shown in the diagram.



- Do not insert the SD memory card while it's upside down by force. Otherwise, it may damage the SD memory card.

### Removing an SD Memory Card

Gently press down on the exposed end of the memory card as shown in the diagram to eject the memory card from the slot.



- Pressing too hard on the SD memory card can cause the card to shoot out uncontrollably from the slot when released.
- To remove the SD memory card, set **<Record>** to **<Off>** from **<SD record>** and press **[Apply (✓)]**. (page 65)
- If you have saved data in the SD memory card, removing the SD memory card prior to setting **<Record>** to OFF will cause damage to the data stored in the card.

## MEMORY CARD INFORMATION (NOT INCLUDED)

---

### What is a memory card?

The memory card is an external data storage device that has been developed to offer an entirely new way to record and share video, audio, and text data using digital devices.

### Selecting a memory card that's suitable for you

Your camera supports SDHC memory cards.

You may, however, experience compatibility issues depending on the model and make of the memory card.

For your camera, we recommend you use a memory card from the following manufacturers:

SD/SDHC Memory Card : Sandisk, Transcend, Kingston

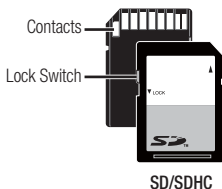
Playback performance can be affected depending on the speed of memory card, so use the high-speed memory card.

### Memory Card Use

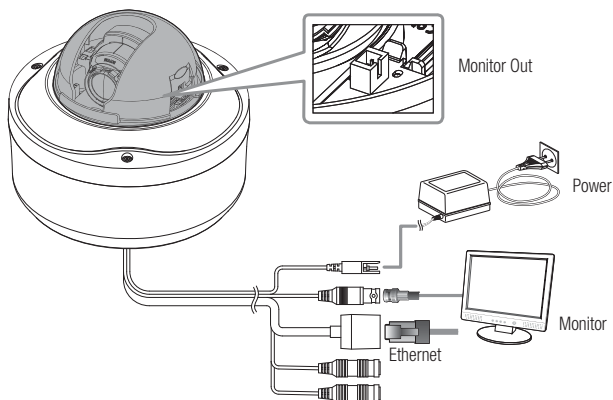
SD and SDHC memory cards feature a switch that disables writing data on to the media.

Having this switch to the Lock position will prevent accidental deletion of data stored in the memory card but at the same time will also prevent you from writing data on to the media.

### ❖ Memory Card Components



## CONNECTING WITH OTHER DEVICE



### Connecting to the monitor

Connect the video out port of the camera to the video input port of the monitor.



- In the initial installation of the camera, you can connect the camera to the monitor for checking the connection status.
- Connect the monitor test cable to the output port of the monitor.

### Ethernet Connection

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

### Power Supply

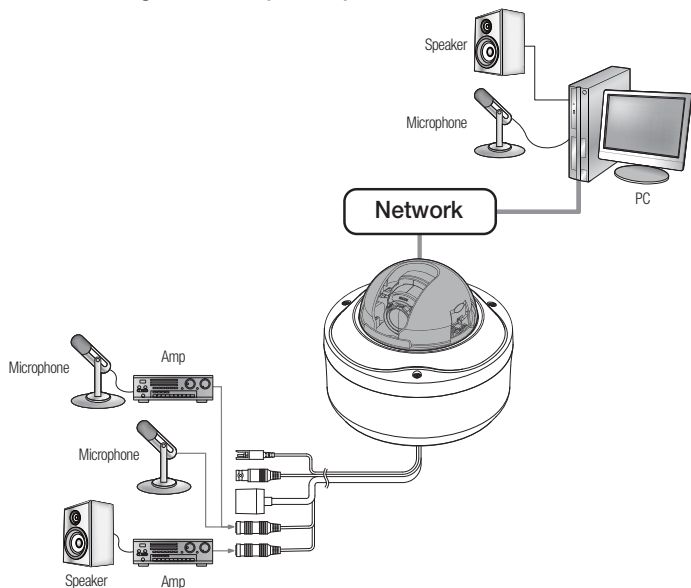
Use the screwdriver to connect each line (+, -) of the power cable to the corresponding power port of the camera.



- 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 camera.
- If using PoE, the heater will not operate at all. Use an adaptor if the installation site requires heater operations. Adaptor is sold separately. For the power specifications, refer to the "Appendix". (page 78)

# installation & connection

## Connecting to Audio Input/Output

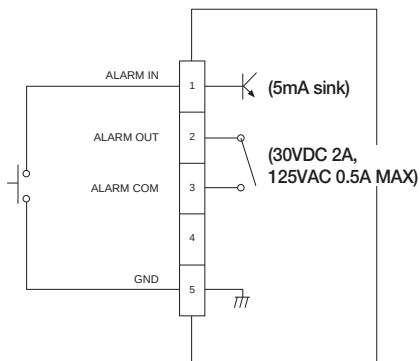


1. Connect the AUDIO IN port of the camera with the microphone directly or LINE OUT port of the amplifier that the microphone is connected to.
2. Connect the AUDIO OUT port of the camera with the LINE IN port of the speaker.
3. Check the specifications for audio input.

- **Audio Codec**  
G.711 PCM.  $\mu$ -law 64kbps 8kHz sampling
- **Full duplex Audio**
- **Audio in**  
Used for mono signal line input (Max.2.4 Vpp)
- **Audio out**  
Used for mono signal line output (Max.2.4 Vpp)
- **Line out impedance**  
600 $\Omega$

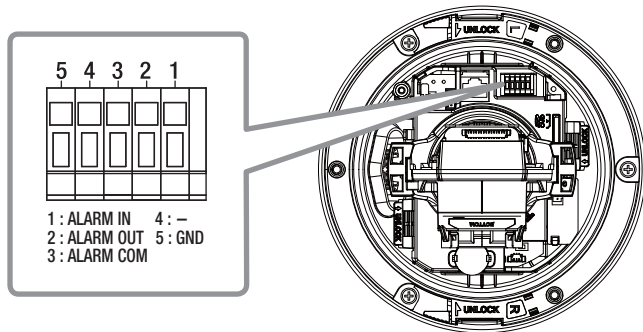


## Alarm I/O Wiring Diagram



## Connecting to the I/O port box

Connect the Alarm I/O signal to the corresponding port of the rear port box.



- ALARM IN : Used to connect the alarm input signal.
- ALARM OUT : Used to connect the alarm output signal.
- ALARM COM : Common port where the alarm output signal is connected.
- GND : Used for earth-grounding.

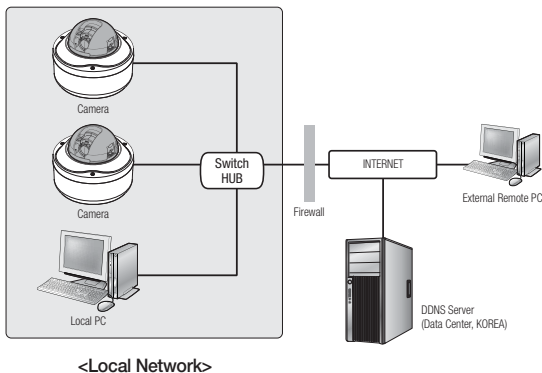
# network connection and setup

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

## CONNECTING THE CAMERA DIRECTLY TO LOCAL AREA NETWORKING

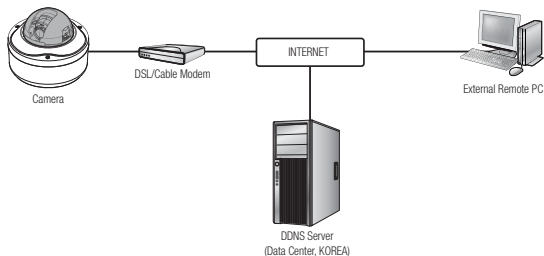
### Connecting to the camera from a local PC in the LAN

1. Launch an Internet browser on the local PC.
2. Enter the IP address of the camera 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 camera 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 31)

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



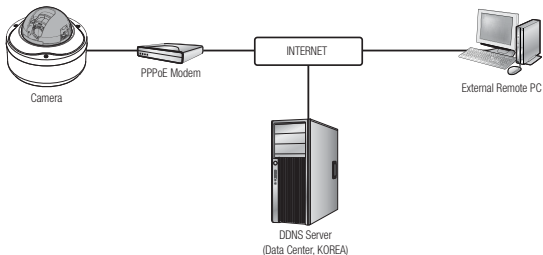
1. Use the cross LAN cable to connect the network cable directly to your PC.
2. Run the IP Installer and change the IP address of the camera so that you can use the web browser on your desktop to connect to the Internet.
3. Use the Internet browser to connect to the camera.
4. Move to [**Setup**] page.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



- For registering the DDNS settings, refer to "**Registering with DDNS**". (page 61)
- For configuring the DDNS settings, refer to "**DDNS**". (page 60)
- For setting the network type, refer to "**Interface**". (page 59)

# network connection and setup

## CONNECTING THE CAMERA DIRECTLY TO A PPPoE MODEM



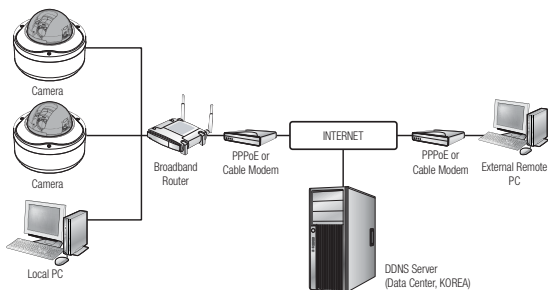
1. Use the cross LAN cable to connect the network cable directly to your PC.
2. Run the IP Installer and change the IP address of the camera so that you can use the web browser on your desktop to connect to the Internet.
3. Use the Internet browser to connect to the camera.
4. Move to [**Setup**] page.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



- For registering the DDNS settings, refer to “**Registering with DDNS**”. (page 61)
- For configuring the DDNS settings, refer to “**DDNS**”. (page 60)
- For setting the network type, refer to “**Interface**”. (page 59)

## CONNECTING THE CAMERA 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.

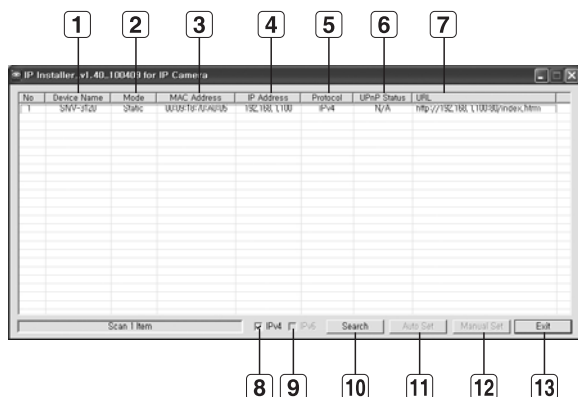
- Select : <Network Neighborhood> → <Properties> → <Local Area Connection> → <Properties> → <General> → <Internet Protocol (TCP/IP)> → <Properties> → <Obtain an IP address automatically> or <Use the following IP address>.
- Follow the instructions below if you select <Use the following IP address>:
  - 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 35)

# network connection and setup

## BUTTONS USED IN IP INSTALLER



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

| 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 camera if DDNS registration has failed. |
| <b>8</b> IPv4        | Scans for cameras with the IPv4 setting.                                                                                                                         |
| <b>9</b> IPv6        | Scans for cameras with the IPv6 setting.                                                                                                                         |
| <b>10</b> Search     | Scans for cameras 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 Samsung web site ([www.samsungipolis.com](http://www.samsungipolis.com)).

## STATIC IP SETUP

### Manual Network Setup

Run <IP Installer\_vX.XX.exe> to display the camera search list.

At the initial startup, both [Auto Set] and [Manual Set] will be grayed out.



- For cameras found with the IPv6 setting, these buttons will be grayed out as the cameras do not support this function.

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



# network connection and setup

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

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



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

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



- 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 35)

## 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 camera 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 camera. 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.

7. When the manual setup including IP is completed, the camera will restart.

**If the Broadband Router has more than one camera connected**

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

| Category              |             | Camera #1     | Camera #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          |
|                       | VNP 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 camera.  
ex) http://IP address : HTTP Port  
http://192.168.1.100:8080

## Auto Network Setup

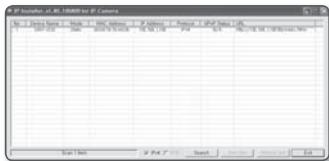
Run <IP Installer\_vX.XX.exe> to display the camera search list.

At the initial startup, both [Auto Set] and [Manual Set] will be grayed out.



- For cameras found with the IPv6 setting, these buttons will be grayed out as the cameras do not support this function.

1. Select a camera in the search list.  
Find the MAC (Ethernet) address labeled on the rear of the camera.  
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

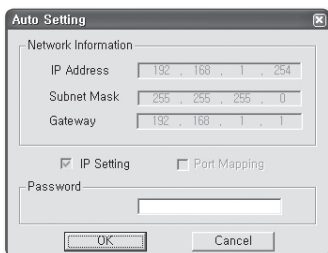
## 3. Enter the password.

This is the login password for the “admin” user who accesses the camera. 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.



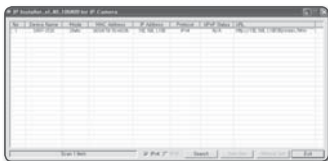
## DYNAMIC IP SETUP

### Dynamic IP Environment Setup

- Example of the Dynamic IP environment
  - If a Broadband Router, with cameras connected, is assigned an IP address by the DHCP server
  - If connecting the camera 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 cameras allocated with <Dynamic IP> addresses in the list.
2. Select a camera in the list, and click [Manual Set] to check the <Dynamic IP> of the camera.  
If you uncheck <DHCP>, you can change IP to <Static>.

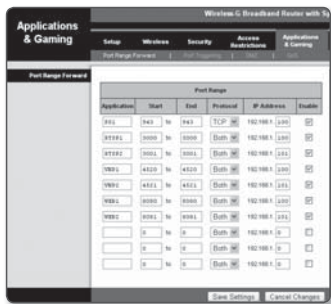


## PORT RANGE FORWARD (PORT MAPPING) SETUP

If you have installed a Broadband Router with a camera connected, you must set the port range forwarding on the Broadband Router so that a remote PC can access the camera 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 camera to the Broadband Router.  
Each port number for the Broadband Router should match that specified in **<Network>** - **<Port>** from the camera'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

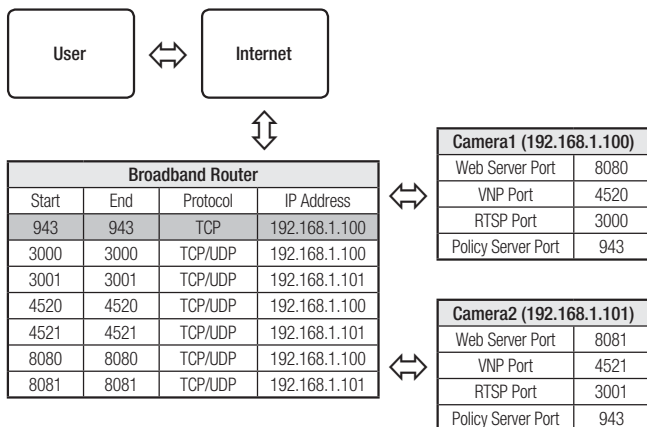
## Setting up Port Range Forward for several network cameras

When several network cameras are connected to one Broadband Router device, you should forward the TCP 943 port of the router to the TCP 943 port of a connected camera.

! ■ 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 camera.

- TCP 943 port is a port for the Silverlight policy server of a camera.

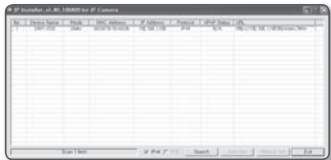
When Camera1 and Camera2 are connected to a router :



- 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 camera.
- You can change the ports of the camera except the policy server port through its configuration web pages.

## CONNECTING TO THE CAMERA FROM A SHARED LOCAL PC

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



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

## CONNECTING TO THE CAMERA 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 cameras within a Broadband Router's network by using the camera's DDNS URL.

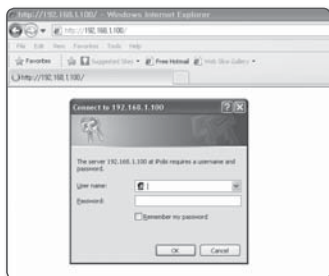
1. Before you can access a camera in the Broadband Router network, you should have set the port range forward for the Broadband Router.
2. From the remote PC, launch the Internet browser and type the DDNS URL address of the camera, or the IP address of the Broadband Router in the address bar.  
ex) [http://www.samsungipolis.com/\[Product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

## CONNECTING TO THE CAMERA

---

### Normally, you would

1. Launch the Internet browser.
2. Type the IP address of the camera 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:0000:0000: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 camera 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 camera 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 camera 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.

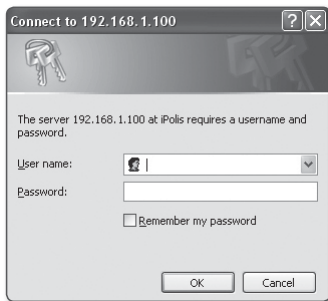
Once you register a dynamic IP-based device with the DDNS server, you can easily check the changed IP when you try to access the device.

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 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.
  - 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.
- 
  - 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 camera uses Microsoft Silverlight for displaying the video.

## INSTALLING SILVERLIGHT RUNTIME

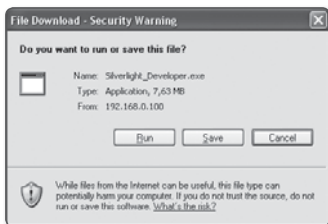
---

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:  
**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> Playback                 | Switch to the monitoring screen that plays recording data in the SD memory.                                                                                                                                                                                                                                                                                                                              |
| <b>3</b> Setup                    | Move to the Setup screen.                                                                                                                                                                                                                                                                                                                                                                                |
| <b>4</b> Viewer Screen            | Displays the Live video on the screen.                                                                                                                                                                                                                                                                                                                                                                   |
| <b>5</b> Alarm Output             | Activate the Alarm Out port.                                                                                                                                                                                                                                                                                                                                                                             |
| <b>6</b> Audio                    | Display the audio Listen and Talk toggle button on the screen.                                                                                                                                                                                                                                                                                                                                           |
| <b>7</b> Hide the alarm indicator | <p>Hides the alarm indicator near the border of the viewer screen.</p> <ul style="list-style-type: none"> <li>In the following cases, the alarm message will pop up on the border of the viewer. <ul style="list-style-type: none"> <li>If an event (alarm, motion detection, video analysis) occurs</li> <li>If the camera is turned off</li> <li>If the network is disconnected</li> </ul> </li> </ul> |

| Item                                       | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>8</b> Camera Menu                       | Used to retrieve and customize the Camera Setup menu.<br>For selecting and saving each menu item, refer to "Using the Camera Menu". (page 47)                                                                                                                                                                                                                                                                                                                                                              |
| <b>9</b> PTZ                               | You can control the camera zoom lens and run the preset which is set before.                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>10</b> Digital PTZ                      | You can use the mouse wheel to activate the digital zooming.                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>11</b> Screen Optimization, Full Screen | Adjust the screen to the optimal size, and display the Full Screen icon on the Live screen.                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>12</b> Capture                          | Saves the snapshot as an image file in the .bmp format.                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>13</b> Video Format                     | <p>You can select a profile type in &lt;Video profile&gt; under the &lt;Audio &amp; Video&gt; setup menu.</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> 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.</li> <li><input checked="" type="checkbox"/> If the "Invalid codec" message is displayed, select a profile type from the profile list again.</li> </ul> |



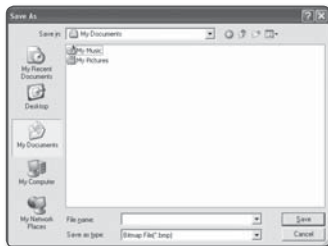
- If the temperature drops below the operational range, video signal may not be produced. In such cases, please wait for the video.

## To capture the snapshot

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



- If you are using IE8 on a Windows 7-based PC, deselect "Turn On Protected Mode" from "Tools - Internet Options - Security".



## To toggle the audio sound

1. Click the **[Audio (  )]** button.  
The corresponding button will be displayed in the Viewer.
2. Click the button to listen to / mute the sound as you wish.  
This button operates as a toggle button.



## To toggle the microphone sound

1. Click the **[Mic (  )]** button.  
The corresponding button will be displayed in the Viewer.



- "Cannot find audio recording device" message appears if there is no Microphone.

2. Click the button to start / stop talking.  
This button operates as a toggle button.  
The Silverlight permission dialog appears when you click the microphone button.



- As the AUDIO and MIC buttons (  ,  ) are simply to display or hide the toggle button on the viewer screen, you cannot control the actual operations of those buttons.  
So if you want to adjust the microphone or audio settings, use the toggle button on the viewer screen.



## 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.

## To control the PTZ

1. Press the **[PTZ (  )]** button.
2. Adjust the zoom or focus when the PTZ control button is displayed in the screen.
  -  /  : Adjusts the zoom
  -  /  : Adjusts the focus
  -  : Adjusts the zooming speed



## To activate a preset

To perform the designated preset in the Live screen, right-click the mouse and select your desired preset number.

## PLAYBACK

1. Click the **[Playback (  )]** button.
2. Specify the start time and end time of your search.
3. Select a search type.
4. Click the **[Search (  )]** button.  
The search results will be displayed in the list.



- If more than 500 events are recorded within the search period, your search will be limited up to the date when the 500th event is recorded.  
For instance, if the search period is between 10th and 15th day of the month, and more than 500 events were recorded 10th through 11th, your search will be limited up to 11th day with a total of 500 events, and events after then (from 12th) will not be found.

5. Select a data item to play in the search list.
6. Click the **[Play (  )]** button.
7. To stop playing the video, click **[Stop (  )]**.  
To return to the search screen, click **[Exit (  )]**.



## To check time information of the playing video

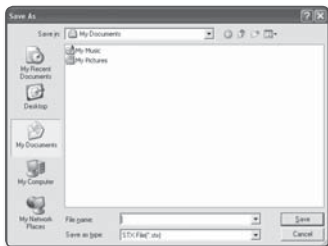
1. Click the **[About (  )]** button.
2. Date and time information appears on the screen.

## To back up the searched video

1. Click [  ] on the scene to back up.  
Save as window appears.
2. Click [Save].  
The screenshot will be backed up to the specified path.



- If you are using IE8 on a Windows 7-based PC, deselect "Turn On Protected Mode" from "Tools - Internet Options - Security".



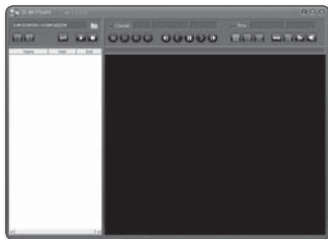
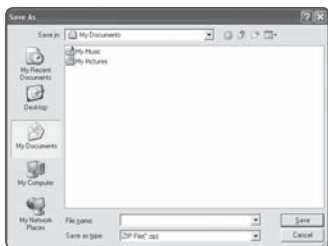
## PLAYING THE BACKUP RECORDINGS

---

You can play backup recordings by using the SlimPlayer.

### To download SlimPlayer

1. Click [SlimPlayer (  )].  
You will see a download dialog where you can specify the download path.
2. Specify the path with a proper file name and click [Save].
3. Unzip the downloaded file and run the executable.



# camera setup

## USING THE CAMERA MENU

Follow the steps below if you run the Web Viewer for setting the menus.

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. To change the value of a selected item, use the Left/Right (◀/▶) buttons.  
To break down to a sub-menu structure, click **[Enter (  )]** on the selected item.



: This arrow appears next to a menu that contains sub items.

: Exits the Menu Setup.

Select the **<SAVE>** or **<QUIT>** before exiting the menu setup to save the whole menu setup or not.



- If **<IV analysis function>** is enabled, camera's OSD menu operation can be set as an event.

## CONFIGURING THE MAIN MENU

### PROFILE

You can select one of the specified configurations for a specific environment.



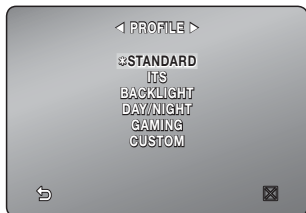
1. Go to **<PROFILE>**.



# camera setup

2. Select the appropriate mode for the installation environment.

- **STANDARD** : Automatically optimizes the configuration for general environment.
- **ITS** : Automatically optimizes the configuration to understand the traffic information and situation easily.
- **BACKLIGHT** : Automatically optimizes the configuration to seize both the subject and the background even if the subject is against the light.
- **DAY/NIGHT** : Automatically optimizes the configuration for day and night environment.
- **GAMING** : Automatically optimizes the configuration to record easily in a room whose lighting condition is regular.
- **CUSTOM** : If user modifies the easy configuration, the modified one is saved as customized configuration.

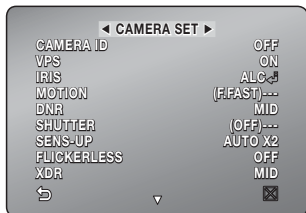


## SETTING UP THE CAMERA

You can set up the general functions of camera module.



1. Go to <CAMERA SET>.
2. Select and set each menu item.

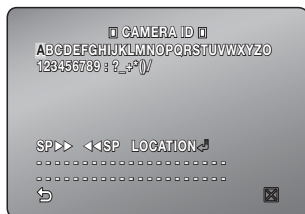




## CAMERA ID

You can type the camera name and location displayed in screen directly.

1. Select the **<CAMERA ID>**.
2. Select alphabet or number to type your desired name in the text input box on the bottom.
  - You can type maximum 54 characters for camera name.



3. Select the **<LOCATION>**.  
When the camera name is display in the monitoring screen, click one of the Up/Down/Right/Left (▲/▼/◀/▶) arrow keys to specify the location and confirm it to go back to the previous menu screen.

## VPS

You can display the outline of moving object clearly by using the progressive scanning function. You can also display the captured screen clearly just like a still image.

## IRIS

1. Select the **<IRIS>**.
2. Select the **<ALC>** to select your desired control mode.
  - LEVEL : Select the overall level of the brightness.
  - BACKLIGHT : Select WDR or BLC.
    - WDR : Set the level of composition in weight and the shutter speed in Broad-band Level, and select the Outdoor or Indoor in White Balance.
    - BLC : You can set the backlight compensation area by defining the size and location.



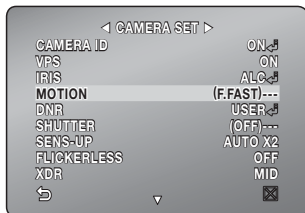
# camera setup

## MOTION

You can set the level for automatic gain control (AGC) for the motion control of camera.

Select the **<F.FAST>** to monitor the fast moving subject in dark lighting condition; and select the **<S.SLOW>** to monitor the subject without moving in dark lighting condition.

- If you select the **<AUTO>** for DAY/NIGHT, you cannot use the **<MOTION>** menu.



## DNR

You can set to reduce the noise in the screen.

## SHUTTER

You can set fixed high-speed electronic shutter and automatic high-speed electronic shutter.

## SENS-UP

You can set the automatic low-speed shutter function to be activated if the luminance of video signal is too low.

## FLICKERLESS

You can set to prevent the screen from flickering caused by inconsistency between the vertical sync frequency (VSF) and the flicker frequency of lighting.

You can fix the shutter speed to 1/100 sec. by selecting **<ON>**.

## XDR

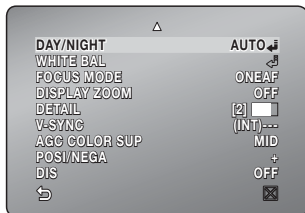
You can set the camera to calculate and compensate the luminance contrast if the shooting place has some brightness contrast.

## DAY/NIGHT

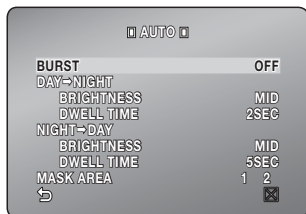
You can set the suitable mode for shooting environment.

1. Select the **<DAY/NIGHT>**.
2. Select the screen mode to switch by illuminance and set the sub-menu.
  - DAY : The shooting mode is fixed to DAY mode regardless of shooting environment change.
  - NIGHT : The shooting mode is fixed to NIGHT mode regardless of shooting environment change.

If you select **<ON>** for BURST, the burst signal is output.



- **AUTO** : DAY mode is automatically switched into NIGHT mode by illuminance or vice versa.
- **DAY→NIGHT/NIGHT→DAY** : If you select the **<AUTO>**, you can set the brightness and interval to switch from NIGHT to DAY.



- **MASK AREA** : If there is bright light such as spot light in shooting place at night, you can set the size and location the highlighted area.  
Apply the mask if the specified area is too bright at night.



## WHITE BAL

You can correct the image colors by adjusting white balance.

1. Select the **<WHITE BAL>**.
2. Select the mode to set white balance.

- **DAY** : You can set the values for red and blue colors in DAY mode.
- **NIGHT** : You can select the mode to use by the illuminance of shooting place and set the corresponding brightness and color for the selected mode.
  - **BRIGHTNESS** : Selects the brightness to switch from DAY mode setting into NIGHT mode setting.
  - **MODE** : Selects the levels for red and blue colors by the selected mode.
  - **RED** : Adjusts the level for red color.
  - **BLUE** : Adjusts the level for blue color.
  - **R-GAIN/B-GAIN** : Adjusts the current color temperature manually.  
You can set the values for red gain and blue gain only in the first AUTO mode.

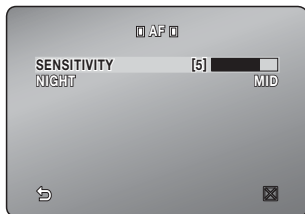


# camera setup

## FOCUS MODE

You can set general functions of zoom camera module.

1. Select the <FOCUS MODE>.
2. Select the focusing mode.
  - ONEAF : Automatically switches between MF mode and AF mode.
  - MF : Is activated in preset task.  
The focus data are saved previously in each preset. As soon as the camera is set in the preset location, the corresponding focus data associated with the preset is called immediately.
  - AF : Is activated when starting focus adjustment.  
And sets the SENSITIVITY and NIGHT operation mode.



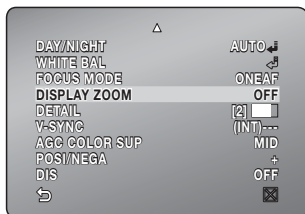
## DISPLAY ZOOM

You can select to operate the display zoom or not.

### DETAIL

You can set the SHARPNESS.

The higher the level is, the sharper and clearer the outline of the image becomes. However, noise increases accordingly.



## V-SYNC

You can select the INT or LINE.

- INT : Synchronizes the output time of the camera with the internal crystal.
- LINE : Synchronizes the output time of the camera with the AC power supply to adjust the output phase for multiple cameras.



■ If you use the DC12V or PoE power supply, it is fixed to the INTERNAL SYNCH only.

## AGC COLOR SUP

Adjusts the color display range based on the level of auto gain control.

## POSI/NEGA

If you select +, the video is output normally; if you select -, the brightness and color of the video are output in reverse.

## DIS

If the camera is installed in a place with specific vibration, you can set the image not to shake.

If you select the <ON>, digital zoom is applied to compensate and the image quality may be degraded.

## OTHER SETUP

You can set the language or text color.

### OTHER SET

You can set other menu items.



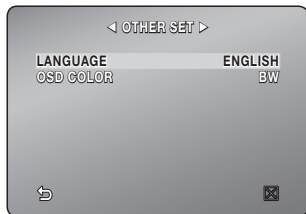
1. Select the <OTHER SET>.
2. Select and set each menu item.



### LANGUAGE

You can set the language to display menu in screen.

It is set separately from the language for Web Viewer.

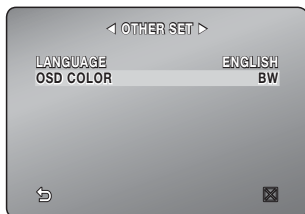


# camera setup

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## OSD COLOR

You can set the text color displayed in screen.



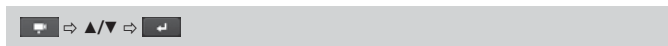
## CHECKING THE SYSTEM INFORMATION

---

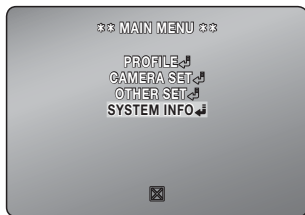
You can check the camera system information.

### SYSTEM INFO

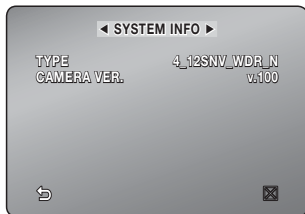
You can check the camera system information.



1. Select the <SYSTEM INFO>.



2. Check the current system information.



# setup screen

## SETUP

You can configure the audio & video, network, event and system settings of the camera in the network.

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

## AUDIO & VIDEO SETUP

### Video profile

1. From the Setup menu, select the <Audio & 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 MJPEG codec can be set as the E-mail/FTP Profile.
  - Record profile : This is the profile that is applied to video recording.
5. When done, click [Apply (  )].



- Profiles using H.264 codec can be stored in the SD memory only in resolutions of 640x480 or less.  
MPEG-4 videos can not be stored in the SD memory.



## 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 MJPEG 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.

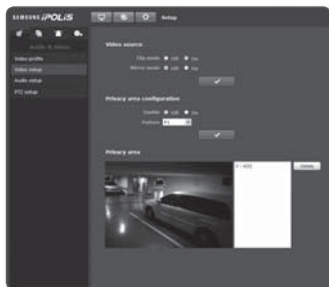
I-Frame is the basic frame for the compression, also known as Key Frame, which contains one complete image data. P-Frame contains only the data that has changed from the preceding I-Frame.

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



## Video setup

1. From the Setup menu, select the **<Audio & Video (  )>** tab.
2. Click **<Video setup>**.
3. Select a **<Video source>** mode.
  - Flip mode : Turn upside down the image that is captured by the camera.
  - Mirror mode : Flip horizontal the image that is captured by the camera.
4. When done, click **[Apply (  )]**.



## To set the privacy zone

You can specify a certain area of the camera video to be protected for your privacy.

1. Set it to **<Enable>**.
2. Click the image and select 4 corners to set your desired zone.  
When the pop-up window to add a new privacy zone appears, type a name for the new zone and click the **[Apply (  )]** button.
  - Do not drag when specifying the privacy zone.
3. Select the **<Pattern>** to display in the privacy zone.
  - If you select the **[Solid]** among **<Pattern>** items, the corresponding zone is displayed in solid gray color.
  - If you select the **[P4 ~ P1]**, the corresponding zone is digitized.
4. To delete the selected area, click the **[Delete (  )]** button.
5. When done, click **[Apply (  )]**.
  - You can set up to 12 privacy zones in maximum.

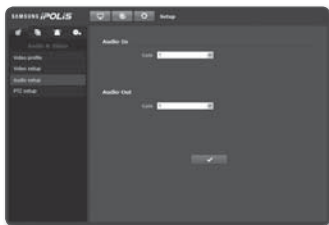


# setup screen

## Audio setup

You can configure the I/O settings of the audio source from the camera.

1. From the Setup menu, select the **<Audio & Video ( [🔊] )>** tab.
2. Click **<Audio setup>**.
3. Adjust the audio I/O levels to your preference.
  - Audio-In : Set the audio input value.
  - Audio-Out : Set the audio output value.
4. When done, click **[Apply ( [✓] )]**.



## PTZ setup

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

1. From the Setup menu, select the **<Audio & Video ( [🔊] )>** tab.
2. Click the **<PTZ setup>**.
3. Set the zoom and focus control buttons.
  - **[Zoom In ( [🔍] )]** : Zooms in the screen.
  - **[Zoom Out ( [🔍] )]** : Zooms out the screen.
  - **[Adjust Focus ( [🔍] / [🔍] )]** : Adjusts the focus in the screen.
  - **[Zoom Speed Control ( [ ] )]** : The bigger the number is, the faster the zoom speed becomes.
4. Set the preset.



## 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

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.
  - IPv6 address : Obtains the IPv6 address to access the IPv6 network.
4. When done, click [Apply (  )].

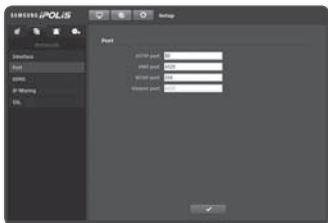


- The IP addressing system will be defaulted to DHCP. If no DHCP server is found, the previous settings will be restored automatically.

# setup screen

## Port

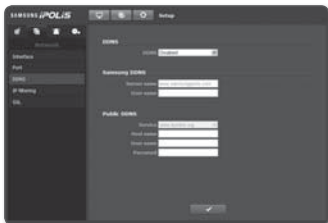
1. From the Setup menu, select the <Network (  )> tab.
2. Click <Port>.
3. Type in each item in the Port menu as necessary.
  - Neither the port range between 0 and 1023 nor port 3702 is available.
  - HTTP port : HTTP port used to access the camera via the web browser.  
The default is 80(TCP).
  - 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.
4. When done, click [Apply (  )].



## DDNS

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



# 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 camera setup

1. From the DDNS setup page, set **<DDNS>** to **<Samsung DDNS>**.
2. Provide the **<User name>** that you registered 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 Camera 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. When done, click **[Apply (  )]**.

## IP filtering

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

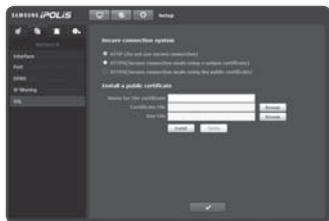
1. From the Setup menu, select the <Network (  )> tab.
2. Click <IP filtering>.
3. Select a <Filtering type>.
  - Deny : If selecting this, access from those IPs that are added to the filtering will be restricted.
  - Allow : If selecting this, access from only those IPs that are added to the filtering will be accepted.
4. Provide the IP that you want to grant or deny access from.
5. 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 camera using HTTPS mode, you have to type the IP address for the camera in the form of "https://<Camera\_IP>".
4. Search for the public certificate that you want to install on the camera.  
To install the certificate on the camera, 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 (  )].



# setup screen

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## 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.

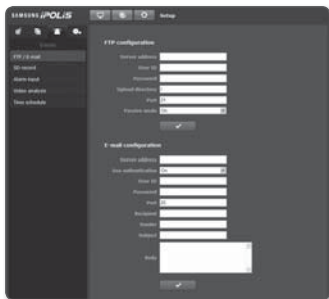
## EVENT SETUP

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### FTP / E-mail

You can configure the FTP/E-mail server settings so that you can transfer the images stored in the camera 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.





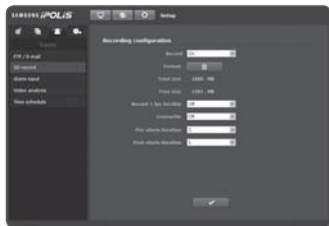
- E-mail configuration
  - Server address : Enter the IP address of the email server that you use for the email transfer.  
ex) SMTP. hotmail. com
  - Use authentication : Select whether to use authorization.
  - User ID : Enter the user ID for logging into the email server.
  - Password : Enter the 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 (  )]**.

## SD record

You can set the record conditions or the use of recording for the SD memory, check the size of stored data, or format the SD memory itself.

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



# setup screen

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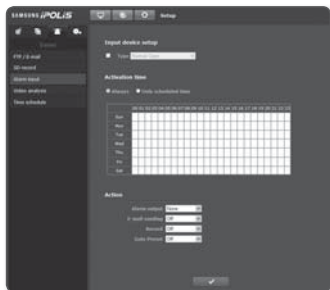
## To make recording on the SD memory

1. Check the <Total size> and the <Free size>.
2. If the SD memory has a sufficient free space, set <Record> to <On>.  
Otherwise, check the stored data and if you find them not important, then click <Format> to format the SD memory.
  - If your SD memory card writes slowly, only one frame per second will be stored.
  - For a SD memory card with a large capacity, the formatting will be slowed down accordingly.
  - If the size of data grows with time, only 1 fps can be stored even if you set the record quality to Full Frame.
3. Specify the record conditions.
  - Record 1 fps forcibly : Only one frame per second will be recorded regardless of the existing record profile.
  - Overwrite : If the SD memory is full, this will delete old data and store new data in replacement.
  - Pre-alarm duration : Specify the time point before the occurrence of the alarm; starting from the time point, the images will be transferred. You can specify up to 5 seconds before the occurrence of the alarm.
  - Post-alarm duration : Specify the time point after the occurrence of the alarm; to the specified time point, the images will be transferred. You can specify up to 120 seconds after the occurrence of the alarm.
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>**.
3. Specify an input device.
  - 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.
4. 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.
5. 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.
  - Record : Specify the use of recording in the alarm input setup.
  - Goto Preset : Moves to the specified preset location when setting the alarm input.
6. When done, click **[Apply (  )]**.



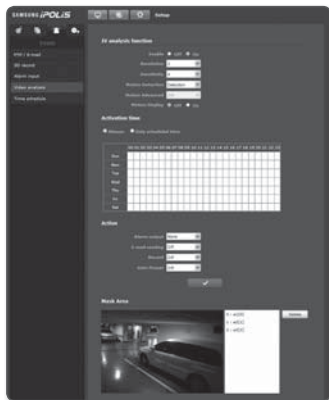
# setup screen

## Video analysis

1. From the Setup menu, select the <Event (  )> tab.
2. Click <Video analysis>.
3. Specify the use of Intelligent Video Analysis.
4. Set the resolution value and sensitivity level to detect an object.

| Resolution Value | Object Size     |
|------------------|-----------------|
| 1                | 32 of 8x8 pixel |
| 2                | 24 of 8x8 pixel |
| 3                | 16 of 8x8 pixel |
| 4                | 8 of 8x8 pixel  |
| 5                | 1 of 8x8 pixel  |

- If you set the Resolution Value high, the camera can detect detail motion of the object.



5. Set the Motion Detection type.  
Sets to detect and trace the moving object.
  - Tracking : Detects a moving object and perform additional functions.
  - Detection : Detects a moving object.
6. Set whether to use the Additional Motion Functions or not.  
Detects any motion of an object, displays the video with any changes, and trace the moving path.
  - If you select the <Moved/Fixed>, you can display the corresponding area when an object disappears from the screen or an object appears and stays in the screen for a specified time period.
7. Set whether to use the Motion Display function or not.
8. Set the activation time and condition.
  - Refer to the "Alarm input" for how to set the <Activation time> and <Action>. (page 67)
9. Select whether to display the mask zone.  
You can set maximum of 4 mask zones. To set mask area, drag the designed area with mouse. Motion detection is not activated in set mask area. To delete set area, click [Delete (  )] button.



- Even if the <Video analysis> is enabled, the video analysis function does not work when entering through the operating menu in the camera.
- If camera is capturing a close object, the video analysis capability may degrade. In the following cases, the video analysis function may not produce a proper result on the default event and motion detections.
  - 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
  - A moving object comes close to the camera

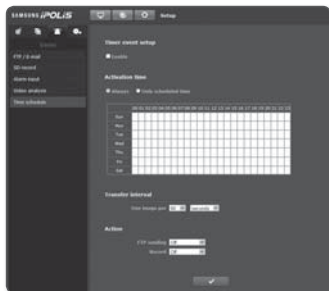
## Time schedule

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.



# setup screen

---

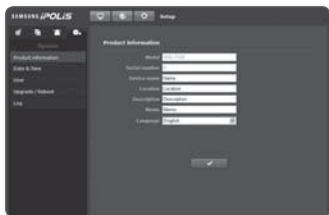
3. Specify the **<Transfer interval>**.
4. Specify the activation conditions.
  - FTP sending : Specify the use of the FTP transfer if an event occurs.
  - Record : Specify the use of recording if an event occurs.
5. When done, click **[Apply (  )]**.

## SYSTEM SETUP

---

### Product information

1. From the Setup menu, select the **<System (  )>** tab.
2. Click **<Product information>**.
3. Check the camera information, or provide details according to your network environment.
  - Location : Specify the location where the camera is installed.
  - Description : Provide detailed information about the camera location.
  - Memo : Provide an explanation about the camera for better understanding.
  - Language : Selects the language to display in the Web Viewer.
4. When done, click **[Apply (  )]**.



- You should change the camera menu language in camera menu.
- 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 camera.
  - **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.
  - **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.

## 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.

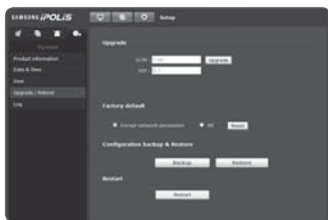


# setup screen

- Guest setup : If **<Guest access>** is permitted, any guest can access the Web Viewer screen but 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.
    - Audio-In : The audio input option will be activated in the Live Viewer screen.
    - Controls : You can control the camera menu, PTZ, Mic. and Alarm button.
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/SSL settings.
    - All : Resets all settings including the camera settings. (however, the log information will not be reset)
      - The IP addressing system will be defaulted to DHCP. 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.



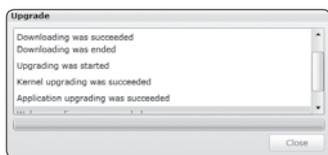


### To perform the upgrade

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.

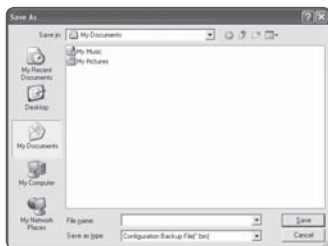


- If you forcibly terminate the upgrade process, upgrade will not be completed properly.



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

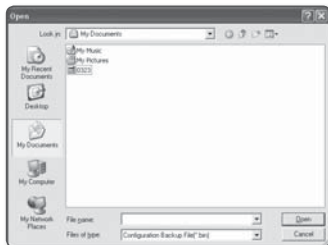
1. Click [**Backup**].  
The Save As dialog should appear.
2. Specify the backup path with a proper file name, and click [**Save**].  
The backup file will be saved to the specified path in the format of “.bin”.
3. To restore the backup settings, click [**Restore**].



4. Select a backup file and click [**Open**].



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

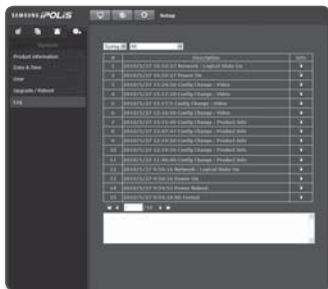


# setup screen

## 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                                                                                                                                |                          |
|-------|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
|       |                           | SNV-3120N                                                                                                                                  | SNV-3120P                |
| Video | Imaging Device            | 1/4" Ex-view HAD PS CCD                                                                                                                    |                          |
|       | Total Pixels              | 811(H) x 508(V)                                                                                                                            | 795(H) x 596(V)          |
|       | Effective Pixels          | 768(H) x 494(V)                                                                                                                            | 752(H) x 582(V)          |
|       | Scanning System           | Progressive(VPS ON) (If WDR on, Interlaced Scan)                                                                                           |                          |
|       | Synchronization           | Internal / Line lock                                                                                                                       |                          |
|       | Frequency                 | H : 15.734KHz / V : 59.94Hz                                                                                                                | H : 15.625KHz / V : 50Hz |
|       | Horizontal Resolution     | Color : 600 TV lines                                                                                                                       |                          |
|       | Min. Illumination         | Color : 0.7 Lux (F 1.65, 50 IRE, VPS OFF), 0.001 Lux (Sens up 512X)<br>B/W : 0.07 Lux (F 1.65, 50 IRE, VPS OFF), 0.0001 Lux (Sens up 512X) |                          |
|       | S / N Ratio               | 50dB                                                                                                                                       |                          |
|       | Video Out                 | CVBS : 1.0 Vp-p / 75Ω composite                                                                                                            |                          |
| Lens  | Focal Length (Zoom Ratio) | 3.69~44.32mm (12X)                                                                                                                         |                          |
|       | Max. Aperture Ratio       | F1.65(Wide) / F2.01(Tele)                                                                                                                  |                          |
|       | Angular Field of View     | H : 54.44°(Wide) ~ 4.64°(Tele) / V : 41.42°(Wide) ~ 3.52°(Tele)                                                                            |                          |
|       | Min. Object Distance      | 0.2m (Wide) / 0.8m (Tele)                                                                                                                  |                          |
|       | Focus Control             | AF / One-Shot AF / Manual                                                                                                                  |                          |
|       | Zoom Movement Speed       | -                                                                                                                                          |                          |
|       | Lens Type                 | DC Auto Iris                                                                                                                               |                          |
|       | Mount Type                | -                                                                                                                                          |                          |

# appendix

| Items               |                             | Description                                              |                                                                                                                            |
|---------------------|-----------------------------|----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
|                     |                             | SNV-3120N                                                | SNV-3120P                                                                                                                  |
| Pan / Tilt / Rotate | Pan Range                   | 0°~355°                                                  |                                                                                                                            |
|                     | Pan Speed                   | -                                                        |                                                                                                                            |
|                     | Tilt Range                  | 0°~90°                                                   |                                                                                                                            |
|                     | Tilt Speed                  | -                                                        |                                                                                                                            |
|                     | Rotate Range                | 0°~355°                                                  |                                                                                                                            |
|                     | Preset                      | 12 ea                                                    |                                                                                                                            |
|                     | Preset Accuracy             | ±0.1°                                                    |                                                                                                                            |
|                     | Auto Tracking               | -                                                        |                                                                                                                            |
| Operational         | On Screen Display           | English, French, Spanish, Japanese, Korean, Portuguese   | English, French, German, Spanish, Italian, Chinese, Portuguese, Russian, Swedish, Danish, Rumanian, Czech, Turkish, Polish |
|                     | Camera Title                | Off / On (Displayed up to 54 characters)                 |                                                                                                                            |
|                     | Day & Night                 | Auto (ICR) / Color / B/W                                 |                                                                                                                            |
|                     | Backlight Compensation      | Off / BLC / WDR                                          |                                                                                                                            |
|                     | Wide Dynamic Range          | 128X                                                     | 160X                                                                                                                       |
|                     | Contrast Enhancement        | XDR (eXtended Dynamic Range) (Off/Low/Medium/High)       |                                                                                                                            |
|                     | Digital Noise Reduction     | Motion Adaptive 2D+3D Noise Filter (Off/Low/Medium/High) |                                                                                                                            |
|                     | Digital Image Stabilization | Off / On                                                 |                                                                                                                            |
|                     | Motion Detection            | Yes                                                      |                                                                                                                            |
|                     | Privacy Masking             | Off / On (12 Polygonal programmable zones)               |                                                                                                                            |
|                     | Sens-up (Frame Integration) | Off / Auto (2X ~ 512X)                                   |                                                                                                                            |

| Items       |                             | Description                                                                                     |                                    |
|-------------|-----------------------------|-------------------------------------------------------------------------------------------------|------------------------------------|
|             |                             | SNV-3120N                                                                                       | SNV-3120P                          |
| Operational | Gain Control                | Off / Very Low / Low / Medium / High / Very High                                                |                                    |
|             | White Balance               | ATW1 / ATW2 / AWC / Manual                                                                      |                                    |
|             | Electronic Shutter Speed    | Off / Manual (1/100 ~ 1/10Ksec)                                                                 |                                    |
|             | Digital Zoom                | 16X                                                                                             |                                    |
|             | Flip / Mirror               | Digital Flip                                                                                    |                                    |
|             | VPS                         | Off / On                                                                                        |                                    |
|             | Intelligent Video Analytics | Moved / Fixed                                                                                   |                                    |
|             | Alarm I/O                   | Input 1ea / Output 1ea (Relay)                                                                  |                                    |
|             | Remote Control Interface    | -                                                                                               |                                    |
|             | RS-485 Protocol             | -                                                                                               |                                    |
| Network     | Ethernet                    | RJ-45 (10/100BASE-T)                                                                            |                                    |
|             | Video Compression Format    | H.264, MPEG-4, MJPEG                                                                            |                                    |
|             | Resolution                  | 704x480, 640x480, 352x240, 320x240                                                              | 704x576, 640x480, 352x288, 320x240 |
|             | Max. Framerate              | 30fps                                                                                           | 25fps                              |
|             | Video Quality Adjustment    | H.264/MPEG-4 : Compression Level, Target Bitrate Level Control<br>MJPEG : Quality Level Control |                                    |
|             | Bitrate Control Method      | H.264/MPEG-4 : CBR or VBR<br>MJPEG : VBR                                                        |                                    |
|             | Streaming Capability        | Multiple Streaming (Up to 10 Profiles)                                                          |                                    |
|             | Audio I/O                   | Line in / Line out                                                                              |                                    |
|             | Audio Compression Format    | G.711 $\mu$ -law                                                                                |                                    |

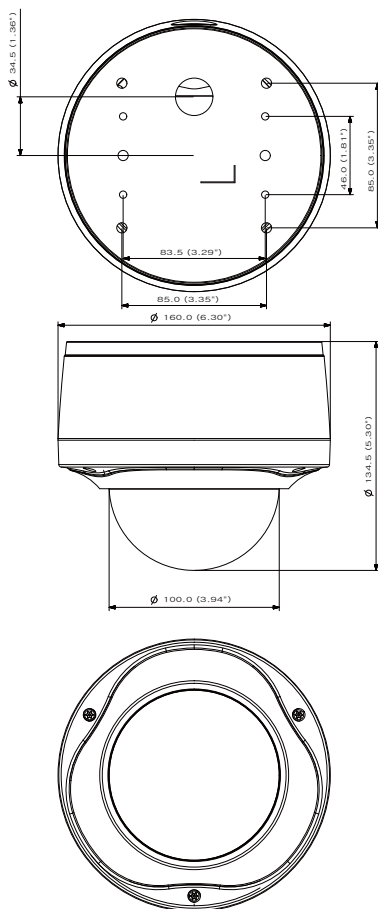
# appendix

| Items         |                                  | Description                                                                                                                               |           |
|---------------|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|               |                                  | SNV-3120N                                                                                                                                 | SNV-3120P |
| Network       | Audio Communication              | 2-Way                                                                                                                                     |           |
|               | IP                               | IPv4, IPv6                                                                                                                                |           |
|               | 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 |           |
|               | 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                      | SD/SDHC Memory Slot                                                                                                                       |           |
|               | ONVIF Conformance                | Yes                                                                                                                                       |           |
|               | Web Viewer                       | Supported OS : Windows XP / VISTA / 7, MAC OS<br>Supported Browser : Internet Explorer 6.0 or Higher, Firefox, Chrome, Safari             |           |
|               | Central Management Software      | NET-i viewer                                                                                                                              |           |
| Environmental | Operating Temperature / Humidity | -40°C ~ +50°C (-40°F ~ +122°F) / ~ 90% RH                                                                                                 |           |
|               | Ingress Protection               | IP66 Grade (Waterproof)                                                                                                                   |           |
| Electrical    | Input Voltage / Current          | 12V DC, 24V AC, PoE(IEEE802.3af)                                                                                                          |           |
|               | Power Consumption                | Max. 8W (Heater Off), Max. 11W (Heater On)                                                                                                |           |
| Mechanical    | Color / Material                 | Body : Ivory / Aluminum                                                                                                                   |           |
|               | Dimension (ØxH)                  | Ø160.0 x H134.5mm                                                                                                                         |           |
|               | Weight                           | 1.5Kg                                                                                                                                     |           |

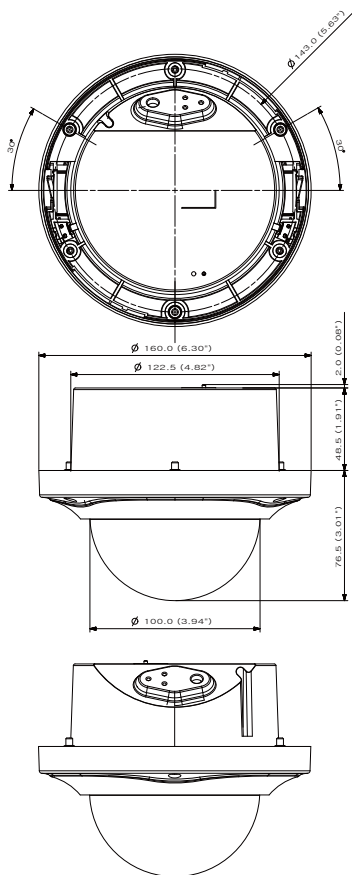
## PRODUCT OVERVIEW

Unit : mm (inch)

## ● APPENDIX



## Flushed mode





## TROUBLESHOOTING

| PROBLEM                                                                          | SOLUTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| I can't access the camera from a web browser.                                    | <ul style="list-style-type: none"> <li>• Check to make sure that the camera's Network settings are appropriate.</li> <li>• Check to make sure that all network cables have been connected properly.</li> <li>• If connected using DHCP, verify that the camera 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 camera is connected to a router, verify that port forwarding is properly configured.</li> </ul> |
| Viewer got disconnected during monitoring.                                       | <ul style="list-style-type: none"> <li>• Connected Viewers become disconnected upon any change to camera or network configurations.</li> <li>• Check all network connections.</li> <li>• If the camera is connected over an PPPoE network, it's possible for Viewer to disconnect under poor network conditions.</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 camera 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 camera again.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                |
| Images overlap.                                                                  | <ul style="list-style-type: none"> <li>• Check whether two or more cameras are set to a single multicast address instead of different addresses. If a single address is used for multiple cameras, 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 camera is connected to.</li> </ul>                                                                                                                                                                                                                                                                                                                                             |

# appendix

| PROBLEM                                                                                                                                                     | SOLUTION                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| No JPEG file is transferred via e-mail on occurrence of intelligent video analysis event of camera even when the <IV analysis function> is set to <Enable>. | <ul style="list-style-type: none"><li>• Verify the settings in the following sequence:<ul style="list-style-type: none"><li>A. Check &lt;Data &amp; Time&gt; settings.</li><li>B. The &lt;IV analysis function&gt; should be set to &lt;Enable&gt;.</li><li>C. Alarm Video Transmission must be enabled.</li></ul></li></ul> |
| Can <Set Rules> be configured even when the <IV analysis function> is set to <Disable>?                                                                     | <ul style="list-style-type: none"><li>• Yes, it can be. You can set rules for events despite of the intelligent video analysis setting.</li></ul>                                                                                                                                                                            |
| No signal is found at the Alarm Output port even when an intelligent video analysis event is generated.                                                     | <ul style="list-style-type: none"><li>• Check alarm output port settings.</li></ul>                                                                                                                                                                                                                                          |
| Cannot record into the SD memory card.                                                                                                                      | <ul style="list-style-type: none"><li>• Check if the memory card is defective.</li><li>• Check if the write protection tab of the memory card is set to "LOCK".</li></ul>                                                                                                                                                    |
| SD memory card is inserted but the camera does not operate properly.                                                                                        | <ul style="list-style-type: none"><li>• Check if the memory card is inserted in the proper direction. Operation of memory card that is formatted by other devices is not guaranteed with this camera unit</li><li>• Format the memory card again in &lt;Setup&gt; → &lt;Event&gt; → &lt;SD Record&gt; menu.</li></ul>        |
| Cannot format the SD memory card.                                                                                                                           | <ul style="list-style-type: none"><li>• Check if the write protection tab of the memory card is set to "LOCK".</li></ul>                                                                                                                                                                                                     |

# OPEN SOURCE ANNOUNCEMENT

---

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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