

WISENET

NETWORK CAMERA
Network Setup Guide

CE

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checking network configuration

Configure the network after checking the following.

1. Check whether to use a DDNS server.
 - Check whether to use a DDNS for remote monitoring from outside, or to configure the system in the form of a local network for monitoring only inside the local network.
2. Check whether to use a static IP or dynamic IP.
3. Before installation, check the number and locations of network cameras and the location of the monitoring PC.
4. Check the network devices to be connected to a network camera, such as IP router/hub.
5. Check the port forwarding, ports and protocol required for establishing a camera connection path.

SELECTING THE NETWORK TYPE

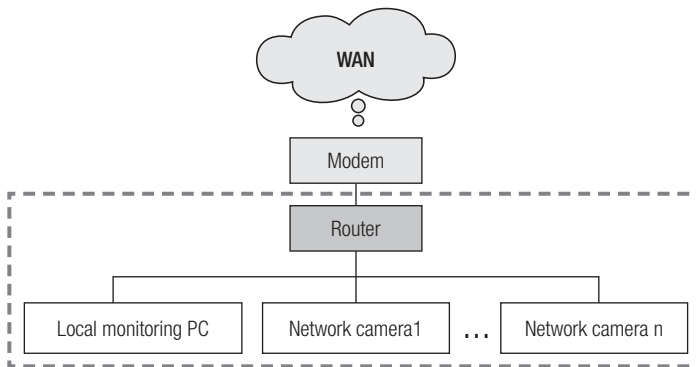
Select the type of network that you want to configure based on the following information.

If DDNS server is not used:

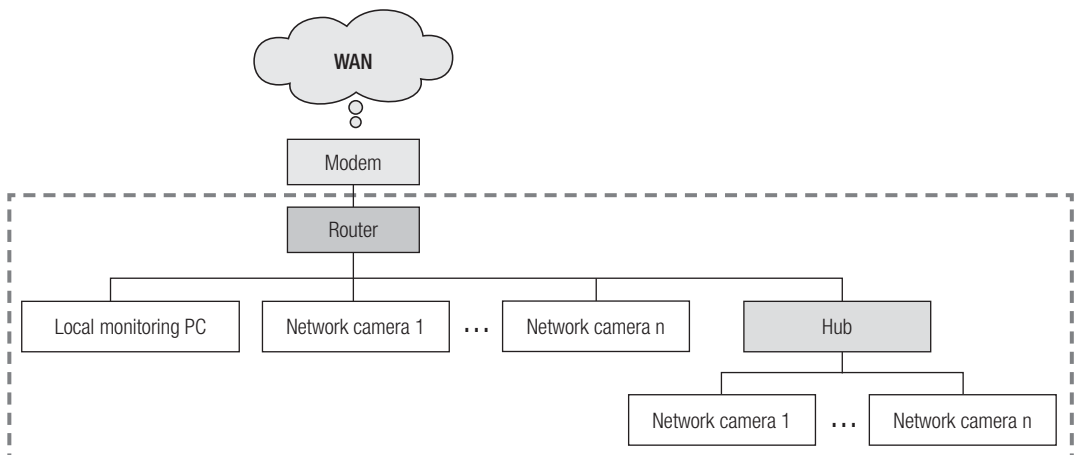
As shown in the image below, if the monitoring PC and network camera are connected to the same router, they will have the same IP range.

Install the IP installer on the local monitoring PC and use the PC for IP configuration.

EX1)

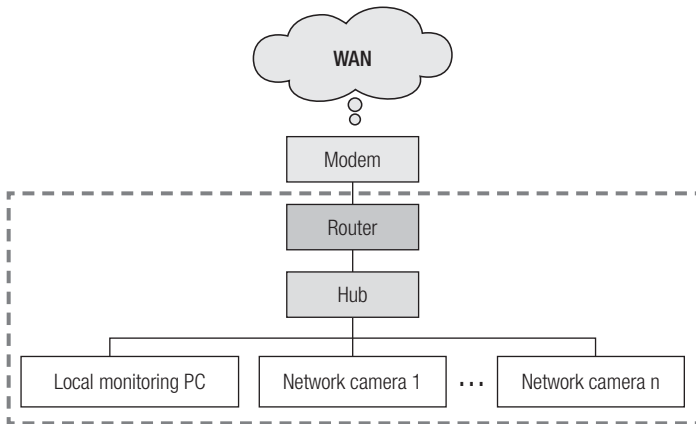


EX2)

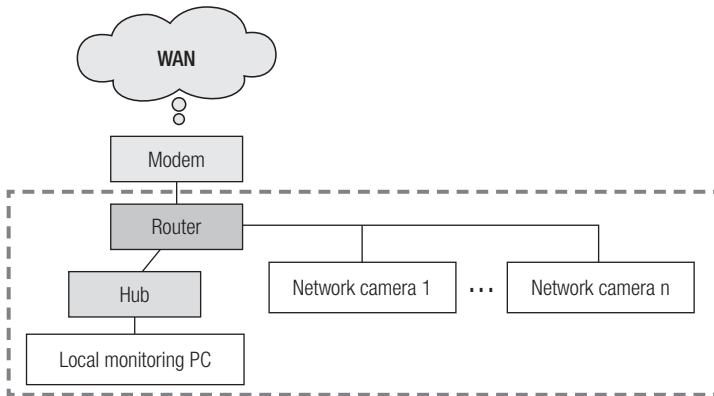


checking network configuration

EX3)

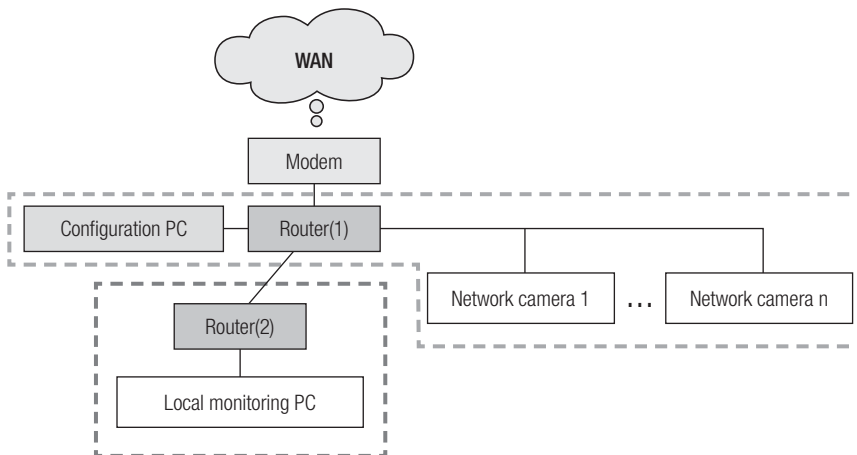


EX4)



As shown in the image below, if the monitoring PC and network camera are connected to different routers, the network camera cannot be configured, even if the IP installer is installed in the local monitoring PC. In this case, connect the configuration PC or notebook to the router (1) to set up the network camera.

EX5)



- ✍️ ▪ Remove the PC or laptop for IP configuration after the configuration.

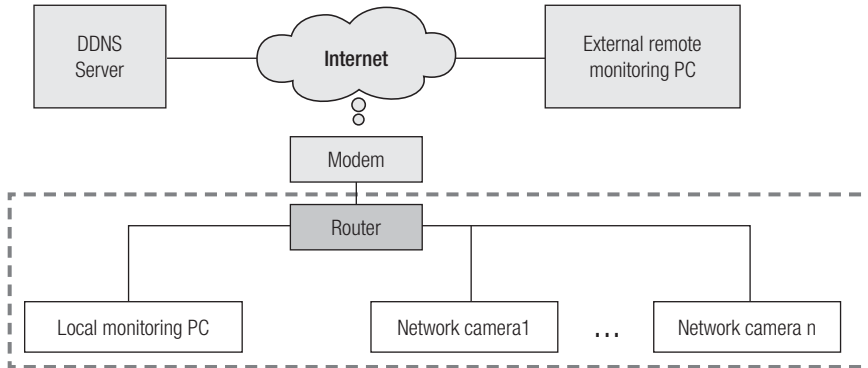
checking network configuration

If DDNS server is used:

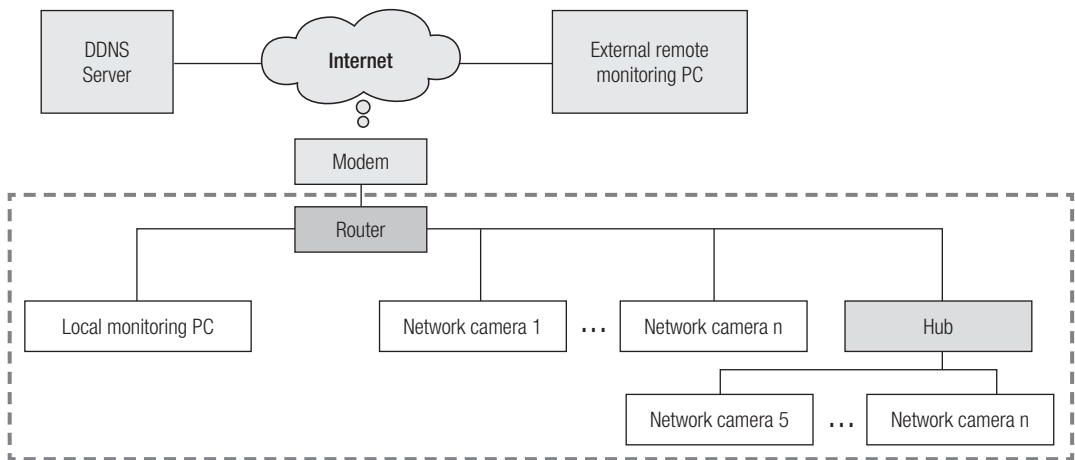
As shown in the image below, if the monitoring PC and network camera are connected to the same router, they will have the same IP range.

Install the IP Installer on the local PC and use the PC for IP configuration.

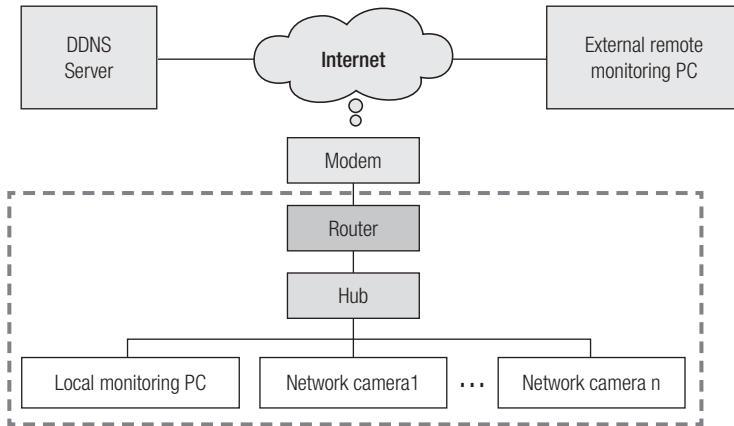
EX1)



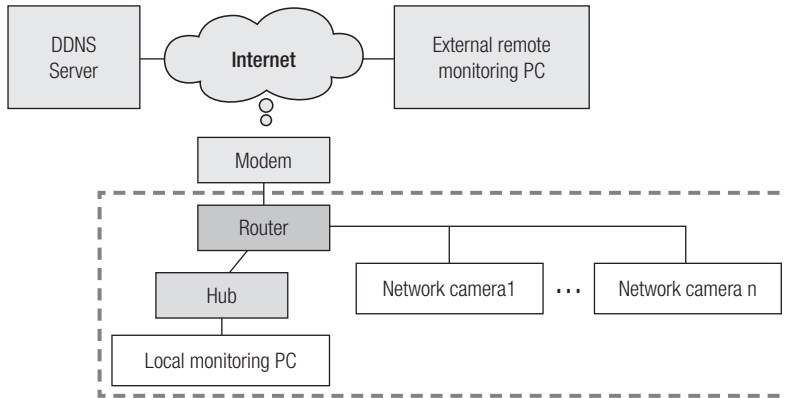
EX2)



EX3)



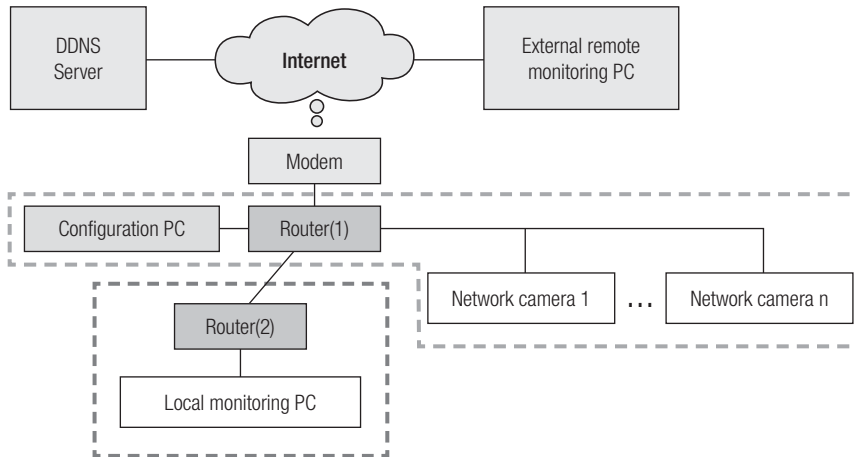
EX4)



checking network configuration

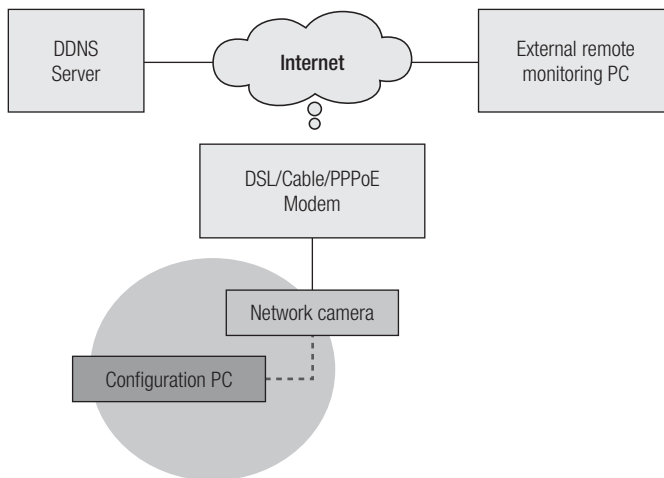
As shown in the image below, if the monitoring PC and network camera are connected to different routers, the network camera cannot be configured, even if the IP installer is installed in the local monitoring PC. Connect another PC or laptop for IP configuration to router (1) and configure the network camera.

EX5)



As shown in the image below, if the monitoring PC and the network camera are connected to the DSL/Cable/PPPoE modem directly without connecting to the local network, connect another PC or laptop and use the PC to configure a network camera IP.

EX6)



- Remove the PC or laptop for IP configuration after the configuration.

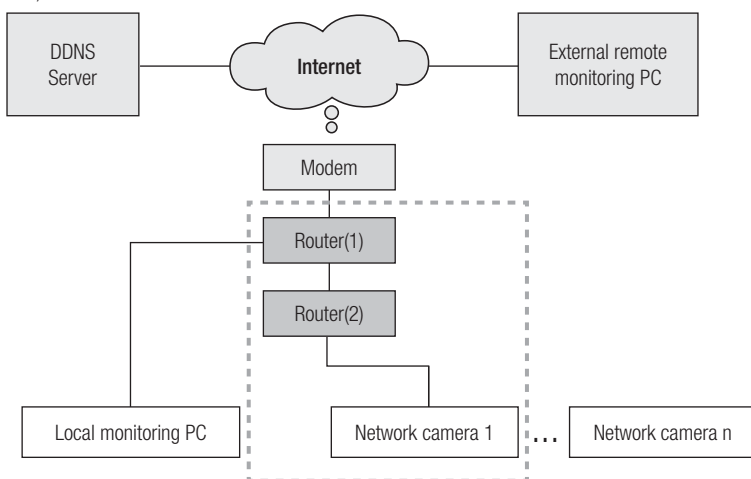
If the network environment makes it difficult to configure an IP for the network camera in a typical way:

As shown in the image below, if two or more routers are located at the upper layer of the network camera, it will generally be impossible to configure the network camera.

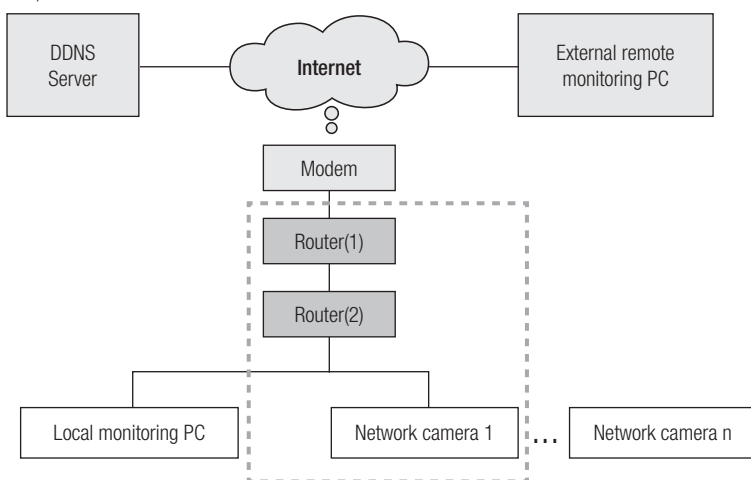
In this environment, it is necessary to convert the router (2) into a general hub equipment (by turning off the DHCP function in the Router Setup menu so that the IP addresses of the router (1) and (2) do not crash with each other to make the router (2) operates as it were a general hub equipment) or double port forwarding of the routers (1) and (2).

- ! It is difficult to change and configure the network, so it is recommended to ask the network administrator of the site to replace router (2) with a general hub, and connect the network camera.

EX1)

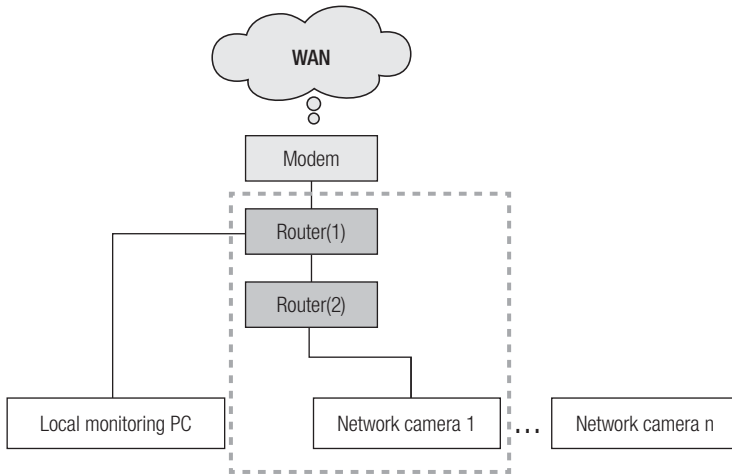


EX2)

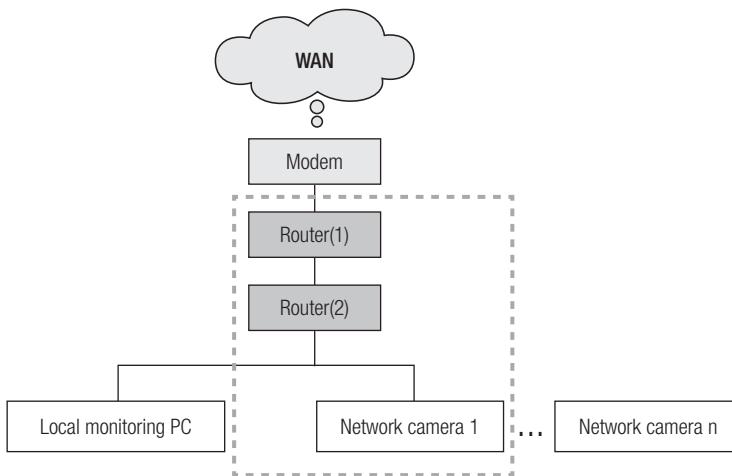


checking network configuration

EX3)



EX4)

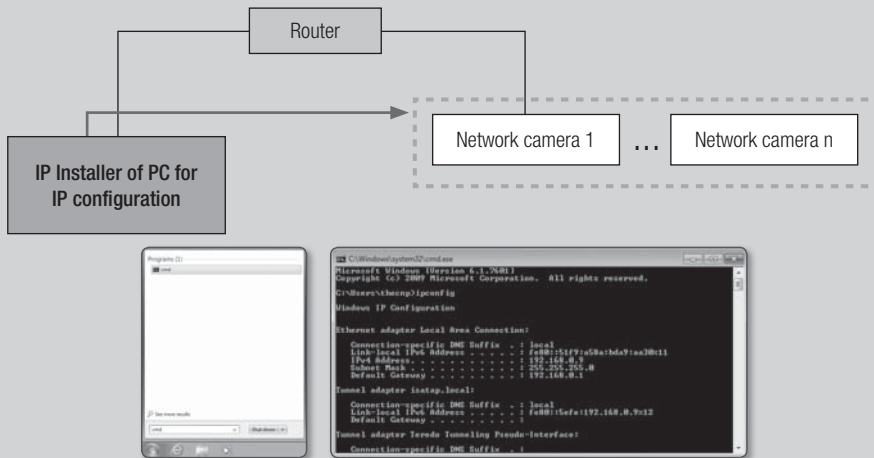


network configuration

How to check the IP range of the router connected to the network camera.

1. Click Start → Run Windows in the Windows screen and enter “cmd”.
2. Type “ipconfig” in the command window.
Information about the IP of the PC for IP configuration connected to the router will be displayed.

- ✎ If the same gateway and subnet mask are used, the IP range is the same because the network camera is connected to the same router.

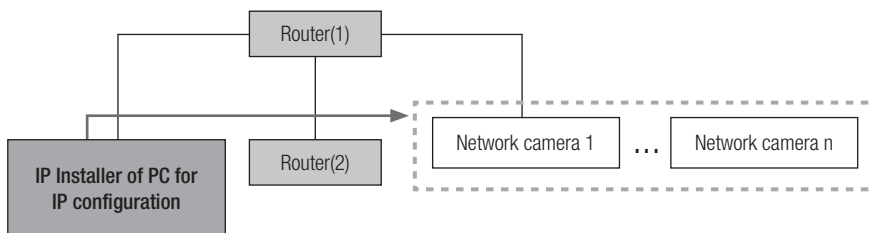


CONFIGURE THE NETWORK ON THE PC USED FOR IP CONFIGURATION

Connect a PC to configure IP

To launch the IP installer program for IP configuration, connect the PC to the same router in order to have the same IP range as the network camera.

- ✎ If there is a local PC within the same IP range, launch the IP installer on the local PC to configure the network. If there is no local PC within the same IP range, connect another PC to configure an IP.

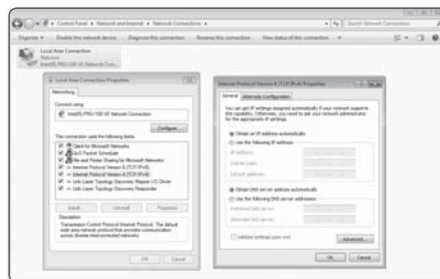


network configuration

How to configure the network environment of the PC used for IP configuration

1. Open the network environment configuration menu of the PC connected to the router.
2. Path : Control panel → Network and Sharing Center → Change adapter settings → Local Area Connection → Properties → Internet Protocol Version (TCP/IPv4) → Properties
3. Select "**Obtain an IP address automatically**" and "**Obtain DNS server address automatically.**"

- ✍ If the IP range of the PC used for IP configuration is different from that of the network camera, the camera will not be detected, even if you click [Search].



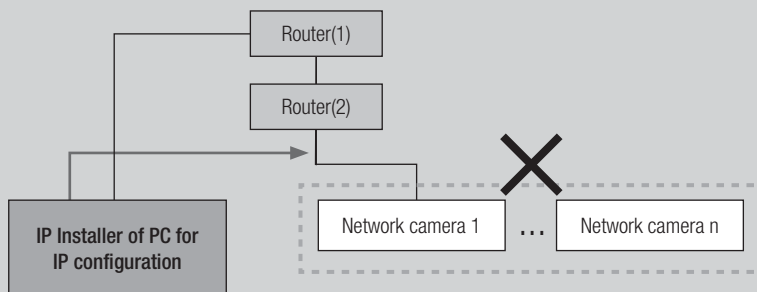
LAUNCHING IP INSTALLER

What is IP Installer?

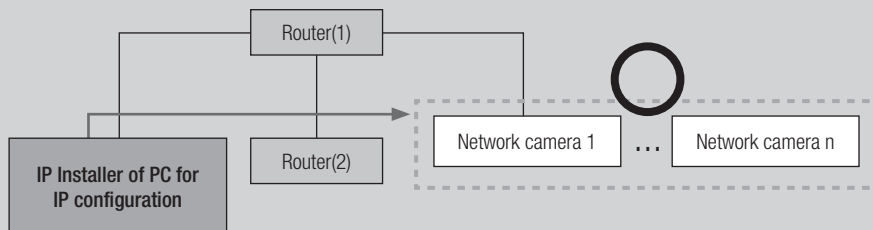
The IP Installer, launched on the PC for IP configuration, receives MAC address information transmitted from the network devices with the IP range of the router, and detects network cameras.

If the IP configuring PC (on which the IP Installer is installed) and the network camera are connected to different routers and their IP ranges are different, the IP Installer cannot detect network cameras.

EX1) In the following network structure, a MAC address of the network camera is not transmitted to outside router (2), and a network camera is not detected on the IP Installer of the local PC.



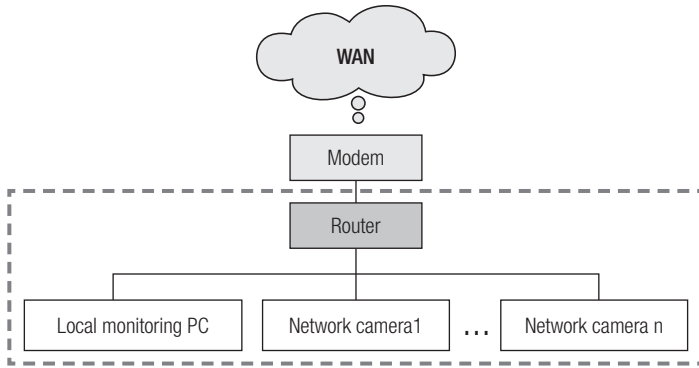
EX2) The IP configuring PC, on which the IP Installer is installed, must be located in the same IP range of the router with the network camera in order to detect network cameras.



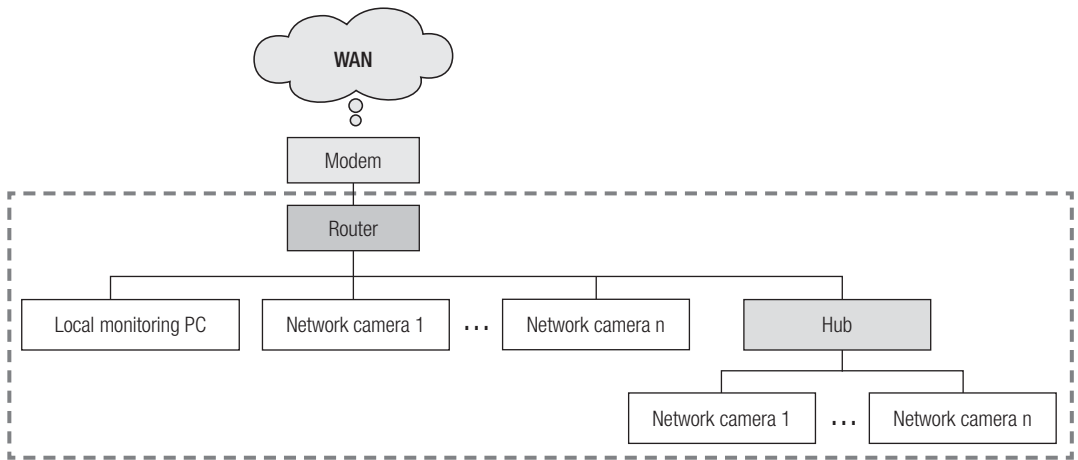
If DDNS server is not used:

In the following case, launch the IP Installer on the local monitoring PC.

EX1)

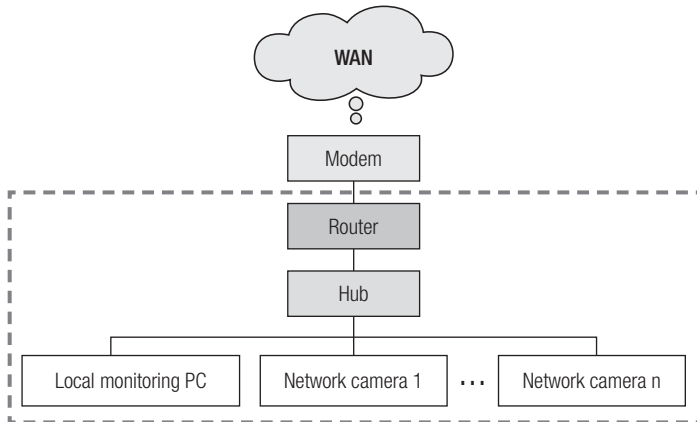


EX2)

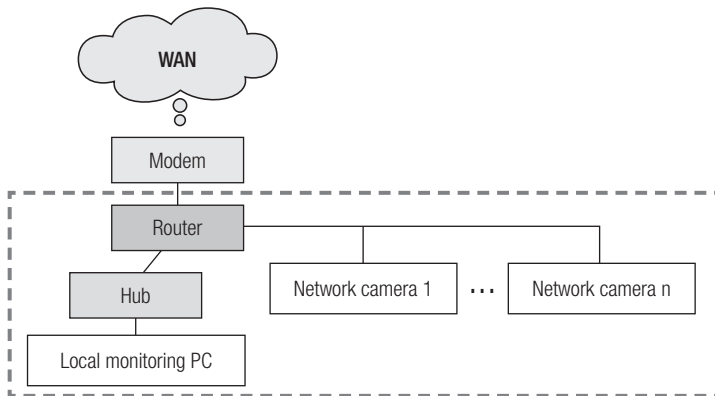


network configuration

EX3)

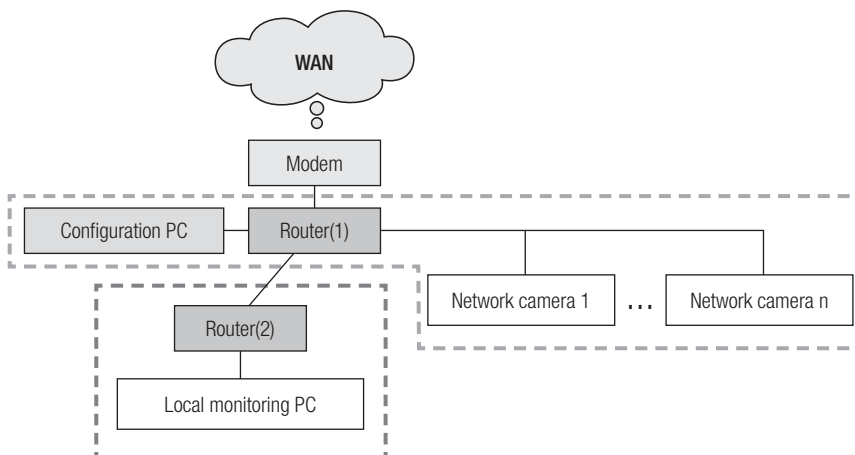


EX4)



In the following case, connect another configuring PC to router (1) and launch the IP Installer.

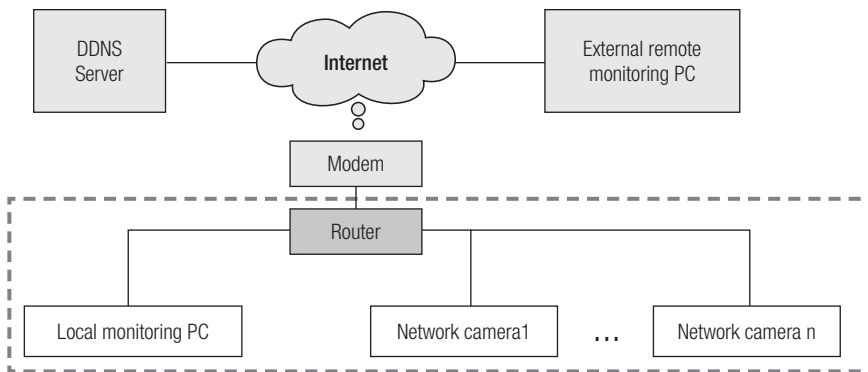
EX5)



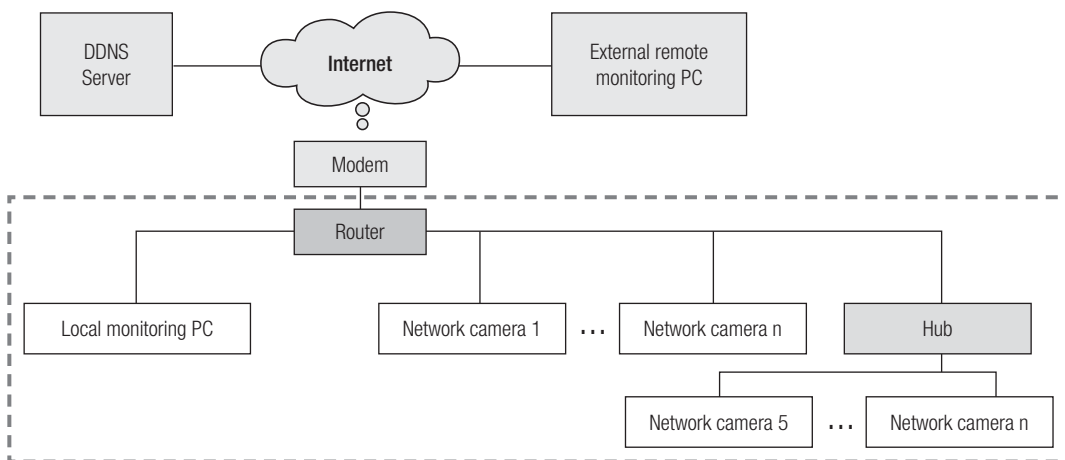
If DDNS server is used:

In the following case, launch the IP Installer on the local monitoring PC.

EX1)

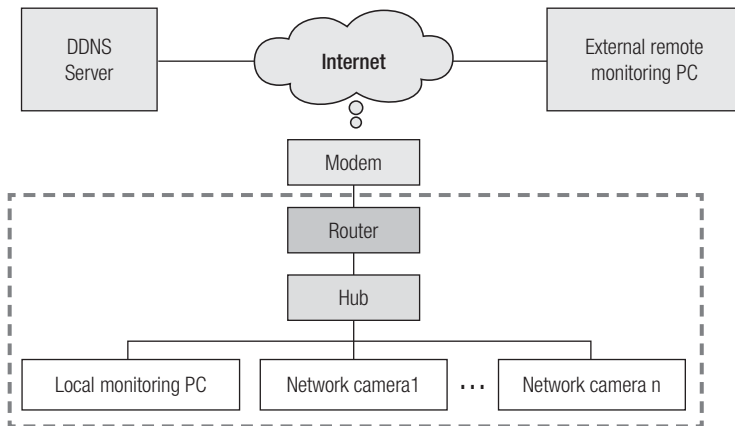


EX2)

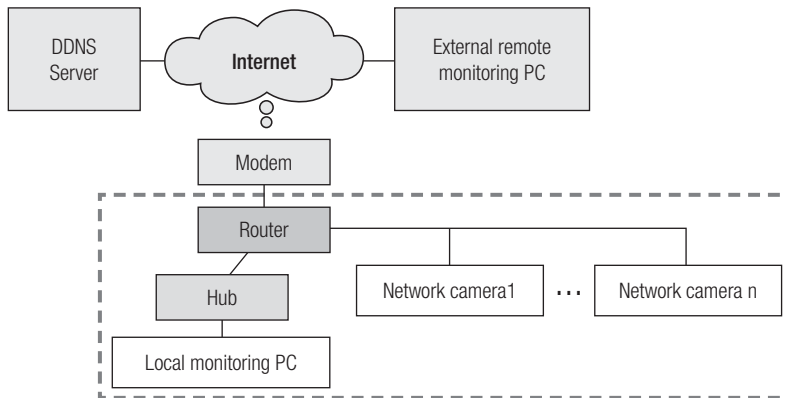


network configuration

EX3)

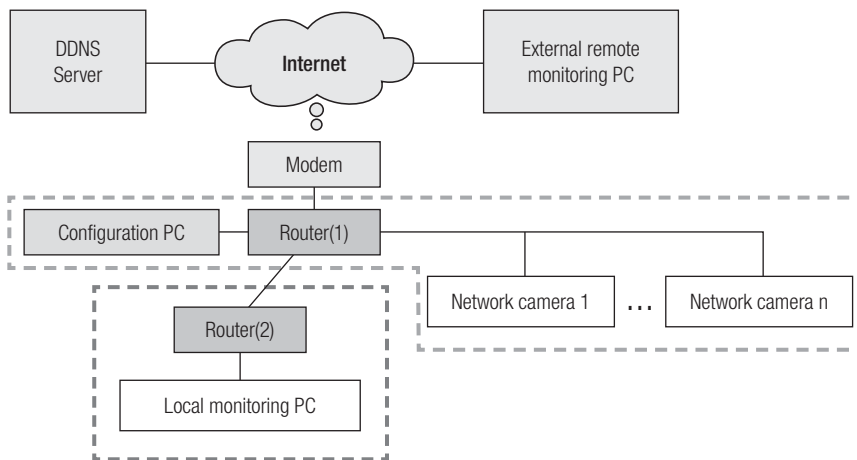


EX4)



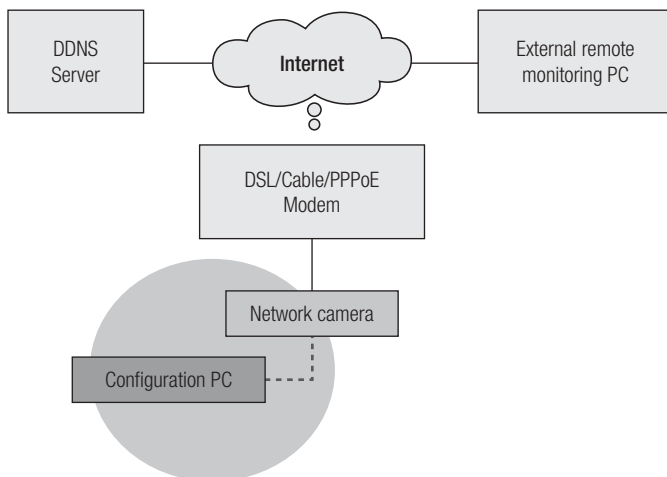
In the following case, connect another configuring PC to router (1) and launch the IP Installer.

EX5)



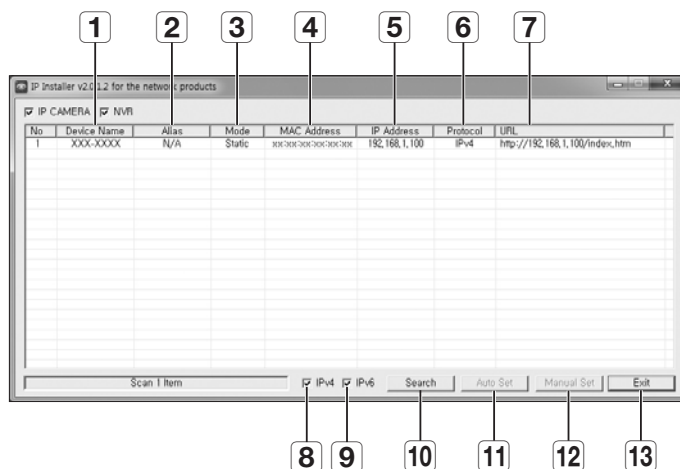
In the following case, connect the configuring PC directly to the network camera and launch the IP Installer.

EX6)



network configuration

Buttons used in IP Installer



Item	Description
1 Device Name	Model name of the connected camera. Click the column to sort the list by model name. However, search will be stopped if clicked during the search.
2 Alias	This function is not currently implemented.
3 Mode	Displays either <Static>, <Dynamic> or <PPPoE> for the current network connection status.
4 MAC(Ethernet) Address	Ethernet address for the connected camera. Click the column to sort the list by Ethernet address. However, search will be stopped if clicked during the search.
5 IP Address	IP address. Click the column to sort the list by IP address. However, search will be stopped if clicked during the search.
6 Protocol	Network setting for the camera. The factory default is "IPv4". Cameras with the IPv6 setting will be displayed "IPv6".
7 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.
8 IPv4	Scans for cameras with the IPv4 setting.
9 IPv6	Scans for cameras with the IPv6 setting. Activated in an IPv6 compliant environment only.
10 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.

Item	Description
11 Auto Set	The IP Installer automatically configures the network settings.
12 Manual Set	You should configure the network settings manually.
13 Exit	Exits the IP Installer program.

CONFIGURING IP INSTALLER VALUES

How to configure with a static IP

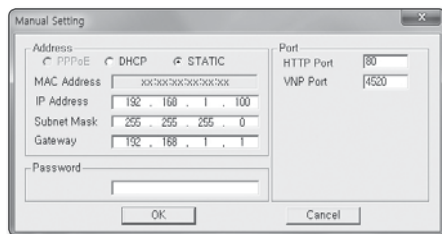
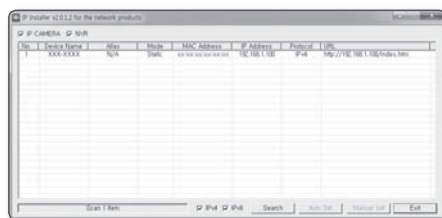
Notice for Setup with a Static IP

If assigning a static IP to the network camera: If the range of the assigned static IP is close to that of network devices (such as PC and printer to which IP addresses are assigned), it may cause an IP assignment error or an IP collision with other network devices after the router is turned off/on or reset. For this reason, it is recommended to assign IP addresses that are not usually used in other network devices.

Ex) If network devices such as printer and PC use between 192.168.1.1 and 192.168.1.10 in the router:
The network camera should use between 192.168.1.101 and 192.168.1.200.

How to configure IP manually using [Manual Set]:

1. Launch the IP Installer on the PC for IP configuration.
2. Click the **[Search]** button. A list of network devices using IP addresses located at the same router is displayed.
3. Check the MAC address information and select a device to configure.
4. Click the **[Manual Set]** button. A window to configure an address and port pops up.
5. Enter the IP range information assigned by the network administrator or the IP range information (IP Address, Subnet Mask, Gateway, HTTP Port, VNP Port) that you want to assign.
6. Type the password authentication number for camera access and click the **[OK]** button. Configuration is now complete.

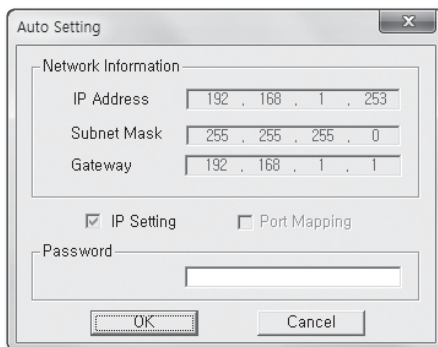
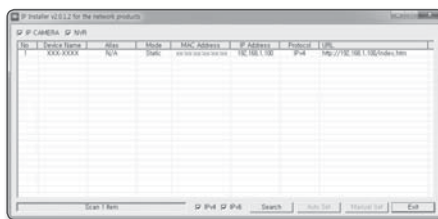


network configuration

- The password for camera access is identical to the “**admin**” login password. Default value is “**4321**”.
- In the IP installer, you can use the initial password, “**4321**” to set IP Address, Subnet Mask, Gateway, HTTP Port, VNP Port, IP type. After changing the network interface, for better security, access the web viewer and change the password.
- For the security purposes, you are recommended to use a combination of numbers, alphabets uppercase and lowercase and special characters for your password.
- HTTP Port is used to connect to the camera using web browser. Default value is “**80**”.
- VNP Port is to control video transmission. Default value is “**4520**”.

How to configure an IP address automatically using [Auto Set]:

1. Launch the IP Installer on the PC for IP configuration.
2. Click the [Search] button. A list of network devices using IP addresses located at the same router is displayed.
3. Check the MAC address information and select a device to configure.
4. Click on the [Auto Set] button. [Auto Setting] window with IP Address, Subnet Mask and Gateway entered pops up.
5. Type the password authentication number for camera access and click the [OK] button. Configuration is now complete.



- The password for camera access is identical to the “**admin**” login password. Default value is “**4321**”.
- In the IP installer, you can use the initial password, “**4321**” to set IP Address, Subnet Mask, Gateway, HTTP Port, VNP Port, IP type. After changing the network interface, for better security, access the web viewer and change the password.
- For the security purposes, you are recommended to use a combination of numbers, alphabets uppercase and lowercase and special characters for your password.
- VNP Port is to control video transmission. Default value is “**4520**”.

Notice for Installer Setup

1. If two or more network cameras are connected to the router, you should configure the IP and port-related parts differently.


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

2. 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)

How to configure with a dynamic IP

Notice for Setup with a Dynamic IP

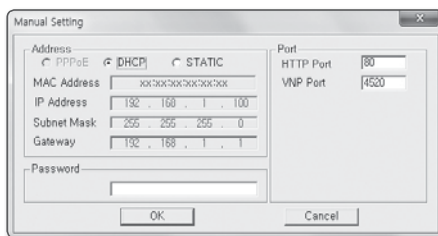
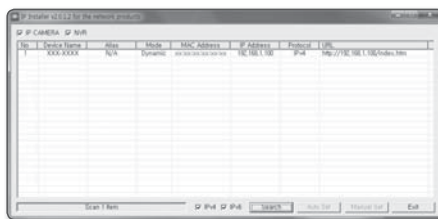
A dynamic IP allows you to use IP address resources effectively. It is needed when assigning an IP address using a DHCP server in a LAN environment, when assigning an IP address using a DHCP of a router in a local network, or when connecting a network camera to a modem that supports DHCP.

- 
 If the network camera is set to use a dynamic IP, the monitoring PC program in the local network environment or in an external remote location may not detect the network camera. This is because IP and port may be changed when the router power is reset or recovered from a failure.
 To solve such problems, it is recommended to set up the port forwarding in the higher router layer.
 Refer to “**How to configure port forwarding**” to learn more about how to configure port forwarding. (Page 23)

network configuration

How to check and configure a dynamic IP address

1. Launch the IP Installer on the PC for IP configuration.
2. Click the **[Search]** button.
A list of network devices, whose IP addresses were assigned by the DHCP of the IP router located at the same router, is displayed.
3. Check the MAC address information and select a device to configure.
4. Click the **[Manual Set]** button. You can check assigned IP from DHCP in the generated window.
5. Click the **[OK]** button. Configuration is now complete.



- The password for camera access is identical to the "admin" login password.
Default value is "4321".
- In the IP installer, you can use the initial password, "4321" to set IP Address, Subnet Mask, Gateway, HTTP Port, VNP Port, IP type. After changing the network interface, for better security, access the web viewer and change the password.
- For the security purposes, you are recommended to use a combination of numbers, alphabets uppercase and lowercase and special characters for your password.
- HTTP Port is used to connect to the camera using web browser.
Default value is "80".
- VNP Port is to control video transmission.
Default value is "4520".

HOW TO CONFIGURE PORT FORWARDING

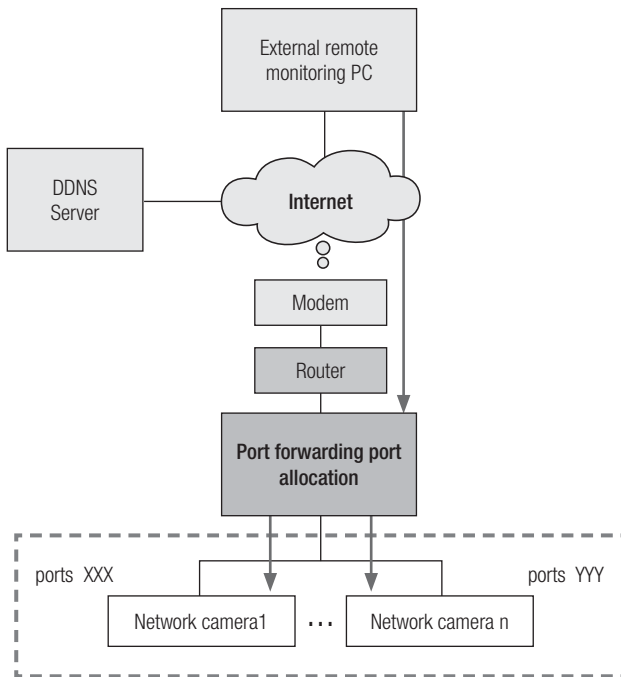
What is port forwarding?

If using a dynamic IP through the DHCP configuration of a router, the port forwarding function allows the router to assign a static IP and camera for a specific network camera when a monitoring PC program connects to a specific network camera.

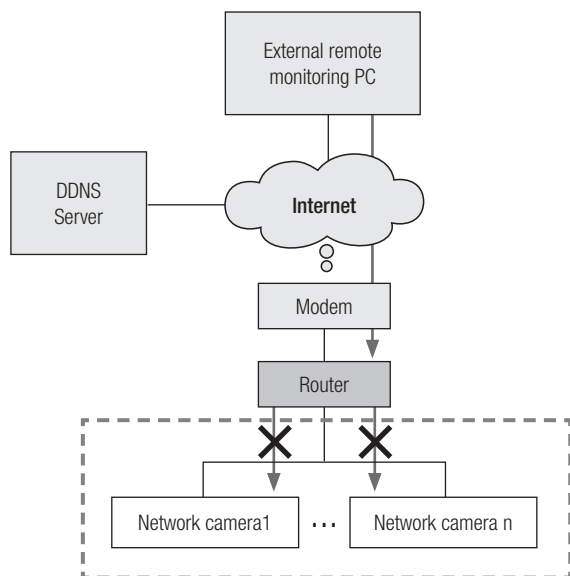
In addition, when the router power is reset or recovered from a failure and its IP and port are changed, it prevents the monitoring PC program from not finding its network camera.



- When a monitoring PC program connects to an internal network camera using a DDNS server, port forwarding must be set. If the network camera's IP and port are not configured through port forwarding, a connection cannot be made.

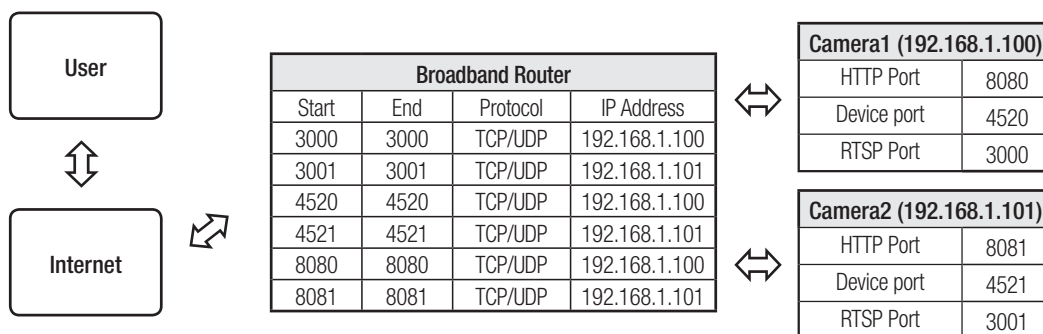


network configuration



Setting up Port Range Forward for several network cameras

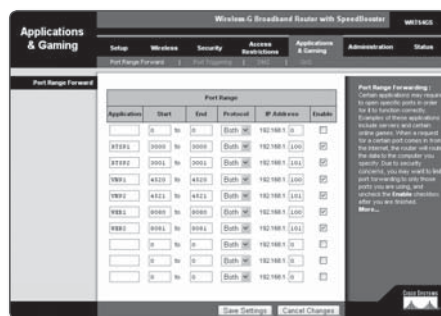
- You can set a rule of Port Forwarding on the Broadband Router device through its configuration web page.
- A user can change each port using the camera setting screen.



- Set manually in router setup menu to set port forwarding.
 Port forwarding can be done without additional router setup if the router supports the UPnP (Universal Plug and Play) function.
 After connecting the network camera, set <Quick connect> of <Samsung DDNS> to <On> in the "Setup → Network → DDNS" menu.

How to configure the CISCO router

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 **<Setup>** - **<Basic>** - **<IP & Port>** from the camera's web viewer menu.
2. When done, click **[Save Settings]**. Your settings will be saved.



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

network configuration

Setting page addresses for each router manufacturer and how to log in to each router



▪ The following information may be subject to change by the manufacturer.

Router Manufacturer	Setting page IP address	ID / Password
Samsung	http://192.168.123.254	admin/admin
Zio	http://192.168.10.1	
Wavecast	http://192.168.200.254 http://192.168.25.1	admin/admin
Linksys	http://192.168.1.1	admin/1234 blank/admin
Belkin	http://192.168.2.1	
Netgear	http://192.168.0.1	admin/password admin/1234
Netop	http://192.168.0.1	admin/admin
Nepel	http://192.168.10.1	admin
Levelone	http://192.168.123.254	
NETWEEN	http://192.168.1.1	admin/admin
NEXT	http://192.168.100.1 http://192.168.0.1	
Imation	http://192.168.10.1	
ASUS	http://192.168.10.1	
SMC	http://192.168.2.1	smcadmin
iptime	http://192.168.0.1	
QookHub HomeHub	http://172.30.1.254 http://172.30.1.254:8899	ktuser/megaap ktroot/nspot
LGU+ (model name NAPL,CAPL)	http://192.168.123.254	admin
MyLGtv	http://192.168.219.1	user/power admin/power
Sktelesys	http://192.168.15.1:62207	root/skb_ipdcp
SK broadband(DWW-2000N)	http://192.168.25.1	admin/admin
SKtv (MW-2010R)	http://192.168.20.1	admin/skbiptv root/1234 or admin
Anygate	http://192.168.10.1	
Buffalo	http://192.168.11.1	root/blank
Unicorn	http://192.168.123.254	admin or admin/admin
LG axler	http://192.168.10.1	
D-link	http://192.168.0.1	admin/blank

How to enter the port forwarding menu of each router manufacturer



- The following information may be subject to change by the manufacturer.

Router Manufacturer	Enter the settings menu of each
Samsung	Advanced Settings → Forwarding → Virtual Server (Port forwarding)
Zio	NAT → Port forwarding
Wavecast	Advanced Settings → Port forwarding, Firewall → Port forwarding
Linksys	Applications & Gaming → Port Range Forward
Belkin	Firewall → Virtual Server
Netgear	Advanced → Port forwarding → Add Custom Service
Netop	Firewall settings → Virtual server settings
Neple	Advanced feature settings → Virtual server
Levelone	Forwarding rule → Virtual server
NETWEEN	Advanced settings → NAT → Port forwarding
NEXT	NAT → Virtual server (Port forwarding)
Imation	Advanced feature settings → Virtual server
ASUS	NAT settings → Virtual server
SMC	Advanced settings → NAT → Virtual server settings
iptime	Administrative tools → Advanced settings → Port forwarding settings
QookHub HomeHub	Advanced settings → Traffic management → Port forwarding settings
LGU+ (model name NAPL,CAPL)	Advanced settings → NAT settings → Port forwarding
MyLGtv	Network settings → NAT settings → Port forwarding at the bottom
Sktelesys	Firewall → Policies → Port Forwarding
SK broadband (DWW-2000N)	Firewall → Port forwarding
SKtv (MW-2010R)	NAT → Port Forwarding
Anygate	Expert settings → Traffic management → Port forwarding
Buffalo	Game port → Port forwarding
Unicorn	Virtual server → Port forwarding, Port forwarding → Virtual server
LG axler	Advanced menu → Port forwarding
D-link	Advanced → Port forwarding (or virtual server)

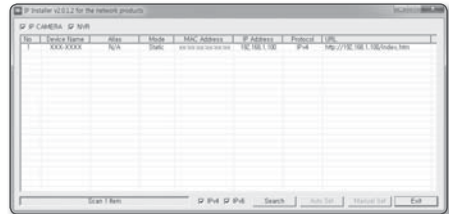
network configuration

LOGIN

Login by connecting to a network camera.

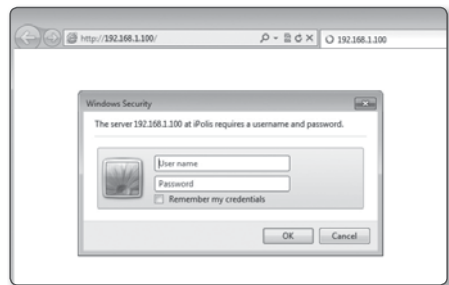
Camera connection (login) through the IP Installer

1. Launch the IP Installer.
2. Click the **[Search]** button to find connected cameras.
3. Select the network camera that you want to connect and double-click on it.
An Internet browser is launched.
4. Enter the **<User name>** and **<Password>** to login when the login window appears.



Camera connection (login) through the Internet browser

1. Launch the Internet browser.
2. Enter the IP address of the network camera in the address bar.
Ex) IP address (IPv4): http://192.168.1.100
IP address (IPv6): [2001:230:abcd:ffff:0000:0000:ffff:1111]
3. If HTTP port is not '80', enter the IP address and HTTP port number of the network camera.
Ex) Enter "http://192.168.1.100:8080"
4. Enter the **<User name>** and **<Password>** to login when the login window appears.



Description of DDNS Server Operation

1. Main DDNS-related information

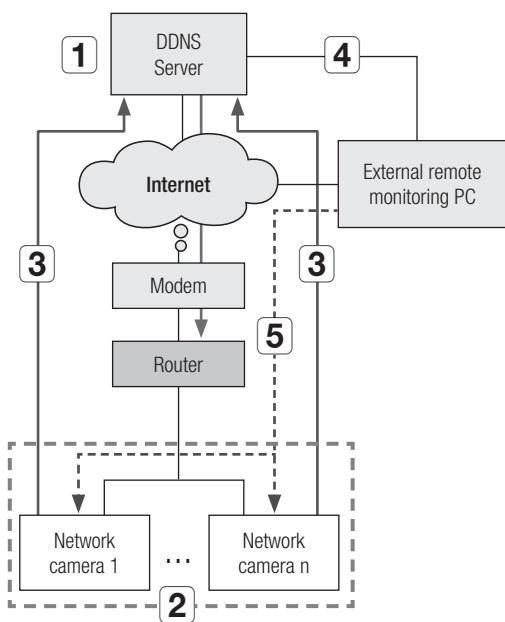
- DDNS URL address: <http://www.samsungipolis.com/Product ID>

2. DDNS server operation

- ① To use the Samsung DDNS, visit the iPOLiS homepage (www.samsungipolis.com) and login with the product ID of camera 1/camera 2 installed in the site.
 - ② Sign up for a membership and register your product on the DDNS server.
 - ③ Connect the camera 1/camera 2 through the webview.
- You may check the option of Samsung DDNS activation in the DDNS configuration menu to use the DDNS.



- The camera periodically transmits its own IP address to the DDNS server on the network once a camera product ID is registered on the DDNS server and the camera DDNS option is activated.
- When an external remote monitoring PC attempts to connect to camera 1/camera 2 for the purpose of monitoring, it connects to the DDNS server to receive the latest address of camera 1/camera 2.
- The external remote monitoring PC receives the latest IP address from the DDNS server and connects to camera 1/ camera 2 using the latest IP address to receive video images.



1	Register the product on the DDNS server.
2	Connect to camera 1/camera 2 through the webviewer and check the option of Samsung DDNS activation.
3	Camera1/ camera 2 periodically transmits its own IP address to the DDNS server.
4	It connects to the DDNS server to receive the latest address of camera 1/camera 2.
5	The external remote monitoring PC receives the latest IP address from the DDNS server and connects to camera 1/ camera 2 using the latest IP address to receive video images.

network configuration

Log in the camera by using a remote PC through the DDNS server

DDNS registration

1. Visit the DDNS Site <http://www.samsungipolis.com> to sign up for a membership.



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

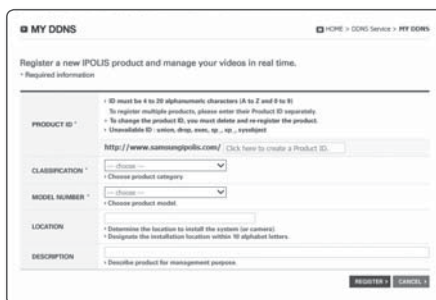


3. Click [PRODUCT REGISTRATION].

4. Enter the product ID.
 - You must perform the duplicate check for the ID that you entered.



5. Select a <CLASSIFICATION > and specify the <MODEL NUMBER>.
6. Specify the product location with a description if necessary.
7. Click [REGISTRATION].



Accessing the network camera connected to the local network.

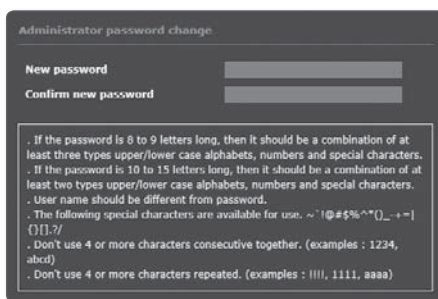
Since using the IP Installer on a remote computer that is not in the Broadband Router's network cluster is not allowed, users can access cameras within a Broadband Router's network by using the camera's DDNS URL.

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. Launch an Internet browser on an external remote monitoring PC.
3. Type a DDNS URL address (<http://www.samsungipolis.com/Product ID>) in the address bar to connect to the camera.
4. Enter the <User name> and <Password> to login when the login window appears.

Password setting

When you access the product for the first time, you must register the login password.

When the "Password change" window appears, enter the new password.

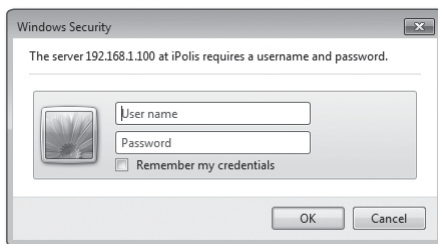


- ! ■ For a new password with 8 to 9 digits, you must use at least 3 of the following: uppercase/lowercase letters, numbers and special characters. For a password with 10 to 15 digits, you must use at least 2 types of those mentioned.
 - Special characters that are allowed. : ~!@#\$%^*()_-=|{}[]?/
- For higher security, you are not recommended to repeat the same characters or consecutive keyboard inputs for your passwords.
- If you lost your password, you can press the [RESET] button to initialize the product. So, don't lose your password by using a memo pad or memorizing it.

Login

Whenever you access the camera, the login window appears. Enter the User ID and password to access the camera.

1. Enter "admin" in the <User name> input box.
The administrator ID, "admin", is fixed and can not be changed.
2. Enter the password in the <Password> input field.
3. Click [OK].
If you have logged in successfully, you will the Live Viewer screen.



network configuration

INSTALLING THE PROGRAM NEEDED TO LAUNCH THE WEBVIEWER AFTER CONNECTING TO NETWORK CAMERA

Installing WebViewer Plugin

If connecting to a camera for the first time, you will see the installation message. Then, install the required WebViewer Plugin to access the camera and control the video from it in real time.

1. When the monitoring page is accessed for the very first time, the installation page is displayed. Click **[Click Here]** to begin installation.



- If the plug-in installation file download status is suspended at 99% in the Internet Explorer browser, retry it after selecting "Release SmartScreen filter" in "Tool → SmartScreen filter".

2. Click **[Run]** in the message window.

3. Click **[Yes]** when the notice window saying that all browser windows will be closed.



- Steps 4 and 5 will be skipped if no Web Viewer Plug-in is installed.

4. When the old version of the Web Viewer Plug-in is installed, a notice window saying the old version will be deleted is displayed.

Click **[Yes]** when the notice window is displayed.

5. Click **[OK]**.

The old version of Web Viewer Plug-in is deleted.

6. Click **[Install]** to begin installation of the Web Viewer Plug-in.

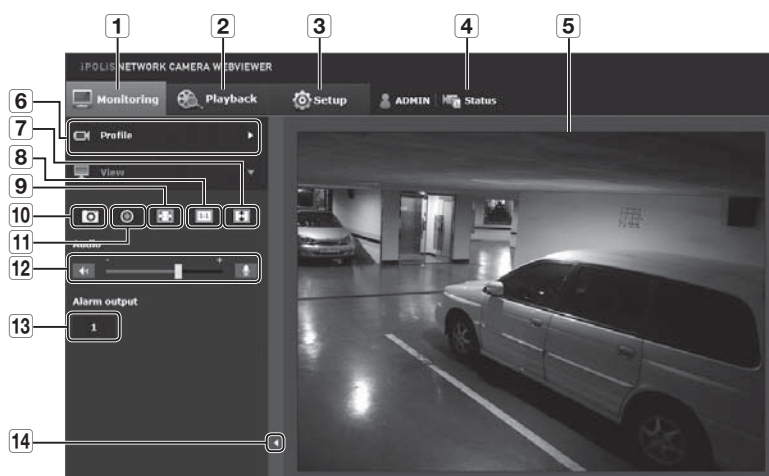
7. Click **[Finish]**.

Web Viewer Plug-in installation is completed.



- In your internet explorer, if you need to move to the installation screen after installing the webviewer plugin, check whether `webviewer_activexplugin_lib.control` in the "Tool → Additional Function Management" menu is "Activated". If not, and if there is a persisting problem, then select "Tools → Internet Options → General" and delete all the search records.

Using the Live Screen



Item	Description
1 Monitoring	Move to the monitoring screen.
2 Playback	Move to the screen where you can search for the video recording saved in your Micro SD memory card or NAS.
3 Setup	Move to the Setup screen.
4 Profile access information	You can read the profile information.
5 Viewer Screen	Displays the Live video on the screen. <ul style="list-style-type: none"> You can use the mouse wheel to activate the digital zooming in Viewer screen.
6 Profile type	You can select a profile type in <Video profile> under the <Basic> setup menu. <ul style="list-style-type: none"> When the Web Viewer is connected, the profile information currently using is displayed.
7 Screen Optimization	The video size of the camera will switch to as big as the Web browser.
8 Fix the resolution	Regardless of the resolution setup configured in the camera, it sets the resolution to 640x480. Press it again to switch back to the default resolution.
9 Full Screen	Switch the current video to the maximum size of the monitor.
10 Capture	Saves the snapshot as an image file in the .jpg format.
11 Manual recording	Users can save their video in the micro SD memory card or NAS on their own.
12 Audio/Microphone Control	Enable Audio and Microphone are control the Audio volume. <ul style="list-style-type: none"> Only the Audio volume can be controlled.
13 Alarm output	Activate the Alarm Out port.
14 Hide the context menu	The left-corner context menu will disappear but only the menu icon.

setup screen

WEB VIEWER-NETWORK SETUP

IP & Port

1. From the Setup menu, select the <Basic ()> tab.

2. Click <IP & Port>.


3. Set the <IPv4 setup>.

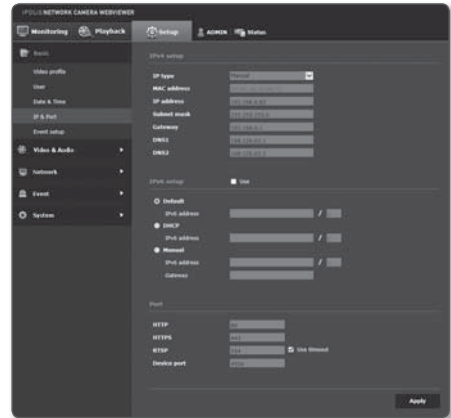
- IP type : Select an IP connection type.
 - Manual : Specify the IP address, Subnet mask, Gateway, DNS1, and DNS2.
 - DHCP : Specify the DNS1 and DNS2.
 - PPPoE : Specify the DNS1, DNS2, ID and Password.
 - If you set it to <Manual>, you should specify the IP, Subnet mask, Gateway, DNS 1 & 2 manually.
- 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.

4. Set the <IPv6 setup>.



- Set to <Use> to use IPv6 address.
- Default : Use the default IPv6 address.
- DHCP : Display and use the IPv6 address obtained from the DHCP server.
- Manual : Enter IP address and gateway manually and use it.



- The IP addressing system will be defaulted to DHCP. If no DHCP server is found, the previous settings will be restored automatically.
- Once completed with editing, click [Apply ()] to apply changes and the browser exits. After a while, connect again with the changed IP.



5. Type in each item in the Port menu as necessary.
 - Neither the port range between 0 and 1023 nor port 3702 is available.
 - HTTP : HTTP port used to access the camera via the web browser.
The default is 80(TCP).
 - Setting the HTTP port for Safari and Google Chrome browsers to 65535 is not allowed by security policy.
 - HTTPS : In this version, the security of the web communication protocol HTTP is strengthened. It can be used when you set HTTPS mode in SSL.
The initial value is set to 443(TCP).
 - The available setting range is 1024~65535. (For security reasons, in your Safari or Google Chrome browser, you may not use 65535 as your HTTPS port.)
 - RTSP : Used to transfer videos in the RTSP mode; the default is 554.
 - Use timeout : When connecting to RTSP, this function resets the connection if there's no response for a certain time.
 - Device port : Set a port used to transfer video signals with the Samsung protocols.



 - If changed the HTTP port, the browser exits.
Afterwards, address should contain the newly assigned HTTP port trailing the IP.
ex) IP address: 192.168.1.100, HTTP port : Assigned 8080 → http://192.168.1.100:8080
(If HTTP port is set to 80, no need to specify the port number)
 - Using RTSP and HTTPS is recommended in order to prevent the image information from being restored.
6. When done, click [**Apply** ()].

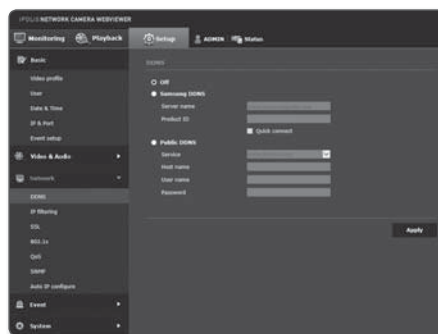
setup screen


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.


 You can use the DDNS service only if the internet is connected.

1. From the Setup menu, select the <Network ()> tab.
2. Click <DDNS>.
3. Select the <DDNS> connection type.
4. Type in the DDNS items according to the selected type.
 - Samsung DDNS : Select this if you use the DDNS server provided by Hanwha Techwin.
 - Product ID : Enter the product ID that is registered with the Samsung DDNS service.
 - Quick connect : It sets port forwarding automatically when used with a UPnP (Universal Plug and Play) supporting router.




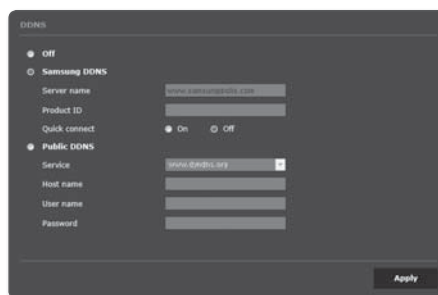
 If you want to use the DDNS service without using a hub that supports the UPnP function, click Quick connect, then go to the hub menu and activate port forwarding for your hub.
For more on how to set port forwarding for your hub, refer to "**How to configure port forwarding**". (page 23)

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



 If selected <Quick connect>, be sure to select Samsung DDNS service.

To connect to the Samsung DDNS in camera setup

1. From the DDNS setup page, set <DDNS> to <Samsung DDNS>.
2. Provide the <Product ID> that you registered product ID 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 ()].




- To use DDNS service properly, both DDNS setup and the router's port forwarding setup are required. For port forwarding setup, refer to "How to configure port forwarding". (page 23)

IP filtering

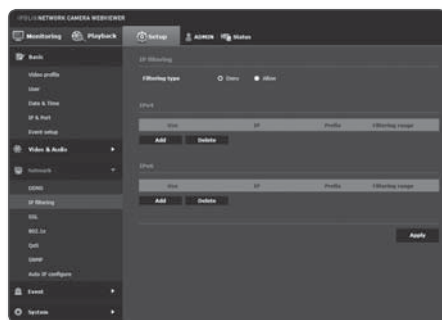
You can create a list of IPs that you want to grant or deny access to them.

1. From the Setup menu, select the <Network ()> tab.
2. Click <IP filtering>.
3. Select <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. Click the [Add ()] button.
The IP list will be created.

5. Provide the IP that you want to grant or deny access from.
When you enter an IP address and a Prefix, the list of IP addresses available will appear in the right-side filter range column.




- If selected <Allow> for IP Filtering and <IPv6 setup> of <IP & Port> is set to <Use>, both IPv4 and IPv6 addresses of the computer currently configuring should be assigned.
- The IP address of the computer used for the current setup cannot be added to <Deny>, it should be added to <Allow>.
- Only the IP addresses that are set to <Use> will be displayed in the filter column.

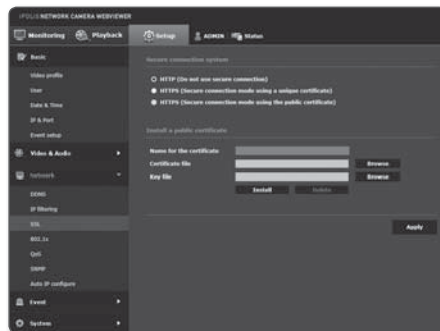
6. Select an IP to delete from the list.
Click the [Delete ()] button.
7. When done, click [Apply ()].

setup screen

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>". If you failed to configure the Web viewer settings in HTTPS mode with Internet Explorer, edit the Internet options as follows: <Menu → Tools → Internet Options → Advanced → Security → Uncheck TLS 1.0, and check TLS 1.1, TLS 1.2>





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 ()]**.

Installing the certificate


1. Enter the certificate name.
2. Click the **[Browse ()]** button, select the public certificate file and key file to be installed, and then click the **[Install ()]** button.

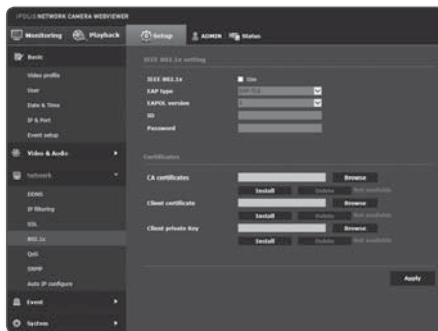
Deleting the certificate

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

802.1x

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




1. From the Setup menu, select the <Network ()> tab.
2. Click <802.1x>.
3. Set the <IEEE 802.1x setting(EAPOL using EAP-TLS)>.
 - Enable IEEE 802.1x : Specify the use of the 802.1x protocol.
 - EAPOL version : Select version 1 or 2.
 - ID : Enter the client certificate ID.
 - Password : Enter the client private key password. If the key file used is not encrypted, you don't need to enter it.



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



4. Install/remove the certificate.
 - CA certificates : Select a public certificate that contains the public key.
 - Client certificate : Select a public certificate that contains the client certificate key.
 - Client private key : Select a public certificate that contains the client private key.
5. When done, click [Apply ()].

To install/remove 802.1x related certificates

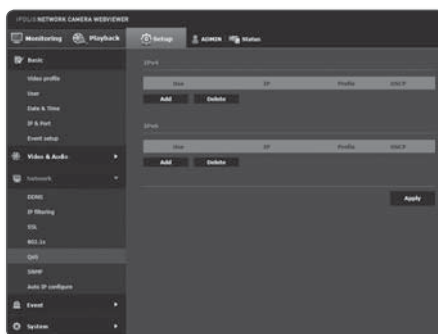
1. Press the [Browse ()] button for each item and select a certificate to install.
2. If no certificate is installed, you will see “Not Available” appearing next to the selected item.
3. Press the [Install ()] button to start installation with a message of “Installed” next to the item.
4. Press the [Delete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



QoS

You can specify the priority to secure a stable transfer rate for a specific IP.

1. From the Setup menu, select the <Network ()> tab.
2. Click <QoS>.
3. Click the [Add ()] button.
The IP list will be created.
4. Enter an IP address to which you will apply QoS.

- ✍ ■ The default prefix for IPv4 is 32;
For DSCP, the default is set to 63.
- Only the IP addresses that are set to <Use> can be prioritized.



5. Select an IP to delete from the list.
Click the [Delete ()] button.
6. When done, click [Apply ()].

setup screen

SNMP

With the SNMP protocols, the system or network admin can monitor the network devices on a remote site, and configure the environment settings.

1. From the Setup menu, select the **<Network ()>** tab.

2. Click **<SNMP>**.

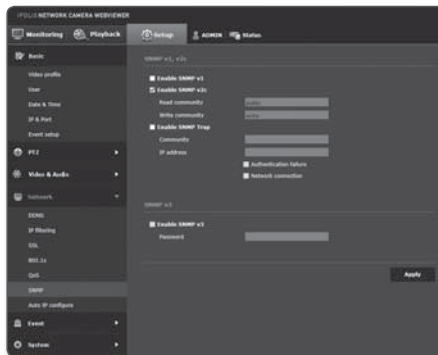
3. Specify the **<SNMP>**.

- Enable SNMP v1 : SNMP version 1 will be active.
- Enable SNMP v2c : SNMP version 2 will be active.
 - Read community : Provide the name of the read community where you can access to the SNMP information.
The default name is **<public>**.
 - Write community : Provide the name of the write community where you can access to the SNMP information. The default name is **<write>**.
- Enable SNMP Trap : SNMP trap is used to send important events and conditions to the Admin.
 - Community : Enter the trap community name to receive messages.
 - IP address : Enter the IP address to which messages will be sent.
 - Authentication failure : It specifies whether an event shall be generated when the community information is invalid.
 - Network connection : It specifies whether an event shall be generated when the network disconnection is restored.
- Enable SNMP v3 : SNMP version 3 will be active.
 - Password : Specify the default password for SNMP version 3.
 - 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.
 - Password should be longer than 8 characters, no more than 16 characters.

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



- SNMP v3 is only able to be set when the secure connection mode is HTTPS.
Refer to **"SSL"**. (page 38)
- If you don't use SNMP v3, there may be a security issue.



Auto IP configure

You can set the IP available for access and camera searching automatically.

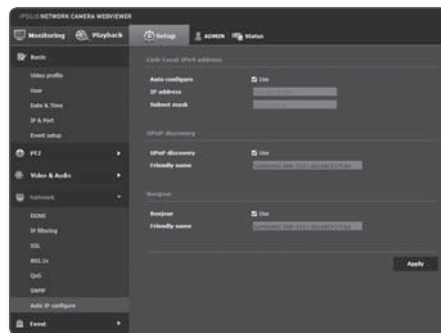
1. From the Setup menu, select the <Network ()> tab.

2. Click <Auto IP configure>.

3. Set the <Link-Local IPv4 address>.

An additional IP address may be assigned to access the camera from the Link-Local network.

- Auto configure : It specifies Able or Disable for the Link-Local IPv4 address.
- IP address : Display the assigned IP address.
- Subnet mask : Display the subnet mask of the assigned IP.



4. Set the <UPnP discovery>.

Cameras can be automatically searched in the client and operating system in support of the UPnP protocol.

- UPnP discovery : It specifies Able or Disable for UPnP Discovery.
- Friendly name : Display the camera name.
Friendly name is displayed in the format of WISENET-<Model Name>-<MAC Address>.

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



- In the Windows operating system which basically supports UPnP, the cameras connected to the network are displayed.

6. Set the <Bonjour>.

Cameras can be automatically searched in the client and operating system in support of the Bonjour protocol.

- Bonjour : It specifies Able or Disable for Bonjour.
- Friendly name : Display the camera name.
Friendly name is displayed in the format of WISENET-<Model Name>-<MAC Address>.



- In the Mac operating system, which support Bonjour by default, the connected cameras are automatically displayed in the Bonjour bookmark of the Safari web browser.
If the Bonjour bookmark is not displayed, check Bookmarks Setup in the "Preference" menu.

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

setup screen

FTP / E-mail

You can configure the FTP/E-mail server settings so that you can transfer the images taken with 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

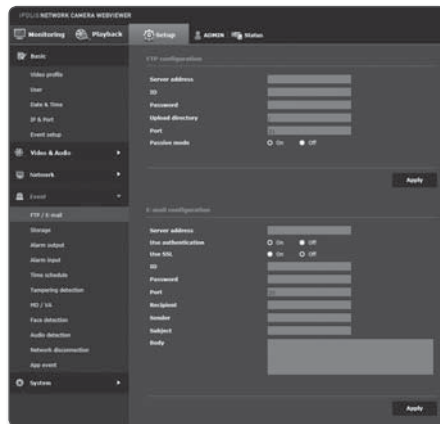
- Server address : Enter the IP address of the FTP server that you transfer the alarm or event images to.
- ID : Enter the user ID with which you will log in to the FTP server.
- Password : Enter the user account password for logging into the FTP server.
- Upload directory : Specify the FTP path where you will transfer the alarm or event 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 transfer the alarm or event images to.
- Use authentication : Select whether to use authorization.
- Use SSL : Specify the use of SSL.
- 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 or event images to the email that you are preparing.

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



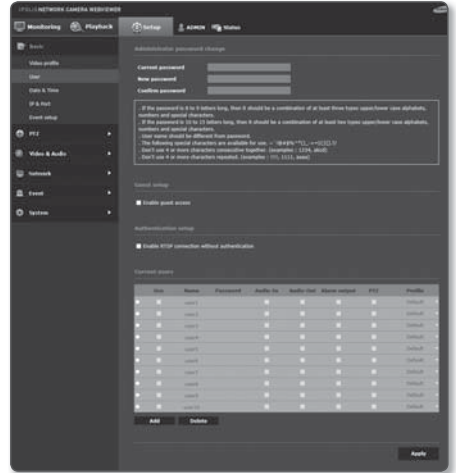
WEB VIEWER-PASSWORD SETUP

User

1. From the Setup menu, select the <Basic ()> tab.
2. Click <User>.
3. Provide the necessary user information.
 - Administrator password change :
Change the password for the administrator.



- For the security purposes, you are recommended to use a combination of numbers, alphabets uppercase and lowercase and special characters for your password.
- It is recommended to change your password once every three months.
- The password length and limits are shown as follows.
 - A combination of at least three types of upper case, lower case, numeric, and special characters: 8 to 9 characters.
 - A combination of at least two types of upper case, lower case, numeric, and special characters: 10 to 15 characters.
 - Should be different from the ID.
 - Cannot repeat the same letter, number of special characters more than 4 times.
 - Don't use 4 or more characters consecutive together. (examples : 1234, abcd)
 - Don't use 4 or more characters repeated. (examples : !!!!, 1111, aaaa)
 - Special characters that are allowed. : ~!@#\$\$%^*()_+={}|[]?/
 - After the factory setting, the admin and user passwords are initialized. You need to reset the password.
 - When you access the camera web page for the first time or access it after the initialization, you will be moved to the admin password setting menu.
 - In this menu, you need to login again with the new password before using the camera web page menus.
 - If the existing password is not matched, when you change the admin password, you cannot change the password.
 - After changing your password, if there is a camera connected to a CMS or NVR client, then you need to re-register it with the newly changed password. If the camera is still connected with the same password, then the account may be locked because a client uses the previous password.
- If you try to login with the registered account, 5 or more consecutive password authentication has failed, and then the account may be locked for thirty seconds.
- When the password is changed while multiple connections are active from a PC, the browser may malfunction. In that case, reconnect to the server.



setup screen

- Guest setup : If you select <**Enable guest access**>, the guest account can access the Web viewer screen but can only view the live Viewer screen.
 - The ID/password for the guest account is <**guest/guest**>, which cannot be changed.
- Authentication setup : If you select <**Enable RTSP connection without authentication**>, you can access RTSP without logging in and view the video.
- Current users : If you select <**Use**>, you can set or change the user permissions.
 - The administrator can set the audio input, audio output and alarm output permissions.
 - Profile : If you select <**Default**>, you can only see the default profile video; if selecting <**All**>, you can see the full profile videos.
- ! ▪ ONVIF functions available to a registered user allowed to use ONVIF functions are limited to those of granted with permission.

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

