

SAMSUNG



1/3" High Performance Network Dome Camera SND-460V User's Manual

Thank you for purchasing a SAMSUNG Ipolis Network CAMERA.
Before attempting to connect or operate this product,
please read these instructions carefully and save this manual for future use.

ENGLISH

iPOLiS

A brand that is integrated into Samsung's network products, **iPOLiS** stands for a convenient world (Polis) made safe (Police) through Samsung's superior network performance (Internet protocol). With **iPOLiS** products' clear digital images transmitted over the internet, real-time monitoring is possible anywhere with an internet connection. Easy remote control functions and the use of existing networks minimize installation costs. With **iPOLiS** experience a world of convenience connected anytime, anywhere.

■ Preface

Thanks for purchasing of SND-460V camera.

This is a user instruction manual for high resolution network camera and the product mentioned here designates the high resolution network camera.

The user who installs and operates the product shall be aware of this manual and other manuals referenced by this manual before the installation and operation and use properly.

This manual and the software and hardware explained here are protected by copyright law.

So the copy, reprint and translation to other languages of a part of or all contents of this user manual without permission of SamsungTechwin Co., LTD are not allowed except for the copy for general use within the scope of copyright law.

■ Note to User

This machine's electromagnetic waves have been registered as suitable for business purposes; the retailer and consumer should be aware of this registration. In the case of wrongful purchases, please exchange the product for a home use product.



Correct Disposal of This Product (Waste Electrical & Electronic Equipment)

(Applicable in the European Union and other European countries with separate collection systems)

This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.



The lightning flash with an arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated "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 appliance.

INFORMATION - This equipment has been tested and found to comply with limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

WARNING - Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

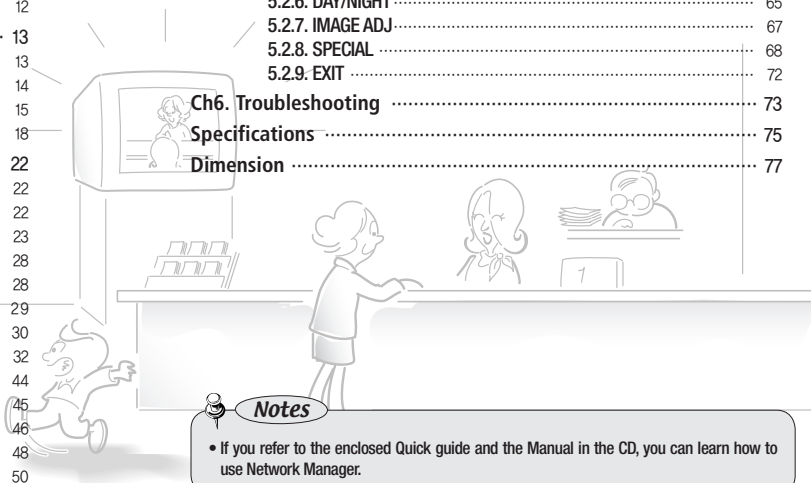
WARNING - To prevent electric shock and risk of fire hazards:

- ◆ Do NOT use power sources other than that specified.
- ◆ Do NOT expose this appliance to rain or moisture.

This installation should be made by a qualified service person and should conform to all local codes.

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Samsung Techwin cares for the environment at all product manufacturing stages to preserve the environment, and is taking a number of steps to provide customers with more environment-friendly products. The Eco mark represents Samsung Techwin's will to create environment-friendly products, and indicates that the product satisfies the EU RoHS Directive.

■ Product Warranty and Limitations

The manufacturers of this product do not take any responsibility for this product; therefore, the manufacturer does not authorize the third-party, but allows that retailer is responsible.

The product warranty does not extend to cover accidents, negligence, abuse, or wrongful use for the whole or any part of the product. Additionally, the manufacturer does not provide warranty for any additional parts or affiliations.

The warranty does not extend to malfunction in these areas.

- Malfunction due to user's negligence
- Dismantlement or replacement by the user
- Connection to alternate power source
- Malfunction due to natural disasters (fire, flood, tsunami, etc.)
- Replacement due to wear and tear
- Instability of network

■ Warning Symbols

Before attempting to connect or operate this product, please read these instructions carefully and save this manual for future use.



Danger :

Misuse or wrongful operation of the product may result in death, injury or bring about other fatal results. It indicates absolute caution when operating.



Caution :

Misuse or wrongful operation of the product may result in slight injury or damage to the product. It indicates caution when operating.



Note :

Indication that the user needs to be aware of certain matters, or will find matters helpful in operating the product.

⚠ Danger

- Random replacement of built-in battery by other types of batteries may cause explosion. The battery shall be replaced by the same battery. The used batteries shall be disposed carefully because they can cause environment pollutions.
- The battery shall be replaced by the same battery.
- The used batteries shall be disposed carefully because they can cause environment pollutions.
- The lithium battery incorporated in this product is not user replaceable. Replacement of the lithium battery will be done by a trained technician.
- For information on its replacement, please contact your service provider.

■ This user's manual has been prepared for the product with firmware version 1.0.0.

Precautions

Do not install under extreme temperature conditions.



Use only under temperature conditions between -10°C and +50°C. Provide good ventilation when using in high temperature conditions.

Do not install in high humidity environment.



May lower image quality.

Do not install under unstable lighting conditions.



Severe lighting changes or flickering may hinder normal camera operation.

Avoid touching the camera lens.



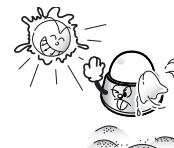
The lens is the most important component of the camera. Be careful not to smear it with fingerprints.

Do not drop the camera or subject it to physical shock.



May cause a product malfunction.

Never keep the camera face to strong light directly.



May damage the CCD.

Precautions

Do not expose the camera to radioactivity.



If it is exposed to radioactivity, For heated CCD, it will be out of order.

Notes

- Exposure to a spotlight or an object emitting strong light may cause smear or blooming.
- Ensure that the power source complies with normal specifications before supplying it to the camera.

Ch1. Overview

1.1. SND-460V Network Camera Introduction

The SND-460V is a high-tech network camera that uses MPEG-4 codec technology to allow high compression rates and clear picture quality by allowing for high frame rates to be transmitted through the network.

By using the network, remote connection, monitoring, and control is possible from any location for simple use; additionally, set-up requires only a network.

The SND-460V Network Camera utilizes embedded software solutions (Embedded Web Server, Embedded Streaming Server, Network Protocol) developed by SamsungTechwin, and guarantees performance and safety while offering various solutions through Internet integration.

1.2. Features

High Resolution

The horizontal resolution of 580TV lines at color mode and 700TV lines at BW mode can be achieved by using a high density CCD having speed 410,000 pixels, which provides clean, noiseless and reliable pictures.

Multi-channel Real-time image encoding

Single Chip MPEG4 and JPEG codec enables real time image encoding and transmission through multi-channel of classified resolution of D1/CI/FCIF.

DIS (Digital Image Stabilizer)

DIS (Digital Image Stabilizer) function compensates camera shaking to obtain clear-cut images.

SD Memory function

SD Memory function is to memorize an event at the SD Memory when it activated.

SSNR (Samsung Super Noise Reduction)

Samsung's high performance SSNR reduces GAIN variance effectively to deliver clean and clear-cut images.

DAY & NIGHT fuction

Day & night function and Sens-up function by ICR (IR Cut-Filter Removal) operation produce high quality images for 24 hours.

- * Sens-Up function delays exposing time to improve CCD sensitivity.
- * Day & Night function allows users choose color mode or BW mode depending upon illumination.

PoE (Power Over Ethernet)

PoE function is to supply power through the LAN cable together with data transmission without power cable for user convenience.

High sensitivity against low illumination

The built-in high sensitivity COLOR CCD enable a clear image even in 0.0006 Lux(Color, SENS-UP), 0.000004 Lux(B/W, SENS-UP) or lower illumination.

Privacy function

Privacy function is to determine surveillance area not to display on the monitor for privacy protection.

Combination of motion detection and alarm

Combination of motion detection, video analytics and alarm enables still image storage in the SD Memory or transmission of still image via email or FTP.

Ch1. Overview



High data compression ratio

High compression in MPEG-4 provides fast transmission and relatively high volume transmission of frame in the same network band.



Real time interactive audio Transmission

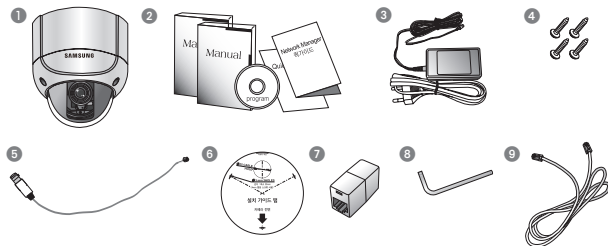


Additional functions

SENS-UP, Mirror, SHARPNESS.

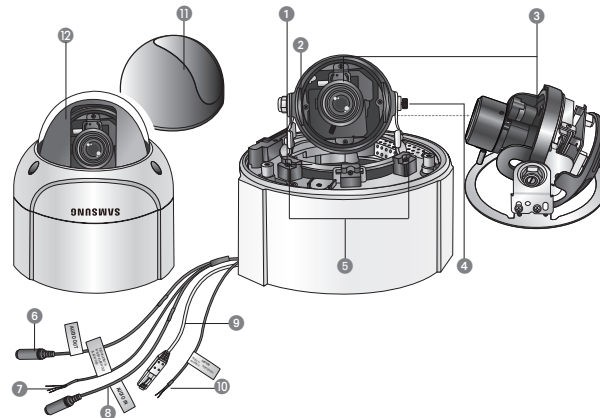
Ch2. Production Description

2.1. Components and Accessories



- | | |
|-----------------------------------|---|
| 1 SND-460V | 2 User's Manual / Install Manual / CD / Quick Guide |
| 3 DC 12V Adaptor / Power Cord | 4 M5 Tapping Screw 4EA |
| 5 Installation Video Output Cable | 6 Installation Template |
| 7 RJ-45 JACK Connector | 8 Wrench |
| 9 Cross Cable | |

2.2. Section names and functions



- 1 Pan Base : control panning angle of camera
- 2 Rotate Base : control rotating angle of camera
- 3 x3.6, 2.8 - 10.0mm (F1.2)
- 4 Rotate Base Holding Screw : fix rotated position
- 5 Pan Base Holding Screws (Color : Silver) : fix panned position
- 6 Audio Input
- 7 Alarm Jack
- 8 Audio Output
- 9 ETHERNET
- 10 Power
- 11 Shield Case
- 12 Dome Cover



Notes

- When you connect SND-460V network camera to the PoE apparatus, the voltage transferred via LAN cable may be abnormally high. Please contact to our distributor for installation or dismantling PoE system.

Ch2. Production Description

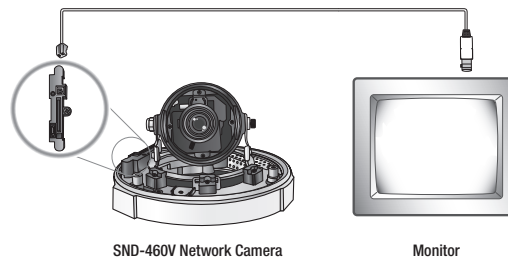
2.3. Recommended PC specifications

Items	Specifications
CPU	Intel core2 duo E4300 or higher processor
Main Memory	2GB or higher RAM
VGA	256M or higher recommended
OS	Window 2000, 2003, XP Professional, VISTA
Web Browser	Internet explorer 5.5 or higher
Resolution	1024*768 or higher
Network	10/100 Base-T Ethernet
DirectX	9.0C or higher

Ch3. Installation and Network Setup

3.1. Connecting to Monitor

Connect the VIDEO-OUT jack to the VIDEO-IN jack of monitor.



- As the connecting method varies with the instruments, refer to the manual supplied with the instrument.
- If necessary, you can connect the monitor to the REMOTE jack on the body of your camera.
- Only connect the cable when the power is turned off.



Notes

- This product is the network camera which transmits video through network, video output terminal is for installation and used to determine imaging range when installing the product.
- Please make sure that the video output terminal of this product is not connected to any recording equipment as this can cause problems.

Ch3. Installation and Network Setup

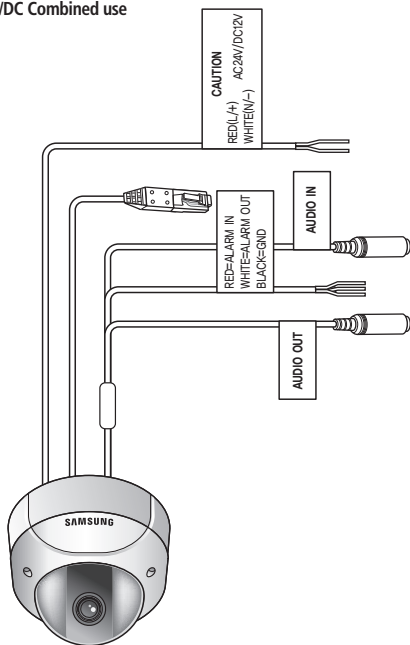
3.2. Connecting to Power

■ AC/DC Power

Both of AC24V and DC12V can be used for the input power of this product.

When using other adaptor not the adaptor (DC12V/4A) provided by the company, make sure that the specification is over AC 24V/1A or DC 12V/2A.

■ AC/DC Combined use



When the resistance value of copper wire is at [20°C(68°F)]

Copper wire size (AWG)	#24(0.22mm ²)	#22(0.33mm ²)	#20(0.52mm ²)	#18(0.83mm ²)
Resistance (Ω/m)	0.078	0.050	0.030	0.018
Voltage Drop (V/m)	0.028	0.018	0.011	0.006

- As shown in the table above, voltage decreases as the wire gets longer. Therefore use of an excessively long adaptor output line for connection to the camera may affect the performance of the camera.

* Standard voltage for camera operation : DC 12V±10%, AC 24V±10%

* There may be some deviation in voltage drop depending on the type of wire and the manufacturer.



Notes

- In case PoE and power adaptor are connected to camera simultaneously, the power authorized first by the product is used.

■ PoE(Power Over Ethernet)

PoE(Power Over Ethernet)is the function of LAN related devices, which supports data and power simultaneously with only connection of LAN cable without separate power input cable installation for power excitation to the product.

When connecting camera to PoE device, please connect to the device complying with PoE (IEEE802.3af) specifications. In case non-standard product is used, it may cause performance degradation or trouble.

3.3. Connection to External Control Connector

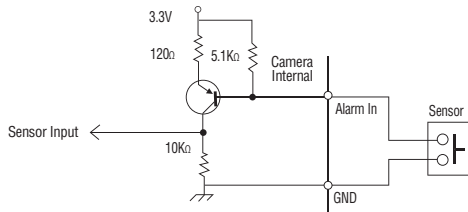
Connect the terminals following the line colors below.

RED is for ALARM input, WHITE for ALARM output and BLACK for GND signal.

Ch3. Installation and Network Setup

■ Connecting Alarm Input

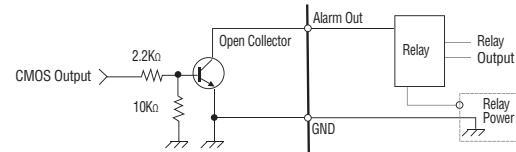
This is the input terminal for external alarm signal, use it by connecting as following.



- In case of selecting Normal Open at setup menu :
In case of contact type, it is short and in case of active type, sensor input acts at "LOW" level.
- In case of selecting Normal Close at setup menu :
In case of contact type, it is open and in case of active type, sensor input acts at high impedance status(open collector).

■ Connecting Alarm output

This is the output terminal for external alarm signal, use it by connecting as following.



- Alarm output part is Open Collector structure and can be composed by using relay. Rated maximum value is DC +24V, 100 mA.

Ch3. Installation and Network Setup

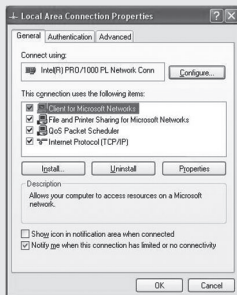
3.4. Network configuration and connection method using Web page

Use when there is one SND-460V network camera to be installed.

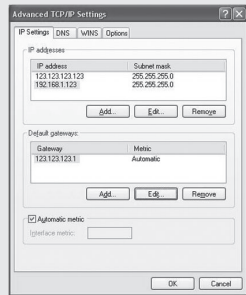
1. Please connect user's PC to SND-460V network camera using cross cable.



Notes



- After pressing internet protocol (TCP/IP) properties, press the 'advanced' button to go into advanced configurations.

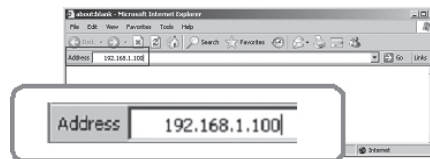


- Add with 192.168.1.XXX.

Notes

- 192.168.1.100 is the IP address for the camera and will be unavailable as an internal IP address.

2. Please launch a Web browser on user's PC and enter [192.168.1.100] in the URL address field and push <Enter> button. Connect to Webviewer login window of SND-460V network camera.



3. Please login with administrator's authorization and move to 'Network' page.(Default value for administrator login is ID: admin, PW:11111111)



Notes

- Default value is ID: admin, PW: 11111111

Ch3. Installation and Network Setup

4. Please configure according to the network environment where SND-460V network camera will be installed and push <Save> button to save the configuration.

▶ Network Setup

<input checked="" type="checkbox"/> Network Configuration	
LAN	+ IP Address <input type="text" value="192"/> <input type="text" value="168"/> <input type="text" value="1"/> <input type="text" value="100"/>
	+ NetMask <input type="text" value="255"/> <input type="text" value="255"/> <input type="text" value="255"/> <input type="text" value="0"/>
	+ Gateway <input type="text" value="192"/> <input type="text" value="168"/> <input type="text" value="1"/> <input type="text" value="1"/>
	+ DNS1 <input type="text" value="168"/> <input type="text" value="126"/> <input type="text" value="63"/> <input type="text" value="1"/>
	+ DNS2 <input type="text" value="168"/> <input type="text" value="126"/> <input type="text" value="63"/> <input type="text" value="2"/>
<input type="radio"/> xDSL	+ User Name <input type="text"/> + Password <input type="text"/>
<input type="radio"/> DHCP	
<input checked="" type="checkbox"/> Port/DDNS Configuration	
+ Connection Port	<input type="text" value="4000"/> (default: 4000)
+ HTTP Port	<input type="text" value="80"/> (default: 80)
+ FTP Port	<input type="text" value="21"/> (default: 21)
<input type="checkbox"/> Use DDNS	+ DDNS Server <input type="text" value="www.samsungipolis.com"/>
	+ ID <input type="text"/> + Password <input type="text"/>
<input checked="" type="checkbox"/> Continuous Jpeg Image Transmission to FTP Server (Jpeg CIFs.)	
+ Enable	<input type="checkbox"/> FrameRate <input type="text" value="1"/>
+ Server Name	<input type="text"/>
+ Home Directory	<input type="text"/>
+ User ID	<input type="text"/>
+ User Password	<input type="text"/>
<input checked="" type="checkbox"/> Streaming Engine	
+ RTSP/TCP Enable	<input type="checkbox"/> + RTP/UDP Enable <input type="checkbox"/>
+ RTP/Multicast Enable	<input type="checkbox"/>
Multicast IP	<input type="text" value="224"/> <input type="text" value="0"/> <input type="text" value="1"/> <input type="text" value="1"/> Multicast Port <input type="text" value="4000"/>
+ Streaming Image Resolution	<input type="text" value="D1"/>
<input type="button" value="Save"/> <input type="button" value="Cancel"/>	

① LAN / xDSL/ DHCP Configuration

<input checked="" type="checkbox"/> Network Configuration	
LAN	+ IP Address <input type="text" value="192"/> <input type="text" value="168"/> <input type="text" value="1"/> <input type="text" value="100"/>
	+ NetMask <input type="text" value="255"/> <input type="text" value="255"/> <input type="text" value="255"/> <input type="text" value="0"/>
	+ Gateway <input type="text" value="192"/> <input type="text" value="168"/> <input type="text" value="1"/> <input type="text" value="1"/>
	+ DNS1 <input type="text" value="168"/> <input type="text" value="126"/> <input type="text" value="63"/> <input type="text" value="1"/>
	+ DNS2 <input type="text" value="168"/> <input type="text" value="126"/> <input type="text" value="63"/> <input type="text" value="2"/>
<input type="radio"/> xDSL	+ User Name <input type="text"/> + Password <input type="text"/>
<input type="radio"/> DHCP	

Item	Description
LAN Use	When network product is connected to normal local LAN or when connected to static IP, the network data to be allotted to the IP is configured.
xDSL	When using xDSL dynamic IP, enter the ID and PW.
DHCP	When automatically receiving IP through DHCP server, the DHCP functions are activated. 'DHCP' is used in the LAN environment where the DHCP is activated. Generally, for mid/large scale, DHCP servers are operated through LAN and for small-scales, IP sharers use DHCP functions.

② Port Configuration

<input checked="" type="checkbox"/> Port/DDNS Configuration	
+ Connection Port	<input type="text" value="4000"/> (default: 4000)
+ HTTP Port	<input type="text" value="80"/> (default: 80)
+ FTP Port	<input type="text" value="21"/> (default: 21)
<input type="checkbox"/> Use DDNS	+ DDNS Server <input type="text" value="www.samsungipolis.com"/>
	+ ID <input type="text"/> + Password <input type="text"/>

Item	Description
Port Setting	The connection port and http, ftp port configurations can be set here and the DDNS use can be checked.



Notes

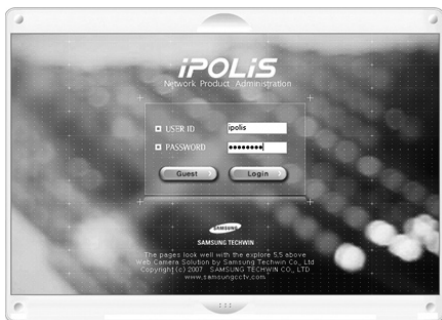
- Use DDNS changes its IP address every time the user attempts to connect to the ISP and when the product is connected to a cable modem or xDSL modem. In this case, the user cannot know the changed IP address. When a product that uses dynamic IP is registered on the DDNS server, when wishing to connect to the product, the changed IP address can be easily recognized. Register the product in the DDNS server in order to register the IP address in the DDNS server. Enable the "Use DDNS" option and enter the submitted ID and password into the server.

Ch4. How to Use Web Viewer

4.1. How to Use Web Viewer

4.1.1. Login

To connect the login page, enter IP address of the camera on a internet Web browser and push enter key.



Enter user ID and password and push <Login> button, then it move to related Web page. (Default value is ID: admin, PW: 11111111) If you click <Guest> button, it move to WebViewer page under the Guest authenticated status. In this case, administrator should permit the Guest connection.

Notes

- If you logged in first as a administrator mode, please change the password of administrator. It can prevent from other users connection to administration page.

4.1.2. Web Viewer screen

Web Viewer screen is composed of menu area for camera/video configuration and screen area for displaying input video from camera.



■ Controls



Video Analytics (Convert to Video Analytics mode)

This button is activated when the Video Analytics Enable option is selected on the Video Analytics page. A menu arrangement of the Analytics mode is different with one of the Control mode.



Ch4. How to Use Web Viewer



RESET (Displayed when the Video Analytics mode is on)
This sets the current screen image to the background.



Alpha branding (Displayed when the Video Analytics mode is on)
Makes changed parts appear half-transparent.



Notes

- It is not recommended to use alpha branding in the low specification system.



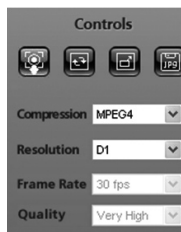
Flip Image
Turns the screen upside down.



Stretch Image
Expands the screen to the size of D1 when selecting CIF and QCIF for resolution.



Save Image
Saves the channel screen as a JPEG file.



- **Compression**
Video compression mode (the mode of compressing video)
 - MPEG, JPEG
- **Resolution**
Video resolution (the size of video screen transmitted)
 - NTSC : D1 (704x480), CIF(352x240), QCIF(176x120)
 - PAL : D1 (704x576), CIF(352x288), QCIF(176x144)
- **Frame Rate** - Setting on the Basic page
The number of maximum video frame transmitted for each second.

Ch4. How to Use Web Viewer

- 1, 5, 10, 15, 20, 25, 30
- Quality - Setting on the Basic page
 - Video quality
 - Very High, High, Normal, Low, Very Low

 **Pause** : Stops video for a while.

 **OSD** : Displays related information.



Displays the title



Removes the title

 **Camera Setup** : Displays OSD control button of camera.

How to Use the Camera



Camera OSD is displayed

 **Day&Night** : Day&Night configuration function (Color, B/W configuration)

■ Instruction for Camera OSD control button



<↑>, <↓> **button** : Moves selection displaying arrows up and down on camera OSD menu.

<←>, <→> **button** : Changes configuration of selected field on camera OSD menu.

<Set> **button** : Displays camera OSD or moves to upper/lower menu of selected field.

<Exit> **button** : Terminates camera OSD.

* For configuring the function and detail operating method of SND-460V network camera, refer 'ch5. How to Operate Camera'.

Ch4. How to Use Web Viewer

4.2. Using Administration page

4.2.1. Initialization Screen after Connecting (Basic Screen)

When connection is successful, the below screen will be displayed.

Video/Audio Setup

Video Format		<input checked="" type="radio"/> NTSC <input type="radio"/> PAL				
Compression Type		<input checked="" type="checkbox"/> MPEG-4 <input checked="" type="checkbox"/> MJPEG				
Initial Resolution		<input checked="" type="radio"/> D1 <input type="radio"/> CIF <input type="radio"/> QCIF				
Dual Coders, Multi-Transcoders	Video Quality	D1	MPEG-4	Very High	MJPEG	Very High
		CIF	MPEG-4	Very High	MJPEG	Very High
		QCIF	MPEG-4	Very High	MJPEG	Very High
	Video Frame Rate	D1	MPEG-4	30fps	MJPEG	30fps
		CIF	MPEG-4	30fps	MJPEG	30fps
		QCIF	MPEG-4	30fps	MJPEG	30fps
Video Channel	<input checked="" type="checkbox"/> Channel 1					
Audio-In Channel	<input checked="" type="checkbox"/> Channel 1					
Audio-Out Channel	<input checked="" type="checkbox"/> Use					
Max UserCounts	10					
Mic. Sensitivity	<input checked="" type="radio"/> High <input type="radio"/> Low					

Product Information

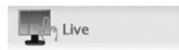
Model	SND-460V
Mac Address	00:00:00:00:00:00
Camera Name	SND-460V (English Only)
Location	Location (English Only)
Description	Description (English Only)
Memo	Memo (English Only)

Save

Cancel

4.2.2. Live

Please Move to Web Viewer page



[Web Viewer live screen]

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4.2.3. Basic

Setup menu for basic configuration.

▶ Video/Audio Setup

<input type="checkbox"/> Video Format <input checked="" type="radio"/> NTSC <input type="radio"/> PAL				
<input type="checkbox"/> Compression Type <input checked="" type="checkbox"/> MPEG-4 <input checked="" type="checkbox"/> MJPEG				
<input type="checkbox"/> Initial Resolution <input checked="" type="radio"/> D1 <input type="radio"/> CIF <input type="radio"/> QCIF				
<input type="checkbox"/> Dual Codescs, Multi-Transcoders	Video Quality	D1	MPEG-4 Very High ▼	MJPEG Very High ▼
		CIF	Very High ▼	Very High ▼
		QCIF	Very High ▼	Very High ▼
	Video Frame Rate	D1	30fps ▼	30fps ▼
		CIF	30fps ▼	30fps ▼
		QCIF	30fps ▼	30fps ▼
<input type="checkbox"/> Video Channel <input checked="" type="checkbox"/> Channel 1				
<input type="checkbox"/> Audio-In Channel <input checked="" type="checkbox"/> Channel 1				
<input type="checkbox"/> Audio-Out Channel <input checked="" type="checkbox"/> Use				
<input type="checkbox"/> Max UserCounts 10 ▼				
<input type="checkbox"/> Mic. Sensitivity <input checked="" type="radio"/> High <input type="radio"/> Low				

▶ Product Information

<input type="checkbox"/> Model	SND-460V
<input type="checkbox"/> Mac Address	00:00:00:00:00:00
<input type="checkbox"/> Camera Name	SND-460V (English Only)
<input type="checkbox"/> Location	Location (English Only)
<input type="checkbox"/> Description	Description (English Only)
<input type="checkbox"/> Memo	Memo (English Only)

■ Video/Audio Setup

Item	Description
Video Format	If you select the type of camera installed (NTSC or PAL), you can choose the size of the view on the camera.

Item	Description
Compression Type	Video compression type (This defines how the video is compressed.)
Initial Resolution	Defines the size of the live screen view.
Video Quality	Selects the video quality. You can still view uninterrupted video with the quality reduced if you use a low speed Internet connection.
Video FrameRate	Defines how many frames the camera will transfer per second.
Video Channel	Defines what video channel will be used by the camera.
Audio-In Channel	Determines whether to use an audio input channel for the camera.
Audio-Out Channel	Determines whether to use an audio output channel for the camera.
Max User Count	Specifies how many users (up to 20) can connect to the camera via the network.
Microphone Sensitivity	Audio Amplifier You need to set the sensitivity to Low with an amplifier-equipped microphone and to High with an amplifier-free Microphone (set it to low for line-in signals).

■ Product Information

Item	Description
Model	Describe camera model.
Mac Address	Describe MAC address of camera.
Camera Name	Name each camera to identify multi cameras on the network.
Location	Describe each camera location.
Description	Describe more information of camera.
Memo	Describe contact number of the camera operator.

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4.2.4. Network

Network Configuration menu.

▶ Network Setup

<input checked="" type="checkbox"/> Network Configuration	
<input checked="" type="radio"/> LAN	* IP Address <input type="text" value="192"/> . <input type="text" value="168"/> . <input type="text" value="1"/> . <input type="text" value="100"/>
	* NetMask <input type="text" value="255"/> . <input type="text" value="255"/> . <input type="text" value="255"/> . <input type="text" value="0"/>
	* Gateway <input type="text" value="192"/> . <input type="text" value="168"/> . <input type="text" value="1"/> . <input type="text" value="1"/>
	* DNS1 <input type="text" value="168"/> . <input type="text" value="126"/> . <input type="text" value="63"/> . <input type="text" value="1"/>
	* DNS2 <input type="text" value="168"/> . <input type="text" value="126"/> . <input type="text" value="63"/> . <input type="text" value="2"/>
<input type="radio"/> xDSL	* User Name <input type="text"/> * Password <input type="text"/>
<input type="radio"/> DHCP	
<input checked="" type="checkbox"/> Port/DDNS Configuration	
* Connection Port	<input type="text" value="4000"/> (default: 4000)
* HTTP Port	<input type="text" value="80"/> (default: 80)
* FTP Port	<input type="text" value="21"/> (default: 21)
<input type="checkbox"/> Use DDNS	* DDNS Server <input type="text" value="www.samsungipolis.com"/>
	* ID <input type="text"/> * Password <input type="text"/>
<input checked="" type="checkbox"/> Continuous Jpeg Image Transmission to FTP Server (Jpeg CIFs.)	
* Enable	<input type="checkbox"/> FrameRate <input type="text" value="1"/>
* Server Name	<input type="text"/>
* Home Directory	<input type="text"/>
* User ID	<input type="text"/>
* User Password	<input type="text"/>
<input checked="" type="checkbox"/> Streaming Engine	
* RTSP/TCP Enable	<input type="checkbox"/> * RTP/UDP Enable <input type="checkbox"/>
* RTP/Multicast Enable	<input type="checkbox"/>
Multicast IP	<input type="text" value="224"/> . <input type="text" value="0"/> . <input type="text" value="1"/> . <input type="text" value="1"/> Multicast Port <input type="text" value="4000"/>
* Streaming Image Resolution	<input type="text" value="D1"/>

Save

Cancel

■ Network Configuration

You can select LAN interface for static IP configuration, xDSL modem and DHCP for cable modem.

Item	Description
LAN	Configure network assignment information of a camera connected to the local area network or to the static IP of xDSL modem.
xDSL	For dynamic IP of xDSL, enter ID and password of xDSL in the username box and password box.
DHCP	For IP router or cable modem interface, select DHCP.

■ Port/DDNS Configuration

Item	Description
Connection Port	Connection port is to control communication with camera. (Default : 4000)
HTTP Port/ FTP Port	HTTP /FTP port is to access to the camera web page or to use FTP function. (Default : http=80, ftp=21)
Use DDNS	Determine use of DDNS server. DDNS allows you to connect to the server transforming dynamic IP.

■ Continuous Jpeg Image Transmission

Item	Description
Enable	Determine use of Continuous JPEG Image Transmission function.
FrameRate	Determine frame rate (frame per seconds) to send out.
Server Name	Enter domain name or IP address of the FTP server.
Home Directory	Configure home directory to store assigned data of the FTP server.
User ID	Enter ID to access to the FTP server.
User Password	Enter Password to access to the FTP server.

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■ Continuous Jpeg Image Transmission

Item	Description
RTSP/TCP Enable	Determines whether to use RTSP/TCP.
RTP/UDP Enable	Determines whether to use RTP/UDP.
RTP/ Multicast Enable	Determines whether to use RTP/Multicast.
Streaming Image	The default setting of Multicast IP is 224.0.1.1.
Resolution	Determines the resolution of the Streaming Engine.

- RTSP/TCP : Assures reliability of data communication and makes it easy to manage firewall by allowing for transferring and controlling data streaming through single RTSP connection.
- RTP/UDP : Useful for large transmission by reducing communication overhead while video quality might be degraded if network is busy.
- RTP/Multicast : Multicast/RTP (RTP over UDP) sends out the latest video image to the users anytime despite of video loss. It is more efficient to use broadband transmission to broadcast video image for multi users simultaneously. Since multicast through internet is not available, you need a router to allow multicast.

■ DDNS Usage

Registration process of DDNS is as following

- Step1) Complete the registration form in iPOLiS website.
The website is 'www.samsungipolis.com'.



Figure 1. Website of iPOLiS

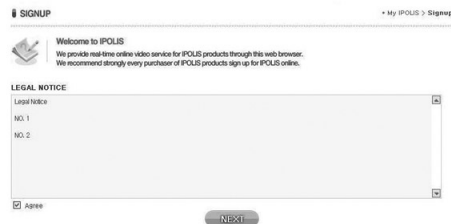


Figure 2. Membership Registration: SIGNUP

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Figure 3. Membership Registration: Input your information.

○ Step2) Register the equipment after login.

Figure 4. Login

NO	ID	Model	Location	Status	View	Information	Management
1	and500	SNB-300	AMBASSADOR HOTEL	OFF	View	Check	Edit Delete
2	and500		Lab	OFF	View	Check	Edit Delete

Figure 5. The list of registered equipment.

Figure 6. Product Registration.
(Confirm repetition certainly at domain registration.)

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Figure 7. The list of registered equipment.

○ Step3) Configure DDNS information in the equipment.

- Click the part of Network Configuration in website of Network Camera.
- Click "USE DDNS" in order to do "Enable" and input the address of DDNS Server (Default: www.samsungipolis.com)
- Enter the ID and Password that is written when register product is in iPOLIS website.

Network Setup

Network Configuration

IP Address: 192.168.1.100
 NetMask: 255.255.255.0
 Gateway: 192.168.1.1
 DNS1: 168.126.63.1
 DNS2: 168.126.63.2

LAN

xDSL
 DHCP

Port/DDNS Configuration

Connection Port: 4000 (default: 4000)
 HTTP Port: 80 (default: 80)
 FTP Port: 21 (default: 21)

Use DDNS
 DDNS Server: www.samsungipolis.com
 ID: [] Password: []

Continuous Jpeg Image Transmission to FTP Server (Jpeg CIFs.)

Enable FrameRate: 1
 Server Name: []
 Home Directory: []
 User ID: []
 User Password: []

Streaming Engine

RTSP/TCP Enable RTP/UDP Enable
 RTP/Multicast Enable
 Multicast IP: 224.0.1.1 Multicast Port: 4000
 Streaming Image Resolution: D1

Save Cancel

The Configuration of DDNS in SND-460V is Completed.

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- Step4) Confirm the connection status of relevant product in product list of iPOLiS website.

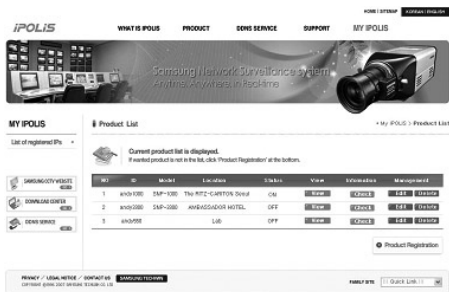


Figure 8. The List of Product.

Be able to confirm the information of connected equipment if click <check> button of 'Product information'.

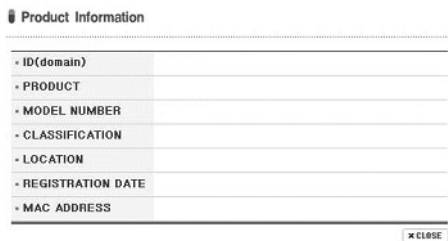


Figure 9. Product information

Click the <View> button under 'View' to move to the login page. To modify or delete information for a registered device in the product list, click the <Edit> or <Delete> button under 'Management', then enter the password to navigate to the Edit or Delete page. The Product ID (Domain) cannot be modified; you must first delete the current Product ID and then create a new one.



Figure 10. Edit/Delete

■ How to use Streaming Engine

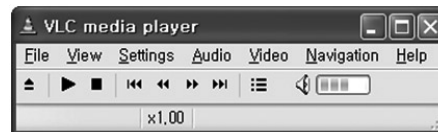
We recommend VLC media player among Streaming Engine products.

○ Step1) Network Page configuration

Click the certain function of Streaming Engine and press <Save> button.
- To update Network Page configuration, the system will reboot.

○ Step2) VLC media player execution

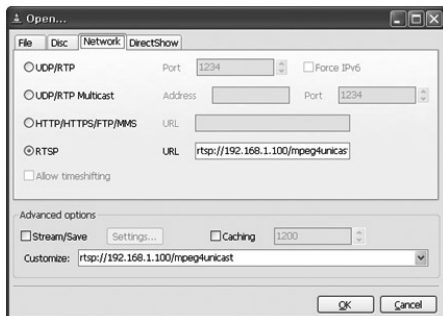
When you execute VLC media player, below screen capture will appear.



○ Step3) VLC media player connection and configuration

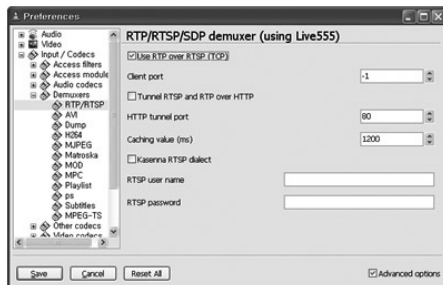
- RTP/UDP connection
Select 'FILE' in the menu and click 'Open Network Stream...'.
Enter 'rtsp://[serverip]/mpeg4unicast' in the RTSP URL and press <OK> button to connect to RTP/UDP.

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- RTP/TCP connection

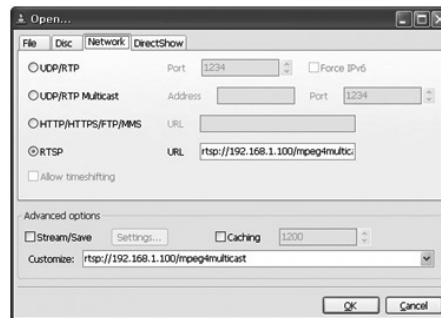
Select 'Settings...' in the menu and click 'Preferences...' then check the 'Advanced options' box at the bottom of right side of the monitor, below options will appear.



Check the 'Use RTP over RTSP (TCP)'. Enter 'rtsp://[serverip]/mpeg4unicast' in the RTSP URL and press <OK> button to connect to RTP/TCP.

- RTP Multicast connection

Enter 'rtsp://[serverip]/mpeg4unicast' in the RTSP URL to connect to multicast.



* TCP configuration should be cleared again to execute RTP Multicast.

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4.2.5. Video Analytics

The Analytics feature compares the current screen against the one at the time of clicking on Set button and marks changed areas. It can detect up to 5 areas.



Item	Description
Video Analytics Enable	Determines whether to use Video Analytics.
Transition Time	Shows the period of time maintaining a changed screen for Detection. (3, 6, 9, 12, or 15 sec)
Item	Description
Reset Time	This is the time needed to convert the current screen to the standard one. (30 or 60 sec, 10 min, 30 min or ∞)
Stable Ratio	Determines whether to detect an object, depending on the size. (1:Low - 5:High)

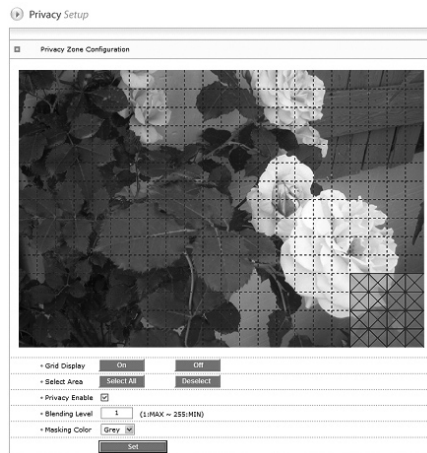


Notes

- When Video Analytics is enabled, the motion detection feature is automatically disabled.

4.2.6. Privacy

For privacy protection, you can specify areas to hide.



Item	Description
Grid Display	Auto hide mode of screen split tool to select area.
Select Area	In the process of Privacy configuration, press <Select All> button to configure the whole screen or press <Deselect> button to cancel the configured screen area.
Privacy Enable	Determine use of Privacy function.
Item	Description
Blending Level	Blending Level function is to determine masking transparency of excluded area in the range of 1 to 255. Level 255 is perfect transparent.
Masking Color	Masking color can be selected among Grey, Blue and Violet..





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4.2.7. Record (Using the SD Memory)

When Motion Detection, Video Analytics or Sensor is detected, you can save them. Then, if an Event is occurred, you can also watch them.



Item	Description
SD Memory Size	It shows total storage capacity of SD memory.
SD Memory Using Size	It shows SD memory occupation.
SD Memory Free Size	It shows balance capacity of SD memory.

Item	Description
Overwrite	In the event of memory overflow, it erases record files chronically and records new events.
Analytics Detection Recording	When Analytics is detected, you can save it.
Motion Detection Recording	When a motion is detected, you can save it (MD).
Sensor Detection Recording	When the Sensor detects a motion, you can save it.
	Plays the video.
	Stops the video.
	Pauses the video.
	Save the video image as a JPEG file.
Event Record List	Event record list stored in the SD memory. ※ This system records images 5 seconds before and after the event. ※ You can record Event up to one minute.



Notes

- We provide SD Memory card only, not the MMC.
- Only 128MB - 2GB SD cards can be used while 4GB SDHC is supported.
- We recommend the FAT32 format.
- Make sure that you turn off the camera before you insert or take out the SD memory card.

Ch4. How to Use Web Viewer

4.2.8. User

This describes password change for administrator or user registration.

➤ User Setup

Administrator Password Change

• Type

• Re-Type

Guest Setup

• Guest Access Permission

Current Users

• User Name	• Password	• Control Level	• Use
user1	*****	<input checked="" type="checkbox"/> Video <input checked="" type="checkbox"/> Controls <input checked="" type="checkbox"/> Audio-In	<input type="checkbox"/>
user2	*****	<input checked="" type="checkbox"/> Video <input checked="" type="checkbox"/> Controls <input checked="" type="checkbox"/> Audio-In	<input type="checkbox"/>
user3	*****	<input checked="" type="checkbox"/> Video <input checked="" type="checkbox"/> Controls <input checked="" type="checkbox"/> Audio-In	<input type="checkbox"/>
user4	*****	<input checked="" type="checkbox"/> Video <input checked="" type="checkbox"/> Controls <input checked="" type="checkbox"/> Audio-In	<input type="checkbox"/>
user5	*****	<input checked="" type="checkbox"/> Video <input checked="" type="checkbox"/> Controls <input checked="" type="checkbox"/> Audio-In	<input type="checkbox"/>

○ Controls = Pan / Tilt / Camera / Audio-Out / Alarm-Out

Item	Description
Administrator Password Change	Change password of administrator
Guest Setup	User clicks 'Guest' button to decide whether allowing guest to connect Main Viewer.
Current User	You can register new user or delete, and set up user's authority. The default password is user1 - user5.

■ Set up user authority

User's authorities set up at 'Current User' are as follows.

Item	Description
Video	Use video related setup function (Compression, Resolution, Video Analytics)
Control	Audio output, Alarm output
Audio	Audio Input
USE	Whether relevant account is used (If not checked, not allowed log-in)

- Example 1) In case control function is limited (Do not check Controls box)



- * audio output, alarm output function icon is inactivated

- Example 2) In case video function is limited (Do not check Video)

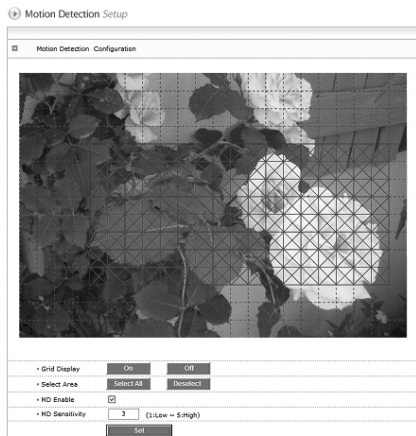


- * Compression, Resolution set up icon is inactivated.

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4.2.9. Motion Detection

This sets up motion detection function of camera.



Item	Description
Grid Display	Basic grid, used to choose area on the screen, is displayed or hidden.
Select Area	When selecting motion detection area, click <Select All> button to select all areas, or click <Deselect> button to cancel the selected area.
MD Enable	Decide whether you use motion detection function.

Item	Description
MD Sensitivity	Setting up sensitivity to detect motion to adjust input video by situation. You can select 1-5, and 5 is the highest.



Notes

- When the motion detection feature is enabled, the Video Analytics feature is automatically disabled.

4.2.10. Alarm/Sensor

This sets up necessary information when using alarm function by attaching sensor to camera.

Alarm/Sensor Setup

Digital In(Sensor) Setup

+ Sensor No.

+ Sensor Type

Digital Out(Alarm) Setup

	Sensor1	MD	Video Analytics
Alarm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Duration		<input type="text" value="30 sec"/>	
FTP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E-Mail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

FTP/E-mail Setup

FTP Setup

+ FTP Server Name

+ Home Directory

+ User ID

+ User Password

E-Mail Setup

+ Recipient E-mail Address 1

+ Recipient E-mail Address 2

+ SMTP Server Name

Use Authentication

- ID

- PW

+ Mail Subject (English Only)

+ Mail Body (English Only)

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■ Alarm/Sensor Setup

◇ Digital In Setup

Item	Description
Sensor No.	Shows the sensor number (Sensor1).
Sensor Type	Types of sensors are 'Normal open' and 'Normal close.' This selects up type of connected sensor.

◇ Digital Out Setup

Item	Description
Alarm	Set up Digital Out responding when event is recognized by connected sensor (Sensor 1), Video Analytics or Motion Detection (MD)
Duration	Set up time to operate relay. It means the period from the time when sensor detects event to the time when relay is released. (1, 2, 3, 4, 5, 30 sec and 1, 2, 3 min, or always)
FTP	In case event occurs by sensor (Sensor 1) or Motion Detection (MD) or Video Analytics on the screen, decide whether transferring related information to FTP.
E-mail	In case event occurs by sensor (Sensor 1) or Motion Detection (MD) or Video Analytics on the screen, decide whether transferring related information by e-mail.

■ FTP/E-mail Setup

Set up FTP server and e-mail information to which related information is transferred in case alarm occurs.

Item	Description	
FTP	Server Name	Enter domain or IP address of FTP server.
	Home Directory	Set up home directory to save relevant data at FTP server.
	User ID	Enter ID to connect FTP server.
	User Password	Enter PW to connect FTP server.

Item	Description	
FTP	Recipient E-mail Address 1 Recipient E-mail Address 2	You can designate up to two e-mail address receiving data when alarm occurs.
	SMTP Server Name	If you use an external E-mail server, enter the name of the E-mail server.
	Use Authentication	If you use an external E-mail server, determine whether to use ID and password.
	ID	Enter ID to connect the outside e-mail server.
	Password	Enter PW to connect the outside e-mail server.
	Mail Subject	Enter the subject of mail to be transferred.
	Mail Body	Enter the body of mail to be transferred.



Notes

- When an event is occurred, a copy of JPEG-format image is transferred to the E-mail or FTP server.

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4.2.11. Time

Time Setup

Current Time
 Date: 2008/07/13 Time: 15:03:19

Time Setup

Set Manually
 Date: [] / [] / [] (yyyy/mm/dd)
 Time: [] : [] (hh:mm)

TimeServer
 Server1: pool.ntp.org GMT+09:00
 Server2: asia.pool.ntp.org
 Server3: europe.pool.ntp.org
 Server4: north-america.pool.ntp.org
 Server5: time.nist.gov

Save Cancel

Current Time

Item	Description
Date	Current setup date displayed
Time	Current setup time displayed

Time Setup

Item	Description
Set Manually	Adjust time manually.
Time Server	Set up address of time server for Server 1 - 5.

4.2.12. LOG

Recent activities made for camera are displayed as log.

Log View Setup

Lines: [5] View (Total Current Log : 3 Lines) Clear

SND-460V IP Network Camera Now Started
 [2009/04/08 10:25:18] SND-460V IP Network Camera Log Cleared
 New Log File Access

Send Log to Administrator E-mail per Day (at 04:00)

Item	Description
Lines	Set up number of lines of the list.
View	Log is viewed with number of lines you set up most recently.
Clear	Delete logs.
Send Log to Administrator E-mail per Day	Sends logs to the administrator via E-mail at the same time (04:00) every day.

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4.2.13. Upgrade

Upgrade program of SND-460V network camera.

▶ System Upgrade Configuration

SND-460V Firmware	
<input type="text"/>	<input type="button" value="search"/> <input type="button" value="Send"/>

Current Version 1.0.0	Last Updated : 2009/03/28 21:57

▶ Factory Reset Setup

Factory Mode	<input type="button" value="Reset"/>
--------------	--------------------------------------

■ System Upgrade Configuration.

Item	Description
SND-460V Firmware	Upgrades the firmware of the SND-460V network camera.

■ Factory Mode Setup

Clicking the <Reset> button makes an administrator check the settings, then returns them to their factory defaults.

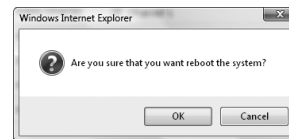


Notes

- If you perform the Factory Mode Reset function, the IP will be reset to 192.168.1.100, a value set at the time of shipment from the factory. In this case, you may not log in depending on the installation environment.
- When you reset a camera function related to video, you need to initialize the setting of the OSD menu as well (see How to Operate Camera in Chapter 5).

4.2.14. System Reboot

Server is rebooted after confirmation procedure of administrator.



Click <OK> button to reboot server.



Notes

- Pressing the <Reset> button next to the SD card for more than 3 seconds returns settings to their factory defaults.

Ch5. How to Operate Camera

5.1. Setup MENU

Setup Menu			
LENS	●DC		
EXPOSURE	●SHUTTER ●RETURN	●AGC	●SENS-UP
WHITE BALANCE	●ATW ●OUTDOOR	●MANUAL ●INDOOR	●AWC--SET
BACKLIGHT	●OFF ●HLC	●BLC	
SSNR	●ON		
DAY/NIGHT	●COLOR	●B/W	●AUTO
IMAGE ADJUSTMENT (IMAGE ADJ.)	●V-REV ●SHARPNESS	●H-REV ●RETURN	●D-ZOOM
SPECIAL	●CAMTITLE ●DIS ●RESET	●MOTION DET ●LANGUAGE ●RETURN	●PRIVACY
EXIT			

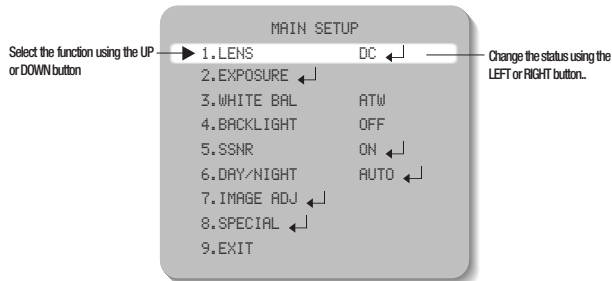
5.2. How to Set Up Functions

Use OSD button displayed on Web Viewer screen to set up functions.

-  : OSD button is popped up in Web Viewer.



1. Please press the <SET> button.
 - Main setup menu is displayed on the monitor screen.



2. Select a desired function using the Up and Down buttons.
 - Place the cursor over a desired item.
3. Set up a selected item by using the Left and Right buttons.
4. To finish the setting, select 'EXIT' and press the SET button.
5. Press the OSD button to quit OSD.



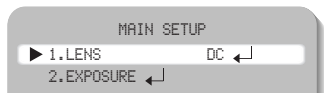
Notes

-  : To select a sub menu, select an item with the icon and press the SET button.
- An item with the --- icon is unavailable due to function settings.

Ch5. How to Operate Camera

5.2.1. LENS

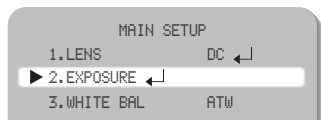
Using this function, you can control screen brightness.



- **DC** : Auto iris lens selection
When DC is selected, you can control screen brightness. The range of brightness control is between 1 and 70. Adjust the brightness appropriately for optimal screen brightness.
- **MANUAL** : Select Manual lens

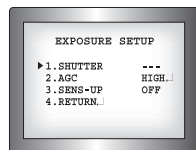


5.2.2. EXPOSURE



1. When the SETUP menu screen is displayed, select EXPOSURE by using the Up and Down buttons so that the arrow indicates EXPOSURE.
2. Select a desired mode using the Up and Down buttons.

- **SHUTTER** :
 - **A.FLK** : Select this when you experience picture flicker, which can happen when there is a clash with the frequency of the installed lighting.



Notes

- When the SHUTTER is set to A.FLK mode, SENS-UP will be disabled.

- **AGC (AUTO GAIN CONTROL)** : The higher the gain level, the brighter the screen - but the higher the noise.
 - **OFF** : Deactivates the AGC function.
 - **LOW** : Allows automatic gain control from 0 to 30dB.
 - **HIGH** : Allows automatic gain control from 0 to 42dB.
- **SENS-UP** : When it is night or dark, the camera automatically detects the light level and maintains a clear picture if this mode is activated.
 - **OFF** : Deactivates the SENS-UP function.
 - **AUTO** : Activates the SENS-UP function.
- **RETURN** : Select this to save the changes in the EXPOSURE menu and return to the SETUP menu.



Notes

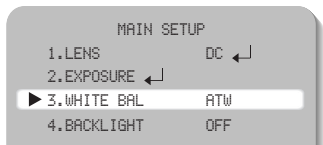
- If you press the SET button in 'AUTO' mode, You can adjust brightness by increasing or decreasing the shutter speed. (X2-X256)
- Note that the higher the zoom level, the brighter the screen, but the more likely it is that an after-image will appear.
- Although Noise, Spots, and Whitish symptoms may occur in SENS-UP operation when the level is increased, this is normal.

Ch5. How to Operate Camera

5.2.3. WHITE BALANCE (WHITE BAL.)

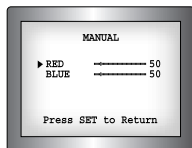
Use the White Balance function to adjust the screen color.

1. When the SETUP menu screen is displayed, select 'White Bal.' by using the Up and Down buttons so that the arrow indicates 'White Bal.'
2. Select a desired mode using the Up and Down buttons.



* Select one of the following 5 modes, as appropriate for your purpose.

- **ATW** : Select this when the color temperature is between 1800°K and 10500°K.
- **INDOOR** : Select this when the color temperature is between 4500°K and 8500°K.
- **OUTDOOR** : Select this when the color temperature is between 1800°K and 10500°K. (sodium light inclusion)
- **AWC — SET** : To find the optimal setting for the current luminance environment in this mode, set the point the camera towards a sheet of white paper and press the SET button. If the environment changes, readjust it.
- **MANUAL** : Select this to fine-tune White Balance manually. Set White Balance first by using the ATW or AWC mode. After that switch to MANUAL mode, fine-tune the White Balance and then press the SET button.



Notes

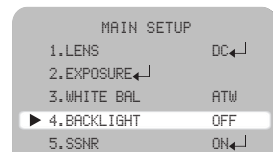
White Balance may not work properly under the following conditions. In this case select the AWC mode.

- When the color temperature of environment surrounding the subject is out of the control range (e.g. clear sky, or sunset)
- When the ambient illumination of the subject is dim.
- If the camera is directed towards a fluorescent light or is installed in a place where illumination changes dramatically, the White Balance operation may become unstable.

5.2.4. BACKLIGHT

This camera is designed so that it delivers a distinctive subject and background at the same time, even when the subject is in backlight, unlike conventional cameras, by adopting a proprietary W-IV DSP chip.

1. When the SETUP menu screen is displayed, select 'BACKLIGHT' by using the Function Setup switch so that the arrow indicates 'BACKLIGHT'.



2. Select a desired mode using the Function Setup switch depending on the camera purpose.
 - **BLC** : Enables a user to directly select a desired area from a picture, and to view the area more clearly.



- **HLC (High Light Compensation)** :

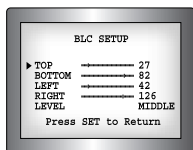
If there is a high light installed in a limited environment such as an apartment parking garage or gas station entrance, removing the high light makes it possible to view car license plates efficiently.

- **DAY** : In normal daylight conditions, the HLC is not activated.

- **NIGHT** : If a high light that is larger than a certain size is present on the screen, remove the high light to see license plates clearly.

Ch5. How to Operate Camera

- OFF : Not being used
- Select 'BLC' to adjust the area to be enhanced and enhancement level.
- HLC : Enable a user to select a mask color of high light area from a picture.



3. Select a desired mode using the Function Setup switch and press the switch.



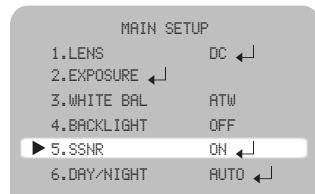
Notes

- Because there can be a difference in the effectiveness of HLC according to the amount of light area in the screen, optimize the installation angle for the best HLC performance.
- In a dark environment, the HLC is only activated when a high light that is larger than a certain area is present.
- The HLC is not activated in light or overly dark conditions.

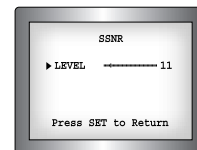
5.2.5. SSNR

This function reduces the background noise in a low luminance environment.

1. When the SETUP menu screen is displayed, select 'SSNR' by using the Up and Down buttons so that the arrow indicates 'SSNR'.



2. Press the SET button. Then you can adjust the noise reduction level.



Notes

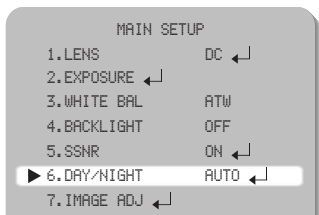
- When adjusting the noise reduction level of the SSNR mode, remember that the higher the level set, the more the noise level will be reduced but that after image may also occur.

5.2.6. DAY/NIGHT

You can display pictures in color or black and white.

1. When the SETUP menu screen is displayed, select 'DAY/NIGHT' by using the Up and Down buttons so that the arrow indicates DAY/NIGHT.

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2. Select a desired mode using the Left and Right buttons according to the picture display you want.

- **COLOR** : The picture is always displayed in color.
- **B/W** : The picture is always displayed in black and white. Please press SETUP button to turn on or off the burst signal on B/W mode.
- **AUTO** : The mode is switched to Color in a normal environment, but switches to B/W mode when ambient illumination is low. To set up the switching time or speed for AUTO mode, press the SET button.



- **DWELL TIME** : You can select the duration time about changing the day/night mode. (5s, 7s, 10s, 20s, 30s, 40s, 60s)

- **DURATION** : You can select brightness of illumination about changing the day/night mode.

	Color → B/W	B/W → Color
Fast	2.5 lux	4 lux
Slow	0.8 lux	6 lux

* The brightness of illumination is changeable by installed environment.

- You can easily switch between night and day modes by adjusting the D&N button on the webpage. (AUTO ↔ B/W, COLOR ↔ B/W)

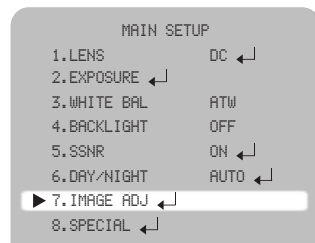


Notes

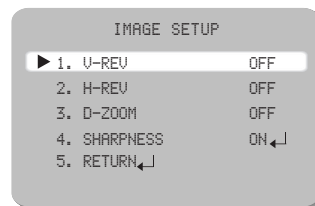
- You cannot control the DAY/NIGHT menu when AGC in the EXPOSURE menu is 'OFF'. At this time, the exchange between DAY mode and NIGHT mode operates as like selecting 'COLOR' mode.

5.2.7. IMAGE ADJ.

1. When the SETUP menu screen is displayed, select 'IMAGE ADJ.' by using the Up and Down buttons so that the arrow indicates IMAGE ADJ.



2. Select a desired mode using the Up and Down buttons.



Ch5. How to Operate Camera

- **V-REV** : You can flip the picture vertically on the screen.
- **H-REV** : You can flip the picture horizontally on the screen.
- **D-ZOOM** : You can use a digital zoom of x2 ~ x10.
- **SHARPNESS** : As you increase this value, the picture outline becomes stronger and clearer. Adjust this value appropriately depending on the sharpness of the picture.
- **RETURN** : Select this to save the settings for the IMAGE ADJ. menu and to return to the SETUP menu.

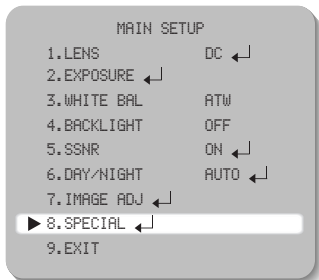


Notes

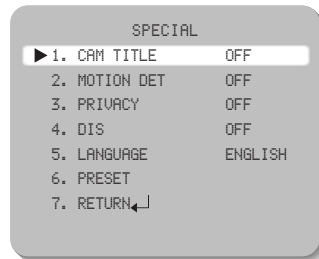
- When H-REV or V-REV is selected, any text in the picture also will be flipped horizontally or vertically.
- If you increase the SHARPNESS level too high, the picture may become distorted or noise may appear.

5.2.8. SPECIAL

1. When the SETUP menu screen is displayed, select 'SPECIAL' by using the Up and Down buttons so that the arrow indicates 'SPECIAL'.



2. Select a desired mode using the Up and Down buttons.



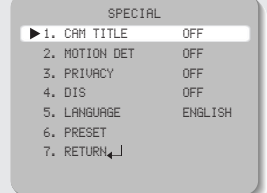
• CAM TITLE

If you enter a title, the title will appear on the monitor.

- 1) If the SPECIAL menu screen is displayed, use the Up and Down buttons so that the arrow indicates 'CAM TITLE'.
- 2) Set it to 'ON' by using the Left and Right buttons.

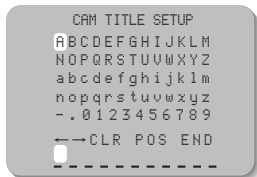
Notes

- When the CAM TITLE menu is 'OFF', no title will be displayed on the monitor screen even if you enter one.



Ch5. How to Operate Camera

- Press the <SET> button.
- Use the 4 direction buttons to move to a desired letter and select the letter by pressing the SET button. Repeat this to enter multiple letters. You can enter up to 15 letters.



Notes

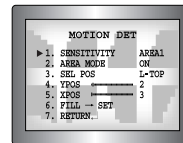
- If you move the cursor to CLR and press the <SET> button, all the letters are deleted. To edit a letter, change the cursor to the bottom left arrow and press the <SET> button. Move the cursor over the letter to be edited, move the cursor to the letter to be inserted and then press the <SET> button.

- Enter a title, move the cursor to 'POS' and press the <SET> button. The entered title appears on the screen. Select the position to display the title on the screen by using the 4 direction buttons and press the <SET> button. When the position is determined, select 'END' and press the <SET> button to return to the SPECIAL menu.



• MOTION DET

If you connect an alarm device to this camera, you can monitor activity more efficiently, because a signal is generated by the camera whenever motion is detected. The motion detection signal is output through the MD OUT port.



- When the SPECIAL menu screen is displayed, press the Up and Down buttons so that the arrow indicates MOTION DET .
- Set up the mode using the 4 direction buttons.
 - SENSITIVITY : You can select up to 8 MD areas. When SENSITIVITY number is high, motion detection sensitivity is increased to recognize even small movement.
 - AREA MODE : Determines whether to use the MD area selected in SENSITIVITY.
 - SEL POS : Determines which of the 4 vertices of each MD area is to be used.
 - YPOS : Determines the coordinate of the vertical axis for SEL POS.
 - XPOS : Determines the coordinate of the horizontal axis for SEL POS.
 - FILL→SET : Fills in a selected MD area. Fills in a selected MD area. The color of filling is sequentially selected as brown, orange, blue, cyan, yellowish green, yellow and red.
 - RETURN : Select this to save the MOTION DET menu settings and return to the SPECIAL menu.



Notes

- MD areas show only MOTION DET menu. Therefore, MD areas don't display on the monitor screen.

• PRIVACY

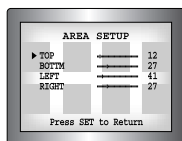
Hide an area you want to hide on the screen.

- When the SPECIAL menu screen is displayed, press the Up and Down buttons so that the arrow indicates 'PRIVACY'.
- Set up the mode using the 4 direction buttons.
 - AREA SEL : You can select up to 8 MD areas.



Ch5. How to Operate Camera

- AREA MODE : Determines whether to use the area selected in the AREA SEL, and the size and position of the area.
 - MASK COLOR : Determine area color. You can select Gray, Green, Red, Blue, Black, White.
 - TRANSP : Determine the transparency of selected area as controlling number from 0 to 3.
 - RETURN : Select this to save the PRIVACY menu settings and return to the SPECIAL menu.
- DIS (Digital Image Stabilizer) :
This function mitigates any picture movement due to external factors such as wind.



Notes

- The chance of resolution decrease is existed because DIS function uses the digital zoom.
 - DIS doesn't operate when background illumination is too low.
 - DIS doesn't operate when object pattern is monotonic as like sky or white wall.
 - When using the DIS mode, the D-ZOOM level is required to set up over 46.
-
- LANGUAGE : You can select the menu language according to your requirements.
 - RESET : Resets the camera settings to the factory defaults.
 - RETURN : Select this to save the SPECIAL menu settings and return to the SPECIAL menu.

5.2.9. EXIT

Press the SET button in the EXIT menu to save the current settings and exit the SET menu.

Ch6. Troubleshooting

If there are problems in operation, please refer to the items below. If the problem persists, please contact the agent you purchased this product from.

- **Nothing appears on the screen.**
 - ▶ Please check the power connection.
 - ▶ Please check the video signal line connection.
- **The video image is not clear.**
 - ▶ Please check if the lens is clean. Please clean the lens with a clean cloth or brush.
 - ▶ Please adjust the contrast feature of the monitor.
 - ▶ Please make sure that the screen is not exposed directly to a bright light. Please move the camera if necessary.
 - ▶ Please readjust the back focus of the camera.
- **The screen is dark.**
 - ▶ Please adjust the contrast feature of the monitor.
- **There is a problem with the camera operation. The camera surface is too hot and black stripes appear on the screen.**
 - ▶ Please check if an appropriate power source to the camera complies with the manufacturer's standard requirement, or if the voltage keeps changing.
- **The MOTION DETECTION function is not working.**
 - ▶ Please check if 'MOTION DETECTION' mode is turned on.
 - ▶ Please check if the MD LEVEL is too low.
 - ▶ Please check the setting of the MD AREA.
- **Colors are not quite right.**
 - ▶ Please check the 'WHITE BAL' setting.
- **The screen is flickering.**
 - ▶ Please check if the camera is facing directly into sunlight or fluorescent light.
 - ▶ Please check the connection of the lens connector cable.
- **L/L mode isn't able to be selected.**
 - ▶ Have you connected your camera to DC power source? Connect it to AC power source.
 - ▶ Please check the frequency of power supply (60Hz for NTSC, 50Hz for PAL).
- **DAYNIGHT(Auto) mode is not working.**
 - ▶ Please check if the AGC menu is set to the OFF position.
- **SENS-UP function is not working.**
 - ▶ Please check if the AGC menu is set to the OFF position.
 - ▶ Please check if the SHUTTER menu is set to A.FLK mode.
 - ▶ Please check the limit of SENS-UP AUTO mode.
- **Audio is not working**

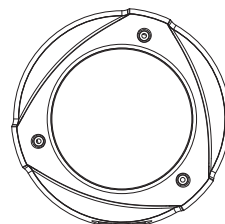
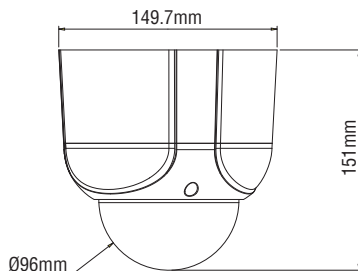
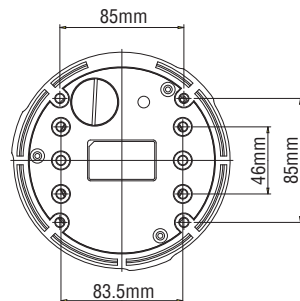
- ▶ Please check the audio is selected from admin page.
 - ▶ Please check speaker volume from the viewer.
 - ▶ In case input sound through microphone at Viewer is not outputted through Audio Out of server, please check whether Audio Out channel is selected at admin page. Or check whether microphone is available at Viewer.
 - ▶ Please check audio driver is working in user's PC.
- **Video is stopped**
 - ▶ Please check whether network cable of SND-460V network camera is correctly connected.
 - ▶ In case user uses hub or IP router, check whether these network equipments are working properly.
 - ▶ Open MS-DOS window and check whether SND-460V network camera is connected to network.
 - **No image from Web Viewer**
 - ▶ Click 'refresh (shortcut; F5)' button at browser to recall the page.
 - ▶ Check whether power of camera and network cable is properly connected.
 - ▶ Check whether computer is connected to network.
 - ▶ If you use hub or router, check whether such equipments are properly operated.
(Note: Open MS-DOS window and enter network ID of camera at ping 192.168.1.100.)
 - ▶ Connect to Admin page to check whether video output is selected.
 - **Image transferred to FTP or by E-mail cannot be viewed**
 - ▶ Video may not be viewed since Divx codec is not installed in user's PC. Divx codec can decode video compressed with MPEG4. Download and install the latest Divx codec, and check video.
<http://www.divx.com/divx/download>
 - **Saved contents is not displayed in the SD memory**
 - ▶ Make sure that you do not take out the memory card while contents are being saved.
 - ▶ Check if the SD memory card is properly inserted.
 - ▶ Check if the capacity on the card is correct on the Record Page.
 - **Product information is not displayed on the local network**
 - ▶ Check if the network cables are properly connected.
 - ▶ Check the status after pressing the RESET switch on the back of the product for five seconds to initialize it.

Model Name	SND-460VN	SND-460VP
CAMERA		
Imaging Device	1/3 inch, Diagonal 6mm Super HAD CCD	
Total Pixels	811(H) x 508(V)	795(H) x 595(V)
Effective Pixels	768(H) x 494(V)	752(H) x 582(V)
Scanning System	2:1 Interlace	
Frequency	H:15.734 KHz / V:59.94 Hz	H: 15.625 KHz / V : 50.00 Hz
Horizontal Resolution	Color : 580 TV Lines (Min.), BW: 700 TV Lines (Min.)	
Min. Illumination	Color : 0.15 Lux (50 IRE @ F1.2), 0.0006 Lux (Sens-up, 256X) B/W : 0.001Lux (50 IRE @ F1.2), 0.000004 Lux (Sens-up,256x)	
S/N (Y signal)	52 dB	
OSD	ENGLISH/KOREAN/JAPANESE/ SPANISH/FRENCH	ENGLISH/CHINESE/SPANISH/ FRENCH/ITALIAN/GERMANY
Camera Title	On/Off	
Day & Night	Auto (ICR) / Color / BW	
Backlight Compensation	BLC / HLC / Off	
Motion Detection	On/Off (Output via communication)	
DIS	On/Off	
Privacy Masking	On / Off (8 Programmable zones)	
SSNR	On (Level adjustable)	
Sens-up	Auto / Off (Selectable limit ~ X256)	
Gain Control	High / Low / Off	
White Balance	ATW / AWC / Manual / Indoor/ Outdoor	
Electronic shutter speed	Auto (NTSC : 1/60~1/120,000sec, PAL : 1/50~1/120,000sec) / Manual / A.FLK	
IRIS	DC Only	
LENS		
Electronic shutter speed	x3.6 Vari-focal Lens (F1.2 F2.8~10.0mm)	
Lens angle of view	H:94.4~28 / V:69.2~21	
Monitoring Angle	PAN	Manual 0° ~ 340°
	TILT	Manual 0° ~ 146°

Specifications

Model Name		SND-460VN	SND-460VP
NETWORK			
Video Encoding	Resolution	704x480(D1), 352x240(CIF), 176x120(QCIF)	704x576(D1), 352x288(CIF), 176x144(QCIF)
	Compression	MPEG-4/JPEG Dual CODEC with transcoder	
	Encode Rate	Up to 30fps @ 704x480	Up to 25fps @ 704x576
Audio Encoding	Compression	ADPCM, 8KHz	
	Transmission speed	Up to 100Mbps	
Network	Remote users Maximum	20 simultaneously	
	Protocol support	RTP/UDP, RTP/Multicast, RTSP, TCP/IP, DHCP, DNS, DDNS, HTTP, SMTP, FTP, PPPoE and NTP	
	Remote notification	Via E-mail or oneshot FTP, continuous FTP transmission	
	Video Analytics	Missing object detection(Appear/Disappear)	
Security	Password Protection	5 User Level	
INTERFACE			
Monitor	Output	1 BNC (580 TVL, For Installation)	
	Input	1 Phone Jack, Line in (1Vpp) / MIC in (2K ohm)	
Audio	Output	1 Phone Jack, Line out (1Vpp)	
	Inputs	Terminal 1 input, NO/NC	
	Outputs	Terminal 1 output, NO/NC	
Alarm	Ethernet	RJ-45 10/100 Base-T	
	Outputs	Terminal 1 output, NO/NC	
Connections	Ethernet	RJ-45 10/100 Base-T	
Storage	SD(SDHC) Memory	Stored event image, Back-up 128MB,256MB,512MB,1GB,2GB SD memory card, 4GB SDHC memory card	
S/W			
Install program	Provided		
IP installer	Provided		
Dedicated viewer	Provided		
ActiveX controller for Web server	Provided		
GENERAL			
Input Voltage	Dual (12V DC/ 24V AC), PoE (IEEE 802.3af)		
Power Consumption	Max. 8.5W		
Operating Temperature/Humidity	-10°C ~ +50°C / 30% ~ 80%RH		
Dimension(WxHxD)	Ø : 150mm, H : 151mm		
Weight	1.8 Kg(4 lb)		

Dimension



MEMO

MEMO

SAMSUNG TECHWIN

The Samsung logo, consisting of the word "SAMSUNG" in a bold, sans-serif font, enclosed within a black, horizontally-oriented oval.

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Firmware Version : 1.2.0
P/No. : Z6806-0970-01B
VAN 09. 07