



**EVERFOCUS**

Ultra Series Super Low Light  
720+ TVL OSD EWDR  
Dual Voltage Box Style Camera  
**Operation Instructions**

Model No. **EQ700**

Please read this manual first for correct installation and operation. This manual should be retained for future reference. The information in this manual was current when published. The manufacturer reserves the right to revise and improve its products. All specifications are therefore subject to change without notice.

### **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 cord 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% and 80%. This device is not rated as submersible. The input power source is 12VDC / 24VAC.

**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.

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**Product Overview**

Get incredible low light sensitivity and the resolution listed in the specs from the actual camera you install. The EverFocus Ultra Series EQ700 uses the Sony Exview HAD II 960H CCD to produce in excess of 720 horizontal TV lines of resolution from each and every Ultra Series 720+ camera we deliver (*megapixel* lenses are recommended to take full advantage of the amazing resolution available from this advanced imaging technology). Combine this with an almost unbelievable *useable native Ultra low light sensitivity of 0.0001 lux* without using digital

slow shutter this camera truly provides **color without compromise:** over 720TVL resolution, plus your choice of full motion color *or* true day/night images in ultra low light with **guaranteed ZERO ghosting** and Digital Wide Dynamic Range to handle the most challenging of bright or unbalanced scene lighting conditions. The EQ700 offers complete flexibility for selection of lens field of view, electronic or DC iris, wide choices for housing styles and mounting configurations, 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 the widest range of applications and **in almost any light level**.

## **FEATURES**

- Ultra resolution of over 720 horizontal TV lines for astounding image quality
- Exview HAD II sensor delivers amazing ultra high sensitivity of .0001 lux - *500X better native light sensitivity without DSS low light boost* - **Zero Ghosting guaranteed**
- Color without compromise: your choice of full motion color or true day/night images in low light without ghosting
- True Day/Night with ICR module
- Adaptive Tone Curve Reproduction (ATR)/Digital Wide Dynamic Range expansion to deliver properly exposed images despite unbalanced lighting in the scene
- Provides 2D-Noise Reduction to improve picture clarity while enabling DVRs to improve disk storage utilization
- Accepts C/CS mount manual or DC iris lenses
- Easy to use OSD setup menu
- Motion detection for 4 configurable zones
- Privacy mask function for 4 configurable zones
- Dual voltage (12VDC/24VAC) with Anti-Crawl for stability even without line lock

## **Box Contents**

Camera

This User Guide

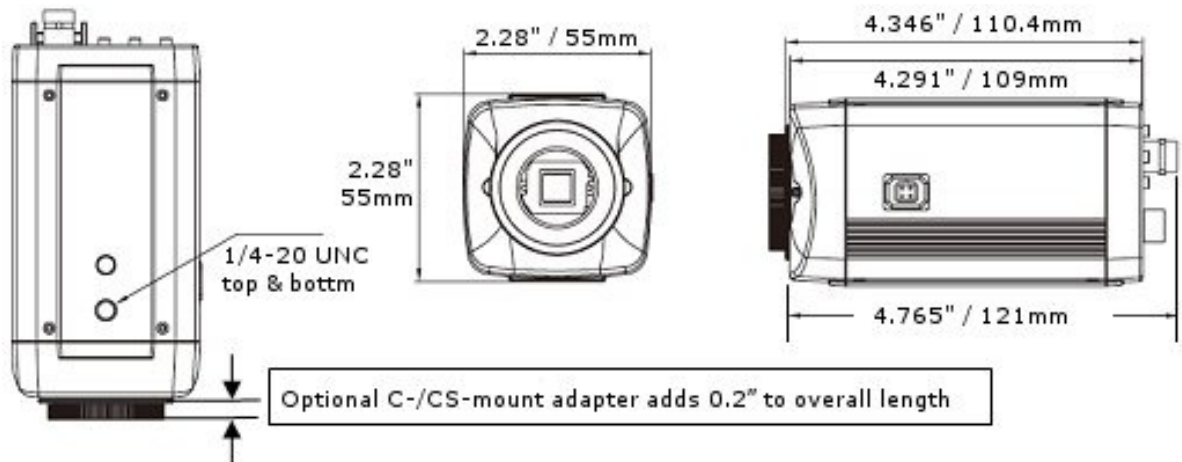
C-mount lens adapter ring

AI lens plug (for connecting lenses not already equipped with a plug)

## SPECIFICATIONS

Imaging Device	1/3" Sony Exview HAD II 960H High Sensitivity Interline CCD
Video Format	NTSC –or- PAL (separate models)
Picture Elements	NTSC: 1020(H)x508(V) PAL:1020(H)x596(V)
Effective Picture Elements	NTSC: 976(H) x 494(V) PAL:976(H) x 582(V)
Horizontal Resolution	More than 720 TVL from production cameras
Sensitivity	Color ~.001 lux, B/W ~ 0.0001Lux/F=1.0 (Zero ghosting guaranteed)
S/N Ratio	Over 50dB (AGC off)
Video Output	BNC 1.0V p-p 75Ω,
Gamma Correction	0.45
Lens Type	C/CS Mount (lens sold separately; megapixel lenses recommended for maximum image clarity)
Back Light Compensation	OFF/BLC/HSBLC Selectable
Auto Gain Control	Low light auto, Bright light auto, Manual selectable
Electronic Shutter	1/60 ~1/100,000 sec.
White Balance	ATW/One Push/User1/User2/Anti-Crawl/Manul/Push Lock
Sync. Mode	Internal (plus Anti-Chroma Crawl White Balance option above)
Day & Night	True D/N with motorized IR cut filter; Choose Color, B/W, Auto
OSD Menu	Multiple functions
OSD Languages	English, Spanish, Portuguese, German, Russian, Japanese, Chinese, French
2D-DNR	On/Off (level adjustable)
Adaptive Tone Curve Reproduction/ Digital WDR (ATR)	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 4 selectable zones
Power Source	12VDC/24VAC
Power Consumption	12VDC:180mA (2.16W) max. / 24VAC:2.9W max.
Operating Temperature	14°F~122°F ; -10°C~50°C
Storage Temperature	-4°F~140°F ; -20°C~60°C
Humidity	Less than 80% non condensing
Dimensions	2.28" x 2.28" x 4.765" / 58mm x 58mm x 121mm (includes BNC at rear)
Weight	~.88 lb/~400g
Certifications	CE / FCC

## DIMENSIONS

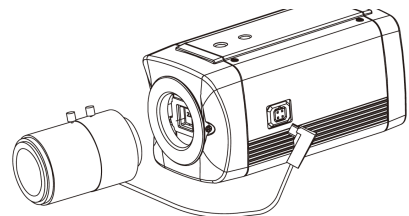
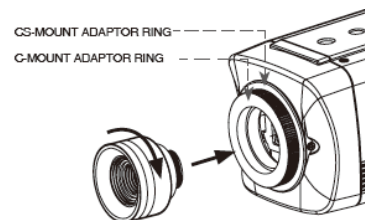


## INSTALLATION

### Warning

- To prevent electrical shock, turn off the electrical power before making electrical connections.

- Choose an appropriate mounting location which allows the desired field of view without obstructions. Select and attach a suitable lens. If a C-mount type lens you **MUST** attach the C- to CS-mount adapter ring between the lens and the camera. If a DC iris lens, attach the lens control wire to the jack on the side of the camera.
- Insure that the mounting surface will support the weight of the camera, mount, and any (optional) housing used to protect the camera. Add a safety wire if needed.
- Attach mount (see instructions provided with mount) and if a housing is used install camera into housing.
- Attach camera (or housing) to mount.
- Attach power and video coax BNC to camera.
- Press MENU button and adjust OSD menu settings to suit application.



## OSD MENU

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 - 108	
		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.

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 (CONTROLLER)		
		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)

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