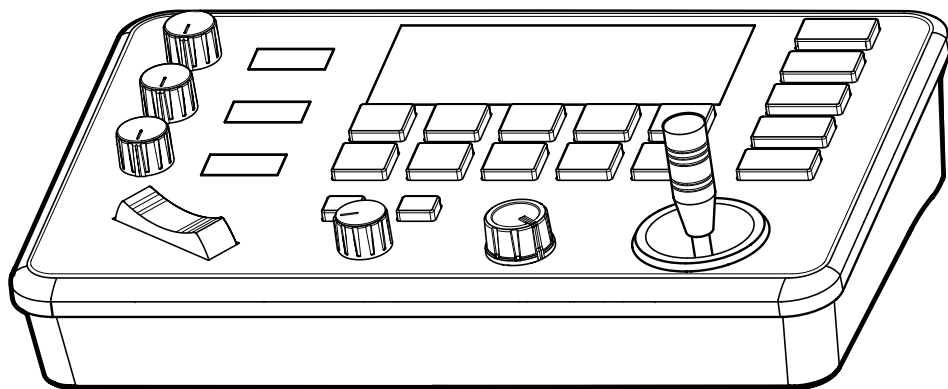


# Mini Pro PTZ Controller

## User Manual



# Content

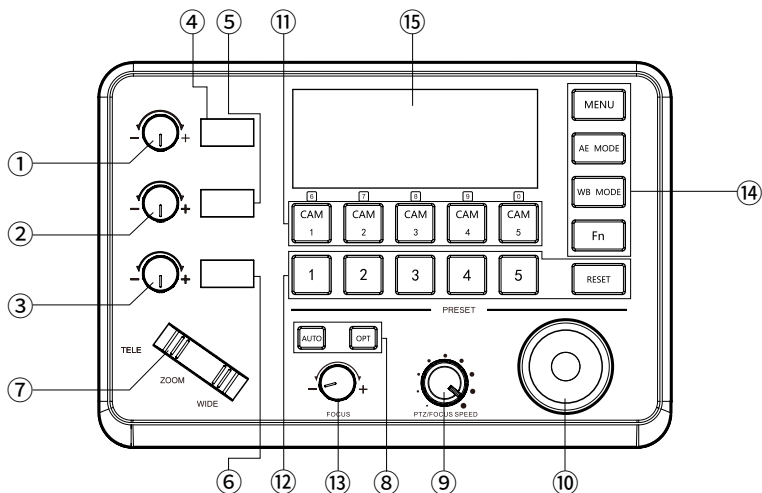
---

|  |    |
|--|----|
| <b>Parameters &amp; Specs</b>                    | 2  |
| Communication & Control Interface                | 2  |
| Camera Control or Operation                      | 2  |
| Control Signal Format                            | 2  |
| Power Supply and Consumption                     | 2  |
| Physical & Others                                | 2  |
| <b>Description of Button &amp; Knob Function</b> | 3  |
| <b>Interface Function and Connection Diagram</b> | 7  |
| Upgrade Interface                                | 7  |
| RS422/RS485 Interface                            | 7  |
| RS232 Interface                                  | 8  |
| LAN Interface                                    | 8  |
| 12V DC Power Interface                           | 9  |
| <b>System Menu Operation Instructions</b>        | 10 |
| System Menu Function Explanation                 | 10 |
| Keyboard System Menu                             | 10 |
| System Setting                                   | 10 |
| Comm Setting                                     | 11 |
| Ethernet Setting                                 | 11 |
| Password Setting                                 | 12 |
| System Menu Guide                                | 12 |
| <b>Products Dimensions</b>                       | 13 |

# Parameters & Specs

| Communication & Control Interface |   |
|-----------------------------------|---|
| RS422/RS485 Interface             | Phoenix Contact 4 pin 3.81mm Terminal                               |
| RS232C Interface                  | DB9 Male Interface  |
| LAN Interface                     | RJ45 Female Interface   |
| Power Supply                      | JEITA type4 Female Interface  |
| Upgrade Online                    | Micro USB Female Interface  |
| Camera Control or Operation       |   |
| Supports up to Control Cameras    | 5   |
| Communication Protocol            | VISCA, PELCO P/D, UDP   |
| Number of LED Displays            | 4 Units Color LED Display Screen                                    |
| Number of Camera Channel          | 5   |
| Infinitely variable knobs         | 4   |
| Joystick                          | 2-Axis  |
| Zoom Mode                         | Tele-Wide Bridge Keys   |
| Buttons                           | 17 Silicon Button   |
| Presets Short keys                | 5 Presets per Each channel  |
| Focus Mode                        | Auto/ Manual/ OPT   |
| Pan/Tilt Rotation Speed           | 7-Level Adjustment  |
| Zoom In/Out Speed                 | 7-Level Adjustment  |
| AE Mode                           | The mode can be switched arbitrarily, and the value can be adjusted |
| WB Mode                           |   |
| Camera Menu                       | One-keys for call   |
| Control Signal Format             |   |
| Baud Rate                         | 2400bps, 4800bps, 9600bps, 19200bps, 38400bps                       |
| Date Bits                         | 8 Bit   |
| Stop Bit                          | 1 Bit   |
| Parity bit                        | NONE  |
| Internet Protocol                 | UDP / VISCA OVER IP   |
| Power Supply and Consumption      |   |
| Rated Voltage                     | DC 12V  |
| Rated Current                     | 0.3A max  |
| Max Power Consumption             | 3.6W  |
| Physical & Others                 |   |
| Password Privacy Protection       | YES   |
| Kingston's Lock Holes             | YES   |
| Works Temperature                 | 0°C ~ 40°C (32 °F ~ 104 °F)   |
| Storage Temperature               | -20°C ~ +60°C (-4 °F ~ 140 °F)                                      |
| Works Environments                | Indoor  |
| Dimensions (L× W × H)             | 244 × 164 × 48mm  |
| G.W                               | 1.1 kg  |
| Accessories                       | Phoenix Contact 4 pin 3.81mm Terminal / Power Adapter / User Manual |

# Description of Button & Knob Function



① This Rotation Knob which was to adjustment the Camera Exposure Parameter or Red Gain Value, Turn Right Rotation was to changed the valued Increased, Turn Left Rotation was changed the Valued Decreased.

② This Rotation Knob which was to adjustment the Camera Exposure Parameter or Blue Gain Value, Turn Right Rotation was to changed the valued Increased, Turn Left Rotation was changed the Valued Decreased.

③ This Rotation Knob which was to adjustment the Camera Exposure Parameter, Turn Right Rotation was to changed the valued Increased, Turn Left Rotation was changed the Valued Decreased.

④ LED Display, Real-time display of items and parameter values of adjusted by " knob ① ".

⑤ LED Display, Real-time display of items and parameter values of adjusted by " knob ② ".

⑥ LED Display, Real-time display of items and parameter values of adjusted by " knob ③ ".

⑦ Zoom Bridge Key

It is used to control the camera to Zoom In/Out, for example, press the TELE end of the bridge key, the camera will Zoom in the TELE direction object, When you Press with more Large Pressure, then the Zoom Speed changed more Faster.

# Description of Button & Knob Function

---

## ⑧ Focus Function Zoon

When the Backlight of [AUTO]Button is Light up, it means that the current focusing mode is the automatic; When the Backlight of [AUTO] Button is Light Off, it means that Current Focus Mode is changed to Manual. User can Press this button to switch the mode.

[OPT key] is used to trigger the single focus of the camera. At the same time, the camera enters the one-shot auto focus mode.

## ⑨ PTZ Speed Adjustment Knob

This knob is used to adjust the speed of Camera Pan, Tilt and Zoom, with a total of 7 gears.

The Current Gear will be display at Led Display. The Gear Value is more small then the pan/tilt rotation speed or the zoom speed of the camera controlled by the keyboard will be more Slowly.

## ⑩ 2-Axis Joystick

The joystick supports control camera to Up/Down, Left and Right movement.

When the camera or keyboard menu is opened, the joystick is used to control the menu cursor Up/Down, Left/Right movement and modify parameters.

## ⑪ Channel Button Zone

[ CAM1 ] to [ CAM5 ] are shortcut keys for camera channels, which can be Freely switched and selected according to your need. When you select any camera channel, the backlight of the corresponding camera channel will be light up in green, and all the parameters and settings of the keyboard will be changed to the current Channel.

Note: The communication parameters (address ID, protocol, baud rate, IP address, port number, etc.) of each channel can be set individually. Support mixed use of multiple protocols through different channel.

## ⑫ Presets Function Zone

### ● [ Number Keys ]

SETTING PRESETS :

Long Press and hold the number key for 2 seconds (such as [Number key 1], when the screen displays "Set Preset 1" means that preset 1 has been saved)

CALL PRESETS :

Short press the preset number to be call Presets, (for example, [Number key 1],

# Description of Button & Knob Function

---

when you press the [Number key 1]the screen displays "Show Preset 1", it means that preset 1 has been call).

- [ RESET Key ]

TO BE CLEAR THE PRESET SETTING

Press[RESET key]+[Number key]to clear the preset position setting.

After pressing the [RESET key], the green backlight starts to flash, Then press the preset number that needs to be cleared, (for example,[RESET]+ [Number key 1], at this time, the green Backlight of button of the [RESET key]stops flashing, and at the same time, “Reset Preset 1” is displayed on the screen, which means that preset 1 has been cleared.

- ⑬ FOCUS Knob

This Knobs is using to adjustment camera’ s focal length, Rotation right direction is adjustment focus length near, Rotation Left direction is adjustment focus length Far; (When User using this function, the keyboard’s Focus mode will be changed to Manual, It wasn’ t available on AUTO Mode).

- ⑭ Function Key Zone

- [Menu Key]

This key is to Turn ON/OFF Camera Menu, Long Press with 3secs will turn on Keyboard system Menu.

- [AE MODE Key]

This key is used to change the automatic exposure mode of the camera. Each time is pressed, the camera changes to different exposure mode. Under in difference of exposure mode, the corresponding functions of Knob 1, Knob 2 and Knob 3 are different. It is shown in real time on the display at the right of the knob.

The specific functions of the knobs are shown in Table 1:

| Exposure Mode       | Knob 1   | Knob 2   | Knob 3                |
|---------------------|----------|----------|-----------------------|
| Auto                | NOT USED | NOT USED | Exposure Compensation |
| Manual              | Shutter  | Iris     | Gain                  |
| Shutter Priority    | Shutter  | NOT USED | Exposure Compensation |
| Iris Priority       | Iris     | NOT USED | Exposure Compensation |
| Brightness Priority | Iris     | Gain     | Exposure Compensation |

Table 1

# Description of Button & Knob Function

---

- [ WB MODE Key ]

This Key is used to changed the White Balance of the camera. Each Time is pressed, the camera will be changed to different WB Mode.Under in difference of WB mode, the corresponding functions of Knob 1, Knob 2 are different.

The specific functions of the knobs are shown in Table 2:

| White Balance Mode | Knob 1   | Knob 2    |
|--------------------|----------|-----------|
| Auto               | NOT USED | NOT USED  |
| Manual             | Red Gain | Blue Gain |

Table 2

- [ Fn Keys ]

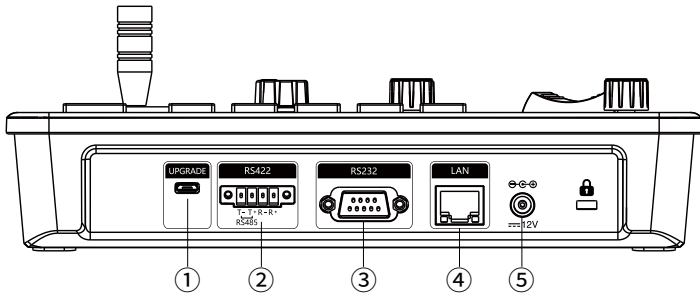
This key is reserved for adding custom functions.

The factory default state is: short press this key to send the command to enter the Sub-menu of the camera, long press this key for 3 seconds to back Home Position of Camera.

## ⑮ LED DISPLAY

It is used to display the current status information & Setting information of the keyboard in real time (including IP address, Port number, serial port address, communication protocol, Baud Rate and other information) and keyboard menu, the brightness of the display can be set through the keyboard menu.

# Interface Function and Connection Diagram

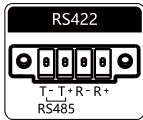


## ① Upgrade Interface

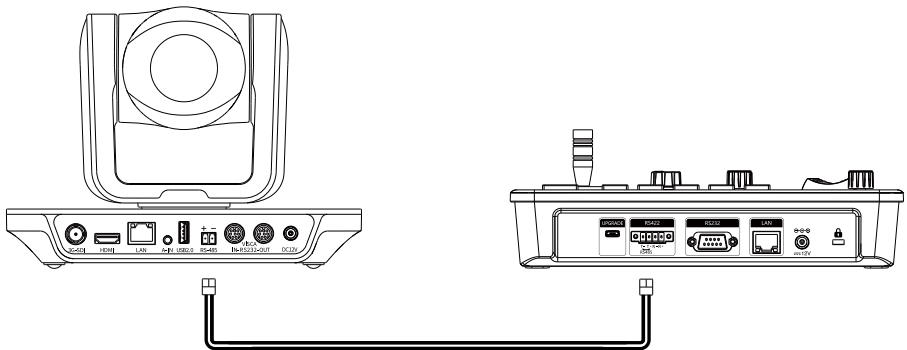


The interface is for upgrade of Hardware of keyboard by Laptop. Using Micro USB Cable direct connection with PC, And Upgrade by our upgrade tools software.

## ② RS422/RS485 Interface



This Interface is using to Connection with Camera by RS422 or RS485,detail connection diagram as follows pictures:



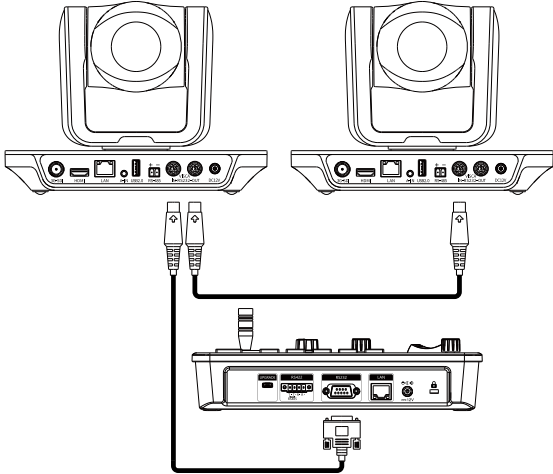


# Interface Function and Connection Diagram

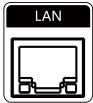
## ③ RS232 Interface



This Interface is using to connection with Camera through RS232, detail connection diagram as follows Pictures:

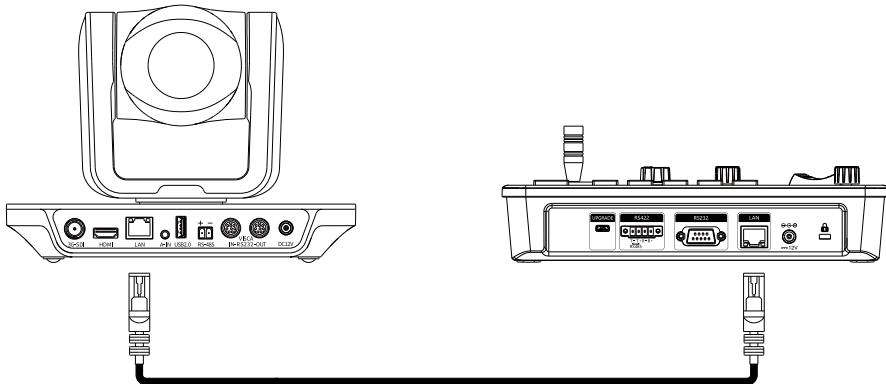


## ④ LAN Interface



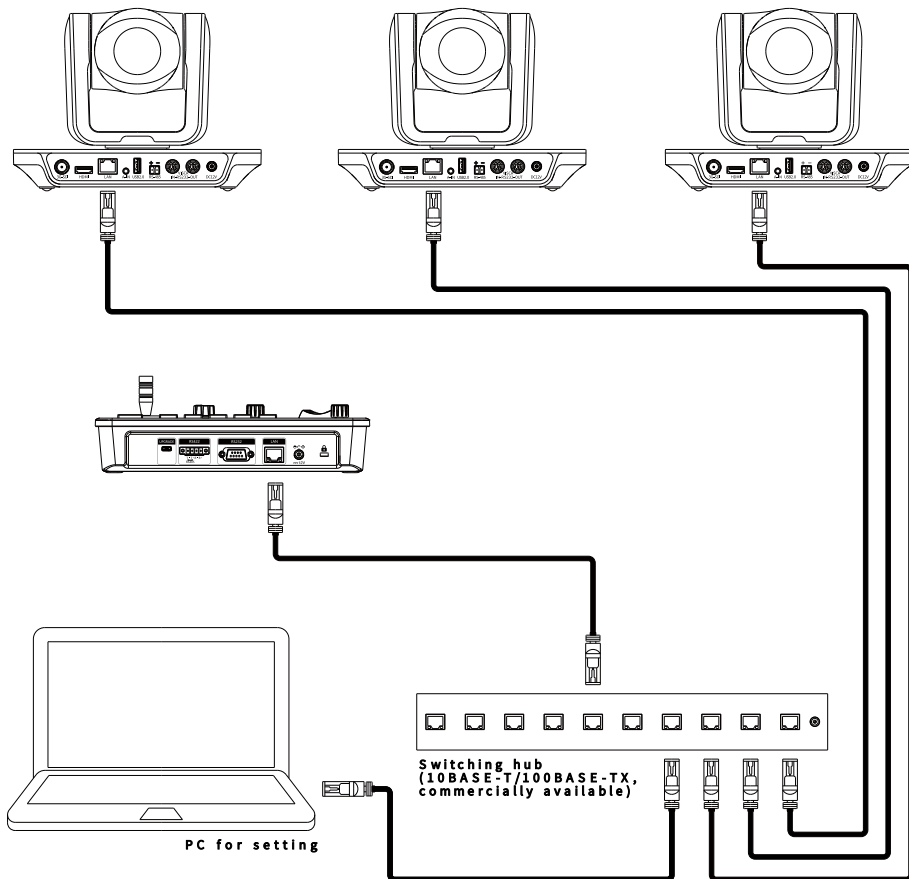
The LAN Interface is using for connection with Network switch or others. Network PTZ Camera, detail connection diagram as follows:

- Connect with Single Unit Network PTZ Camera connection diagram as follows:



# Interface Function and Connection Diagram

- Connect with multiple cameras by LAN interface detail connection diagram as follows: (When connecting multiple cameras, you need to set the IP of each camera separately with a computer).



## ⑤ DC Power Supply Interface



This interface is the Power supply interface, you can direct connection it with Power adapter; please don't using non-original Power adapter.

# System Menu Operation Instructions

---

## System Menu Operation & Explanation

---

- 1.Long Press [ MENU ] with 3secs will turn on Keyboard system Menu;
- 2.The joystick swings up and down: control the system menu cursor to move up and down / change the parameters of the current menu item;
- 3.The Joystick swings Right: enter the current menu item / save and exit the current menu item;
- 4.The Joystick swings Left: Exist current Menu item/ No Saved and Exit current Menu item;
- 5.Press [ MENU ]to exist System Menu;
- 6.Press the number keys[0]~[9]: input numerical value (only valid for menu items that need to input numerical value). example IP Address or Port number setting.
- 7.When the current value is number input, the green backlight of [CAM1]~[CAM5] is Light on, and at this time [CAM1]~[CAM5] Corresponds to the numbers 6~0 on the silk screen above the buttons.

## SYSTEM MENU

---

- 1.Long Press [ MENU ] with 3 secs will turn on Keyboard system Menu.
- 2.The joystick swings up and down to control the menu cursor to move up and down

- |                     |
|---------------------|
| 1. System Setting   |
| 2. COMM Setting     |
| 3. Ethernet Setting |
| 4. Password Setting |

## SYSTEM SETTING

---

The joystick swings up and down the Cursor to [ System Setting ], then Movement right to enter System Setting menu.

### ● [ Language ]

The Joystick swings up/down to [Language], then Movement right to enter setting. The Joystick swing up/down can changed the current Parameters setting, Swing the joystick to the right to save the current parameters and exit the language settingstate. The following menus operate setting is same.

- |                            |                 |
|----------------------------|-----------------|
| 1. Language :              | English         |
| 2. LED Display Brightness: | Normal          |
| 3. Automatically Standby:  | Off             |
| 4. Itself IP:              | 192.168.001.088 |
| 5. Itself Port:            | 52381           |
| 6. Factory default Setting |                 |
| 7. About Keyboard          |                 |

Optional Language: Chinese, English; other languages can be customized and developed according to customer needs.

### ● [ LED Display Brightness ]

Change the brightness of the LED display: Low, Normal, High.

### ● [ Automatically Standby ]

Set the keyboard to automatically enter standby mode without any operation within a limited time.

Select-able: Off, 1 minute, 2 minutes, 5 minutes, 10 minutes, 20 minutes, 30 minutes, 60 minutes.

### ● [ Itself IP ]

To setting Keyboard itself IP Address / Port Number, default IP is 192.168.1.88, default Port 52381.

# System Menu Operation Instructions

---

- [ Factory default Setting ]

To change the Keyboard restore to Factory default setting.

- [ About Keyboard ]

To review the relevant information of the keyboard, including: keyboard model, Firmware version, factory S/N and other information.

## COMM SETTING

---

To move the cursor to [ Comm Setting ], then Movement right to enter Comm Setting:

|               |       |
|---------------|-------|
| 1. Channel:   | CAM1  |
| 2. Address:   | 1     |
| 3. Baud Rate: | 9600  |
| 4. Protocol:  | VISCA |

- [ Channel ]

The available channels CAM1~5 correspond to the buttons [CAM1]~[CAM5].

- [ Address ]

To set the serial communication address of the corresponding channel.

If the current communication protocol is VISCA, the communication address can be selected from 1~7. If the current communication protocol is PELCO-D/P, The communication address can be selected from 1~255.

- [ Baud Rate ]

To set the serial communication Baud Rate of the corresponding channel.

Available in: 2400, 4800, 9600, 19200, 38400bps.

- [ Protocol ]

To set the Serial communication Protocol of the corresponding channel ( Including Serial Communication Protocol and Internet Communication Protocol).

Available in: VISCA, PELCO P/D, UDP.

## ETHERNET SETTING

---

To move the cursor to [ Ethernet Setting ], then Movement right to enter Ethernet Setting:

|             |               |
|-------------|---------------|
| 1. Channel: | CAM1          |
| 2. Cam IP:  | 192.168.1.162 |
| 3. Port:    | 52381         |

- [ Channel ]

The available channels CAM1~5 correspond to the buttons [CAM1]~[CAM5].

- [ Cam IP ]

To set the Cam IP of the corresponding channel, which can be directly input through the number keys. When the number of input digits reaches 3, the cursor will automatically Jump to the next entry.

- [ Port ]

To set the UDP Port of the corresponding channel, it depend for the UDP Port number of camera at current channel.

# System Menu Operation Instructions

## PASSWORD SETTING

To move the cursor to [ Password Setting ], then Movement right to enter Password :

1. Using Password:    Enabled
2. Modify Password

● [ Using Password ]

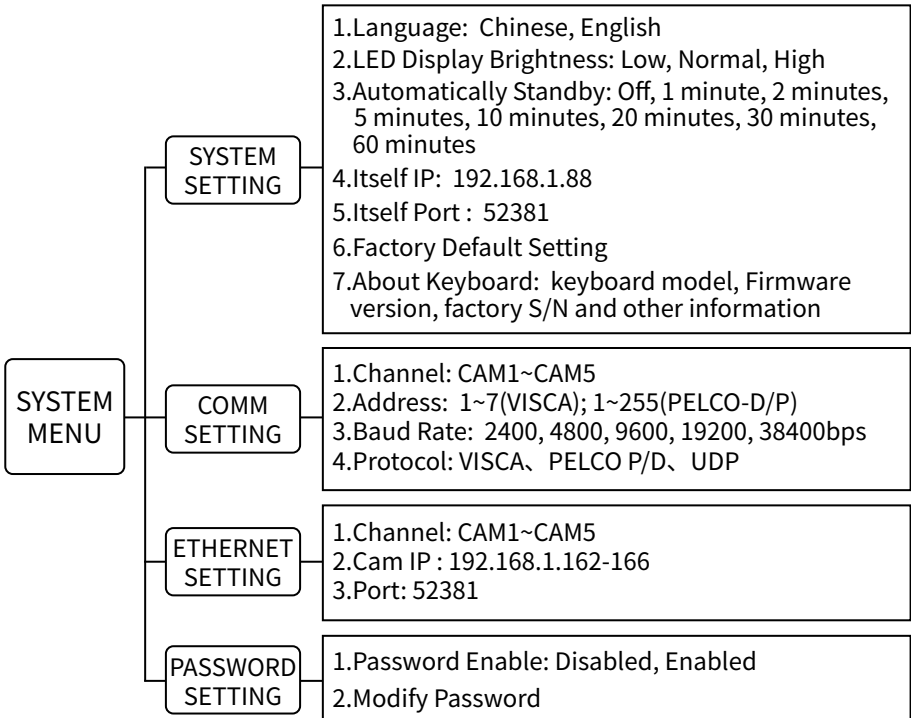
How to Using the Password Function: To changed the Password setting is Enable; When the password function is Enable, a password is required to enter the menu. The default password is: 8888

● [ Modify Password ]

The user can change the password by himself. If the password is not changed, the password is the default password.

Warning: Please use this function with caution. If the product cannot be used normally due to the password set by the customer, the manufacturer does not assume any responsibility.

## SYSTEM MENU GUIDE



# Products Dimensions

The size for Mini Pro PTZ Controller is as below:  
(Unit of length: mm)

