IP PTZ Camera Controller

Attentions

The purpose of this user manual is to ensure that users can use the product correctly and avoid danger and damage in operation. Before using this product, please read this user manual carefully and keep it properly for future reference.

Precautions

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.

6. **How to use the button "CAMERA OSD" on the controller 90950-221?**

The 【CAMERA OSD】button is only useful under the IP VISCA protocol. After pressing the 【CAMERA OSD】button, you can see the menu bar on the display. Then you can move the joystick up or down to select. Press 【HOME】 to enter the next level and press 【CAMERA OSD】 to return to the original level. Be careful not to change the contents under 【SETTING】 or the PTZ camera cannot be controlled at all.

Content

1. Product Overview

1.1 Product Features

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

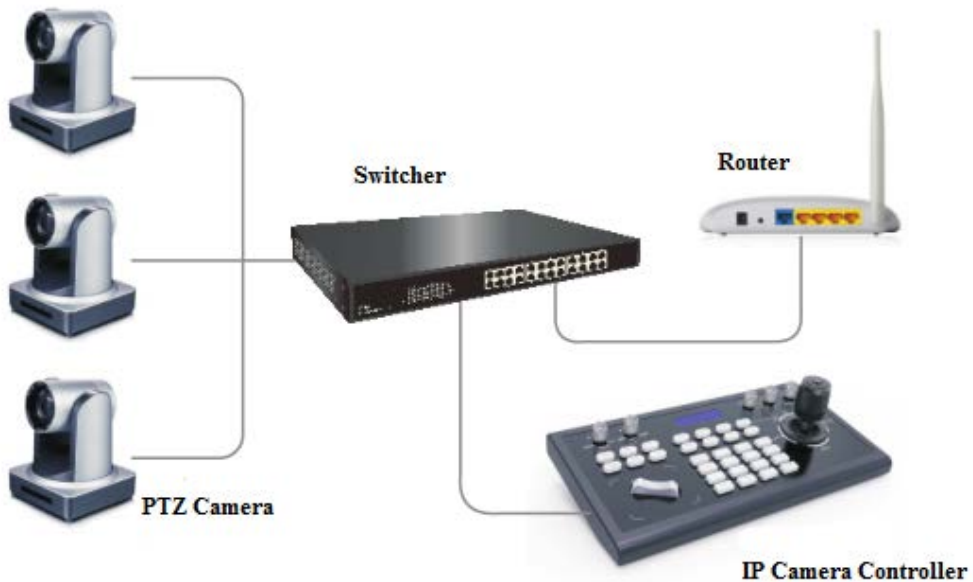Three Control Protocols: VISCA, ONVIF and PELCO

1.2 Wiring Diagram

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

2. Function Description

2.1 Button Description
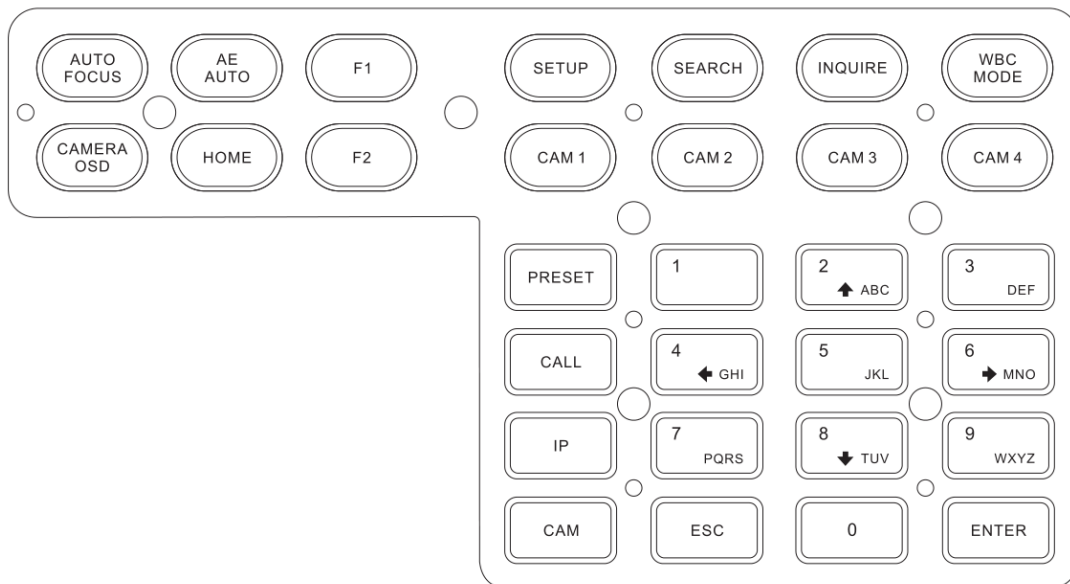
【AUTO FOCUS】

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.

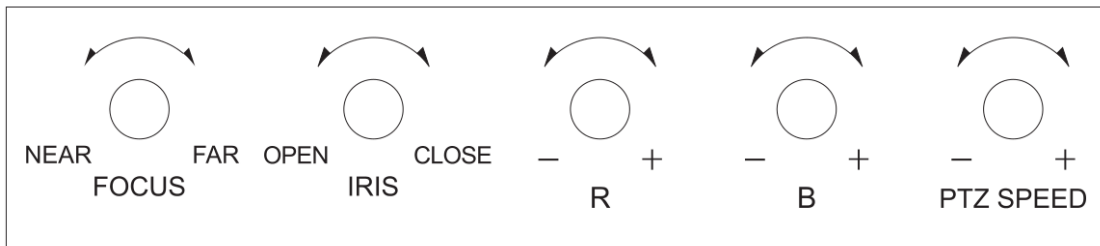It needs to work with the number keys and "enter" button.

【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
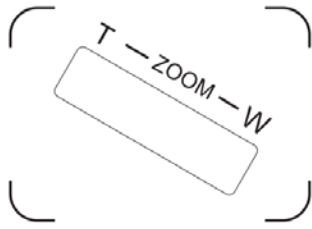
【ENTER】Confirm Button

2.2 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

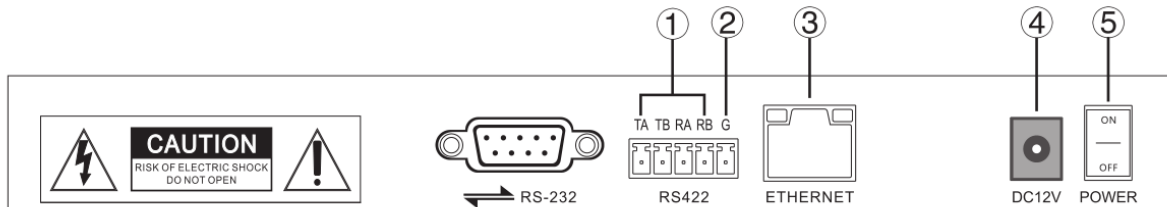【PTZ SPEED-】【PTZ SPEED+】Adjust PTZ Speed, Gears 1 (Slow)- 8(Fast)

【T-ZOOM-W】Zoom Tele and Zoom Wide.

2.3 Joystick Control

	Up		**Down**		**Left**
	Right		**Zoom In**		**Zoom Out**

2.4 Terminal Description of Back Panel Interfaces

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

Number	Label	Physical interface	Description
①	RS422	Control Output (TA, TB, RA, RB)	1. Connect to RS422 bus of the camera: TA to camera RA; TB to camera RB; RA to camera TA; RB to camera TB.
②	Ground	Control line ground (G）	Control signal Line ground
③	ETHERNET	**Ethernet port**	Network connection
④	DC-12V	Power input	DC 12V Power input

⑤	POWER	Power switch	Power on/ off

3. Local Settings (SETUP)

3.1 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

3.2 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)

3.3 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.

3.4 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

3.5 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

3.6 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.

4. Connection and Control

4.1 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.

4.2 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.

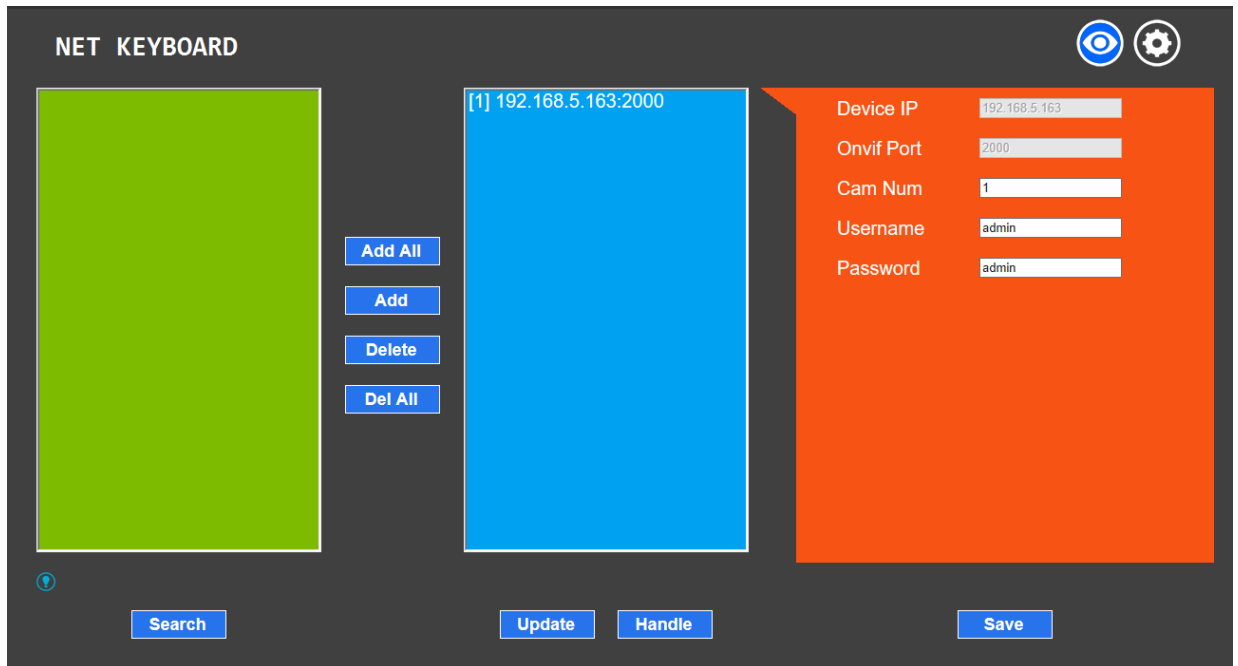## 4.3 Control in VISCA & PELCO Mode

Simply set the address code and baud rate to control.

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

5. Web Page Configuration

5.1 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.
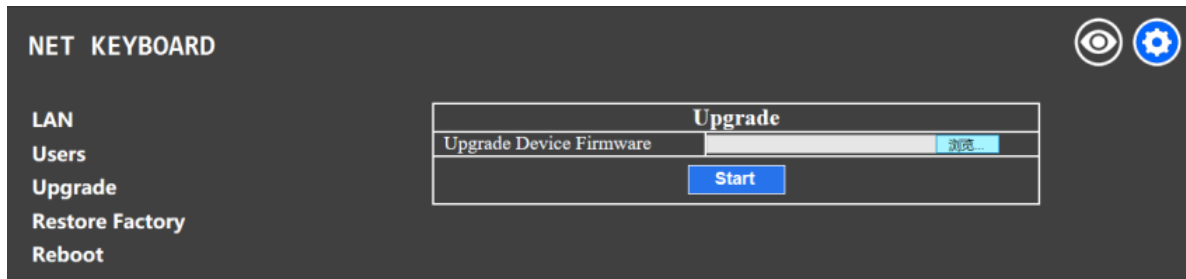
5.2 LAN Settings

To modify the device IP access way and port parameters in LAN Settings, as shown below:
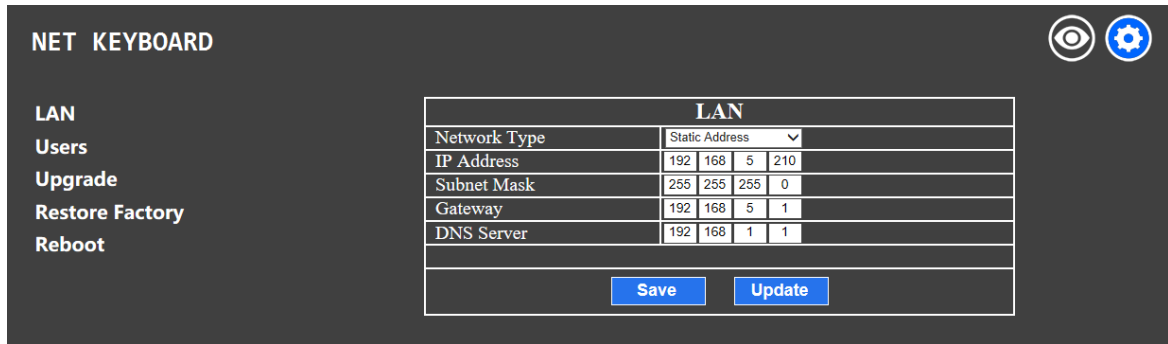
Dynamic address (default access way): the Controller will automatically acquire IP address from the router.

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

5.3 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

5.4 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.

5.5 Reboot

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

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