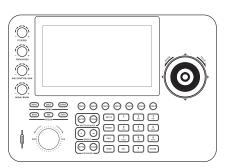
Keyboard Controller

User Manual



Version 1.0-05.02.0277

Warranty Certificate

(Please keep this for warranty claims)

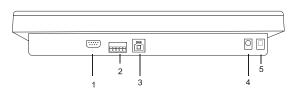
| User Information | |
|---------------------|--------------------|
| Name: | Phone: |
| Email: | — Postal Code: ——— |
| Address: | |
| Product Information | |
| Model: | |
| Barcode: | |
| Fault Description | |
| | |
| | |
| | |
| N | |

lotes

- 1. Please fill in your user information accurately and completely to ensure the repaired device can be returned to you promptly.
- 2. Specify the model, barcode, and provide a detailed description of the malfunction.

1. Product Overview

1.1 I/O Introduction



| No. | Item | Function Descriptions |
|-----|--------------------|--|
| 1 | RS232 port | Connect the RS232 cable |
| 2 | RS422/RS485 | Connect the RS422 or RS485 cable |
| 3 | IP port | Connect the RJ45 network cable |
| 4 | 12 V DC power port | Connect the included DC power supply adapter and the power cable |
| 5 | Power button | Turn on/off keyboard power |

1.2 Panel Function Introduction

Button instruction

button to save the preset.

button to call the preset.

[AUTO WHITE BALANCE]

[CYCLE WHITE BALNCE]

Single click to enter auto exposure mode

Single click to enter auto exposure mode.

Single click to switch between exposure modes.

Single click to switch between white balance modes.

[SETUP]

[CALL]

[ESC]
Menu Back/Exit
[ENTER]
Confirmation

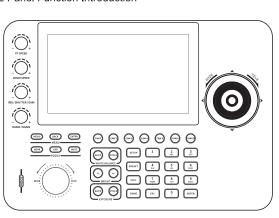
[BRIGHT-]

[AUTO EXPOSURE]

[CYCLE EXPOSURE]

Brightness Priority

PTZ camera



[CAM1] [CAM2] [CAM3] [CAM4] [CAM5] [CAM6] [CAM ID]

Quickly switch devices. Click the button to enter the corresponding camera.

Menu Setup:Click to enter keyboard parameter settings and add devices.

Set Preset: Click to set a preset position. Enter the number and press [Enter]

Call Preset: Click to call a preset position. Enter the number and press [Enter]

Numeric key presets: Long press for preset setting while short press for preset

For Example: Set Preset #1: First move the camera to the position where you

want to set the preset, long press the number [1], "PRESET 1" will appear at the bottom of the screen, then move the camera to another position, short press the number [1] to call and it will turn to preset#1 position which you set.

Mode Options: One push WB/Manual WB/AUTO WB/Indoor WB/Outdoor WB. [BRIGHT+]
Brightness Increase: Click to increase the brightness setting of the image.

Brightness Decrease: Click to decrease the brightness setting of the image.

Mode options: Shutter Priority/IRIS Priority/Manual Exposure/Auto Exposure/

Camera Menu: Press this button to access the camera menu settings for the

This button function is to get back to the original position of the camera.

[MENU BACK]

Camera Menu Back: After setting parameters in the camera menu, click this button to return to the previous level or step-by-step return to the main menu. IMENU ENTERI

Camera Menu Confirm: Click to enter each menu item and confirm settings. [NEAR FOCUS]

Pressing the [NEAR] button optimizes focus for close-range subjects, ensuring sharp clarity for objects near the camera.

[FAR FOCUS]

Pressing the [FAR] button adjusts focus for distant objects, enhancing details for subjects farther away.

for subjects farther away. [AUTO FOCUS]

Pressing the [AUTO] button enables automatic focus, allowing the camera to dynamically adjust for optimal clarity.

[PT Speed]

Twist the Speed Control knob in to cycle to increase or decrease the PT. [Zoom Speed]

Twist the Speed Control knob in to cycle to increase or decrease the Zoom Speed. Turn the knob right for +, left for -.

[Iris/ Shutter/ Gain]

Press the knob to switch the Iris, Shutter and Gain functions. Turn the knob right for +, left for -.

IRGAIN/BGAINI

Red-Blue Gain: Press the knob to switch the gain type.Turn the knob right

[ZOOM WIDE/TELE]

Zoom adjustment:turn the knob right for +, left for -.

1.3 Knob Description

| Operating | Output Control | Operating | Output Control | Operating | Output Control |
|-----------|-------------------|-----------|-------------------|-----------|-------------------|
| 8 | Upward | | Downward | | Left |
| Operating | Output Control | Operating | Output Control | Operating | Output Control |
| | Right | | Zoom + | | Zoom - |

Press the button on top of the Knob to confirm

2.3 Add Network Devices

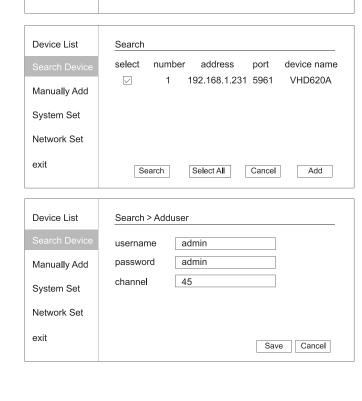
| Device List | Manually Add | | | |
|---------------|---------------|---------------|-------------|--------|
| Search Device | channel | 1 | | |
| | protocol | onvif ~ | | |
| Manually Add | ip | 192.168.1.206 | address | 1 |
| System Set | port | 81 | baudtare | 2400 |
| ., | username | admin | password | admin |
| Network Set | rtsp username | | rtsp posswd | |
| exit | rtsp url | /stream1 | | |
| CAIL | | | Save | Cancel |

| Item | Description |
|-----------|--|
| Channel | Any channel |
| Protocol | Onvif / NDI/VISCA over IP |
| IP | Input the camera IP address |
| Address | Any Address |
| Port | Select a port to be used by the camera (Input the camera port Corresponding to the Network Protocol) |
| User Name | Input camera user name |
| Password | Input camera password |

3. LCD Function Menu Description

Press the SETUP button on the keyboard to access the LCD function menu.

3.1 Device List



2. Camera Setting Overview on Keyboard Controller

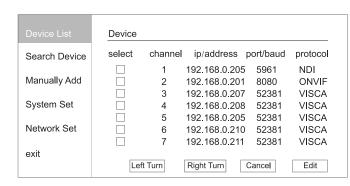
2.1 Camera Setting Overview

| Item | Settings | Description |
|----------|---|--|
| CAM | 1 ~ 255 | Assign the camera number; 255 units can be set at most |
| Protocol | VISCA NDI ONVIF PELCO-D PELCO-P | Select a control protocol to be used for connecting the camera |

2.2 Add Analog Devices

| Device List | Manually Ad | d | | |
|---------------|--------------|-----------|-------------|--------|
| Search Device | channel | 1 | | |
| 2001011201100 | protocol | Pelco-D ~ | | |
| Manually Add | ip | | address | 1 |
| System Set | port | | baudtare | 9600 |
| Cyclom Co. | username | admin | password | admin |
| Network Set | rtsp usernan | ne | rtsp posswo | d |
| exit | rtsp url | /stream1 | | |
| GXIL | | | Save | Cancel |

| Item | Settings | Description |
|-----------|--|--|
| Port | RS232 / RS422/RS485 | Set the control protocol of VISCA/PELCO-D /PELCO-P control |
| Baud Rate | 2400 4800 9600 19200 38400 | When selecting VISCA/PELCO-D/PELCO-P as the control protocol, the Baud rate transmission speed must be specified |



Enter Device List and select the device which you want to add through joystick 'UP' and 'DOWN', press the [EDIT] button to modify the camera information.

| Device List | Device > Mod | ify | | | - |
|-----------------|---------------|---------------|-------------|--------|---|
| Search Device | protocol | ndi ~ | | | |
| Manually Add | ip | 192.168.0.205 | address | | |
| Mariadily / lad | port | 5961 | baudtare | 2400 | ~ |
| System Set | username | admin | password | admin | |
| Network Set | rtsp username | 9 | rtsp posswd | | |
| THOUNGIN GOT | rtsp url | | | | |
| exit | | | | | , |
| | | | Save | Cancel | |

3.2 Search Device

Search—Confirm NDI or ONVIF protocol search —Add--Input the Camera Username, password and Channel-Save.

NOTE: Default Protocol is ONVIF/NDI, if any other protocols need, use Manually added.

3.3 Manually Add

Device List

Manually Add

System Set

Network Set

Search

select number address port device name

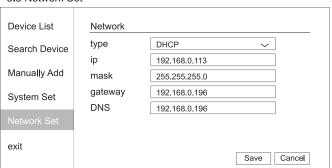
| Device List | Manually Add | | | | |
|---------------|---------------|----------|-------------|--------|---|
| Search Device | channel | 44 | | | |
| | protocol | onvif ~ | | | |
| | ip | | address | 1 | |
| System Set | port | | baudtare | 2400 | ~ |
| -, | username | | password | | |
| Network Set | rtsp username | | rtsp posswd | | |
| exit | rtsp url | /stream1 | | | |
| OAIL | | | Save | Cancel | |
| | | | | | |

3.4 System Set

| Device List | System | |
|---------------|----------|--------------------------|
| Search Device | language | English |
| | sound | OFF ~ |
| Manually Add | System | factory reset |
| | | restart upgrade |
| | version | V5.4.3-20250526 |
| Network Set | | ☐ visca echo code opened |
| exit | | |
| | | Save Cancel |
| | | |

| Item | Description |
|----------|--|
| Language | English/ Chinese |
| Sound | On/Off for the Keyboard sound |
| System | Factory Reset / restart/Upgrade -When executing the factory reset, do not move the PTZ joystick and the ZOOM in/out button |
| Version | Keyboard Version |

3.5 Network Set



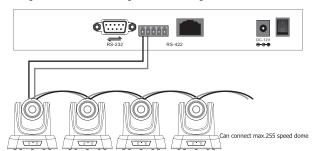
| Item | Settings | Description | | | |
|------------|---------------|--|--|--|--|
| Туре | STATIC/DHCP | Specify a static IP or let DHCP to assign an IP to the keyboar | | | |
| IP Address | 192.168.0.179 | For a static IP, specify the IP address in this field | | | |
| Mask | 255.255.255.0 | For a static IP, specify the mask in this field | | | |
| Gateway | 192.168.0.1 | For a static IP, specify the gateway in this field | | | |
| DNS | 192.168.0.179 | For a static IP, specify the DNS in this field | | | |

4. Camera Connection Description

4.1 Analog Connection

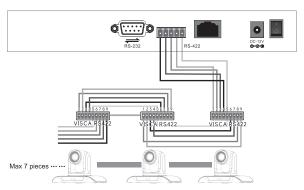
4.1.1 RS485 Connection

Analog Mode: Connection diagram of controlling PTZ camera Via RS485.



RS485 Control Output: RS485+ of PTZ camera connects to Ta of RS422 on the joystick controller and RS485- of PTZ camera connects to Tb of RS422 on the Joystick controller.

4.1.2 RS422 Connection



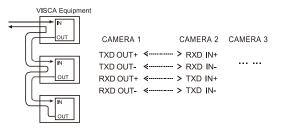
4.1.3 RS232 Connection

The first pin RXD of joystick controller (10pin terminal) connects to the Input interface TXD of camera, the second pin TXD of joystick controller connects to RXD of camera, the third pin of joystick controller connects to GND of camera (also can use the standard RS232 interface (DBO) of joystick controller to connect the camera.)

| Controller | Camera |
|------------|--------|
| RXD < | > TXD |
| TXD < | >RXD |
| GND < | > GND |
| | |

4.1.4 Connection Between Cameras

Use the RS485 bus cascade connection method. The output of camera #1 connects to the input of camera #2 and the output of camera #2 connects to the input of camera #3 and so on as shown in the diagram below:

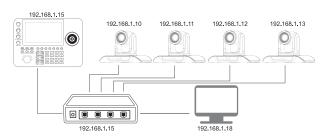


The RS232 cascade connection method is essentially the same as that for RS485: connect the output of camera #1 to the input of camera #2, the output of camera #2 to the input of camera #3, and so on.

| CAMERA 1 | CAMERA 2 | CAMERA 3 |
|-------------------|----------|----------|
| TXD < | ···> RXD | |
| RXD ∢ ···· | > TXD | |
| GND < | > GND | |

4.2 Network Connection

Network Mode: Connection diagram of controlling PTZ camera via VISCA, NDI. ONVIF.



Connect the camera and joystick controller in the same LAN and ensure their IP address in the same network segment, such as 192.168.1.123 and 192.168.1.111 belong to the same network segment, while 192.168.1.123 and 192.168.0.125 do not belong to the same network segment, so you need to modify the joystick controller or the ptz camera IP address. The joystick controller gets its IP address dynamically.

5. Network Configuration

5.1 Home connection & Login

Please connect the power cable and then the network cable to the joystick controller. Upon successful startup, the controller will display its IP address (e.g., 192.168.x.xxx) on its screen. To access the configuration page, enter this IP address into a web browser.

The initial username: admin; password: blank.

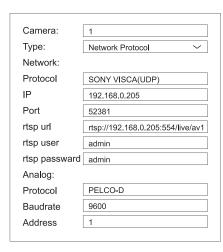
1. Connect the joystick controller and computer to the same LAN segment, enter the joystick controller IP address to the browser. The page display as follows:



- 2. Default username: admin; password: blank.
- 3. Enter device web interface, the page display as follows:

| 1 | 192,168,0,205 | | | | | | |
|---|---------------|-------|-----------------|------|---|---------|---|
| | | 52381 | SONY VISCA(UDP) | 9600 | 1 | PELCO-D | 0 |
| 2 | 192.168.0.206 | 52381 | SONY VISCA(UDP) | 9600 | 2 | PELCO-D | 0 |
| 3 | 192.168.0.207 | 52381 | SONY VISCA(UDP) | 9600 | 3 | PELCO-D | 0 |
| 4 | 192.168.0.208 | 52381 | SONY VISCA(UDP) | 9600 | 4 | PELCO-D | 0 |
| 5 | 192.168.0.209 | 52381 | SONY VISCA(UDP) | 9600 | 5 | PELCO-D | 0 |
| 6 | 192.168.0.210 | 52381 | SONY VISCA(UDP) | 9600 | 6 | PELCO-D | 0 |
| 7 | 192.168.0.211 | 52381 | SONY VISCA(UDP) | 9600 | 7 | PELCO-D | 0 |
| | | | | | | | |





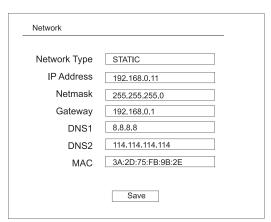
4. After entering the device home page, you can view the details of the device parameters, which can be changed.

5. Click \(\sigma\) to add and modify the device parameters in the LAN. Input the device number corresponding IP address, port number and user name and click save.

Note: When entering the joystick controller web interface to add a device successfully, which will be displayed on the LCD screen of the joystick controller. After adding the device on the web interface successfully, click the joystick controller corresponding number to control the camera.

5.2 WEB Interface setup

Network settings can modify the device's IP acquisition method and port parameters, as shown below:



Dynamic Address(DHCP)(Default acquisition method):The joystick controller will request an IP address from the router automatically. After the request is successful, it will be displayed on the joystick controller's display.

The display format is: "Local IP: 192.168.x.xxx". Static Address(STATIC): When the user wants to set the network segment by himself modify the network type to a static address and fill in the information of the network segment that requires to be modified.

5.3 System upgrade

| Upgra | ade | | | |
|-------|-----|--------|---------|--|
| | | | | |
| | | Browse | Upgrade | |
| | | | | |

Upgrade function is used as the maintenance and update joystick function. After entering the upgrade page, select the correct upgrade file and click "start". The device will automatically restart after the upgrade is completed.

Note: Do not perform any operations against the device during its upgrade process, and do not power off or disconnect the network!

5.4 System Reset

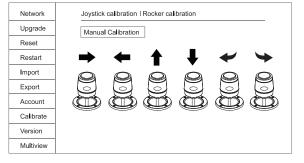


When clicking the device to reset, the joystick controller will remove all data, and the network will automatically default to a static IP. Recommended caution operation.

5.5 Account

| ograde | | ID | Username | Password | Modify |
|----------|----|----------|----------|----------|--------|
| set | | 1 | admin1 | | 0 |
| start | | 2 | admin2 | | 0 |
| | | 3 | admin3 | | 0 |
| port | | 4 | admin4 | | 0 |
| xport | | 5 | admin5 | | 0 |
| ccount | | 6 | admin6 | | 0 |
| | | 7 | admin7 | | 0 |
| alibrate | _ | | | | |
| ersion | Ac | id De | lete | | |

5.6 Joystick/Rocker calibration



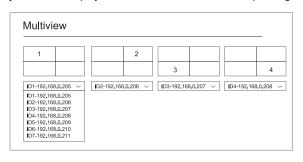
5.7 Restart & Version

| Reset | Reset |
|-------|--------------------------|
| | Hardware V1.0.1-190823 |
| Reset | Software V5.3.2-20230905 |
| | Web V3.0.6-20230905 |

After the device is used for a long time, you need to restart it for maintenance. Click Restart to restart the camera.

5.8 Multi-View Setting

There are 4 zones on the screen, select the IP address of the camera you want to display the camera screen in the corresponding zone.



6. Trouble Shooting

LCD Display shows "Control Failure"

This can occur when the controller doesn't receive a response from the camera.

- 1. Please check that the network jacks you are using are active.
- Please check that the network cable you are using is not failing.
 Please check that the camera is supplying an Acknowledgement and Completion response.

The joystick isn't controlling any cameras at all

This can occur when the camera(s) and/or joystick aren't properly set up.

- 1. Check that the network jacks you are using are active.
- 2. Check that the network or serial cables you are using are not failing.
- 3. Check that the camera control address matches the joystick control address.
- 4. Check that you are in the correct control mode. Hold the Joystick Controller button for 3+ seconds to toggle between serial and Network control.

Multiple cameras are being controlled at once

This can occur when multiple cameras are set to the same joystick control address.

Check the camera's control addresses and ensure that each camera has a unique address.

a. Open the joystick OSD menu and select option 3. Device List: Inquire. Check that none of the connected cameras have the same control address.

b. Log into the Web UI and select Devices. Check that none of the connected cameras have the same control address.

Note:

1. Add device for manual addition.

2. Enter the correct port number and device connection protocol in Add Device.

When the screen displays "Incorrect username and password", please check whether the username and password of the added device are correct.

When use ONVIF protocol but fails to add devices of other brands, please check,



