SAMSUNG TECHWIN

NETWORK CAMERA

User Manual

SNP-3302/3302H/
3371/3371H/3371TH

CE

SAMSUNG

Network Camera

User Manual

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- **Design and specifications are subject to change without prior notice.**
- **The default password can be exposed to a hacking thread so it is recommended to change the password after installing the product.**
  Note that the security and other related issues caused by the unchanged password shall be responsible for the user.

IMPORTANT SAFETY INSTRUCTIONS

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

13. Unplug this apparatus during lighting storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

WARNING

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

CAUTION

RISK OF ELECTRIC SHOCK.
DO NOT OPEN

CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK.
DO NOT REMOVE COVER (OR BACK).
NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

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.

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 BNC Out terminal of the product is provided for easier installation, and is not recommended for monitoring purposes.
If you keep the BNC cable connected, a risk of lightening may cause damage or malfunction to the product.

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

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

overview

Please read the following recommend safety precautions carefully.

- Do not place this apparatus on an uneven surface.
- Do not place this apparatus near conductive material.
- Do not attempt to service this apparatus yourself.
- Do not install near any magnetic sources.
- Do not block any ventilation openings.
- Do not place heavy items on the product.
- Do not expose the camera to radioactivity.

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

- **4CIF Video Quality**
- **Multi-Streaming**
  This network camera can display videos in different resolutions and qualities simultaneously using different CODECs.

  - However, MPEG-4 video can not be played on a web page. Use CMS software if you want to play the video on a web page.
- **Web Browser-based Monitoring**
  Using the Internet web browser to display the image in a local network environment.
- **Alarm**
  If an event occurs, the event-related video will be transferred to the FTP/email specified by the user or saved to the SD memory, or the event signal will be sent to the Alarm Out port.
- **Motion Detection**
  Detects motion from the camera's video input.
- **Intelligent Video Analysis**
  Analyzes video to detect logical events of specified conditions from the camera's video input.
- **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
- Operating System : Microsoft Windows 7/VISTA/XP SP3, Apple MAC OS
- Resolution : 1280X1024 pixels or higher
- RAM : 2GB or higher
- Web Browser : Firefox, Google Chrome, *Apple Safari, Windows Internet Explorer 9.0(32bit) /8.0(32bit)/7.0(32bit)
  - Neither a beta test version unlike the version released in th.e company website nor the developer version will be supported.
  - It is recommended to connect to IPv6 in Windows 7.
  - For Mac OSX, 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
- It is recommended to use memory cards of at least class 6 speed.

WHAT'S INCLUDED

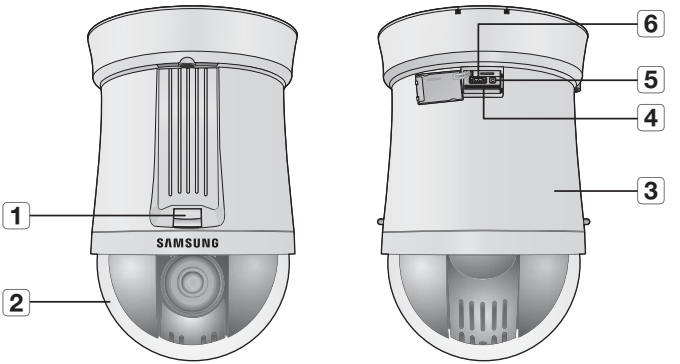
Please check if your camera and accessories are all included in the product package.

Appearance	Item Name	Quantity	Description	Model Name
	Camera	1		SNP-3302/3371, SNP-3302H/ 3371H/3371TH
	User Manual, Installer S/W CD, CMS S/W DVD	2		
	Quick Guide (Optional)	1		

Appearance	Item Name	Quantity	Description	Model Name
	Warranty card (Optional)	1		SNP-3302/3371, SNP-3302H/ 3371H/3371TH
	BNC cable	1	Used to test the camera connection to a portable display device	
	Installation base	1	If installing it indoors or in a ceiling housing	SNP-3302/3371
	Tapping Screw	3	Used for installation on the wall or ceiling	
	Template	1	Product installation guide	
	Hexagon screw	3	Used for attaching the installation base to the camera	SNP-3302H/3371H/ 3371TH
	L Wrench	1	Used for fixing the installation base after attaching it to the camera	
	Installation base	1	Bracket for mounting outdoors	

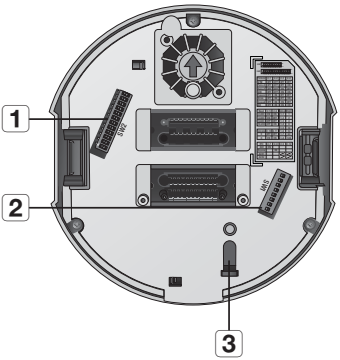
AT A GLANCE (SNP-3302/3371)

Appearance

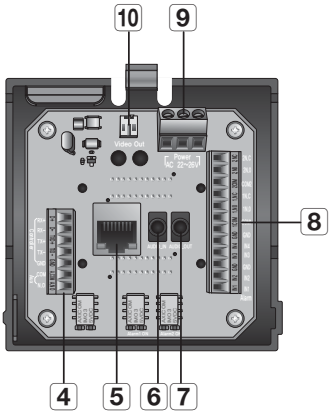


Item	Description
1 Unlock button	Used if installing the camera in the installation base.
2 Dome Cover	Dome cover for the lens and unit protection.
3 Main unit	Protect the internal PTZ mechanism from the direct sunlight.
4 SD Memory Card Compartment	Compartment for the SD memory card.
5 Reset Button	Pressing and holding this button for about 5 seconds will reset all camera settings to the factory default.
6 After Service Port (A/S port)	This is for the repair purpose only that is not available for the user.

Bottom View of Installation Base



Inner View of Installation Base

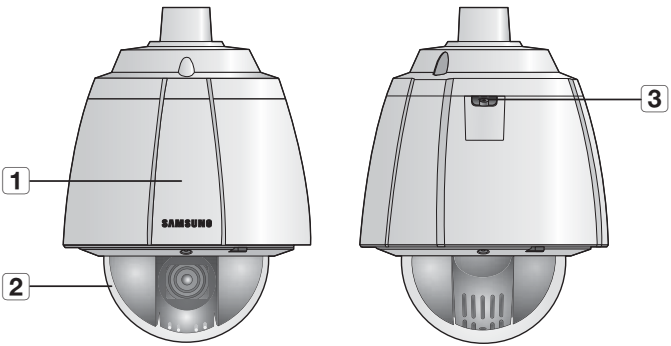


Item	Description
1 Communications Setup Switch	Set the transfer rate and protocols.
2 ID Setup Switch	Specify the camera ID.
3 Safety cable hook	Cable hook that is designed for preventing an accidental fall of the product.
4 Communications and AUX Ports	Used for RS-485 communications.
5 Network Connections	Used to connect a PoE+ or LAN cable.
6 Audio Input Port	Used to connect the audio input cable. (Mono jack plug is not supported.)

Item	Description
7 Audio Output Port	Used to connect the audio output cable. (Mono jack plug is not supported.)
8 Alarm I/O Port	Used to connect the alarm I/O cable.
9 Power Port	Used to connect the power.
10 Video Out Port	Analog video output port. (for installation)

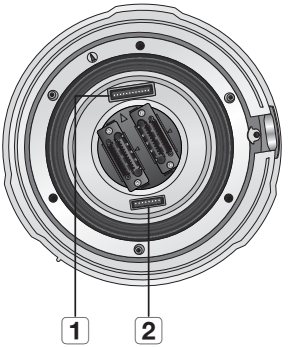
AT A GLANCE (SNP-3302H/3371H/3371TH)

Appearance

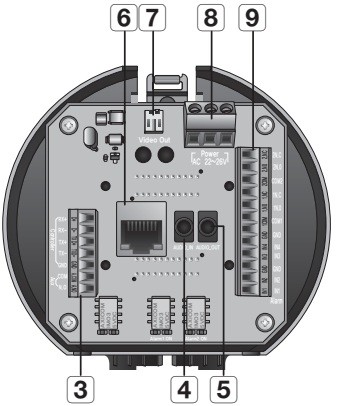


Item	Description
1 Main unit	Protects the internal PTZ mechanism from the direct sunlight, rain or external impact.
2 Dome Cover	Dome cover for the lens and unit protection.
3 Safety cable hook	Cable hook that is designed for preventing an accidental fall of the product.

Bottom View of Installation Base



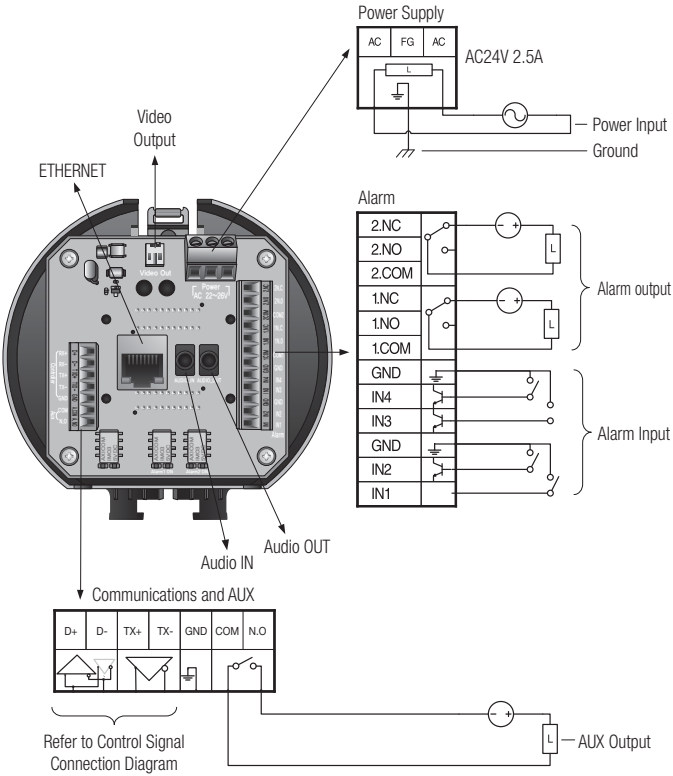
Inner View of Installation Base



Item	Description
1 Communications Setup Switch	Set the transfer rate and protocols.
2 ID Setup Switch	Specify the camera ID.
3 Communications and AUX Ports	Used for RS-485 communications.
4 Audio Input Port	Used to connect the audio input cable. (Mono jack plug is not supported.)
5 Audio Output Port	Used to connect the audio output cable. (Mono jack plug is not supported.)
6 Network Connections	Used to connect a PoE+ or LAN cable.
7 Video Out Port	Analog video output port. (for installation)
8 Power Port	Used to connect the power.
9 Alarm I/O Port	Used to connect the alarm I/O cable.

▪ Camera Wiring Interface Board

For the camera wiring, please refer to the picture below.



Control Signal Connection

- RS-485 Communications

- RS-422 Communications

- The maximum power capacity of the alarm and AUX outputs is 30VDC/2A, 125VAC/0.5A, and 250VAC/0.25A.
- When connecting alarm input and output cables, be sure to connect one cable to each terminal respectively.
- To connect products over the camera's capacity, please use an additional relay device.
- Connecting the power connector and GND incorrectly to the NC/NO and COM ports can cause a short circuit which may lead to fire and damage the camera.

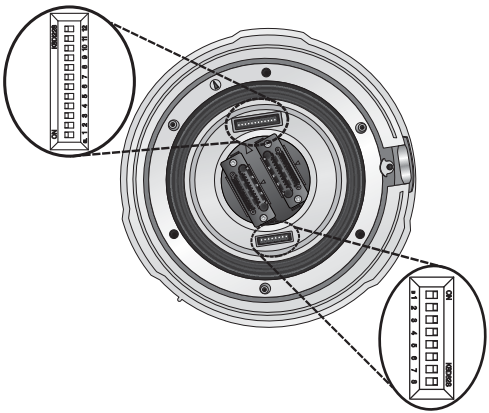
DIP SWITCH SETTING (SNP-3302H/3371H/3371TH)

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.

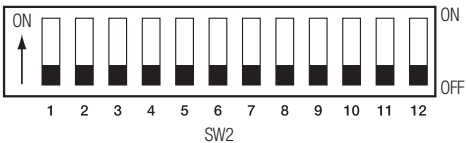
1. Set the switches according to your installation environment. For more detailed setup information, please refer to the chart on the next page.
2. The camera may malfunction if the switches are not fully turned On/Off; please double check the switches before finishing setup.

Communication Protocol
DIP Switch (SW2)



Camera ID DIP Switch (SW1)

Communication Protocol DIP Switch Settings (SW2)



SW2 Pin No.	Purpose
1~4	Protocol Settings
5~6	Baud Rate Settings
7	Transfer Method (RS-485/422) Settings
8	Response Mode Settings
9	RESERVED
10~11	Termination Settings
12	RESERVED

- **Protocol Settings**

Select a communication protocol for the camera.

No.	Protocol	SW2-#1	SW2-#2	SW2-#3	SW2-#4
1	SAMSUNG-T	OFF	OFF	OFF	OFF
2	Pelco-D	OFF	OFF	OFF	ON
3	Pelco-P	OFF	OFF	ON	OFF
4	SAMSUNG-E	OFF	OFF	ON	ON
5	Panasonic	OFF	ON	OFF	OFF
6	Vicon	OFF	ON	OFF	ON
7	Honeywell	OFF	ON	ON	OFF
8	AD	OFF	ON	ON	ON
9	Reserved	ON	OFF	OFF	OFF
10	Reserved	ON	OFF	OFF	ON
11	Reserved	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

- **Baud Rate Settings**

Select the transfer speed of a selected communication protocol.

No.	Baud Rate (BPS)	SW2-#5	SW2-#6
1	2400	ON	ON
2	4800	ON	OFF
3	9600	OFF	OFF
4	19200	OFF	ON

- **Communication Method Settings**

Select a communication method for the camera.

	Function	ON	OFF
SW2-#7	Transfer Mode Switch	RS-422(4Wire)	RS-485(2Wire)

- **Communication Response Settings**

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

	Function	ON	OFF
SW2-#8	Response Mode Switch	Response	No Response

- **Termination Settings**

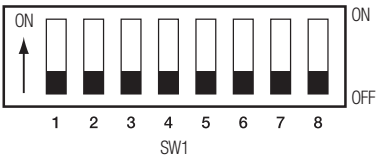
To prevent the attenuation of communication signals between the camera and controller, the items at the end of line must be set up with the termination settings.

Camera Input Position	SW2-#10	SW2-#11
Termination of Longest Path	ON	ON
On the Path	OFF	OFF

- The default value is shaded in each setting table.
- To use a third party controller with this product, please contact our After-Sales Service or Technology Department.

Camera ID DIP Switch Settings (SW1)

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



- **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

ID	SW1-#1	SW1-#2	SW1-#3	SW1-#4	SW1-#5	SW1-#6	SW1-#7	SW1-#8
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
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

ID	SW1-#1	SW1-#2	SW1-#3	SW1-#4	SW1-#5	SW1-#6	SW1-#7	SW1-#8
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
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

ID	SW1-#1	SW1-#2	SW1-#3	SW1-#4	SW1-#5	SW1-#6	SW1-#7	SW1-#8
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
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

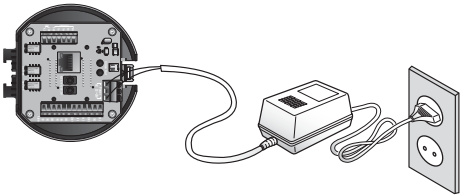
ID	SW1-#1	SW1-#2	SW1-#3	SW1-#4	SW1-#5	SW1-#6	SW1-#7	SW1-#8
146	OFF	ON	OFF	OFF	ON	OFF	OFF	ON
147	ON	ON	OFF	OFF	ON	OFF	OFF	ON
148	OFF	OFF	ON	OFF	ON	OFF	OFF	ON
149	ON	OFF	ON	OFF	ON	OFF	OFF	ON
150	OFF	ON	ON	OFF	ON	OFF	OFF	ON
151	ON	ON	ON	OFF	ON	OFF	OFF	ON
152	OFF	OFF	OFF	ON	ON	OFF	OFF	ON
153	ON	OFF	OFF	ON	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
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

ID	SW1-#1	SW1-#2	SW1-#3	SW1-#4	SW1-#5	SW1-#6	SW1-#7	SW1-#8
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
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

ID	SW1-#1	SW1-#2	SW1-#3	SW1-#4	SW1-#5	SW1-#6	SW1-#7	SW1-#8
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

Preparing Adapter and Cable

- Connect the camera to the power adaptor. Then, plug the power cord of the adaptor to the wall outlet.



Check out the rated voltage and current before making connections.

Rated Power	Allowable Input Voltage	Current Consumption
AC 24V	AC 22V ~ 26V	2.5 A

- If applied with both PoE+ and AC 24V power supplies, the device is powered from the first engaged supply.
  - It is preferred to use single power supply of either one of PoE+ and AC 24V.
- If connected to a switch device that provides PoE+ power, you don't need to apply a power source of AC 24V supply.
- Make sure the PoE device suffices PoE+ (IEEE 802.3at) specifications.
  - If connecting to the PoE device of IEEE 802.3af standard, set the 'Do not use PoE' of the switch device.
    For further information on switch device, refer to the manufacturer's manual.
- The PoE switch model (for each channel) and PoE connection time can differ according to the manufacturer.

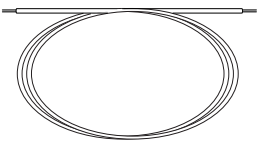
Electrical Resistance of Copper Wire at [20°C (68°F)]

Copper Wire Gauge (AWG)	#24(0.22mm²)	#22(0.33mm²)	#20(0.52mm²)	#18(0.83mm²)
Resistance (Ω/m)	0.078	0.050	0.030	0.018
Drop Voltage (V/m)	0.028	0.018	0.011	0.006
Recommended Distance (m)	Less than 20	Less than 30	Less than 30	Less than 30

- As shown in the table above, you may encounter a voltage-sag depending on the wire length.
  If you use an excessively long wire for camera connection, the camera may not work properly.
  - Camera Operating Voltage: AC 24V±10%
  - Voltage drop measurements on the chart above may vary depending on the type and manufacture of the copper cable.

Communications Cable

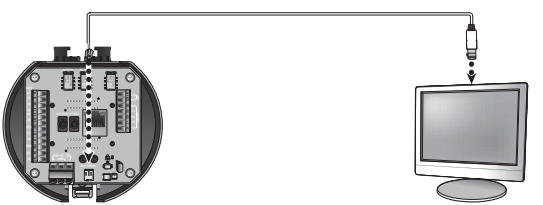
For the camera to communicate with the controller, a RS-485/422 communications line is required.



- A 30m or shorter length is recommended for the connection.
- The communication cable is not enclosed with the camera.

Connecting the installation monitor

Connect the cable to the camera's rear video output terminal and the installation monitor's video input terminal.



- The wiring varies depending on your monitor type and peripheral devices; please refer to the user manual for each device.
- Please make sure the monitor and camera are turned off when connecting them.

- This product is a network camera that transfers video over a network; the video output terminal is used to set the imaging range of the camera at installation.
- Using the terminal for monitoring purposes may cause problems such as degradation in video quality.

Preparing & Installing Camera Bracket

For installation guidelines for brackets and housings, refer to the installation manual that is enclosed with the bracket or housing.

▪ Available Bracket Models

Model	Item	SNP-3302/3371	SNP-3302H/3371H/ 3371TH
SHP-3700H	Outdoor Housing	Yes	-
SHP-3700F	Ceiling-mount Housing		
SBP-300HM1	Hanging Mount		
SBP-300WM1	Wall Mount		Yes
SBP-300WM			
SBP-300CM	Ceiling Mount		
SBP-300LM	Parapet Mount		
SBP-300KM	Corner Mount		
SBP-300PM	Pole Mount		

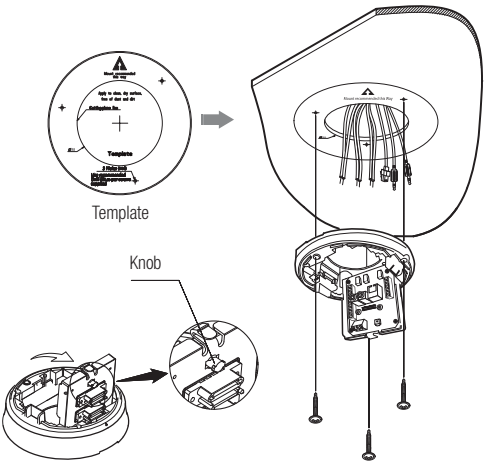
- See "**Optional Accessories for Installation**" for the appearance of each bracket (unbundled). (page 39)

Installing by surface attachment

- SNP-3302H/3371H/3371TH cannot be installed on the surface of a wall or ceiling.

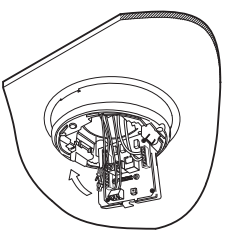
▪ Attaching Template & Installing installation base

1. Attach the provided template on the ceiling. Based on the template, drill a 88mm hole in the ceiling and arrange the wires through the hole.
2. Install installation base as shown.
3. Before installing the exposed bracket, open the hinged door at the bottom of the bracket as shown in the picture. Hold the knob on the hinged door to open it.



▪ Connect Terminal Wires

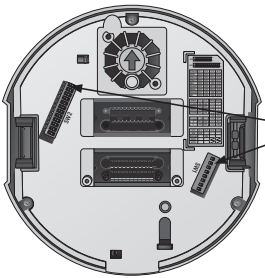
1. Connect the cables to the terminal block on the hinged door. Refer to "**Camera Wiring Interface Board**". (page 17)
2. Once the wiring is complete, close the hinged door.



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

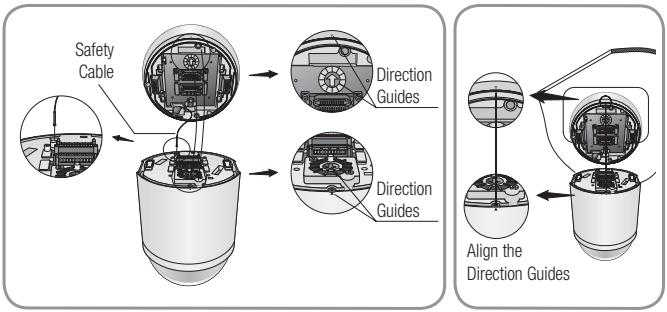
■ Configuring Camera DIP Switches

DIP switches for communication and ID protocols are located on the bottom of the camera.



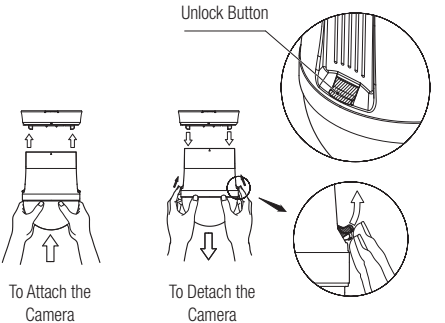
■ Connecting Camera Safety Cable and Attaching Camera

1. First, as shown in the left hand picture, pull out the safety cable from the base and then hook it to the mount. The safety cable is coiled inside the base.
   - To attach the camera to the mount, refer to the alignment guide marks as shown in the picture.
2. Carefully attach the camera to the mount following the alignment guide marks as shown in the picture.



- Make sure to hook the camera's safety cable to the mount before proceeding. Otherwise you may be exposed to serious injury caused by the camera falling.

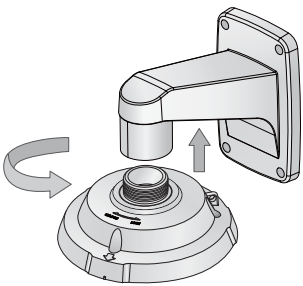
- To attach or detach the camera, refer to the picture.
  - Attaching the Camera : Hold up the camera and push it to the mount as shown in the picture.
    Push the camera until you hear a “click”.
  - Detaching the Camera : To detach the camera, pull the camera downward while pushing up the unlock buttons on the camera.



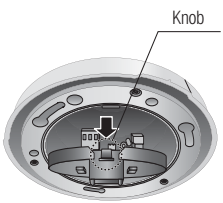
Installing by wall mount

▪ Fix the installation base with the bracket

1. Fix the base with the bracket by turning it clockwise.

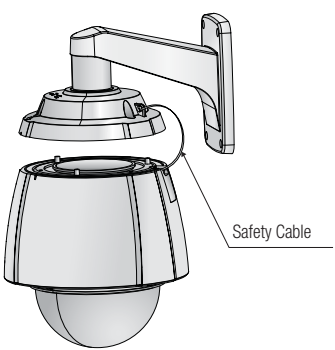


2. As shown in the picture below, gently press and lift up the handle of the hinged door on the bottom of the installation base. Please refer to the "**Camera Wiring Interface Board**" on page 17, connect the wires.

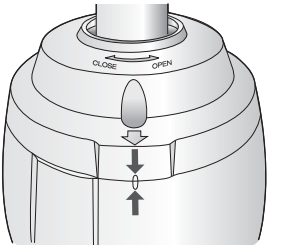


▪ Do not connect the camera to a power outlet until the installation is complete. Supplying power while the installation is in progress may cause fire or damage the product.

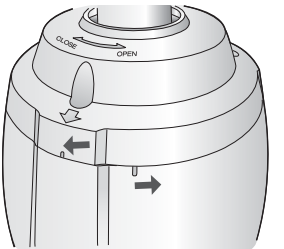
3. Connect the camera safety wire to the installation base.



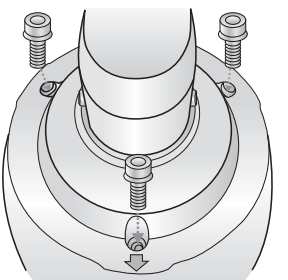
4. Assemble Camera and Installation Base
   Assemble the installation base and camera by matching the installation direction guides.



5. Attach Camera
   Turn the camera frame counterclockwise until the protrusions on the camera frame and installation base become matched perfectly.



6. Secure Camera and Installation Base
   As shown in the picture below, secure the installation base and camera using 3 hexagon screws.

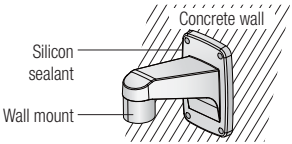


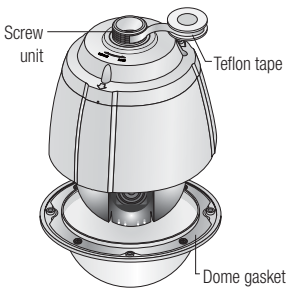
Notes for Waterproofing

This product is an indoor unit. If it is installed outdoors, use the outdoor housing to make it waterproof.

- **Installing the unit on the wall by combining the outdoor housing and wall mount**

1. Install the wall mount on the vertical wall. If the mount is installed on an inclined wall, moisture can penetrate inside the outdoor housing through the external cable.
2. Wrap the screw part of the housing with a sufficient amount of Teflon tape for assembly.
3. When separating the dome cover and fastening it to the housing frame, make sure that the gasket is not loosened to separate from the dome cover.
4. Install the wall mount adapter for waterproofing, and apply the silicon sealant between and around the wall and wall mount for sealing.



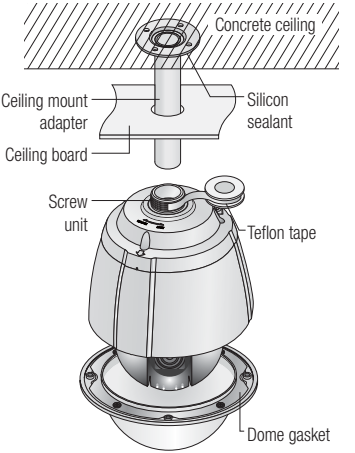


- Take particular caution to ensure that there is proper sealing if the installed side is not flat.

- **Installing on the wall by combining the outdoor housing and ceiling mount adapter**

1. Wrap the screw part of the housing with a sufficient amount of Teflon tape for assembly.
2. When separating the dome cover and fastening it to the housing frame, make sure that the gasket is not loosened to separate from the dome cover.
3. Install the ceiling mount adapter for waterproofing, and apply the silicon sealant between and around the wall and ceiling mount for sealing.

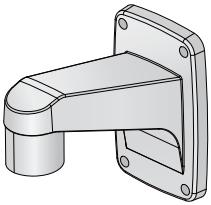
- Take particular caution to ensure that there is proper sealing if the installed side is not flat.



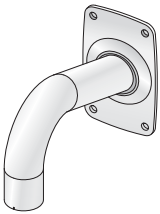
Optional Accessories for Installation

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

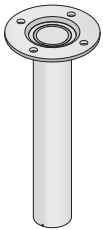
1. If installing the camera on the wall
   - Wall mount (SBP-300WM1)



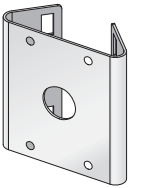
   - Wall mount (SBP-300WM)



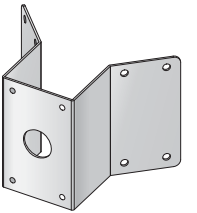
2. If installing the camera on the ceiling
   - Ceiling Mount (SBP-300CM)



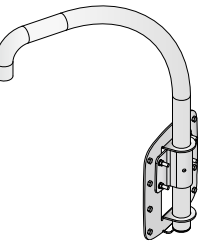
3. If installing the wall mount (SBP-300WM/SBP-300WM1) on an at least 80mm-long cylinder
   - Pole Mount (SBP-300PM)



4. If installing the wall mount (SBP-300WM/SBP-300WM1) on a corner of the wall
   - Corner Mount (SBP-300KM)

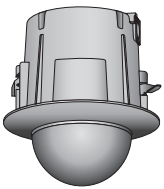


5. If installing on a building rooftop
   - Parapet Mount (SBP-300LM)



6. If installing SNP-3302/3371 outdoors
   - Outdoor Housing (SHP-3700H)

7. If installing SNP-3302/3371 on a ceiling as built-in component
   - Flush-Mount Indoor Housing for PTZ Dome Camera (SHP-3700F)



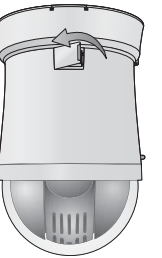
8. If installing SNP-3302/3371 in the wall mount or ceiling mount
   - Hanging Mount (SBP-300HM1)

INSERTING/REMOVING A SD MEMORY CARD

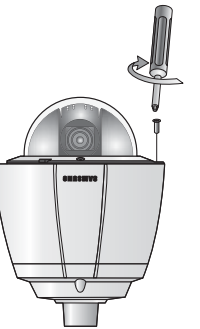
- Disconnect the power cable from the camera before inserting the SD memory card.

Inserting a SD Memory Card

1. Open the cover in the rear of the camera.
   (SNP-3302/3371)

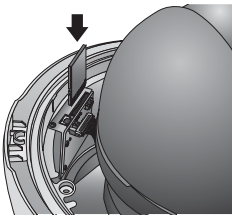


Using the screw driver, loosen 4 screws by turning them counterclockwise and separate the dome cover.
(SNP-3302H/3371H/3371TH)



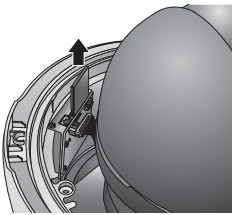
2. Push the SD memory card in the direction of the arrow shown in the diagram.

- 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 <**Record**> to <**Off**> from <**SD record**> and press [**Apply (** ✔ **)**]. (page 100)
- If you turn off the camera or remove the SD memory card that contains data from the product, the data may be lost or damaged.

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

Memory cards of 4GB ~ 32GB is recommended for using with this camera.

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

It is recommended to use memory cards of at least class 6 speed.

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.

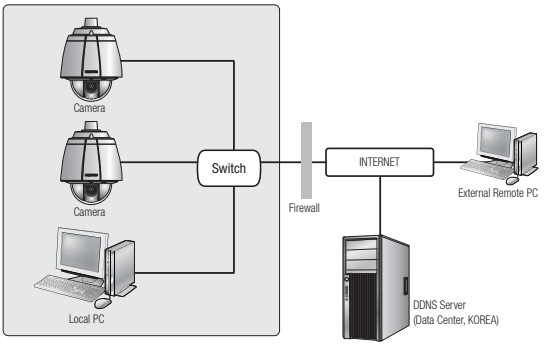
network connection and setup

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

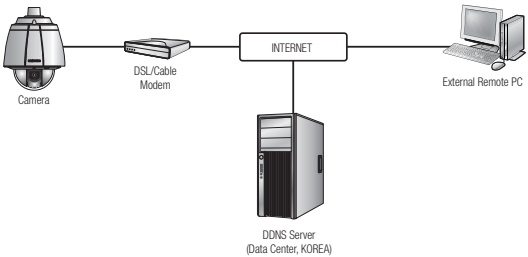
1. Launch an Internet browser on the local PC.
2. Enter the IP address of the camera in the address bar of the browser.



<Local Network>

- A remote PC in an external Internet out of the LAN network may not be able to connect to the camera installed in the intranet if the port-forwarding is not properly set or a firewall is set. In this case, to resolve the problem, contact your network administrator.
- By factory default, the IP address will be assigned from the DHCP server automatically. If there is no DHCP server available, the IP address will be set to 192.168.1.100. To change the IP address, use the IP Installer. For further details on IP Installer use, refer to "**Static IP Setup**". (Page 49)

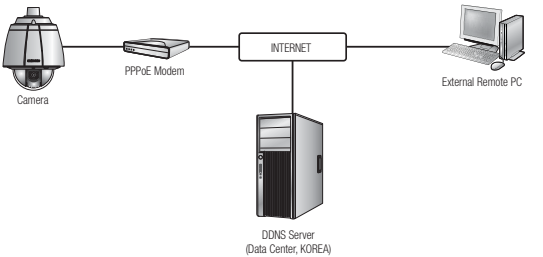
CONNECTING THE CAMERA DIRECTLY TO A DHCP BASED DSL/CABLE MODEM



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 93)
- For configuring the DDNS settings, refer to "**DDNS**". (page 92)
- For setting the network type, refer to "**Interface**". (page 90)

CONNECTING THE CAMERA DIRECTLY TO A PPPoE MODEM

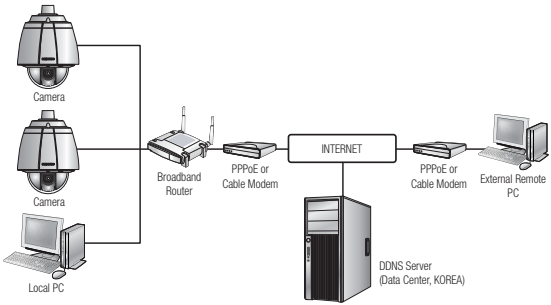


1. Use the cross LAN cable to connect the network cable directly to your PC.
2. Run the IP Installer and change the IP address of the camera so that you can use the web browser on your desktop to connect to the Internet.
3. Use the Internet browser to connect to the web viewer.
4. Move to [**Setup**]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

- For registering the DDNS settings, refer to "**Registering with DDNS**". (page 93)
- For configuring the DDNS settings, refer to "**DDNS**". (page 92)
- For setting the network type, refer to "**Interface**". (page 90)

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**>:

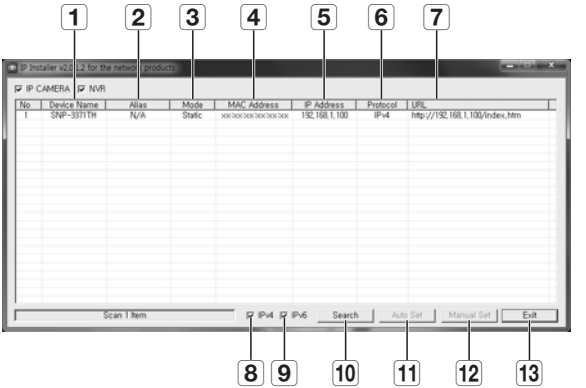
  ex1) If the address (LAN IP) of the Broadband Router is 192.168.1.1
  IP address : 192.168.1.100
  Subnet Mask : 255.255.255.0
  Default Gateway : 192.168.1.1

  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 54)

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

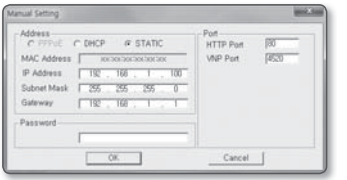
Manual Network Setup

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.

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 [**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.

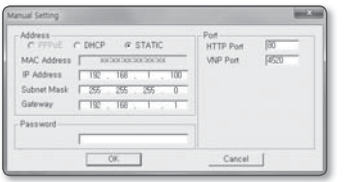


- You can configure the static IP settings only if the DHCP checkbox is unchecked.

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.
   The default password is "**4321**".

- The default password is vulnerable to security threats. You should change it.
- If you want to change the password, refer to "**Administrator password change**" of the user setup. (page 113)

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 54)

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 Subnet Mask Gateway	192.168.1.100 255.255.255.0 192.168.1.1	192.168.1.101 255.255.255.0 192.168.1.1
Port related settings	HTTP Port VNP Port	8080 4520	8081 4521

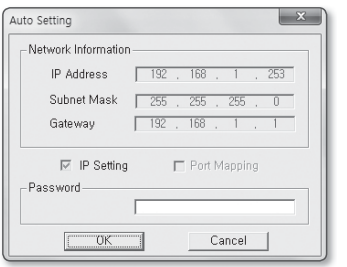
- If the <**HTTP Port**> is set other than 80, you must provide the <**Port**> number in the address bar of the Internet browser before you can access the camera.
  ex) http://IP address : HTTP Port
  http://192.168.1.100:8080

Auto Network Setup

Run <**IP Installer_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.
   The default password is "**4321**".

- The default password is vulnerable to security threats. You should change it.
- If you want to change the password, refer to "**Administrator password change**" of the user setup. (page 113)

4. Click [**OK**].
   Auto network setup will be completed.

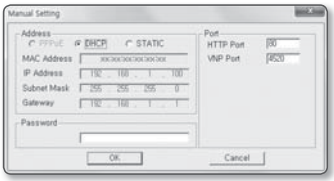
DYNAMIC IP SETUP

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**>.



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.

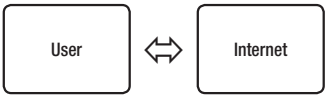
Setting up Port Range Forward for several network cameras

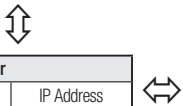
When several network cameras are connected to one Broadband Router device, you should forward the TCP 943 port of the router to the TCP 943 port of a connected camera.

- 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.

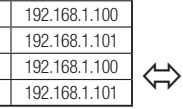
When Camera1 and Camera2 are connected to a router :





Broadband Router			
Start	End	Protocol	IP Address
943	943	TCP	192.168.1.100
3000	3000	TCP/UDP	192.168.1.100
3001	3001	TCP/UDP	192.168.1.101
4520	4520	TCP/UDP	192.168.1.100
4521	4521	TCP/UDP	192.168.1.101
8080	8080	TCP/UDP	192.168.1.100
8081	8081	TCP/UDP	192.168.1.101

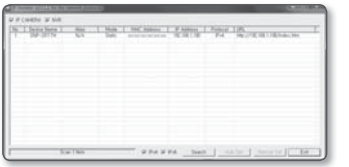
Camera1 (192.168.1.100)	
Web Server Port	8080
Device port	4520
RTSP port	3000
Policy server port	943



Camera2 (192.168.1.101)	
Web Server Port	8081
Device port	4521
RTSP port	3001
Policy server port	943

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

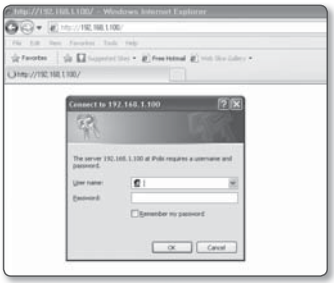
Since using the IP Installer on a remote computer that is not in the Broadband Router's network cluster is not allowed, users can access cameras within a Broadband Router's network by using the camera's DDNS URL.

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 93)

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

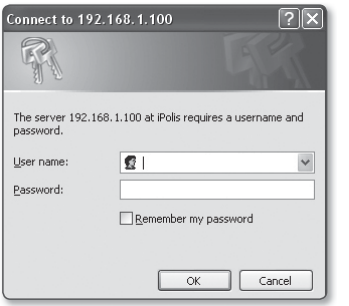
If the camera is connected directly to the DHCP cable modem, DSL modem, or PPPoE modem, the IP address of your network will be changed each time you try to connect to the ISP (Internet Service Provider) server.
If this is the case, you will not be informed of the IP address changed by DDNS.

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.

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 "**4321**" in the <**Password**> input box.
   If the password is changed, enter the changed password instead.
3. Click [**OK**].
   If you have logged in successfully, you will the Live Viewer screen.



- The default user ID is "**admin**", and the default password is "**4321**".
- For security purposes, ensure that you change the password in <**System**> - <**User**>.
- The default password is vulnerable to security threats. You should change it.
- If you check the "**Remember my password**" option when your input is done, in future you will be logged in automatically without being prompted to enter the login information.

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

INSTALLING ACTIVEX

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

1. When accessing the start screen of the monitoring page, click the yellow warning message in the top of the page.

2. Click <**Install This Add-on for All users on This Computer...**>.

3. The security warning popup appears, click [**Install**].
4. When the required ActiveX is installed properly after your access to the camera, the Live screen should appear.

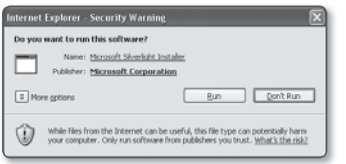
INSTALLING SILVERLIGHT RUNTIME

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

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

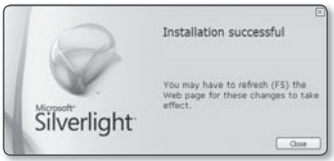
2. When the file download dialog pops up, click <**Run**>.

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



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

5. When done, click <**Close**>.



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

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

USING THE LIVE SCREEN

Item	Description
1 Monitoring	Move to the monitoring screen.
2 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.
5 Auto Focus	Fit the focus automatically.
6 AUX	Turn on or off the AUX device.
7 Alarm Output	Activate the Alarm Out port.

Item	Description
8 Audio/Microphone Control	Activate the audio and microphone and control the audio's volume.
9 Hide the alarm indicator	Hides the alarm indicator near the border of the viewer screen. ■ In the following cases, the alarm message will pop up on the border of the viewer. - If an event (alarm, motion detection, video analysis) occurs - If the camera is turned off - If the network is disconnected
10 PTZ	Control the pan/tilt/zoom operations of the camera.
11 Digital PTZ	Use the mouse wheel to control the digital zooming.
12 Screen Optimization, Full Screen	Adjust the screen to the optimal size, and display the Full Screen icon on the Live screen.
13 Capture	The current image is saved as a .jpg or .bmp image file.
14 Video Format	You can select a profile type in <**Video profile**> under the <**Audio & Video**> setup menu. If the "Invalid codec" message is displayed, select a profile type from the profile list again.

- If the temperature drops below the operational range, video signal may not be produced. In such cases, please wait for the video.
- Web pages related to playback and setting menus are accessible only by the admin. For other user accounts, the buttons will be deactivated.

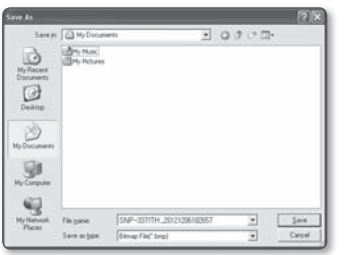
To enable the Area Zoom mode

From the viewer screen, right-click to display the context menu below:
Menu items and descriptions

- AreaZoom : Zoom the area selected with the mouse.
- Goto 1X : Change the current zoom factor to x1.
- Prev : Return to the previous area and settings.
- Next : If navigated with Prev, it is switched to area and setting before navigation.
- Exit Areazoom : Exit the Area Zoom mode.
- Goto Preset : Move to the preset position.

To capture the snapshot

1. Click [ ] 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**".

To toggle the audio sound

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

To toggle the microphone sound

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

- "**Any available audio capture device cannot be found!**" message appears if there is no Microphone.

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

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

To fit the full screen

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

- For the ActiveX viewer, you can just click an appropriate button on the page to perform the operation as the audio I/O buttons and the Full Screen button are not displayed in the top of the screen.

To control the PTZ

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

- For further details on PTZ use, refer to "**PTZ setup**". (page 75)

PLAYING THE RECORDED VIDEO

- Before you can play the video, you must configure the record settings. For details on record settings, refer to "**SD record**". (page 100)

To play the content after searching by event

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.

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 [**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 (** **)**].
   To return to the search screen, click [**Exit (** **)**].

To play after searching by time

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. ■ Dates for which there is video in the SD memory card are displayed within the boxes on the calendar.
3 Full screen	The current image is converted to cover the maximum size of the monitor.
4 Screen optimization	The camera image is converted to fit the Web browser window.
5 Capture	The current image is saved as a .jpg or .bmp image file.
6 Audio On/Off	This sets the option to use the audio of the recorded video. ■ The audio of the video is activated when the button is enabled.

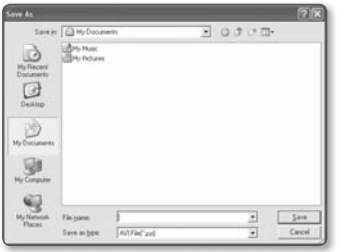
Item	Description
7 Video information	Time data of the replayed video is displayed on the screen.
8 Backup	Time zone is set to back up the video saved in the SD memory card. ■ Can be set as up to 5 minutes.

■ The time search is not available with other web browsers than Internet Explorer.

1. Click [**Search by Time (**)].
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.
   - 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.
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. Click [ ] on the scene to back up.
   Save as window appears.
2. Confirm the save path and click [**Save**] button.
   The selected data will be backed up to the specified path in .avi format.



To play the backup video

You can play the video stored (for the backup purpose) with Windows Media Player or VLC Media Player.

SETUP

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

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

AUDIO & VIDEO SETUP

Video profile

1. From the Setup menu, select the <**Audio & Video (**)> tab.
2. Click <**Video profile**>.
3. Select a <**Video profile**> number.
4. Click the input box of each item and enter / select a desired value.
   - The context menu may differ depending on the selected codec type.
   - Default profile : 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.
5. When done, click [**Apply (**)].

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

To add a video profile

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

1. Select a profile number.
2. Provide the name and select a codec.
3. Specify the conditions under which the codec will be applied.
4. Specify the details of the selected codec including resolution and frame rate.
   - Resolution : Set the video size of the MPEG-4, H.264, and MJPEG files.
   - Framerate : Specify the frame rate.
   - Compression : Specify the compression rate of the video.
   - Bitrate control : You can select one from constant bit rate and variable bit rate for compression. Constant bit rate (CBR) varies the video quality and fixes network transfer bit rate, while variable bit rate emphasizes the quality by varying network transfer bit rate.
   - Maximum bitrate : Specify the maximum bit rate of the video.

- As the bit rate can be adjusted limitedly according to the resolution, frame rate and screen complexity, the actual bit rate can be greater than the maximum bit rate. So you must consider the use conditions when setting the value.
- 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 : Specify the bit rate at which you will transfer the video.
   - Encoding priority : You can set the video transfer method to Framerate or Compression.
   - GOP size : Select a GOP size between 1 and 150.
   - Profile : You can select the H.264 profiling method.
   - Entropy coding : Reduce the possible compression loss due to encoding.
   - Multicast(VNP) : Specify the use of the VNP protocol.
     - IPv4 : Enter an IPv4 address with which you can connect to the IPv4 network.
     - Port : Specify the video communication port.
     - TTL : Set the TTL for the VNP packet.

- Multicast(RTP) : Specify the use of the RTP protocol.
  - IPv4 : Enter an IPv4 address with which you can connect to the IPv4 network.
  - Port : Specify the video communication port.
  - TTL : You can set the TTL for the RTP packet.

■ 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 GOP size?

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

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

You can set between 1 and 150 for the MPEG-4 and H.264 CODEC.

Video setup

1. From the Setup menu, select the <**Audio & Video (** **)**> tab.
2. Click <**Video setup**>.
3. Select a <**Video source**> mode.
   - Flip/Mirror mode : Displays the video from the camera upside down or reversely.
4. Set the <**Video output**>.
   - If you select <**Off**>, the video signal will not be output via the VIDEO OUT port.
5. Specify the privacy zone.
6. When done, click [**Apply (** **)**].

To set the privacy zone

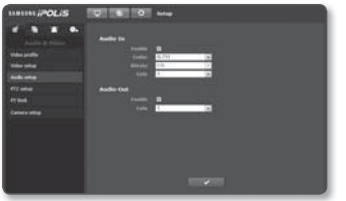
You can specify a certain area of the camera video to be protected for your privacy.

1. Set it to <**On**>.
2. When done, click [**Apply (** ✓ **)**].
3. Place the cursor at a point in the video and drag it to whatever you need.
4. Provide a name and press [**OK**].
5. If you want to delete an area in the list, select one and click [**Delete (** Delete **)**].

- If the privacy zone is smaller than the minimum size, the zone is not marked.

Audio setup

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



1. From the Setup menu, select the <**Audio & Video (** **)**> tab.
2. Click <**Audio setup**>.
3. Set the audio input value.
   - Enable : This sets the option to use the audio input.
   - Codec : Sets the codec to be used.
     - 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 : Sets the input audio gain.
4. Set the audio output level.
   - Enable : Sets whether to use audio output.
   - Gain : Sets the output audio gain.
5. When done, click [**Apply (** ✓ **)**].

PTZ setup

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

1. From the Setup menu, select the <**Audio & Video ( )**> tab.
2. Click <**PTZ setup**>.
3. Click [**Direction Adjustment ( )**].
   - [**Change direction to ( )/( )/( )/( )**] : Change the direction of camera lens.
   - [**Moving speed control (6)**] : 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 (4)**] : The bigger the number is, the faster the zoom speed becomes.
5. Set the preset.
6. Set the start position (Home position) on the screen.

To add a preset

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

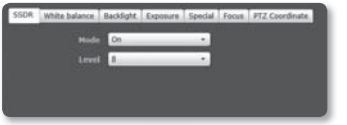
To delete a preset

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.
   You can change the camera settings according to the selected preset.
   For more information about the preset editing, refer to "**Camera Setup**". (page 81)
   - <**After action**> in Special determines whether the preset will be automatically run.
3. When done, click [**Apply (** ✓ **)**].
4. Press [↶] to return to the PTZ setup screen.

- After saving the preset, make sure to close preset editing mode by clicking [↶] button or "Back" button of the browser. If you change the settings of other camera while the window is still open, this may cause an error.

To set the home position

1. Move to a desired start screen point and press [ ].
   The point will be set to the home position.
2. Click [ ] in the home position. You will move to the predetermined home position.

To configure the swing settings

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

1. Set <**Mode**> in <**Sequence setup**> to <**Swing**>.
   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.
4. Set the moving speed and dwell time.
5. Press the [ ] button.
   The first preset, second preset, speed and dwell time will be saved in set mode.
6. Press the [ ] button.
   It performs the swing operation.
7. Press the [ ] button.
   The running swing will be stop.

To set a group

The group function enables you to group various presets before calling them in sequence. Each group can contain up to 128 presets.

1. Set <**Mode**> in <**Sequence setup**> to <**Group**>.
   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 [+] button.
   Your settings will be entered in the right list.
4. Press the [🗑] button.
   Set data on the right list will be saved.
5. Press the [➡] button.
   It performs the group operation.
6. Press the [■] button.
   The running group will be stop.
7. Press the [🗑] button.
   Selected group data will be deleted.

To configure the tour settings

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

1. Set <**Mode**> in <**Sequence setup**> to <**Tour**>.
   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 [+] button.
   Your settings will be entered in the right list.
4. Press the [ ] button.
   Set data on the right list will be saved.
5. Press the [→] button.
   It performs the tour operation.
6. Press the [■] button.
   The running tour will be stop.
7. Press the [🗑] 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. Set <**Mode**> in <**Sequence setup**> to <**Trace & Auto Run**>.
   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 [ ] button.
   Selected tracing number will be saved.
4. Move the navigation path of saving using the pan/tilt/zoom.
5. Press the [■] button.
   Saving is terminated.
6. Press the [→] 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. Set <**Mode**> in <**Sequence setup**> to <**Trace & Auto Run**>.
   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.
     - Auto run of preset can be set in "**Special-After action**" of preset edit. (page 76)
   - 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.

PT limit

You can specify restrictions on the pan or tilt function.

1. From the Setup menu, select the <**Audio & Video ( )**> tab.
2. Click <**PT limit**>.
3. Decide if you want to limit the PT 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 : PT 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.

Camera setup

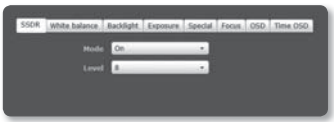
You can change the camera settings according to the environment where the camera is located.

1. From the Setup menu, select the <**Audio & Video (** **)**> tab.
2. Click <**Camera setup**>.
3. Configure the settings as necessary of : SSDR, White balance, Backlight, Exposure, Special, Focus, OSD, Time OSD
4. When done, click [**Apply (** **)**].
   - If a certain time (timeout: 240s) is elapsed with your not pressing the [**Apply** ( )] button after changing the settings, your changes will not be applied.

SSDR (Samsung Super Dynamic Range) Setup

In a scene where the difference between bright and dark is severe, you can increase the brightness of the dark area alone to regulate the overall brightness.

1. Select <**SSDR**>.
2. Set <**Mode**> to <**On**>.
3. Configure the <**Level**> setting as necessary.
   - Level : Adjust the level of the dynamic range.



White balance Setup

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

1. Select <**White balance**>.
2. Select <**Mode**>.
   - ATW : Corrects the colors of the camera video automatically.
   - Manual : You can adjust the red and blue gains of the camera video manually.
   - AWC : Corrects the colors of the camera video to be optimized to the current lighting condition and screen mode.
     To obtain the optimal condition for the current lighting, put the focus of the camera to a white paper and press the [**AWC Set**] button. If the lighting environment is changed, you should readjust the settings accordingly.
   - Outdoor : Automatically corrects the video colors of the camera to be optimized to the outdoor environment.
   - Indoor : Automatically corrects the video colors of the camera to be optimized to the indoor environment.

- In AWC mode, click the [**AWC Set**] button if you want to keep the white balance level of the current image.

- The white balancing may not work properly in the following conditions:
  If this is the case, switch to AWC mode.
  - 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 : Specify the WDR sensitivity level.
   - WDR Level : Specify the WDR related levels.

- 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.

- 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.
- 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 push af**> or <**Manual**>.
- SSDR and 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.
   - BLC level : You can change the level to adjust the brightness of the monitoring area.
   - BLC/HLC Box Mode : Specify the mode of BLC/HLC Box.
   - BLC/HLC Box Adjustment : Use the arrow buttons to adjust the size and position of the BLC/HLC Box.
   - BLC/HLC Box Step : Specify the pixel unit for movement. You can use the arrow buttons of <**BLC/HLC Box Adjustment**> to add or reduce the pixels.

HLC (Highlight Compensation) Setup

If a strong light like a streetlamp or vehicle headlight points toward the camera, the area can be set to be cut off to prevent a saturated area on the monitor.

1. Select <**Backlight**>.
2. Set <**Mode**> to <**HLC**>.
3. Select each item and set it properly.
   - HLC Mode : Set the HLC mode.
   - HLC level : This adjusts the brightness level to cut off the highlighted area.
   - Mask tone : This adjusts the brightness of the cut-off area.
     - As the number increases, the color is set to change from dark to white.
   - Mask Color : Specify the masking color.
   - BLC/HLC Box Mode : Specify the mode of BLC/HLC Box.
   - BLC/HLC Box Adjustment : Use the arrow buttons to adjust the size and position of the BLC/HLC Box.
   - BLC/HLC Box Step : Specify the pixel unit for movement. You can use the arrow buttons of <**BLC/HLC Box Adjustment**> to add or reduce the pixels.

- At night operation, this function will be activated only if the incoming highlight exceeds a certain area in a low contrast environment.
- At night operation, HLC will not function in too a bright or too a dark scene.

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.
   - SSNR3 : Specify the use of noise reduction.
     - SSNR3 mode cannot be used if the AGC mode is set to <**Off**> or <**Manual**>.
   - 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.
     - If the gain is not used, Sens-up will be disabled.
   - 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 : Iris F-No is set manually.
   - Iris F-No : If the iris mode is set to Manual, specify the F number of the iris.
     - As F-No increases, the iris decreases, so the screen is darkened, and as F-No decreases, the screen is brightened.

- AGC mode : Select AGC Control mode.
  Adjust the gain value of the video (that, in particular, was recorded at a low contrast scene and had a lower brightness level than normal) to control the video brightness.
  - SSNR, Sens-up and <**Auto**> mode in daytime/nighttime mode setting cannot be used if the AGC mode is set to <**Off**>.
  - Sens-up and <**Auto**> mode in daytime/nighttime mode setting cannot be used if the AGC mode is set to <**Manual**>.
- AGC Val : If the AGC mode is set to Manual, specify one between 5dB and 41dB.

Special Setup

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

- DIS : Automatically compensates for the flicker on the screen.
  - DIS cannot be used if VA/MD is used.
  - Digital zoom cannot be used if DIS is used.
- 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**>.
- Dwell time : This is the time while each applicable lighting condition is kept in order to enable the switch between day and night modes.
- Duration : Specify the time interval of lighting at which the sequence operation is triggered.
- Sharpness mode : Adjust the overall sharpness of the image.
  If selecting <**On**>, you can adjust the sharpness of the image.
- Sharpness level : The higher the level is, the sharper and clearer the outline of the image becomes.
- Color level : Adjust the color level of the image.
- VPS : Virtual Progressive Scan provides a clearer view of objects, which is used for high-quality video.
  - Off : Switch the video recording system to 2:1 Interlace Scan.
  - On : Switch the video recording system to Virtual Progressive Scan.

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 push af : Auto Focus will be performed once after the zooming operation.
   - Digital zoom : Specify the use of digital zoom.
     - Digital zoom cannot be used if DIS is used.
   - Digital zoom limit : Specify the limit of the digital zoom.
   - Zoom tracking : Specify the focus sync mode with the panning/tilting/zooming operation.
     - Off : Only the zoom lens will work.
     - Auto-Track : It will control (detect and correct) the zooming operation to keep fitting the focus.
     - Tracking : The zooming operation will be guided by the focus track.
   - Zoom speed : Adjust the zoom tracking speed.
   - Init. lens : Reset the lens to prevent the step-out in zoom mode.
   - Duration : Specify the frequency of resetting the lens.
     - You can specify the date of resetting the lens that will perform in auto focus mode. Specify the time between 1 and 7 days, and the resetting will be performed at 24-hour interval starting from the specified date.

OSD Setup

1. Select <**OSD**>.
2. Select each item and set it properly.
   - Camera title : Specify whether or not to display the camera title on the screen.
     - You can enter up to 15 characters for the title.
   - Camera title position X, Y : Specify the coordinates where the camera title is displayed on the screen.
   - PTZ position display : Specify whether or not to display the PTZ OSD menu on the screen.
   - Camera ID : Specify whether or not to display the camera ID number on the screen.

Time OSD Setup

1. Select <**Time OSD**>.
2. Select each item and set it properly.
   - Time display : Specify the use of time display on the screen.
   - Time position display X, Y : Specify the position of time display on the screen.
   - Date format : Specify the date format that will be displayed on the screen.
   - Display weekday : Specify the date display on the screen.

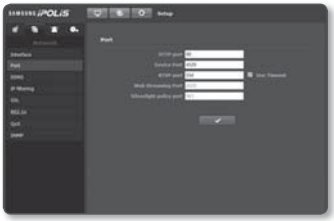
NETWORK SETUP

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, Name 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**>.
   - IPv6 use : Specify the use of IPv6.
   - Default IPv6 Address : Obtains the IPv6 address to access the IPv6 network.
     - Use Default Address Only : Use only the default IPv6 address.
     - Obtain IP address via DHCP : Display and use the IPv6 address obtained from the DHCP server.
     - Use the following IP Address : Enter an IP address 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



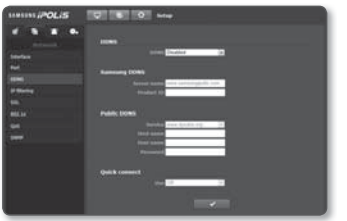
1. From the Setup menu, select the <**Network** ( )> tab.
2. Click <**Port**>.
3. Type in each item in the Port menu as necessary.
   - Neither the port range between 0 and 1023 nor port 3702 is available.
   - HTTP port : HTTP port used to access the camera via the web browser.
     The default is 80(TCP).
     - Setting the HTTP port for Safari and Google Chrome browsers to 65535 is not allowed by security policy.
   - 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** ( )].

DDNS

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



1. From the Setup menu, select the <**Network ( )**> tab.
2. Click <**DDNS**>.
3. Select 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.
     - 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.
   - Quick connect : It sets port forwarding automatically when used with a UPnP (Universal Plug and Play) supporting router.
5. When done, click [**Apply ( )**].

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

Registering with DDNS

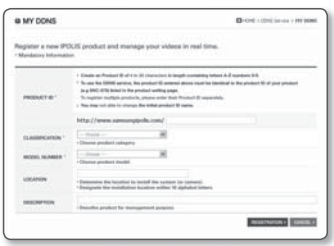
To register your product with the Samsung DDNS

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.



To connect to the Samsung DDNS in camera setup

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

Configuring public DDNS in Camera Settings

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

- To use DDNS service properly, both DDNS setup and the router's port forwarding setup are required.
  For port forwarding setup, refer to "**Port Range Forward (Port Mapping) Setup**". (page 54)

IP filtering

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

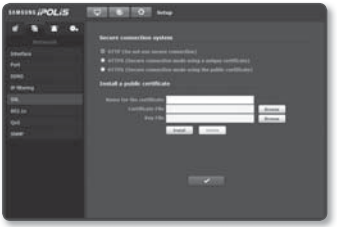
1. From the Setup menu, select the <**Network (** **)**> tab.
2. Click <**IP filtering**>.
3. Select <**Filtering type**>.
   - Deny : If selecting this, access from those IPs that are added to the filtering will be restricted.
   - Allow : If selecting this, access from only those IPs that are added to the filtering will be accepted.
4. 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.

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

SSL

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



1. From the Setup menu, select the <**Network ( )**> tab.
2. Click <**SSL**>.
3. Select a secure connection system.
   - To access the camera using HTTPS mode, you have to type the IP address for the camera in the form of "https://<Camera_IP>".
     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 (Browse)**] button, select the public certificate file and key file to be installed, and then click the [**Install (Install)**] button.

Deleting the certificate

1. Click [**Delete (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 (** 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 (** Install)] button to start installation with a message of "Installed" next to the item.
4. Press the [**Delete (** Delete)] button to remove the certificate.

QoS

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

1. From the Setup menu, select the <**Network (** **)**> tab.
2. Click <**QoS**>.
3. 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.

4. Select an IP address to which you will apply QoS.
   Only the selected IPs can be prioritized.
5. When done, click [**Apply (** **)**].

SNMP

With the SNMP protocols, you can allow the system or network admin to 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.

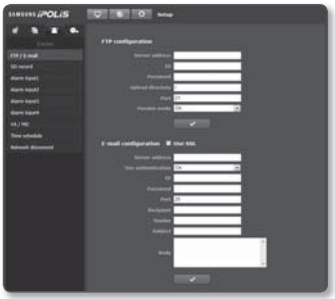
4. When done, click [**Apply (✓)**].

- SNMP v3 is only able to be set when the secure connection mode is HTTPS.
  Refer to "**SSL**". (page 96)

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.

- Port : The default port of the FTP server is 21; however, you can use a different port number according to the FTP server settings.
- Passive mode : Select <**On**> if you need to connect in passive mode due to the firewall or the FTP server settings.

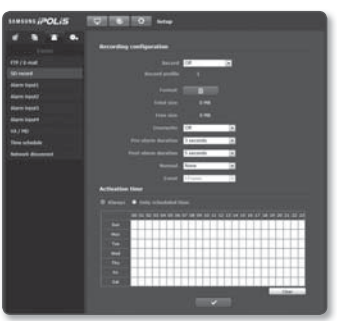
• E-mail configuration
- Use SSL : Specify the use of SSL.
- Server address : Enter the IP address of the email server that you use for the email transfer.
- Use authentication : Select whether to use authorization.
- ID : Enter the user ID for logging into the email server.
- Password : Enter the user 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 massage. Attach the alarm or event images to the email that you are preparing.

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

SD record

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

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

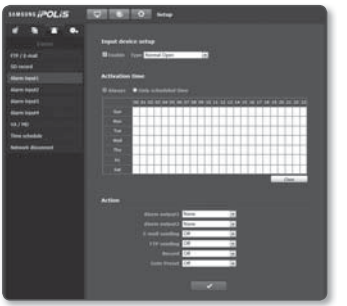


To make recording on the SD memory

1. Check the <**Total size**> and the <**Free size**>.
2. If the SD memory has a sufficient free space, set <**Record**> to <**On**>. Otherwise, check the stored data and if you find them not important, then click <**Format**> to format the SD memory.
   - If your SD memory card writes slowly, only one frame per second will be stored.
   - For a SD memory card with a large capacity, the formatting will be slowed down accordingly.
   - 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 record conditions.
   - Record profile : Display the number of profile to record.
   - Overwrite : If the SD memory is full, this will delete old data and store new data in replacement.
   - Pre-alarm duration : Set the image transfer time before the alarm. You can specify up to 5 seconds before the occurrence of the alarm.
   - Post-alarm duration : Set the image transfer time after the alarm. You can specify up to 120 seconds after the occurrence of the alarm.
   - 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**>.
     - <**Full**> can be set when the <**Normal**> and <**Event**> recording resolution is 800x600 or less.
4. Specify the <**Activation time**>.
   - Always : This is always recorded to the SD memory card.
     - If set to Always, the activation time cannot be changed.
   - Only scheduled time : This is recorded only during the specified time of the specified day of the week.
   - [Clear] : The specified time is released.
5. When done, click [**Apply (✓)**].

Alarm input 1 ~ 4

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



1. From the Setup menu, select the <**Event (**)> tab.
2. Click <**Alarm input**>.
3. Specify an input device.
   - Type
     - Normal Open : It is normally open, but if it is closed, an alarm will be triggered.
     - Normal Close : It is normally closed, but if it is open, an alarm will be triggered.
4. Specify the <**Activation time**>.
   - Always : Always check if an alarm occurs. It activates in operated mode when the alarm occurs.
     - 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] : All settings are released.
5. Specify an operation that will perform if an alarm occurs.
   - Alarm output1 / Alarm output2 : Select whether to set the alarm output if an alarm is incoming, and specify the alarm output time.
   - E-mail sending : Specify the use of email transfer in the alarm input setup.
     - Refer to "**FTP / E-mail**" for more details. (page 99)
   - FTP sending : Specify the use of FTP transfer in the alarm input setup.
     - Refer to "**FTP / E-mail**" for more details. (page 99)
   - Record : This sets the option to record the content in the SD memory card when the alarm is input.
     - Set <**Record**> to <**On**> in <**SD record**>. (page 100)
   - Goto Preset : Moves to the specified preset location when setting the alarm input.
6. When done, click [**Apply (**)].

VA / MD

This can be set to generate an event signal when a motion or intelligent video analysis event is detected.

1. From the Setup menu, select the <**Event (** **)**> tab.
2. Click <**VA / MD**>.

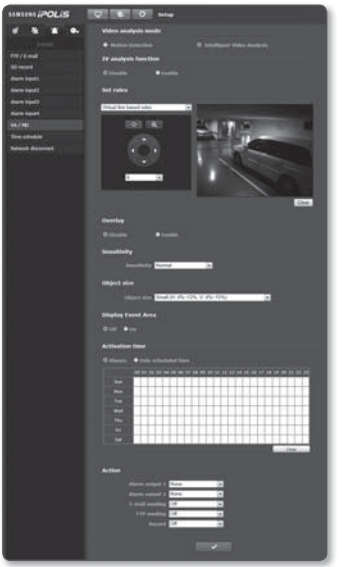
- DIS cannot be used if VA/MD is used.

▪ To use Motion detection (MD)

1. Select a motion detection mode.
2. Set <**Motion Detection function**> to <**Enable**>.
3. Select a sensitivity level of the motion detection.
   Higher the sensitivity is, the smaller motion is detected.
4. Use the drag-and-drop method to specify the detection area on the video.
5. Specify whether or not the event area is displayed.
   - If you select <**On**>, a portion of the selected area considered that an event occurred will be boxed in white.
6. Specify the object size.
7. Specify the activation time and activation condition.
   - For more information about <**Activation time**> and <**Action**>, refer to "**Alarm input**". (page 102)
8. When done, click [**Apply (** **)**].

- If you are controlling the Pan/Tilt/Zoom operation or fitting the focus of the camera, the motion sensor may not work.

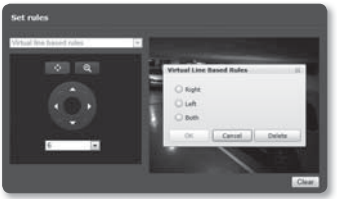
▪ To use Intelligent Video Analysis (VA)



1. Select an Intelligent Video Analysis mode.
2. Set <**IV analysis function**> to <**Enable**>.
3. Specify the event rules.
4. Set whether you want to use the overlay or not.
   - If you set it to <**Enable**>, the event rules will be shown on the screen.
5. Select the detection sensitivity of a moving object.
   - Set to a lower sensitivity in environments that allow clear distinguishing of objects from background.
     Set to a higher sensitivity otherwise, such as in a dark place.
6. Specify the object size.
7. Specify whether or not the event area is displayed.
   - If you select <**On**>, a portion of the selected area considered that an event occurred will be boxed in white.
8. Specify the activation time and activation condition.
   - For more information about <**Activation time**> and <**Action**>, refer to "**Alarm input**". (page 102)
9. When done, click [**Apply (** ✓ **)**].

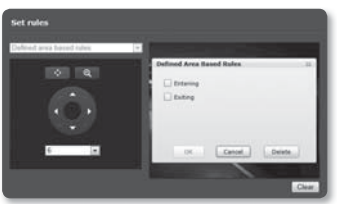
- Motion Detection and Intelligent Video Analysis cannot be used simultaneously.
- Detected size of an object may have difference with the actual size according to its shape.
- If camera is capturing a close object, the video analysis capability may degrade.
- In the following cases, motion detection and intelligent video analysis function may be degraded or cause improper detection.
  - The object color or brightness is similar to the background.
  - Small activities around the border area of the camera's field of view.
  - Multiple movements continue occurring at random due to a scene change, rapid lighting changes or other reasons.
  - A fixed object continues moving in the same position.
  - Motions of less position changing such as approaching to the camera or fading away from the camera.
  - Moving object approaches to the camera too close
  - 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.
- You can select and specify only one event rule from: Motion Detection, Virtual Line, Defined Area and Appearing/Disappearing.

To use the IV analysis function according to the virtual line based rule



1. Set <**IV analysis function**> to <**Enable**>.
2. Set the event rule to <**Virtual line based rules**>.
3. Click a desired point in the video and drag it to the end point. Then, the popup window appears.
4. Select a desired <**Virtual Line Based Rules**>.
   - Right : A movement from left to right in the virtual line will be detected.
   - Left : A movement from right to left in the virtual line will be detected.
   - Both : A movement in any direction in the virtual line will be detected.
5. Click [**OK**].
   To cancel the existing line, Click the [**Clear (** Clear **)**].
6. When done, click [**Apply (** ✔ **)**].

To use the IV analysis function according to the defined area based rule



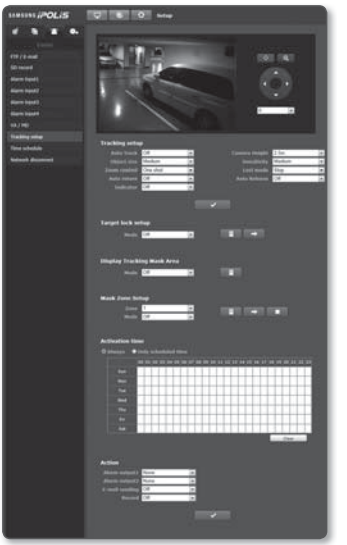
1. Set <**IV analysis function**> to <**Enable**>.
2. Set the event rule to <**Defined area based rules**>.
3. Click a corner point of a desired area in the video to display the popup window.
4. Select a desired <**Defined Area Based Rules**>.
   - Entering : An event where a moving object passes through the defined area and enters inside will be detected.
   - Exiting : An event where a moving object passes through the defined area and exits outside will be detected.
5. Click [**OK**].
   To cancel the existing zone, Click the [**Clear (** Clear **)**].
6. When done, click [**Apply (** ✔ **)**].

To use the IV analysis function according to the whole area based rule

1. Set <**IV analysis function**> to <**Enable**>.
2. Set the event rule to <**Appearing/ Disappearing Detection**>, and drag the video using the mouse.
   - Appearing : An event where an object that has not existed suddenly appears will be detected.
   - Disappearing : An event where an object that has existed suddenly disappears will be detected.
3. Click [**OK**].
   To cancel the existing zone, Click the [**Clear (** Clear **)**].
4. When done, click [**Apply (** ✓ **)**].

Tracking setup (SNP-3371TH)

You can configure the tracking settings.



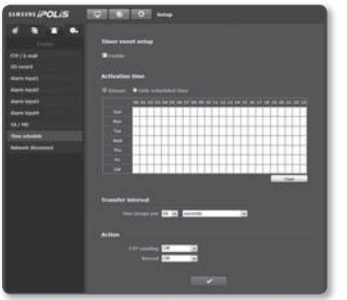
1. From the Setup menu, select the <**Event (** **)**> tab.
2. Click <**Tracking setup**>.
3. Specify the <**Tracking setup**>.
   - Auto Track : Specify the use of auto tracking.
   - Camera Height : Specify the height from the ground to the camera installation position.
   - Object size : Specify the size of the object to track.
   - Sensitivity : Specify the sensitivity level according to the change of the illumination if an object is detected.
   - Zoom control : Select a zooming operation that you want to apply for tracking the object.
   - Lost mode : If Auto Track fails, specify the operation to perform for the rest of time specified in Auto Release.
   - Auto return : This will hold the camera for the rest of the specified time after the Auto Release operation and return it to the default position.
   - Auto Release : Specify the tracking time for a detected object.
   - Indicator : Set the indicators surrounding the object.
4. Specify the <**Target lock setup**>.
   You can specify the target manually and perform the auto tracking.
   - [ ] : The selected mode will be applied.
   - [ ] : Activate the target lock operation.

5. Specify the <**Display Tracking Mask Area**>.
   Specify the display of the tracking mask on the screen, which was created in Mask Zone Setup.
   - [ ] : The selected mode will be applied.
6. Specify the <**Mask Zone Setup**>.
   You can specify a specific zone where a defined operation will be performed if an object under auto tracking enters the zone.
   - [ ] : Start your settings.
   - [ ] : Specify the start and end points.
   - [ ] : You can exit the mode.
7. Specify the activation time and activation condition.
   - For more information about <**Activation time**> and <**Action**>, refer to "**Alarm input**". (page 102)
8. When done, click [**Apply ( )**].

- The Trace Zone Setup menu is available only with SNP-3371TH.

Time schedule

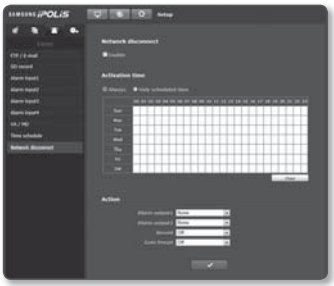
You can set to save the video data at a certain interval as scheduled regardless of the actual occurrence of the event.



1. From the Setup menu, select the <**Event (** **)**> tab.
2. Click <**Time schedule**>.
3. Set <**Timer event setup**> to <**Enable**>.
4. Specify the <**Activation time**>.
   - Always : The set operation is always executed.
   - Only scheduled time : The set operation is executed periodically, only at the specified time on the specified day of the week.
5. Specify the <**Transfer interval**>.
6. Specify the activation conditions.
   - FTP sending : This sets the option to transfer by using FTP when an alarm is input.
     - Refer to "**FTP / E-mail**" for more details. (page 99)
   - Record : This sets the option to record the content in the SD memory card when the alarm is input.
     - Set <**Record**> to <**On**> in <**SD record**>. (page 100)
7. When done, click [**Apply (** **)**].

Network disconnect

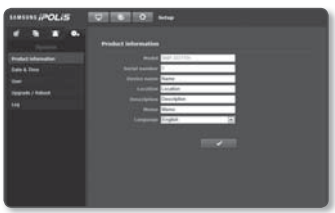
This can be set to generate an event signal when the physical network connection is cut off.



1. From the Setup menu, select the <**Event (**)> tab.
2. Click <**Network disconnect**>.
3. Specify the use of "Network disconnect".
4. Specify the activation time and activation condition.
   - For more information about <**Activation time**> and <**Action**>, refer to "**Alarm input**". (page 102)
5. When done, click [**Apply (**)].

SYSTEM SETUP

Product information



1. From the Setup menu, select the <**System (**)> tab.
2. Click <**Product information**>.
3. Check the camera information, or provide details according to your network environment.
   - 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.

   - 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 : Synchronize the time with the connected PC.
4. When done, click [**Apply (**)].

- If you select the <**Synchronize with PC viewer**>, the standard timezone should be set the same as the current timezone in PC.

User

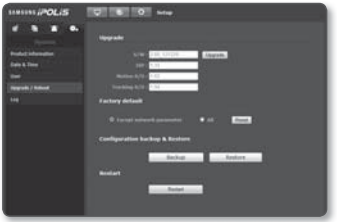
1. From the Setup menu, select the <**System ( )**> tab.
2. Click <**User**>.
3. Provide the necessary user information.
   - Administrator Password Change : Change the password for the administrator.

- The default password is vulnerable to security threats. You should change it.
- It is recommended to change your password once every three months.
- The password length and limits are shown as follows.
  - A combination of at least three types of upper case, lower case, numeric, and special characters : 8 to 15 characters.
  - A combination of at least two types of upper case, lower case, numeric, and special characters : 10 to 15 characters.
  - Should be different from the ID.
  - Cannot repeat the same letter, number of special characters more than 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 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 <**Guest access**> is allowed, the user with the guest account who accesses the web viewer can view only the Live viewer screen.
  - The ID/password for the guest account is <**guest/guest**>, which cannot be changed.
- Enable RTSP connection without authentication : If you select <**Enable**>, you can access RTSP without logging in and view the video.
- Current users : You can change the user information and adjust the permission level for a user who is set to <**Enable**>.
  - Video : You can select a video profile in the Liver viewer screen.
  - Audio-In : The audio input option will be activated in the Live Viewer screen.
  - Controls : You can control PTZ control, MIC and alarm button.

4. When done, click [**Apply (✓)**].

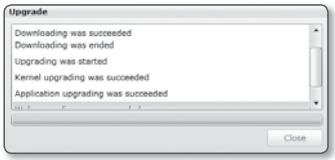
Upgrade / Reboot



1. From the Setup menu, select the <**System ( )**> tab.
2. Click <**Upgrade / Reboot**>.
3. Select a desired item and set it appropriately.
   - Upgrade : Performs upgrading the system.
   - Factory default : Resets the system to the factory default.
     - Except network parameter : Reset the other settings except for 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.
   - Restart : Restarts the system.

To perform the upgrade

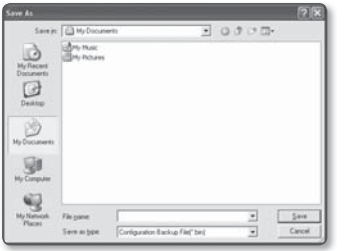
1. Click [**Upgrade**].
2. Click [**Browse**] and specify a file to upgrade.
3. Click [**Send**].
4. The "**Upgrade**" dialog appears where the progression will be shown in the bottom.
5. Once completed upgrading, the browser exits and the camera restarts.



- The tracking B/D version is applicable only to SNP-3371TH.
- It may take a max of 20 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

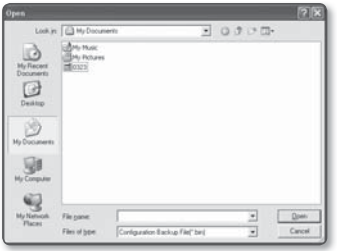
1. Click [**Backup**].
   The Save As dialog should appear.
2. Specify the backup path with a proper file name, and click [**Save**].
   The backup file will be saved to the specified path in the format of "**.bin**".



To restore the backup settings

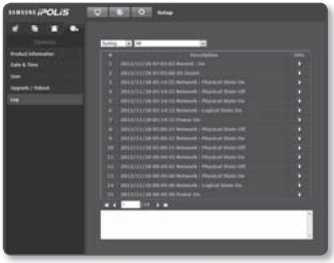
1. To restore the backup settings, click [**Restore**].
2. Select a backup file and click [**Open**].

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



Log

You can check the system log or event log.



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

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

SPECIFICATION

Items		Description	
		SNP-3302/3302H	SNP-3371/3371H/3371TH
Video	Imaging Device	1/4" Vertical Double Density Interline Transfer CCD	
	Total Pixels	NTSC : 811(H) x 508(V), PAL : 795(H) x 596(V)	
	Effective Pixels	NTSC : 768(H) x 494(V), PAL : 752(H) x 582(V)	
	Scanning System	Progressive (VPS ON) (If WDR on, Interlaced Scan)	
	Min. Illumination	Color : 0.7 Lux / F1.6(50IRE), B/W : 0.07 Lux / F1.6(50IRE)	
	S / N Ratio	52dB	
	Video Out	CVBS : 1.0 Vp-p / 75Ω composite, 704x480(N), 704x576(P), for installation	
Lens	Focal Length (Zoom Ratio)	3.5~105.3mm (30X)	3.5~129.5mm (37X)
	Max. Aperture Ratio	F1.6(Wide) / F3.9(Tele)	
	Angular Field of View	H : 55.5˚(Wide) ~ 1.92˚(Tele) V : 42.5˚(Wide) ~ 1.43˚(Tele)	H : 55.5˚(Wide) ~ 1.59˚(Tele) V : 42.5˚(Wide) ~ 1.19˚(Tele)
	Min. Object Distance	1.8m (5.91ft)	
	Focus Cotrol	AF / One-Shot AF / Manual	
	Lens Type	DC Auto Iris	
	Mount Type	Board-in type	
Pan / Tilt / Rotate	Pan Range	360˚ Endless	
	Pan Speed	Preset : 500˚/sec, Manual : 0.024˚/sec ~120˚/sec	
	Tilt Range	190˚ (-5˚ ~185˚)	
	Tilt Speed	Preset : 500˚/sec, Manual : 0.024˚/sec ~120˚/sec	
	Rotate Range	-	
	Preset	255 ea	
	Preset Accuracy	±0.1˚	
	Auto Tracking	SNP-3371TH Only	

Items		Description	
		SNP-3302/3302H	SNP-3371/3371H/3371TH
Operational	Camera Title	Off / On (Displayed up to 15 characters)	
	Day & Night	Auto (ICR) / Color / B/W	
	Backlight Compensation	Off / BLC / WDR / HLC	
	Wide Dynamic Range	NTSC : 128X (52dB), PAL : 128X	
	Contrast Enhancement	SSDR (Samsung Super Dynamic Range) (Off / On)	
	Digital Noise Reduction	SSNRIII (2D+3D Noise Filter) (Off / On)	
	Digital Image Stabilization	Off / On	
	Motion Detection	Yes	
	Privacy Masking	Off / On (8 Rectangle programmable zones)	
	Sens-up (Frame Integration)	Off / Auto (2X ~ 512X)	
	Gain Control	Off / Low / Medium / High / Manual	
	White Balance	AWC / Manual / Indoor / Outdoor / ATW (1,700°K ~ 11,000°K)	
	Electronic Shutter Speed	NTSC : ESC / FLK / Manual (1/60 ~ 1/120,000) PAL : ESC / FLK / Manual (1/50 ~ 1/120,000)	
	Digital Zoom	16X	
	Flip / Mirror	Off / On	
	Intelligent Video Analytics	Virtual Line, Enter/Exit, Appear / Disappear	
	Schedule	-	
	Alarm I/O	Input 4ea / Output 2ea (Relay)	
	Remote Control Interface	RS-485/422	
	RS-485 Protocol	SAMSUNG-T/E, PELCO-P/D, Panasonic, Honeywell, AD, Vicon	

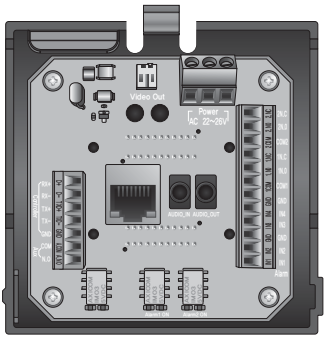
Items		Description	
		SNP-3302/3302H	SNP-3371/3371H/3371TH
Network	Ethernet	RJ-45 (10/100BASE-T)	
	Video Compression Format	H.264, MPEG-4, MJPEG	
	Resolution	NTSC : 704x480, 640x480, 352x240, 320x240, PAL : 704x576, 640x480, 352x288, 320x240	
	Max. Framerate	NTSC : 30fps, PAL : 25fps	
	Video Quality Adjustment	H.264/MPEG-4 : Compression Level, Target Bitrate Level Control MJPEG : Quality Level Control	
	Bitrate Control Method	H.264/MPEG-4 : CBR or VBR MJPEG : VBR	
	Streaming Capability	Multiple Streaming (Up to 10 Profiles)	
	Audio I/O	Mic / Line in, Line out (Mono jack not supported.)	
	Audio Compression Format	G.711 μ-law, G.726	
	Audio Communication	Bi-directional	
	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, ONVIF	
	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	

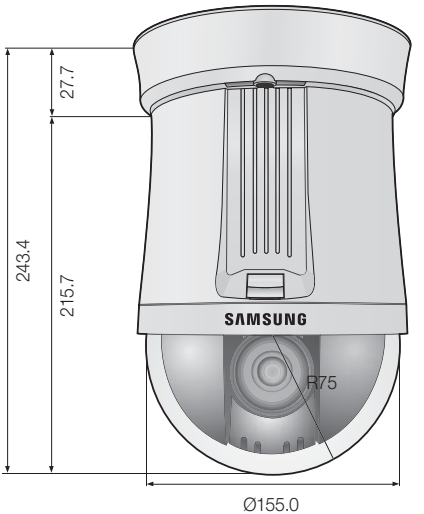
Items		Description	
		SNP-3302/3302H	SNP-3371/3371H/3371TH
Network	ONVIF Conformance	Yes	
	Webpage Language	English, French, German, Spanish, Italian, Chinese, Korean, Russian, Japanese, Swedish, Denish, Portuguese, Czech, Polish, Turkish, Rumanian, Serbian, Dutch, Croatian, Hungarian, Greek	
	Web Viewer	Supported OS : Microsoft Windows 7/VISTA/XP SP3, Apple MAC OS Supported Browser : Firefox, Google Chrome, *Apple Safari, Windows Internet Explorer 9.0(32bit)/8.0(32bit)/7.0(32bit) * For Mac OSX, only the Safari browser is supported.	
	Central Management Software	NET-i viewer	
Environmental	Operating Temperature / Humidity	SNP-3302/3371 : -10°C ~ +55°C (+14°F ~ +131°F) / 20% ~ 80% RH SNP-3302H/3371H/3371TH : -50°C ~ +55°C (-58°F ~ +131°F) / ~ 90% RH (AC24V On)	
	Storage Temperature / Humidity	-30°C ~ +60°C / ~ 90%RH	
	Ingress Protection	IP66 (SNP-3302H/3371H/3371TH only)	
Electrical	Input Voltage / Current	24V AC, PoE+ (IEEE802.3at)	
	Power Consumption	SNP-3302/3371 : Max. 21W SNP-3302H/3371H/3371TH : Max. 25W (Heater Off), Max. 60W (Heater On) * Heater works only at AC power input.	
Mechanical	Color / Material	SNP-3302/3371 : Ivory / Plastic SNP-3302H/3371H/3371TH : Ivory / Aluminum (Vandal Resistance) / Plastic Sun-Shield	
	Dimension (Ø x H)	SNP-3302/3371 : Ø155.0 x H243.4 mm SNP-3302H/3371H/3371TH : Ø248.0 x H316.5 mm	
	Weight	SNP-3302/3371 : 2.2Kg SNP-3302H/3371H/3371TH : 4.6Kg	

PRODUCT OVERVIEW

- **SNP-3302/3371**

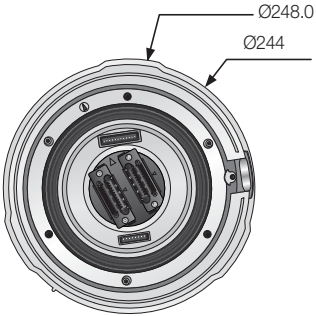
Unit : mm (inch)

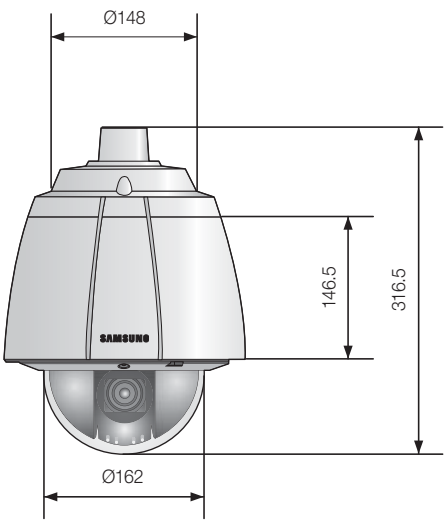




■ SNP-3302H/3371H/3371TH

Unit : mm (inch)





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.

PROBLEM	SOLUTION
No file is transferred via e-mail on occurrence of intelligent video analysis event of camera even when the <IV analysis function> is set to <Enable>.	• Verify the settings in the following sequence: A. Check <Data & Time> settings. B. The <IV analysis function> should be set to <Enable>. C. Alarm Video Transmission must be enabled.
Can <Set Rules> be configured even when the <IV analysis function> is set to <Disable>?	• 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> ➞ <SD 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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