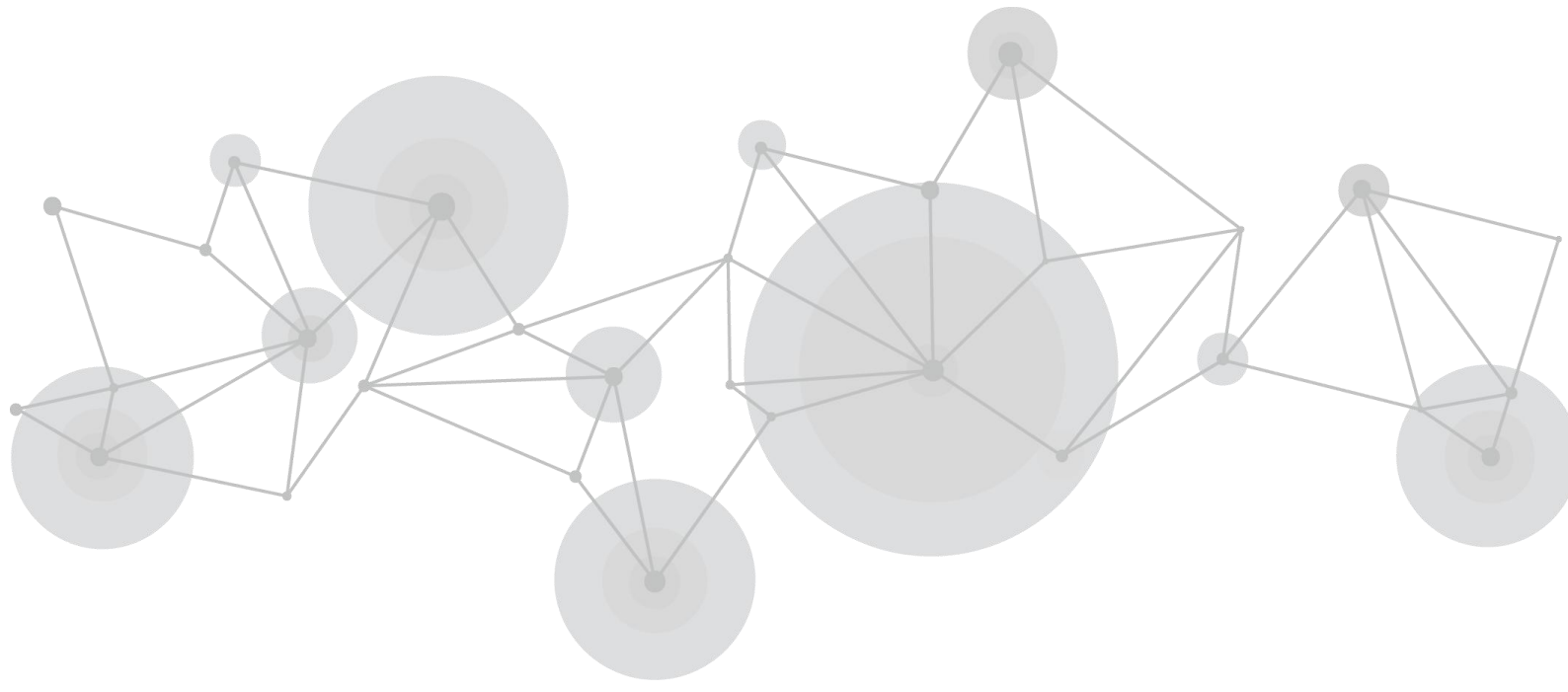


PTZ Camera Controller

KBC10



User Manual



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Thank you for choosing our product!

This User Manual is designed to show you how to use this camera controller quickly and make use of all the features. Please read all directions and instructions carefully before using this product.

Declarations

Operators Safety Summary

The general safety information in this summary is for operating personnel.

Use the Proper Power Cord

Use only the power cord and connector specified for your product. Use only a power cord that is in good condition. Refer cord and connector changes to qualified service personnel.

Use the Proper Fuse

To avoid fire hazard, use only the fuse having identical type, voltage rating, and current rating characteristics. Refer fuse replacement to qualified service personnel.

Do Not Operate in Explosive Atmospheres

To avoid explosion, do not operate this product in an explosive atmosphere.

Installation Safety Summary

Safety Precautions

For all camera controller installation procedures, please observe the following important safety and handling rules to avoid damage to yourself and the equipment.

To protect users from electric shock, ensure that the chassis connects to earth via the ground wire provided in the AC power Cord.

The AC Socket-outlet should be installed near the equipment and be easily accessible.

Unpacking and Inspection

Before opening shipping box, inspect it for damage. If you find any damage, notify the shipping carrier immediately for all claims adjustments. As you open the box, compare its contents against the packing slip. If you find any shortages, contact your sales representative.

Once you have removed all the components from their packaging and checked that all the listed components are present, visually inspect the system to ensure there was no damage during shipping. If there is damage, notify the shipping carrier immediately for all claims adjustments.

Site Preparation

The environment in which you install your camera controller should be clean, properly lit, free from static, and have adequate power, ventilation, and space for all components.

Chapter 1 Your Product

1.1 Product Overview

Product Features

Four control modes: Two IP control modes (IP VISCA & ONVIF); Two analog control modes (RS422 & RS232)

Three Control Protocols: VISCA, ONVIF and PELCO

1.2 Wiring Diagram

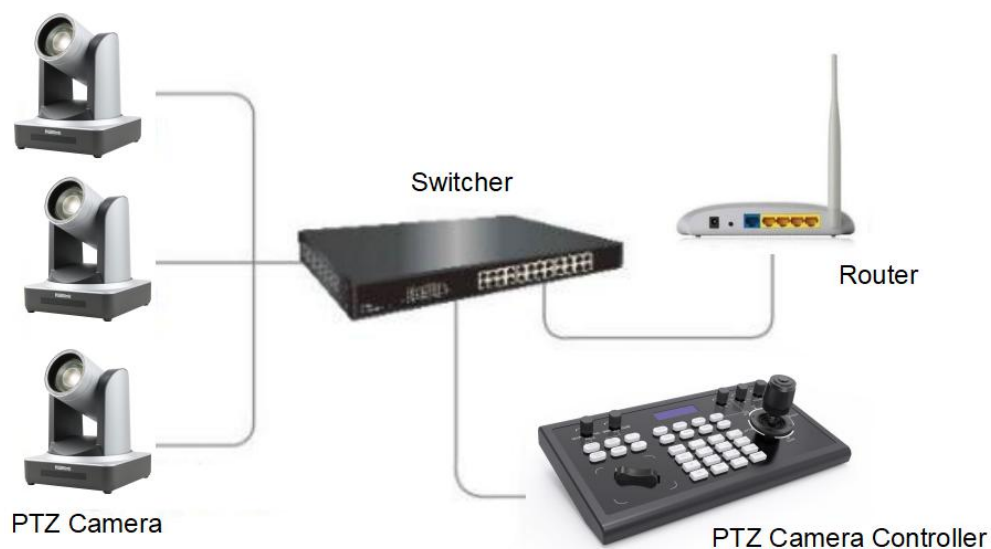
The controller and PTZ camera must be connected to the same LAN, and IP addresses must be at the same segment.

For example:

192.168.1.123 is at the same segment with 192.168.1.111

192.168.1.123 is not at the same segment with 192.168.0.125

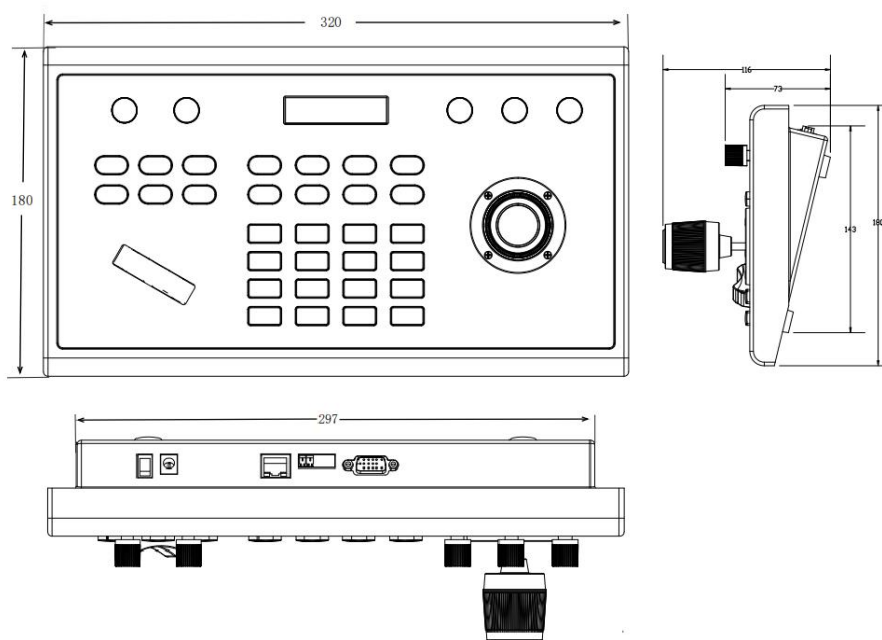
The default setting for IP controller is obtaining IP address dynamically.



1.3 Technical Specifications

Ethernet	One Ethernet port
Joystick	Four-dimensional (up, down, left, right) joystick control and clock, Zoom Tele/Wide
Connection	Lead
Display	LCD
Prompt Tone	Button Sound Prompts Open/Off
Power supply	DC 12V1A±10%
Power Consumption	0.6 W Max
Operating Temperature	0°C-50°C
Storage Temperature	-20-70°C
Dimensions(mm)	320*180*100

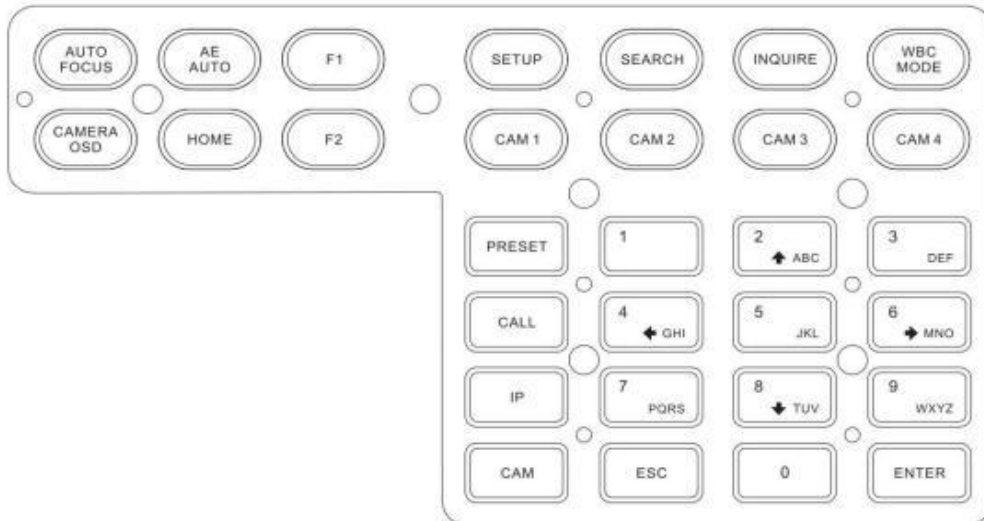
1.4 Dimension



Chapter 2 Use Your Product

2.1 Function Description

2.1.1 Button Description



【AUTO FOCUS】

Auto Focus button: Set the camera in auto focus mode with this button. It will light up when camera is in manual focus mode.

【AE AUTO】

Auto Aperture button: Set the camera in automatic aperture mode with this button. It will light up when camera is in manual aperture mode.

【CAMERA OSD】

Camera OSD button: call/close the camera OSD.

【HOME】

HOME button: The camera will back to home position if camera OSD is off. While when the camera OSD is called out, the home button is confirm function of camera OSD.

【F1】 ~ 【F2】

Custom function buttons: Custom functions in VISCA and IP VISCA modes.

【SETUP】

Controller local Settings button: Modify and view local settings.

【SEARCH】

Search button: Search for all available devices with ONVIF protocol in the LAN (only in ONVIF Mode)

【INQUIRE】

Inquire button: Check added devices

【WBC MODE】

Auto white balance button: Set the camera in auto white balance mode. It will light up when camera is in manual white balance mode.

【CAM1】 ~ 【CAM4】

Quickly switch device button: Quickly switch to CAM NUM 1-4 devices (ONVIF, IP VISCA), or to address code 1-4 devices (VISCA, PELCO)

【PRESET】

Short press to set presets; long press to delete presets setting.

It needs to work with the number keys and “enter” button, for setting or deleting presets.

【CALL】

Call preset button: It needs to work with the number keys and ENTER button.

【IP】

Manually add network device button:

Manually add network devices (only in ONVIF and IP VISCA modes)

【CAM】

In IP VISCA and ONVIF modes, it will quickly switch to the CAM NUM bound device when adding a device via CAM.

In VISCA and PELCO modes, it will switch to the address code when entering a certain address. It needs to work with the number keys and “enter” button.

【1】 ~ 【9】

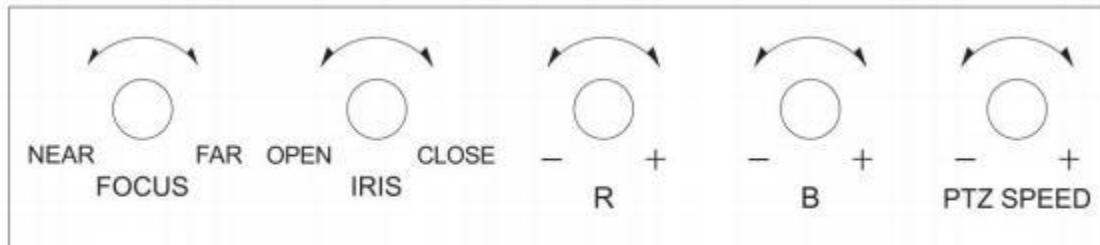
Number keys of 0,1,2,3,4,5,6,7,8,9.

2,4,6,8 serve as direction keys as well, which could control pan and tilt rotation, and camera OSD.

【ESC】 Return

【ENTER】 Confirm Button

2.1.2 Rocker Switch and Knob



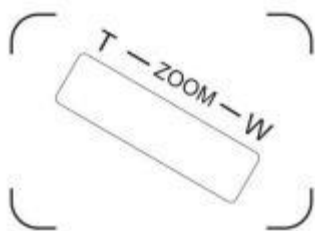
【NEAR】 【FAR】 Manually adjust the focal length.

【OPEN】 【CLOSE】 Manually adjust the aperture, OPEN(Aperture Plus)/CLOSE(Aperture minus)

【R-】 【R+】 Manually adjust the Red Gain

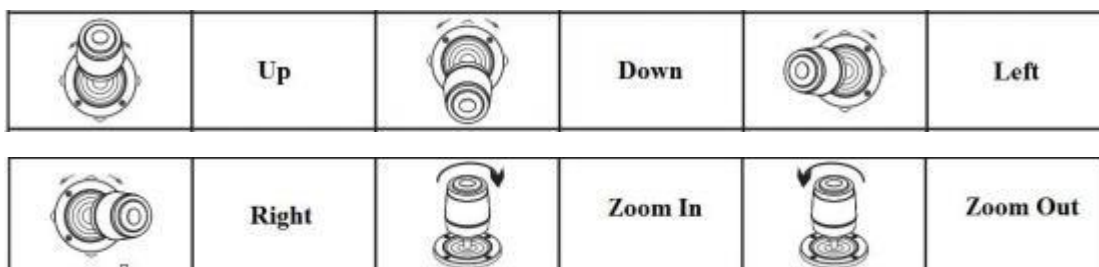
【B-】 【B+】 Manually adjust the Blue Gain

【PTZ SPEED-】 【PTZ SPEED+】 Adjust PTZ Speed, Gears 1 (Slow)- 8(Fast)



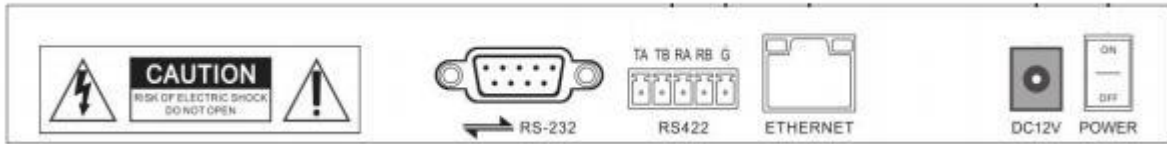
【T-ZOOM-W】 Zoom Tele and Zoom Wide.

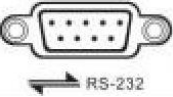
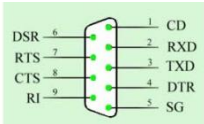





2.1.3 Joystick Control



2.1.4 Terminal Description of Back Panel Interfaces

Back Panel Details: RS422, RS232, DC-12V, Ethernet, Power Switch



Number	Label	Physical interface	Description
	RS 232		<p>Pin 1 : Received Line Signal Detector</p> <p>Pin 2 : Received Data</p> <p>Pin 3 : Transmit Data</p> <p>Pin 4 : Data Terminal Ready</p> <p>Pin 5 : Signal Ground</p> <p>Pin 6 : Data Set Ready</p> <p>Pin 7 : Request To Send</p> <p>Pin 8 : Clear To Send</p> <p>Pin 9 : Ring Indicator</p>
	RS422	Control Output (TA, TB, RA, RB)	Connect to RS422 bus of the camera: TA to camera RA; TB to camera RB; RA to camera TA; RB to camera TB.
	Ground	Control line ground (G)	Control signal Line ground
	ETHERNET	Ethernet port	Network connection
	DC- 12V	Power input	DC 12V Power input
	POWER	Power switch	Power on/ off

2.2 Local Settings (SETUP)

2.2.1 Basic Settings

Move the joystick up and down to switch 1 to 2, and 2 to 3 settings; Move the joystick left and right to switch on and off the button sound prompts, confirm with ENTER button.

- (1) Network Type: dynamic and static
- (2) Button sound prompt: on and off
- (3) Language setting: Chinese and English
- (4) Mode: VISCA, IP VISCA, ONVIF, PELCO
- (5) Version information
- (6) Restore factory settings
- (7) Local IP

2.2.2 VISCA & IP VISCA Mode shared Setting

- (1) F1: Custom function for F1 button (VISCA command)
- (2) F2: Custom function for F2 button (VISCA command)

Input custom name → ENTER → Input VISCA command

For example: the command is 8101040702FF, then input 01040702 (0 can't be omitted)

2.2.3 IP VISCA Mode Setting

Delete the saved device:

Move the joystick up and down to view devices; Move the joystick rightward to view the device's port information; Move the joystick leftward to view the IP, CAM NUM information; ENTER to delete the selected device.

2.2.4 VISCA Mode Setting

Control settings (set the baud rate for a certain address code):

Move the joystick up, down, left and right to switch addresses (1-7) → ENTER → Move the joystick left and right to switch baud rate → ENTER

EX: Select the address: 1 → ENTER → Select the baud rate: 9600 → ENTER

When the controller switch to address 1, the control baud rate is 9600

2.2.5 PELCO Mode Setting

Control settings (set the baud rate for a certain address code):

Move the joystick up, down, left and right to switch addresses (1-255) → ENTER → Move the joystick left and right to choose protocols → ENTER → Move the joystick left and right to switch baud rate → ENTER

EX: Select the address: 1 → ENTER → Select the protocol: PELCO-D → ENTER → Select the baud rate: 9600 → ENTER

When the controller switch to address 1, the control baud rate is 9600, protocol is PELCO-D

2.2.6 ONVIF Mode Setting

Delete saved device:

Move the joystick up and down to view devices; Move the joystick rightward to view the device's port information; Move the joystick leftward to view the IP, CAM NUM information; ENTER to delete the selected device.

2.3 Connection and Control

2.3.1 Connection and Control in ONVIF Mode

Search and Add

In ONVIF mode, follow the steps below to add a LAN device to the PTZ controller:

- (1) After the controller obtained IP address, simply press the SEARCH button.
- (2) All available devices with ONVIF protocol in the LAN will be displayed on the controller when search process is complete.
- (3) Move the joystick up/down to select the device, press the ENTER button to confirm.
- (4) It's required to enter the device's username, password and CAM NUM information when adding a device.
- (5) Press the ENTER button to save.
- (6) Alternatively to add a device via **【IP】** button manually.
- (7) Press the INQUIRE button to view the added device; Move the joystick up/down to view the saved device (move the joystick rightward to view the port); Press the ENTER button to select a camera to control, or use the CAM button to connect and control.

2.3.2 Connection and Control in IP VISCA Mode

Searching function is not available in IP VISCA mode, but to manually add a device.

- (1). Manually add device via the **【IP】** button.
- (2) Press the INQUIRE button to view the added device; Move the joystick up/down to view the saved device (move the joystick rightward to view the port); Press the ENTER button to select a camera to control, or use the CAM button to connect and control.

2.3.3 Control in VISCA & PELCO Mode

Simply set the address code and baud rate to control.

In PELCO Mode, correctly set the PELCO-D or PELCO-P protocol is required.

2.4 Web Page Configuration

2.4.1 Home Page

- (1) Connect the controller and computer to the same LAN and enter the controller's IP address into the browser.
- (2) Default username: admin ; Password: empty
- (3) Home page is as below:

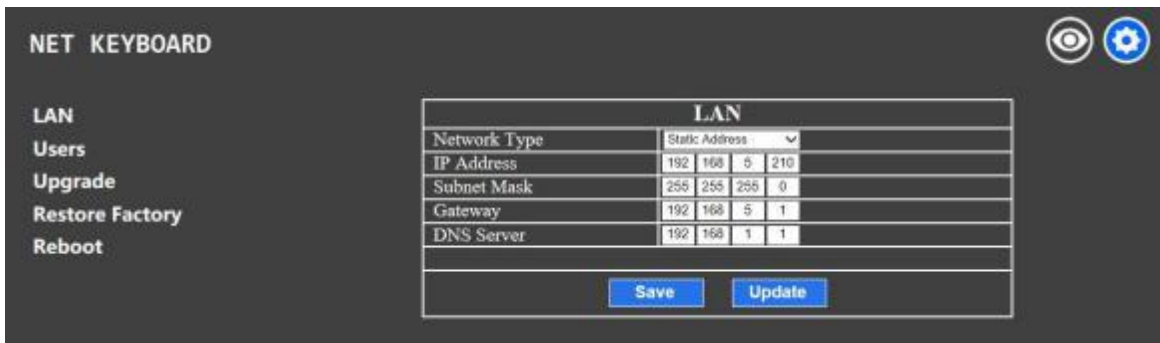


- (4) Home page consists of three segments: Search Device List (green); Added Device List (blue) or Manually Add (yellow); Device Details (orange).
- (5) Click "Search" button to find ONVIF devices in the LAN, which will be displayed in the green frame automatically.
- (6) Select the device in the "Search Device List", and click "Add" to complete. Press "Ctrl" for multiple selections.
- (7) Select the device in the "Added Device List", and click "Delete" to complete. Press "Ctrl" for multiple selections.
- (8) After successfully add a device, click the IP address in the "Added Device List" to edit the account and port information of the device.
- (9) After addition, deletion, and modification, click "Save" button to take effect.

PS. Any modification to the configuration on home page needs to be saved by click "Save" button; otherwise the modification is invalid.

2.4.2 LAN Settings

To modify the device IP access way and port parameters in LAN Settings, as shown below:



Dynamic address (default access way): the Controller will automatically acquire IP address from the router.

Static address: Change the network to static address when necessary; simply input the network segment information to modify.

2.4.3 Upgrade



The upgrade function is applied for maintenance and update.

Choose the right upgrading file and click “start” to update the controller. It will auto reboot after updating.

PS: Do not operate the controller during the upgrade process. Do not power off or disconnect network

2.4.4 Restore Factory

Restore the controller to factory default settings when unexpected failure occurs due to incorrect modifications. Please use it with caution if the controller works well.

2.4.5 Reboot

Click Reboot for maintenance if the controller runs for a long time.

Chapter 3 Order Code

3.1 Product Code

981-1000-03-0-18

KBC10 PTZ Camera Controller

Chapter 4 Appendix

4.1 FAQ

1. What is the function of CAM NUM when add a network device?

CAM NUM will be associated and bound with the currently entered IP and port information. It will quickly switch to the CAM NUM bound device when adding a device with CAM button.

2. How to enter English when set the user name, password and custom keys of F1/ F2 ?

For example: to enter letter C, simply press the number key “2” three times continuously in the input interface.

3. How to enter IP address?

The camera controller doesn't have "." button; So please enter the IP address with four segments.

Take IP address 192.168.0.1 for example, it will automatically jump to next segment when finished input 192 and 168; while after input 0, you have to move the joystick rightward to switch to next segment input.

4. How to clear in input mode?

Move the joystick leftward to clear the input information.

5. The home page of each mode refers to the displayed page when controller initialization complete.

In IP VISCA and ONVIF Mode, if you see the prompts of "Visca!" and "Onvif!", the IP address displayed on the screen is local IP address of the controller. While the prompts of "Visca:" and "Onvif:" shown on the page, the IP address displayed on the screen belongs to the connected device.