

## **Operation Instruction**





EDH5201B

**EDH5201W** 

# HDcctv 1080p Indoor 3-Axis Dome Camera

*EDH5210B EDH5210W* 

#### **EVERFOCUS ELECTRONICS CORPORATION**

## **Operation Instruction**

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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.

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### **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. Use the camera at temperatures within -10°C~50°C (14°F~122°F) and in an indoor environment; this device is not rated as weather proof. The input power source is 12VDC. The use of properly fused or Class 2 power limited type supplies are highly recommended.
- 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.



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.



#### Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B 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 users' authority to operate this equipment.

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### Chapter

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## 1. Product Overview

The EDH5201 is an HDcctv indoor 3-axis dome camera with Day/Night capability available in your choice of white or black plastic housing to match or contrast with the décor. Based on a 1/2.8" Sony 2.43 megapixel progressive scan sensor and varifocal 3.6~16mm megapixel lens for HD 1080p resolution 100% digital images, it delivers vastly superior video quality compared to traditional CCTV images. This superior resolution not only captures more critical evidentiary information, but the inherent ability for megapixel video also extends the area of coverage, expedites completion of investigations, resolves complaints and reduces both capital and operational costs. Designed with SENS-UP up to 8X low light enhancement technology, the EDH5201 can capture color images in very low light without ghosting, or it can switch to monochrome mode automatically in low light environments.

This highly advanced imaging system also incorporates state of the art optical enhancement technologies: Lens Shading Correction compensates to eliminate artificial shadows caused by attenuation of light as it traverses the outer portions of the lens; Digital Slow Shutter light enhancement technology combines with Digital Noise Reduction (3D DNR) to maximize image clarity while conserving DVR disk storage space; digital WDR to handle challenging lighting conditions; digital zoom with electronic PTZ to fine tune field of view; Highlight Suppression (HSBLC) to handle imbalance due to bright spots in the scene; image flip/rotate, and much more.

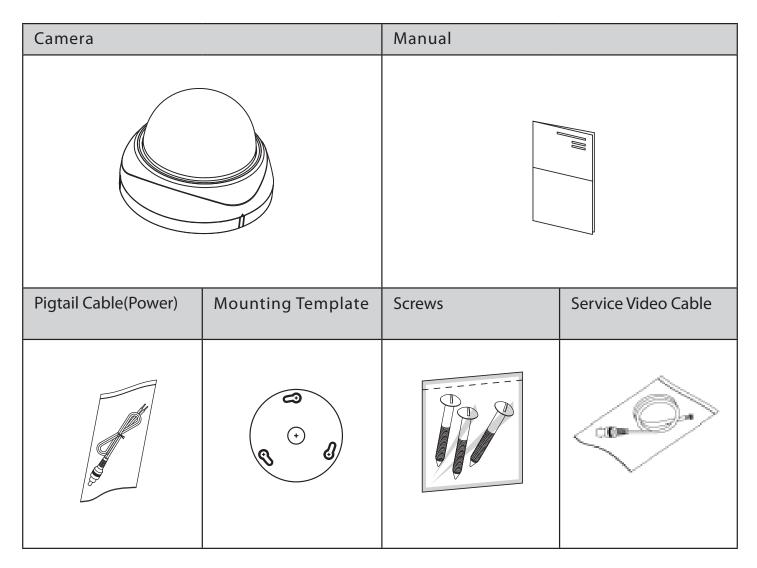
No major upgrade to the IT network is required to deploy this powerful technology; HDcctv cameras communicate at digital speeds up to 1.5Gb/s over existing or new coaxial cable (RG59 or other types for longer distances), using industry standard BNC connectors. With its NTSC/analog secondary output to allow convenient aim and focus using a standard hand held test monitor, full OSD controls, 3-axis positioning and 94° wide horizontal viewing angle megapixel lens the EDH5201 delivers flexible, robust coverage in a wide range of low light surveillance applications while delivering stunning HD image quality.

#### 1.1 Features

- HDcctv 2.1 Megapixel real time 1920x1080/1280x720 HD video over coax for superlative image detail
- Supports video outputs of 1080p30/25 and 720p60/50 (field select)
- Varifocal 3.6~16mm megapixel lens
- Choice of Day/Night operation or Full Color Images in Low Light
- Provides 3-D DNR to improve picture clarity while enabling DVRs to improve disk storage utilization
- 3-Axis Gimbal for Flexible mounting and positioning
- Easy to use OSD setup menu with an array of options
- Enhanced low light sensitivity increase of up to 8x
- Lens Shading Compensation to offset diminished light transmission through lens periphery for uniform image illumination
- Electronic WDR and HSBLC [Highlight Suppression Back Light Compensation] to handle lighting imbalance and bright areas in the scene
- Digital zoom increases effective lens magnification up to 20X
- Up to 24 Privacy Zones
- Dead pixel compensation for increased clarity and extended service life
- SD TV Out for aim and focus using a standard hand held test monitor

#### 1.2 Accessory Parts List

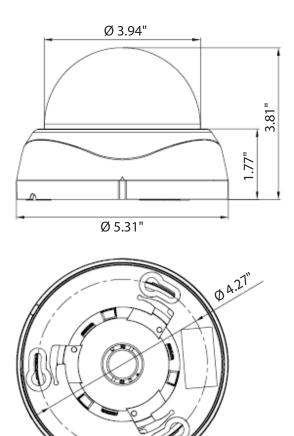
Please be careful when you unpack the box due to the electronics devices inside. Check and make sure that you have all the items listed below inside the original box:



Please Note: If an item appears to have been damaged in shipment, replace it properly in its carton and notify the shipper. If any items are missing, notify your EverFocus Electronics Corp. Sales Representative or Customer Service. The shipping carton is the safest container in which the unit may be transported. Save it for possible future use.

## 1.3 Specifications

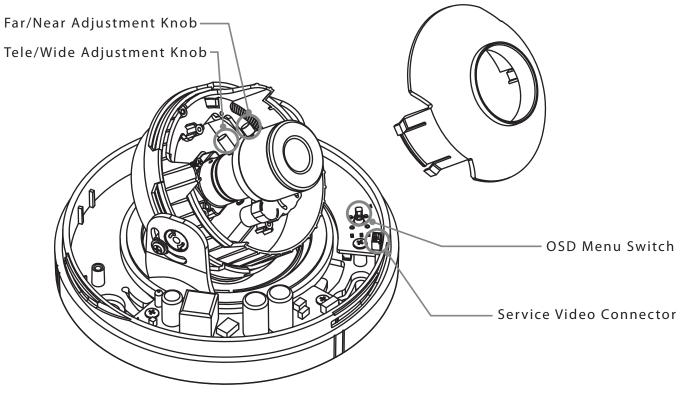
Pickup Device	1/2.8" Sony 2.43 Megapixel Color Progressive CMOS sensor		
Image Pixels	1920(H)x1080(V) with 2.8µx 2.8µ pixel size		
HDcctv Image Area Dimensions	5.38mm (H) x 3.02 mm(W); ø 6.17 mm area diagonal		
Sensitivity	0.1lux/F=1.2 (Sens-Up OFF)		
S/N Ratio	More than 50dB		
Video Format Main Output	HDcctv		
Video Resolution/Mode Main Output	Field select 1080p30/25, 720p60/50		
Main Output Connector	BNC-F		
Video Format Test Output	NTSC/PAL selectable		
Test Output Connector	Pin connector on board; adapter cable to BNC-F supplied		
Lens Type	3.6~16mm Megapixel DC Iris Lens		
FOV Angle	72°~19° Horizontal		
Shutter Speed	Auto/Manual selectable		
OSD	Yes (5-axis joystick control)		
D/N Mode	Auto, Color, B/W (Electronic D/N)		
Exposure Control	Automatic Electronic Shutter		
Digital WDR	Weight Level Adjustable 0~4		
DSS	Low light boost up to 8X		
Lens Shading Compensation	On / Off		
HSBLC (Highlight Suppression Back Light Compensation)	Off/On		
Auto Gain Control	Variable relative level 0~10		
White Balance	ATW / Push / Manual		
DNR - 3D	Low / Medium / High		
Digital Zoom	1X~20X		
Image Flip	Off /V Flip/H flip/H+V flip (rotate)		
Programmable Privacy Zones	24 areas independently adjustable for size, location, color		
Language	English		
Dead Pixel Compensation	Manual Off/On		
Power Source & Consumption	DC12V (+/-10%) @ 220mA		
Mounting/Positioning	3-Axis gimbal		
Dimensions	Body: 95.3mm / 3.75" (Max. H) x Ø136.4mm / Ø5.37" Base Diameter (W)		
Weight	343g / 12.1oz		
Housing Color	Choice of black or white		
Operating Temperature	14°F to 122°F		
Operating Humidity	20%~80% humidity, non-condensing		



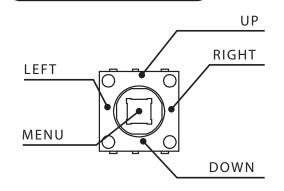
## Chapter

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# 2. Camera Component Description



### OSD Menu Switch

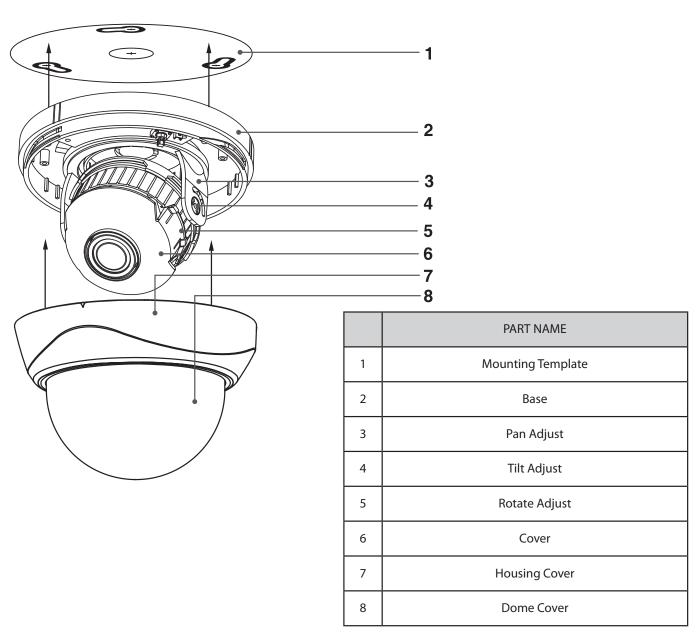


- UP, DOWN: Menu up / down
- LEFT, RIGHT: Change Values
- MENU : MENU(SELECTION KEY) / Enter

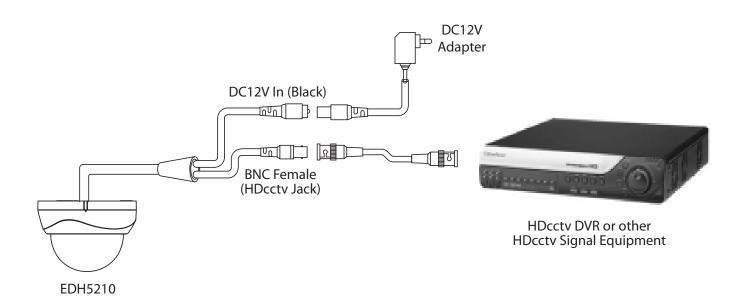
## Chapter

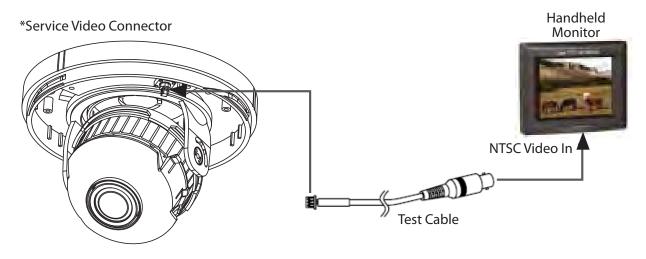
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# 3. Installation



## **Connections**





\* NOTE



When installing the camera, make sure that all cable ends and connectors are protected from humidity and other outdoor environments.

## 4. OSD Structure

SETUP

EXPOSURE

WHITE BALANCE

WDR / BLC

DNR

DAY & NIGHT

IMAGE

SPECIAL

SYSTEM

Reset Date All

EXT

## Chapter

4

			ı.			
Main	Sub Menu	Sub Menu				
EXPOSURE	BRIGHTNESS	0 ~ 20				
	AE MODE	NORMAL AE /	NORMAL AE / INDOOR			
	LENS(IRIS)	MANUAL / AU	MANUAL / AUTO			
	SHUTTER	MANUAL / AUTO	LEVEL RETURN	1/30(25), 1/60(50), 1/120(100), 1/240, 1/500, 1/1K, 1/2K, 1/4K, 1/8K, 1/16K, 1/30K, 1/60K.  BACK / EXIT		
	DSS	OEE V2 V2 V/		DACK / EXII		
	AGC	OFF, X2, X3, X4, X5, X6, X7, X8 0 ~ 10				
	BASE FREQ	60Hz / 50Hz				
	RESET DATA	BACK / DEF.				
	RETURN	BACK / EXIT.				
	ILLIOIN		ICOLORTEMP.	LOW / MIDDLE / HIGH		
		AUTO /AUTOext/	R-GAIN	0~20		
	WB MODE	PUSH	B-GAIN	0~20		
WHITE BALANCE		/MANUAL	RETURN	BACK / EXIT		
	SATURATION	0 ~ 20				
	RESET DATE	BACK / DEF.				
	RETURN	BACK / EXIT.				
	MODE	OFF, BLC, DWD	DR .			
	WDR WGT	0 ~ 4				
	BLC OSD	OFF ~ ON				
	BLC POS-X	0 ~ 20				
DWDR / BLC	BLC POS-Y	0 ~ 20				
	BLC SIZE-X	0 ~ 20				
	BLC SIZE-Y	0 ~ 20				
	RESET DATA	BACK / DEF.				
	RETURN	BACK / EXIT.	,			
DNR		OFF, LOW, MIDDLE, HIGH				
DAY & NIGHT			D&N DETECT	AGC / SENSE		
			DELAY	1sec, 3, 5, 10, 15, 20, 25, 30, 40, 50, 60sec		
		COLOR/B&W/	D->N LEVEL	0 ~ 20(AGC) / 0 ~ 10(SENSE)		
		AUTO	N->D LEVEL	0 ~ 20(AGC) / 0 ~ 10(SENSE)		
			RESET DATA	BACK / DEF.		
			RETURN	BACK / EXIT.		

# 4. OSD Structure

Main	Sub Menu	Sub Menu				
	SHARPNESS	0 ~ 10	0~10			
	FLIP	OFF, H FLIP,	OFF, H FLIP, V FLIP, HV FLIP			
	LENS SHADING	OFF, ON				
IMAGE	DZOOM	1x, 2x, 4x, 6x, 8x, 10x, 12x, 14x, 16x, 18x, 20x				
	RESET DATA	BACK / DEF.				
	RETURN	BACK / EXIT	BACK / EXIT.			
			ZONE NO.	0 ~ 23		
			ZONE OP.	OFF/ ON		
			X-POS	0 ~ 60		
			Y-POS	0 ~ 40		
			X-SIZ	0 ~ 40		
	PRIVACY	OFF/ ON	Y-SIZ	0 ~ 40		
			COLOR	BLK, WHI, YEL, CYN, GRN, MAG, RED, BLU		
			TRANS.	0 ~ 4		
			RESET DATA	BACK / DEF.		
SPECIAL			RETURN	BACK / EXIT.		
SPECIAL			LEVEL	0 ~ 20		
	HLMASK	OFF/ ON	COLOR	BLK, WHI, YEL, CYN, GRN, MAG, RED, BLU		
			RESET DATA	BACK / DEF.		
			RETURN	BACK / EXIT.		
	PATTERN	OFF, 1, 2				
	DISPLAY INFO.		CAMERA ID.	OFF/ ON		
			MOTION CHECK	OFF/ ON		
			RETURN	BACK / EXIT.		
	RESET DATA	BACK / DEF.				
	RETURN	BACK / EXIT.				
	SDI FORMAT	1080p / 720p				
	SDI FPS	30 / 25 (when 1080p), 60 / 50 (when 720p)				
	CVBS FORMAT	NTSC / PAL				
SYSTEM	APPLY	OK				
SYSTEM	SYSTEM INFO	S/W VERSION				
		SET VERSION				
	RESET DATA	BACK / DEF.				
	RETURN	BACK / EXIT				

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