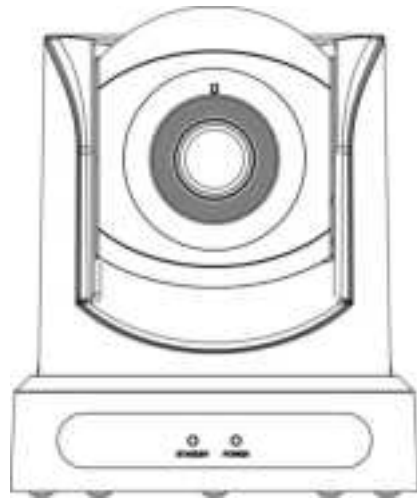
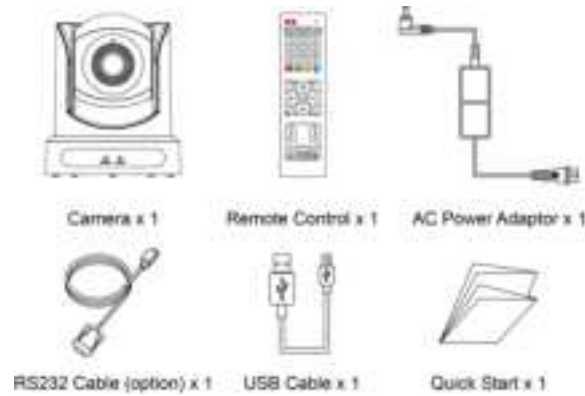


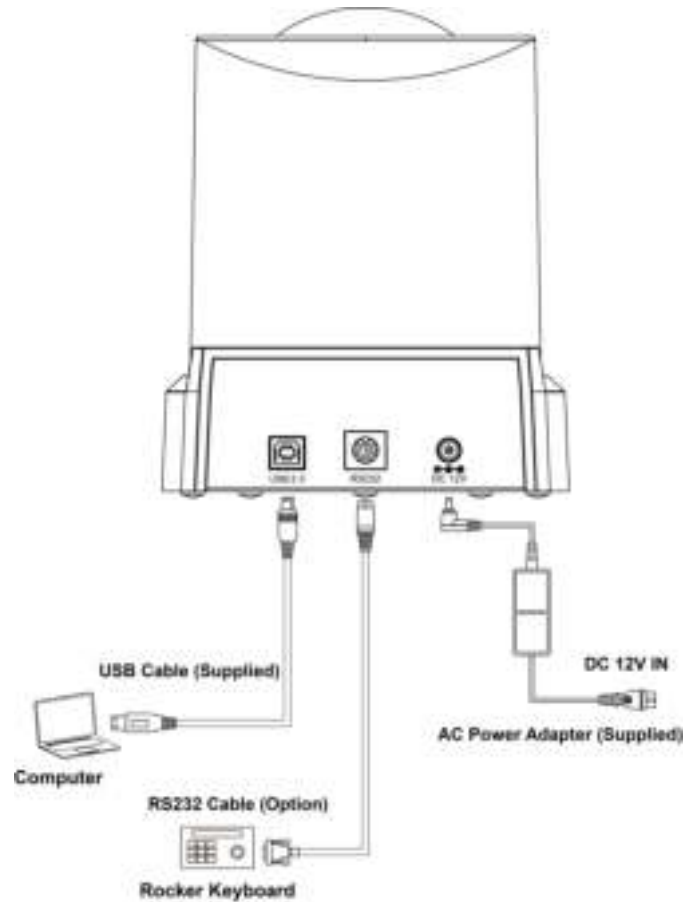
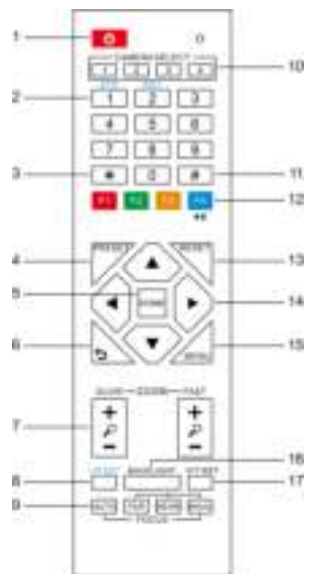
# 1 Appearance and Connection



# 2 Packing List



# 3 Remote Control: Menu Settings on next page



No.	Name	Function Description
1	Standby Key	Enter into standby mode by pressed it
2	Number Key	Preset setting or transfer preset
3	*Key	Equipped with other keys for using
4	Preset Key	Preset: Setting Preset + Number key (0-9)
5	HOME Key	Confirm menu or the PTZ will back to the middle position after pressed it
6	Return Key	Return back the last level menu
7	Zoom Button	Making the lens wide angle/narrow angle slowly or quickly
8	Left/Right Setting Key	<ul style="list-style-type: none"> <li>Standard: Simultaneously press Left/Right setting key + 1 (horizontal)</li> <li>Reverse: Simultaneously press Left/Right setting key + 2 (horizontal)</li> </ul>
9	Focus Key	auto/manual/far-end/near-end focus
10	Selection Key	Select the camera need to control
11	#Key	Need to equipped with other key
12	IR Remote Control Key	[* + # + F1/F2/F3/F4]: NO.1/2/3/4 address
13	Reset Key	Delete preset (reset key + corresponding preset number key)
14	PTZ Control key	PTZ moved according to the arrow indicates
15	Menu Key	Enter or exit OSD Menu after pressed it
16	Backlight Key	Turn on/off backlight consumption (loop)
17	PTZ Reset Key	PTZ starts to self-test after pressed it

# 4 Product Features

## Full Featured USB Interface

USB 2.0 interface, support encoding output, and support UVC 1.0 protocol.

## 1080P Full HD

High-quality HD CMOS sensor with 2.07 million effective pixels for high-quality images up to 1920x1080.

## Low Light

The application of 2D and 3D noise reduction algorithm greatly reduces the image noise. Even under the condition of ultra-low illumination, it still keeps the picture clean and clear, and the SNR of image is as high as 55dB.

## H.264 Slice/SVC Encoding

Output H.264 code stream, and support Slice and SVC encoding mode, can adapt to high-end USB video conferencing applications.

## Double Stream

Support two code streams simultaneous output (YUY2, MJPEG, H.264 any two), can reduce the host codec pressure.

## Remote Control

The camera can be remotely controlled via an RS232 cable.

# 5 RS232 Interface

Interface diagram	No.	Function	No.	Function
	1	DTR	5	RXD
	2	DSR	6	GND
	3	TXD	7	IR OUT
	4	GND	8	NC

# 6 Safety precautions

## Electrical safety

The installation and use of this product must strictly comply with local electrical safety standards.

## Power polarity

This product uses DC +12V power supply, the maximum current 2A, please pay attention to the polarity of power supply.

## Careful installation

Do not grab the camera head to move the camera. Do not rotate head of camera by hand, it may cause mechanical problems.

## Do not unauthorized disassemble

This product has no parts which can be repaired by the user. The damage caused by the user's own disassembly is not covered by warranty.



- Electromagnetic fields at specific frequencies may affect the image of the machine.
- Do not hot-plug the power supply during the use of the IP Camera.

# 7 Troubleshooting

## Image

- The monitor shows no image
  - Check that the camera power supply is connected, the voltage is normal, and the power indicator light is always on.
  - Turn off the power switch to check whether the camera is self-testing.
  - Check the cable of video platform and TV whether correct connection.

- Sometimes without the image
 

Check the cable of video platform and TV whether correct connection.

  - Image have jitter when the camera lens at max multiple.
    - Check whether the camera installed position be stabled.
    - Check whether have vibrating machinery or object near the camera.

## Control

- Remote control can not control
  - Check and replace the new battery for the remote controller.
  - Check whether the camera working mode is correct.
  - Check whether the address of remote control can match the camera.
- Series port can not control
  - Check whether the camera protocol, address such is the same.
  - Check whether the control line is connected well.

# 8 Toxic and harmful substances

Part Name	Toxic or harmful substances or elements					
	(Pb)	(Hg)	(Cd)	(CrVI)	(PBB)	(PBDE)
Metal	x	o	o	o	o	o
Plastic	o	o	o	o	o	o
Glass	x	o	o	o	o	o
Circuit board	x	o	o	o	o	o
Power	x	o	o	o	o	o
Attached	x	o	o	o	o	o

This form is compiled in accordance with SJ/T 11364.

O: Indicates that the content of the hazardous substance in all homogenized materials of the component is subject to the limit specified in GB/T 26572.

x: Said the hazardous substance in at least one of the components homogenized material content in excess of the GB/T 26572 limit requirements, and there are no mature alternatives.

# 9 Laia Cam Control

Download the Laia Cam Control app and add to your Laia B&H PC Pro features such as ePTZ, presets, various image settings... Extra features for your personal camera!

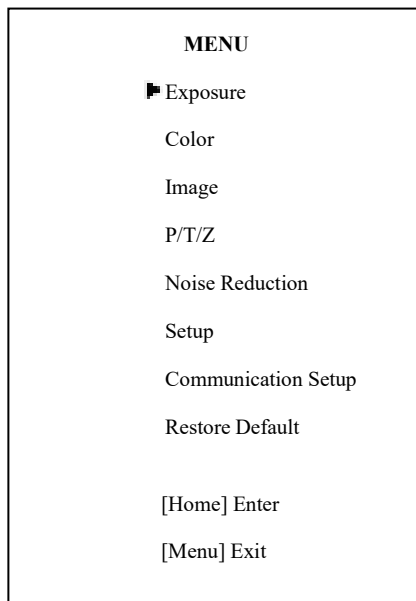
- <https://laiatech.com/control-app>
- You can also scan this QR to get the Laia Cam Control



## Remote Control: Menu Settings

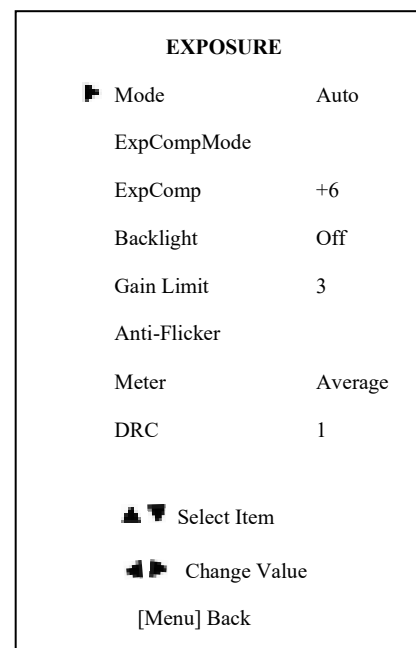
### 1. MENU

Press [MENU] button to display the main menu on the normal screen, using arrow button to move the cursor to the item to be set. Press the [HOME] button to enter the corresponding sub-menu.



### 2. EXPOSURE

Move the cursor to the Exposure item in the main menu and press [home] button, EXPOSURE menu appears, as shown in the following figure.



Mode: Exposure mode. Optional items: Auto, Manual, SAE, AAE, Bright

ExpCompMode: Exposure compensation mode, Optional items: On, Off (Effective only in Auto mode)

ExpComp: Exposure compensation value, Optional items:-7 ~ 7(Effective only in ExpCompMode item to On)

Gain Limit: Maximum gain limit. Optional items: 0 ~ 15 (Effective only in Auto, AAE ,Bright mode)

Backlight: Set the backlight compensation, Optional items: On, Off (Effective only in Auto mode)

DRC: DRC strength, Optional items: 0 ~ 8.

Bright: Intensity control, Optional items:

00~17. (Effective only in Bright mode)

Anti-Flicker Flicker: Anti-flicker. Optional items: Off, 50Hz, 60Hz (Effective only in Auto, Bright mode)

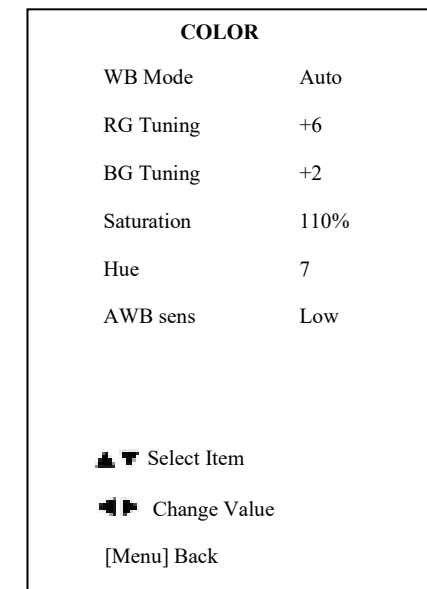
Meter: Optional items: Average, Center, Bottom, Top

Iris: Aperture value. Optional items: F1.8, F2.0,F2.4,F2.8,F3.4,F4.0,F4.8,F5.6,F6.8,F8.0,F9.6 ,F11.0,Close ( Effective only in Manual, AAE mode)

Shutt: Shutter value. Optional items: 1/30, 1/60,1/90,1/100,1/125,1/180,1/250,1/350,1/500,1/725,1/1000,1/1500,1/2000,1/3000,1/4000,1/6000, 1/10000 (Effective only in Manual, SAE mode)

### 3. COLOR

Move the cursor to the Color item in the main menu and press [home] button, COLOR menu appears, as shown in the following figure.



WB-Mode: White balance mode. Optional items: Auto, Indoor, Outdoor, Onepush, Manual

RG: Red gain. Optional items: 0~255 (Effective only in Manual mode)

BG: Blue gain. Optional items: 0~255 (Effective only in Manual mode)

RG Tuning: Red gain fine-tuning, Optional items: -10 ~ +10 (Effective only in AWBsens is Low)

BG Tuning: Blue gain fine-tuning, Optional items: -10 ~ +10 (Effective only in AWBsens is Low)

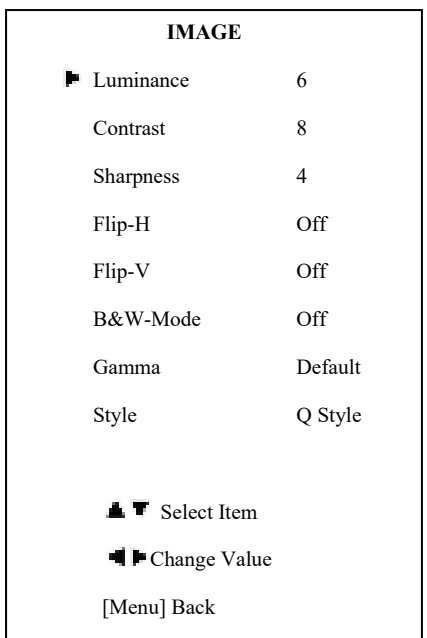
Sat.: Saturation. Optional items: 60% ~ 200%.

Hue: Chroma adjustment, Optional items:0 ~

AWBsens: The white balance sensitivity, Optional items: Normal, High, Low.

### 4. IMAGE

Move the cursor to the Image item in the main menu and press [home] button, IMAGE menu appears, as shown in the following figure.



Luminance: Brightness adjustment. Optional items: 0 ~ 14

Contrast: Contrast adjustment. Optional items: 0 ~ 14

Sharpness: Sharpness adjustment. Optional items: Auto, 0 ~ 15

Flip-H: Image flipped horizontally. Optional items: On, Off.

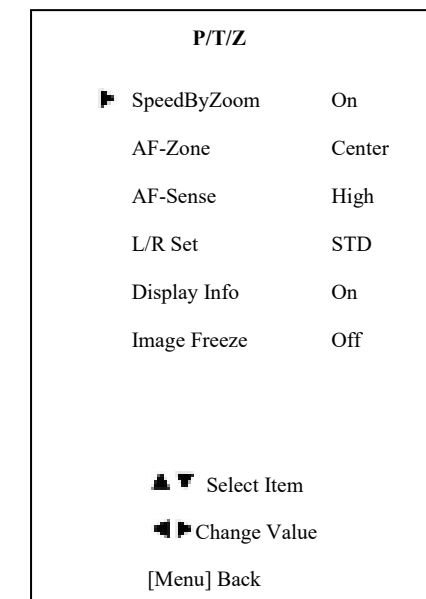
Flip-V: Image Flip Vertical. Optional items: On, Off

B&W-Mode: Image color. Optional items: On, Off

Gamma: Optional items: Default, 0.45, 0.5, 0.56, 0.63

Style: Optional items: Norm, Clarity, Bright, Soft, 5Q, Q Style.

### 5. PTZ



SpeedByZoom: The depth of field scale switch, Optional items: On, Off

AF-Zone: Interested in focusing area, Optional items: Top, Center, Bottom

AF-Sense: Automatic focusing sensitivity options, Optional items: Low, Normal, High

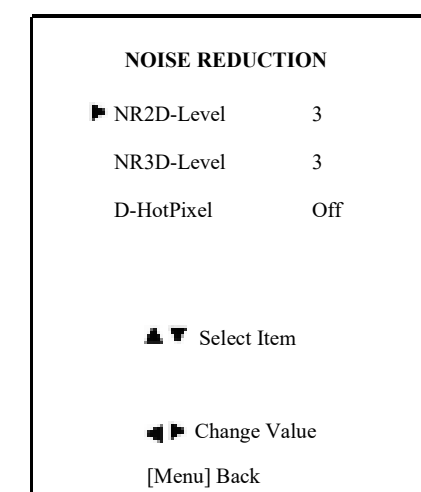
L/R Set: Optional items: STD, REV

Display Info Optional items: On, Off

Image Freeze: Optional items: On, Off

### 6. NOISE REDUCTION

Move the cursor to the Noise Reduction item in the main menu and press [home] button, NOISE REDUCTION menu appears, as shown in the following figure.



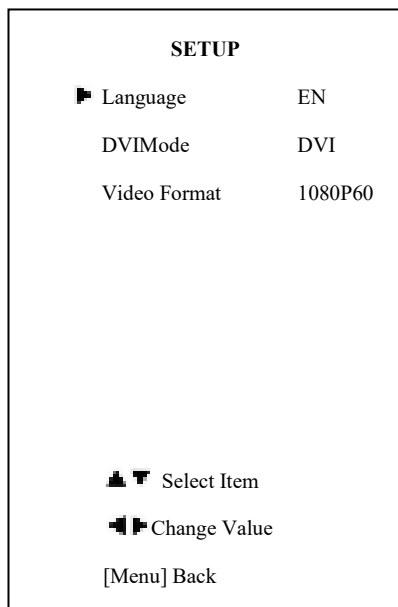
NR2D-Level: 2D noise reduction. Optional items: Off, Auto, 1 ~ 5

NR3D-Level: 3D noise reduction. Optional items: Off, 1 ~ 8

D-HotPixel: Dynamic bad points, Optional items: Off, 1 ~ 5

### 7. SETUP

Move the cursor to the Setup item in the main menu and press [home] button, SETUP menu appears, as shown in the following figure.



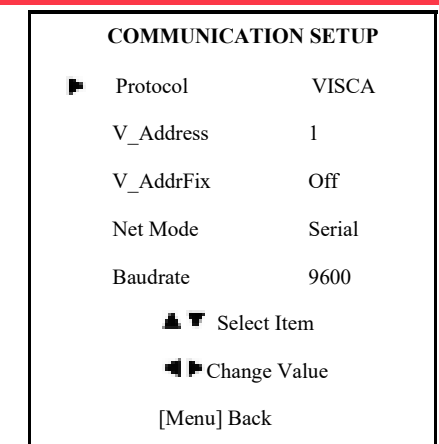
Language: menu language, Optional items: EN, Chinese, Russian

DVI Mode, Optional items: DVI, HDMI

Video Format: Optional items: 1080P60, 1080P50, 720P60, 720P50,1080P30,1080P25, 720P30,720P25

### 8. COMMUNICATION SETUP

Move the cursor to the Setup item in the main menu and press [home] button, COMMUNICATION SETUP menu appears, as shown in the following figure.



Protocol: Control protocol type. Optional items: AUTO, VISCA, PELCO-D, PELCO-P

V\_Address: Protocol address, To be decided according to the agreement, AUTO, VISCA protocol Optional items: 1 ~ 7

P\_D\_Address: PELCO-D protocol Optional items: 0 ~ 254

P\_P\_Address: PELCO-P protocol Optional items: 0 ~ 31

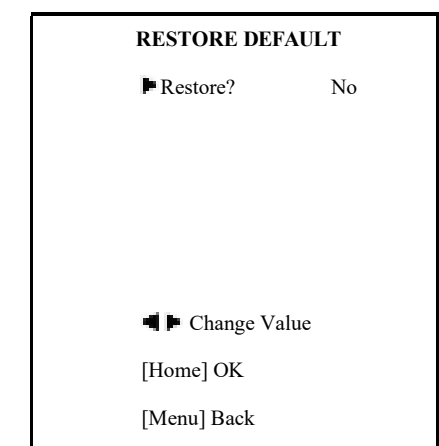
V\_AddrFix: If I can change through the serial port of infrared switch, Optional items: On, Off (When set to On, useless in 88 30 01 FF Command)

Net Mode: Set the serial port control networking, Optional items: Serial, Paral

Baudrate: Serial port baud rate. Optional items: 2400, 4800, 9600

### 9. RESTORE DEFAULT

Move the cursor to the Restore Default item in the main menu and press [home] button, RESTORE DEFAULT menu appears, as shown in the following figure.



Restore: Confirm restore factory settings. Optional items: Yes, No

Note: Press [HOME] button to confirm, All parameter restore default, Include IR Remote address and VISICA Address

Save: Save Options. Optional items: Yes, No