

Full HD(HD-SDI) CCTV Box camera

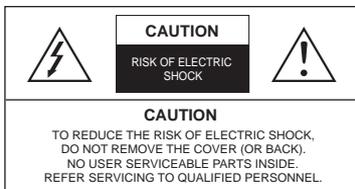
INSTRUCTION MANUAL



Please read this manual carefully before installation and operation of the product.

Dear Customers!

By selecting this product, you have decided to use a professional device that guarantees highest quality and reliability. We would like to thank you very much for your confidence and kindly ask you to read the following instructions carefully before Installation and operation in order to take full advantage of all quality features regarding this product.



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.

CAUTION – To prevent electric shock and risk of the fire hazards

- Do NOT use power source 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.

Table of contents

1. Precautions	4
2. Limitation of liability	5
3. Disclaimer of warranty	5
4. Package	6
5. Name and function of each part	7~8
6. Installation	9~12
6-1. Lens	
6-2. When using an auto iris lens(DC- drive)	
6-3. When using a C-Mount Lens	
6-4. When using a CS-Mount Lens	
6-5. Application of HD-SDI output	
6-6. Power	
7. Functions and operation	13~23
7-1. On Screen Menu(OSD)	
7-2. Setting up the menu	
7-3. VIDEO OUT	
7-4. AUTO MENU SET	
7-5. DAY / NIGHT	
7-6. AWB	
7-7. AE	
7-8. PRIVACY	
7-9. EFFECT	
7-10. SYSTEM	
7-11. INITIALIZE	
7-12. EXIT	
8. Trouble shooting guide	24
9. Dimension (mm)	25
10. Specification	26

1. Precautions

- Please read the manual carefully before the installation in order to make use the camera to be set up correctly and to have the best picture quality.
- Please keep the manual in good condition for your future reference and service application.
- Installation and services should only be carried out by an authorized personnel according to local safety regulations.
- If any liquid or solid matter gets into the housing, immediately disconnect the camera from power supply and have it checked by your authorized dealer before reusing.
- Avoid installing the camera at extremely hot or cold places.
- If you are not a certified person, never try to dismantle the camera. To avoid electric shock, never remove the screws or covers. There are no parts inside that need maintenance by the user. All maintenance should be carried out by qualified personnel.
- Avoid installing the camera at a place of high humidity.
- Avoid installing the camera at the place exposed to gas or oil.
- Keep the top glass of the lens always clean in order to obtain the best picture quality all the time. Be careful not to be stained by fingerprint.
- Don't face the camera directly toward sunlight or sunlight reflecting area. The sensor may go defective at this condition.
- Please give a special attention to keep the unit from dangerous drop or external shock during the process of transportation or handling.
- Never try to touch the camera in wet hand. It may cause an electric shock.
- Do not expose the camera to radioactivity. It causes a serious damage on the sensor.

2. Limitation of liability

This publication is provided "AS IS" without warranty of any kind, either express or implied, including but not limited to, the implied warranties of merchantability, fitness for any particular purpose, or noninfringement of the third party's right. This publication could include technical inaccuracies or typographical errors. Changes are added to the information herein, at any time, for the improvements of this publication and/or the corresponding product(s).

3. Disclaimer of warranty

In no event shall seller be liable to any party or any person, except for replacement or reasonable maintenance of the product, for the cases, including but not limited to below :

- (1) Any damage and loss, including without limitation, direct or indirect, special, consequential or exemplary, arising out of or relating to the product;
- (2) Personal injury or any damage caused by inappropriate use or negligent operation of the user;
- (3) Unauthorized disassemble, repair or modification of the product by the user;
- (4) Inconvenience or any loss arising when images are not displayed, due to any reason or cause including any failure or problem of the product;
- (5) Any problem, consequential inconvenience, or loss or damage, arising out of the system combined by the devices of third party.
- (6) Any claim or action for damages, brought by any person or organization being photogenic subject, due to violation of privacy with the result of that surveillance-camera's picture, including saved data, for some reason, becomes public or is used for the purpose other than surveillance.

4. Package



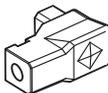
SUPER WDR Camera
1EA



Instruction manual
1EA



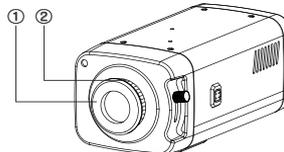
C Mount Adaptor
1EA



Iris Jack
1EA

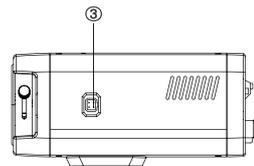
5. Name and function of each part

Front



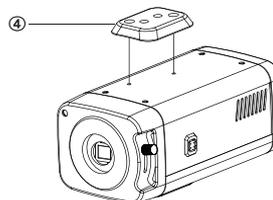
- ① Protective cover
- ② C-Mount lens adaptor

Right side



- ③ DC Iris Jack for DC Auto Iris Lens

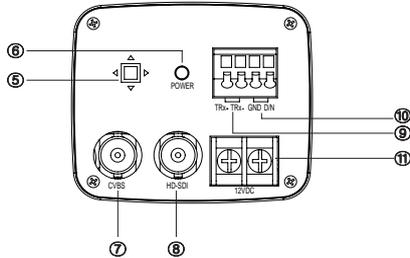
TOP



- ④ Mounting bracket holder
Mounting bracket holder can be separated and attached on the bottom side as well.
Please use the supplied clamp screws only change the position of the bracket. Using screws more than 5mm depth can do a serious damage to the inside of this camera.

5. Name and function of each part

Rear side



⑤ OSD Control button.

⑥ Power indicator LED
Lamp is on when the power is being supplied.

⑦ CVBS output (BNC Female)
Connect coaxial cable for composite video signal out.

⑧ HD-SDI output (BNC Female)
Connect coaxial cable for HD-SDI signal video signal out.

⑨ RS-485 Control port
You can control SETUP menu through this port by using external controllers like a remote controller that RS-485 Communication is supported. For details, see page 20.

⑩ Day & Night Out port
This unit can be synchronized by an External IR LED kit through this port.
Low : CDS sensor off (LED off)
High : CDS sensor On (LED on)

⑪ Power input terminal
Connect to the power source.
Polarity of the power is self-configured. (Non-polarity).

6. Installation

6-1. Lens

Lens is not supplied with the unit. C-Mount or CS-Mount type of lens is useable. Please select a lens that has a good F-Stop number in order to get the best picture quality. Use of DC auto iris lens is recommended to achieve the best results for operating this product effectively.

Caution

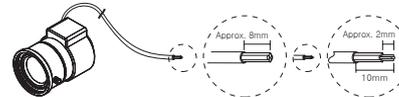
Please make sure the surface of the lens be always clear. Clean dirt or water drops with soft cloth in order to avoid the picture blooming or reflection.

Note

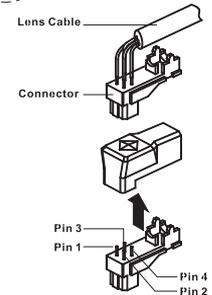
To get the best image quality, please use recommended lenses from the manufacturer or camera supplier.

6-2. When using an auto iris lens (DC-drive)

1. Please take off the sleeve outer cable of the lens by 10mm.
2. Please take off the sleeve inner cable of the lens by 2mm.



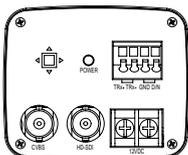
Pin No.	Lens
	DC
No.1 Pin	Damping -
No.2 Pin	Damping +
No.3 Pin	Drive +
No.4 Pin	Drive -



3. Solder the wires on the pin-connector (iris-jack) supplied with the lens according to the pin configuration as shown in the drawing.
4. Assemble the lens.
5. Connect the Auto Iris jack.

6. Installation

6-6. Power



12VDC camera

Please make sure to use a UL/CE approved and 12VDC/450mA regulated power supply.

12VDC/24VAC Dual Power camera (Option)

Please make sure to use a UL/CE approved and 12VDC/450mA, 24VAC/220mA regulated power supply.

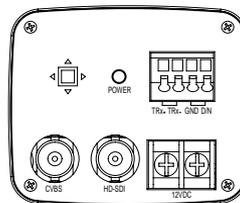
7. Functions and operation

7-1. On Screen Menu

MAIN MENU					
VIDEO OUT	VIDEO OUTSIZE	FRAME RATE	CVBS OUT MODE		SAVE/ RETURN
AUTO MENU	NORMAL	50HZ INDOOR	60HZ INDOOR	OUTDOOR	RETURN
DAY/NIGHT	AUTO/COLOR/IR	D TO N LEVEL N TO D LEVEL	D TO N TIME N TO D TIME	D/N RESET	RETURN
AWB	(ATW)/PUSH/HOLD TRACK/USER/8000K/ 6000K/4200K/3200K	RED	BLUE	AWB RESET	RETURN
AE	IRIS ATR-EX(WDR) DSS	DC IRIS BLC/FLC	BRIGHTNESS LSC	FLICKERLESS AGC AE RESET	RETURN
PRIVACY	AREA NUMBER MASK POSITION	MASK DEFINE PRIVACY RESET	MASK PATTERN	MASK SIZE	RETURN
EFFECT	COLOR ADJUST 2DNR	SHARPNESS 3DNR	CONTRAST EFFECT RESET	REVERSAL	RETURN
SYSTEM	CAMERA ID FIRMWARE	ID DISPLAY 485 TERM	CAMERA NAME BAUD RATE	NAME DISPLAY SYSTEM RESET	RETURN
INITIALIZE	FACTORY INIT				RETURN
EXIT	SAVE/EXIT	EXIT	RETURN		

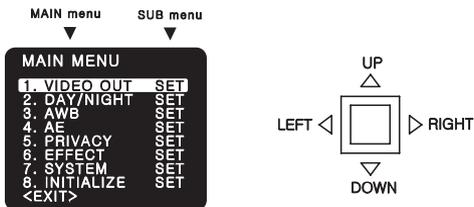
7-2. Setting up the menu

Settings can be made using the OSD Switch located on the back of the camera.



1. Press the button to access the SETUP mode.
The SETUP menu is displayed on the monitor.
2. Please select any function you wish to activate by using the UP/DOWN selections.
The cursor can be moved up or down by using the UP/DOWN selections.
Position the cursor to point to the function you wish to operate.

7. Functions and operation



* MAIN-menu : Use UP/ DOWN selections. / SUB-menu : Use LEFT/ RIGHT selection

- Change the status of the selected feature using the LEFT/RIGHT selections. When the LEFT or RIGHT selection is done, available values and modes are displayed in order. Please keep the selection until you get to the mode you wish to operate.
- When completed, move the cursor indicator to 'EXIT' position and press the Button to finish the setting.

NOTE

- If appears at the mode you wish to operate, it means that there is a sub-menu which can be selected by OSD Switch

7-3. VIDEO OUT

(1) VIDEO OUTSIZE

– VIDEO OUTSIZE can be set to 1080P, 1080i, 720P according to Local Regulation.

(2) FRAME RATE

– Six modes of 60/59.94/50/30/29.97/25 can be selected.

(3) CVBS OUT MODE

– CVBS output can be set to NTSC or PAL according to local TV standard.

NOTE

In case of 1080i mode, only 3 types of Frame rate are available and they are 60/50/59.94 respectively. When you use 1080P 60 mode, please check your DVR or related HD devices first whether they support this mode or not. (In this mode, cable connection distance is less than half of 1080P 30 mode.)



7. Functions and operation

7-4. AUTO MENU SET

(1) NORMAL

– Sets as initial factory default value.

(2) 50HZ INDOOR

– For indoor use in 50HZ (PAL) environment.

(In this mode, i.e. 50HZ INDOOR MODE, FLICKERLESS changes automatically into 50HZ mode from initial OFF mode.)

(3) 60HZ INDOOR

– For indoor use in 60HZ (NTSC) environment.

(In this mode, i.e. 60HZ INDOOR MODE, FLICKERLESS changes automatically into 60HZ mode from initial OFF mode.)

(4) OUTDOOR

– For outdoor use.

(In this mode, i.e. OUTDOOR MODE, AWB changes automatically into PUSH mode from initial ATW mode.)

(5) AUTOSSET RESET

– When set as ON and press SET KEY, it turns into AUTOSSET NORMAL MODE automatically, which means initial factory reset.



AUTOSSET SETUP



AUTOSSET SETUP



AUTOSSET SETUP



7-5. DAY / NIGHT

You can display pictures in Color/IR MODE/AUTO.

(1) DAY/NIGHT MODE

- Please position the cursor on 'DAY/NIGHT' on the SETUP menu by using the UP and DOWN selections.
- Please select the mode you wish to operate by using the LEFT and RIGHT selections.

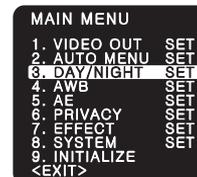
– COLOR : The picture is always displayed in color.

– IR : The mode is switched to 'DAY' in a normal environment, but switches into 'NIGHT' mode when ambient illumination is low.

NOTE

True Day & Night cameras with CDS & ICR are to be set in this mode.

– AUTO: Automatically turns between Day and Night Mode according to AGC operation.



DAY/NIGHT SETUP



7. Functions and operation

NOTE

Day & Night cameras without CDS & ICR are to be set in this mode.

(2) D TO N LEVEL

- Sets the level of illumination in which COLOR mode is turned into B/W mode.
(This menu is not activated in case of IR MODE)



(3) N TO D LEVEL

- Sets the level of illumination in which B/W mode is turned into COLOR mode.
(This menu is not activated in case of IR MODE)

(4) D TO N TIME

- Sets the switching time from COLOR mode into B/W mode when the level of illumination has come to D TO N LEVEL.
(Not activated in case of IR MODE)

(5) N TO D TIME

- Sets the switching time from B/W mode into COLOR mode when the level of illumination has come to N TO D LEVEL.
(Not activated in case of IR MODE)

(6) D/N RESET

- Sets the switching time from B/W mode into COLOR mode when the level of illumination has come to N TO D LEVEL.

(7) RETURN

- Returns to the MAIN MENU.

7-6. AWB (Auto White Balance)

This is useful when the cameras are installed in different artificial lighting conditions where a standard "White Balance" condition is not suitable for all.

(1) AWB MODE

1. Please position the cursor on 'AWB' on the SETUP menu by using the UP and DOWN selections.
2. Please select the mode you wish to operate by using the LEFT or RIGHT selection.
3. Please select one of the 8 modes below.



(2) ATW (Auto Tracking White Balance)

- IN : This mode can be used within the color temperature range of 2,500°K~7000°K.
- OUT : This mode can be used within the color temperature range of 1,800°K~10,500°K.



7. Functions and operation

NOTE

In case of indoor use, ATW(IN) mode is highly recommended.

- (3) PUSH MODE : This mode can be used within the color temperature range of 1,800°K~10,500°K.

NOTE : In case of outdoor use, PUSH mode is recommended.

- (4) HOLD MODE : This mode is used to fix AWB in a specific environment.

NOTE : When there are drastic movements of some specific colored features such as red, blue, green or yellow cars on the express road and when environment is volatile so much, HOLD MODE is strongly recommended.

- (5) TRACK MODE : Sets some specific range of color temperature.
(23 types of color temperature can be set within 1,500°K~15,000°K range.)

(6) USER MODE

USER MODE is suitable for enhanced users who want to set red and/or blue value manually according to user's environment.

Please change to manual adjustment mode and press OSD Switch.

Set the appropriate color temperature, and then increase or decrease the red and blue color values while monitoring the color changes on the screen.

- RED : Adjust the level between 00 ~ 50(Default 17)
- BLUE : Adjust the level between 00 ~ 50(Default 40)



(7) 8,000°K/6,000°K/4,200°K/3,200°K MODE

- 8,000°K : Shade
- 6,000°K : Cloudy weather
- 4,200°K : Fluorescent light
- 3,200°K : Electric light bulb

(8) AWB RESET

- Resets all setting of AWB menu into initial factory reset value.

(9) RETURN

- Returns to the MAIN MENU.

7. Functions and operation

7-7.AE (Auto Exposure)

(1) IRIS MODE

- DC : Selects DC drive auto iris lens.
- ESC : Selects manual iris lens
- AE HOLD : Fixes the change of the brightness.

This mode is useful when lots of motions are detected on the monitor.

(2) DC IRIS LEVEL : Adjusts the mechanical Iris lens in 00 ~ 50(Default22)

(3) BRIGHTNESS : Adjusts the brightness in 00 ~ 30(Default 07)

(4) FLICKERLESS : This is used only when there is a difference in frequency between the power system (50Hz) and TV system (60Hz). In this case, flicker is occurred on the monitor. In most countries other than Japan, FLICKERLESS mode is not necessary.

≡ NOTE

When the power system (50Hz) and the TV system(60Hz) are different,

- 'Flickerless on' mode is recommended for indoor use.
- 'Flickerless off' mode is recommended for outdoor use.

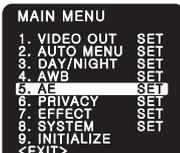
(5) ATR-EX (WDR) : This mode functions like WDR. 3 modes of Off/Low/Mid/High can be selected.

Wide Dynamic Range Performance
In general, it is very hard to see objects inside the buildings, etc in case that there comes strong light from the outside.

By using ATR-EX(WDR) mode, the difference in brightness between the bright area and the dark area can be minimized and consequently those objects inside and outside of the buildings or windows can be seen all together even though there is strong light or backlight from the outside.

≡ NOTE

- This mode is recommended for those environment with backlight or shade.
- When ATR-EX(WDR) is ON, DC IRIS LEVEL, BRIGHTNESS, BLC menu's are all inactivated.



7. Functions and operation

(6) BLC (Back Light Compensation)

Enables a user to directly select a desired area from a picture, and to view the area more clearly even under backlight environment.

- BLC : Used for backlight environment. (Indoor objects can be seen.)
- FLC : Compensates the saturation of image when camera faces toward the same direction as sunlight.

(7) LSC (Lens Shading Correction)

Adjust the LEVEL 00 ~ 50(Default 00)
Compensates for the shading of the lens.

≡ NOTE

This function will be provided soon in next version.

(8) AGC(Auto Gain Control)

The higher the gain level is, the brighter the screen becomes. But the higher gain level causes more noise.

- LOW : Allows automatic gain control from 0 to 20dB.
- MIDDLE : Allows automatic gain control from 0 to 30dB.
- HIGH : Allows automatic gain control from 0 to 42dB.

(9) DSS(Digital Slow Shutter)

This is an electronically activated function to improve the sensitivity for viewing low light condition in addition to the original sensitivity from the sensor itself. Shutter level is adjustable x2 times. At night, DSS is set to x2 automatically.

≡ NOTE

This function will be provided soon in next version.

(10) AE RESET

- Resets all settings of AE menu into the initial factory default value.

(11) RETURN

- Returns to the MAIN MENU.



7. Functions and operation

7-8.PRIVACY

Masks the areas you want to hide on the screen.

(1) AREA NUMBER: You can select up to 4 PRIVACY areas.

(2) MASK DEFINE: Determines whether to use the MASK or not.

(3) MASK PATTERN: Defines the Mask Color or type.

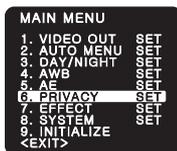
– 6 types of BLACK/RED/GREEN/BLUE/YELLOW/MOSAIC are selectable.

(4) MASK SIZE: By moving the cursor LEFT/RIGHT, TOP/BOTTOM, the size of masking area can be determined.

(5) MASK POSITION: Adjust vertical and horizontal position of masking area.

(6) PRIVACY RESET
– Resets all setting of PRIVACY menu.

(7) RETURN
– Returns to the MAIN MENU.



7-9.EFFECT

(1) COLOR ADJUST

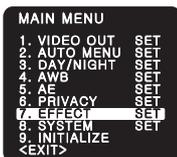
– COLOR GAIN : Adjusts the COLOR GAIN level in 00 ~ 50 (Default 25)

– COLOR HUE : Adjusts the COLOR HUE level in 00 ~ 50 (Default 25)

☞ **NOTE**
This function enables user to adjust the variation of Color Gain on the monitor when installing camera.

(2) SHARPNESS
– Adjusts the SHARPNESS level in 00 ~ 50(Default 25)

(3)CONTRAST
–Adjusts the CONTRAST level in 00 ~ 50(Default 25)



7. Functions and operation

(4) REVERSAL: Enables either normal image (NORMAL), mirrored Image (MIR), vertically reversed image (VER), vertically reversed and mirrored image(FLIP).

(5) 2DNR
– Cuts off the noise in low light condition.
4 modes of OFF/LOW/MID/HIGH are available.

☞ **NOTE**
Higher 2DNR level reduces more low light noise but deteriorates resolution as well.

(6) 3DNR
– Cuts off the noise in low light condition.
4 modes of OFF/LOW/MID/HIGH are available.

☞ **NOTE**
Higher 3DNR level reduces more low light noise but it can cause ghost effect as well.

☞ **NOTE**
This function will be provided soon in the next firmware version.

(7) EFFECT RESET
Resets all setting of EFFECT menu into initial factory default.

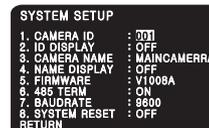
(8) RETURN
– Returns to the MAIN MENU.

7-10.SYSTEM

(1) CAMERA ID : Determdins the camera ID number in 001 ~ 255 (Default 001)

(2) ID DISPLAY : Defines the location where camera ID is displayed on the screen. 4 location of top, bottom, left and right can be selected.

(3) CAMERA NAME
– Defines camera name. When 'Name Display' is on, this text will Be shown on the screen.



7. Functions and operation

(4) NAME DISPLAY

-If you enter a title for this, that will appear on the monitor.



1. Please position the cursor on 'NAME DISPLAY' by moving UP or DOWN direction.
2. Then, select 'ON' by using the LEFT and RIGHT selection. When you press the button to complete 'ON', then 'CAMERA NAME' will be displayed.

NOTE

· If 'OFF' is selected, the NAME DISPLAY does not appear on the monitor even if it has been input.

3. Up to 10 letters are available for the NAME DISPLAY.

① Please move the cursor to the letter to choose by using the UP and DOWN selections.

② Set an ID from 0, 1, ~8, 9, A, B, ~Y, Z by using the UP, DOWN, LEFT and RIGHT selections.

③ Lock in the letters by using the button.

When the letter is locked in, the cursor moves to the next space.

④ Please repeat the above to input NAME DISPLAY.



4. When a name has been chosen, please select a position for the name to display.

① Please move the cursor onto 'POSITION' and then press the button.

② The name will appear at the top right corner.

③ Please find the position you wish to display the name by using the 4 directional selections, and then press the button to finish.

5. Camera Name Input process is finished if user selects 'RETURN' and presses OSD switch.

(5) FIRMWARE:

- Shows firmware version of this camera unit.

(6) 485 TERM

- RS485 Function ON/OFF

(7) BAUD RATE

- Selects baud rate for RS485 communication among 2400/ 4800/ 9600. (Default:9600)

(8) SYSTEM RESET

- Resets all setting of SYSTEM menu.

CAMERA ID, 485 TERM settings are not initialized.

(9) RETURN

- Returns to the MAIN MENU.

7. Functions and operation

7-11.INITIALIZE

Resets the camera setting to the factory defaults.

CAMERA ID, 485 TERM settings are not initialized.

7-12.EXIT

(1) SAVE/EXIT

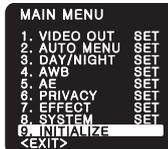
- Saves the current settings and exits the menu.

(2) EXIT

- Not saves the current settings and exits the menu.

(3) RETURN

- Returns to the MAIN MENU.



FACTORY SETUP

1. FACTORY INIT : OFF
RETURN

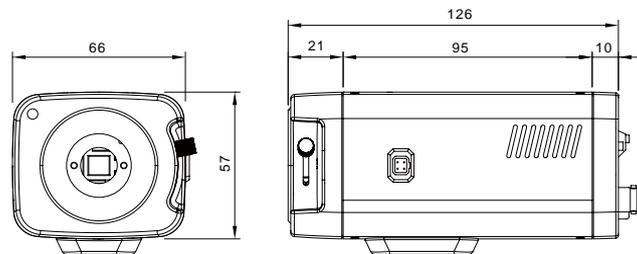
1. SAVE/EXIT
2. EXIT
3. RETURN

8. Troubleshooting

If there are problems in operating, please refer to the checklist below. If the problem persists, please contact the agent where this product is purchased.

Problems	Troubleshooting				
Nothing appears on the screen.	<ul style="list-style-type: none"> • Please check that the power cord and line connection between the camera and the monitor are fixed properly. • Please check that you have properly connected VIDEO cable to the VIDEO output jack of the camera. 				
The image on the screen is dim.	<ul style="list-style-type: none"> • Is lens stained with dirt? Clean your lens with soft, clean cloth. • 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 interim 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"> • Please check that you have properly connected the camera to an appropriate power source. 				
Color is not correct.	<ul style="list-style-type: none"> • Please check the setting of AWB menu . 				
The screen flickers continually.	<ul style="list-style-type: none"> • Please check that direction of camera turns toward the Sun. 				
RS-485 communication fails.	<ul style="list-style-type: none"> • Please check the polarity between RS-485 Control Port and RS-485 cable. 				
	485 Control Board Connection Port	RS-485 Control Port			
	(+)CONNECTION TERMINAL(TRX+)	485+			
	(-)CONNECTION TERMINAL(TRX-)	485-			
	<ul style="list-style-type: none"> • Please check the RS-485 Communication establishment initial value. *RS-485 Communication establishment initial value 				
	Item	Camera ID	BAUD RATE	UART MODE	RET PKT
	Initial value	001	9600	8-NONE-1	ENABLE
<ul style="list-style-type: none"> • We recommend that you make ground connect between camera and controller in order to maintain safety communication control. 					

9. Dimension(mm)



10. Specification

MODEL	Full HD(HD-SDI) CCTV Box Camera
Sensor Device	Sony 1/2.8 inch progressive scan CMOS, 3MegaPixel
Total Pixels	2144(H) x 1588(V) 3.4 Megapixel
Effective Pixels	2096(H) x 1561(V) 3.27 Megapixel
Scanning System	Progressive Scan
Horizontal	More than 1100 TVL
S/N Ratio	More than 5 2dB
Min. Illumination	1.0 Lux with DSSX2 (F1.2, 30IRE, AGC On),
Shutter Speed	1/30s Default,(Long Exposure Mode, ~1Sec)
Video Output	1920 x 1080P 60/50/30/25/59.94/29.97 1920x 1080i 60/50/59.94 1280x 720P 60/50/30/25/59.94/29.97 (Mode Select)
Video Output Format	2.97G/s, 3G-SDI Output (SMPTE 424M)
AV Output	1V p-p Composite. 75 Ohms
Digital Output	SDI Output
Day & Night	D/N Output Port, ICR
Serial Port	RS485
Lens	C/CS Mount Lens
Lens Control	DC IRIS Lens
Power Source	DC 12V(9~19V), AC24V(Optional)
Power Consumption	440mA / DC12V (5.3W)
Operating Temperature	-10°C ~ 50°C
Storage Temperature	-20°C ~ 70°C
Operating Humidity	Under 90% Non -condensing
Measurement (mm)	66(W) x 57(V) x 126.5(L)
Weight (Approx.)	700 g
OSD	Video Mode / D&N / AWB / AE /Privacy Mask / Flickerless Brightness / Sharpness / Mirror & Flip / DSS/DNR, etc.

*Specifications are subject to change without prior notice for better improvement.

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