

# HD CCTV Total Solution

## 5MP IR Bullet Camera User Manual

Please use this camera with a DVR which supports HD video recording.  
Please read the instructions thoroughly before using the product.



### CAUTION

### RISK OF ELECTRIC SHOCK



#### CAUTION:

To reduce the risk of electric shock, do not expose this apparatus to rain or moisture.

Only operate this apparatus from the type of power source indicated on the label.

The company shall not be liable for any damages arising out of any improper use, even if we have been advised of the possibility of such damages.



The lightning flash with 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.



This 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.



#### ROHS Announcement

All lead-free products offered by the company comply with the requirements of the European law on the Restriction of Hazardous Substances (RoHS) directive, which means our manufacture processes and products are strictly "lead-free" and without the hazardous substances cited in the directive.



The crossed-out wheeled bin mark symbolizes that within the European Union the product must be collected separately at the product end-of-life. This applies to your product and any peripherals marked with this symbol. Do not dispose of these products as unsorted municipal waste.



#### CE Mark

This apparatus is manufactured to comply with the radio interference.

The company does not warrant that this manual will be uninterrupted or error-free. We reserve the right to revise or remove any content in this manual at any time.

## FEATURES

1. 1/2.5" CMOS Sensor with up to 5MP video output
2. Low light sensitivity
3. Quadbrid video output with TVI, CVI, AHD & CVBS
4. DWDR to increase image recognizability in overexposure and dark areas
5. Day and night 24-hour surveillance with IR effective distance up to 50 meters
6. IP66 for weather-proof application
7. Camera parameters adjustable when used with HD CCTV DVR
8. (Optional) Microphone built-in for audio recording

## PACKAGE CONTENT

- IR camera
- User manual
- Wrench
- Screws & wall plugs

## SPECIFICATIONS\*

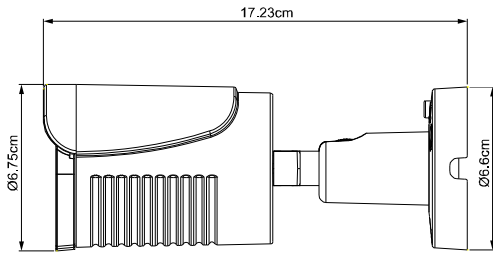
	Model 1	Model 2	Model 3
Video Mode	TVI, CVI, AHD & CVBS** switchable		
Pick-up Element	1/2.5 " CMOS image sensor		
Number of Pixels	2560 (H) x 1920 (V)		
Video Frame Rate	5MP@ 20fps		
Min. Illumination	0.1 Lux / F1.8, 0 Lux (IR LED ON)	0.1 Lux / F1.4(Wide)~F2.8(Tele), 0 Lux (IR LED ON)	
S/N Ratio	More than 48dB (AGC OFF)		
Shutter Speed	AUTO : 1/25(30) sec~1/50,000 sec		
Lens	f3.6mm / F1.8	motorized f2.8 ~ 12mm / F1.4 ~ F2.8	
Lens Angle	96° (Horizontal) / 50° (Vertical) / 116° (Diagonal)	Wide: 113.5° (Horizontal) / 59.3° (Vertical) / 137° (Diagonal)  Tele: 33.4° (Horizontal) / 18.7° (Vertical) / 38.2° (Diagonal)	
IR LED	2 units	4 units	
IR Effective Distance	Up to 50 meters		
IR Shift	YES		
Day & Night Mode	YES		
Audio	NO	Microphone built-in	
Noise Reduction	YES		
IRIS Mode	AES		
White Balance	AUTO		
AGC	AUTO		
Sharpness	Adjustable		
Flickerless	50HZ / 60HZ / OFF		
BLC	Adjustable		
DWDR	YES		
IP Rating	IP66		
Operating Temperature	-20°C ~ 40°C		
Operating Humidity	90% or less relative humidity		
Power Source (±10%)	DC12V / 1A	DC12V / 1A	
Current Consumption (±10%)	100mA (IR IED OFF); 250mA (IR LED ON)	120mA (IR IED OFF); 340mA (IR LED ON)	
Net Weight (kg)	0.36	0.94	
Optional Peripherals	Junction Box (AVA456-WBKT / AVA456-WHKT)		

\* The specifications are subject to change without notice.

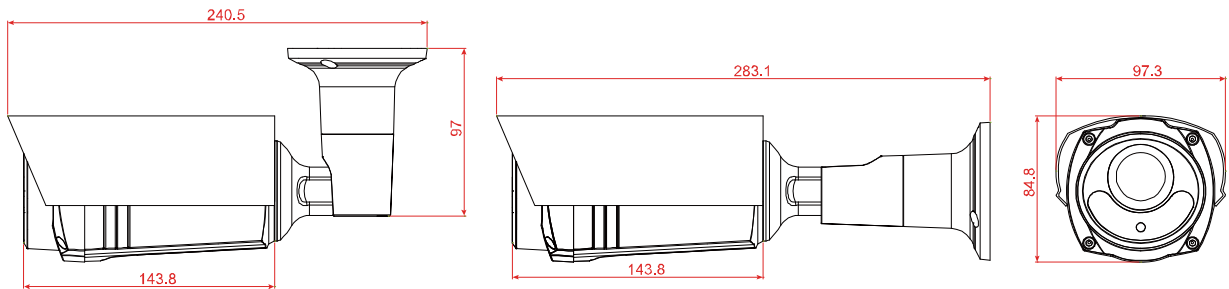
\*\* The camera can't be accessed to change configurations in the CVBS mode.

## DIMENSIONS\*

### ■ Model 1



### ■ Model 2





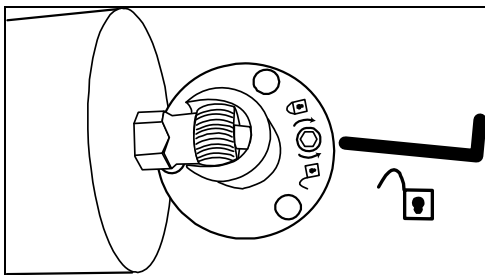
\*Dimensional Tolerance:  $\pm 5\text{mm}$

## INSTALLATION



### ■ Model 1

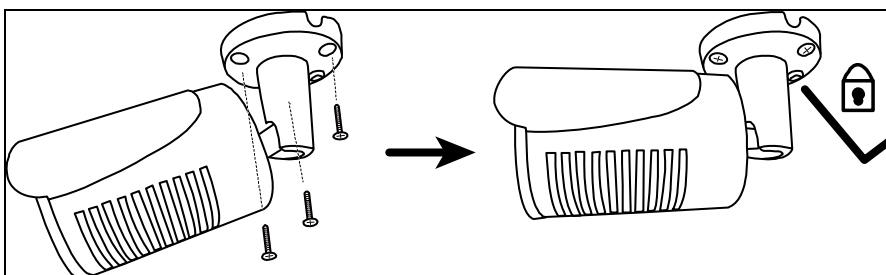
Step1: Find the wrench supplied in the sales package, and loosen the screw as indicated below to loosen the joint lock of the bracket.

**Note:**  for lock, and for  unlock.



Step2: Locate where to install this camera, and fasten the bracket to the ceiling or wall. Then, adjust the viewing angle of the camera, and fasten the screw to secure the joint lock of the bracket.

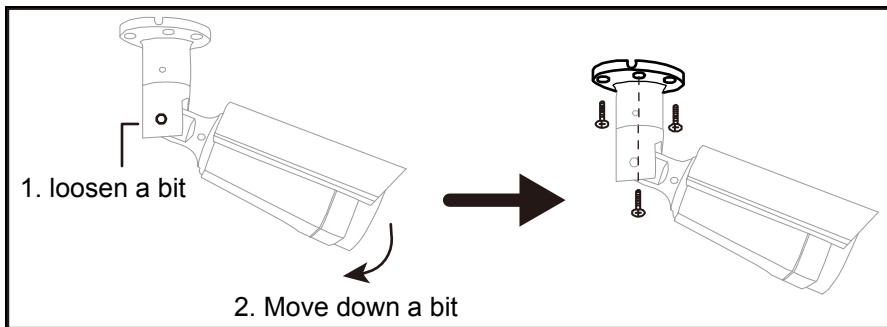
**Note:**  for lock, and for  unlock.



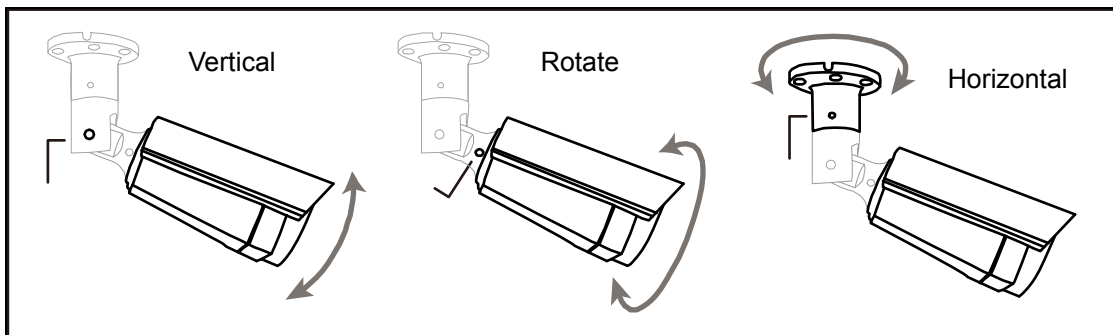
## ■ Model 2

Step 1: Loosen the screw as indicated below to move down the camera lens.

Then, fasten the camera to the ceiling or wall where you want to install.



Step 2: Adjust the viewing angle of the camera as indicated below.



Step 3: Power on the camera and fine-tune the viewing angle.

For details, please refer to the section, "**FOCAL LENGTH & FOCUS ADJUSTMENT**".

## CONNECTION

### 1. DC12V Input Terminal

Connect the power terminal of the camera to a DC 12V regulated power supply.

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**Note:** Please use the correct power adaptor, DC12V (regulated), to operate this unit. The power tolerance of this unit is DC12V  $\pm$  10%. Over maximum DC 12V power input will damage this unit.

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### 2. Video Output Connector (VIDEO OUT)

Connect the camera video output to the video input of a DVR with 75 $\Omega$  coaxial cable.

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**Note:** To ensure the camera has sufficient protection against moisture, an extra waterproof measure, such as by using an insulating tape, must be used to cover the power and video connectors after connection.

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## FOCAL LENGTH & FOCUS ADJUSTMENT

This function is available for Model 2 only.


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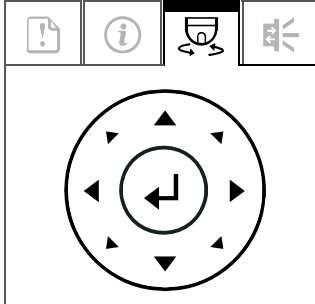
**Note:** The access path is taking our HD CCTV recorder as an example. If you're using other brand's recorder, please refer to its own user manual to know how to access the camera parameters.

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Based on the recorder type you have, on the live view:

### **Type 1**



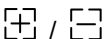
Click twice on the channel that this camera is connected to show in full screen, and click on  on the right side to display the PTZ control panel.



### **Type 2**

Click twice on the channel that this camera is connected to show in full screen, and click on  on the bottom left of the channel to show the PTZ control panel.

### **How to adjust**

	Zoom in / out max	Click to zoom in on the image to the largest / zoom out on the image to its original size.
	Zoom in / out	Click to zoom in / out the image.
	Focus near / far	Click to adjust the focus of the image.

# CAMERA PARAMETERS

This camera series has its own configuration menu.

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**Note:** The camera can't be accessed to change configurations when the video mode is switched to CVBS.

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**Note:** The access path is taking our HD CCTV recorder as an example. If you're using other brand's recorder, please refer to its own user manual to know how to access the camera parameters.

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Based on the recorder type you have, on the live view:

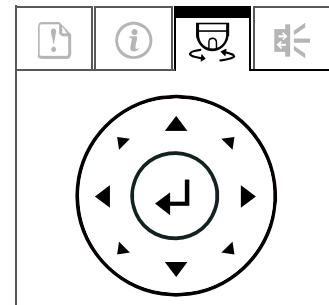
## Type 1

Click twice on the channel that this camera is connected to show in full screen, and click on  on the right side to display the PTZ control panel.


Then, click on  (Enter) on the PTZ control panel to show the configuration menu of this camera, and use the arrow keypad to choose between each option.


When the camera menu is entered, use keypad to move between and change those configurations.

-  Move between selections.
-  Change settings.
-  Call the camera parameters menu or enter the currently-selected item.






## Type 2

Click twice on the channel that this camera is connected to show in full screen, and click on  on the bottom left of the channel to show the PTZ control panel.

Then, click on  (Enter) on the PTZ control panel to show the configuration menu of this camera, and use the arrow keypad to choose between each option.



-  Move among sub-menus.
-  Change settings.
-  Call the camera parameters menu or enter the currently-selected item.

MENU			REMARK	
FORMAT			Choose the video resolution and IPS of this camera in different video output mode.	
VIDEO MODE		TVI / AHD / CVI / CVBS		
MAIN-MENU	AE	BRIGHTNESS	1 ~ 10	
		EXPOSURE MODE	GLOBAL	
			BLC	Manually adjust the level of BLC from 0 ~ 8. The higher the value, the brighter the whole image.
		GAIN	HIGH / MIDDLE / LOW	
	WDR	OFF / ON	Digital WDR	
	AWB	MODE	ATW	
			MWB	Manually adjust the white balance parameters by modifying R / B gain parameters.
	DAY - NIGHT	MODE	EXT	Use the external light sensor we added in the camera to detect the surrounding light condition and switch to color or B/W mode.
			AUTO	
			COLOR	
			B/W	
	VIDEO SETTING	CONTRAST	1 ~ 10	
		SHARPNESS	1 ~ 10	
		COLOR GAIN	1 ~ 10	
		NR	1 ~ 10	
		MIRROR	DEFAULT	
			H	Horizontal
V	Vertical			
	HV	Horizontal & vertical		
RESET				
EXIT			Exit the menu without saving	
SAVE-EXIT			Save the changes and exit the menu.	