PTZ Camera Controller
User Manual



USING THE UNIT SAFELY

Before using this unit, please read below warning and precautions which provide important information concerning the proper operation of the unit. Besides, to assure that you have gained a good grasp of every feature of your new unit, read below manual. This manual should be saved and kept on hand for further convenient reference.

Warning And Cautions



※ Operate unit only on the specified supply voltage.

※ Disconnect power cord by connector only. Do not pull on cable portion.

※ Do not place or drop heavy or sharp-edged objects on power cord. A damaged cord can cause fire or electrical shock hazards. Regularly check power cord for excessive wear or damage to avoid possible fire / electrical hazards.

※ Ensure unit is properly grounded at all times to prevent electrical shock hazard.

※ Do not operate unit in hazardous or potentially explosive atmospheres. Doing so could result in fire, explosion, or other dangerous results.

※ Handle with care to avoid shocks in transit. Shocks may cause malfunction. When you need to transport the unit, use the original packing materials or alternate adequate packing.

※ Do not remove covers, panels, casing, or access circuitry with power applied to the unit! Turn power off and disconnect power cord prior to removal. Internal servicing / adjustment of unit should only be performed by qualified personnel.

※ Turn off the unit if an abnormality or malfunction occurs. Disconnect everything before moving the unit.

Please select the best installation position

※ Do not cover the air inlet and outlet of the unit, make sure that there is sufficient space around the ventilation holes on both sides to avoid blockage of ventilation.

※ To avoid falling or damage, please do not place this unit on an unstable cart, stand, or table. Make sure install this unit on a very stable horizontal surface for use.

※ Do not use this unit in a humid, dusty location or near water. Avoid liquids, metal pieces or other foreign materials to enter the unit.

※ Do not use this unit in an environment where the temperature is too cold or too hot.

※ Avoid placing this unit in direct sunlight or in a place where hot air from other products can blow.

Note: due to constant effort to improve products and product features, specifications may change without notice

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1. Introduction

1.1 Overview

As a professional PTZ camera controller, it supports RS-422/RS-485/RS-232/IP control and connects up to 255 cameras.Provides the ability to control camera pan/tilt/zoom and focus, white balance, exposure. A more elaborate camera setup is provided on the controlling PTZ camera,It is widely used in education, conference, telemedicine, medical services and other industries.



1.2 Main Features

- 5 "display, support ONVIF and NDI (optional) protocol to view the current camera picture in real time
- IP/RS-422/RS-485/RS-232 control interface
- Supports NDI (optional), VISCA, VISCA-IP, Pelco P & D, ONVIF control protocols
- Control up to 255 IP cameras, 255 camera presets
- Camera track recording and playback
- Quickly control camera focus, exposure settings, and pan/tilt/zoom/focus speed
- Support POE + power supply
- Tally GPIO for switching and pointing cameras.

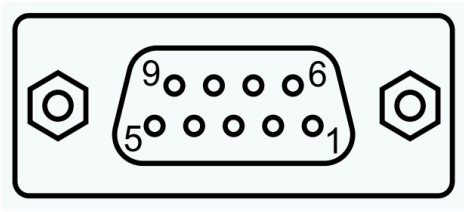
2.Interface

2.1 Interface



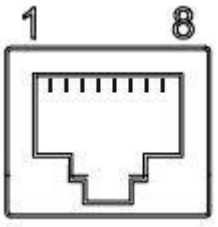
1. Power switch: When the power switch is set to ON, the power is turned on.
2. DC 12V power input
3. USB-C interface (for upgrade)
4. RS232 interface (supporting PELCO-D, PELCO-P and VISCA protocols)
5. TALLY GPIO port
6. RS-422/485 interface (supporting PELCO-D, PELCO-P and VISCA protocols)
7. LAN interface (supports ONVIF, VISCA-IP, VISCA-SONY, NDI (optional) protocols)

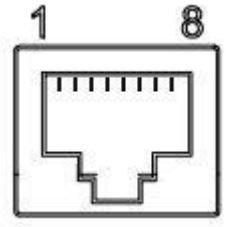
2.2 Interface Definition



RS-232

RS-232	Definition
1	DCD
2	RXD
3	TXD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	RI





RS-422/485 **LAN**

RS-422/485	Definition	LAN	Definition	Color
1	TX+ (RS-485)	**1**	TX_D1+	Orange/White
2	TX- (RS-485)	**2**	TX_D1-	Orange
3	RX+	**3**	RX_D2+	Green/White
4	n/c	**4**	BI_D3+	Blue
5	n/c	**5**	BI_D3-	Blue/White
6	RX-	**6**	RX_D2-	Green
7	n/c	**7**	BI_D4+	Brown/White
8	n/c	**8**	BI_D4-	Brown

2.3 Specifications

Product model		Standard version	NDI version
Connect	Interface	IP(RJ45)×1, RS-232×1, RS-485/RS-422×1, TALLY × 1, USB2.0 (for upgrade)	
	IP Control Protocol	ONVIF, VISCA-IP,VISCA-SONY	ONVIF, VISCA-IP,VISCA-SONY NDI®|HX, NDI®|HX2
	Serial port control protocol	PELCO-D, PELCO-P, VISCA	
	Serial port baud rate	2400, 4800, 9600, 19200, 38400, 115200 bps	
	Network port standard	1000M×1 (PoE/PoE+: IEEE802.3 af/at)	
Control Interface	Display screen	5-inch display	
	Knob	Quickly control camera aperture, shutter speed, gain, auto exposure, white balance, etc.	
	Rocker	Pan/Tilt/Zoom	
	Number of cameras that can be connected	Up to 255 units	
	Preset bit	Up to 255 preset bits can be set	
Power Source	Power source	PoE+/ DC 7~24V	
	Power consumption	PoE+: < 8W, DC: < 8W	
Environment	Work environment	-20°C~60°C	
	Storage environment	-20°C~70°C	
Size	Size (LWD)	282×158×47mm 340 × 195 × 69.5mm (with Joystick)	
	Weight	Net weight: 1089g	

3.Control Panel

3.1 Front Panel



A	5-inch display
B	Gain/ Exposure/ White Balance/ Focus Control
C	Camera Search/ Add/ Camera Menu/ Camera Switch/ Menu Control Knob/ PTZ Speed Adjust/ Exit Button
D	Quickly adjust camera zoom: seesaw button
E	Camera shortcut function keys and user-defined keys, camera management, camera presets and track settings Multi-function number panel: used to input numbers, letters, characters, etc.
F	PTZ Joystick: It is used to control the camera motion and call the camera menu. The top key locks the pan, tilt, and zoom functions of the 4D joystick

3.2 Keyboard Description

■ **Display screen** On-screen adjustable controller menu option The "PVW" key previews the current camera picture.	
■ **Exposure/white balance/focus control** **1. R1/BLUE/RED knob:** Turn the knob to manually adjust the red and blue gain of the camera, and the current red and blue gain values will be displayed at the bottom of the screen. Short press once to switch between red and blue gain adjustment. **2. R2/IRIS/SHUTTRE knob:** Turn the knob to adjust the camera aperture/shutter/gain parameters, and the current status will be displayed at the bottom of the screen. A short press toggles the aperture/shutter/gain adjustment. **3. R3/NEAR/FAR knob:** Turn the knob to manually adjust the camera focus and display the status at the bottom of the screen. **4. AWB button:** automatic white balance of the camera. When the button is turned on, the red light will always be on. **5. ONE PUSH WB:** One-key white balance. Press this key to perform automatic white balance only once. **6. AE button:** The camera is exposed automatically. When it is turned on, this button will always turn on the red light. **7. ONE PUSH AF:** Focus with one key. Press this key to perform autofocus only once. **8. AUTO FOCUS button:** The camera focuses automatically. When it is turned on, the red light will always be on.	

■ **Search Add Camera/Menu Selection:**

SEARCH: Quickly enter the "SEARCH" menu. With the menu knob, the IP camera can be automatically searched in the menu.

Add: Quick access to the "ADD" menu, where cameras can be added.

CAM OSD: Call up the camera built-in menu.

CAM POWER: Control the power switch of the current camera, and it will be normally on when it is turned on. (This function is invalid under Pelco _ D/P protocol)

When the button is turned on (button lights red), the target camera is turned on.
When the button is turned off (the button red light is not lit), the target camera is turned off (standby).

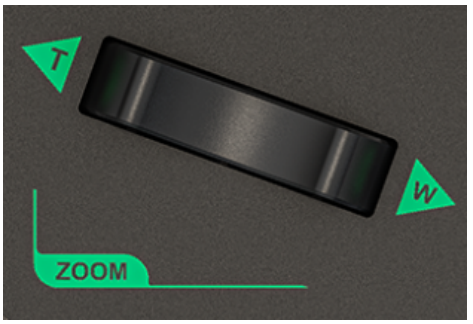
MENU/EXIT: In the Menu Status page, press the key to enter the menu interface. Press the Exit key to return the option to the previous menu interface. Press and hold to go directly to the status page.

PTZ Speed Adjustment/Menu Selection: PT Speed Knob: Controls the speed of the camera pan and tilt. On the menu page, this knob can also be used to select menu options. Press the knob to confirm the options or enter the next menu interface.



■ **Quickly adjust the camera zoom:**

Seesaw button: press the seesaw T key to enlarge the image, and press the seesaw W key to reduce the image. In addition, you can also control the camera focus by turning the PTZ remote lever. And display that status at the bottom of the screen.



■ **User-defined keys and camera function keys:**

F1 ~ F7 shortcut keys/CAM1-7: Press the shortcut keys F1-F7 to quickly connect the corresponding camera, or customize the key functions according to the user's requirements. The specific functions are set in the menu.

CAM: Call the camera of the specified label, press the number of the specified camera label on the digital panel, and then press the key to switch the camera corresponding to the called number.

CALL: The camera calls the preset position. Enter the number on the number panel in advance, and then press the CALL key to call the preset position of the specified number label. After selecting the number, press and hold to play the recording track.

PRESET: Set the preset position of the camera. Enter the number on the digital panel in advance, and then press the PRESET key. The camera stores the current position to the number label. Select the number and press it for a long time to



4.Menu Status Page

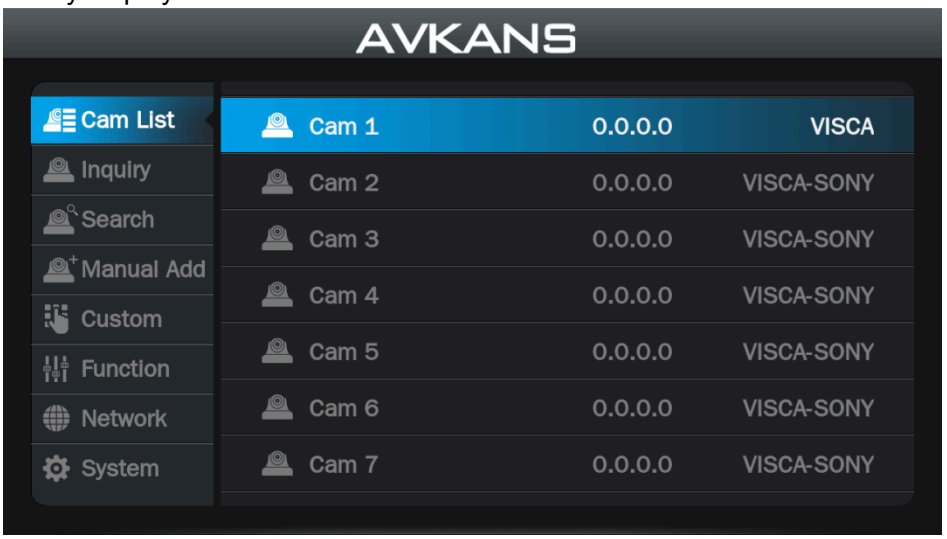
4.1 Controller Screen Description



1. Camera connection status: display the information of the currently connected camera. Includes camera serial number, camera name, current control protocol, camera IP address, and TALLYSignal status (tally turns red when PGM signal is connected), etc.
2. Camera parameter status: real-time display of camera red gain, blue gain, aperture, shutter, gain image parameters.
3. Camera Speed: Displays the controller's pan, tilt, zoom, and focus speeds.
4. Status bar: displays the operating status of the controller in real time.

4.2 Camera Information

The name of the connected camera, the current control protocol, and the IP address of the camera are clearly displayed in the camera list.



5. Camera Management

5.1 Camera Management

Up to 255 cameras can be connected to the system. Users can match cameras in two ways: automatically searching for IP cameras and manually adding cameras. At the same time, the camera information can be queried.

Before adding the IP camera, please connect the IP camera and the controller through the network

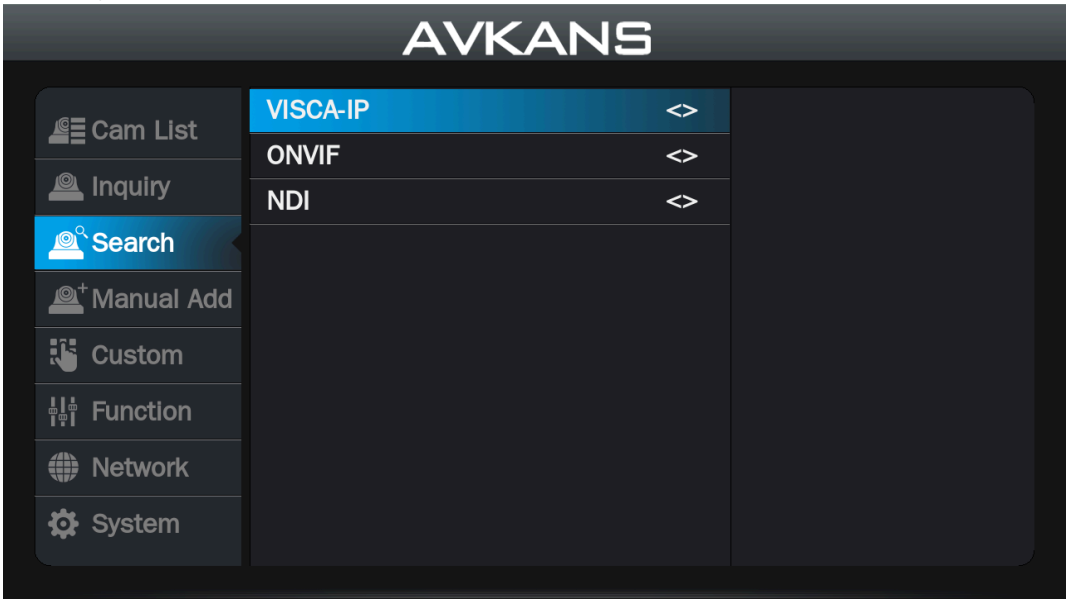
cable, and configure the controller IP according to (8 network setting instructions). Make it in the same network segment as the address of the camera.(That is, the values of the first three sections of the IP of the camera and the IP of the controller are the same, and only the last section is different).

5.1.1 Automatic search for IP camera

The device supports the search of cameras with VISCA-IP, ONVIF and NDI (optional) protocols as follows:

Click the search key on the panel to enter the camera search menu bar.When the VISCA-IP, ONVIF, or NDI protocol is selected, the controller automatically searches for cameras and displays the IP addresses of the cameras that can be connected.Press the corresponding camera IP to enter the configuration interface, and select the camera number to change other configurations of the current camera number. Once configured, the camera can be connected. Press the Save Exit key to return to the IP page. At this time, you can choose to repeat the above operations to add other searched cameras, or return to other operations.

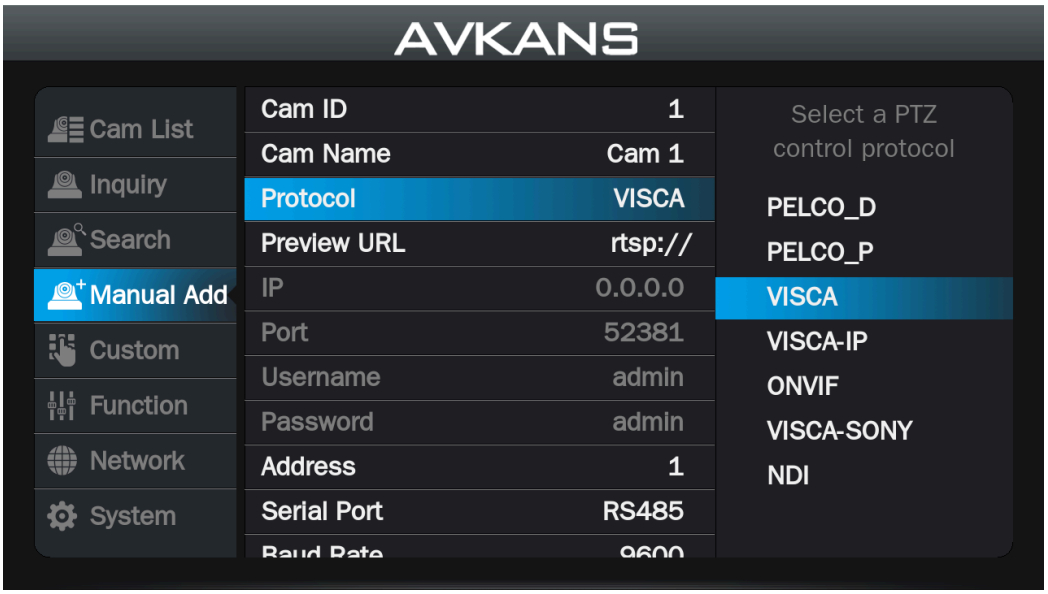
If no IP appears and the word EXIT appears after the protocol is selected, it means that no camera is searched under the protocol. At this time, confirm whether the connection and network configuration of the camera and controller meet the above requirements. Or add a camera directly in the [Add Manually] menu.



Note: ① The search function is valid only when the network cable is connected. Manually add a camera in the [Add Manually] menu when connecting to the RS232/422/485 serial port.

5.1.2 Adding cameras manually

Press "ADD" to enter the camera addition menu, first select the required camera number, and then select the protocol you want to connect.After setting, press the CALL key to wake up the camera and save the settings.



Settings that can be changed on the manual addition page include: camera group and ID, camera name, camera protocol, camera IP, address, and userAccount name, password, baud rate, serial port interface, physical address, etc. See the following table for details:

General options	**Camera**	Camera number, optional: 1 ~ 255. After saving, press the cam key to enter the camera calling function. At this time, press the number key of the camera to call the corresponding camera quickly.
	Name	Camera name, support customization. It can be modified via Multifunction Digital Panel or the virtual keyboard.
	Agreement	The control protocol used. NDI, VISCA-IP, ONVIF and VISCA-SONY protocols can be selected for network port connection, and VISCA, PELCO-D and PELCO-P protocols can be selected for RS232/422/485 connection.
	Address	RTSP address, used to pull the camera RTSP video stream.
Optional under NDI (optional), ONVIF, VISCA-IP, VISCA-SONY protocols	**IP**	The IP address of the connected camera needs to be filled in manually.
	Port	VISCA UDP port number, default value: 1259, generally do not modify. Can be modified according to the requirements of different cameras.
Optional under ONVIF protocol	**User**	User name. Default is admin. Can be modified according to the requirements of different cameras. Press once on the multifunction number panel or virtual keyboard to enter the corresponding number; press twice or more to enter the corresponding letter. Press Enter to toggle the letter case.
	Password	Password. Default is admin. Can be modified according to the requirements of different cameras.

Optional under VISCA, Pelco _ D/P protocol	**Physical address**	Camera address, which can be connected and controlled only when it is set at the same value as the camera. The default setting is 1, which needs to be adjusted according to the value of the camera. When using the same interface and protocol to connect multiple cameras, the addresses of the cameras cannot be the same, and they should be set to 1, 2, 3 in turn.
	Serial port	Control interface, optional: RS232, RS485.
	Baud rate	Baud rate. The baud rate of the controller and the camera can be connected and controlled only when they are in the same frequency band. Generally, the default is 9600, which does not need to be adjusted. It can also be set according to the parameters of different cameras.
	Pattern	For compatibility with different cameras only, the default is Normal 1. In general, it is not necessary to modify. The control commands of cameras of different brands are somewhat different, so in case of abnormal connection and control problems: under the VISCA protocol, you can try to switch to Normal 1/Visca 2 for compatibility; under the ONVIF protocol, you can try to switch to Onvif 3 for compatibility. Optional in full mode, but valid only for ONVIF and VISCA protocols.

5.1.3 How to add multiple PTZ cameras

Multiple cameras can be added in turn by repeating the operations of automatic camera search and manual camera addition, but note that:
When the network port is used to connect multiple cameras at the same time, the IP addresses between the cameras shall not be repeated.
When the same serial port protocol is used to connect multiple cameras, the physical addresses of the cameras shall not be repeated. It should be set to 1, 2, 3, and so on.

5.1.4 How to call the camera

After you add a camera, you can use the cam key to quickly recall the camera. Press the cam key after pressing the number key below to call the corresponding camera quickly.

6. Custom Settings

6.1 Fn/CAM Key

Enter the Fn/CAM key menu to set the shortcut keys F1, F2, F3, F4, F5, F6 and F7 to CAM mode or function mode.

In CAM mode, briefly pressing the corresponding F key on the panel will connect the camera. Long pressing the corresponding F key on the panel will quickly invoke the shortcut function set in the specified key.

In FUNTION mode, pressing the corresponding F key on the panel will quickly call the shortcut function set in the designated key. Press and hold the corresponding F key on the panel to connect the camera.

6.2 Custom Key

In the Fn/Key function area, you can set corresponding shortcuts for the F1 ~ F7 shortcut keys.

The F1, F2, F3, F4, F5, F6 and F7 shortcut keys can be set to have the functions of flipping the camera image up and down and flipping the camera image left and right,Camera picture freeze and other functions. Among them, CMD1-7 supports 7 kinds of camera function commands customized by users.

Click to select CMD ID1-7. In CMD editing, the user can input camera function commands according to actual needs.Implement functions that are not available on the shortcut execution panel. Support the input of 0-F commands. The length of the input command is not more than 14 characters (6 HEX). Press Enter when the input is completed.

Note: The sending port depends on the port selected during the current camera configuration. Functional instructions can be obtained from the camera manual or from the manufacturer.

Shortcut keys can be assigned to camera functions as follows:

1	Cam	Quick Call Camera N
2	Power	Put the camera to sleep/wake
3	Reset	Causes the camera to perform a reset
4	Freeze	Freeze the camera frame
5	V-Flip	Flip vertically
6	H-Flip	Flip horizontally
7	AI Track Start	Turn on AI tracking
8	AI Track Stop	Turn off AI tracking
9	CMD1-7	Customize Camera Feature Command Settings

6.3 TALLY Settings

This controller can receive the PGM signal of the video switching station, and can also output the PGM signal to the PTZ camera.
PGM signal: Also known as a "program" signal, in a video switcher, it refers to the video picture of the final broadcast video output.

1） **PGM signal: local optional: input, output.**
PGM input: Receive the TALLY program signal from the video switcher.
PGM output: Output TALLY signal to the PTZ camera currently called by the controller.When PGM output is selected, the PGM option for the Follow signal to follow is not available.
2） **Follow signal: Close and PGM signals can be selected.**
PGM signal: If this option is selected, the controller will call the corresponding PTZ camera synchronously according to the PGM camera signal source selected by the video switcher.
The controller can receive the PGM signal of the video switcher and synchronously call the PTZ camera selected by the switcher.

	Name	Color	Status	Explain
Controller TALLY Indicator	PGM signal input (Refers to the program signal of the switcher)	Red	Lamp On	When the PGM signal of the video switcher is received, the red light will be lit in the tall area on the touch screen.

			Lamp Off	No signal

6.4 Control lever

The joystick supports the selection of stand-alone and multi-level modes.

Single stage: Only a fixed set of speeds will be sent in each direction.

Multistage: Each direction continuously sends a velocity that varies with the amplitude of the joystick, depending on the amplitude of the joystick.

The joystick supports the user to freely set the single-level or multi-level control mode in the menu according to the actual needs. To meet the operational requirements in different scenarios.

7. Advanced Setting

7.1 PT Reversal

When turned on, the PT operation of the controller joystick is reversed, that is, the camera will move downward when the joystick is moved upward. The camera moves to the right when the joystick is moved to the left.

7.2 PresetS.

Save the preset bit information and select on or off. When it is turned on, it can remember the exposure, white balance and other image States of the preset position of the camera.

7.3 Track Loop

Set the switch of the track loop, open the track loop, the camera will repeat the track recorded in the loop. Close the recording loop, the camera will play back the loop track only once.

7.4 Quick Call

Quick Call camera preset position.

When you turn on Quick Recall, just press the number on the keypad to quickly recall directly to the preset position.

If "Quick recall" is turned off, pressing the preset number will not recall to the preset position. After selecting the preset number, Press the call key to recall the preset bit.

8. Network Setting

The controller identifies the camera through the IP address, so when the camera and the controller are connected through the network port, You need to set the IP, subnet mask and gateway of the controller first, and make sure that the camera and the camera controller are in the same LAN.

If RS422/232/485 is used to connect the camera and the controller, the network configuration step can be omitted. Go directly to [ADD-Add Manually] to configure the camera.

1） DHCP

When DHCP is turned on, the camera controller can automatically obtain an IP address through the router.

2） IP

DHCP On: Connecting the camera controller to a router that supports DHCP will automatically obtain an IP address.

DHCP off: When there is no router, the network cable can be directly connected to the camera and the controller. Manually set the IP address of the controller to ensure that the controller and the camera are in the same network segment (that is, the first three digits of their IP addresses are the sameThe last bit is different. For example, when the camera IP is 192.168.5.163, the controller IP can be 192.168.5.177.)

3) Subnet mask

Set the subnet mask. The default setting is 255.255.255.0.

4) Gateway

Set the gateway based on the current IP address. The default setting is 192.168.5.1.

9. System Setting

The controller system settings can be adjusted here.

Screen brightness: Adjust the screen backlight, optional range: 1 ~ 255.

Key Backlight: key light switch, optional on/off, key white light will go out after off.

Key brightness: Turn on or off the key brightness. Adjust the brightness of the white button light. The optional range is 1 ~ 10.

Green brightness: Adjust the brightness of the green button light, optional range: 1 ~ 10.

Beep: key beep, which can be turned on or off.

Factory Reset: All keyboard settings of the PTZ camera controller will be cleared and restored to the default factory settings.

Preference Reset: Restore the default settings. However, it can retain the currently saved user configuration information such as camera connection configuration, camera preset position, PTZ rate, etc.(Note: When resetting the controller, do not move the PTZ lever and the zoom seesaw buttons, but keep them in their original positions.)

Version: APP version and MCU version of the machine can be viewed here.

Save and Exit: Saves the selected settings and exits.

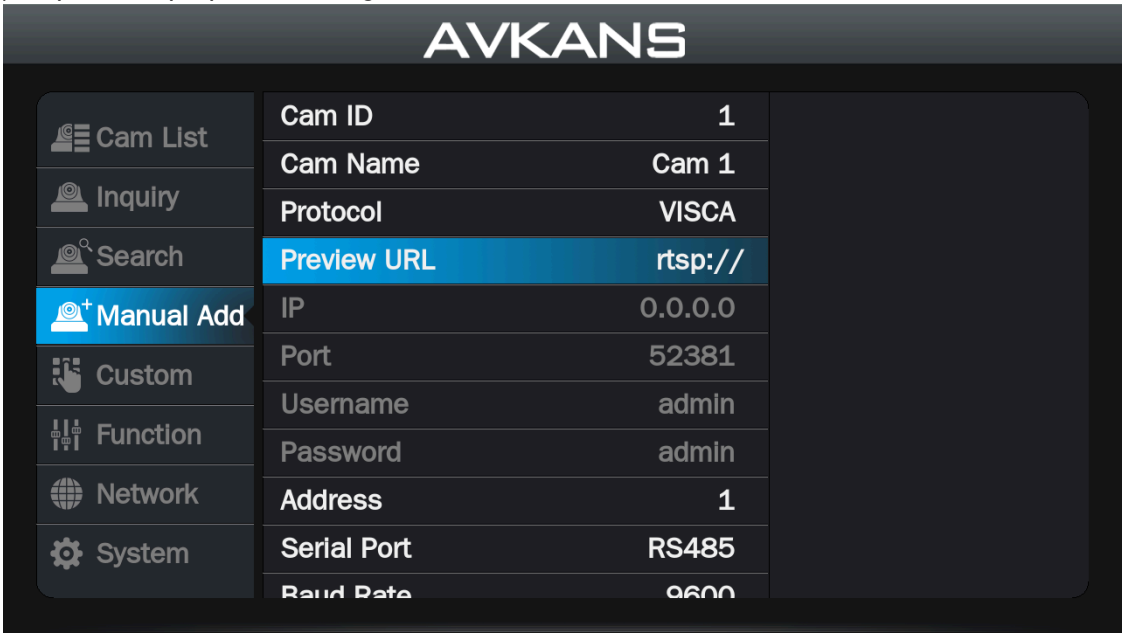
10. Operation for Preview and Preset Position

10.1 Preview camera picture (PVW)

The PVW button turns the preview function on or off. Under ONVIF and NDI protocols, the controller will automatically pull the video stream of the camera. Connect the PTZ camera and press the PVW key to preview the camera in real time in the controller display.
If other control protocols are used, complete the following settings before previewing the camera:

The PVW function obtains the video stream of the camera through the RTSP protocol, so it is necessary to connect the controller and the camera through the network cable. And the Rtsp stream address of the camera is obtained in advance. (Refer to the corresponding camera manual)
Taking the PTZ camera of AVMATRIX as an example,The default RTSP stream address is: primary stream: RTSP//192.168.5.163: 554/live/av0 secondary stream: RTSP//192.168.5.163: 554/live/av1

(For practical purposes, change the IP address 192.168.5.163 to the current IP address of the camera.)



Operation method 1:
(1) The camera is added first through the ONVIF protocol.
(2) Press the add key to enter the menu and select the camera (change Cam ID to the desired camera).
(3) Change the camera control protocol from ONVIF to the required protocol (e.g. VISCA-IP, VISCA, Pelco D/P),The controller will automatically obtain the RTSP address of the camera.
(4) Select the "call" key to call the camera and save the settings.
(5) Press the PVW button and the preview video of the camera will be displayed on the screen. Press PVW again to close the preview video.
Note: This method is only available for cameras that support the ONVIF protocol

Operation method 2:
(1) The camera is added to the controller via VISCA-IP or VISCA-SONY protocol.
(2) Press the add key to enter the menu and select the camera (change Cam ID to the desired camera).
(3) Select URL and enter the RTSP address of the camera via onscreen analog keyboard, for example: RTSP//192.168.5.163: 554/live/av0
(4) Press the "/HOME" key to exit the analog keyboard after the input is completed.
(5) Select the "call" key to call the camera and save the settings.
(6) Press the PVW button and the preview video of the camera will be displayed on the screen. Press PVW again to close the preview video.

10.2 Camera preset position setting

- **Set/Create Preset Settings**

Move the camera to the desired position and enter the desired preset number on the alphanumeric keypad, for example, number 77. Then briefly press the PRESET button to save the preset.

- **Invokes preset values**

Enter the desired preset number on the alphanumeric keypad, such as "77", and briefly press the "CALL" button to recall the position of the number 77. When Quick Call is on, press the number keys 1-9 to call the 9 preset bits directly.

- **Reset/Clear Preset Settings**

Enter the number of the preset to be cleared 77. Press the RESET button shortly to reset/clear the preset.

Note: When setting and clearing the preset bit, the quick recall function needs to be in the off state.

10.3 Camera track recording settings

- **Set Up/Create Track Recording**

Input the preset number of the required storage track on the alphanumeric keyboard, such as 11, and then press the PRESET button for a long time. Enter the track recording mode. First, the camera will return to the start position, that is, the preset position of 11. The screen prompts "Waitting..." ".When Track recording is prompted, operate the joystick or other functions to start recording the track of the camera. Press the "PRESET" button for a short time to save the preset and complete the track recording.

- **Playback track recording**

Enter the preset number of the track to be played back on the alphanumeric keyboard, such as "11", and then press and hold the "CALL" button. You can play back the camera track numbered 11. (The camera will first return to the home position, the default position of 11, and the screen prompts "Waitting.."..."。Start track playback when prompted for Track replaying)

From the function menu, you can set the switch of the track loop. Turn on the track loop, and the camera will repeat the recorded track.Close the recording loop and the camera will play back the loop track only once.

During the playback of the recording track, the camera will immediately stop the playback of the recording track by moving the joystick or pressing the seesaw button.Locking the operation through the locking key on the remote lever can prevent the track playback from being interrupted due to misoperation.

- **Reset/Clear Track Recording**

Enter the track number 11 to be cleared and press and hold the "RESET" button to reset/clear the track recording.

11. Web Page Control

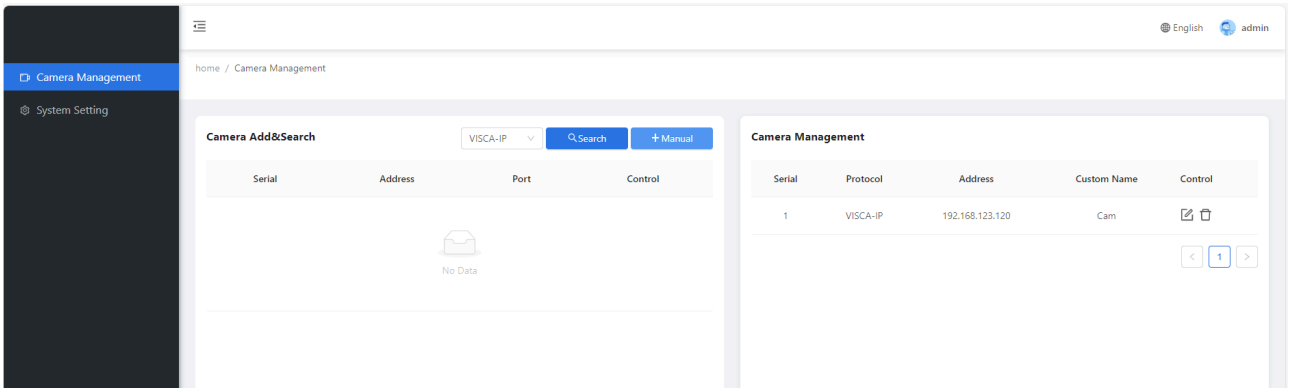
Connect the controller and PC to one router. Open the DHCP setting of controller, will automatically obtain a IP of the controller. Record this IP.
(Or connect controller with PC via network cable, set the PC's IP address to the same IP range as controller.)

Log in to the controller's IP address in a browser. You can manage the camera and system settings here. **Default account: admin; default password: admin.**

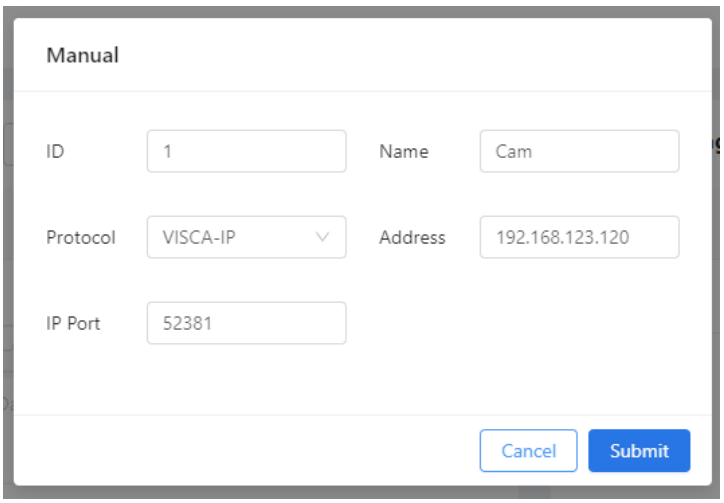
- **Camera Management:**

In the Camera Add&Search field, select VISCA-IP, ONVIF protocol according to the situation and click SEARCH button to start the search. When the search is complete, all cameras searched will be

displayed.

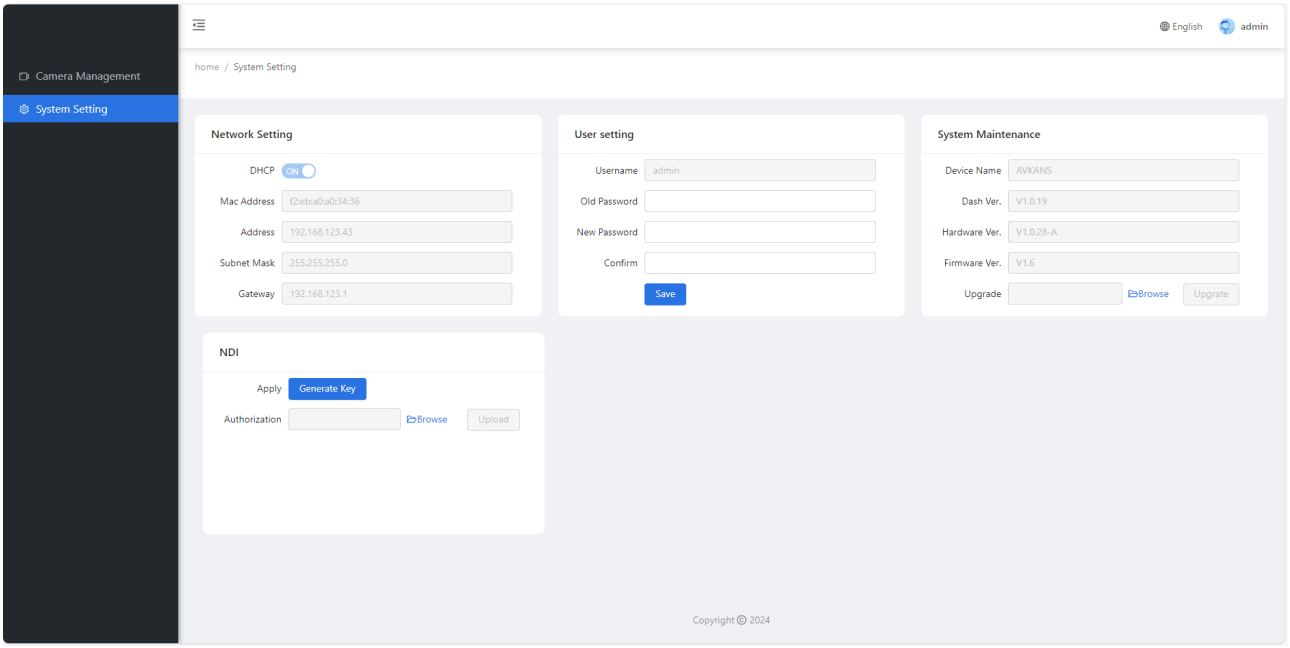


Click "Manual Add" and a manual window will pop up where you can easily change the camera's ID, name, protocol, etc. After selecting, click "Submit" and the camera will be successfully added. The successfully added camera will be displayed in the camera management window on the right.

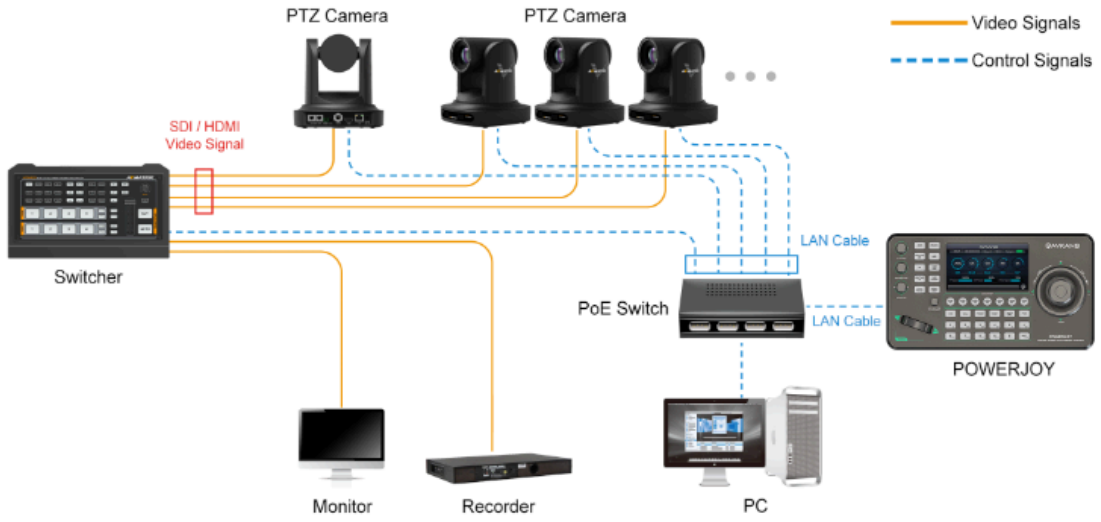


- **System Setting:**

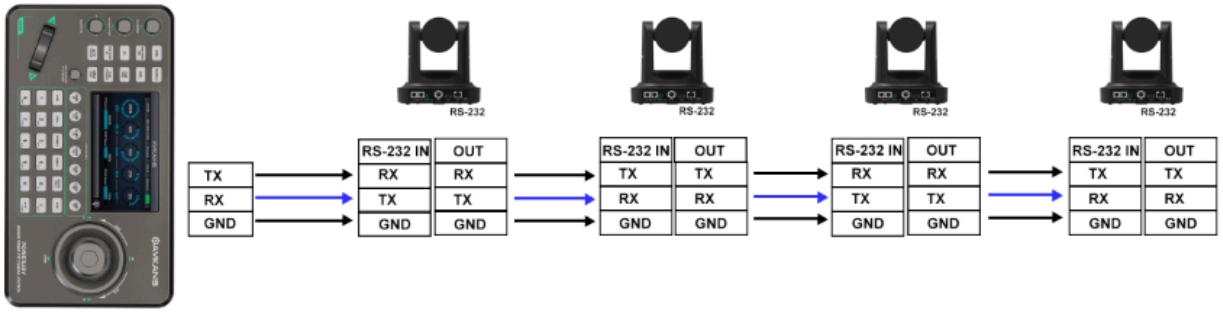
In the system settings, users can set network configuration, modify the login password, view the controller system version, and upgrade the version.



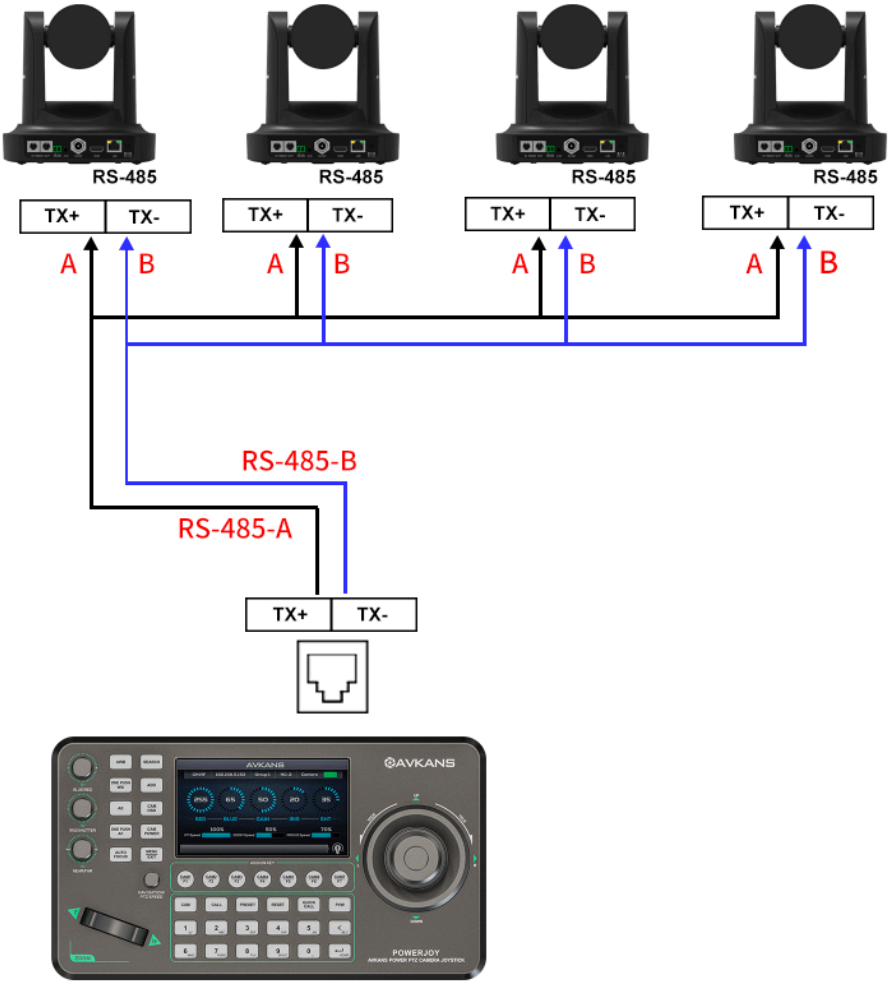
12.PTZ Camera Controller Connection



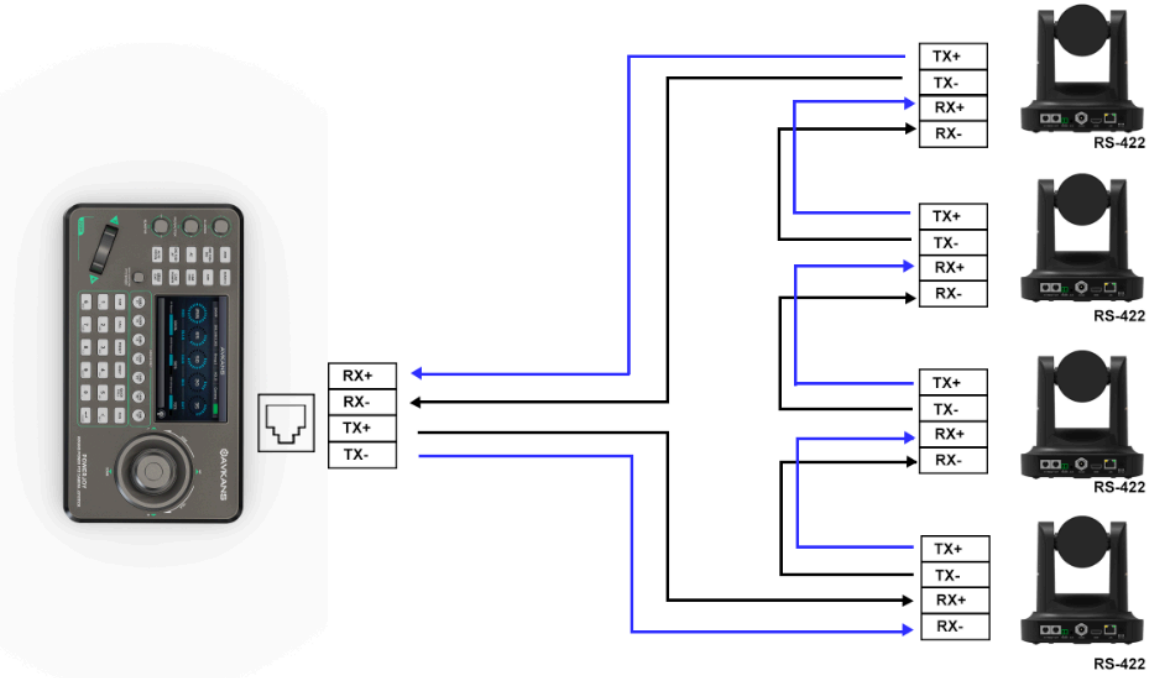
13.RS-232 Connection Diagram



14.RS-485 Connection Diagram



15.RS-422 Connection Diagram



16. Accessories

This PTZ camera controller is equipped with one 12V power adapter.



12V Power Adapter