

SAMSUNG TECHWIN

NETWORK CAMERA

User Manual

SNP-3120/SNP-3120V/
SNP-3120VH



Network Camera

User Manual

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- ❖ Design and specifications are subject to change without prior notice.
- ❖ The initial administrator ID is "admin" and the password should be set when logging in for the first time. Please change your password every three months to safely protect personal information and to prevent the damage of the information theft.
Please, take note that it's a user's responsibility for the security and any other problems caused by mismanaging a password.

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.
15. This product is intended to be supplied by a Listed power supply unit marked "Class 2" and rated from 12 V dc, min 0.9A.



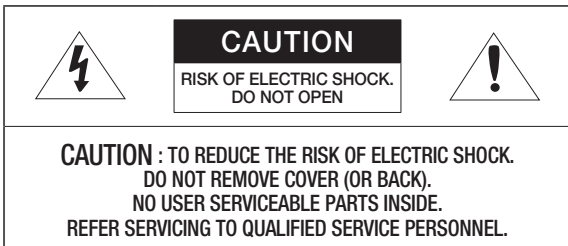
WARNING

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.

To prevent injury, this apparatus must be securely attached to the Wall/ceiling in accordance with the installation instructions.

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.

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

Risk of explosion if battery is replaced by an incorrect type.

Dispose of used batteries according to the instructions.

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 CVBS out terminal of the product is provided for easier installation, and is not recommended for monitoring purposes.

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

The ITE is to be connected only to PoE networks without routing to the outside plant.

Do not expose the product to the direct airflow from an air conditioner. Otherwise, it may cause moisture condensation inside the Clear Dome due to temperature difference between internal and external of the dome camera.

If you install this product in a low-temp area such as inside a cold store, you must seal up the wiring pipe with silicon, so that the external air can not flow inside the housing.

Otherwise, external high, humid air may flow inside the housing, pooling moisture or vapor inside the product due to a difference between internal and external temperature.

overview

Please read the following recommend safety precautions carefully.

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

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

The meaning of the symbols are shown below.

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

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PRODUCT FEATURES

- **Multi-Streaming**

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



- However, MPEG4 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 FTP/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.

- **Auto Detection of Disconnected Network**

Detects network disconnection before triggering an event.

- **ONVIF Compliance**

This product supports ONVIF.

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



Driving network video through global standardization

RECOMENDED PC SPECIFICATIONS

- CPU : Intel Core 2 Duo 2.6GHz or higher
- Resolution : 1280X1024 pixels or higher
- RAM : 2GB or higher
- Supported OS : Windows XP / VISTA / 7, MAC OS X 10.7
- Supported Browser : Microsoft Internet Explorer (Ver. 10 ~ 7)
Mozilla Firefox (Ver. 19 ~9) ※ Windows Only
Google Chrome (Ver. 25 ~ 15) ※ Windows Only
Apple Safari (Ver. 6.0.2(Mac OS X 10.8, 10.7 only), 5.1.7) ※ Mac OS X only
 - Windows 8 is supported only in the Desktop mode.
 - Neither a beta test version unlike the version released in the company website nor the developer version will be supported.
 - It is recommended to connect to IPv6 in Windows 7.
 - For Mac OS X, only the Safari browser is supported.
- Video Memory : 256MB or higher



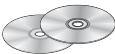
- If the driver of the video graphic adapter is not installed properly or is not the latest version, the video may not be played properly.
- For a multi-monitoring system involving at least 2 monitors, the playback performance can be deteriorated depending on the system.
- It is advisable to use Intel Core 2 Duo 2.93GHz or higher in a multi-browser environment.

RECOMENDED SD/SDHC MEMORY CARD SPECIFICATIONS

- 4GB ~ 32GB
- For your camera, we recommend you use a memory card from the following manufacturers:
SD/SDHC Memory Card : Sandisk, Transcend

WHAT'S INCLUDED

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

Appearance	Item Name	Quantity	Description	Model Name
	Instruction book, Installer S/W CD, CMS S/W DVD	2		SNP-3120 or SNP-3120V or SNP-3120VH
	Quick Guide (Optional)	1		
	Warranty card (Optional)	1		
	7Pin Terminal Block	1	For communications	
	8Pin Terminal Block	1	For alarm I/O	
	Cable for the testing monitor	1	Used to test the camera connection to a portable display device	
	Audio cable	1		

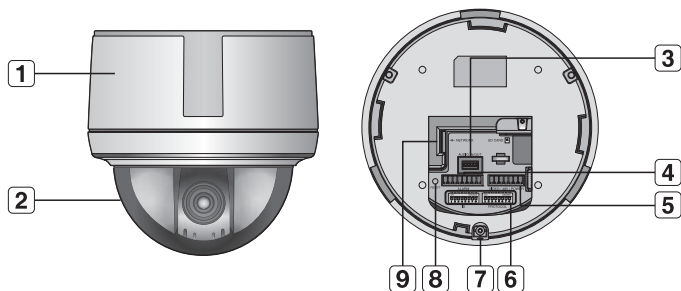
overview

Appearance	Item Name	Quantity	Description	Model Name
	Template	1	Product installation guide	SNP-3120
	ASSY-Tapping Screw	4	Used for installation on the ceiling	
	Mount Bracket	1		
	L Wrench	1	Used to remove/fix the dome cover	SNP-3120V/ SNP-3120VH



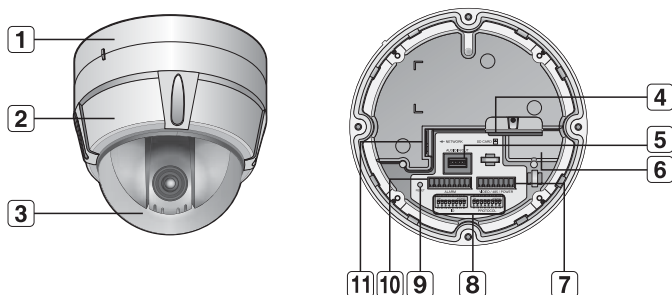
- The Test Monitor Cable is connected to a portable display and used for testing the camera. If you intend to use it for an actual monitoring camera, use the BNC cable instead.

AT A GLANCE (SNP-3120)



Item	Description
1 Main unit	Main unit includes the lens, switch board, PCB boards and screws.
2 Dome Cover	Dome cover for the lens and unit protection.
3 Audio	Audio I/O port.
4 Alarm In / Out terminals	Used to connect alarm in/out terminal block.
5 Video, RS-485, Power	Used to connect monitor, RS-485 device or power.
6 ID setup switch	Used to setup the camera ID or communication protocol.
7 Screw Hole	Used to fix the camera to the ceiling.
8 Reset Button	Resets the camera settings to the default. Press and hold it for about 5 seconds to turn off the system indicator and restart the system. ■ 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.
9 Network port	Used to connect a PoE+ or LAN cable.

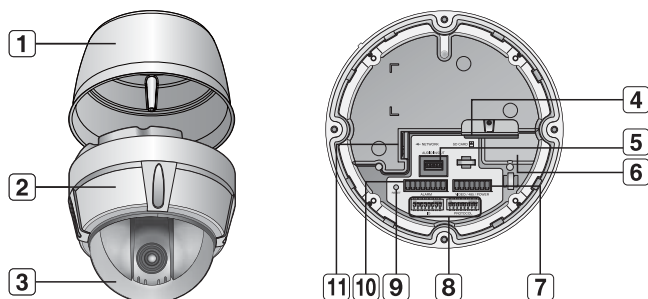
AT A GLANCE (SNP-3120V)



Item	Description
1 Surface Mount Bracket	Used to install the camera directly on the ceiling. After separating this cover, mount this bracket on to ceiling.
2 Main unit	Main unit includes the lens, switch board, PCB boards and screws.
3 Dome Cover	Dome cover for the lens and unit protection.
4 SD Memory Card Compartment	Compartment for the SD memory card.
5 Audio	Audio I/O port.
6 Heater	Activated when the ambient temperature is under 5°C to prevent the dome cover from being covered with frost.
7 Video, RS-485, Power	Used to connect monitor, RS-485 device or power.
8 ID setup switch	Used to setup the camera ID or communication protocol.

Item	Description
9 Reset Button	Resets the camera settings to the default. Press and hold it for about 5 seconds to turn off the system indicator and restart the system. i 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.
10 Alarm In / Out terminals	Used to connect alarm in/out terminal block.
11 Network port	Used to connect a PoE+ or LAN cable.

AT A GLANCE (SNP-3120VH)

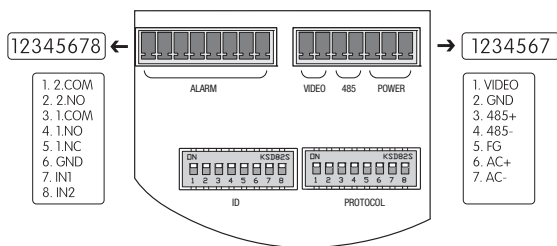


Item	Description
1 Sun Shield Housing	Used to protect the main unit from the sunlight.
2 Main unit	Main unit includes the lens, switch board, PCB boards and screws.
3 Dome Cover	Dome cover for the lens and unit protection.
4 SD Memory Card Compartment	Compartment for the SD memory card.
5 Audio	Audio I/O port.
6 Heater	Activated when the ambient temperature is under 5°C to prevent the dome cover from being covered with frost.
7 Video, RS-485, Power	Used to connect monitor, RS-485 device or power.
8 ID setup switch	Used to setup the camera ID or communication protocol.

Item	Description
9 Reset Button	Resets the camera settings to the default. Press and hold it for about 5 seconds to turn off the system indicator and restart the system. i 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.
10 Alarm In / Out terminals	Used to plug terminal block to connect alarm in/out.
11 Network port	Used to connect a PoE+ or LAN cable.

Camera Wiring Interface Board

For the camera wiring, please refer to the picture below. When using coaxial communication, a separate control signal connection is not required.



Controller & Auxiliary Signal Connection

No.	Name	Usage
1	2.COM	Alarm Output 2 (Common)
2	2.NO	Alarm Output 2 (Normal Open)
3	1.COM	Alarm Output 1 (Common)
4	1.NO	Alarm Output 1 (Normal Open)
5	1.NC	Alarm Output 1 (Normal Open)
6	GND	Ground
7	IN1	Alarm Input Sensor Terminal 1
8	IN2	Alarm Input Sensor Terminal 2

Power, Video & Communication Signal Connection

No.	Name	Usage
1	VIDEO	Video Output
2	GND	Ground
3	485+	Controller Data Line
4	485-	Controller Data Line
5	FG	Field Ground
6	AC	AC 24V
7	AC	AC 24V



- The provided BNC cable's blue line is Video Output, while the black line is the Ground.
- Power supply adaptor (AC) has no polarities.



- The maximum power capacity of the built-in relay is 30V DC/2A, 125V AC/0.5A, and 250V AC/0.25A.
- Connecting the power connector and GND incorrectly to the NC/NO and COM ports may cause a short circuit and fire, damaging the camera.
- When connecting the camera to an external over-rated product, use a separate relay device to ensure proper operation.
- To prevent possible inflow of lightning while in test monitoring, perform the test with the FG terminal grounded.

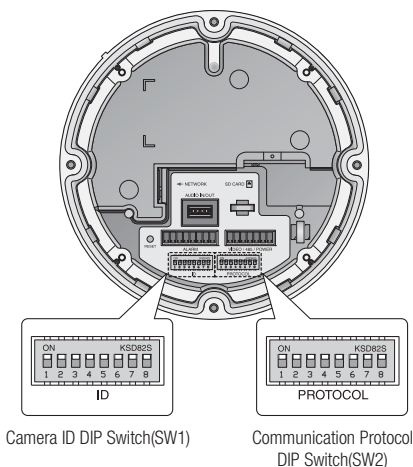
installation & connection

DIP SWITCH SETTING

How to set up Protocols and ID DIP Switches

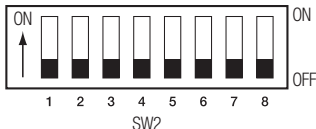
You can control various settings of the camera system using the Communication and ID DIP switches. Before installing the product, please set up the DIP switches according to the installation environment.

1. Detach the camera frame from the install base, and place the bottom of the frame toward you as shown in the picture below.
2. Set the switches according to your installation environment. For more detailed setup information, please refer to the chart on the next page.
3. The camera may malfunction if the switches are not fully turned On/Off; please double check the switches before finishing setup.



Communication Protocol DIP Switch Settings (SW2)

Coaxial communication automatically detects signals, and so does not require a separate communication setup process.



SW2 Pin No.	Purpose
1~4	Protocol Settings
5~6	Baud Rate Settings
7	Response Mode Settings
8	Termination Settings

• Protocol Settings

Select a communication protocol for the camera.

No.	Protocol	SW2-#1	SW2-#2	SW2-#3	SW2-#4
1	AUTO DETECT	OFF	OFF	OFF	OFF
2	Samsung-T	OFF	OFF	OFF	ON
3	Pelco-D	OFF	OFF	ON	OFF
4	Pelco-P	OFF	OFF	ON	ON
5	Samsung-E	OFF	ON	OFF	OFF
6	Panasonic	OFF	ON	OFF	ON
7	Vicon	OFF	ON	ON	OFF
8	Honeywell	OFF	ON	ON	ON
9	AD	ON	OFF	OFF	OFF
10	GE	ON	OFF	OFF	ON
11	BOSCH	ON	OFF	ON	OFF
12	Reserved	ON	OFF	ON	ON
13	Reserved	ON	ON	OFF	OFF
14	Reserved	ON	ON	OFF	ON
15	Reserved	ON	ON	ON	OFF
16	Reserved	ON	ON	ON	ON

installation & connection

• Baud Rate Settings

Select the transfer speed of a selected communication protocol.

No.	Baud Rate (BPS)	SW2-#5	SW2-#6
1	2,400	ON	ON
2	4,800	ON	OFF
3	9,600	OFF	OFF
4	19,200	OFF	ON

• Communication Response Settings

Select a communication response method for the camera and controller: Response or No Response.

	Function	ON	OFF
SW2- #7	Response Mode Switch	Response	No Response

• Termination Settings

To prevent the attenuation of communication signals between the camera and controller, the items at the end of line must be set up with the termination settings.

Camera Input Position	SW2- #8
Termination of Longest Path	ON
On the Path	OFF

- This model is provided with factory defaults of all DIP switches set to OFF. The default settings are shaded in the table.



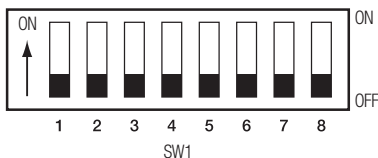
- To use a third party controller with this product, please contact our After-Sales Service or Technology Department.
- Controls Using Different Protocols

	AD Protocol	VICON Protocol	GE Protocol
Entering Camera OSD	3+Auxiliary ON	IRIS OPEN	IRIS OPEN
Exiting Camera OSD	3+Auxiliary OFF	IRIS CLOSE	IRIS CLOSE
ENTER	IRIS OPEN	IRIS OPEN	IRIS OPEN
ESC	IRIS CLOSE	IRIS CLOSE	IRIS CLOSE

- For more information about the protocols, refer to our official website.

Camera ID DIP Switch Settings (SW1)

To set up camera IDs, refer to the “**Camera ID Chart**” next.



installation & connection

• Camera ID Chart

ID	SW1-#1	SW1-#2	SW1-#3	SW1-#4	SW1-#5	SW1-#6	SW1-#7	SW1-#8
1	ON/OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
5	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
6	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
7	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
8	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
9	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
10	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF
11	ON	ON	OFF	ON	OFF	OFF	OFF	OFF
12	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF
13	ON	OFF	ON	ON	OFF	OFF	OFF	OFF
14	OFF	ON	ON	ON	OFF	OFF	OFF	OFF
15	ON	ON	ON	ON	OFF	OFF	OFF	OFF
16	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF
17	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF
18	OFF	ON	OFF	OFF	ON	OFF	OFF	OFF
19	ON	ON	OFF	OFF	ON	OFF	OFF	OFF
20	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF
21	ON	OFF	ON	OFF	ON	OFF	OFF	OFF
22	OFF	ON	ON	OFF	ON	OFF	OFF	OFF
23	ON	ON	ON	OFF	ON	OFF	OFF	OFF
24	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF
25	ON	OFF	OFF	ON	ON	OFF	OFF	OFF
26	OFF	ON	OFF	ON	ON	OFF	OFF	OFF
27	ON	ON	OFF	ON	ON	OFF	OFF	OFF
28	OFF	OFF	ON	ON	ON	OFF	OFF	OFF
29	ON	OFF	ON	ON	ON	OFF	OFF	OFF
30	OFF	ON	ON	ON	ON	OFF	OFF	OFF
31	ON	ON	ON	ON	ON	OFF	OFF	OFF
32	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF
33	ON	OFF	OFF	OFF	OFF	ON	OFF	OFF
34	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF
35	ON	ON	OFF	OFF	OFF	ON	OFF	OFF
36	OFF	OFF	ON	OFF	OFF	ON	OFF	OFF
37	ON	OFF	ON	OFF	OFF	ON	OFF	OFF
38	OFF	ON	ON	OFF	OFF	ON	OFF	OFF
39	ON	ON	ON	OFF	OFF	ON	OFF	OFF
40	OFF	OFF	OFF	ON	OFF	ON	OFF	OFF
41	ON	OFF	OFF	ON	OFF	ON	OFF	OFF

ID	SW1-#1	SW1-#2	SW1-#3	SW1-#4	SW1-#5	SW1-#6	SW1-#7	SW1-#8
42	OFF	ON	OFF	ON	OFF	ON	OFF	OFF
43	ON	ON	OFF	ON	OFF	ON	OFF	OFF
44	OFF	OFF	ON	ON	OFF	ON	OFF	OFF
45	ON	OFF	ON	ON	OFF	ON	OFF	OFF
46	OFF	ON	ON	ON	OFF	ON	OFF	OFF
47	ON	ON	ON	ON	OFF	ON	OFF	OFF
48	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF
49	ON	OFF	OFF	OFF	ON	ON	OFF	OFF
50	OFF	ON	OFF	OFF	ON	ON	OFF	OFF
51	ON	ON	OFF	OFF	ON	ON	OFF	OFF
52	OFF	OFF	ON	OFF	ON	ON	OFF	OFF
53	ON	OFF	ON	OFF	ON	ON	OFF	OFF
54	OFF	ON	ON	OFF	ON	ON	OFF	OFF
55	ON	ON	ON	OFF	ON	ON	OFF	OFF
56	OFF	OFF	OFF	ON	ON	ON	OFF	OFF
57	ON	OFF	OFF	ON	ON	ON	OFF	OFF
58	OFF	ON	OFF	ON	ON	ON	OFF	OFF
59	ON	ON	OFF	ON	ON	ON	OFF	OFF
60	OFF	OFF	ON	ON	ON	ON	OFF	OFF
61	ON	OFF	ON	ON	ON	ON	OFF	OFF
62	OFF	ON	ON	ON	ON	ON	OFF	OFF
63	ON	ON	ON	ON	ON	ON	OFF	OFF
64	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF
65	ON	OFF	OFF	OFF	OFF	OFF	ON	OFF
66	OFF	ON	OFF	OFF	OFF	OFF	ON	OFF
67	ON	ON	OFF	OFF	OFF	OFF	ON	OFF
68	OFF	OFF	ON	OFF	OFF	OFF	ON	OFF
69	ON	OFF	ON	OFF	OFF	OFF	ON	OFF
70	OFF	ON	ON	OFF	OFF	OFF	ON	OFF
71	ON	ON	ON	OFF	OFF	OFF	ON	OFF
72	OFF	OFF	OFF	ON	OFF	OFF	ON	OFF
73	ON	OFF	OFF	ON	OFF	OFF	ON	OFF
74	OFF	ON	OFF	ON	OFF	OFF	ON	OFF
75	ON	ON	OFF	ON	OFF	OFF	ON	OFF
76	OFF	OFF	ON	ON	OFF	OFF	ON	OFF
77	ON	OFF	ON	ON	OFF	OFF	ON	OFF
78	OFF	ON	ON	ON	OFF	OFF	ON	OFF
79	ON	ON	ON	ON	OFF	OFF	ON	OFF
80	OFF	OFF	OFF	OFF	ON	OFF	ON	OFF
81	ON	OFF	OFF	OFF	ON	OFF	ON	OFF
82	OFF	ON	OFF	OFF	ON	OFF	ON	OFF
83	ON	ON	OFF	OFF	ON	OFF	ON	OFF
84	OFF	OFF	ON	OFF	ON	OFF	ON	OFF

installation & connection

ID	SW1-#1	SW1-#2	SW1-#3	SW1-#4	SW1-#5	SW1-#6	SW1-#7	SW1-#8
85	ON	OFF	ON	OFF	ON	OFF	ON	OFF
86	OFF	ON	ON	OFF	ON	OFF	ON	OFF
87	ON	ON	ON	OFF	ON	OFF	ON	OFF
88	OFF	OFF	OFF	ON	ON	OFF	ON	OFF
89	ON	OFF	OFF	ON	ON	OFF	ON	OFF
90	OFF	ON	OFF	ON	ON	OFF	ON	OFF
91	ON	ON	OFF	ON	ON	OFF	ON	OFF
92	OFF	OFF	ON	ON	ON	OFF	ON	OFF
93	ON	OFF	ON	ON	ON	OFF	ON	OFF
94	OFF	ON	ON	ON	ON	OFF	ON	OFF
95	ON	ON	ON	ON	ON	OFF	ON	OFF
96	OFF	OFF	OFF	OFF	OFF	ON	ON	OFF
97	ON	OFF	OFF	OFF	OFF	ON	ON	OFF
98	OFF	ON	OFF	OFF	OFF	ON	ON	OFF
99	ON	ON	OFF	OFF	OFF	ON	ON	OFF
100	OFF	OFF	ON	OFF	OFF	ON	ON	OFF
101	ON	OFF	ON	OFF	OFF	ON	ON	OFF
102	OFF	ON	ON	OFF	OFF	ON	ON	OFF
103	ON	ON	ON	OFF	OFF	ON	ON	OFF
104	OFF	OFF	OFF	ON	OFF	ON	ON	OFF
105	ON	OFF	OFF	ON	OFF	ON	ON	OFF
106	OFF	ON	OFF	ON	OFF	ON	ON	OFF
107	ON	ON	OFF	ON	OFF	ON	ON	OFF
108	OFF	OFF	ON	ON	OFF	ON	ON	OFF
109	ON	OFF	ON	ON	OFF	ON	ON	OFF
110	OFF	ON	ON	ON	OFF	ON	ON	OFF
111	ON	ON	ON	ON	OFF	ON	ON	OFF
112	OFF	OFF	OFF	OFF	ON	ON	ON	OFF
113	ON	OFF	OFF	OFF	ON	ON	ON	OFF
114	OFF	ON	OFF	OFF	ON	ON	ON	OFF
115	ON	ON	OFF	OFF	ON	ON	ON	OFF
116	OFF	OFF	ON	OFF	ON	ON	ON	OFF
117	ON	OFF	ON	OFF	ON	ON	ON	OFF
118	OFF	ON	ON	OFF	ON	ON	ON	OFF
119	ON	ON	ON	OFF	ON	ON	ON	OFF
120	OFF	OFF	OFF	ON	ON	ON	ON	OFF
121	ON	OFF	OFF	ON	ON	ON	ON	OFF
122	OFF	ON	OFF	ON	ON	ON	ON	OFF
123	ON	ON	OFF	ON	ON	ON	ON	OFF
124	OFF	OFF	ON	ON	ON	ON	ON	OFF
125	ON	OFF	ON	ON	ON	ON	ON	OFF
126	OFF	ON	ON	ON	ON	ON	ON	OFF
127	ON	ON	ON	ON	ON	ON	ON	OFF

ID	SW1-#1	SW1-#2	SW1-#3	SW1-#4	SW1-#5	SW1-#6	SW1-#7	SW1-#8
128	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON
129	ON	OFF	OFF	OFF	OFF	OFF	OFF	ON
130	OFF	ON	OFF	OFF	OFF	OFF	OFF	ON
131	ON	ON	OFF	OFF	OFF	OFF	OFF	ON
132	OFF	OFF	ON	OFF	OFF	OFF	OFF	ON
133	ON	OFF	ON	OFF	OFF	OFF	OFF	ON
134	OFF	ON	ON	OFF	OFF	OFF	OFF	ON
135	ON	ON	ON	OFF	OFF	OFF	OFF	ON
136	OFF	OFF	OFF	ON	OFF	OFF	OFF	ON
137	ON	OFF	OFF	ON	OFF	OFF	OFF	ON
138	OFF	ON	OFF	ON	OFF	OFF	OFF	ON
139	ON	ON	OFF	ON	OFF	OFF	OFF	ON
140	OFF	OFF	ON	ON	OFF	OFF	OFF	ON
141	ON	OFF	ON	ON	OFF	OFF	OFF	ON
142	OFF	ON	ON	ON	OFF	OFF	OFF	ON
143	ON	ON	ON	ON	OFF	OFF	OFF	ON
144	OFF	OFF	OFF	OFF	ON	OFF	OFF	ON
145	ON	OFF	OFF	OFF	ON	OFF	OFF	ON
146	OFF	ON	OFF	OFF	ON	OFF	OFF	ON
147	ON	ON	OFF	OFF	ON	OFF	OFF	ON
148	OFF	OFF	ON	OFF	ON	OFF	OFF	ON
149	ON	OFF	ON	OFF	ON	OFF	OFF	ON
150	OFF	ON	ON	OFF	ON	OFF	OFF	ON
151	ON	ON	ON	OFF	ON	OFF	OFF	ON
152	OFF	OFF	OFF	ON	ON	OFF	OFF	ON
153	ON	OFF	OFF	ON	ON	OFF	OFF	ON
154	OFF	ON	OFF	ON	ON	OFF	OFF	ON
155	ON	ON	OFF	ON	ON	OFF	OFF	ON
156	OFF	OFF	ON	ON	ON	OFF	OFF	ON
157	ON	OFF	ON	ON	ON	OFF	OFF	ON
158	OFF	ON	ON	ON	ON	OFF	OFF	ON
159	ON	ON	ON	ON	ON	OFF	OFF	ON
160	OFF	OFF	OFF	OFF	OFF	ON	OFF	ON
161	ON	OFF	OFF	OFF	OFF	ON	OFF	ON
162	OFF	ON	OFF	OFF	OFF	ON	OFF	ON
163	ON	ON	OFF	OFF	OFF	ON	OFF	ON
164	OFF	OFF	ON	OFF	OFF	ON	OFF	ON
165	ON	OFF	ON	OFF	OFF	ON	OFF	ON
166	OFF	ON	ON	OFF	OFF	ON	OFF	ON
167	ON	ON	ON	OFF	OFF	ON	OFF	ON
168	OFF	OFF	OFF	ON	OFF	ON	OFF	ON
169	ON	OFF	OFF	ON	OFF	ON	OFF	ON
170	OFF	ON	OFF	ON	OFF	ON	OFF	ON

installation & connection

ID	SW1-#1	SW1-#2	SW1-#3	SW1-#4	SW1-#5	SW1-#6	SW1-#7	SW1-#8
171	ON	ON	OFF	ON	OFF	ON	OFF	ON
172	OFF	OFF	ON	ON	OFF	ON	OFF	ON
173	ON	OFF	ON	ON	OFF	ON	OFF	ON
174	OFF	ON	ON	ON	OFF	ON	OFF	ON
175	ON	ON	ON	ON	OFF	ON	OFF	ON
176	OFF	OFF	OFF	OFF	ON	ON	OFF	ON
177	ON	OFF	OFF	OFF	ON	ON	OFF	ON
178	OFF	ON	OFF	OFF	ON	ON	OFF	ON
179	ON	ON	OFF	OFF	ON	ON	OFF	ON
180	OFF	OFF	ON	OFF	ON	ON	OFF	ON
181	ON	OFF	ON	OFF	ON	ON	OFF	ON
182	OFF	ON	ON	OFF	ON	ON	OFF	ON
183	ON	ON	ON	OFF	ON	ON	OFF	ON
184	OFF	OFF	OFF	ON	ON	ON	OFF	ON
185	ON	OFF	OFF	ON	ON	ON	OFF	ON
186	OFF	ON	OFF	ON	ON	ON	OFF	ON
187	ON	ON	OFF	ON	ON	ON	OFF	ON
188	OFF	OFF	ON	ON	ON	ON	OFF	ON
189	ON	OFF	ON	ON	ON	ON	OFF	ON
190	OFF	ON	ON	ON	ON	ON	OFF	ON
191	ON	ON	ON	ON	ON	ON	OFF	ON
192	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON
193	ON	OFF	OFF	OFF	OFF	OFF	ON	ON
194	OFF	ON	OFF	OFF	OFF	OFF	ON	ON
195	ON	ON	OFF	OFF	OFF	OFF	ON	ON
196	OFF	OFF	ON	OFF	OFF	OFF	ON	ON
197	ON	OFF	ON	OFF	OFF	OFF	ON	ON
198	OFF	ON	ON	OFF	OFF	OFF	ON	ON
199	ON	ON	ON	OFF	OFF	OFF	ON	ON
200	OFF	OFF	OFF	ON	OFF	OFF	ON	ON
201	ON	OFF	OFF	ON	OFF	OFF	ON	ON
202	OFF	ON	OFF	ON	OFF	OFF	ON	ON
203	ON	ON	OFF	ON	OFF	OFF	ON	ON
204	OFF	OFF	ON	ON	OFF	OFF	ON	ON
205	ON	OFF	ON	ON	OFF	OFF	ON	ON
206	OFF	ON	ON	ON	OFF	OFF	ON	ON
207	ON	ON	ON	ON	OFF	OFF	ON	ON
208	OFF	OFF	OFF	OFF	ON	OFF	ON	ON
209	ON	OFF	OFF	OFF	ON	OFF	ON	ON
210	OFF	ON	OFF	OFF	ON	OFF	ON	ON
211	ON	ON	OFF	OFF	ON	OFF	ON	ON
212	OFF	OFF	ON	OFF	ON	OFF	ON	ON
213	ON	OFF	ON	OFF	ON	OFF	ON	ON

ID	SW1-#1	SW1-#2	SW1-#3	SW1-#4	SW1-#5	SW1-#6	SW1-#7	SW1-#8
214	OFF	ON	ON	OFF	ON	OFF	ON	ON
215	ON	ON	ON	OFF	ON	OFF	ON	ON
216	OFF	OFF	OFF	ON	ON	OFF	ON	ON
217	ON	OFF	OFF	ON	ON	OFF	ON	ON
218	OFF	ON	OFF	ON	ON	OFF	ON	ON
219	ON	ON	OFF	ON	ON	OFF	ON	ON
220	OFF	OFF	ON	ON	ON	OFF	ON	ON
221	ON	OFF	ON	ON	ON	OFF	ON	ON
222	OFF	ON	ON	ON	ON	OFF	ON	ON
223	ON	ON	ON	ON	ON	OFF	ON	ON
224	OFF	OFF	OFF	OFF	OFF	ON	ON	ON
225	ON	OFF	OFF	OFF	OFF	ON	ON	ON
226	OFF	ON	OFF	OFF	OFF	ON	ON	ON
227	ON	ON	OFF	OFF	OFF	ON	ON	ON
228	OFF	OFF	ON	OFF	OFF	ON	ON	ON
229	ON	OFF	ON	OFF	OFF	ON	ON	ON
230	OFF	ON	ON	OFF	OFF	ON	ON	ON
231	ON	ON	ON	OFF	OFF	ON	ON	ON
232	OFF	OFF	OFF	ON	OFF	ON	ON	ON
233	ON	OFF	OFF	ON	OFF	ON	ON	ON
234	OFF	ON	OFF	ON	OFF	ON	ON	ON
235	ON	ON	OFF	ON	OFF	ON	ON	ON
236	OFF	OFF	ON	ON	OFF	ON	ON	ON
237	ON	OFF	ON	ON	OFF	ON	ON	ON
238	OFF	ON	ON	ON	OFF	ON	ON	ON
239	ON	ON	ON	ON	OFF	ON	ON	ON
240	OFF	OFF	OFF	OFF	ON	ON	ON	ON
241	ON	OFF	OFF	OFF	ON	ON	ON	ON
242	OFF	ON	OFF	OFF	ON	ON	ON	ON
243	ON	ON	OFF	OFF	ON	ON	ON	ON
244	OFF	OFF	ON	OFF	ON	ON	ON	ON
245	ON	OFF	ON	OFF	ON	ON	ON	ON
246	OFF	ON	ON	OFF	ON	ON	ON	ON
247	ON	ON	ON	OFF	ON	ON	ON	ON
248	OFF	OFF	OFF	ON	ON	ON	ON	ON
249	ON	OFF	OFF	ON	ON	ON	ON	ON
250	OFF	ON	OFF	ON	ON	ON	ON	ON
251	ON	ON	OFF	ON	ON	ON	ON	ON
252	OFF	OFF	ON	ON	ON	ON	ON	ON
253	ON	OFF	ON	ON	ON	ON	ON	ON
254	OFF	ON	ON	ON	ON	ON	ON	ON
255	ON	ON	ON	ON	ON	ON	ON	ON

installation & connection

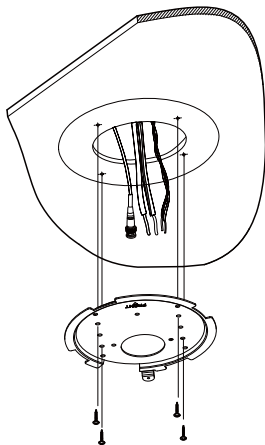
INSTALLATION (SNP-3120)

On-ceiling installation

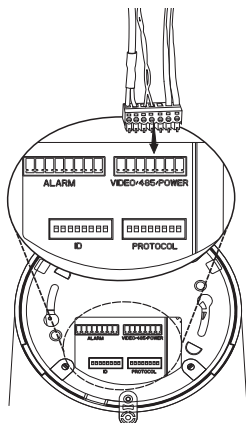
1. Drill a hole of 60mm diameter on the ceiling and run the wires down through it.
2. Install the Mount Bracket onto the hold and fix it using 4 screws.



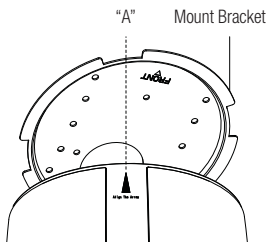
- Do not connect the camera to a power outlet until the installation is complete. Supplying power in the middle of the installation may cause fire or damage the product.



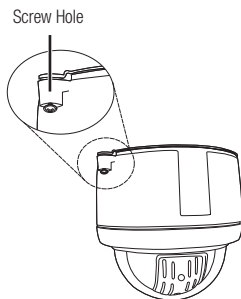
3. Connect each camera cable to the proper terminals on the bottom of the camera. For more detailed instructions, please refer to Page 18: "Camera Wiring Interface Board".
4. DIP switches for communication and ID setup are located on the bottom of the camera. For more instructions, please refer to Page 24.



5. Align the “**Align The Arrow**” triangular edge of the camera to the marking (shown as “**A**” in the diagram) on the left of the “**FRONT**” side of the Mount Bracket.
6. After inserting the camera into the Mount Bracket, turn the camera module clockwise about 25°.



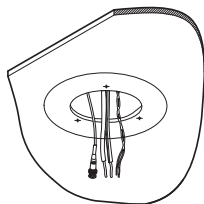
7. Match the screw holes in the camera and mount bracket, and then fasten with the screw.



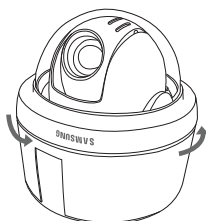
installation & connection

Flush Mount Type Installation Example

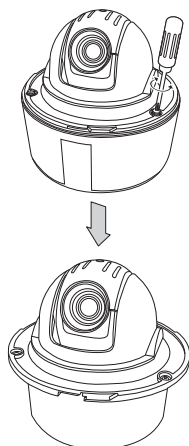
1. Attach the template, and then drill a hole according to the 143 mm diameter hole marked on the template. Drop down the camera cables through the hole. Drill another small hole for a screw to secure the camera.



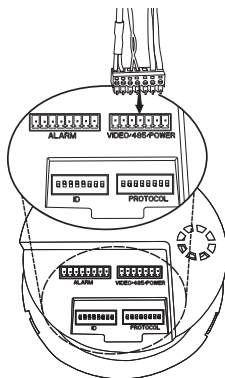
2. Rotate the dome cover counterclockwise to detach it from the camera.



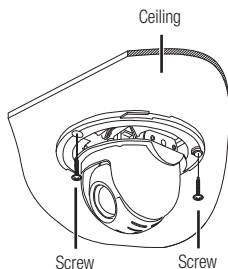
3. Remove the 3 screws, and then detach the mount housing from the camera.



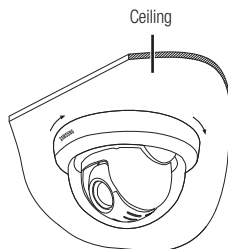
4. Connect each camera cable to the proper terminals on the bottom of the camera (Refer to Page 18: “**Camera Wiring Interface Board**”). Configure the DIP switches on the bottom of the camera for communication and ID (Refer to pages 21~23).



5. Install Camera Fit the camera to the hole on the ceiling, and then secure the camera using 3 Product-enclosed Fixture Screws (M4x20).



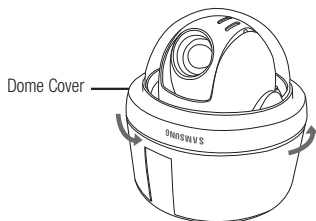
6. Assemble Dome Cover Insert the grooves on the dome cover into ones on the camera, and then turn clockwise to fasten.



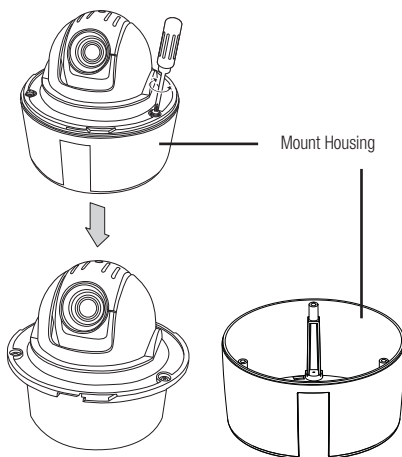
installation & connection

INSTALLING WITH ACCESSORIES (SOLD SEPARATELY)

1. Turn the Dome Cover counter-clockwise and separate from the camera.



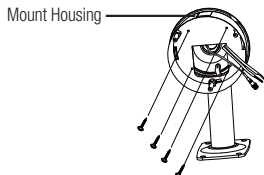
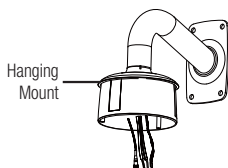
2. Remove 3 screws and separate the Mount Housing from the camera.



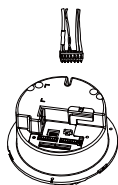
3. Fix the Mount Housing onto the Hanging Mount (SBP-300HM) with 4 screws (M4xL16).



- Note that the recommended torque for the screw fastening is less than 3 kgf, to prevent deformation of the mount housing.



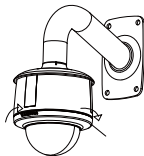
4. Connect wires to the Terminal Block and attach it to the bottom side of the camera.
(Refer to the **"Camera Wiring Interface Board"** at page 18.)
Set the communication protocol and ID DIP switches on the bottom of the camera unit. (Refer to pages 21~23.)



5. Fix the camera to the Mount Housing by using 3 screws removed in the step 2.



6. Attach the Dome Cover and turn it clockwise to fix.

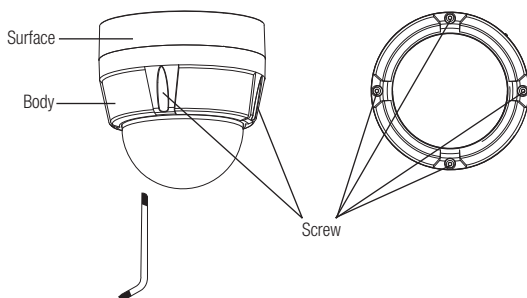


installation & connection

INSTALLATION (SNP-3120V)

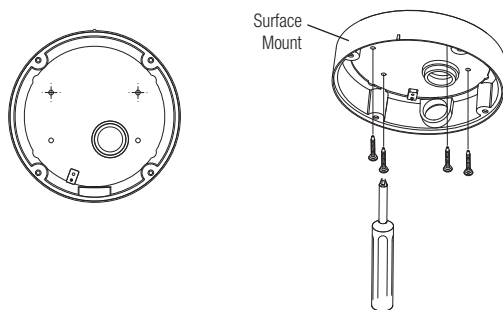
Ceiling Mount

1. Use the provided L-shaped wrench to remove the surface mount by loosening 4 screws counter clockwise.

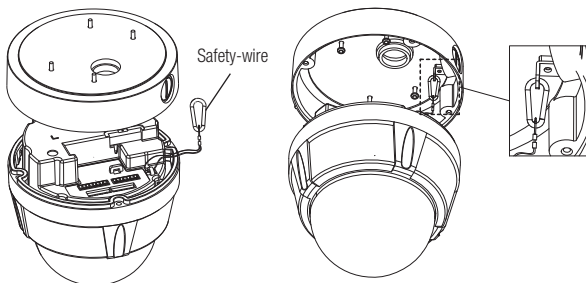


2. Drill holes (5 mm in diameter and at least 35 mm in depth for each) for the screws (x4) to be inserted in the bottom of the surface mount, and insert the provided plastic anchor (HUD5) to the end.

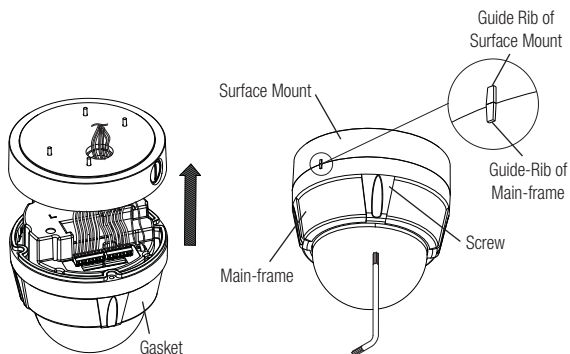
Insert the cables into the cable hole, and fix the SCREW-TAPPING (TH M4xL30) to the plastic anchor that was inserted in the hole for fixing the surface mount. (x4)



3. Connect the safety wire (attached to the camera) to the surface mount as shown. Then, arrange the cables.
- For more information about the wiring, refer to "**Camera Wiring Interface Board**". (Page 18)



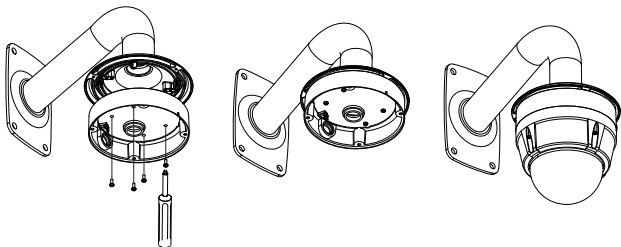
4. Arrange the cables inside the surface mount so that they should not be entangled or stuck in, and align the guide rib of the camera with that of the surface mount. Use the L-shaped wrench to tighten the screws (x4) so that the camera is secured to the mount. To ensure waterproofness, take caution lest that the outer gasket should get loose or be stuck in.



installation & connection

Mount onto the optimal adaptor

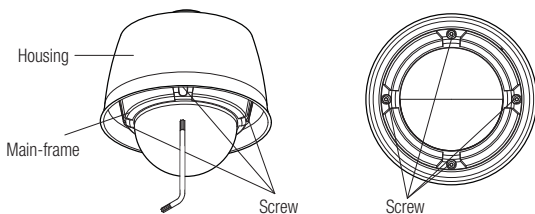
1. Follow step 1 in **"Ceiling Mount"** above and remove the surface mount.
2. Insert the cables into the cable hole on the surface mount and fix them to SBP-300HM (HANGING MOUNT) using SCREW-MACHINE (BH, M4xL10, x4).



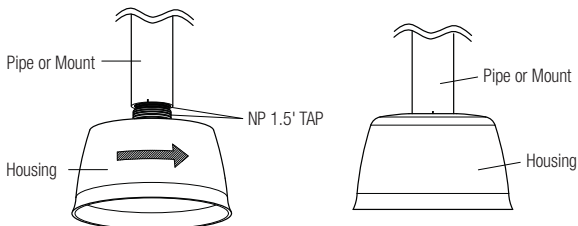
3. Repeat step 3 through step 4 in **"Ceiling Mount"** above to complete the installation.

INSTALLATION (SNP-3120VH)

1. Use the provided L-shaped wrench to loosen 4 screws counter clockwise, which will help removing the housing.

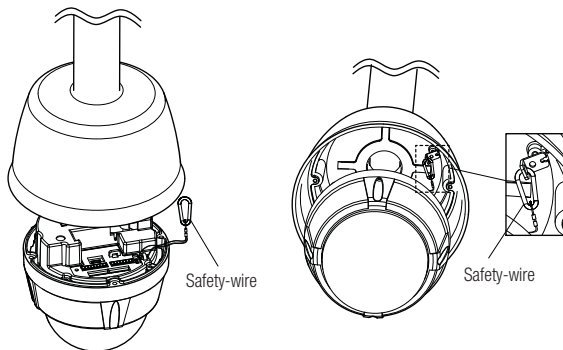


2. Fix the housing to the NP 1.5" tapped pipe, wall mount (SBP-300WM) or ceiling mount (SBP-300CM) by turning it clockwise. For waterproofness and lock between the two component parts, use the Teflon tape to wrap them around.

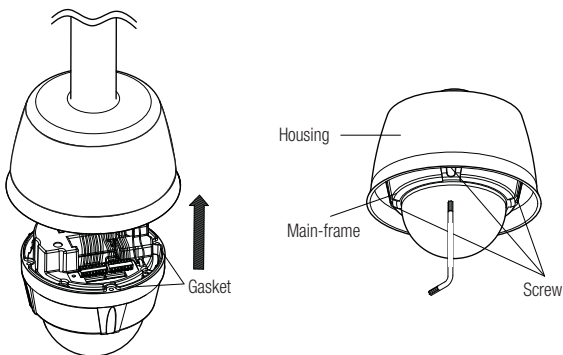


installation & connection

3. Secure the safety wire (attached to the product) to the housing as shown.
- For details about the cable connection, refer to the **"Camera Wiring Interface Board"** section in this manual.



4. Arrange the cables inside the housing lest they be damaged or stuck in, and use the L-shaped wrench to tighten 4 screws to the housing. To ensure waterproofness, this step needs your special care. Otherwise, the gasket on the outer side of the product may be loose or just stuck in.



Optional Accessories for Installation

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

1. When installing the camera on a wall

- SNP-3120, SNP-3120V :
Wall mount (SBP-300WM) + Hanging mount (SBP-300HM)

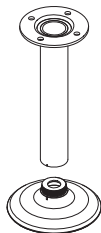


- SNP-3120VH :
Wall mount (SBP-300WM)

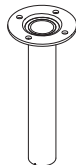


2. When installing the camera on a ceiling

- SNP-3120, SNP-3120V :
Ceiling mount (SBP-300CM) + Hanging mount (SBP-300HM)

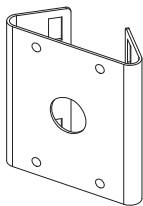


- SNP-3120VH :
Ceiling mount (SBP-300CM)

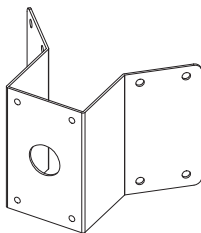


installation & connection

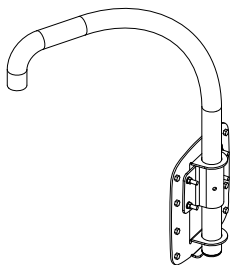
3. When installing the Wall Mount (SBP-300WM) on a pole bigger than 80mm in diameter :
Pole Mount (SBP-300PM)



4. When installing the Wall Mount (SBP-300WM) on a cornered wall :
Corner Mount (SBP-300KM)



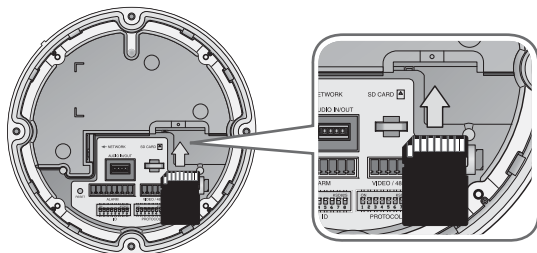
5. When installing SNP-3120VH on a rooftop of a building :
Parapet Mount (SBP-300LM)



INSERTING/REMOVING A SD MEMORY CARD

Inserting a SD Memory Card

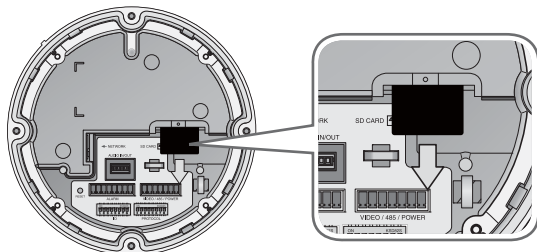
Push the SD memory card in the direction of the arrow shown in the diagram.



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

Removing a 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 turn off the camera or remove the SD memory card, set the card to <Off> in <Storage> menu and press the **[Apply (Apply)]** button. (page 123)
- 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 SD/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

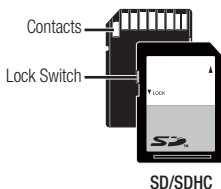
Playback performance can be affected depending on the speed of memory card, so use the high-speed memory card.

Memory Card Use

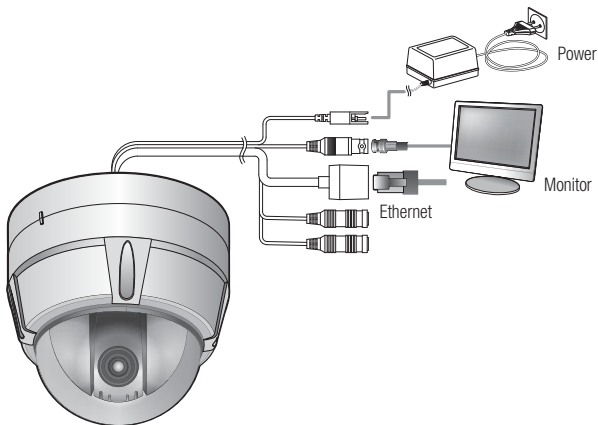
SD and SDHC memory cards feature a switch that disables writing data on to the media.

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

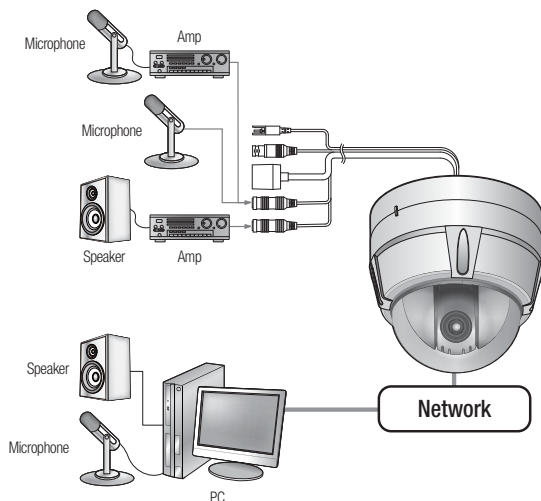
Use the screwdriver to connect each line (+, -) of the power cable to the corresponding power port of the camera.



- 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. (SNP-3120V/VH)
Use an adaptor if the installation site requires heater operations. Adaptor is sold separately.
For the power specifications, refer to the "**Appendix**". (page 144)

installation & connection

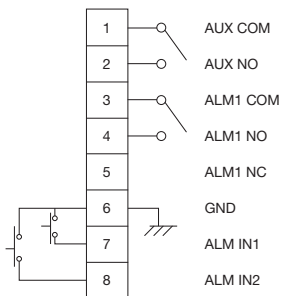
Connecting to Audio Input/Output



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.

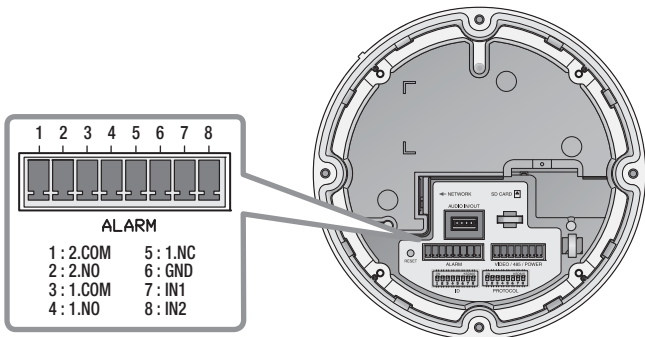
- **Audio Codec**
G.711 PCM, μ -law 64kbps 8kHz sampling
- **Full duplex Audio**
- **Audio in**
Used for mono signal line input (Max.2.4 Vpp)
- **Audio out**
Used for mono signal line output (Max.2.4 Vpp)
- **Line out impedance**
600 Ω

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.



■ For further details on each terminal refer to "Camera Wiring Interface Board". (page 18)

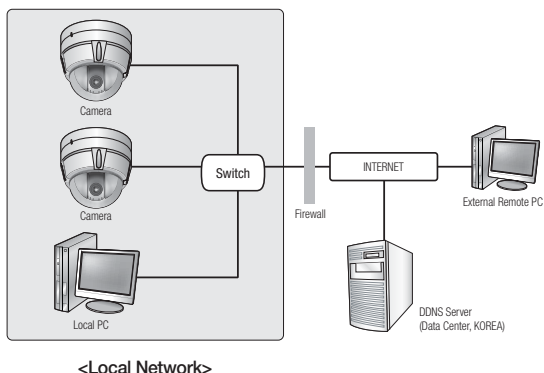
network connection and setup

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

CONNECTING THE CAMERA DIRECTLY TO LOCAL AREA NETWORKING

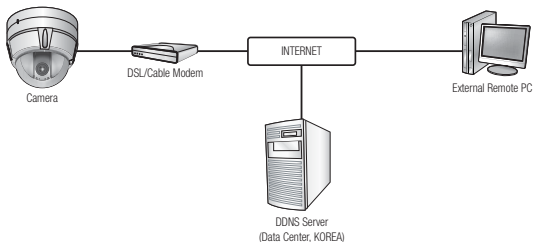
Connecting to the camera from a local PC in the LAN

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.
- 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.
- 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 53)

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



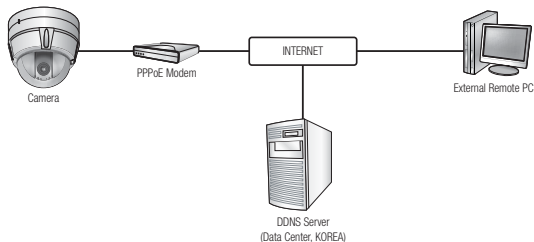
1. Use the cross LAN cable to connect the network cable directly to your PC.
2. Run the IP Installer and change the IP address of the camera so that you can use the web browser on your desktop to connect to the Internet.
3. Use the Internet browser to connect to the web viewer.
4. Move to [**Setup**] 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 115)
- For configuring the DDNS settings, refer to "**DDNS**". (page 114)
- For setting the network type, refer to "**Interface**". (page 112)

network connection and setup

CONNECTING THE CAMERA DIRECTLY TO A PPPoE MODEM



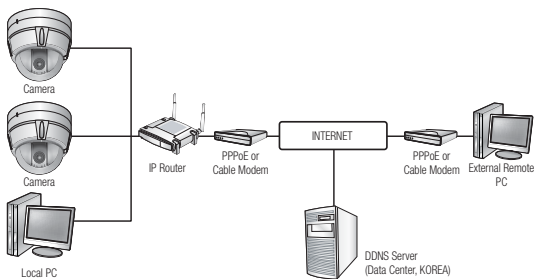
1. Use the cross LAN cable to connect the network cable directly to your PC.
2. Run the IP Installer and change the IP address of the camera so that you can use the web browser on your desktop to connect to the Internet.
3. Use the Internet browser to connect to the web viewer.
4. Move to **[Setup]** page.
5. Move to **[Network] – [DDNS]** and configure the DDNS settings.
6. Move to **[Network] - [Interface]** Setup Page, set the network type to **[PPPoE]**, and enter the ID and password.
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 115)
- For configuring the DDNS settings, refer to **"DDNS"**. (page 114)
- For setting the network type, refer to **"Interface"**. (page 112)

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.

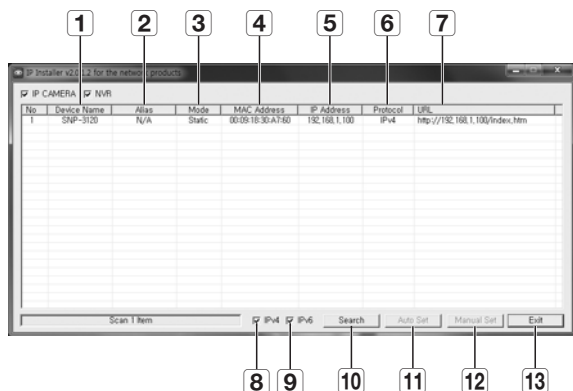
- Select : **<Network Neighborhood>** → **<Properties>** → **<Local Area Connection>** → **<Properties>** → **<General>** → **<Internet Protocol (TCP/IP)>** → **<Properties>** → **<Obtain an IP address automatically>** or **<Use the following IP address>**.
- Follow the instructions below if you select **<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.
- For more information about port forwarding of the broadband router, refer to "**Port Range Forward (Port Mapping) Setup**". (Page 58)

network connection and setup

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".

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



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

STATIC IP SETUP

Manual Network Setup

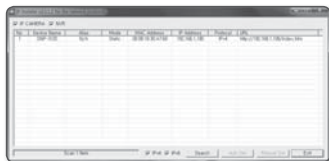
Run <IP Installer_v2.XX.exe> to display the camera search list.

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.
Check the MAC address of the camera on the camera's label.
Both the **[Auto Set]** and **[Manual Set]** buttons will be activated.



network connection and setup

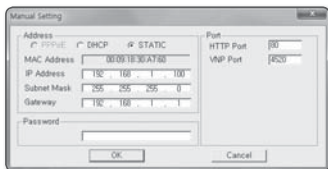
2. Click [Manual Set].

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.

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

- MAC (Ethernet) Address : The MAC address imprinted on the camera label is automatically displayed and requires no user setting.



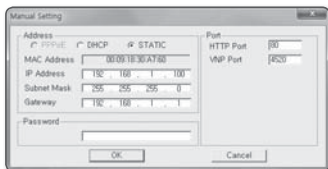
- You can configure the static IP settings only if the DHCP checkbox is unchecked.

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.
- VNP Port : Used to control the video signal transfer, defaulted to 4520.



5. Enter the password.

Enter the password of **"admin"** account, which was used to access the camera.



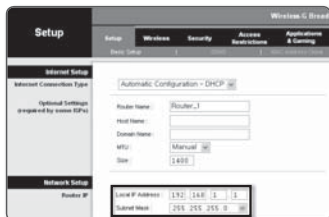
- For the security purposes, you are recommended to use a combination of numbers, alphabets uppercase and lowercase and special characters for your password.
- If you want to change the password, refer to **"Administrator password change"** of the user setup. (page 134)

6. Click [OK].

Manual network setup will be completed.

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.
- For more information about port forwarding of the broadband router, refer to "**Port Range Forward (Port Mapping) Setup**". (Page 58)

If the Broadband Router has more than one camera connected

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

ex)

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

network connection and setup

Auto Network Setup

Run <IP Installer_v2.XX.exe> to display the camera search list.

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



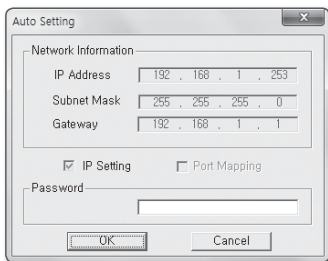
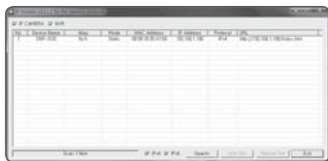
- For cameras found with the IPv6 setting, these buttons will be grayed out as the cameras do not support this function.

1. Select a camera in the search list.
Check the MAC address of the camera on the camera's label.
Both the [Auto Set] and [Manual Set] buttons will be activated.
2. Click [Auto Set].
The Auto Setting dialog appears.
The <IP Address>, <Subnet Mask>, and <Gateway> will be set automatically.
3. Enter the password.
Enter the password of "admin" account, which was used to access the camera.



- For the security purposes, you are recommended to use a combination of numbers, alphabets uppercase and lowercase and special characters for your password.
- If you want to change the password, refer to "Administrator password change" of the user setup. (page 134)

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 computer.
Cameras allocated with <Dynamic IP> address are shown in the list.
2. Select a camera from the search result.
3. Click the [Manual Set] button and check the camera's <Dynamic IP> address.
If you uncheck <DHCP>, you can change IP to <Static>.



network connection and setup

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

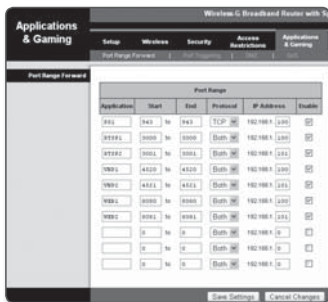
1. From the Setup menu of the Broadband Router, select **<Applications & Gaming>** - **<Port Range Forward>**.

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 **<Setup>** - **<Network>** - **<Port>** from the camera's web viewer menu.

3. When done, click **[Save Settings]**.
Your settings will be saved.



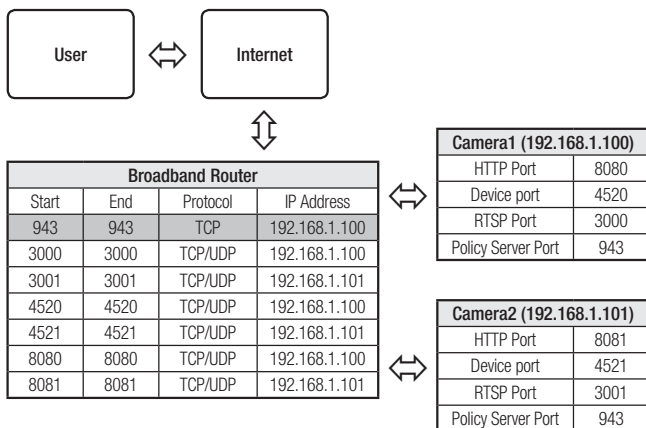
- Above sample instructions are based on the CISCO's Broadband Router.
- The settings may differ depending on the connected Broadband Router model.
For more information, refer to the user manual of the applicable router.

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.
 - 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.

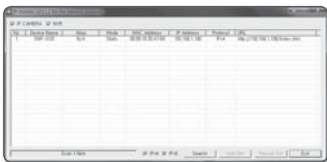
When Camera1 and Camera2 are connected to a router :



network connection and setup

CONNECTING TO THE CAMERA FROM A SHARED LOCAL PC

1. Run the IP Installer.
It will scan for connected cameras and display them as a list.
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 ID>

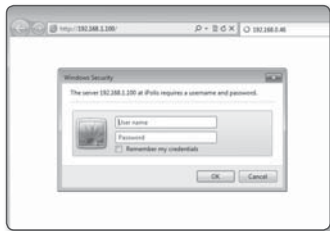


- For registering the DDNS settings, refer to "**Registering with DDNS**". (page 115)

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 ID
 - 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 register your device to the <DDNS> server, visit www.samsungipolis.com and register your device first, and then set the Web Viewer's <Network> - <DDNS> to <Samsung DDNS>, as well as providing <Product ID> that had been used for DDNS registration.



- You can use a DDNS connection only if you are connected to the external network.

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.

Administrator password change

New password

Confirm new password

Apply

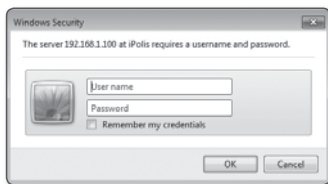


- A new password should be eight to fifteen letters long and a combination of at least two of uppercase/lowercase alphabets, numbers and special characters.
 - Special characters that are allowed: ~!@#\$%^&*()_+=|{}[]?/
- You cannot use your ID as your password. You cannot repeat same letters more than twice and you cannot use the three consecutive keyboard buttons.
- 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.



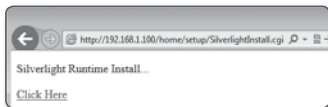
- When you access the camera web viewer, pay special attention to the security by checking whether the image data is encrypted.
- If you check the **"Remember my credentials"** option when your input is done, in future you will be logged in automatically without being prompted to enter the login information.
- You will experience the best video quality if the screen size is 100%. Reducing the ratio may cut the image on the borders.

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.

To install on Windows OS

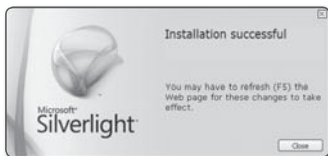
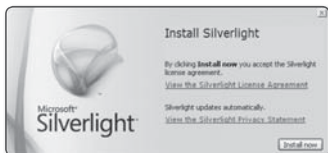
1. Click **[Click Here]**.



2. When the file download dialog pops up, click **[Run]**.
3. When the download is completed, click **[Yes]**.
4. The Silverlight Runtime installation page will be displayed. **[Install now]** to proceed with the installation.



5. When done, click **[Close]**.



To install on MAC OS

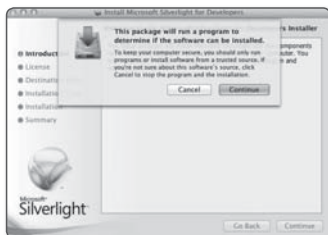
1. Run the file trailing with “.dmg”.



2. Run the install package file automatically created, ending with “.pkg”.



3. Click [Continue].



4. Select your language on the language selection screen, and click [Continue].

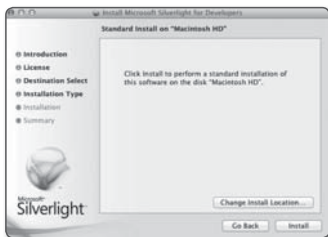


web viewer

5. Click **[Agree]**.



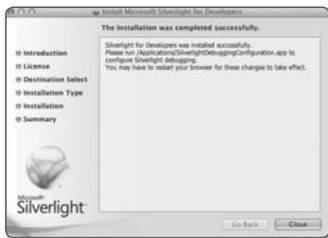
6. Click **[Install]**.



7. Enter the password of the account currently logged in, and click **[Install Software]** and continue.



8. Once completed, click **[Close]**.



INSTALLING STW 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.

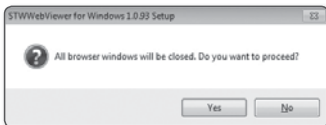


- If the plug-in installation file download status is suspended at 99% in the Internet Explorer browser, retry it after selecting "Release SmartScreen filter" in "Tool → SmartScreen filter".

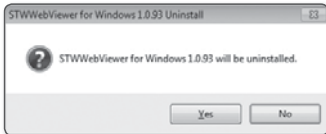
2. Click **[Run]** in the message window.



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



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.

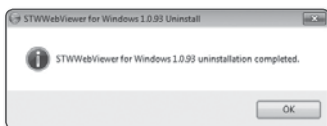


- Steps 4 and 5 will be skipped if no Web Viewer Plug-in is installed.

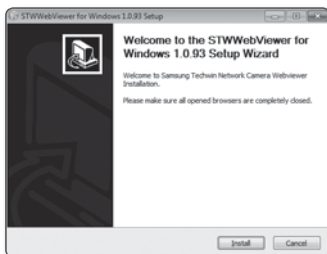


web viewer

5. Click **[OK]**.
The old version of Web Viewer Plug-in is deleted.



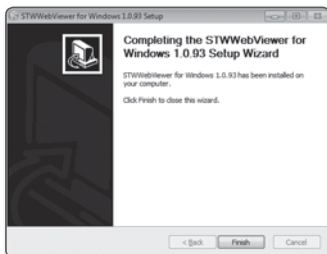
6. Click **[Install]** to begin installation of the Web Viewer Plug-in.



7. Click **[Finish]**.
STW Web Viewer Plug-in installation is completed.



- In your internet explorer, if you need to move to the installation screen after installing the STW 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	Switch to the monitoring screen that plays recording data in the SD memory.
3 Setup	Move to the Setup screen.
4 Viewer Screen	Displays the Live video on the screen. You can use the mouse wheel to activate the digital zooming in Viewer screen.
5 Profile type	You can select a profile type in <Video profile> under the <Video & Audio> setup menu. When the Web Viewer is connected, the profile information currently using is displayed.
6 Screen Optimization	The video size of the camera will switch to as big as the Web browser.
7 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.

web viewer

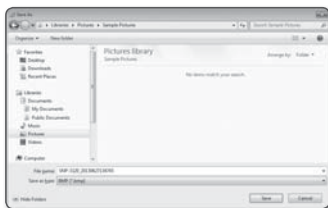
Item	Description
8 Full Screen	Switch the current video to the maximum size of the monitor.
9 Capture	Saves the snapshot as an image file in the .bmp or .jpg format.
10 Audio/Microphone Control	Enable Audio and Microphone are control the Audio volume. ■ Only the Audio volume can be controlled.
11 Alarm output	Activate the Alarm Out port.
12 PTZ	Control the pan/tilt/zoom operations of the camera.
13 Hide the context menu	The left-corner context menu will disappear but only the menu icon.

To capture the snapshot

1. Click [**Capture** ()] on the scene to capture.
The Capture dialog should appear.
2. Confirm the save path and click [**Save**] button.
The screenshot will be saved in the specified path.



- If you encounter an interrupted video when capturing the image with IE8 on a Windows 7-based PC, deselect "**Turn On Protected Mode**" from "**Tools – Internet Options – Security**".
- If the screen is not captured by IE browser in Windows 7 or 8, run the IE Browser with the Admin privilege.



To fit the full screen

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



- For the Internet Explorer and Google Chrome browser, you can switch to the full screen.

To Use Audio

1. Click **[Audio ()]** icon to activate audio communication.
2. Use **[]** bar to control the volume.



- If there is no sound from pulling in and out the audio jack while it is in operation, click the **[Audio ()]** icon to enable it again.

To Use Microphone

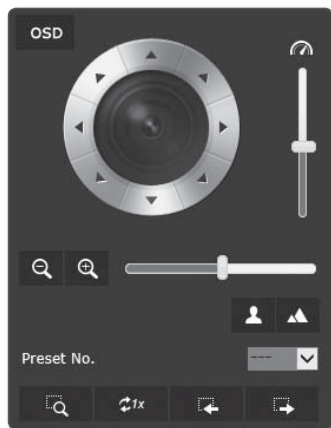
Click **[Mic ()]** icon to activate the microphone.

To control the PTZ

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



- For further details on PTZ use, refer to "PTZ setup". (page 100)



To enable the Area Zoom mode

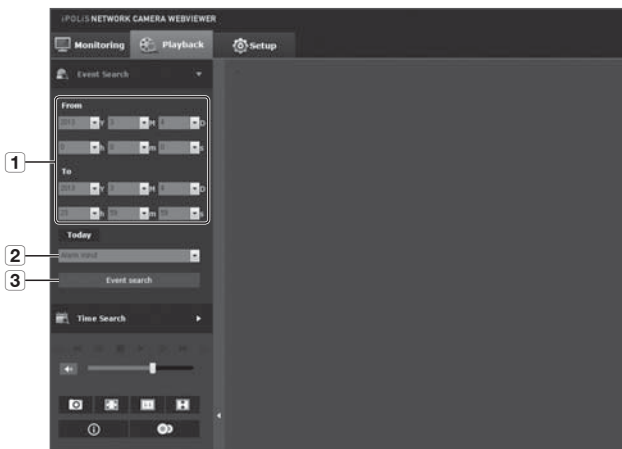
-  : Zoom the area selected with the mouse.
-  : Change the current zoom factor to x1.
-  : Return to the previous area and settings.
-  : If navigated with Prev, it is switched to area and setting before navigation.
- Preset No. : Move to the preset position.

PLAYING THE RECORDED VIDEO



- Before you can play the video, you must configure the record settings. For details on record settings, refer to "Storage". (page 123)

Name of event search screen and its function



Item	Description
1 Search range setting	Set the search date and time from the data saved in the SD memory card.
2 Search event setting	Set the event type to search within the search period.
3 Event search	Run the event search.

To play the content after searching by event

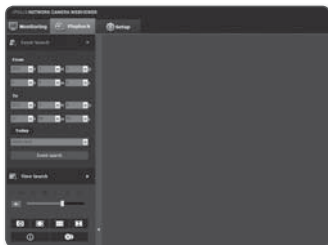
1. Click the **[Playback (🔍)]** button.
2. Specify the start time and end time of your search.
3. Select an event type for your search within the specified period.
4. Click the **[Event search]** button.
The search results will be displayed in the list.



- If more than 800 events are recorded within the search period, your search will be limited up to the date when the 800th event is recorded.

For instance, if the search period is between 10th and 15th day of the month, and more than 800 events were recorded 10th through 11th, your search will be limited up to 11th day with a total of 800 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 (■)]**.
8. To return to the search screen, click **[Exit (↶)]**.



Name of time search screen and its function



Item	Description
1 Time bar	The section in the specific period is played by moving the time bar.
2 Search date setting	Set the search date using the calendar. ■ If there is data saved in your SD memory card on the day, it is marked as a box on the calendar.
3 Speaker	To listen to a voice signal (if present) in the recorded video, then activate the voice signal icon when you play it.
4 Screen optimization	The camera image is converted to fit the Web browser window.
5 Fix the resolution	Regardless of the resolution setup configured in the camera, it sets the resolution to 800x600. Press it again to switch back to the default resolution.
6 Capture	The current image is saved as a .jpg or .bmp image file.
7 Full screen	The current image is converted to cover the maximum size of the monitor.

Item	Description
8 Video information	Time data of the replayed video is displayed on the screen.
9 Backup	Set the desired date to make a backup copy of video data saved in your SD memory card. ■ Can be set as up to 5 minutes.

To play after searching by time

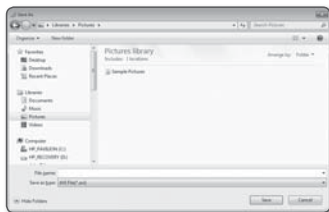
1. Click [Time Search ()].
2. Click a desired date in the calendar.
The video on the specified date will be played.
3. If the video playback is stopped, select a time and click [Play ()].
The video on the selected time will be played.
4. While the video is being played, the recording time for the current video will be shown.
5. Search for the video forward or backward, and control the play speed.
 - How to Control the Play Interval
 : Select this button to move 1 frame forward.
 : Select this button to move 1 second back.
 - To control the play speed
If selecting  , the button will switch to x1, x2, x4, x8, and the play speed will increase accordingly.
When the  button is selected, the playing speed is decreased to -1x, -2x, -4x, -8x and the playing speed slows down gradually. Subsequently the quick playing speed is returned to the normal speed and the reverse playing speed increases.
 - To control the playback direction
If you see the  button with the play speed displayed, the video will be played forward; Whereas, if you see the  button with the play speed displayed, the video will be played backward.
 - How to set the time bar
If you press the  button, the details of the time bar section can be viewed.
If you press the  button, you can view a wider range of times and the desired time can be selected more easily.



6. Move **[Time bar (■)]** to a desired time point of the video before playing it.
The time containing a normal recording file will be highlighted in blue; the time with the event recording will be highlighted in red.

To back up the searched video

1. During playback, click **[Backup]** on the scene to back up.
The scheduling window for backup start and end time appears.
2. Click **[Save]** button.
The Save As window appears.
3. Confirm the save path and click **[Save]** button.
The screenshot will be backed up to the specified path.



To play the backup video

The backed up images are saved in an .avi format. Gom Player, VLC Player, and Window Media Player are recommended as the media player compatible with this format.



- In case of Windows Media Player, download the latest codec from www.windows7codecs.com and install it prior to use.

To Play an AVI File



- If you used the AVI codec to record your video, you can insert a memory card in the PC to check the video.

If you used STW codec to record your video you need to go to **[Playback]** and make an AVI backup file, so that you can play the AVI video file.

For more on how to set the type of video recording file, please refer to **<Storage>**. (page 123)

1. Separate the SD memory card from the camera.



- Before separating the SD memory card, set the **<Device>** to **<Off>** in the **"Setup → Event → Storage"** menu.

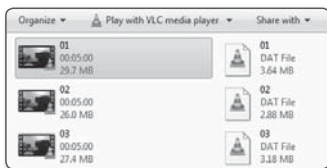
2. Insert the SD memory card into the PC.

3. Play the AVI file in the **"\\ch00\\img\\YYYY_MM_DD"** directory, using a media player.



- The file name begins with "01.avi" and the file number increments by 1.

- Once corrupted, the data in the SD memory card cannot be replayed in the Web Viewer's **[Playback]**.



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 **[PTZ ()]** tab in the left corner of the Live screen.
3. Click **[OSD ()]** button.
The camera setup menu appears.
4. Use the Up/Down (/) buttons to move to a desired item.
5. Click **[Enter ()]**. Then, use the up/down (/) button to move to a desired item.
6. To access a sub menu item, click **[Enter ()]**.
7. To move to previous menu or exit the menu setup, click **[Cancel ()]** button.



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



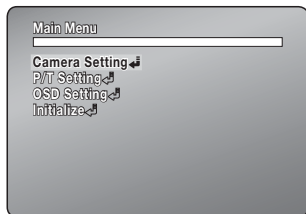
- If **<Video analysis>** is enabled, camera's OSD menu operation can be set as an event.

CAMERA SETTING

You can set up the general functions of camera module.

Starting the Menu

1. Click **[OSD ()]** button.
2. When main menu shows up on screen, move to desired menu by using direction button.



camera setup

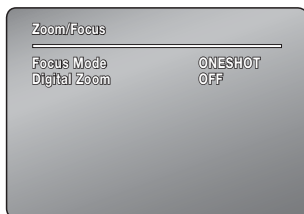
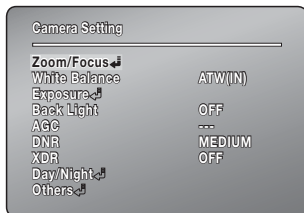
Zoom/Focus

Main Menu ⇨ Camera Setting ⇨ Zoom/Focus

- Focus Mode
 - AUTO : Performs continuous auto-focus.
 - MANUAL : Changes the camera mode to Manual Focus.
 - ONESHOT : Auto-focuses the camera once after the Pan, Tilt, or Zoom function is used.
- Digital Zoom : Enables the maximum digital zoom. Setting the digital zoom to 16X provides a total zoom of 192X.



- Unlike the optical zoom, the graphics quality of the digital zoom decreases as its zoom ratio increases.
- The auto-focus function may not operate normally under the following conditions :
 - When background illumination is low
 - While Slow-Shutter is in operation
 - If the zoom level is set too high
 - When background illumination is too high
 - If a long distance object and a close distance object appear together within a monitoring area
 - If there is no contrast, e.g. Ceiling or a wall
 - If the camera is facing a thin horizontal line
- Auto Focus focuses on an object in the center of the screen; objects around the screen edges may not be properly in focus.

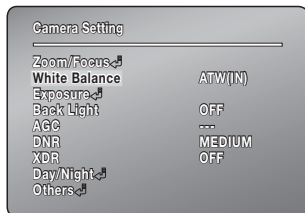


White Balance

The White Balance menu adjusts the balance of the screen colors under different lighting conditions.

Main Menu ⇒ Camera Setting ⇒ White Balance

- **ATW(IN)** : Adjusts the screen color to be optimal in an indoor environment.
(Operating Temperature: about 2,500°K ~ about 9,300°K)
- **ATW(OUT)** : Automatically adjusts the screen color to be optimal in bright outdoors environments. (Operating Temperature: about 2,000°K ~ about 10,000°K)
- **AWC** : Adjusts the screen color to be optimized to the current lighting and monitor conditions. Using this setting may require an readjustment if the lighting conditions changes.
- **MANUAL** : Enables customization of the Red and Blue gains.



- White Balance may not work properly under the following conditions.
 - When the color temperature of the environment surrounding the subject is out of the control range.
 - When the ambient illumination of the subject is dim.
 - If the camera is directed towards a fluorescent light or is installed in a place where illumination changes dramatically, White Balance adjustments may not deliver consistent results.

camera setup

Exposure

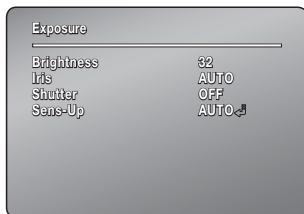
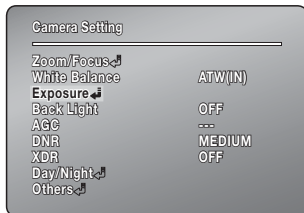
The Exposure settings are to control the camera's exposure meter.

Main Menu ⇨ Camera Setting ⇨ Exposure

- Brightness : Adjusts the screen brightness.
(Over 32: Brighter, Under 32: Darker)
 - It may not fully operable under extremely low lighting condition.
- Iris
 - AUTO : Automatically adjusts the exposure meter.
 - MANUAL : Enables manual adjustment of the exposure meter.
(Over 32: Brighter, Under 32: Darker)
- Shutter : Controls the camera's electronic shutter.
 - OFF : The shutter speed is fixed at 1/60 for NTSC and 1/50 for PAL.
Operates when Iris is on the Auto Mode.
 - A. FLK : Select this setting when you experience picture flickering.
Flickering can happen when artificial lighting frequencies clash with camera frame rates.
 - MANUAL : Enables manual adjustment of the shutter speed.
- Sens-Up
 - AUTO : Automatically detects light levels and maintains a clear picture at night or under low-light conditions.
 - Sens-Up Limit : Adjusts to the maximum-powered zoom per frame.



- While the Internal Sync mode is in effect, setting the shutter to '---' and facing the camera directly to a bright light source may cause poor camera performance.
- Brightness is disabled when the Iris is in Manual mode.
- Shutter is disabled when the WDR is turned on.
- Sens-Up is disabled when the shutter is in Manual mode.



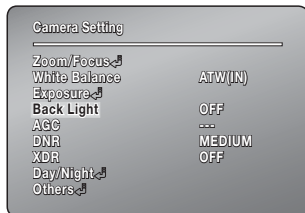
Back Light

Backlight Mode Settings

Unlike other cameras, Samsung Techwin's unique A1 DSP chip gives you a clear image of the subject even with bright backlight.

Main Menu ⇒ Camera Setting ⇒ Back Light

- Back Light
 - OFF : Disables the Backlight mode.
 - WDR : Activates the Wide Dynamic Range mode.
 - BLC : Activates a user defined backlight compensation mode.



WDR

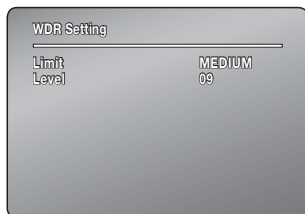
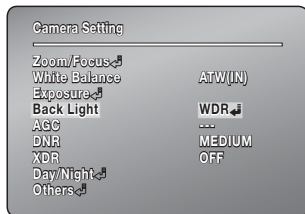
When there are both bright and dark areas at the same time, this mode makes both areas distinctive.

Main Menu ⇒ Camera Setting ⇒ Back Light ⇒ WDR

- Limit : Three WDR sensitivity levels are available in 3 : LOW, MEDIUM, and HIGH. Note that the higher the sensitivity level, the lower the contrast in the light and dark areas becomes.
- Level : Adjusts the screen brightness in WDR mode.



- WDR is disabled when the VPS mode is turned on.
- WDR is disabled if the Iris is in Manual mode.
- During WDR operation, noise, discoloration, spots, and whitish symptoms may occur depending on lighting conditions. If they occur, stop using WDR.



camera setup

BLC

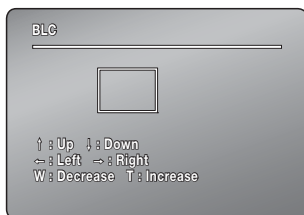
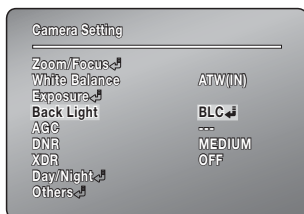
You can selectively choose a screen area to see objects within the area more clearly than others.

Main Menu ⇨ Camera Setting ⇨ Back Light ⇨ BLC

- You can adjust the position and size of the backlight compensation area.



- BLC is disabled if the Iris is in Manual mode.
- Color saturation may occur depending on the environment.



AGC

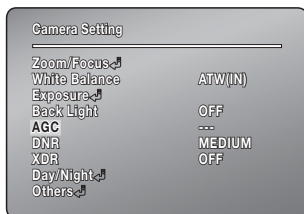
AGC (Automatic Gain Control) adjusts the camera's gain control and the screen brightness if the camera has captured an object under low-light conditions.

Main Menu ⇨ Camera Setting ⇨ AGC

- The OFF, LOW, MEDIUM, HIGH, and MANUAL modes are available.



- If you select the AUTO for Day/Night, you cannot use the AGC menu.

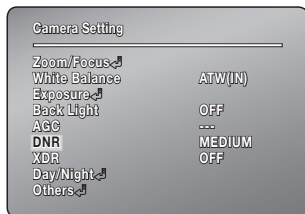


DNR (Dynamic Noise Reduction)

DNR significantly reduces the amount of low luminance noise.

Main Menu ⇒ Camera Setting ⇒ DNR

- OFF : Disables the noise reduction function.
- LOW : Reduces only a small amount of noise, but generates almost no afterimage.
- MEDIUM : The most commonly used mode. Reduces a suitable amount of noise while generating a subtle afterimage.
- HIGH : Reduces noise significantly, but generates obvious afterimages.

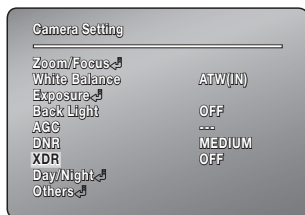


XDR (eXtended Dynamic Range)

XDR illuminates darker spots of an image while retaining the same light level for brighter spots to even out the overall brightness of the image with high contrast between bright and dark spots.

Main Menu ⇒ Camera Setting ⇒ XDR

- The OFF, LOW, MEDIUM and HIGH modes are available.



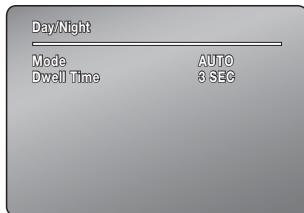
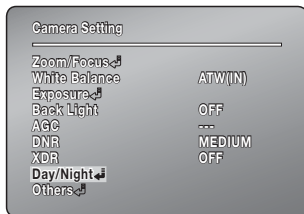
camera setup

Day/Night

The Day & Night function allows the camera to switch between the Color and B/W modes.

Main Menu ⇨ Camera Setting ⇨ Day/Night

- Mode
 - AUTO : Operates in Color mode most times, and switches to B/W mode if a low light level is detected during nighttime.
 - COLOR : Operates in Color mode at all times.
 - BW : Operates in B/W mode at all times. By using the Burst On/Off sub menu, burst signals can be retained or disabled.
 - If the camera is in B/W mode and connected to equipment that requires external sync through burst signals, set the Burst On/Off option to "On".
- Dwell Time : The duration of both the lighting conditions can be customized to let the camera delay the switching between the daytime and night-time settings.
 - Using B/W mode under sunlight or a halogen lamp may decrease the focusing performance.



Others

Main Menu ⇒ Camera Setting ⇒ Others

- Sharpness : Sharpens outlines of an image.
- Freeze : Stops or reanimates an image.
- Stabilizer : The Stabilizer compensates for any small movements of the camera caused by due to the wind and other reasonable causes.
- VPS : This function enhances the outline of moving subject, which improves the sharpness of a captured image as fine as a still image.
- Posi/Nega : Setting to + outputs normal video, where setting to – outputs inverted brightness and color.



- The Stabilizer uses the digital zoom and may cause low picture quality.
- The Stabilizer is disabled if the ambient light is too low.
- The Stabilizer is disabled if the field of view has very low or no contrast, e.g. The sky or a white wall.
- VPS is disabled when the Freeze is turned on.

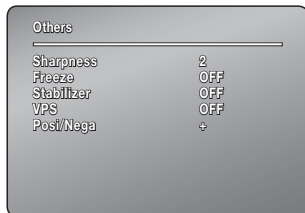
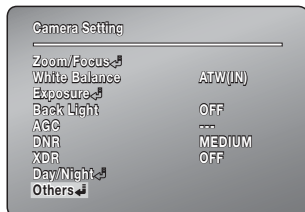
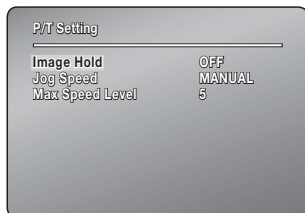


Image Hold

Main Menu ⇒ P/T Setting ⇒ Image Hold

- When the camera is moving between presets locations, this function freezes the cameras image until the camera reached the next location. This is useful to help the screen observer keep sharp eyes and to monitor multiple locations within a network.



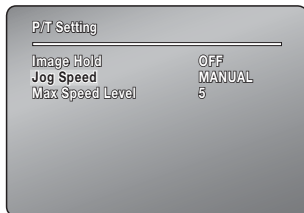
camera setup

Jog Speed

You can adjust the pan/tilt speed of the controller in use.

Main Menu ⇒ P/T Setting ⇒ Jog Speed

- **MANUAL** : The angle of the controller handle determines the speed of Pan and Tilt; the more you tilt the controller, the faster the camera spins.
- **10/20/30/40/50/60** : Maintains speed regardless of the angle of the controller handle.

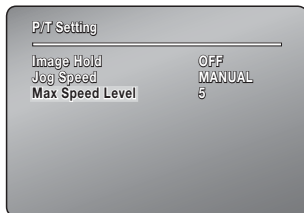


Max Speed Level

Adjusts the maximum speed of Pan and Tilt while performing the Preset and Sequencing actions.

Main Menu ⇒ P/T Setting ⇒ Max Speed Level

- **1~7** : Pan and Tilt operations can be set up to 650°/ sec.



OSD SETTING

OSD Setting

OSD Setting is to set up the OSD (On Screen Display) functions.

Main Menu ⇨ OSD Setting

- Camera ID : Displays or hides Camera ID in the upper left of the screen.
- Camera Name : Add a name to the camera.
- Seq. Status : Displays or hides the status of a sequence action that is in progress.
- PTZ Position : Displays or hides the status of the Pan, Tilt, and Zoom operation that is in progress.
- Language : Enables changing the system language. This camera supports English, Chinese, French, German, Spanish, Portuguese, Korean and Italian.



- When selecting the Camera Name and Preset Name, the screen displays the Left keypad.
- Names can be up to 12 characters and can be entered via the joystick and the Enter key. Once a name is entered, use the joystick and the Enter key to perform the Set command and save the name.

Main Menu

Camera Setting ↵
P/T Setting ↵
OSD Setting ↵
Initialize ↵

OSD Setting

Camera ID	ON
Camera Name ↵	
Seq. Status	ON
PTZ Position	ON
Language	ENGLISH
Others ↵	

Camera Name []

ABCDEFGHIJKLM
NOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
nopqrstuvwxyz
1234567890 ()
[]/*!?,.

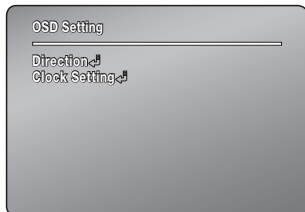
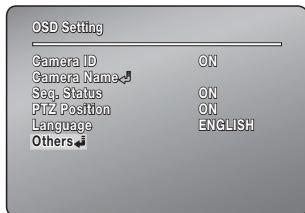
BACK SPACE CLR SET

camera setup

OSD Setting (Others)

Main Menu ⇒ OSD Setting ⇒ Others

- Direction : Indicates the current angle of the camera: East, West, South, North, Southeast, Southwest, Northeast, or Northwest.
 - Set North Dir. : Set up a North direction for the camera.
- Clock Setting : Customize the camera clock; you can schedule sequence actions to perform automatically.
 - Display : Shows or hides the clock from the screen.
 - Date Format : Changes the display format of the camera date:
DD/MM/YYYY or MM/DD/YYYY.



INITIALIZE

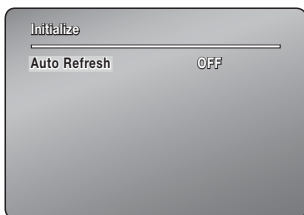
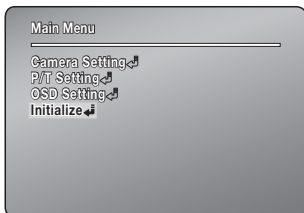
Initialize

Main Menu ⇨ Initialize

- Auto Refresh : Enables optimizing the status of the camera's built-in electric circuits and components on a regular basis.
(A regular operation can be scheduled.)
This mode can be used to maintain and repair the current settings of the camera when anomalous operations occur: e.g. The camera happened to directly face a light source, or the settings have been canceled after the camera repeatedly rotated in all four directions for a long time to monitor a specific location.
The default setting is Off.
- OFF, 1~7 Days : Selecting Off disables Auto Refresh and selecting 1~7 Days automatically executes it after 1~7 days has passed.



- Auto Refresh takes approximately 10 seconds to finish. If Auto Refresh activates in the middle of a sequence action, the camera pauses the sequence action and performs an Auto Refresh, then resumes the sequence action once the refresh is complete.



setup screen

SETUP

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

1. In the Live screen, click [**Setup** ()].

2. The Setup screen appears.



- Microsoft Silverlight 5.0 or higher is required to be installed on the PC for setup pages that provide preview video.
If not installed already, automatically moves to the Silverlight setup.

VIDEO & AUDIO SETUP

Video profile

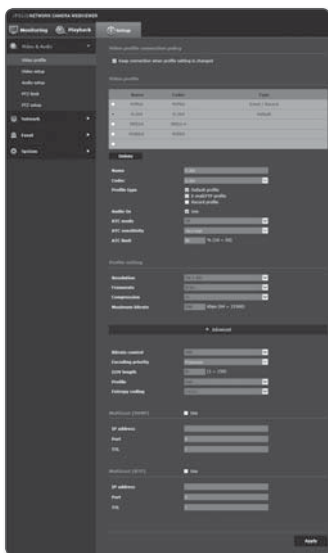
1. From the Setup menu, select the <**Video & Audio** ()> tab.

2. Click <**Video profile**>.

3. Set the <**Video profile connection policy**>.

- Keep connection when profile setting is changed : Changing profile properties that is used by existing connection does not affect such connection and remains with old profile setup.

If not selected, changing a profile used by an existing connection resets such connection.



4. Select each profile properties.

For more details, refer to "To Add/Change the Video Profile". (Page 95)

5. 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 : If no profile is selected when using the Web Viewer, the default video profile is applied.
- 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.
- Audio-In : Sets whether to use audio for video recordings.

6. According to your situation, set ATC (Auto Transmit Control) mode.

- ATC mode : It adjusts the video properties according to the variance in the network bandwidth, controlling the bit rate. Adjusting the bit rate depends on the ATC mode.



- Control framerate : Reduce the frame rate if the network bandwidth drops down.
 - Control compression : Control the compression rate if the network bandwidth drops down.
- Compression adjustment can cause deterioration of the image quality.

- If <Bitrate control> is set to <CBR>, the encoding priority according to the ATC mode will be fixed as below:

Bitrate control / ATC mode	Control framerate	Control compression
CBR	Framerate	Compression

setup screen

- ATC sensitivity : Affect the transfer rate according to the variance in the network bandwidth.

The transfer rate will be adjusted to the fastest if the bandwidth is <Very high>, and adjusted to the latest if the bandwidth is <Very low>.

- ATC limit : If the quality or frame rate is adjusted, the property will be changed to the applied value (%) against the previous setting value (100%).
Note that if you reduce the property value too much, you may encounter flickering on the screen. So it is advisable to adjust the value within the threshold.



- It is recommended to apply ATC control only for cameras supporting ATC.
- Set the ATC sensitivity to <Very low> in a network environment with high variance in the network bandwidth.
- If the network connection is unstable, you may encounter flickering on the screen.

7. When done, click **[Apply (**

- MJPEG, H264 is the default profile and you cannot delete it or change the name and codec.
- MPEG4 videos can not be stored in the SD memory.

To Add/Change the Video Profile

The profile setup can be added or modified to accommodate various profiles depending on the recording conditions.

1. Select one from the <Video profile> options.
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.
Click <Advanced> to display the context menu.
 - Resolution : Set the video size of the MPEG4, H.264, and MJPEG files.
 - Framerate : Set the max number of video frames per sec.
 - Compression : Specify the compression rate of the video.
 - Maximum bitrate : Set the max bit rate of video when the bit rate control is set to VBR.



- As the bit rate can be adjusted limitedly according to the resolution, frame rate and screen complexity, the actual bit rate can be greater than the maximum bit rate. So you must consider the use conditions when setting the value.
- In the case of multiple connections, the maximum/target total beat rate to receive the video/audio signal stably is 20Mbps.
For example, if 10 users are connected, the maximum/target beat rate must be set to 2Mbps(2048kbps) or less.
- Target bitrate : Set the target bit rate when the bit rate control is set to CBR.
- Bitrate control : You can select one from constant bit rate and variable bit rate for compression. Fixed bitrate means that the network transmission bitrate is fixed while varying the video quality or frame rate, variable bitrate means that a higher priority is placed on the video quality while varying the bitrate.
- After setting the fixed bit rate for bit control, if you select the video quality priority mode, depending on the complexity of the screen, the actual transmitted frame rate may differ from the frame rate setup in order to guarantee the optimal video quality for the given bit rate.
- Encoding priority : You can set the priority of video transmission to frame rate or compression.
- GOV length : It specifies the distance (in terms of number of frames) between two consecutive I-Frames in a video sequence when H.264 codec was selected. (One I-Frame + 0~Several P-Frames)
- Profile : You can select the H.264 profiling method.

setup screen

- Entropy coding : Reduce the possible compression loss due to encoding.
- Multicast(SVNP) : Specify the use of the SVNP protocol.
 - IP address : 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 SVNP packet.
- Multicast(RTP) : Specify the use of the RTP protocol.
 - IP address : 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.



- If you set the Multicast address to 224.0.0.0~224.0.0.255, multicast may not work properly in all environments. In that case, we recommend you change the multicast address.

What is GOV length?

GOV(Group of Video object planes) is a set of video frames for H.264 compression, indicating a collection of frames from the initial I-Frame (key frame) to the next I-Frame. GOV 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.

For MPEG4 and H.264 codec, you can determine the GOV length. (1~150)

Video setup

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

1. From the Setup menu, select the **<Video & Audio ()>** tab.
2. Click **<Video setup>**.
3. Select a **<Pattern>** that will be applied to the privacy zone.
 - If you select **[Solid]** from the **<Pattern>** items, the selected zone will be displayed in grey.
 - If you select one from **[P1~P3]**, the selected zone will be displayed in mosaic pixels.
4. Click an area on the image and select 4 corner points to specify a desired zone.
A popup appears where you enter a name for the zone and click **[OK]**.
 - Do not drag an area to specify a privacy zone; it does not work.
5. If you want to delete a name in the list, select it and click **[Delete ()]**.
6. When done, click **[Apply ()]**.

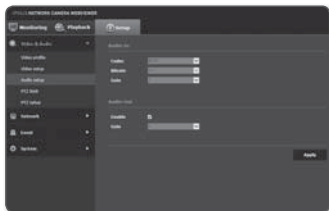


setup screen

Audio setup

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

1. From the Setup menu, select the **<Video & Audio ()>** tab.
2. Click **<Audio setup>**.
3. Set the audio input value.
 - **Codec** : Specify the audio codec.
 - G.711 : A audio codec standard, it uses 64 Kbps PCM (Pulse Code Modulation) encoding.
ITU standard audio codec that is adequate for digital voice transfer in PSTN network or through a PBX.
 - G.726 : ITU standard audio codec applying ADPCM (Adaptive Differential Pulse Code Modulation) for variable bit rates of 40/32/24/16 Kbps to 64 Kbps PCM encoding.
 - **Bitrate** : Set the bit rate to differentiate compression ratio if using G.726 codec.
 - **Gain** : Specify the audio input amplification.
4. Set the audio output level.
 - **Enable** : Sets whether to use audio output.
 - **Gain** : Set the amplification value for the audio output.
5. When done, click **[Apply ()]**.



PTZ limit

You can specify restrictions on the pan or tilt function.

1. From the Setup menu, select the **<Video & Audio ()>** tab.
2. Click **<PTZ limit>**.
3. Decide if you want to limit the PTZ operations. If so, specify the details.
 - Mode : Select a mode to set between Pan limit and Tilt limit.
 - Use : Select whether to use limit in set mode.
 - Action : PTZ limiting operation is set.
 - [**Start**] : Start limit setting.
 - [**Enter**] : Provide the start and end points.
 - [**Exit**] : If you want to change the point setting, click this to return to the input dialog.



setup screen

PTZ setup

You can change the direction of lens and activate the zoom.

1. Select the <Video & Audio ()> tab from Setup menu.
2. Click <PTZ setup>.
3. Adjust the direction.
 - [Change direction to ()/()/()/()/()/()/()/()] : The camera direction is adjusted.
 - [Moving speed control ()] : The bigger the number is, the faster the moving speed becomes.



4. Set the zoom and focus.
 - [Zoom In ()] : Zooms in the screen.
 - [Zoom Out ()] : Zooms out the screen.
 - [Adjust Focus ( / )] : Adjusts the focus in the screen.
 - [Zoom Speed Control ()] : Move the bar to the right to speed up zooming.
5. Set the preset.



To add a preset

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

To delete a preset

1. Select the preset number to delete.
2. Press the [] button.

To move to a desired preset

1. Select a preset number that you want to move.
2. Press the [] button.

To configure the detailed settings for the preset

1. Select the number of preset that you want to configure.
2. Press [] to enter the preset editing mode.
3. When the Setup window appears, select each item and set appropriately.
4. When done, click [Apply ()].

setup screen

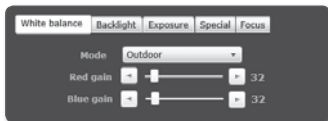
White balance Setup

You can correct the image colors based on white under any lighting conditions.

1. Select <White balance>.

2. Select <Mode>.

- Indoor : Automatically corrects the video colors of the camera to be optimized to the indoor environment.
- Outdoor : Automatically corrects the video colors of the camera to be optimized to the outdoor environment.
- Manual : You can adjust the red and blue gains of the camera video manually.

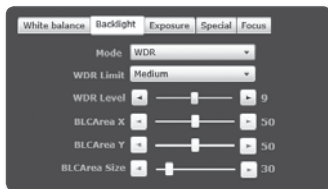


- The white balancing may not work properly in the following conditions:
 - If the surrounding condition of the object is out of the temperature correction range
ex) Clear sky, sunset
 - If the surrounding of the object is dark
 - If the focus of the camera directly faces the florescent lighting or if the camera is installed in a place of variable illumination, the white balancing operation may be unstable.

WDR Setup

You can set to display a sharp image of the objects in a scene where both bright and dark areas exist.

1. Select <Backlight>.
2. Set <Mode> to <WDR>.
3. Select each item and set it properly.
 - WDR Limit : Set the WDR sensitivity.
 - WDR Level : Specify the WDR sensitivity level.



- If WDR mode is active, the shutter mode cannot be changed. Data transfer via the network is available at up to 15 fps.
- If the WDR mode is active, a moving object can cause an afterimage on the screen.

Ex)



<WDR OFF>



<WDR ON>



- If you select WDR, you may encounter the following problems. So set it to Not Used.
 - Unnatural change of colors that cause an unnatural image on the screen
 - Noise on the bright area of the image
- As the performance of the WDR function may differ depending on the bright-area size of the image, it is recommended to optimize the installation angle for the best performance.
- At night operation, this function will be activated only if the incoming highlight exceeds a certain area in a low contrast environment.
- Increasing the maximum value may cause an unnatural portion of the image.

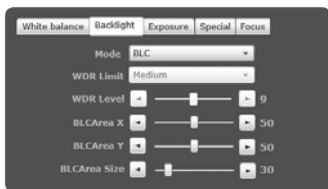
setup screen

- For the best WDR performance, it is recommended to set the Iris mode to **<Auto>**.
- Since the auto focus operation can be repeated depending on the lighting condition if user backlight compensation is used, it is recommended to use the focusing mode of **<One Shot AF>** or **<Manual>**.
- Shutter cannot be used in WDR mode.

BLC Setup

You can specify a desired area on the video manually and set the area to be displayed more clearly.

1. Select **<Backlight>**.
2. Set **<Mode>** to **<BLC>**.
3. Select each item and set it properly.
 - BLCArea X : Set the X-line coordinates in the BLC area which can be set from 11 to 89.
 - BLCArea Y : Set the Y-line coordinates in the BLC area which can be set from 13 to 87.
 - BLCArea Size : Set the size of the BLC area, which can be set from 24 to 60.



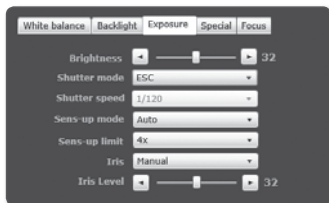
Exposure Setup

You can adjust the exposure level of the camera.

1. Select <Exposure>.

2. Select each item and set it properly.

- Brightness : Adjust the screen brightness.
- Shutter mode : Adjust the electronic shutter of the camera.
 - ESC (Electronic shutter control) : Adjust the shutter speed automatically according to the ambient brightness.
 - Manual : Adjust the shutter speed of the camera manually.
 - A.FLK (Anti flicker) : Select this feature if you encounter a flickering screen due to a frequency mismatch with the ambient lighting.
 - Sens-up can be used only when the shutter type is <ESC>, and cannot be used when it is <Manual> or <A.FLK>. But Sens-up can be used regardless of shutter type when WDR mode is used. (apart from the influence of AGC)
 - The shutter cannot be used if the backlight compensation is set to WDR mode.
- Shutter speed : Control the shutter speed manually.
- Sens-up mode : Automatically senses the darkness level at night or in a low contrast scene and extends the accumulation time accordingly for a bright and sharp image.
 - Sens-up can be used only when the shutter type is <ESC>.
 - Sens-up mode cannot be used if the AGC mode is set to <Off> or <Manual>.
 - The greater the video accumulation factor is, the brighter the screen is but the afterimage of a moving object grows accordingly and the Auto Focus mode may not operate properly.
- Sens-up limit : Set the work condition to Auto mode in a low contrast scene.
- Iris : You can set the camera iris to Auto or Manual to your preference.
 - Auto : Automatically sets the iris adaptively to the ambient lighting and shutter speed.
 - Manual : Set the shutter level on your own.
- Iris Level : Set the shutter level when the shutter mode is manual.



setup screen

Special Setup

1. Select <Special>.

2. Select each item and set it properly.

- Day & night : You can switch the mode to adjust the black and white level as well as the colors.
 - Color : Always displays the video in colors.
 - B/W : Always displays the video in black and white.
 - Auto : Displays in color mode during normal daytime and switches to black and white mode in a low contrast scene at night.
 - Auto daytime/nighttime mode setting cannot be selected if the AGC mode in the <Exposure> menu is set to <Off> or <Manual>.
- Burst Mode : When the night/day mode is B/W, turn it on or off.
- AGC mode : Select the AGC control mode.

When you record an object in the dark area and obtain an image with brightness lower than a certain level, adjust the image gain's control sensitivity to change the brightness.

 - If the AGC mode is set to <Off>, you cannot use the XDR, Sens-up menu or the <Auto> mode for night/day setting.
 - If the AGC mode is set to <Manual>, you cannot use the Sens-up menu or the <Auto> mode for night/day setting.
- AGC Level : When the AGC mode is manual, select a value in the range of 1dB~16dB.
- XDR : The higher the value the better the contrast is but also there is slightly more noise in the bright and dark areas as a result.
- DNR : The higher the setting is the higher the screen noise is.



Focus Setup

1. Select <Focus>.
2. Select each item and set it properly.

- Mode
 - Manual : The focus will be adjusted manually according to the zoom factor.
 - Auto : The focus will be adjusted automatically according to the zoom factor.
 - One Shot AF : Auto Focus will be performed once after the zooming operation.
- Preset pan position : Set the preset's pan position which can be set from 0 to 359.
- Preset tilt position : Set the preset's tilt position which can be set from -5 to 185.
- Preset zoom position : Set the preset's zoom position which can be set from 1 to 12. (When x12 is set, you can set the max digital zooming value.)



setup screen

To configure the swing settings

Swing is a monitoring function that moves between two preset points and enables you to trace the motion.

1. Select **<Swing setup>** in **<Sequence setup>**.

The menu screen will switch to the swing setting screen.



2. Select a swing setting mode.

- Pan swing : You can set the swing monitoring using the PAN function.
- Tilt swing : You can set the swing monitoring using the Tilt function.
- Pan & Tilt swing : You can set the swing monitoring only using both PAN and Tilt functions.

3. Set **<First preset>** and **<Second preset>** to specify a swing range.



- When moving to the second preset from the first preset, the camera will move to the right direction on the screen.

4. Set the moving speed and dwell time.

5. Press the [**Set**] button.

The first preset, second preset, speed and dwell time will be saved in set mode.

6. Press the [**Start**] button.

It performs the swing operation.

7. Press the [**Stop**] button.

The running swing will be stop.



- If you want to set the swing, then you need at least two presets set already.

To set a group

The group function enables you to group various presets before calling them in sequence. Six groups can save a total of 128 presets each.

1. Select **<Group setup>** in **<Sequence setup>**.

The menu screen will switch to the group setting screen.



2. Select a group setting mode.
 - Group No. : Select a group number.
 - Preset No. : Select a preset number.
 - Speed : Specify the speed of movement.
 - Dwell time : Specify the duration for which an operation is kept at the preset position.
3. Press the [**Add**] button.
Entered in the bottom list.
4. If you want to delete a preset added, select it and press the [**Delete**] button.
5. Press the [**Set**] button.
Saved in the bottom list.
6. Press the [**Start**] button.
It performs the group operation.
7. Press the [**Stop**] button.
The running group will be stop.
8. Press the [**Remove**] button.
Selected group data will be deleted.

setup screen

To configure the tour settings

The tour function enables you to call groups of your presets in sequence.

1. Select **<Tour setup>** in **<Sequence setup>**.

The menu screen will switch to the tour setting screen.

2. Configure the tour settings in detail.

- Group No. : Select a group number.
- Dwell time : Specify a waiting time before a new group is called.

3. Press the [**Add**] button.

Entered in the bottom list.

4. Press the [**Set**] button.

Saved in the bottom list.

5. Press the [**Start**] button.

It performs the tour operation.

6. Press the [**Stop**] button.

The running tour will be stop.

7. Press the [**Remove**] button.

Selected tour data will be deleted.



To set the tracing function

Tracking remembers the trace of movements instructed using the direction button and reproduces it for your reference.

1. Select **<Trace & Auto Run>** in **<Sequence setup>**.

The menu screen will switch to the PTZ tracking and Auto operation menu screen.

2. Select a tracking number.

The operation will be saved with display of the memory usage. The saving time differs, depending on the level of the PTZ operation.

If memory is filled to 100% or the recording end configuration is not completed in 2 minutes from the beginning of saving, it will be automatically terminated.



3. Press the [**Set**] button.
Selected tracing number will be saved.
4. Move the navigation path of saving using the pan/tilt/zoom.
5. Press the [**Stop**] button.
Saving is terminated.
6. Press the [**Start**] button.
Selected tracing number will be activated as set.

To set the auto run

This feature will activate the predefined sequence function if the user does not manipulate anything on the product for a certain time.

1. Select <Trace & Auto Run> in <Sequence setup>.
The menu screen will switch to the PTZ tracking and Auto execution menu screen.



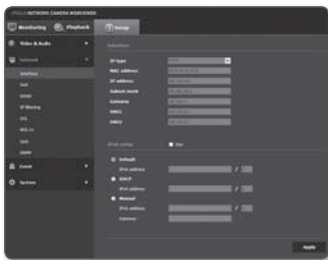
2. Select an auto run mode.
 - Home : It is moved to the home position.
 - Preset : It is moved to the selected preset number.
 - Swing : Automatically executes the operation in Swing mode.
 - Group : Automatically executes the operation in Group mode.
 - Tour : Automatically executes the operation in Tour mode.
 - Trace : Automatically executes the operation in Trace mode.
 - Auto pan : Automatically executes the 360° rotation in the pan direction.
You can designate the tilt angle and speed.
3. Set the start time of autorun. After selecting the mode, select time (5s/10s/20s/30s/1m/2m/3m/4m/5m).
4. Select the preset number.
5. Press the [**Set**] button.
Selected operation will be performed automatically.

setup screen

NETWORK SETUP

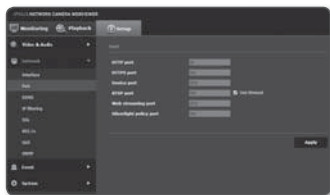
Interface

1. From the Setup menu, select the **<Network ()>** tab.
 2. Click **<Interface>**.
 3. Set the **<Interface>** and **<IPv6 setup>** as necessary.
 - IP type : Select an IP connection type.
 - Manual : Specify the IP address, Subnet mask, Gateway, DNS1, and DNS2.
 - DHCP : Specify the DNS1 and DNS2.
 - PPPoE : Specify the DNS1, DNS2, ID and Password.
 - If you set it to **<Manual>**, you should specify the IP, Subnet mask, Gateway, DNS 1 & 2 manually.
 - MAC address : Shows the MAC address.
 - IP address : Displays the current IP address.
 - Subnet mask : Displays the **<Subnet mask>** for the set IP.
 - Gateway : Displays the **<Gateway>** for the set IP.
 - DNS1/DNS2 : Displays the DNS(Domain Name Service) server address.
 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.
 5. 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.
 - Once completed with editing, click **[Apply ()]** to apply changes and the browser exits. After a while, connect again with the changed IP.



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).
 - Setting the HTTP port for Safari and Google Chrome browsers to 65535 is not allowed by security policy.
 - HTTPS port : 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.)
 - Device 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.
 - Web streaming port : Used to transfer videos to the Web Viewer; the default is 4520.
 - Silverlight policy port : Silverlight is used to permit to acquire a network connection; the default is 943.



- 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)
- The port range of the Web Streaming is between 4502 and 4534. If the Device port is with this effective range, the Web Streaming port should be specified the same as the Device port.
- You cannot change the Web Streaming/Silverlight policy server port of a camera.

4. 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.

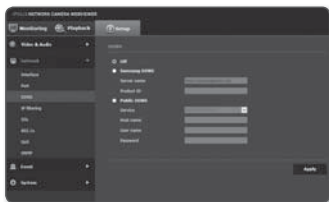


- You can use the DDNS service only if the internet is connected.

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 Samsung Techwin.
 - Product ID : Enter the product ID that is registered with the Samsung DDNS service.
- 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 ()]**.



Registering with DDNS

To register your product with the Samsung DDNS

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



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



3. Click [PRODUCT REGISTRATION].
4. Enter the product 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].
The product will be added to the product list that you can check.



setup screen

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 (A screenshot of a web-based DDNS configuration interface. On the left, there are radio buttons for 'off', 'Samsung DDNS', and 'Public DDNS'. The 'Samsung DDNS' option is selected. To the right of these options are input fields for 'Server name', 'Product ID', 'Service' (with a dropdown arrow), 'Host name', and 'Password'. At the bottom right of the form is an 'Apply' button.**

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 (A small icon of a notepad with a pencil, typically used to denote a tip or important note.**

- To use DDNS service properly, both DDNS setup and the router's port forwarding setup are required.
For port forwarding setup, refer to "Port Range Forward (Port Mapping) Setup". (page 58)

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.

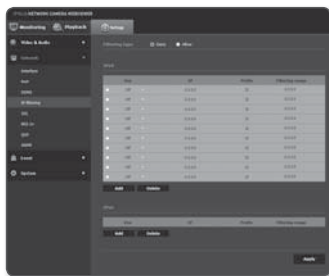


- If selected **<Allow>** for IP Filtering and **<IPv6 setup>** of **<Interface>** is set to **<Use>**, both IPv4 and IPv6 addresses of the computer currently configuring should be assigned.
- The IP address of the computer used for the current setup cannot be added to **<Deny>**, it should be added 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

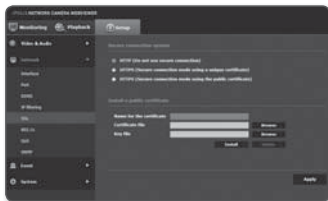
SSL

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.

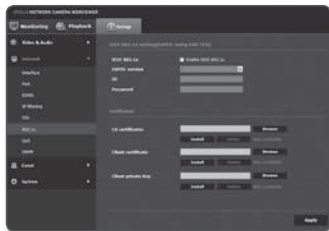
Deleting the certificate

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

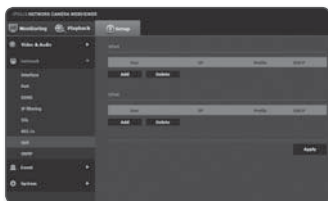
1. Press the [Browse ()] button for each item and select a certificate to install.
2. If no certificate is installed, you will see "Not Available" appearing next to the selected item.
3. Press the [Install ()] button to start installation with a message of "Installed" next to the item.
4. Press the [Delete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

setup screen

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 (✔)]**.

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 v3 : SNMP version 3 will be active.
 - Password : Specify the default password for SNMP version 3. The default password is <admin4321>.
 - 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 118)

EVENT SETUP

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.



setup screen

- 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** ().

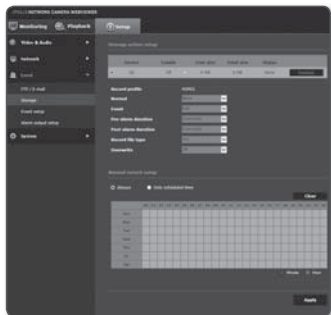
Storage

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 **<Storage>**.

To make recording on the SD memory

1. Check the memory card's **<Free size>** and **<Total size>**.
2. If there are sufficient free space, set the device 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.
 - Setting to higher options of resolution, bit rate and frame rate increases the amount of data produced. As the size of data grows, transferred video can be stored only at 1 fps even if you set the record quality to full frames.
 - As some space of the SD memory card is reserved for the system, only about 90% of the total capacity is available for use.
3. Specify the storage action.
 - Record profile : Shows recording profile's codec type.
 - Normal : This sets the option to always record the content regardless of the event.
 - I-Frame : Records one image per second.
 - Full : Records at the frame rate set in the record profile.
 - Event : Set the recording type for a certain event that occurs.
 - **<Event>** recordings are not saved as **<Normal>**.



setup screen

- 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.
 - Record file type : It specifies the file format of the recorded images.
 - STW : It is Samsung Techwin's unique file format.
 - AVI : It is the conventional avi format.
 - Overwrite : If the SD memory is full, this will delete old data and store new data in replacement.
4. Specify the <**Normal record setup**>.
- Always : Always save recorded video in the SD memory card.
 - If set to Always, the activation time cannot be changed.
 - Only scheduled time : Records only on the specified time of the specified day of week.
 - [Clear] : The specified time is released.
5. When done, click [**Apply** ()].

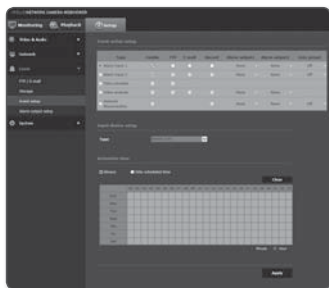
Alarm input 1/2

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

1. From the Setup menu, select the **<Event (🔔)>** tab.
2. Click **<Event setup>**.
3. Select **<Alarm input>** from **<Event action setup>**.
4. Set whether or not to **<Enable>**.
5. 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.
6. Specify the **<Activation time>**.
 - Always : Always check if an alarm occurs. It activates in operated mode when the alarm occurs.
 - If set to **<Always>**, the activation time cannot be changed.
 - 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.
 - [Clear] : Reset all settings.
 - Minute : Click an area in Activation Time and set the time by minutes.
 - Hour : Drag your mouse at Activation Time and set the time by hours.



- The transfer interval setting value must be smaller than the preset activation interval to succeed in image transmission.



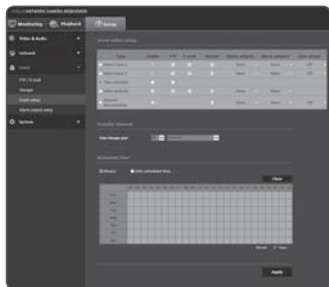
setup screen

7. Specify an operation that will perform if an alarm occurs.
 - FTP : Specify the use of FTP transfer in the alarm input setup.
 - E-mail : Specify the use of email transfer in the alarm input setup.
 - Record : Specify the use of recording in the alarm input setup.
 - Alarm output1/Alarm output2 : Select whether to set the alarm output if an alarm is incoming, and specify the alarm output time.
 - Goto preset : Moves to the specified preset location when setting the alarm input.
8. When done, click **[Apply ()]**.

Time schedule

You can set to save the video data at a certain interval as scheduled regardless of the actual occurrence of the event.

1. From the Setup menu, select the <Event ()> tab.
2. Click <Event setup>.
3. Select <Time schedule> from <Event action setup>.
4. Set whether or not to <Enable>.
5. Specify the <Transfer interval>.
6. 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.
7. Specify the activation conditions.
 - FTP : Specify the use of the FTP transfer if an event occurs.
8. When done, click [Apply ()].



setup screen

Video analysis

Events of video analysis can be set to trigger event signal output.

1. From the Setup menu, select the **<Event ()>** tab.
2. Click **<Event setup>**.
3. Select **<Video analytics>** from **<Event action setup>**.
4. Set whether or not to **<Enable>**.
5. 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.

6. 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.
7. 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.



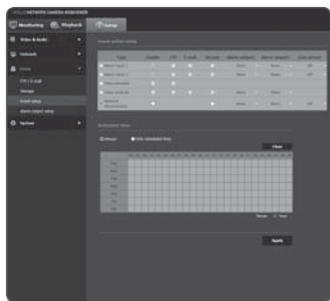
8. Set whether to use the Motion Display function or not.
9. Set the activation time and condition.
 - For more information about <Activation time> and <Action>, refer to "Alarm input". (page 125)
10. Select whether to display the mask zone.
 You can set maximum of 4 mask zones. To set mask area, drag 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

setup screen

Network disconnection

You can receive and save events of a physically disconnected network.

1. From the Setup menu, select the **<Event (🏠)>** tab.
2. Click **<Event setup>**.
3. Select **<Network disconnection>** from **<Event action setup>**.
4. Set whether or not to **<Enable>**.
5. Specify the activation time and activation condition.
 - For more information about **<Activation time>** and **<Action>**, refer to "Alarm input". (page 125)
6. When done, click **[Apply (📌)]**.



Alarm output setup

1. From the Setup menu, select the **<Event (🔔)>** tab.
2. Click **<Alarm output setup>**.
3. Set the camera's type of alarm output.
 - If you change the alarm output type, the alarm out button on the monitoring page and alarm output type displayed on Event Setup page will be changed accordingly.
 - Type
 - Normal open : Considers "Open circuit" status of the sensor or alarm input device as normal, and triggers alarm event if becomes "Closed circuit" status.
 - Normal close : Considers "Closed circuit" status of the sensor or alarm input device as normal, and triggers alarm event if becomes "Open circuit" status.
4. Set the alarm output button.
 - Button mode : Sets the alarm output method.
 - There is difference between operations when clicked alarm output button while disabled.
 - Pulse : It is activated during the time period specified by the duration (switching interval) and then becomes inactive automatically.
 - Active/Inactive : It maintains as activated until the user clicks the button again to make it inactive.
 - Duration : Set the alarm duration that maintains activated if the mode is set to pulse, from 1 to 15 seconds.
5. When done, click **[Apply (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.
 - Model : Model name of the product.
 - Serial number : Product serial number.
 - Device name : Provide a device name that will be displayed on the Live screen.
 - 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 : Select a preferred language for the Web Viewer OSD.

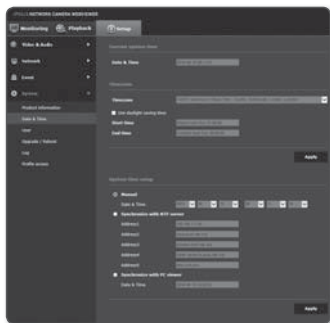


 - You should change the camera menu language in camera menu.
 - The default language is set to **<English>**.
4. When done, click **[Apply ()]**.



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 : Sets to the time of the computer connected.
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.

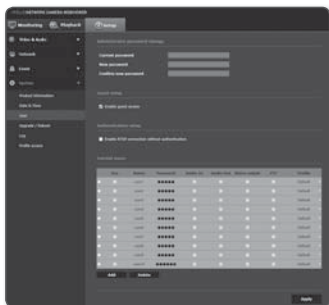
setup screen

User

1. From the Setup menu, select the <System ()> 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 two types of upper case, lower case, numeric, and special characters: 8 to 15 characters.
 - Should be different from the ID.
 - Cannot repeat the same letter, number of special characters more than three times.
 - Cannot use three consecutive letters (e.g. abc, 123, 321, or ascii code values in the sequential increasing or decreasing order)
 - 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.

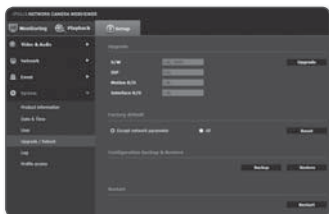


- If the existing password is not matched, when you change the admin password, you cannot change the password.
 - After changing your password, if there is a camera connected to a CMS or NVR client, then you need to re-register it with the newly changed password. If the camera is still connected with 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.
- 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, alarm output and PTZ control 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.
- Video Transfer, Changing Video Information, Alarm Output : Set the profile to <**All**>, and select at your preference for the rest.
4. When done, click [**Apply** ()].

setup screen

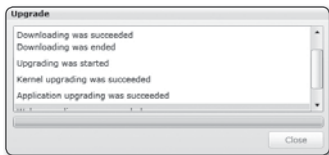
Upgrade / Reboot

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 Network 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 you reset the camera. 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. (When you perform PTZ operations, you cannot backup or recover the previous settings.)
 - 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.
5. Once completed upgrading, the browser exits and the camera restarts.

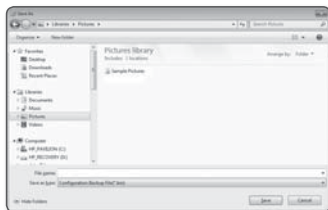




- It may take a max of 10 minutes for the upgrade process.
If you forcibly terminate the upgrade process, upgrade will not be completed properly.
- During restarting the system, accessing with web viewer will not be made.
- You can download the latest version from the Samsung web site (www.samsungcctv.com).

To back up the current 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”.

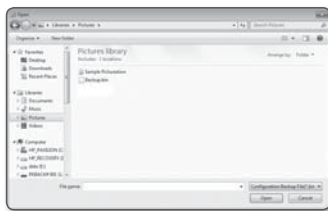


To restore the backup settings

1. To restore the backup settings, click [**Restore**].
2. 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.
- You can restore a backup file for the SNP-3120V/SNP-3120VH model only.

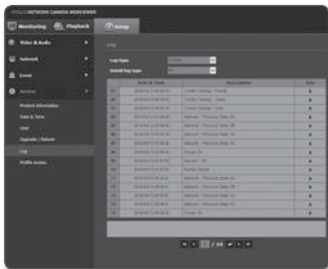


setup screen

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.
 - System : You can check the system logs where any system changes are recorded including the time information.
 - Event : 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.

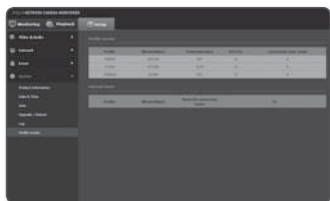


- If you want to view the details of a log, click **[Info ()]** in the right column of the log; the log information will be shown in the bottom pane.
- Each page displays 15 logs with the latest one displayed at the top.
- The event/system log list can contain up to 1000 logs; after that, the existing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

Profile access

You can check the profile information.

1. From the Setup menu, select the <System ()> tab.
2. Click <Profile access>.
 - Profile access : Show the information of the newly added profile.
 - Profile : Show the information of the newly added codec.
 - Bitrate(kbps) : Show both the actual bit rate and the set bit rate.
 - Framerate(fps) : Show both the actual frame rate and the set frame rate.
 - ATC(%) : Show the ATC status.
 - Concurrent users count : Show the number of concurrent users who access the profile.
 - Current users : Shows information on users accessing web viewer and displaying monitoring video.
 - Profile : Show the name of the profile accessed by the user.
 - Bitrate(kbps) : Show the current bit rate.
 - Network connection status : You can check the network connection status.
 - IP : Show the IP address of the current user.



- To check information on the profile currently used, click <Profile access> again to refresh it.

SPECIFICATION

Items		Description		
		SNP-3120	SNP-3120V	SNP-3120VH
Video	Imaging Device	1/4" Ex-view HAD PS CCD		
	Total Pixels	NT : 811(H) x 508(V), PAL : 795(H) x 596(V)		
	Effective Pixels	NT : 768(H) x 494(V), PAL : 752(H) x 582(V)		
	Scanning System	Progressive(VPS ON) (If WDR on, Interlaced Scan)		
	Synchronization	Internal / Line lock		
	Frequency	NT : H : 15.734KHz / V : 59.94Hz, PAL : 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) B/W : 0.07 Lux (F 1.65, 50 IRE, VPS OFF), 0.0001 Lux (Sens up 512X)		
	S / N Ratio	50dB		
Lens	Video Out	CVBS : 1.0 Vp-p / 75Ω composite		
	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) ~ 4.62°(Tele) / V : 42.32°(Wide) ~ 3.58°(Tele)		
	Min. Object Distance	0.2m (Wide) / 0.8m (Tele)		
	Focus Control	Auto / One-Shot AF / Manual		
	Zoom Movement Speed	-		
	Lens Type	DC Auto Iris		
	Mount Type	-		

Items		Description		
		SNP-3120	SNP-3120V	SNP-3120VH
Pan / Tilt / Rotate	Pan Range	360° Endless		
	Pan Speed	Preset : 650°/sec, Manual : 0.05°/sec ~120°/sec (Turbo:200°/sec)		
	Tilt Range	-5° ~185°		
	Tilt Speed	Preset : 650°/sec, Manual : 0.05°/sec ~120°/sec		
	Rotate Range	-		
	Preset	255 ea		
	Preset Accuracy	±0.1°		
	Auto Tracking	-		
Operational	On Screen Display	NT : English, French, German, Spanish, Italian, Korean, Portuguese PAL : English, French, German, Spanish, Italian, Chinese, Portuguese		
	Camera Title	Off / On (Displayed up to 12 characters)		
	Day & Night	Auto (ICR) / Color / B/W		
	Backlight Compensation	Off / BLC / WDR		
	Wide Dynamic Range	NT : 128X / PAL : 160X		
	Dynamic Range	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)		

appendix

Items	Description		
	SNP-3120	SNP-3120V	SNP-3120VH
Operational	Gain Control	Off / Low / Medium / High / Manual	
	White Balance	ATW (In) / ATW (Out) / AWC / Manual	
	Electronic Shutter Speed	Off / A.FLK / Manual (1/120 ~ 1/10Ksec)	
	Digital Zoom	16X	
	Flip / Mirror	Digital Flip	
	Profile	-	
	VPS	Off / On	
	Intelligent Video Analytics	Moved / Fixed	
	PIP	-	
	Schedule	-	
	Alarm I/O	Input 2ea / Output 2ea (Relay)	
	RS-485 Protocol	SAMSUNG T/E, PELCO-P/D, Panasonic, Honeywell, AD, Vicon, GE, Bosch	
Network	Ethernet	RJ-45 (10/100BASE-T)	
	Video Compression Format	H.264, MPEG4, MJPEG	
	Resolution	NT : 704x480, 640x480, 352x240, 320x240 PAL : 704x576, 640x480, 352x288, 320x240	
	Max. Framerate	NT : 30fps / PAL : 25fps	
	Video Quality Adjustment	H.264/MPEG4 : Compression Level, Target Bitrate Level Control MJPEG : Quality Level Control	
	Bitrate Control Method	H.264/MPEG4 : CBR or VBR MJPEG : VBR	
	Streaming Capability	Multiple Streaming (Up to 10 Profiles)	

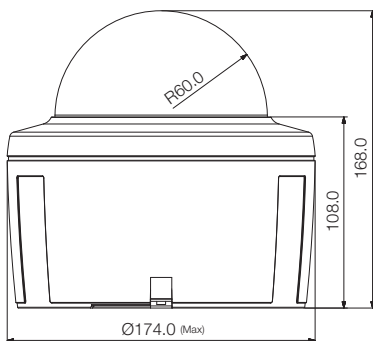
Items	Description		
	SNP-3120	SNP-3120V	SNP-3120VH
Network	Audio I/O	Line in / Line out	
	Audio Compression Format	G.711 μ -law, G.726	
	Audio Communication	2-Way	
	IP	IPv4, IPv6	
	Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTSP, NTP, HTTP, HTTPS,SSL, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS	
	Security	HTTPS(SSL) Login Authentication Digest Login Authentication IP Address Filtering User access Log 802.1x Authentication	
	Streaming Method	Unicast / Multicast	
	Max. User Access	10 users at Unicast Mode	
	Memory Slot	SD/SDHC Memory Slot	
	ONVIF Conformance	Yes	
	Webpage Language	English, French, German, Spanish, Italian, Chinese, Korean, Russian, Japanese, Swedish, Danish, Portuguese, Czech, Polish, Turkish, Rumanian, Serbian, Dutch, Croatian, Hungarian, Greek, Norway, Finland	
	Web Viewer	Supported OS : Windows XP / VISTA / 7 / 8, MAC OS X 10.7 Supported Browser : Microsoft Internet Explorer (Ver. 10 ~ 7) Mozilla Firefox (Ver. 19 ~9) * Windows Only Google Chrome (Ver. 25 ~ 15) * Windows Only Apple Safari (Ver. 6.0.2(Mac OS X 10.8, 10.7 only), 5.1.7) * Mac OS X only	
	Central Management Software	SmartViewer 4.0	

appendix

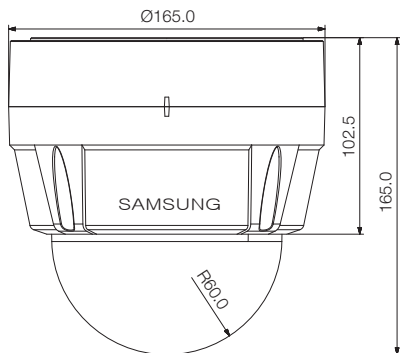
Items		Description		
		SNP-3120	SNP-3120V	SNP-3120VH
Environmental	Operating Temperature / Humidity	-10°C ~ +50°C (+14°F ~ +122°F) /~90% RH	-50°C ~ +55°C (-58°F ~ +131°F) / ~90% RH (AC24V On)	
	Ingress Protection	-	IP66	
Electrical	Input Voltage / Current	24V AC, PoE+(IEEE802.3at)		
	Power Consumption	Max. 15W	Max. 15W (Heater Off), Max. 45W (Heater On)	
Mechanical	Color / Material	Body : Ivory / Plastic	Body : Ivory / Aluminum (Vandal Resistance)	Body : Ivory / Aluminum (Vandal Resistance), Sun-Shield Built-in
	Dimension (Ø x H)	Ø174.0 x H168.0 mm (6.85" x 6.61")	Ø165.0 x H165.0 mm (6.5" x 6.5")	Ø200.0 x H203.0 mm (7.87" x 7.99")
	Weight	1.2Kg (2.65 lb)	1.9Kg (4.19 lb)	2.4Kg (5.29 lb)

PRODUCT OVERVIEW

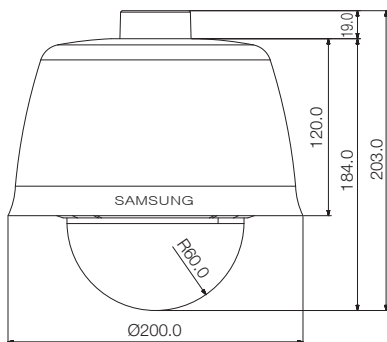
SNP-3120



SNP-3120V



SNP-3120VH



TROUBLESHOOTING

PROBLEM	SOLUTION
I can't access the camera from a web browser.	• Check to make sure that the camera's Network settings are appropriate. • Check to make sure that all network cables have been connected properly. • If connected using DHCP, verify that the camera is able to acquire dynamic IP addresses without any problem. • If the camera is connected to a Broadband Router, verify that port forwarding is properly configured.
Viewer got disconnected during monitoring.	• Connected Viewers become disconnected upon any change to camera or network configurations. • Check all network connections. • If the camera is connected over an PPPoE network, it's possible for Viewer to disconnect under poor network conditions.
I cannot connect to the system using a tab browser of Internet Explorer 7.0.	• An error may be generated when connecting with a new window or tab since the cookie data are shared. Do not use a new window or tab, select "File → New session".
The camera connected to the network is not detected in the IP installer program.	• Turn off the firewall settings on your PC and then search the camera again.
Images overlap.	• 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.
No image appears.	• 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.

appendix

PROBLEM	SOLUTION
<Video analytics> of <Event setup> is set to <Enable>, but no notification e-mail reaches me even when an analysis event had occurred.	• Verify the settings in the following sequence: A. Check <Data & Time> settings. B. The <Video analytics> should be set to <Enable>. C. Check if the <E-mail> option of <Event action setup> menu is checked to use.
Can I define event rules even when I don't use <Video analytics>?	• Yes, it can be. You can set rules for events despite of the intelligent video analysis setting.
No signal is found at the Alarm Output port even when an intelligent video analysis event is generated.	• Check alarm output port settings.
Cannot record into the SD memory card.	• Check if the memory card is defective. • Check if the write protection tab of the memory card is set to "LOCK".
SD memory card is inserted but the camera does not operate properly.	• 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 • Format the memory card again in <Setup> → <Event> → <Record> menu.
Cannot format the SD memory card.	• Check if the write protection tab of the memory card is set to "LOCK".

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librt 1.20	BSD 1.0	

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

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Version 2.1, February 1999

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