

SAMSUNG TECHWIN

High Resolution Zoom Color Camera

User Manual

SCZ-2273

SCZ-2373



SAMSUNG




High Resolution Zoom Color Camera

User Manual

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Warranty

If the product does not operate properly in normal conditions, please let us know. Samsung Techwin will resolve the problem for free of charge. The warranty period is 3 years. However, the followings are excluded:

- If the system behaves abnormally because you run a program irrelevant to the system operation.
- Deteriorated performance or natural worn-out in process of time

❖ Design and specifications are subject to change without prior notice.

Before operating the camera, confirm the camera model and correct input power voltage.
To help you understand this manual thoroughly, we'll introduce our model description.

■ SCZ-2273/2373 SERIES

- NTSC MODEL
SCZ-2273/2373N
- PAL MODEL
SCZ-2273/2373P

■ MODEL DESCRIPTION

- SCZ-2273/2373X



- SIGNAL SYSTEM
N → NTSC MODEL
P → PAL MODEL

safety information



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.



This symbol indicates that dangerous voltage consisting a risk of electric shock is present within this unit.



This exclamation point symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING

- To prevent damage which may result in fire or electric shock hazard, do not expose this appliance to rain or moisture.
- To prevent injury, this apparatus must be securely attached to the floor/wall in accordance with the installation instructions.

WARNING

1. Be sure to use only the standard adapter that is specified in the specification sheet. Using any other adapter could cause fire, electrical shock, or damage to the product.
2. Incorrectly connecting the power supply or replacing battery may cause explosion, fire, electric shock, or damage to the product.
3. Do not connect multiple cameras to a single adapter. Exceeding the capacity may cause abnormal heat generation or fire.
4. Securely plug the power cord into the power receptacle. insecure connection may cause fire.
5. When installing the camera, fasten it securely and firmly. The fall of camera may cause personal injury.

6. Do not place conductive objects (e.g. screwdrivers, coins, metal parts, etc.) or containers filled with water on top of the camera. doing so may cause personal injury due to fire, electric shock, or falling objects.
7. Do not install the unit in humid, dusty, or sooty locations. doing so may cause fire or electric shock.
8. If any unusual smells or smoke come from the unit, stop using the product. in such case, immediately disconnect the power source and contact the service center. continued use in such a condition may cause fire or electric shock.
9. If this product fails to operate normally, contact the nearest service center. never disassemble or modify this product in any way. (samsung is not liable for problems caused by unauthorized modifications or attempted repair.)
10. When cleaning, do not spray water directly onto parts of the product. doing so may cause fire or electric shock.

CAUTION

1. Do not drop objects on the product or apply strong shock to it. Keep away from a location subject to excessive vibration or magnetic interference.
2. Do not install in a location subject to high temperature (over 55°C), low temperature (below -10°C), or high humidity. Doing so may cause fire or electric shock.
3. If you want to relocate the already installed product, be sure to turn off the power and then move or reinstall it.
4. Remove the power plug from the outlet when there is a lightning. Neglecting to do so may cause fire or damage to the product.
5. Keep out of direct sunlight and heat radiation sources. It may cause fire.
6. Install it in a place with good ventilation.
7. Avoid aiming the camera directly towards extremely bright objects such as sun, as this may damage the CCD image sensor.
8. Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.
9. The Mains plug is used as a disconnect device and shall stay readily operable at any time.
10. Do not expose the camera to radioactivity. Radioactivity exposure may damage the CCD.

safety information

FCC STATEMENT

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions :

- 1) This device may not cause harmful interference, and
- 2) This device must accept any interference received including interference that may cause undesired operation.

CAUTION

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of 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.



IC Compliance Notice

This Class A digital apparatus meets all requirements of the Canadian Interference.-Causing Equipment Regulations of ICES-003.



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

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

This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. charger, headset, USB cable) should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them 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 these items for environmentally safe recycling.

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



Correct disposal of batteries in this product

(Applicable in the European Union and other European countries with separate battery return systems.)

This marking on the battery, manual or packaging indicates that the batteries in this product should not be disposed of with other household waste at the end of their working life. Where marked, the chemical symbols Hg, Cd or Pb indicate that the battery contains mercury, cadmium or lead above the reference levels in EC Directive 2006/66. If batteries are not properly disposed of, these substances can cause harm to human health or the environment.

To protect natural resources and to promote material reuse, please separate batteries from other types of waste and recycle them through your local, free battery return system.

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, 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 is 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 cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus.
13. Unplug this apparatus when a card is used. Use caution when moving the cart/ apparatus combination to avoid injury from tip-over.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as powersupply 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.



Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus



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.

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Command Description

FEATURES

- **37x/27x Optical Zoom**

The built-in SCZ-2373(37x)/2273(27x) optical zoom lens is a highly durable component. It features auto focus, auto iris, and zoom functions.

- **High Resolution**

By adopting a diagonal 6mm (1/3") 520,000 pixel (NTSC), 610,000 pixel (PAL) Sony 960H Exview HAD CCD II, the camera produces clear picture quality with a horizontal resolution of 680TV lines in ER mode .

- **SSNR 3 (Samsung Super Noise Reduction)**

The high-performance SV-V DSP chip effectively removes low-light gain noise and ghosting to provide clear images even in dark environments.

- **DIS (Digital Image Stabilizer)**

Digital image stabilization compensates camera shakings for enhanced image capture.

- **SSDR (Samsung Super Dynamic Range)**

For images with high contrast between bright and dark areas from difficult lighting conditions such as backlighting, this camera selectively illuminates darker areas while retaining the same light level for brighter areas to even out the overall brightness.

- **DAY&NIGHT(ICR)**

This camera has a function that automatically selects the mode that is appropriate for daytime or night-time conditions. The COLOR mode operates in daytime conditions to provide optimum colors, and BW mode operates in night-time conditions to enhance the definition of the image.

- **Motion Detection**

Since the camera detects motion without any additional external sensor, you can monitor activity more efficient.

- **Miscellaneous Functions**

HLC(High Light Compensation), SENS-UP, FLIP(H/V-REV), D-ZOOM, SHARPNESS, MOTION DETECTION and PRIVACY functions are provided.

- **Communication**

RS-485, Coaxial communication methods are supported.

- RS-485 Communications

- : SAMSUNG-T, SAMSUNG-E, Pelco-P, Pelco-D, Panasonic, Bosch, Honeywell, AD, Vicon.

- Coaxial Communications

- : Pelco Coaxitron

introduction

- **OSD**

The camera's OSD is complimented by 18 foreign languages.

- NTSC : Korean, English, French, Spanish, Japanese, Portuguese
- PAL : English, French, German, Spanish, Italian, Chinese, Russian, Czech, Polish, Portuguese, Romanian, Serbian, Swedish, Danish, Turkish

WHAT'S INCLUDED



Main Body



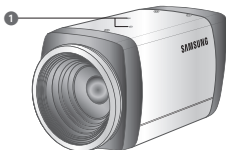
Quick Manual



8-PIN CABLE ASSY

COMPONENT NAMES AND FUNCTIONS

TOP



BOTTOM

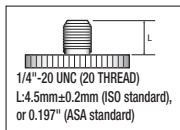


1 Tripod Mounting Bracket Screw Hole

Used to fix tripod mounting bracket on top of the camera.

2 Tripod Mounting Hole

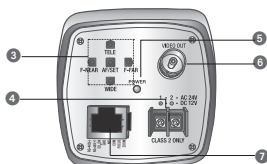
Used to install the camera on an optional tripod.
The tripod must be equipped with screws with specifications shown on the right.



- Attach the bracket to the top of the camera. Use screws included in the package or their equivalent (less than 6mm). Otherwise, the bracket may not assemble to the camera properly.



BOTTOM VIEW



3 Key Buttons

- Following buttons control zoom, focus, and auto focus functions.

WIDE button : To widen the view. (ZOOM OUT)
TELE button : To close in on a far object. (ZOOM IN)
F-NEAR button : To see a near object clearly.
F-FAR button : To see a far object clearly.

Pressing the 'SET' button locks the zoom control function of these buttons and prompts the main setup menu.

- Main setup menu can be navigated using these buttons.

SET : To access the main setup menu.
UP (TELE button) : To move the arrow indicator to up.
DOWN (WIDE button) : To move the arrow indicator to down.
LEFT (F-NEAR button) : To move the arrow indicator to left.
RIGHT (F-FAR button) : To move the arrow indicator to right.

4 Power Input Terminal

Power supply terminal (DC12V \pm 10%/AC24V \pm 10%)

5 Power LED

Illuminates when power is supplied.

6 Video Output Jack

Used to connect an external video monitor in jack.

7 RJ-45 JACK

Terminals, such as RS-485 communications, MD OUT, ZOOM, and FOCUS, EX_DN are areincluded.

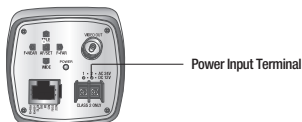
CONNECTING TO MONITOR

Connect Video Out Jack to the monitor's Video In jack as shown below.



- Connection methods may vary depending on the video equipment. Please refer to the model specific instruction manual.
- Connect cables with the unit powered down.

CONNECTING TO POWER



DC 12V, 500mA / AC24V, 500mA



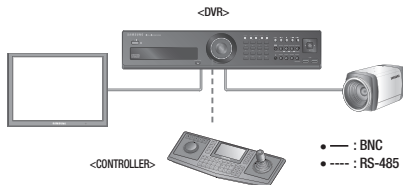
- Use of an excessively long adaptor output line for connection to the camera may affect the performance of the camera.
- Standard voltage for camera operation : DC12V \pm 10% / AC 24V \pm 10%
- The wire is polarized. Match '+' and '-' terminals properly.

USING COAXIAL COMMUNICATIONS

The camera can be controlled by using external controllers like a Remote controller. (RS-485 Communication)

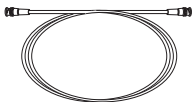
- Coaxial Communications System
- OSD Control method
- If you set the sensitivity level of the sub menu item (of COAX) to "Low", you have to press the MENU/ENTER (OSD KEY) button twice in a row to access the OSD menu. (To prevent an error by noise from the DVR)

CAMERA	DVR	CONTROLLER
SET	MENU/ENTER	OSD KEY
UP	UP KEY	JOYSTICK UP
DOWN	DOWN KEY	JOYSTICK DOWN
LEFT	LEFT KEY	JOYSTICK LEFT
RIGHT	RIGHT KEY	JOYSTICK RIGHT



• Video Cable

The camera's video output port is connected to the monitor with a BNC coaxial cable, shown below : If the distance between the camera and the monitor exceeds the recommended maximum, please use an auxiliary video amp.



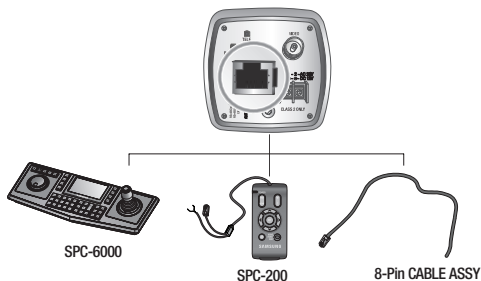
Distance	Recommended Cable Specification
300m	3C2V(RG-59/U)
450m	5C2V(RG-6/U)
600m	7C2V(RG-11/U)



- It is recommended that pure copper coax cable is used and not copper coated steel, as this will cause issues with the communication over the coaxial cable.

CONNECTING TO 8P CONTROL TERMINAL






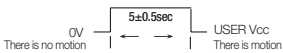
The camera can be controlled by using external controllers like a Remote controller. (RS-485 Communication)



* 8P Control Terminal Configuration

Name	Cable color	Description	Name	Cable color	Description
ZOOM	ORANGE	-	GND	BLUE	-
FOCUS	WHITE/ORANGE		EX DN	WHITE/BLUE	External D/N
COM	GREEN		485+	BROWN	RS-485 communication
MD OUT	WHITE/GREEN		485-	WHITE/BROWN	RS-485 communication

connection

Connector	Function	Signal Level	I/O
ZOOM	Tele	 +6V ~ +12V COM	I
	Wide	 COM -6V ~ -12V	
FOCUS	Far	 +6V ~ +12V COM	I
	Near	 COM -6V ~ -12V	
COM		 COM	-
MD		 5±0.5sec 0V There is no motion USER Vcc There is motion	O
EX DN		DAY mode : D&N terminals must be OPEN to external signals. (Do not input voltage) NIGHT mode : D&N terminal must be connected to the ground	I



- MD(Motion Detection) Output format is open collector.
- When using the MD function, the 'GND' should be connected to the frame ground.
- Do not simultaneously connect the RS-485 (+) (-) communication line when you use voltage control ZOOM and FOCUS, using the RECEIVER BOX (SRX-100B).

* Match the communication setup between devices when you use the wired controller (SPC-200) or SPC-6000.

ITEM	SPC-200	SPC-6000(Factory Default)
MODE	Serial	Serial
Data Bit	8 bit	8 bit
Bit/Sec	9600bps	9600bps
Parity	EVEN	NONE
CAM ID NO.	0	1~255
RETURN PACKET	ENABLE	See the SPC-6000 manual



- Contact an authorized technician for inspection.

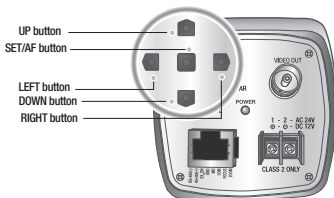
MENU CONFIGURATION

MAIN SETUP MENU			
SSDR	● ON	● OFF	
WHITE BAL	● ATW ● OUTDOOR	● MANUAL ● INDOOR	● AWC→SET ● MERCURY
BACKLIGHT	● OFF	● BLC	● HLC
MOTION DET	● OFF	● ON	
FOCUS _← ↓	● MODE ● D-ZOOM ● LENS INIT	● ZOOM TRACK ● ZOOM POS INIT ● RETURN	● ZOOM SPEED ● USER PRESET
EXPOSURE _← ↓	● BRIGHTNESS ● AGC ● RETURN	● IRIS ● SSNR3	● SHUTTER ● SENS-UP
SPECIAL _← ↓	● PRIVACY ● SYNC ● DISPLAY	● DAY/NIGHT ● COMM ADJ ● RETURN	● DIS ● IMAGE ADJ
RESET			
EXIT			

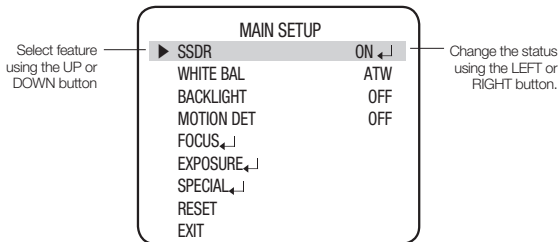
camera operation

MENU SETUP

Use the five buttons on back of the camera.



1. Press the SET button for 2 seconds. (Short-pressing the button activates the AUTO FOCUS).
 - Main setup menu is displayed on the monitor screen.



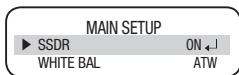
2. Select the desired feature using the UP or DOWN button.
 - Each pressing of the UP or DOWN button moves the indicator to the next or previous feature.
 - Move the arrow indicator to the desired feature item.
3. Change the status of the selected feature using the LEFT or RIGHT button.
4. When completed, move the arrow indicator to 'EXIT' and press the SET button.



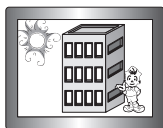
- Features marked with a ◀ have an accessible submenu.
- Access the submenu by pressing the SET button.

SSDR (SAMSUNG SUPER DYNAMIC RANGE)

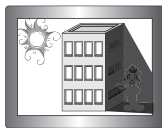
SSDR illuminates darker spots of an image while retaining the same light level for brighter spots to even out the overall brightness of images with high contrast between bright and dark spots



1. When the SETUP menu screen is displayed, select 'SSDR' by using the button so that the arrow indicates 'SSDR'.
2. Use the button to change the SSDR level according to the contrast between bright and dark areas.



SSDR ON

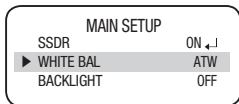


SSDR OFF

WHITE BAL (WHITE BALANCE)

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.



camera operation

※ Select one of the following 6 modes, as appropriate for your purpose.

- **ATW** : Select this when the color temperature is between 1,800°K and 10,500°K.
- **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 Function Setup switch.
- **AWC→SET** : To find the optimal luminance level for the current environment, point the camera towards a sheet of white paper and press the Function Setup switch. If the environment changes, readjust it.
- **OUTDOOR** : Select this when the color temperature is between 1,700°K and 11,000°K. (sodium light inclusion)
- **INDOOR** : Select this when the color temperature is between 4,500°K and 8,500°K.
- **MERCURY** : This is an auto compensation function that optimizes camera colors for the environments such as mercury lamps. (Color temperature : 2400°K~11000°K)



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

- ① When the color temperature of the environment surrounding the subject is out of the control range (e.g. clear sky or sunset).
- ② When the ambient illumination of the subject is dim.
- ③ 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.

BACKLIGHT

Unlike conventional cameras, the SCZ-2373/2273 is designed to deliver a distinctive subject and background at the same time, even when the subject is backlight, by using the features of the proprietary SV-V DSP chip.

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

MAIN SETUP	
SSDR	ON ◀▶
WHITE BAL	ATW
▶ BACKLIGHT	OFF
MOTION DET	OFF

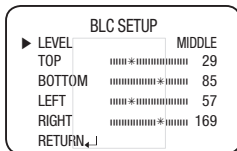
- Select a desired mode using the Left and Right buttons depending on the camera purpose.

- **OFF** : Cancels the BLC function.

- **BLC** :

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

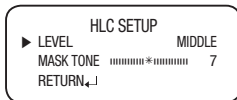
- **LEVEL** : You can adjust the brightness of the monitoring area.
- **UP/DOWN/LEFT/RIGHT** : You can adjust the position of the monitoring area.



- **HLC (HIGH LIGHT COMPENSATION)** :

If the scene contains extremely bright light areas such as; from car headlight, the light can mask out much of the on-screen detail.

- **LEVEL** : Adjust level of the HLC function.(LOW,MIDDLE,HIGH)
- **MASK TONE** : Change the brightness
- **LIMIT** : Enable to change the operating condition.



- Since the following symptoms may occur according to the ambient illumination when BLC is selected, set it to OFF.
 - ① Color or screen changes unnaturally.
 - ② Noise appears in the bright part of the screen.
- Since the performance of the BLC function may be affected by the area of the bright part of the screen, optimize the installation angle for the best BLC performance.
- If you increase LIMIT, the screen display may be distorted.
- For high performance of BLC function, We recommend that you set IRIS to AUTO in the EXPOSURE setup.
- Activating BLC may cause the camera to repeat the Auto Focus operation depending on lighting conditions. It is recommended that you use the Focus Setup menu in One-Push or Manual mode.
- Smart Zoom and BLC cannot be used in conjunction with each other.
- Setting up Smart Zoom and then BLC automatically cancels Smart Zoom.
- For effective viewing of license plates, there is a minimum required illumination and the shutter speed needs to be faster than 1/200sec.
- 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.
- When dark, the HLC is only activated when a bright light exceeding a specific size. (In NIGHT ONLY mode.)
- The HLC is not activated in day light or when bright light is not present at night. (In NIGHT ONLY mode.)

MOTION DETECTION

The camera detects an object's movement by sensing disparity of outline, brightness levels and color. The camera sends a detection signal out via the MD output terminal and will zoom into a pre-determined point.

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

2. Please press the SETUP button.

- OFF : MOTION DETECTION mode is cancelled.
- ON : Any motion in the selected areas is observed.
 - DETECT BOX : Outlines an object on the screen in a box when its movement matches a custom Motion Type.
 - ALARM OUT : Releases a signal from the MD Output Port on the back of the camera when an object's movement matches a custom Motion Type.

- SMART ZOOM :

Smart zoom is operated in connection with MOTION DETECTION. When the SMART ZOOM function is 'ON' while the MOTION DETECTION mode is 'ON', the zoom goes to the TARGET ZOOM position once motion is detected. Once the zoom action is finished and 'DWELL TIME' has passed, the zoom returns to the 'START ZOOM' position.

- ▶ START ZOOM : By moving the left or right button in the 'START ZOOM' item to select the zoom position from 1x to 37x/27x to be returned after the 'SMART ZOOM' action is over.
- ▶ TARGET ZOOM : Use the left or right button in the 'TARGET ZOOM' item to select the zoom position from 1x to 37x/27x to be used during MOTION DETECTION.
- ▶ DWELL TIME : Use the left or right button in the 'DWELL TIME' item to select a time between 5 and 60 seconds for the dwell time before the zoom is returned to the 'START ZOOM' position. (5,7,10,15,20,30,40,60 sec)

MAIN SETUP

SSDR	ON ◀▶
WHITE BAL	ATW
BACKLIGHT	OFF
▶ MOTION DET	OFF
FOCUS◀▶	
EXPOSURE◀▶	

MD SETUP

▶ DETECT BOX	ON
ALARM OUT	ON
SMART ZOOM	OFF
DETECT AREA◀▶	
MASK AREA ◀▶	
SENSITIVITY	* 3
DET. SIZE◀▶	
RETURN◀▶	

SMART ZOOM SETUP

▶ START ZOOM	x1
TARGET ZOOM	x5
DWELL TIME	5 SEC
RETURN◀▶	

- **DETECT AREA** : Motion Detection and tracking will only occur within this defined area. (Full Screen is defined as factory default).

DETECT AREA		
▶ TOP	*■■■■■■■■	1
BOTTOM	■■■■■■■■*	50
LEFT	*■■■■■■■■	1
RIGHT	■■■■■■■■*	50
RETURN	←	

- **MASK AREA** : Specify a detection exception area to mask. Select a mask area number and specify the size and position.

- ▶ **AREA** : You can select up to 4 areas.
- ▶ **MODE** : Determines whether to use the area selected in the AREA.
- ▶ **TOP / BOTTOM / LEFT / RIGHT** :

Adjust the size and position of the selected area.

MASK AREA		
▶ AREA		AREA1
MODE		OFF
TOP	■■■*■■■■■■	15
BOTTOM	■■■■*■■■■	25
LEFT	■■■*■■■■	15
RIGHT	■■■■*■■■	25
RETURN	←	

- **SENSITIVITY** : Set the sensitivity of the motion detection. When you adjust the lower level, the more sensitive.
- **DET. SIZE** : Selects an object size to detect on the screen. When you adjust higher levels, the more larger size.
- **RETURN** : Return to the SPECIAL menu.



■ Tips on Using the Motion Detection Feature

- The feature may not function properly under flickering light conditions.
- The camera interprets sudden changes in lighting and subsequent change in brightness of an object as motion.
- With the feature enabled, other algorithms may require additional time to operate.
- This system does not guarantee prevention of fire or theft. The manufacturer shall not be held responsible for any accident or damage incurred.

camera operation

FOCUS

1. Press the SET button to access the main setup menu and then position the indicator over FOCUS using the UP or DOWN button.
2. Press the SET button.
 - **MODE** : You can select the most suitable zoom mode. Move the arrow indicator to 'MODE' using UP or DOWN button.

MAIN SETUP	
SSDR	ON ↵
WHITE BAL	ATW
BACKLIGHT	OFF
MOTION DET	OFF
▶ FOCUS ↵	
EXPOSURE ↵	

FOCUS SETUP	
▶ MODE	ONE-PUSH ↵
ZOOM TRACK	AUTO TRACK
ZOOM SPEED	FAST
D-ZOOM	OFF
ZOOM POS INIT	AUTO
USER PRESET	OFF
LENS INIT	MANUAL ↵
RETURN ↵	

- ONE-PUSH :

Focus is automatically adjusted just once, after zoom position is changed. Select 'ONE PUSH' and the SET button to confirm. Increase or decrease optical zoom (ZOOM) or digital zoom (D-ZOOM) positions using the directional buttons while verifying the changes on screen. Press the SET button once the desired image quality is obtained.

ZOOM/FOCUS POS SETUP	
↑ : TELE ↓ : WIDE	
← : NEAR → : FAR	

- AUTO :

Select AUTO and press the SET button to confirm. Increase or decrease optical zoom (ZOOM) or digital zoom (D-ZOOM) positions using the UP or DOWN button while verifying the changes on screen. Enabling D-ZOOM (ON) means that digital zoom will activate once optical zoom ends. The focus automatically adjusts when the lens zooms in and out.

ZOOM POS SETUP	
↑ : TELE ↓ : WIDE	

- **MANUAL :**

Select 'MANUAL' and press the SET button to confirm. Increase or decrease optical zoom (ZOOM) or digital zoom (D-ZOOM) positions moving directional buttons while verifying the changes on screen. Press the SET button once desired image quality is obtained. Focus can be manually adjusted, independent of moving zoom.

ZOOM/FOCUS POS SETUP

↑ : TELE ↓ : WIDE
← : NEAR → : FAR

● **ZOOM TRACK :**

Select 'ON' for the 'SMART ZOOM' item in the MOTION DETECTION menu and press SET button to change the settings for the 'SMART ZOOM' function. Use the left or right button in the 'ZOOM' item to select 'AUTOTRACK' or 'TRACK' and press SET button to activate the zoom action focus function.

FOCUS SETUP

MODE	AUTO↔
▶ ZOOM TRACK	AUTO TRACK
ZOOM SPEED	FAST

- AUTO TRACK : Zooming in while deciding or adjusting the status of the focus.
- TRACK : The camera moves the focus track which is established.
- OFF : Only the zoom lens moves.

● **ZOOM SPEED :**

Configure zoom tracing speed using this feature. Position the indicator over 'ZOOM SPEED' using the UP or DOWN button and then set to desired mode using the LEFT or RIGHT button.

FOCUS SETUP

MODE	AUTO↔
ZOOM TRACK	AUTO TRACK
▶ ZOOM SPEED	FAST
D-ZOOM	OFF

- FAST : To move zoom fast.
- SLOW : To move zoom slowly.
- MEDIUM : To move zoom at medium speed.

● **D-ZOOM :**

Configure magnification limit from x2~x16 using this feature. Position the indicator over 'D-ZOOM' using the UP or DOWN button Set 'D-ZOOM' to 'ON' and press the SET button to confirm.

FOCUS SETUP

MODE	AUTO↔
ZOOM TRACK	AUTO TRACK
ZOOM SPEED	FAST
▶ D-ZOOM	OFF
ZOOM POS INIT	OFF

- Set 'ZOOM LIMIT' to the desired level using the LEFT or RIGHT button.

D-ZOOM LIMIT SETUP

▶ LIMIT	X2
RETURN↔	



- When the DIS is enabled, you cannot use the D-ZOOM.

- **ZOOM POS INIT :**

Moves to the controlled ZOOM position when the power is turned on and the initial ZOOM position has been set.

- **AUTO :** If you turn the power off and on, the zoom magnification level is set to the previous level that was set before the power went off.
- **MANUAL :** The zoom magnification level can be set from 1x to 37x/27x.

FOCUS SETUP	
MODE	AUTO↵
ZOOM TRACK	AUTO TRACK
ZOOM SPEED	FAST
D-ZOOM	OFF
▶ ZOOM POS INIT	OFF
USER PRESET	OFF

ZOOM INIT POS SETUP	
▶ POS INIT	x1
RETURN↵	



- The zoom position is saved after 5 seconds when you set zoom function.

- **USER PRESET :**

Preset user-designated configurations using this feature. Position the indicator over 'USER PRESET' using the UP or DOWN button and then set to 'ON' using the LEFT or RIGHT button. Press the SET button to confirm.

- **PRESET NO :**
Up to 128 preset configurations are supported.
- **PRESET SAVE :** Save configured preset.
- **PRESET CLEAR :** Clear configured preset.
- **RETURN :** Revert to the FOCUS SETUP menu.

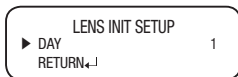
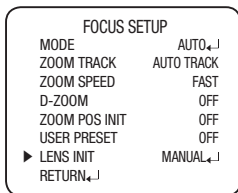
FOCUS SETUP	
MODE	AUTO↵
ZOOM TRACK	AUTO TRACK
ZOOM SPEED	FAST
D-ZOOM	OFF
ZOOM POS INIT	OFF
▶ USER PRESET	OFF
LENS INIT	MANUAL↵

USER PRESET SETUP	
▶ PRESET NO	* 1
PRESET SAVE	
PRESET CLEAR	
RETURN↵	
PRESET NOT DEFINED	

- **LENS INIT :**

Use the left or right button in the 'Lens initialization' item select 'Automatic' or 'Manual' and then press the SET button.

- **AUTO :** The lens can automatically be set by a pre-selected day, from 1-day to 7-days. This will start from when the time is set.
- **Manual :** The Lens will reset when you press the SET button.



- **RETURN :** Save the current settings and return to the parent menu (MAIN SETUP).

EXPOSURE

From the Main Setup menu, select EXPOSURE and press SET. You can now change the exposure setting.

1. Press the SET button to access the main setup menu and then position the indicator over FOCUS using the UP or DOWN button.
2. Press the SET button.

- **BRIGHTNESS :**

Use this feature to adjust image brightness. Position the indicator over 'BRIGHTNESS' using the UP or DOWN button. Then increase or decrease brightness level using the LEFT or RIGHT button while verifying the changes on screen. Set END once desired level is obtained.

- **IRIS :** Set 'IRIS' to 'AUTO' or 'MANUAL'.

Position the indicator over 'IRIS' using the UP or DOWN button and then select the desired iris mode using the LEFT or RIGHT button.

- **AUTO:** The iris is automatically activated upon illumination.
- **MANUAL :** Manual iris configuration. Set 'IRIS' to 'MANUAL' using the LEFT or RIGHT button and then press the SET button. Increase or decrease iris level using the LEFT or RIGHT button while verifying the changes on screen.

- **SHUTTER :** Control image brightness by adjusting shutter speed.

- 1 Position the indicator over 'SHUTTER' using the UP or DOWN button. Then select the desired shutter mode (A.FLK, ESC, MANUAL) using the LEFT or RIGHT button.

MAIN SETUP

SSDR	ON ↵
WHITE BAL	ATW
BACKLIGHT	OFF
MOTION DET	OFF
FOCUS ↵	
▶ EXPOSURE ↵	
SPECIAL ↵	

EXPOSURE SETUP

▶ BRIGHTNESS	***** 50
IRIS	AUTO
SHUTTER	---
AGC	HIGH
SSNR3	MEDIUM
SENS-UP	OFF
RETURN ↵	

IRIS MANUAL SETUP

▶ IRIS F-No	F1.6
RETURN ↵	

EXPOSURE SETUP

BRIGHTNESS	***** 50
IRIS	AUTO
▶ SHUTTER	---
AGC	HIGH
SSNR3	MEDIUM
SENS-UP	OFF
RETURN ↵	

- MANUAL : Manual shutter speed setting.
- A.FLK (NTSC: 1/100, PAL: 1/120) : Flicker-free mode.
- ESC : Automatic shutter speed setting (optimal).
Auto operation is possible only when the IRIS is set to MANUAL.

2 If you choose 'MANUAL', select the optimal shutter speed.

- In MANUAL mode, the optimal shutter speed needs to be designated. Select from 1/60(PAL:1/50) to 1/120,000. 'Sens-Up' mode can be configured manually (2x to 512x).

SHUTTER MANUAL SETUP

► MANUAL 1/500
RETURN

3 Press the SET button to complete.



- Image may become unstable if the camera is set to 'ESC' mode and faces a strong fluorescent light.
- In case the shutter is set to Low Speed in a bright environment, saturation may occur.

• AGC (Auto Gain Control): For brighter images.

- 1 Position the indicator over 'AGC' using the UP or DOWN button.
- 2 Set 'AGC' to the desired mode using the LEFT or RIGHT button.

- HIGH : Wide range gain value adjustment
- MANUAL : Selecting gain value range. (6dB ~ 42dB)
- OFF : Disabled
- LOW : Narrow range gain value adjustment
- MEDIUM : MEDIUM range gain value adjustment

EXPOSURE SETUP

BRIGHTNESS ***** 50
IRIS AUTO
SHUTTER ---
► AGC HIGH
SSNR3 MEDIUM
SENS-UP OFF

GAIN MANUAL SETUP

► AGC VAL 6dB
RETURN

- **SSNR(Samsung Super Noise Reduction):** On screen noise reduction.

- ① Position the indicator over 'SSNR' using the UP or DOWN button.
- ② Set 'SSNR' to the desired mode using the LEFT or RIGHT button.
 - LOW: Low noise reduction
 - MEDIUM: Medium noise reduction
 - HIGH: High noise reduction
 - OFF: Disabled

EXPOSURE SETUP	
BRIGHTNESS	■■■■■*■■■■■■ 50
IRIS	AUTO
SHUTTER	---
AGC	HIGH
▶ SSNR3	MEDIUM
SENS-UP	OFF



- Changing the 'AGC' setting from LOW to HIGH results in greater sensitivity, as well as on screen noise.
- Setting 'AGC' to OFF locks 'SSNR3' configuration.

- **SENS-UP** : This feature ensures clear images at night or under low light conditions.

- ① Position the indicator over 'SENS-UP' using the UP or DOWN button.
- ② Set 'SENS-UP' to the desired mode using the LEFT or RIGHT button.
 - AUTO : Select this mode for use in night time or under low light conditions.
 - OFF : Disabled

SENS-UP LIMIT SETUP	
▶ LIMIT	X2
RETURN_4_↓	



- Once 'AUTO' mode is set, the user can configure the SENS-UP limit by increasing/decreasing the shutter speed (e.g.: X2, X4..... X32, X64, X128, X256, X512).
- Enabling Sens-Up increases camera sensitivity and may result in additional noise and/or other phenomenons. This is normal.

- **RETURN** : To revert to the main setup menu.

SPECIAL

1. Press the SET button to access the main setup menu and then position the indicator over 'SPECIAL' using the UP or DOWN button.

MAIN SETUP	
SSDR	ON ↵
WHITE BAL	ATW
BACKLIGHT	OFF
MOTION DET	OFF
FOCUS ↵	
EXPOSURE ↵	
▶ SPECIAL ↵	
RESET	

2. Press the SET button to confirm.

- **PRIVACY** : Hide the area that you want not to be displayed on the screen.

- ① When the SPECIAL menu screen is displayed, using the UP or DOWN button so that the arrow indicates 'PRIVACY'.
- ② Set up the mode using the 4 direction buttons.
 - AREA : You can select up to 12 areas.
 - MODE : Determines whether to use the area selected in the AREA SEL.
 - MASK COLOR : Determine area color. You can select Green, Red, Blue, Black, White, Gray.
 - TRANSPARENCY : Specify the use of transparency on the selected area.
 - SEL POS/X POS/Y POS : Changes the position of the selected area.
 - RETURN : Return to the SPECIAL SETUP menu.

SPECIAL SETUP	
▶ PRIVACY	OFF
DAY/NIGHT	AUTO ↵

PRIVACY AREA SETUP	
▶ AREA	AREA 1
MODE	OFF
MASK COLOR	GREEN
TRANSPARENCY	OFF
SEL POS	L-TOP
X POS	* 0000000000 10
Y POS	* 0000000000 10
RETURN ↵	

- **DAY/NIGHT** : You can display pictures in color or black and white.

- ① When the SETUP menu screen is displayed, select 'DAY/NIGHT' using the UP or DOWN button so that the arrow indicates 'DAY/NIGHT'.
- ② Select a desired mode using the LEFT or RIGHT button according to the picture display you want.

SPECIAL SETUP	
PRIVACY	OFF
▶ DAY/NIGHT	AUTO ↵
DIS	OFF
SYNC	INT

- 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.

DAY/NIGHT AUTO SETUP

- ▶ DWELL TIME 5 SEC
- DURATION SLOW
- RETURN_↓

- COLOR: The picture is always displayed in color.
- B/W : The picture is always displayed in black and white.

BURST LEVEL SETUP

- ▶ BURST LEVEL [|||||] 50
- RETURN_↓

- ▶ DWELL TIME :
You can select tday/night switching delay time from.
→5,7,10,15,20,30,40, 60(sec)

BURST MODE SETUP

- ▶ BURST MODE ON
- RETURN_↓

- ▶ DURATION : You can select the day/night switching point(lux).

	Color → B/W	B/W → Color
Fast	2.6Lux	4.2Lux
Slow	1.2Lux	6.0Lux

※ When AGC is middle mode.

- EXT : This mode allows you to apply a desired filter to external signals.



- 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.
- The OSD key does not work for 3 seconds when switching to Color or B/W, to ensure stable camera operation.
- The camera may focus less well under infrared illumination than under normal illumination.
- The brightness of illumination is changeable by installed environment.

- **DIS** : The DIS mode can compensate for vibration of the camera

SPECIAL SETUP

PRIVACY	OFF
DAY/NIGHT	AUTO _↕
▶ DIS	OFF
SYNC	INT



- When DIS is operating, D-ZOOM does not operate.

- **SYNC** : Two synchronization modes are available INTERNAL and EXTERNAL LINE-LOCK. In LINE-LOCK mode, it synchronizes the camera's video out signal to the external SYNC signal.

- INT : Internal synchronization

- LL : External line-lock synchronization

▶ If you choose 'LL', you can adjust the desired phase. Press the SET button.

▶ You can adjust the desired phase from 0 to 359.

SPECIAL SETUP

PRIVACY	OFF
DAY/NIGHT	AUTO _↕
DIS	OFF
▶ SYNC	INT

- **COMM ADJ (Communication Adjustment)** :

This function sets up the camera communication status when controlling the camera through an external controlled device.

- 1 When the SPECIAL menu screen is displayed, using the UP or DOWN button so that the arrow indicates 'COMM ADJ'.

- 2 Set up the mode moving the 4 direction of the SET button.

- Protocol : Select the communication PROTOCOL. (SAMSUNG-T, SAMSUNG-E, Pelco-P, Pelco-D, Vicon, Panasonic, Bosch, Honeywell, AD.)

- CAM ID : Determines the camera's identification number (between 0 and 255).

- BAUD RATE : You can select 2400/4800/9600/19200/38400/57600/115200 bps.

- UART MODE : You can select NONE, EVEN or ODD for the parity bits.

COMMUNICATION SETUP

▶ PROTOCOL	SAMSUNG-T
CAM ID	*■■■■■■■■■■ 1
BAUD RATE	9600
UART MODE	8-N-1
RET PKT	DISABLE
COAX	ON _↕
RETURN _↕	

- ▶ **CRT** : Please select this menu item when using a CRT monitor.

CRT MONITOR SETUP

▶ **PED LEVEL** ■■■■*■■■■■■■ 25
COLOR LEVEL ■■■■■*■■■■ 50
RESET
RETURN↵

- ▶ **USER** : Please use this menu item when using a monitor other than standard ones.
 You can change the gamma, PED level, and color gain in the sub menus.

- **RETURN** : Return to the **SPECIAL** menu.

- **DISPLAY**: Use this feature to designate a name for the camera, which will display on the monitor screen.

- CAM TITLE

- 1 Press the **SET** button to display the main setup menu and move the arrow indicator to 'CAM TITLE' using the **UP** or **DOWN** button.
- 2 Set 'CAM TITLE' to 'ON' using the **UP** or **DOWN** button.

DISPLAY SETUP

▶ **CAM TITLE** OFF
CAM ID ON
CAM INFO ON
ZOOM MAG ON
FONT COLOR WHITE
LANGUAGE ENGLISH
RETURN↵



- If the **CAM TITLE** feature is set to 'OFF', the name will not displayed in the monitor

- 3 Press the **SET** button.
- 4 Use the **Setup** button 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.

CAMERA TITLE SETUP

A B C D E F G H I J K L M
 N O P Q R S T U V W X Y Z
 a b c d e f g h i j k l m
 n o p q r s t u v w x y z
 - . 0 1 2 3 4 5 6 7 8 9
 ← → CLR POS END
 █



- **Correcting Mistakes**
 Move the cursor th 'CLR' and press the **SET** button to clear the entire entry. To modify one character, use **LEFT** or **RIGHT** to position the cursor above the character to be modified and click the **SET** button after selecting the character to enter.

- 5 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 moving the 4 direction buttons and press the SET button. When the position is determined, select.



- CAM ID : Displays camera ID on top left corner of the screen.
- CAM INFO : Displays camera information on screen.
- ZOOM MAG : Use this feature to display the current zoom magnification level on screen. Position the indicator over 'ZOOM MAG' using the UP or DOWN button. Then set to ON using the LEFT or RIGHT button.
- FONT COLOR : You can select the font color(white,yellow,green,red,blue)
- LANGUAGE : You can select the menu language according to your requirements.
- RETURN : Select this to save the SPECIAL menu settings and return to the SPECIAL menu.

RESET

Resets the camera settings to the factory defaults. Communication, Language and Monitor settings are not initialized.

EXIT

To finish setup menu.

TROUBLESHOOTING

If you have trouble operating your camera, refer to the following table.

If the guidelines do not enable you to solve the problem, contact an authorized technician.

PROBLEM	SOLUTION
Nothing appears on the screen.	<ul style="list-style-type: none">▶ Ensure that your camera is supplied with rated power as appropriate.▶ Check that you have properly connected VIDEO cable to the camera VIDEO output jack.
The image on the screen is dim.	<ul style="list-style-type: none">▶ If the lens is dusty, wipe it out with a clean cloth or brush.▶ Set the monitor to proper condition.▶ If the camera is exposed to too strong light, change the camera position.
The image on the screen is dark.	<ul style="list-style-type: none">▶ Adjust the contrast feature of the monitor.▶ If you have an intermediate device, set the 75Ω / Hi-z properly.
The camera is not working properly, and the surface of the camera is hot.	<ul style="list-style-type: none">▶ Check that you have properly connected the camera to an appropriate power source.
The SENS-UP function does not work.	<ul style="list-style-type: none">▶ Check that AGC of EXPOSURE SETUP menu is 'OFF'.▶ Check that SHUTTER of EXPOSURE SETUP menu is 'A.FLK' or 'MANUAL'.
The Motion Detection function does not work.	<ul style="list-style-type: none">▶ Check that MOTION DET of SPECIAL SETUP menu is 'OFF'.
Color is not correct.	<ul style="list-style-type: none">▶ Check the setting of WHITE BAL SETUP menu .
The screen flickers continually.	<ul style="list-style-type: none">▶ Check that direction of camera turns toward the Sun.
When coaxial communication is not available:	<ul style="list-style-type: none">▶ Make sure that the camera and monitor are installed within the recommended distance.▶ Use the video amplifier equivalent to coaxitron if the recommended installation distance is exceeded.

specifications

SPECIFICATIONS

	SCZ-2373/SCZ-2273N	SCZ-2373/SCZ-2273P
VIDEO		
Imaging Device	1/4" Sony 960H Exview HAD CCD II	
Total Pixels	1020(H) x 508(V)	1020(H) x 596(V)
Effective Pixels	976(H) x 494(V)	976(H) x 582(V)
Scanning System	2:1 Interlace	
Scanning Frequency	H:15.734 KHz V:59.95 Hz	H:15.625 KHz V:50.00 Hz
Synchronization	Internal/Line-Lock	
Min. Illumination	Color : 0.2 Lux @ F1.6 (Wide,50IRE) B/W : 0.01 Lux @ F1.6 (Wide,50IRE)	
Resolution	680TVL (ER mode ON)	
S / N Ratio	52dB (AGC Off, Weight ON)	
Video Output	CVBS:1.0 Vp-p/75Ω	
Lens Type		
Focal Length (Zoom Ratio)	SCZ-2273 : 3.5~94.5mm, 27x SCZ-2373 : 3.5~129.5mm, 37x	
Max. Aperture Ratio	SCZ-2273 : 1:1.6 (Wide) ~2.8 (Tele) SCZ-2373 : 1:1.6 (Wide) ~ 3.9 (Tele)	
Angular Field of View	SCZ-2273 : H: 56.26(Wide)/2.24(Tele), V:43.28(Wide)/1.67(Tele), D:67.56(Wide)/2.80(Tele) SCZ-2373 : H: 56.26(Wide)/1.62(Tele), V:43.28(Wide)/1.22(Tele), D:67.56(Wide)/2.02(Tele)	
Min. Object Distance	1.5m	
Focus Control	Auto / Manual / One Push	
Zoom Movement Speed	3.1sec (Wide to Tele)	
OPERATIONAL		
On Screen Display	NTSC : Built-In OSD Korean, Japanese, English, Spanish, Portuguese, French PAL : Built-In OSD English, French, German, Italian, Spanish, Chinese, Portuguese, Danish, Swedish, Russian, Serbian, Polish, Czech, Turkish, Romanian	
Camera Title	Off / On (Displayed 15 characters)	
Day & Night	Auto (ICR) / External / Color / B/W	
Backlight Compensation	Off / BLC / HLC	

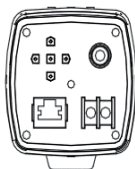
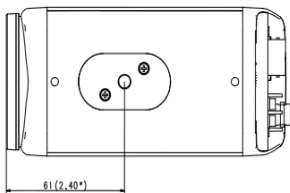
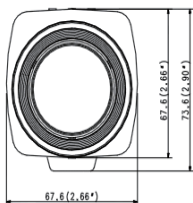
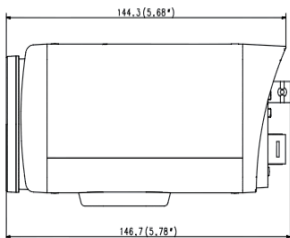
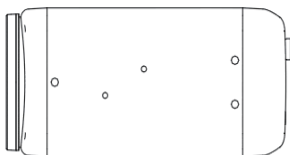
	SCZ-2373/SCZ-2273N	SCZ-2373/SCZ-2273P
Contrast Enhancement	SSDR - Level adjustable	
Digital Noise Reduction	SSNRIII (OFF / LOW / MEDIUM / HIGH)	
Digital Image Stabilization	Off / On	
Motion Detection	Off / On (programmable zones)	
Privacy Masking	Off / On (12 Rectangle)	
Sens-up (Frame Integration)	Auto/Off(selectable limit ~512X)	
Gain Control	High / Medium / Low / Manual	
White Balance	ATW / Indoor / Outdoor / AWC / Manual / Mercury	
Electronic Shutter Speed	Esc / A.FLK / Manual	
Digital Zoom	Off / On (1x ~ 16x)	
Flip / Mirror (Reverse)	Off / H-Rev / V-Rev / HV-Rev	
Preset	128 Position (Store with Internal EEPROM)	
Communication	Coaxial control(SPC-300 compatible) RS-485 : Samsung T/E, Pelco D/P, Panasonic, Bosch, Honeywell, AD, Vicon	
Environmental		
Operating Temperature / Humidity	-10°C ~ +55°C (+14°F ~ +131°F) / Less than 90% RH	
Electrical		
Input Voltage	DC12±10%/AC24V±10%	
Power Consumption	Max 5.8W	
Mechanical		
Dimension (WxHxD)	67.6 x 67.6 x 146.7mm	
Weight	540g	

※ The specification for this product may change without prior notice for product improvement.

specifications

DIMENSIONS

Unit : mm (Inches)



MEMO

SAMSUNG-T Protocol Command Description

SAMSUNG-T PROTOCOL COMMAND DESCRIPTION

Command Name		Byte1	Byte2	Byte3	E
	Command Packet	STX	CAM ID	HOST ADDR	
	Return Packet	STX	CAM ID	HOST ADDR	
	Checksum	CHECKSUM CALCULATION : UNARY OPERATION OF SUMMATION Ex) CHECKSUM = ~(BYTE2+BYTE3+...+BYTE8+ BYTE9);			
Reset	Function	Reset all data to factory default value.			
	Command Packet	A0h	CAM ID	HOST ADDR	
	Return Packet	A0h	CAM ID	HOST ADDR	
Focus Far	Function	Move focus lens to far direction.			
	Command Packet	A0h	CAM ID	HOST ADDR	
	Return Packet	A0h	CAM ID	HOST ADDR	
Focus Near	Function	Move focus lens to near direction.			
	Command Packet	A0h	CAM ID	HOST ADDR	
	Return Packet	A0h	CAM ID	HOST ADDR	
Zoom Wide	Function	Move zoom lens to wide direction.			
	Command Packet	A0h	CAM ID	HOST ADDR	
	Return Packet	A0h	CAM ID	HOST ADDR	
Zoom Tele	Function				
	Command Packet	A0h	CAM ID	HOST ADDR	
	Return Packet	A0h	CAM ID	HOST ADDR	
ZOOM Direct	Function				
	Command Packet	A0h	CAM ID	HOST ADDR	
	Return Packet	A0h	CAM ID	HOST ADDR	
	Parameter	P1,P2: OPTICAL ZOOM = 0000h ~ 07DDh P3 : DIGITAL ZOOM = ((256*10)/Ratio)-1 Ex) D-ZOOM 1.1x : P3 = E7h = ((256*10)/11)-1, Ratio 11 means D-ZOOM 2.0x : P3 = 7Fh = ((256*10)/20)-1, Ratio 20 means			
AF Stop	Function	Stop zoom & focus lens moving.			
	Command Packet	A0h	CAM ID	HOST ADDR	
	Return Packet	A0h	CAM ID	HOST ADDR	
One push AF	Function	Unconditionally execute auto focus.			
	Command Packet	A0h	CAM ID	HOST ADDR	
	Return Packet	A0h	CAM ID	HOST ADDR	

Byte4 Byte5	Byte 6	Byte7	Byte8	Byte9	Byte10	Byte11
CAMMAND	DATA3	DATA4	DATA5	DATA6	ETX	CHECKSUM
CAMMAND	DATA3	DATA4	DATA5	DATA6	ETX	CHECKSUM

FROM BYTE2 TO BYTE9.

000Fh	00h	00h	00h	00h	AFh	CHECK SUM
000Fh	00h	00h	00h	00h	AFh	CHECK SUM

0100h	00h	00h	00h	00h	AFh	CHECK SUM
0100h	00h	00h	00h	00h	AFh	CHECK SUM

0200h	00h	00h	00h	00h	AFh	CHECK SUM
0200h	00h	00h	00h	00h	AFh	CHECK SUM

0040h	00h	00h	00h	00h	AFh	CHECK SUM
0040h	00h	00h	00h	00h	AFh	CHECK SUM

0020h	00h	00h	00h	00h	AFh	CHECK SUM
0020h	00h	00h	00h	00h	AFh	CHECK SUM

00FFh	P1	P2	P3	00h	AFh	CHECK SUM
00FFh	P1	P2	P3	00h	AFh	CHECK SUM

1.1x.

2.0x.

0000h	00h	00h	00h	00h	AFh	CHECK SUM
0000h	00h	00h	00h	00h	AFh	CHECK SUM

0045h	00h	00h	00h	00h	AFh	CHECK SUM
0045h	00h	00h	00h	00h	AFh	CHECK SUM

SAMSUNG-T Protocol Command Description

User Preset Save	Function	Save current user preset configuration information.			
	Command Packet	A0h	CAM ID	HOST ADDR	
	Return Packet	A0h	CAM ID	HOST ADDR	
	Parameter	P1:00h(USER PRESET 1) ~ 80h(USER PRESET 128)			
User Preset Exec.	Function	Execute selected user preset.			
	Command Packet	A0h	CAM ID	HOST ADDR	
	Return Packet	A0h	CAM ID	HOST ADDR	
	Parameter	P1:00h(USER PRESET 1) ~ 80h(USER PRESET 128)			
User Preset Clear	Function	Clear selected user preset.			
	Command Packet	A0h	CAM ID	HOST ADDR	
	Return Packet	A0h	CAM ID	HOST ADDR	
	Parameter	P1:00h(USER PRESET 1) ~ 80h(USER PRESET 128)			
OSD Menu On/Off	Function	Display OSD menu on the screen. Clear OSD menu and save current menu setup.			
	Command Packet	A0h	CAM ID	HOST ADDR	
	Return Packet	A0h	CAM ID	HOST ADDR	
	Parameter	P1 : 00h = ON 01h = OFF			
OSD Menu Up	Function	Move OSD arrow to up.			
	Command Packet	A0h	CAM ID	HOST ADDR	
	Return Packet	A0h	CAM ID	HOST ADDR	
OSD Menu Down	Function	Move OSD arrow to down.			
	Command Packet	A0h	CAM ID	HOST ADDR	
	Return Packet	A0h	CAM ID	HOST ADDR	
OSD Menu Left	Function	Move OSD arrow to left.			
	Command Packet	A0h	CAM ID	HOST ADDR	
	Return Packet	A0h	CAM ID	HOST ADDR	
OSD Menu Right	Function	Move OSD arrow to right.			
	Command Packet	A0h	CAM ID	HOST ADDR	
	Return Packet	A0h	CAM ID	HOST ADDR	
OSD Menu Set	Function	Move to inside menu			
	Command Packet	A0h	CAM ID	HOST ADDR	
	Return Packet	A0h	CAM ID	HOST ADDR	
OSD Menu ESC	Function	Move to upper menu.			
	Command Packet	A0h	CAM ID	HOST ADDR	
	Return Packet	A0h	CAM ID	HOST ADDR	

0003h	P1	00h	00h	00h	Afh	CHECK SUM
0003h	P1	00h	00h	00h	Afh	CHECK SUM

0007h	P1	00h	00h	00h	Afh	CHECK SUM
0007h	P1	00h	00h	00h	Afh	CHECK SUM

0005h	P1	00h	00h	00h	Afh	CHECK SUM
0005h	P1	00h	00h	00h	Afh	CHECK SUM

00B1h	P1	00h	00h	00h	Afh	CHECK SUM
00B1h	P1	00h	00h	00h	Afh	CHECK SUM

0008h	00h	00h	00h	00h	AFh	CHECK SUM
0008h	00h	00h	00h	00h	AFh	CHECK SUM

0010h	00h	00h	00h	00h	AFh	CHECK SUM
0010h	00h	00h	00h	00h	AFh	CHECK SUM

0004h	00h	00h	00h	00h	AFh	CHECK SUM
0004h	00h	00h	00h	00h	AFh	CHECK SUM

0002h	00h	00h	00h	00h	AFh	CHECK SUM
0002h	00h	00h	00h	00h	AFh	CHECK SUM

0100h	00h	00h	00h	00h	AFh	CHECK SUM
0100h	00h	00h	00h	00h	AFh	CHECK SUM

0200h	00h	00h	00h	00h	AFh	CHECK SUM
0200h	00h	00h	00h	00h	AFh	CHECK SUM



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