



CCTV Bullet camera

ZEB HDTVI-B2



User Manual

www.zebronics.com

Dear Customer,

Hello Zebee, please refer to this user manual for optimum usage of ZEB-HD TVI-B2 CCTV Bullet Camera.

Features

- **ICR (Infrared Cut Removable Filter):**

Automatic day/night mode switching for clear images.

- **AGC (Automatic Gain Control):** Adjusts sensitivity for varying light conditions.

- **BLC (Back Light Compensation):**

Enhances visibility in front of bright backgrounds.

- **AWB (Auto White Balance):** Ensures natural colors in different lighting.

- **DNR (Digital Noise Reduction):** Reduces image noise for clearer pictures.

- **DWDR (Digital Wide Dynamic Range):**

Enhances image quality in challenging lighting.

- **AHD | CVI | TVI | CVBS:** Supports four video formats for compatibility.

- **2MP:** High resolution Image Sensor

- **20 Meters IR Range (Max.):** Maximum infrared illumination distance.

- **CMOS Image Sensor:** Provides better image quality.

- **Low Illumination:** Captures clear images in low light.

Specifications

Camera	Minimum Illumination	0.005lux @F1.2, AGC ON; 0 lux (LED ON)
	Image Sensor	1/3" CMOS sensor
	Shutter Speed	1/50(1/60) to 1/100,000 seconds
	Angle of View	2.8mm: Horizontal: 97°; Vertical: 53°; Diagonal: 113°
	Scanning System	Progressive Scan
Lens	Focus Length	2.8mm (Fixed)
	Mount Type / Lens	M12
	Focus Control	Fixed
	Lens Type	Fixed
	Lens	2.8mm
	Max Aperture	F1.6
Night Vision	IR Cut Filter	Yes
	IR Range	10-20m
	IR Power On	Auto Control
Camera Features	OSD Support	Yes
	No of IR LEDs	1 IR LED
	Day/Night	Support
	Noise Reduction	Yes
	Picture Adjustment	Yes
	WDR	Yes (D-WDR)
	White Balance	Yes
	AGC (Gain Control)	Yes
	ICR (Infrared Cut Removable Filter)	Auto(ICR)/Color/B/W
	Back Light Compensation	Yes
	Video output	TVI:2MP@25/30fps AHD:2MP@25/30fps CVI:2MP@25/30fps CVBS:PAL/NTSC
	Weatherproof Standard	IP67
	S/N Ratio	≥52dB (AGC OFF)
General	Power Consumption	DC12V (± 10%)
	Operating Temperature	-30°C~50°C / Less than 90% RH
	Weight	150g
	Body type	ABS Plastic
	Dimension (Dia x H)	6.5 x 14.4 cm
	Country of Origin	India

Package Contents

CCTV Camera	: 1 U
Mounting Kit	: 1 U
QR Code Guide	: 1 U

Connectors



DC Power Input



BNC Connector

Getting Started

Unpack your camera and ensure all components are present.

- **Camera Placement:** Decide on the installation location considering visibility, temperature, stability, and angle.
- **Cable Connection:** Connect the camera to your monitor or recording device using the appropriate cables.
- **Power Supply:** Power the camera with a DC12V power supply (matching the camera's requirements) by connecting it to the camera's power input.
- **Positioning:** Adjust the camera's angle and secure it in place using the mounting screws.
- **Testing:** Verify camera functionality by checking the live feed on your monitor or recording device.

Installation

Follow the provided instructions to install the camera securely, connect cables, and position it as needed.

- **Mounting:** Securely mount the camera on a stable surface or bracket using the included mounting screws. Ensure it has a clear line of sight to the area you want to monitor.
- **Positioning:** Adjust the camera's angle to achieve the desired field of view. Tighten the mounting screws to lock it in place.
- **Cable Routing:** Carefully route the cables, keeping them tidy and out of the way. Use cable clips or ties to secure the cables to prevent damage or tripping hazards.
- **Weatherproofing (Outdoor Installation):** If installing the camera outdoors, ensure it is protected from the elements. Consider using weatherproof enclosures or covers to shield the camera and cable connections.
- **Connecting to Power:** Connect the DC12V power supply to the camera's power input. Ensure the power supply is properly connected to a stable power source.
- **Video Connection:** Connect the camera's video output to DVR using the BNC cables.

OSD MENU:

The OSD menu allows users to configure key camera functions such as exposure, white balance, day/night mode, and image adjustments for optimal performance.

MAIN	
AE	↵
AWB	↵
LIGHTING SETTING	↵
IMAGE ENHANCE	↵
VIDEO SETTING	↵
LANGUAGE	<ENGLISH>
RESET	
SAVE & EXIT	
EXIT	

AE (Auto Exposure) automatically adjusts the camera's exposure level — mainly shutter control, shutter speed, brightness and exposure mode to ensure that the image is properly lit under varying lighting conditions.

```
EXPOSURE
  SHUTTER CTRL          <MANUAL>
  SHUTTER               <1/25>
  BRIGHTNESS           <30>
  EXPOSURE MODE        <BLC>
  RETURN
```

AWB automatically adjusts the color tones in image so that white objects appear truly white under different lighting

```
AWB
  MODE                  <ATW>
  RETURN
```

Lighting Settings allow the camera to adjust exposure and color tones for different lighting conditions, ensuring clear and natural images in any environment.

Lighting Mode lets you select the type Of illumination: White Light, Smart, or IR—so the camera can optimize exposure and image quality for different lighting conditions.

```
LIGHTING SETTING
  LIGHTNING MODE      <WHITE LIGHT>
  WHITE MODE          <AUTO>
  RETURN
```

```
LIGHTING SETTING
  LIGHTNING MODE      <SMART>
  IR MODE              <AUTO>
  RETURN
```

LIGHTING SETTING	
LIGHTNING MODE	<IR>
IR MODE	<AUTO>
RETURN	

Image Sensing settings allow adjustment of contrast, sharpness, saturation, 2DNR (noise reduction), and DWDR (digital wide dynamic range) to optimize picture clarity and detail under various conditions.

IMAGE ENHANCE	
CONTRAST	<MANUAL> <5>
SHARPNESS	<MANUAL> <9>
SATURATE	<MANUAL> <11>
2DNR	<AUTO>
DWDR	<OPEN>
RETURN	

Video Settings allow you to select the video output mode—HD (AHD, TVI, CVI, CVBS) or Standard (1080P25, PAL, etc.)—to match your monitor or recording device requirements.

VIDEO SETTING	
HD	<AHD>
STANDARD	<1080P25>
APPLY & REBOOT	
RETURN	

VIDEO SETTING	
HD	<TVI>
STANDARD	<1080P25>
RETURN	

VIDEO SETTING	
HD	<CVI>
STANDARD	<1080P25>
APPLY & REBOOT	
RETURN	

VIDEO SETTING

HD

<CVBS>

STANDARD

<PAL>

APPLY & REBOOT

RETURN

ISO 9001:2015 Certified Company
www.zebronics.com

