

ED710 & ED730

Ultra 720+ Series Day/Night Indoor Dome Camera

User's Manual



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Release Date: January, 2014

Precautions

1. **Do not install the camera near electric or magnetic fields.** Install the camera away from TV/radio transmitters, magnets, electric motors, transformers and audio speakers since the electromagnetic fields generated from these devices may distort the video image or otherwise interfere with camera operation.
2. **Never disassemble the camera beyond the recommendations in this manual nor introduce materials other than those recommended herein.** Improper disassembly or introduction of corrosive materials may result in equipment failure or other damage.
3. **Try to avoid facing the camera toward the sun.** In some circumstances, direct sunlight may cause permanent damage to the sensor and/or internal circuits, as well as creating unbalanced illumination beyond the capability of the camera to compensate.
4. **Keep the power cable away from water and other liquids and never touch the power cord with wet hands.** Touching a wet power cord with your hands or touching the power cord with wet hands may result in electric shock.
5. **Never install the camera in areas exposed to oil, gas or solvents.** Oil, gas or solvents may result in equipment failure, electric shock or, in extreme cases, fire.
6. **Cleaning.** For cameras with interchangeable lenses, do not touch the surface of the sensor directly with the hands. Use lens tissue or a cotton tipped applicator and ethanol to clean the sensor and the camera lens. Use a damp soft cloth to remove any dirt from the camera body. Please do not use complex solvents, corrosive or abrasive agents for cleaning of any part of the camera.
7. **Do not operate the camera beyond the specified temperature, humidity or power source ratings.** This camera is suitable for indoor operation only. Use the camera at temperatures within -10°C~50°C (14°F~122°F) and humidity between 20%~ 80%; this device is not rated as submersible. The input power source is 12VDC or 24VAC. Be sure to connect the proper + / - polarity and voltage, as incorrect polarity or too high a voltage will likely cause the camera to fail, and such damage is not covered by the warranty.
8. **Mounting.** Use care in selecting a solid mounting surface which will support the weight of the camera plus any wind, snow, ice or other loading, and securely attach the camera to the mounting surface using screws and anchors which will properly support the camera. If necessary (e.g. when mounting to drop ceilings) use a safety wire to provide additional support for the camera.

Safety Notice

Federal Communication Commission Interference Statement

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 in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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.



ATTENTION! This is a class A product which may cause radio interference in a domestic environment; in this case, the user may be urged to take adequate measures.^{4,5}



This Product is RoHS compliant.^{4,5}



WEEE^{4,5}

Your EverFocus product is designed and manufactured with high quality materials and components which can be recycled and reused. This symbol means that electrical and electronic equipment, at their end-of-life, should be disposed of separately from your household waste. Please, dispose of this equipment at your local community waste collection/recycling centre. In the European Union there are separate collection systems for used electrical and electronic product.^{4,5}
Please, help us to conserve the environment we live in!

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1. Introduction

Get incredible performance in bright light or low light, and the resolution listed in the specs from the actual camera you install. To take full advantage of the amazing resolution available from this advanced imaging technology, the EverFocus Ultra Series ED710/730 uses a vari-focal lens together with SONY EXview HAD 960H CCD II to produce in excess of 720 horizontal TV lines of resolution from each and Ultra Series 720+ camera we deliver.

The EverFocus Ultra Series cameras are combined with a useable native low light sensitivity of 0.05 lux without using digital slow shutter. The cameras truly provides color without compromise: over 720TVL resolution, Digital Wide Dynamic Range for clear color images in the most challenging of bright or unbalanced scene lighting conditions. Moreover, the ED730 features 18 LEDs with range of 30m / 100 feet or more; it also provides true day/night IR enhanced images in low light with guaranteed ZERO ghosting.

The EverFocus Ultra Series cameras support both NTSC and PAL scanning systems. The cameras are equipped with 3 Axis rotation design, allowing wall or ceiling mounting. Your choice of vari-focal 2.8~12mm DC iris lens for easily adjustable field of view; dual voltage operation and a full suite of OSD Menu and DSP functions controllable at the camera (DNR to save DVR HDD space, privacy masking, mirroring, and much more) This is the camera that you have been waiting for to create analog CCTV systems that produce astounding image clarity in a wide range of indoor applications at the widest range of light levels.

Model	Image Sensor and Lens	TVL	IR LEDs	Day / Night
ED710	1/3" Sony Exview HAD II 960H CCD	720+	No	Auto
ED730	2.8-12mm DC Iris		Yes (18 LEDs)	True Day/Night

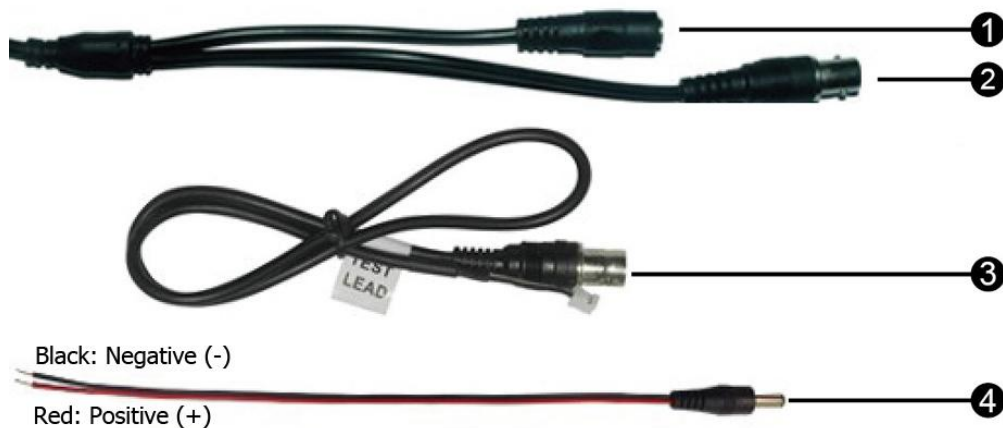
1.1 Packing List

- Dome Camera x 1
- User Manual x 1
- Test Lead x 1
- DC Power Pigtail Cable x 1
- Quick Installation Guide x 1
- Screw x 3
- Screw Driver x 1
- Plastic Anchor x 3
- Template Plate x 1

1.2 Features

- Ultra resolution of over 720 horizontal TV lines for astounding image quality
- Exview HAD CCD II delivers amazing ultra high sensitivity of 0.05 lux – very low light sensitivity without DSS low light boost - Zero Ghosting guaranteed
- Vari-focal 2.8~12mm DC iris lens to capture the desired field of view
- 18 IR LEDs for 30m/100ft. range -depending on scene IR reflectivity (**for ED730**)
- Provides 2D- Noise Reduction to improve picture clarity while enabling DVRs to improve disk storage utilization
- Adaptive Tone Curve Reproduction (ATR)/Digital Wide Dynamic Range expansion to deliver properly exposed images despite unbalanced lighting in the scene
- Easy to use OSD setup menu
- Compact size for discreet surveillance
- The flexible angle viewing with its 3 Axis rotation design allows wall or ceiling mounting
- Easy lock installation by screwing the base plate to the surface and then locking the camera to the base plate without mounting screws

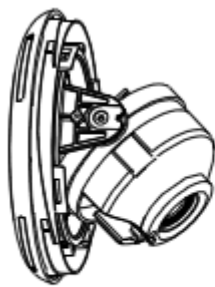
2. Cable Description



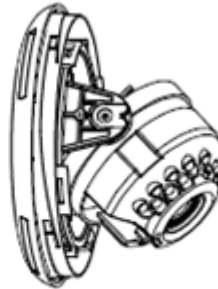
No.	Name	Descriptions
1	Power Cable	Connects to a 12VDC or 24VAC power source.
2	Video Output	Connects to a DVR or monitor, using a 75 Ohm BNC-type coaxial cable.
3	Test Lead	Connects to a monitor for setting image aim and focus.
4	DC Power Pigtail Cable	Optional power pigtail cable. The red wire is positive (+); while the black wire is negative (-).

3. Installation

3.1 Installation and Adjustment

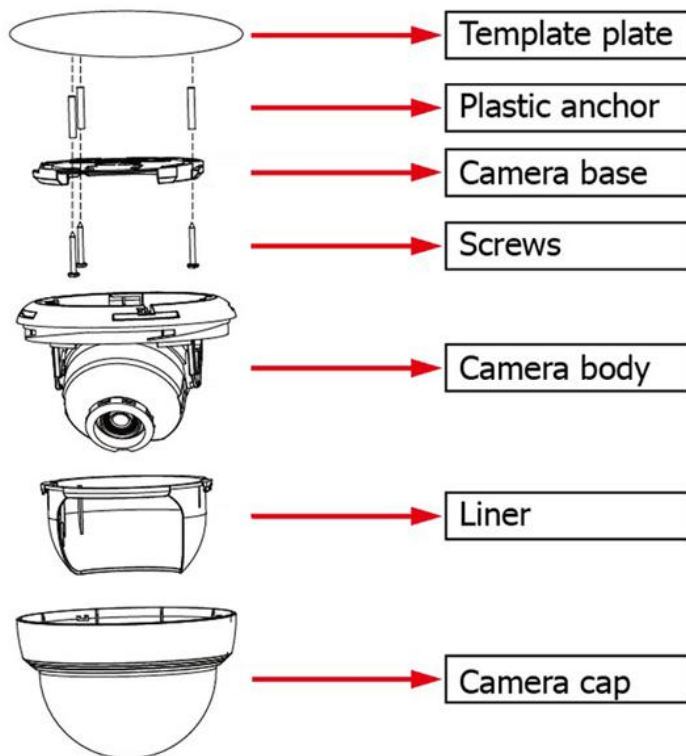


ED710 without LED



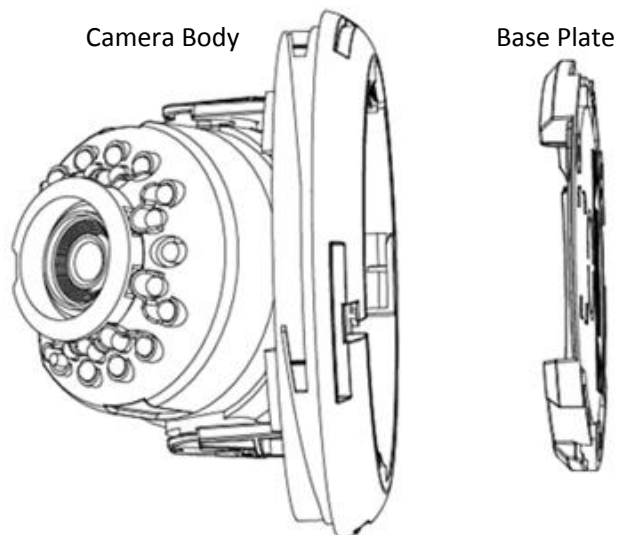
ED730 with LED

Camera Breakdown



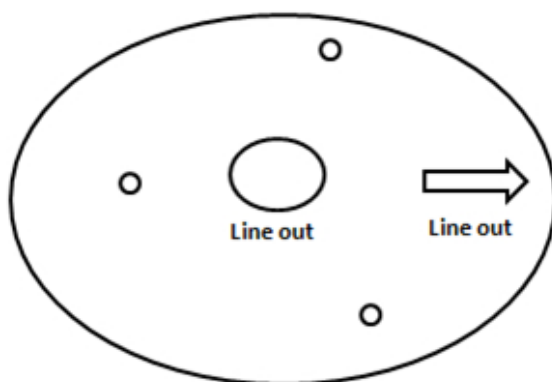
Important Notice

Please be noted the camera Base Plate may lose when you take out the camera from the pack. It is because the Base Plate is attached to Camera Body without locking tightly in order to simplify the installation procedure.



The Base Plate is unlocked to the Camera Body.

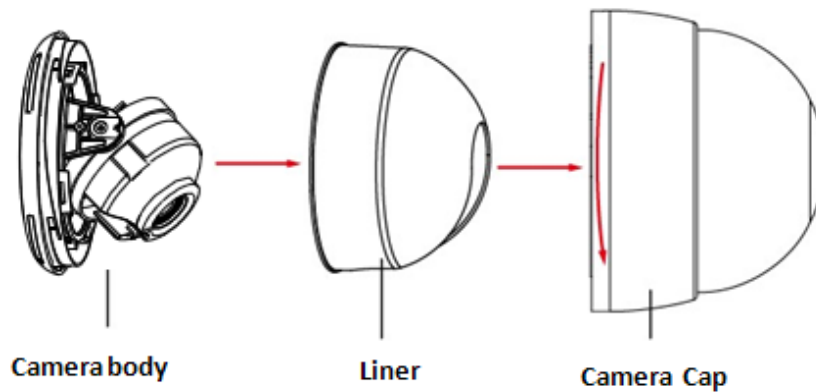
1. Stick the template plate on the position where you want to attach the camera, drill the three holes on the template plate for screwing the camera with the supplied screws and anchors, and the circle in the middle only if you want to wire the cables through the wall / ceiling (the "Line out" mark represents the factory wiring position).



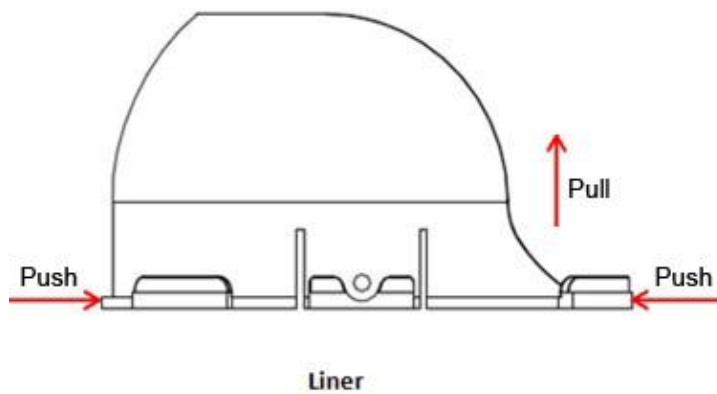
Template plate

2. Insert the supplied three anchors into the holes.

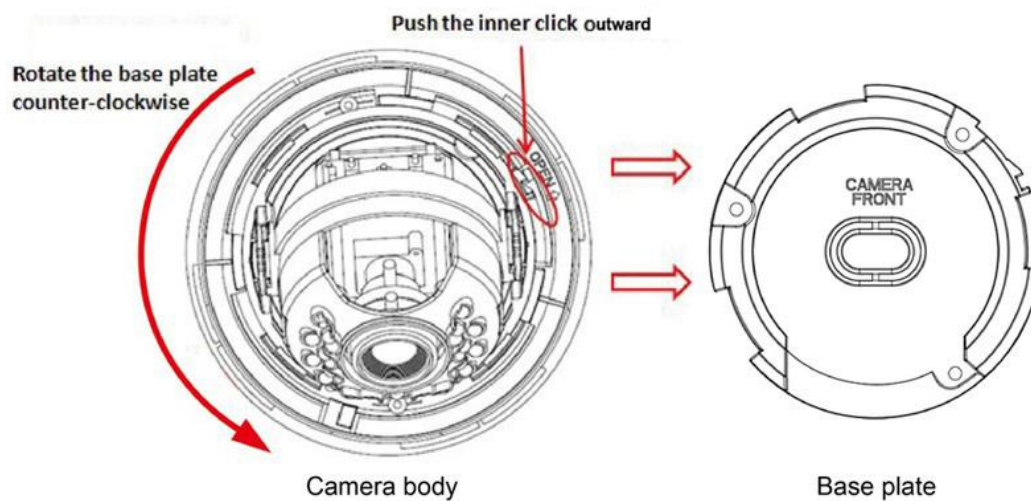
3. Rotate counter-clockwise to remove the camera cap, press and pull to remove the liner.



Remark: Hold the liner with one hand, press and pull to remove the liner (refer to the “arrow” label which marked to the liner)



4. Push the inner click outward and rotate the base plate counter-clockwise, then remove the camera body from the base plate. (See the yellow arrow label on the camera)

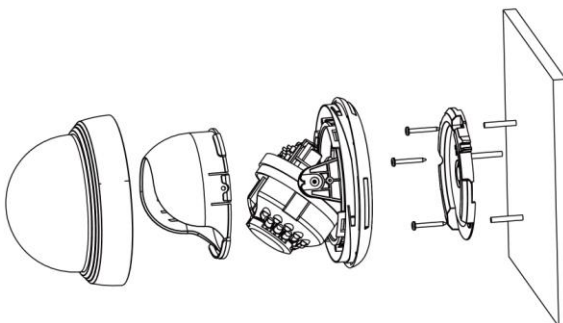


5. Screw the base plate to the wall / ceiling using the supplied three screws. Note that if you want to wire the cables through the wall / ceiling, break the middle part of the base plate.

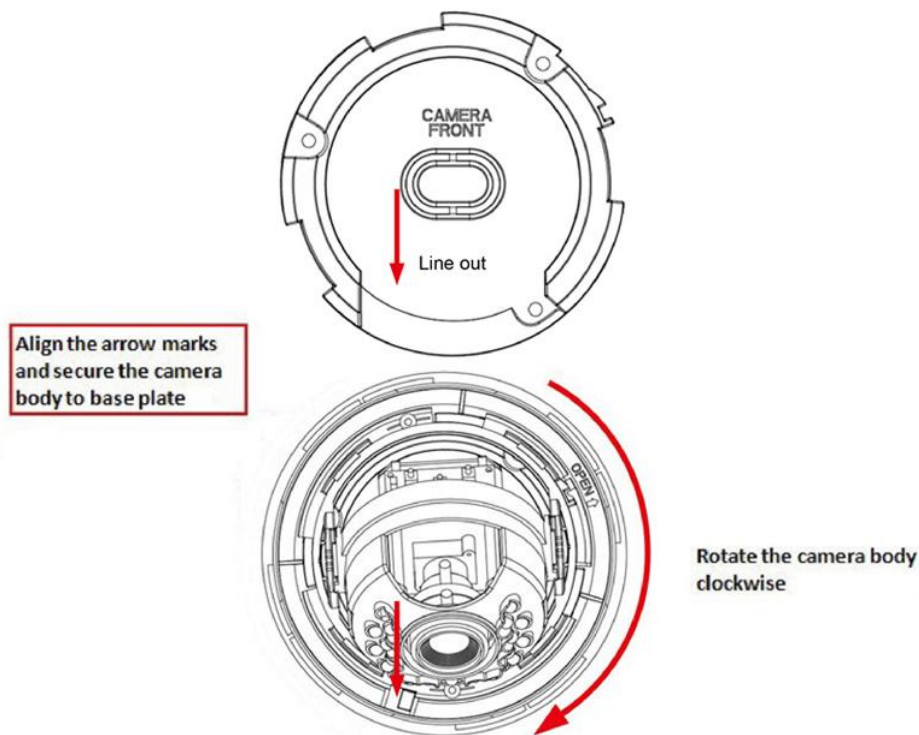
Ceiling-Mount



Wall-Mount



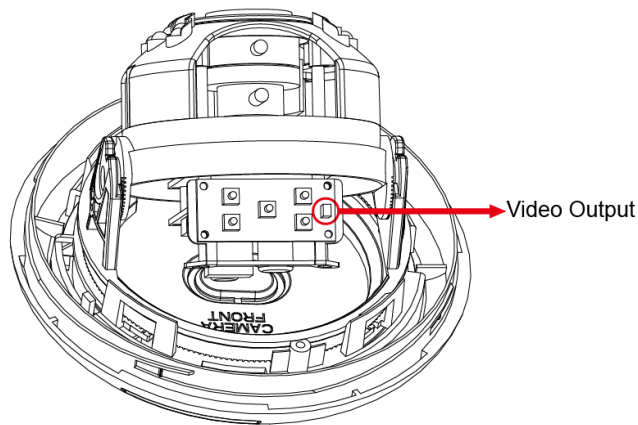
6. To lock the camera body back to the base plate, align the arrow marks and rotate the camera body clockwise. A “click” sound should be heard when the camera body and the base plate are firmly locked. **(See the direction arrow labels on the camera)**



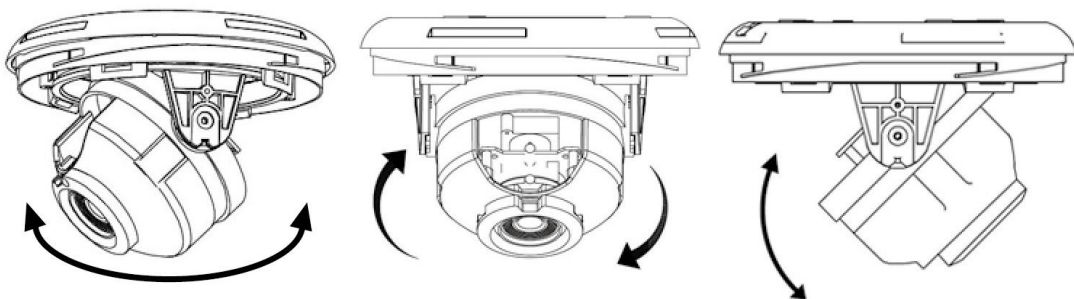
7. Connect the camera to the 12 VDC or 24 VAC power source and a DVR or monitor.



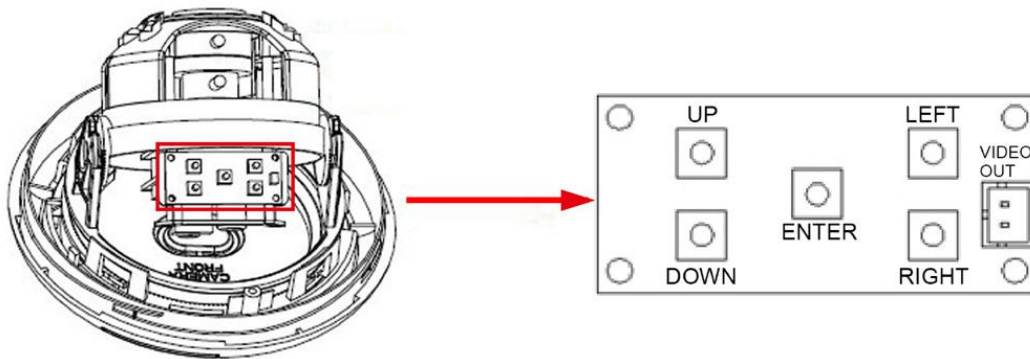
8. Optionally connect the camera to a monitor using the supplied Test Lead for adjusting camera angles, focus, zoom and configuring OSD menu
 - a. Connect one end of the Test Lead to the camera and the other end to a monitor.



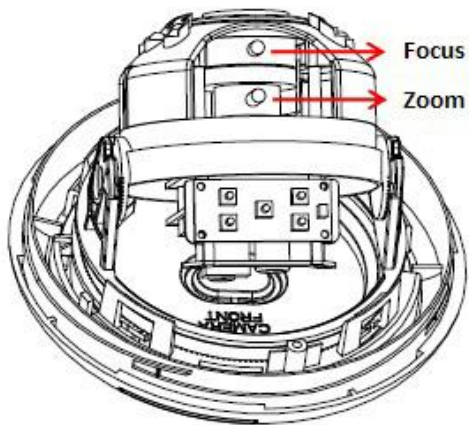
- b. To adjust camera angles, simply tilt, pan or rotate the camera.



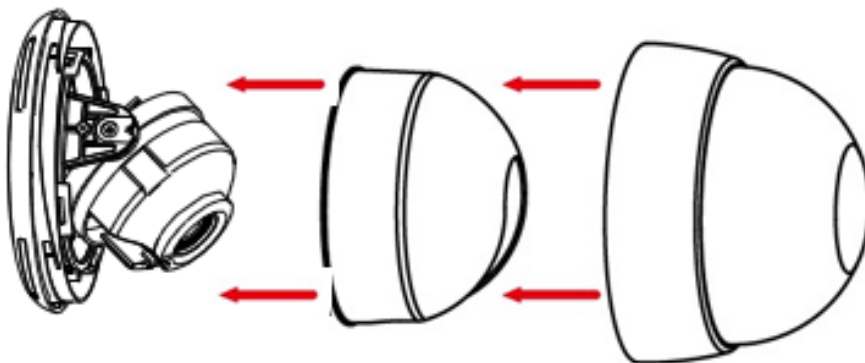
- c. To configure the OSD Menu, using the function button.



- d. To adjust the Zoom / Focus, using the Zoom / Focus screws. Tighten the zoom / Focus screws using the supplied screwdriver.



9. Put the liner back and secure the camera cover cap back to the camera.



4. Configuration in the OSD Menu

You can use the function buttons on the rear panel of the camera body to configure camera settings in the OSD menu:

No.	Main	Sub Menu	Sub Menu / Function			
1	Lens	Auto*	Type	DC*		
			Mode	AUTO*, Open, Close		
			Speed	0-255 (default=80)		
		Manual				
2	Shutter AGC	Auto*	High Luminance	Mode	Shut + Auto Iris, Auto Iris*	
				Brightness	0-255 (default=24) <ED710>	
			Low Luminance		Mode	AGC*, Off
				Brightness	x0.25, x0.50*, x0.75, x1.00	
		Manual	Mode	Shut+AGC		
			Shutter	1/60*, 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000		
			AGC	6.00*, 12.00, 18.00, 24.00, 30.00, 36.00, 42.00, 44.80		
		3	White Balance	ATW*	Speed	0-255 (default=239)
Delay CNT	0-255 (default=16)					
ATW Frame	x0.50, x1.0, x1.5, x2.0*					
Environment	Indoor*, Outdoor					
Push						
User1	B-Gain			0-255 (default=29)		
	R-Gain			0-255 (default=34)		
User2	B-Gain			0-255 (default=45)		
	R-Gain			0-255 (default=26)		
Anti CR						
Manual	Level			24-90 (default=58)		
Push lock						
4	Back Light	Off* / BLC / HLC				
5	Picture Adjust	Mirror	Off* / On			
		Brightness	0-255 (default=0)			
		Contrast	0-255 (default=128)			
		Sharpness	0-255 (default=128)			

		Hue	0-255 (default=128)			
		Gain	0-255 (default=128) <ED710>		0-255 (default=150) <ED730>	
6	ATR	Off*				
		On	Luminance	Low, Mid*, High		
			Contrast	Low, Mid-low, Mid*, Mid-high, High		
7	Motion Detection	Off*				
		On	Detect Sense	0-127 (default=111)		
			Block Display	Off*, On, Enable		
			Motion Area	Off*, On		
			Area Select	1/4*, 2/4, 3/4, 4/4		
			Top / Bottom	0-244 (default=0)		
			Left / Right	0-474 (default=0)		
8	Privacy	Off*				
		On	Area Select	1/8*, 2/8, 3/8, 4/8,5/8, 6/8, 7/8, 8/8		
			Top / Bottom	0-244 (default=0)		
			Left / Right	0-474 (default=0)		
			Color	1-8 (default=1)		
			Transpare nt	0.00, 0.50, 0.75, *1.00		
			Mosaic	*Off / On		
9	Day/Night	EXT1*<ED730>				
		EXT2				
		Auto*<ED710>	Burst	Off*/On		
			Delay CNT	0-255 (default=004) <ED710>		0-255 (default=003) <ED730>
			Day→Night	0-255 (default=000) <ED710>		0-255 (default=001) <ED730>
			Night→Day	0-255 (default=003) <ED710>		0-255 (default=015) <ED730>
			Color			
		B / W	Burst	Off* / On		
			IR Optimizer	Off		
				On*	Mode	Auto*/Center
Level	0-31 (default=015)					
10	NR	NR Mode	Off			

			Y/C*	Y Level	000-015 (default=003)
				C Level	000-015 (default=003)
11	Camera ID	Off*			
		On	English letters, numbers and 28 symbols		
12	Sync.	Int.			
13	Language	English*, Japanese, German, French, Russian, Portuguese, Spanish Simplified Chinese			
14	Camera Reset				
15	Save all				

5. Specifications

P/N	ED710	ED730
Pickup Device	1/3" Sony Exview HAD II 960H High Sensitivity Interline CCD	
Video Format	NTSC or PAL	
Picture Elements	1020 x 508 (NTSC) / 1020 x 596 (PAL)	
Effective Pixels	976 x 494 (NTSC) / 976 x 582 (PAL)	
Scanning System	2:1 Interlace	
Horizontal Resolution	720+ TVL	
Sensitivity	0.05 Lux native from sensor	0 Lux with IR on 0.05 Lux native from sensor
S/N Ratio	Over 50 dB (AGC OFF)	
Electronic Shutter	1/60(1/50)~1/100,000s	
Video Output	BNC 1.0Vp-p 75Ω	
Gamma Correction	0.45	
Lens Type	2.8-12mm DC Iris	
Lens Option	Varifocal	
BLC	OFF/BLC/HS BLC Selectable	
Gain Control	Low light auto, bright light auto, manual selectable	
White Balance	ATW/One Push/User2/Anti-Crawl/Manual/Push Lock	
Sync Mode	Internal(plus Anti-Chroma Crawl White Balance option)	
Day/Night	Auto	True D/N with ICR, Auto
IR LED	N/A	18 Units
IR Wave Length	N/A	850nm
IR Distance	N/A	Up to 30m/100ft.range(depending on scene IR reflectivity)
OSD Menu	Multiple Functions	
OSD Languages	English, Spanish, Portuguese, German, Russian, Japanese, Chinese, French	
Digital Noise Reduction	Y/C, Y, C, OFF	
ATR	On/Off(3 levels each adjustable for luminance and contrast)	
Wide Dynamic Range	On/Off(3 levels each adjustable for luminance and contrast)	
Mirror	Off/On	
Motion Detection	Off/On for 4 selectable zones (On screen indication on alarm)	
Privacy Mask	Off/On for 8 selectable zones	
Environmental	Indoor	
Power Source	12VDC/24VAC	
Power Consumption	12VDC:140 mA, 2W max.; 24VAC:2W max.;	IR on (12VDC:300mA, 4W max. 24VAC:4W max.)
Operating Temperature	-10°C~50°C / 14°F~122°F	
Humidity	Less than 80%	
Dimensions(in/mm)	133 x 96mm / 5.24 " x 3.78"	
Weight(lbs/g)	0.75lbs /340g	0.79lbs /360g
Certifications	CE/FCC/RoHS	

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

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Your EverFocus product is designed and manufactured with high quality materials and components which can be recycled and reused.
This symbol means that electrical and electronic equipment, at their end-of-life, should be disposed of separately from your household waste.
Please, dispose of this equipment at your local community waste collection/recycling centre.
In the European Union there are separate collection systems for used electrical and electronic product.
Please, help us to conserve the environment we live in!

Ihr EverFocus Produkt wurde entwickelt und hergestellt mit qualitativ hochwertigen Materialien und Komponenten, die recycelt und wieder verwendet werden können.
Dieses Symbol bedeutet, dass elektrische und elektronische Geräte am Ende ihrer Nutzungsdauer vom Hausmüll getrennt entsorgt werden sollen.
Bitte entsorgen Sie dieses Gerät bei Ihrer örtlichen kommunalen Sammelstelle oder im Recycling Centre.
Helfen Sie uns bitte, die Umwelt zu erhalten, in der wir leben!



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