HIGH RESOLUTION
DSP COLOR CAMERA
OPERATION MANUAL

Thank you for choosing our high quality camera.
Before attempting to connect operate this unit, please read and follow these instructions.

CONTENTS

1. CAUTIONS

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.
2. This device must accept any interference received, including interference that may cause undesired operation.

Note

This equipment has been tested and found to comply with the 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

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Caution

Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

⚠ CAUTION

1. A regulated DC12V 500mA power supply is recommended for use with this camera for the best picture and the most stable operation.
   An unregulated power supply can cause damage to the camera.
   When unregulated power supply is applied, product warranty will be out of subject.
2. It is recommended that the camera is used with a monitor that has a CCTV quality 75 video impedance level.
   If your monitor is switched to high impedance then please adjust accordingly.
3. Do not attempt to disassemble the camera to gain access to the internal componets. Refer servicing to your dealer.
4. Never face the camera towards the sun or any bright or reflective light, which may cause smear on the picture and possible damage to the CCD.
5. **Do not remove the serial sticker for the warranty service.**
6. Do not expose the camera to rain or other types of liquid.
7. The apparatus must be connected to a mains socket-outlet with a protective earthing connection.

1. CAUTIONS

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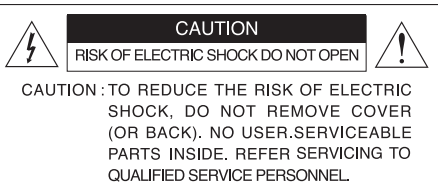**(Waste Electrical & Electronic Equipment)**

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

This marking shown on the product or its literature, indicate 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.

This product should not be mixed with other commercial wastes purchased this product, or their local government office, for details of where and how they can take item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract.
Household users should contact either the retailer where they for disposal.

CAUTION
RISK OF ELECTRIC SHOCK DO NOT OPEN

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

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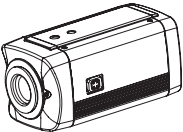
This symbol is intended to alert the user to the presence of important operating and maintenance(servicing) instructions in the literature accompanying the appliance
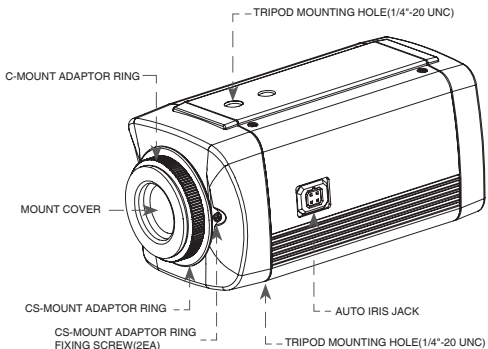
2. FEATURES

- **1/3˝ SONY EXview HAD CCD II**
- **High Resolution of 700TV Lines**
- **OSD Function**
- **Multi Language**
  (ENGLISH / JAPANESE / GERMAN / FRENCH / RUSSIAN / PORTUGUESE / SPANISH / CHINESE)
- **2DNR**
- **Privacy Zone**
- **Motion Detect**
- **DC12V / AC24V Dual Voltage**
- **ATR(Adaptive Tone-curve Reproduction / Digital WDR)**
  The function provides gradation compensation to improve the contrast of subjects both
  low-luminance areas and high luminance areas exist in the same picture

3. COMPONENTS

DSP Color Camera	
AUTO IRIS LENS CONNECTION PLUG	
C-MOUNT ADAPTOR RING	
OPERATION MANUAL	

4. NAME AND FUNCTION

• FRONT

C-MOUNT ADAPTOR RING

MOUNT COVER

CS-MOUNT ADAPTOR RING

CS-MOUNT ADAPTOR RING
FIXING SCREW(2EA)

TRIPOD MOUNTING HOLE(1/4"-20 UNC)

AUTO IRIS JACK

TRIPOD MOUNTING HOLE(1/4"-20 UNC)
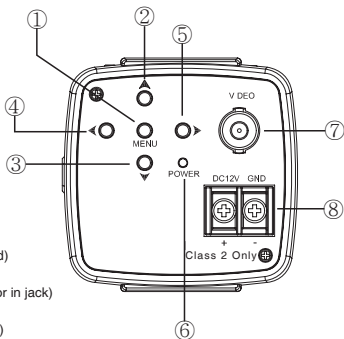
• BACK

①. MENU BUTTON
②. UP BUTTON
③. DOWON BUTTON
④. LEFT BUTTON
⑤. RIGHT BUTTON
⑥. POWER LED
(The LED turns on when power is supplied)
⑦. VIDEO OUT JACK
(Used to connect an external video monitor in jack)
⑧. POWER TERMINAL
(User to connect an DC12V power source)
(Options : AC 24V/DC12V)
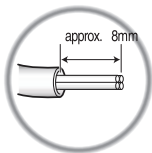
5. INSTALLATION

• LENS CONNECTION

Lenses are sold separately. Lenses such as an auto iris lens,
CS-Mount lens and C-Mount lens can be used.

NOTE

- Please keep the lens clean.
- Any foreign objects and Finger marks on the lens can cause inferior image quality in low light level conditions.

When using an auto iris lens

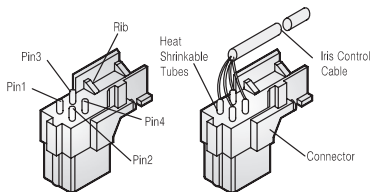1. Please peel off about 8mm of the outer skin of the auto iris lens cable.

approx. 8mm

2. Please peel off about 2mm of the outer skin of the insulated conductor inside the lens cable.

approx. 2mm
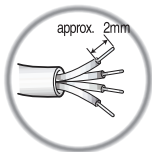
5. INSTALLATION

3. Please remove the cover of the auto iris lens connection plug and solder the lens cable to the connector pin in the plug.

* PIN ASSIGNMENT OF THE LENS CONNECTOR

      1) DC auto iris lens
      Pin 1: DAMP-(CTL-)
      Pin 2: DAMP+(CLT+)
      Pin 3: DRV+
      Pin 4: DRV-(GND)

4. Please replace the auto iris lens connection plug cover and take off the Sensor protection cap and then attach the auto iris lens to the camera by screwing it in clockwise.
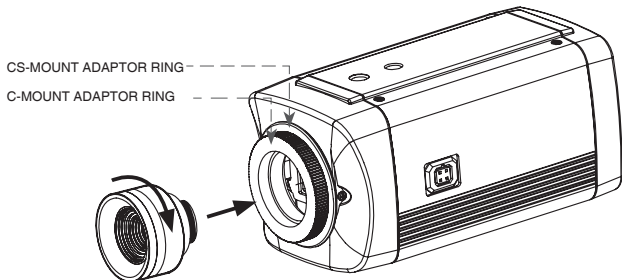
5. INSTALLATION

5. Please insert the connection plug that is connected to the auto iris lens
   cable into the auto lens connector, which is located on the side of the camera
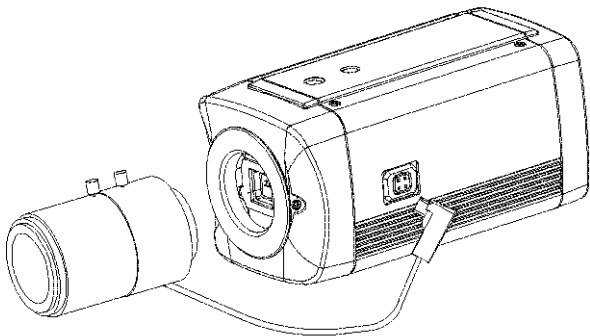
5. INSTALLATION

Installation of C-Mount Lens

CS-MOUNT ADAPTOR RING
C-MOUNT ADAPTOR RING

Installation of CS-Mount Lens

CS-MOUNT ADAPTOR RING
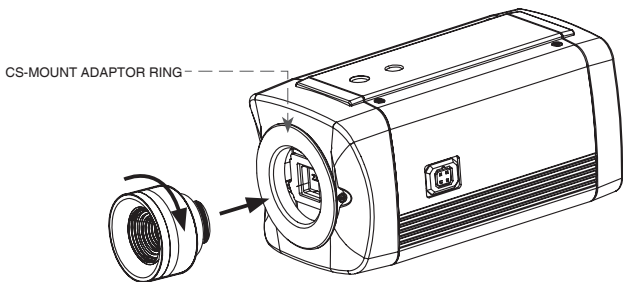
5. INSTALLATION

• MONITOR CONNECTION

(1) DC12V
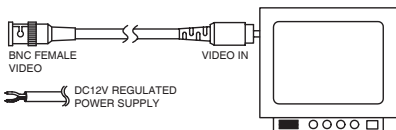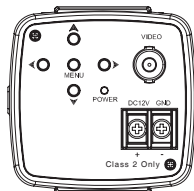
(2) DC12V/AC24V

* As the connecting method varies with instruments, refer to the manual supplied with the instrument.
* Only connect the cable when the power is turned off.
* Set the 75Ω / Hi-Z selection switch as shown below if you have an intermediate device

6. DIMENSIONS

Unit(mm)

1/4"-20 UNC

58

58

110.4

109

7. SPECIFICATION

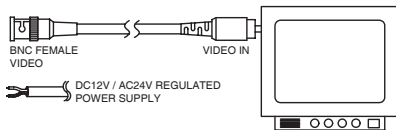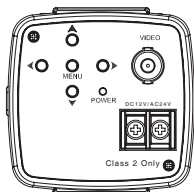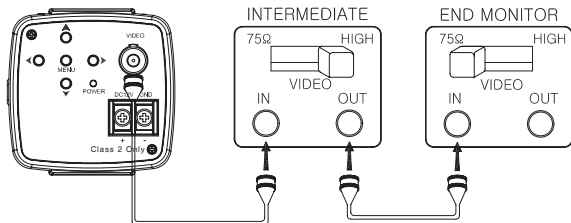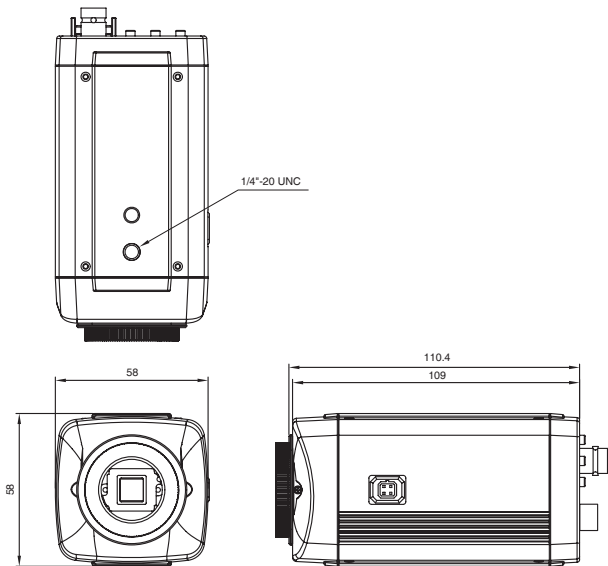| Signal Format		NTSC	PAL
Image Device		1/3″ SONY EXview HAD CCD II	
Scanning System		2 : 1 Interlace	
Scanning Frequency		15.734KHz(H), 59.94Hz(V)	15.625KHz(H), 50Hz(V)
Total Pixels		1020(H) X 508(V)	1020(H) X 596(V)
Effective Pixels		976(H) X 494(V)	976(H) X 582(V)
H.Resolution		750TV Lines	
S/N Ratio		More than 50dB(AGC OFF)	
Min.Illumination		0.05Lux(Color) / 0.003Lux(BW) (30IRE@F1.4)	
Sync System		Internal	
Gamma		r= 0.45	
Video Output Level		1.0 Vp-p Composite(75Ω)	
OSD		Built in	
BLC		OFF/BLC/HLC	
2DNR		OFF/ON(Level adjustable)	
ATR		OFF/ON(Level adjustable)	
Function		MIRROR / BRIGHTNESS / CONTRAST / SHARPNESS / HUE / GAIN	
White Balance		ATW / PUSH / USER1 / USER2 / ANTI CR / MANUAL / PUSH-LOCK	
Privacy Masking		4 Zones	
Motion Detection		4 Zones	
Day & Night(ICR)		AUTO / COLOR / BW	
Language		ENGLISH / JAPANESE / GERMAN / FRENCH / RUSSIAN / PORTUGUESE / SPANISH / CHINESE	
Operating Temperature		14°F~122°F(-10°C~+50°C)	
Storage Temperature		-4°F~140°F(-20°C~+60°C)	
Humidity		Less than 80%	
Dimension		58(W) x 58(H) x 110.4(D)	
Power Consumption	DC12V	DC12V(±10%), Max. 130mA	
	DUAL	AC24V(±10%), Max. 2.9W DC12V(±10%), Max. 180mA	
Lens		MANUAL/DC	

Specifications and designs are subject to change for improving the functionality of this product without notice.

8. OSD MENU STRUCTURE

MAIN MENU	1st Sub MENU	2nd Sub MENU	3rd Sub MENU	4th Sub MENU
LENS	MANUAL			
	AUTO	TYPE	DC	
		MODE	AUTO,OPEN,CLOSE	
		SPEED	(000 – 255)	
		RETURN		
SHUTTER / AGC	AUTO	HIGH LUMINANCE	MODE	SHUT,AUTO IRIS, SHUT+AUTO IRIS
			BRIGHTNESS	(000 – 255)
		LOW LUMINANCE	MODE	AGC,OFF
			BRIGHTNESS	x0.25,x0.50,x0.75,x1.00
		RETURN		
	MANUAL	MODE	SHUT+AGC	
		SHUTTER	1/50(PAL),1/100(NTSC) 1/60(NTSC),1/120(PAL) 1/250,1/500,1/1000 1/2000,1/4000,1/10000	
		AGC	6,12,18,24,30,36,42,44.8	
		RETURN		
WHITE BAL	ATW	SPEED	(000 – 255)	
		DELAY CNT	(000 – 255)	
		ATW FRAME	x0.50,x1.00,x1.50,x2.00	
		ENVIRONMENT	INDOOR,OUTDOOR	
		RETURN		
	PUSH			
	USER1	B-GAIN	(000 – 255)	
		R-GAIN	(000 – 255)	
		RETURN		
	USER2	B-GAIN	(000 – 255)	
		R-GAIN	(000 – 255)	
		RETURN		
	ANTI CR			
	MANUAL	LEVEL	24 – 103	
		RETURN		
	PUSH LOCK			
BACK LIGHT	OFF,BLC,HLC			
PIC ADJUST	MIRROR	OFF,ON		
	BRIGHTNESS	(000 – 255)		
	CONTRAST	(000 – 255)		
	SHARPNESS	(000 – 255)		
	HUE	(000 – 255)		
	GAIN	(000 – 255)		
	RETURN			
ATR	ON	LUMINANCE	LOW,MID,HIGH	
		CONTRAST	LOW,MIDLOW,MID,MIDHIGH,HIGH	
		RETURN		
	OFF			

***SHUT+IRIS**: Both the Shutter and the Mechanical Iris are automatically adjusted according to brightness.
***Auto Iris(Default)**: The Shutter stays at the manually selected value and only the Mechanical Iris adjusts to brightness.

8. OSD MENU STRUCTURE

MAIN MENU	1st Sub MENU	2nd Sub MENU	3rd Sub MENU	4th Sub MENU
MOTION DET	ON	DETECT SENSE	(000 – 255)	
		BLOCK DISP	OFF,ON,ENABLE (CONTROLER)	
		MONITOR AREA	ON,OFF	
		AREA SEL	1/4, 2/4, 3/4, 4/4	
			TOP	NTSC:(000 – 244) / PAL: (000 – 288)
			BOTTOM	NTSC:(000 – 244) / PAL: (000 – 288)
			LEFT	NTSC:(000 – 474) / PAL: (000 – 468)
			RIGHT	NTSC:(000 – 474) / PAL: (000 – 468)
		RETURN		
	OFF			
NEXT				
EXIT				
SAVE ALL				
PRIVACY	ON	AREA SEL	1/4, 2/4, 3/4, 4/4	
			TOP	NTSC:(000 – 244) / PAL: (000 – 288)
			BOTTOM	NTSC:(000 – 244) / PAL: (000 – 288)
			LEFT	NTSC:(000 – 474) / PAL: (000 – 468)
			RIGHT	NTSC:(000 – 474) / PAL: (000 – 468)
		COLOR	(1 – 8)	
		TRANSP	0.00, 0.50, 0.75, 1.00	
		MOSAIC	OFF,ON	
		RETURN		
	OFF			
DAY/ NIGHT	AUTO	BURST	OFF,ON	
		DELAY CNT	0 – 255	
		DAY > NIGHT	0 – 255	
		NIGHT > DAY	0 – 255	
		RETURN		
	COLOR			
	BW			
NR	NR MODE	OFF,Y,C,Y/C		
	C LEVEL	(000 ~ 015)		
	Y LEVEL	(000 ~ 015)		
	RETURN			
CAMERA ID	ON	EDIT MODE		
		RETURN		
	OFF			
LANGUAGE	ENGLISH, 日本語, DEUTSCH, FRANCAIS, Русский, PORTUGUÊS, ESPAÑOL, 中文			
CAMERA RESET				
BACK				
EXIT				
SAVE ALL				

*Important Note : - Any changes made to the camera settings must be saved prior to exiting the OSD menu.
Else all changes will be discarded.
- By changing the lens option in the OSD from MANUAL to AUTO will automatically change the
SHUTTER/AGC setting from AUTO IRIS to SHUT+AUTO IRIS.(Default:AUTO IRIS)