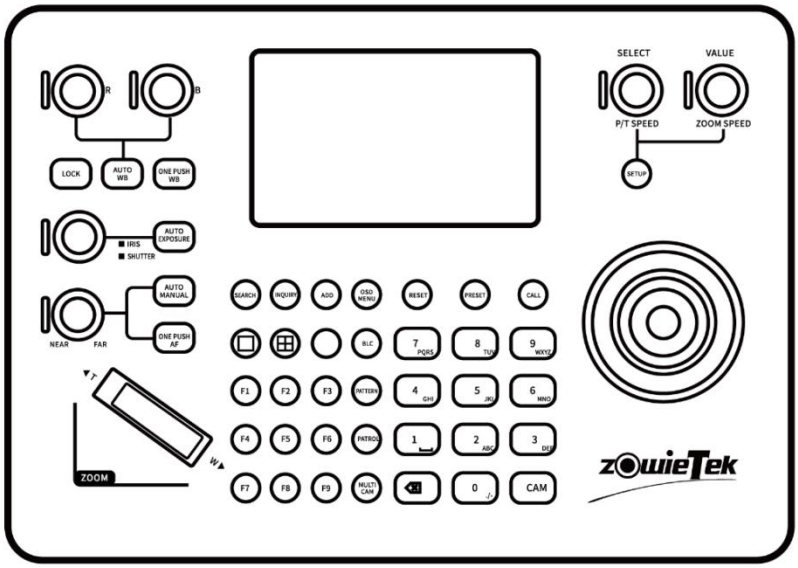
ZowieKBD PTZ Camera Controller

User Manual



Attention

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.

Statement

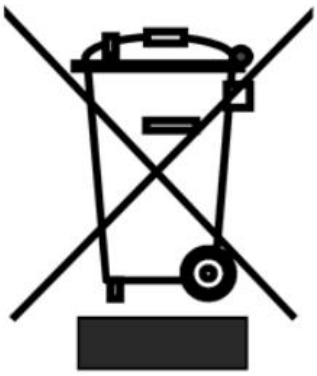
The descriptions in this manual may differ from the version you are using. If you are having trouble using this manual, please contact our technical support for assistance. The contents of this manual will be updated, and our company reserves the right to leave it without notice.

Zowietek Electronics, Ltd.

Warnings and Precautions

1. Read all of these warnings and save them for later reference.
2. Follow all warnings and instructions marked on this unit.
3. Unplug this unit from the Power Adapter before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not use this unit in or near water.
5. Do not place this unit on an unstable cart, stand, or table. The unit may fall, causing serious damage.
6. Slots and openings on the cabinet slides and bottom are provided for ventilation. To ensure this unit's safe and reliable operation and protect it from overheating, do not block or cover these openings. Do not place this unit on a bed, sofa, rug, or similar surface, as the ventilation openings on the bottom of the cabinet will be blocked.
7. This unit should never be placed near or over a heat register or radiator. This unit should not be placed in a built-in installation unless proper ventilation is provided.
8. This product should only be operated from the type of power source indicated on the marking label of the AC adapter. If you are not sure of the type of power available, consult your ZowieBox dealer or your local power company.
9. Do not allow anything to rest on the power cord. Do not locate this unit where the power cord will be walked on, rolled over, or otherwise stressed.
10. If an extension cord must be used with this unit, make sure that the total of the ampere ratings on the products plugged into the extension cord does not exceed the extension cord rating.
11. Never push objects of any kind into this unit through the cabinet ventilation slots, as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electric shock. Never spill liquid of any kind onto or into this unit.
12. Except as specifically explained elsewhere in this manual, do not attempt to service this product yourself. Opening or removing covers that are marked "Do Not Remove" may expose you to dangerous voltage points or other risks, and will void your warranty. Refer all service issues to qualified service personnel.
13. Unplug this product from the Power Adapter and refer to qualified service personnel under the following conditions:
    a) When the liquid has spilled into the unit.
    b) When the product has been exposed to rain or water.
    c) When the product does not operate normally under normal operating conditions. Adjust only those controls covered by the operating instructions in this manual; improper adjustment of other controls may damage the unit and often require extensive work by a qualified technician to restore the unit to normal operation.
    d) When the product has been dropped or the cabinet has been damaged.
    e) When the product exhibits a distinct change in performance, indicating a need for service.

Disposal



For EU Customers only - WEEE Marking

This symbol on the product or its packaging indicates that this product must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service, or the shop where you purchased the product.

Contents

1. General

1.1 Overview

ZowieKBD is a professional-grade PTZ camera keyboard controller designed for efficient, ergonomic, and precise operation. Featuring a robust all-metal enclosure, intuitive layout, and responsive 7D joystick, it delivers seamless control across demanding video production environments.

Equipped with 41 hardware buttons, 6 knobs, and a zoom rocker, ZowieKBD supports popular control protocols including Sony VISCA, VISCA over IP, NDI, ONVIF, and Pelco D/P—making it highly versatile for both commercial and studio use. Users can easily manage pan, tilt, zoom, focus, and other key camera settings through a user-friendly OSD interface.

The built-in 5” LCD and optional HDMI output allow for flexible preview modes, supporting up to 4K30 video, quad-camera group control, and live feeds with Tally border indicators. ZowieKBD also supports camera patrol, presets, and API-based system integration across Windows, macOS, Android, and Linux platforms, powered by ZowieUI and ZowieAPI.

Compact, durable, and packed with powerful features, ZowieKBD is the ideal choice for modern PTZ camera workflows in broadcast, conferencing, and live streaming scenarios.

1.2 Features

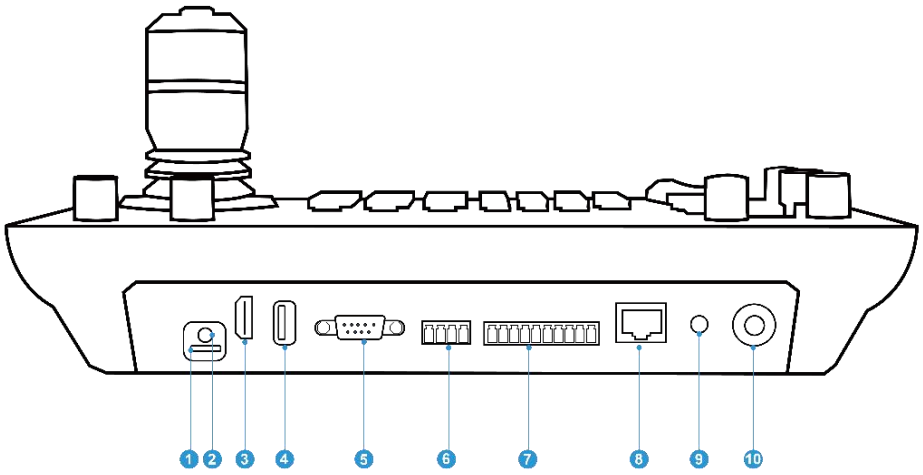
- Ergonomic and robust PTZ keyboard with metal enclosure, 41 buttons, 6 knobs, zoom rocker, and 7D joystick for precise control.
- 5” LCD screen and HDMI output support up to 4K30 video; easily switch between single and quad-camera views.
- Supports Sony VISCA, VISCA over IP, NDI (HX1/HX2/HX3), ONVIF, and Pelco D/P protocols.
- Customizable button lights, themes, and user-assignable function keys for tailored workflows.
- Group control, camera patrol, and quad preview switching for multi-camera environments.
- Tally integration with GPIO sync and preview/program status indicators.
- Web UI and RESTful API for remote control and automation via PC, tablet, or smartphone.
- Dual power options: DC adapter or PoE.
- Eco-friendly, all-metal build with OEM/ODM customization support.

1.3 Packing List

Product	Quantity
PTZ Camera KBD	X1
Accessories	**Quantity**
Power Adapter	X1
RS422/485 Phoenix Plug	X1
Tally Phoenix Plug	X1
Quick User Guide	X1

2. Quick Start Guide

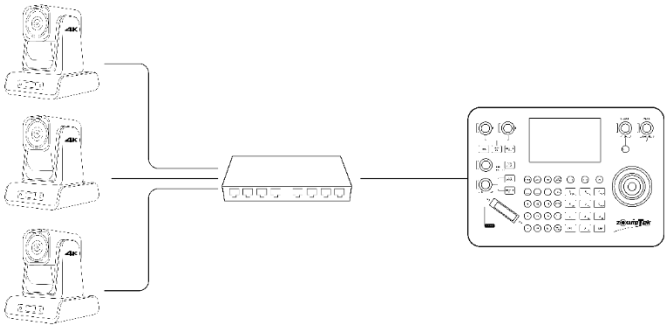
2.1 Interface Description



NUM	Name	Function
1	TF Card Port	For firmware upgrading.
2	Line Out Port	Monitor the current camera audio when the screen is single grid.
3	HDMI Out Port	Output the video to an external monitor.
4	USB Port	For firmware upgrading.
5	RS232 Interface	Connect RS232 cable for controlling Cameras.
6	RS422/RS485 Interface	Connect RS232 cable for controlling Cameras.
7	Tally / Contact (GPI I/O Connector)	Tally control interface.
8	LAN Interface	Connect the ZowieKBD to a network/power supply.
9	DC In	Power supply.

10	Power Button	Power on/power off the ZowieKBD.

2.2 Connection



Step1: Connect Network

To use Sony VISCA, VISCA over IP, NDI or ONVIF protocols, please connect to the network.

NOTICE

*Zowietek products default to DHCP, so for the purposes of this quick start guide, please connect ZowieKBD to a network with **DHCP server**.*

Step 2: Connect Power Supply

※ **DC :** *Please use a **12V 1A DC power adapter** for power supply.*

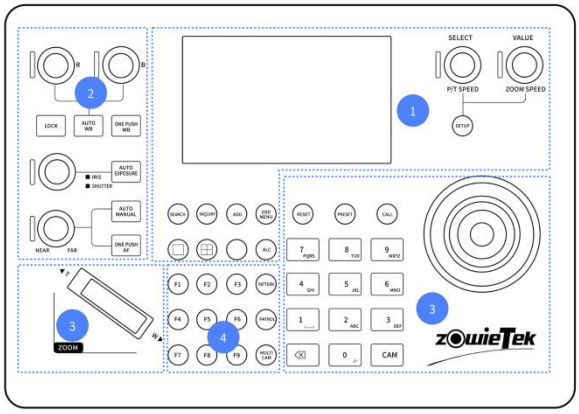
※ **PoE:** *ZowieKBD can also be powered by Power over Ethernet (PoE/PoE+). To take advantage of POE, the LAN cable has to be connected to a PoE Network Switch with at least a **CAT5e LAN** cable.*

Step 3: Power Button

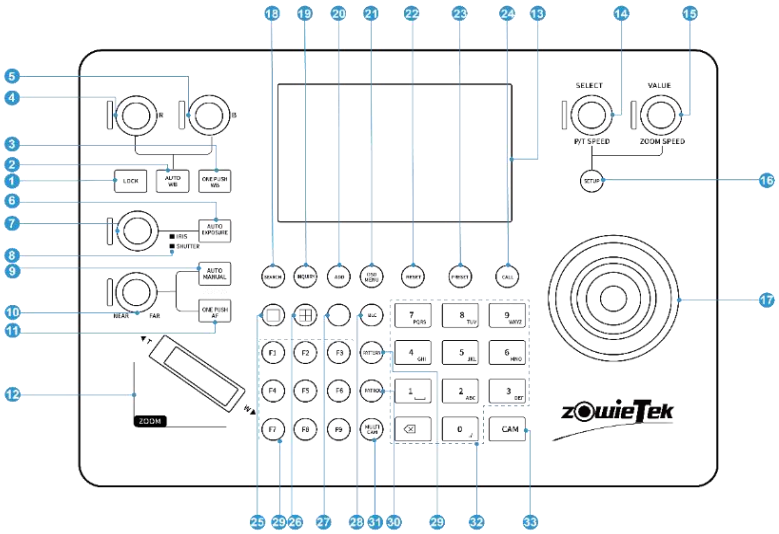
*After connecting the device, **press** the power button and **hold until** its **light turns on**—this signals that ZowieKBD is ready to go.*

2.3 Button Function Description

ZowieKBD at a Glance



NUM	Zone	Function
1	LCD and Settings	Used for preview, ZowieKBD settings and camera interaction
2	Camera Image Adjustment	Set exposure, focus, and white balance.
3	Camera Control	Control the pan/tilt/zoom of camera, set/call/reset presets.
4	Fn and Muticam	For firmware upgrading.



1. Lock

   Lock all ZowieKBD functions, the light is on when locked

2. Auto White Balance

   Press to switch between Auto/Manual /Indoor /Outdoor /One-push/Manual white balance.

3. One Push WB

Trigger one-push white balance, automatically switch to one-push white balance mode when in other mode.

4. Manual Red Adjustment for White Balance

   Automatically switch to manual white balance mode when in other white balance mode.

5. Manual Blue Adjustment for White Balance

   Automatically switch to manual white balance mode when in other white balance mode.

6. Auto Exposure

   Press to switch between auto/manual/shutter priority/aperture priority/brightness priority modes.

7. Manual Adjustment for Exposure

   Adjust different exposure parameters according to different exposure modes.

Mode	Parameters
AAE	Iris+/-
SAE	Shutter+/-
Bright	Bright+/-
Manual	Iris/Shutter (Press the knob to switch adjustment parameters)
Auto	Automatically switch to manual mode

8. Exposure mode indicator

   The current mode can be confirmed by the light of the button/knob

Exposure Mode	Knob	IRIS	SHUTTER	AUTO Exposure Button
Auto	OFF	OFF	OFF	ON
Manual	ON	On	OFF	OFF
SAE	ON	OFF	ON	ON
AAE	ON	ON	OFF	ON
Bright	ON	OFF	OFF	ON

9. Auto/Manual Focus

   Press to switch between auto/manual/one-push focus.

10. Manual Adjustment for Focus

    Manually focus far/near, automatically switch to manual focus mode when in other mode.

11. One Push AF

    Trigger one-push focus, automatically switch to one-push focus when in other mode

12. Zoom Seesaw

    Zoom in/out

13. LCD

    Video preview and settings

14. P/T Speed

    Set the horizontal/vertical rotation speed

15. Zoom Speed

    Set the zoom speed

16. Setup

    Enter/exit the keyboard setting interface

17. Joystick

    Any directions to control the camera direction

18. Search

    Search for cameras on the same network segment through Sony VISCA/ONVIF/NDI protocols

19. Inquiry

    View/edit/add cameras, add groups

20. Add

    Through IP VISCA(UDP)/IP VISCA(TCP)/ONVIF/VISCA/Pelco D/Pelco P/NDI/Sony VISCA to add camera

21. OSD Menu

    Call/exit camera' s OSD menu

22. Reset

    Reset presets

23. Preset

    Set presets

24. Call

    Call presets

25. Single Grid Switch

    Switch single grid preview

26. Four-Grid Switch

    Switch four-grid preview

27. HDMI Switch

    Switch HDMI priority/LCD priority output

28. BLC

    Turn on/off Backlight

29. Pattern

    Reserve

30. Patrol

    Reserve

31. Multi Cam

    Number + MULTI CAM to switch group

32. Numeric Keypad

    Numeric-alphabetic input

33. Cam

    Number + Cam to switch camera

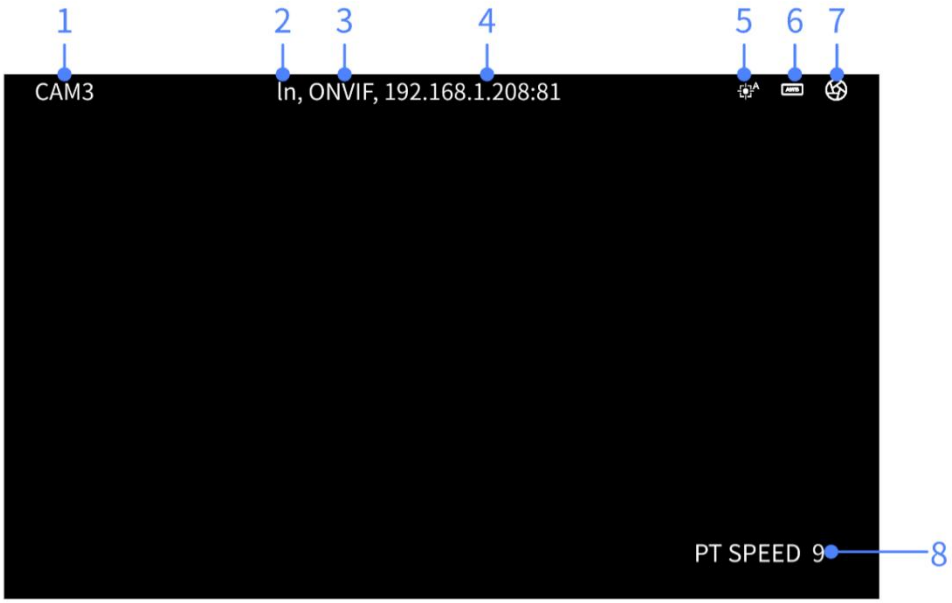
2.4 Shortcut Buttons

In certain interfaces, users can use long press/combination keys to perform some shortcut operations.

Buttons	Function	Description
Long press 	Hide/show camera information	
Press 	View basic keyboard information	Use in single grid/four grid interface preview
Long Press 	Modify the current camera parameters	Use in single grid/four grid interface preview
Long press 	Enter group management interface	
Number + 	Quickly switch current group	
Number1~4 + 	Quickly switch current control window	Use in four grid interfaces
Press 	Enter camera/group list for quick selection	Use in single grid/four grid interface
Press 	Enter the camera's OSD menu	Takes effect when the camera's OSD menu is awakened

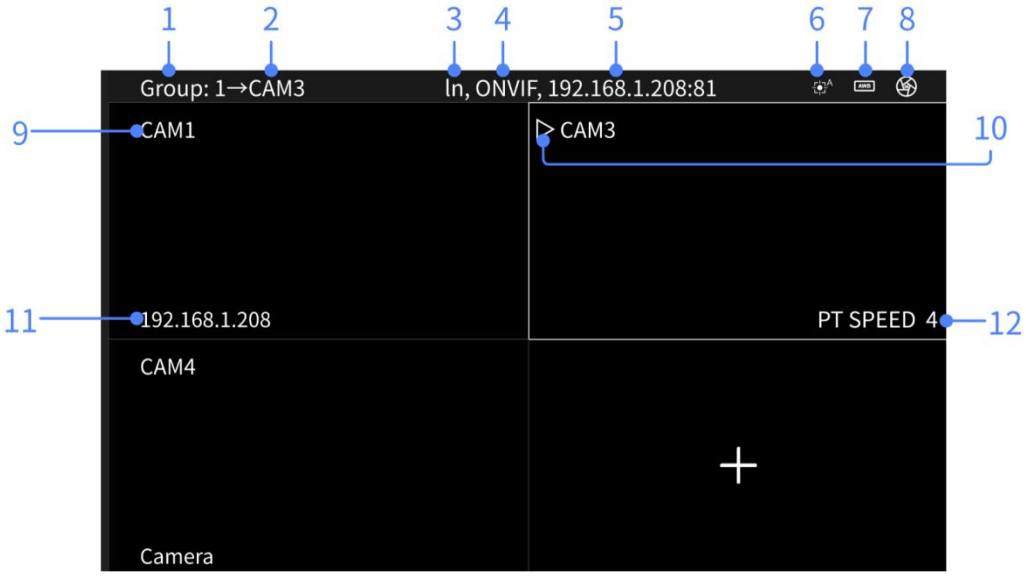
2.5 ZowieKBD Screen LCD

2.5.1 Single grid display



1. Current controlled camera number
2. Current controlled camera name
3. Current controlled protocol
4. Current camera IP
5. Current focus mode
6. Current white balance mode
7. Current exposure mode
8. Current operation

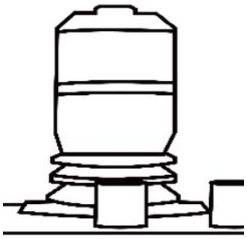
2.5.2 Four grid display



1. Current controlled group number
2. Current controlled camera number
3. Current controlled camera name
4. Current controlled camera protocol
5. Current controlled camera IP
6. Current controlled camera focus mode
7. Current controlled camera white balance mode
8. Current controlled camera exposure mode
9. Camera number
10. Current controlled window signal
11. Camera IP
12. Current operation

2.6 Navigating the Menus

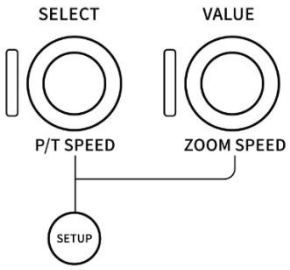
Method 1: Use the joystick to control the menu



Action	Response
Up/Down	Control the cursor to move up and down
Right/Click	Enter the next menu
Rotate	Return to the previous menu

:

Method 2: Use the knob to control the menu



Action	Response
Setup	Open the menu/return to the previous menu
P/T Speed	Rotate: Move the cursor Click: Enter the next menu
Zoom Speed	Rotate: Modify the value of the current parameter Click: Confirm parameter modification

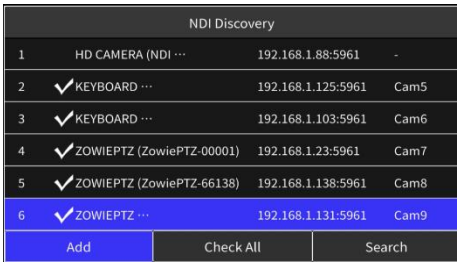
3. Basic Functions

3.1 Add an NDI® Camera to ZowieKBD

Before adding an NDI camera, please make sure that NDI is activated on the keyboard. Go to page 27 to see how to activate NDI.

Method 1: Search for NDI cameras (Recommended)

Click SEARCH and select NDI protocol to search.



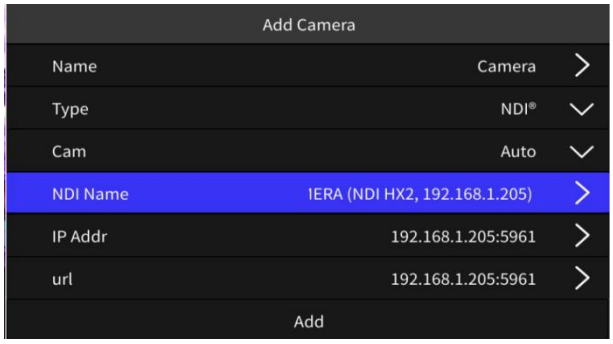
After the search is completed, use the up, down and top button of the joystick to select the camera to add. A " √ " sign will appear in front of the selected camera .
Use the left, right and top button of the joystick to operate Add/Check All/Search below.

Method 2: Manually add NDI camera

Click ADD to add manually or click SETUP -> Device Management->CAM List->Add to add

manually.

Use the up, down and top buttons of the joystick to move the cursor and modify the parameters.



Select the type as NDI, and the Cam number can be specified or automatically assigned in the order of addition.

Enter the NDI Name, and make sure that the entered NDI name is correct. Even missing or adding spaces will cause the manual addition of NDI to fail.

Users can first open the NDI monitor of NDI Tool to view the actual NDI name.

Enter the IP address and URL of the NDI source. The default NDI port number is 5961.

Click ADD to complete the addition.

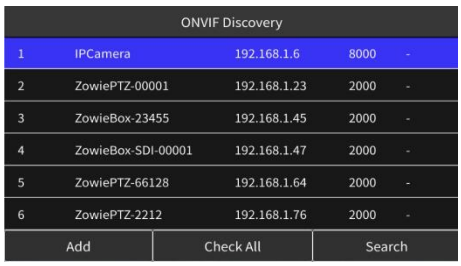
Tips:

1. Users also can click SETUP ->Device Management->Search and select NDI protocol to search.
2. Users can also use P/T SPEED knob SELECT P/T SPEED to select the camera to add, ZOOM SPEED knob VALUE ZOOM SPEED to operate Add/Check All/Search below.

3.2 Add an ONVIF Camera to ZowieKBD

Method 1: Search for ONVIF cameras (Recommended)

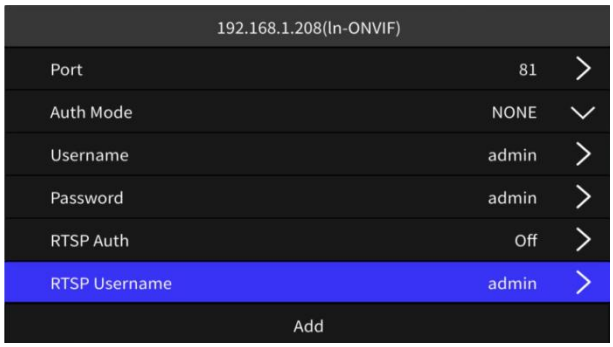
Click SEARCH and select ONVIF protocol to search or click SETUP ->Device Management->Search and select ONVIF protocol to search.



After the search is completed, use the up, down and top button of the joystick to select the camera to add. A " √ " sign will appear in front of the selected camera .

Use the left, right and top button of the joystick to operate Add/Check All/Search below.

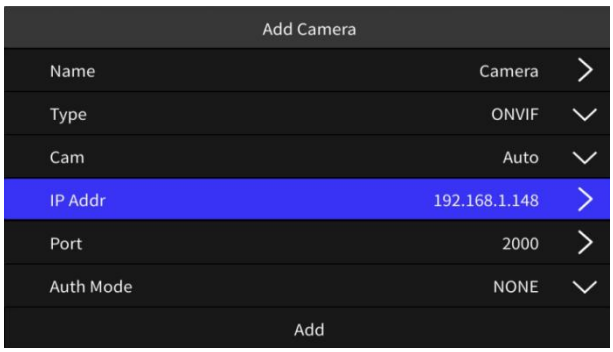
When clicking to add a single camera, please select the correct ONVIF authentication and RTSP authentication. (This step is not required when adding ONVIF cameras in batches)



Method 2: Manually add ONVIF camera

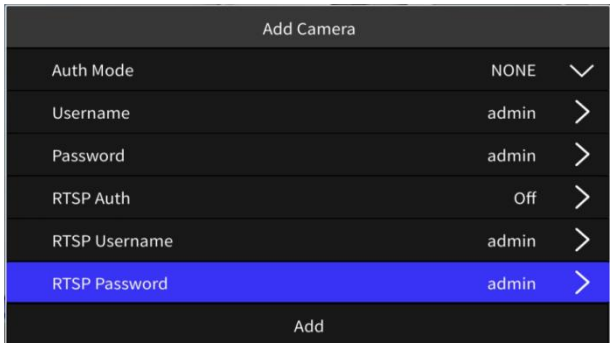
Click ADD to add manually or click SETUP-> Device Management->CAM List->Add to add manually.

Use the up, down and top buttons of the joystick to move the cursor and modify the parameters.



Select ONVIF as the type and enter the IP address and port number of the ONVIF camera (the default port number for most cameras is 2000).

Cam numbers can be specified or automatically assigned in the order.

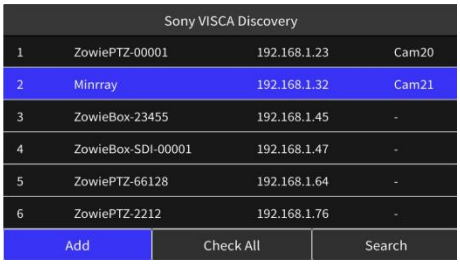


Select the correct ONVIF protocol authentication and RTSP authentication (both are disabled by default for ZowiePTZ cameras) and click Add to complete the addition.

3.3 Add a Sony VISCA Camera to ZowieKBD

Method 1: Search for Sony VISCA Camera (Recommended)

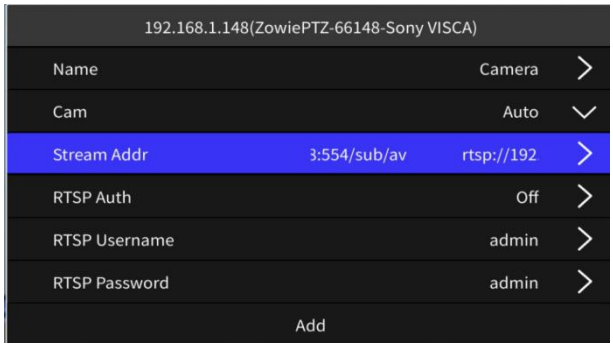
Click SEARCH and select Sony VISCA protocol to search or click SETUP ->Device Management->Search and select Sony VISCA protocol to search.



After the search is completed, use the up, down and top button of the joystick to select the camera you want to add. A " √ " sign will appear in front of the selected camera .

Use the left, right and top button of the joystick to operate Add/Check All/Search below.

After clicking to add a single camera, please enter the correct RTSP address and RTSP authentication. (This step is not required when adding Sony VISCA cameras in batches)

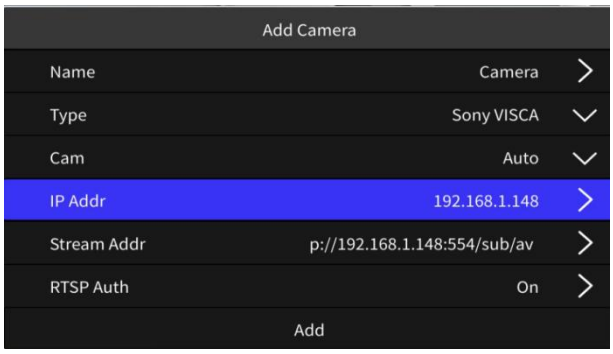


Method 2: Manually add Sony VISCA camera

Click ADD to add manually, or click SETUP ->Device Management->CAM List->Add to add

manually.

Use the up, down and top buttons of the joystick to move the cursor and modify the parameters.



Change the Type to Sony VISCA, enter the IP address and RTSP URL of the camera to be controlled, and select the correct RTSP authentication.

The Cam number can be specified or automatically assigned in the order in which it is added.

Click Add to complete the addition.

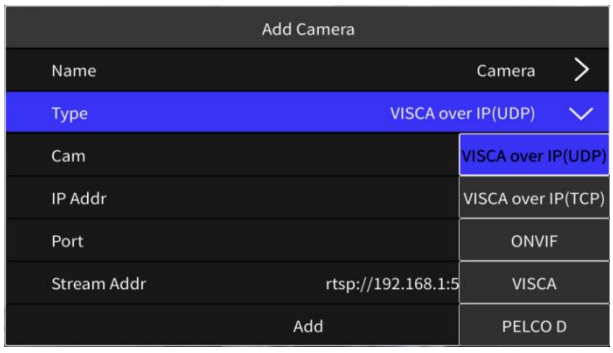
Tips:

Go to page 30 to see how to preset the RTSP suffix for quick addition

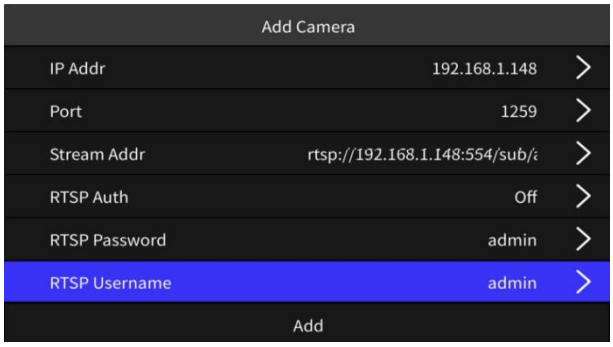
3.4 Add a VISCA Over IP Camera to ZowieKBD

Click ADD to add manually or click SETUP->Device Management->CAM List->Add to add manually.

Use the up, down and top button of the joystick to move the cursor and modify the parameters.



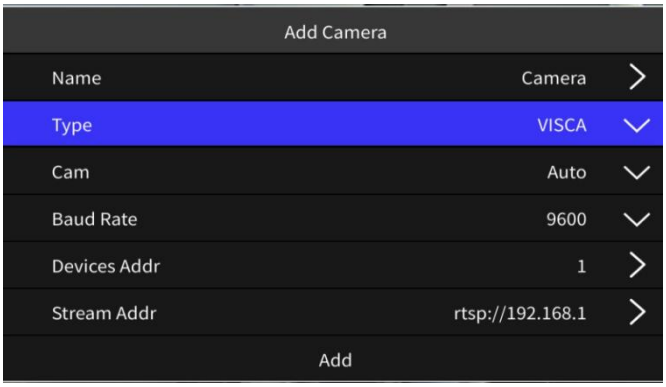
Select the type as VISCA over IP (UDP)/VISCA over IP (TCP), and the Cam number can be specified or automatically assigned in the order in which it is added.



Enter the IP address and UDP/TCP port number of the camera to be controlled (ZowiePTZ default port TCP: 5230; UDP: 1259)
Enter the correct RTSP address and RTSP authentication for preview.

3.5 Add a Serial Port Protocol Camera to ZowieKBD

Click ADD to add manually or click SETUP->Device Management->CAM List->Add to add manually.
Use the up, down and top button of the joystick to move the cursor and modify the parameters.
Select the protocol as VISCA/PELCO D/P and enter the correct baud rate and protocol address. (The default baud rate of ZowiePTZ is 9600, and the default address is VISCA: 1, PELCO D: 1, PELCO: 0)
Cam numbers can be specified or automatically assigned in the order they are added.



If the camera supports RTSP streaming, please enter the camera's RTSP URL and RTSP authentication and click Add.

3.6 Modify the Added camera

If you need to modify the added camera, please click INQUIRY to view the added camera list, or click SETUP-> Device Management->CAM List to view the added camera.

Use the up, down, and top button of the joystick to move the cursor and select the camera to

be modified.

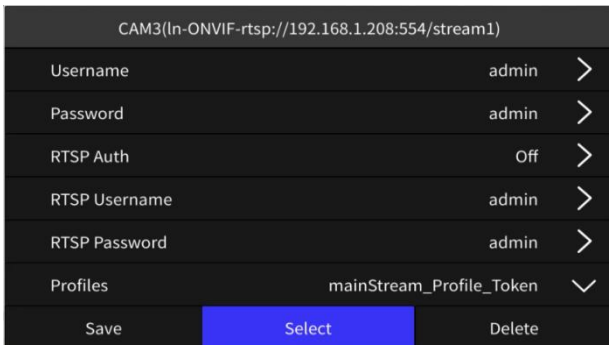
Use the left, right, and top button of the joystick to operate Add Group/Edit/Add/Delete below.

For NDI Camera:

Only the parameters of manually added NDI cameras can be modified. For NDI cameras added by automatic search, only the camera name can be modified.

For ONVIF cameras:

After adding the camera, you can enter the camera modification page to modify the default configuration of the ONVIF camera to determine whether the ZowieKBD preview is a sub-stream or a main stream.



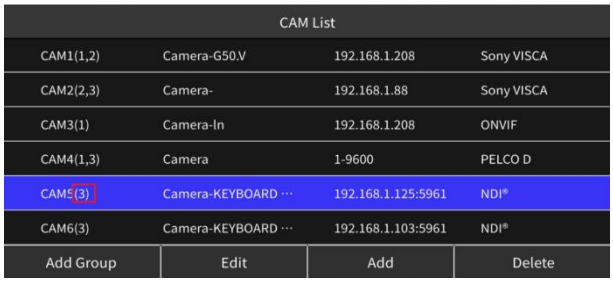
3.7 Add/Modify Groups

Method 1:

Click INQUIRY or SETUP ->Device Management →CAM List to enter the list of added cameras.

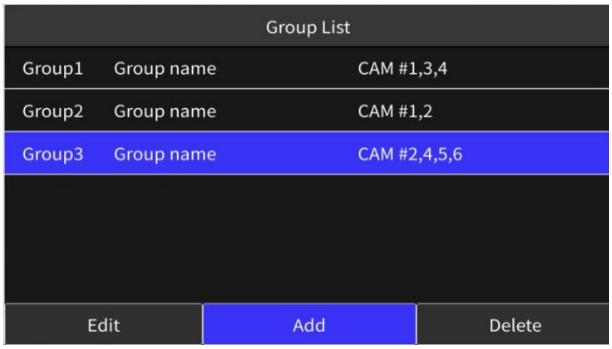
Use the up, down and top button of the joystick to move the cursor and select the camera to be added to the group, and use the left, right and top button of the joystick to select the Add Group operation below.

After adding, the camera name will be followed by the group number.

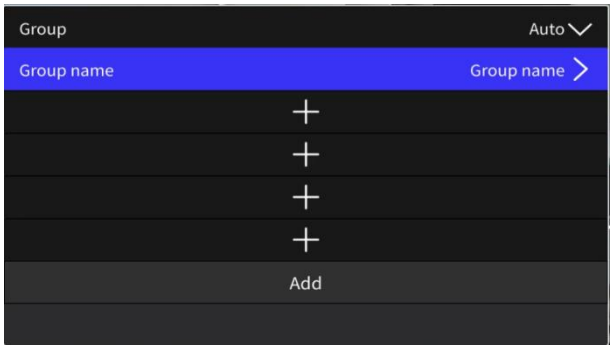


Method 2:

Click SETUP ->Device Management->Group List->Add and select Add a New Group, or long press MULTI CAM to Add a new group.



Entering a name for the group, click the "+" below to add a camera.



Tips:

Adding a group, please confirm the resolution of the cameras in the group. The four-grid preview can be performed only when the preview resolutions of the cameras are consistent. Otherwise, the cameras with mismatched resolutions cannot be previewed.

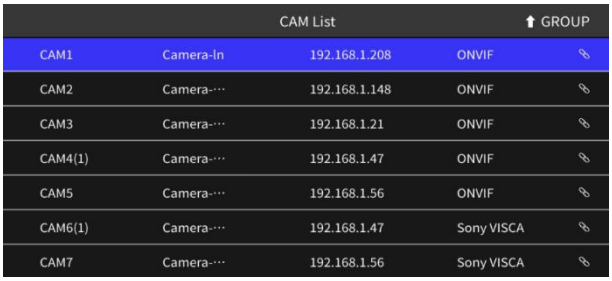
3.8 Switch Active Camera/Group

When switching cameras, please stay in the window preview interface instead of the settings interface

Switch active camera

Method 1:

Press SELECT P/T SPEED to enter the quick camera list, rotate SELECT P/T SPEED and move the cursor.



Select the desired camera and press the P/T SPEED key 

to switch camera.

Method 2:

Use the alphanumeric Keyboard + 

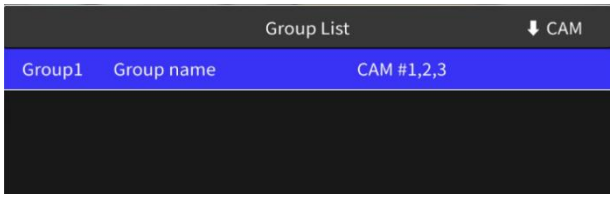
to switch cameras.

Switch active group

Method 1:

Press 

and turn the knob clockwise to enter the quick group list.
When the cursor is on the first camera, continue to move upward to switch to the group quick switch list.



Method 2:

Use the alphanumeric Keyboard + 

to switch groups.

Tips:

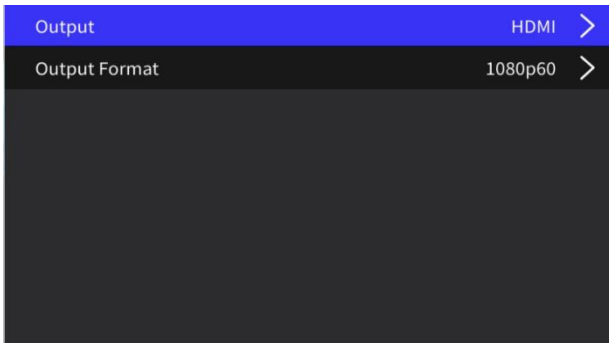
1. When the keyboard is in a single grid and you select to switch a group, the ZowieKBD will automatically switch to a four-grid display.
2. When the keyboard is in a four-square grid and you choose to switch cameras, the keyboard will automatically replace the camera in the current window.
3. When the camera currently displayed in the four-grid is changed, the changed information will be saved in the group information.
4. Please make sure that the camera/group number you entered exists, as ZowieKBD cannot switch to an unadded camera/group.

3.9 Single/Four-grid/HDMI output switch

Use  to switch ZowieKBD to single-grid display, and use  to switch ZowieKBD to four-grid display.

Use ◯ to switch ZowieKBD to HDMI priority display, the button will light up when the device is HDMI priority.

Or click SETUP ->System Settings->Output Settings to switch output options and HDMI output resolution.



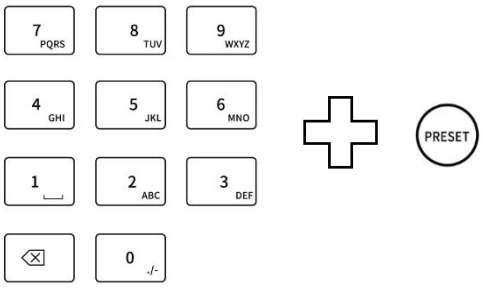
When the device is in the four-grid mode, press and hold the top button on the joystick and move the joystick to switch the current control window.
Or press and hold the P/T SPEDD knob and rotate it to switch the current control window.

Or use the 1~4 alphanumeric keypad + ⊞ to switch the current control window.

3.10 Setting/Calling presets

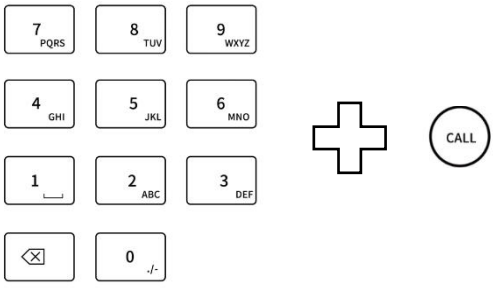
Set presets

After moving the camera to the desired position, use the alphanumeric keyboard+ PRESET to set the presets.



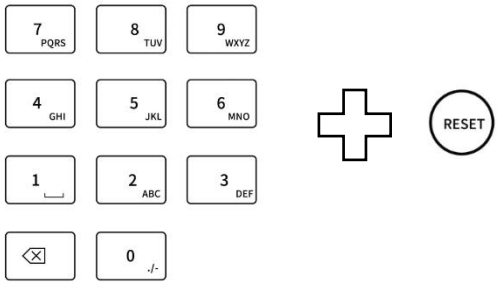
Call presets

Use alphanumeric keyboard+ CALL to call presets.



Reset presets

Use alphanumeric



keyboard+ RESET to delete presets.

Tips:

1. The preset position can support up to 0-255. If the number exceeds this, the input/call will fail.
2. The NDI protocol does not support deleting presets.

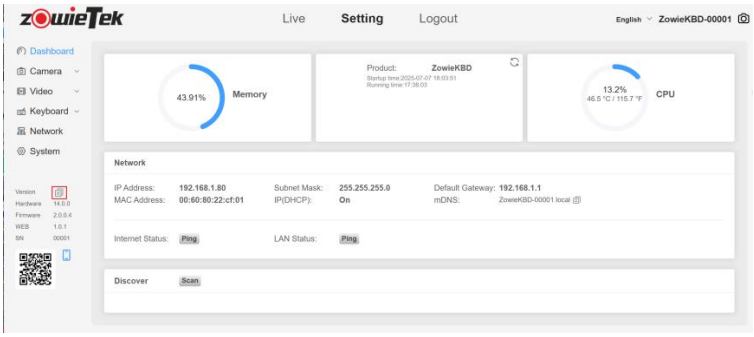
4. Keyboard Advanced Configuration

4.1 NDI Active

Click SETUP -> Protocol Settings-> NDI to check whether NDI needs to be activated. The following shows that NDI is not activated.

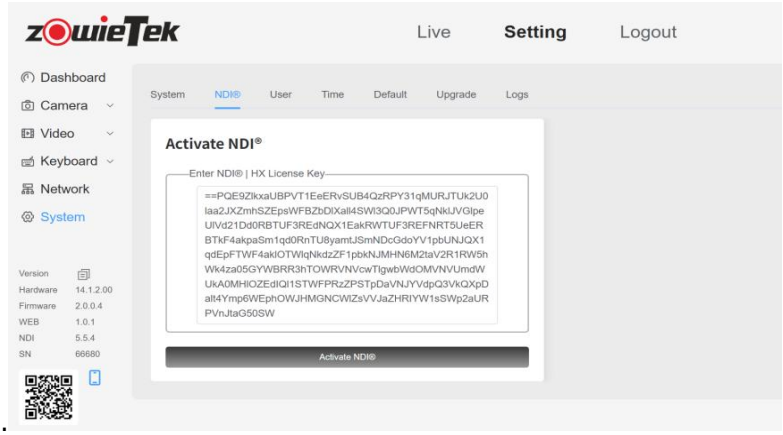
1. Enter https://zowietek.com/store and purchase the NDI activation code.
2. Please connect ZowieKBD to the network and click the ZOOM SPEED button in the window preview interface to view the current IP of ZowieKBD.

Log in to ZowieKBD web interface, click the copy button, and copy the keyboard's SN, Hardware, Chip ID and other information.



Please send the purchase information and device information to the email address displayed after the purchase is successful.

After obtaining the activation code, log in to the ZowieKBD website, click Setting->System->NDI, click the Activate NDI button and restart ZowieKBD.

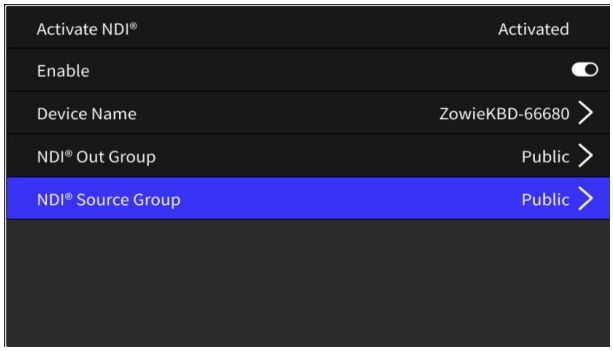


4.2 NDI Source/Out Settings

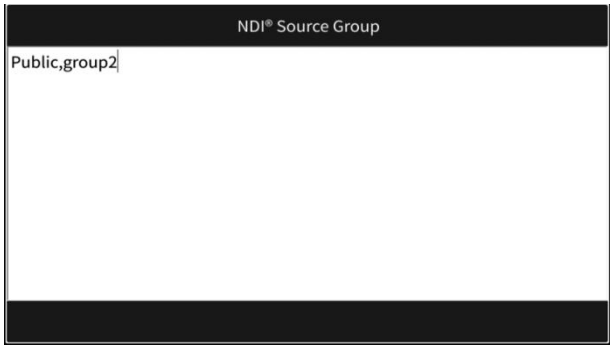
ZowieKBD can receive NDI signal sources of NDI HX1/HX2/HX3, and convert the received NDI/RTSP stream into NDI signal and send it out.

NDI Source Settings

Click SETUP->Protocol Settings->NDI to view the received NDI group information. The default group is Public.



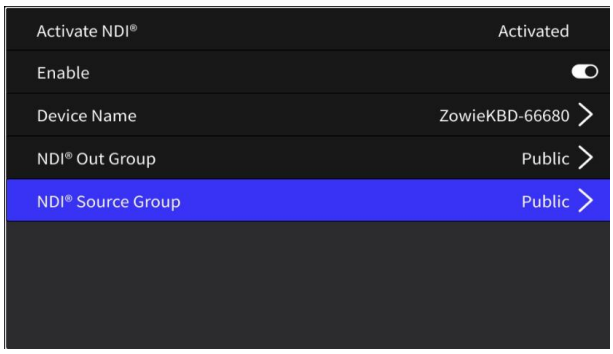
If you need to add or modify group information, click the top button of the joystick or the P/T SPEED knob to enter the modification. Use "," to separate different groups.



NDI Out Settings

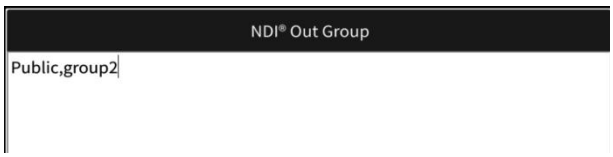
Click SETUP->Protocol Settings->NDI to change parameters.

After modifying all NDI output related settings, please restart the keyboard.



Turn on the NDI Enable button for NDI output, and the NDI name of the keyboard will be determined by the Device Name.

If you need to add or modify the information of the output group, click the button on the top of the joystick or the P/T SPEED knob to enter the modification, and use "," to separate different groups.

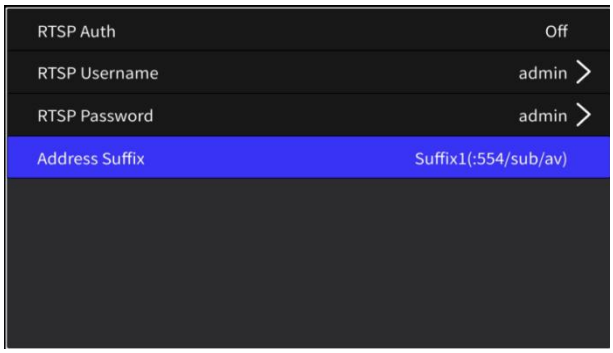


Tips:

ZowieKBD does not support Full NDI and NDI HB video preview.

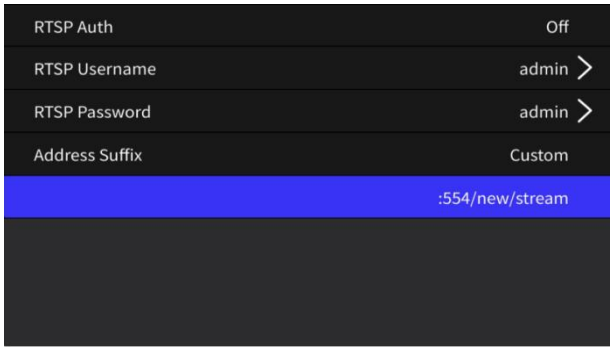
4.3 RTSP Endpoint Preset/Authentication

For Sony VISCA, VISCA over IP, VISCA, Pelco -D/P, if you need to preview the video, you need to manually enter the RTSP URL and authentication information. Users can preset the *RTSP suffix and authentication information for easy addition.*

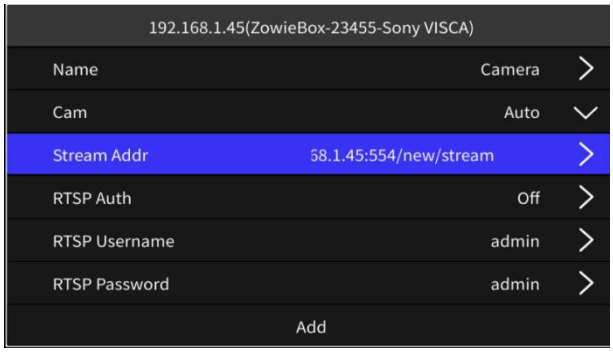


Click SETUP-> Protocol Settings->RTSP to set whether to enable RTSP authentication for the cameras added later, as well as the username and password.

Click Address Suffix to select the suffix of the RTSP URL. Use the left and right buttons of the joystick or the P/T SPEED knob to switch the preset RTSP suffix. If the preset URL does not meet the requirements, switch to the Custom option for custom input.



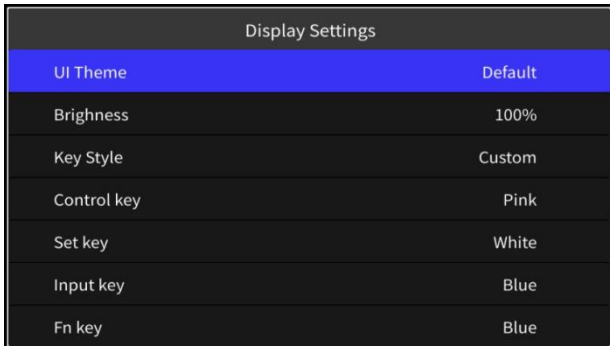
After the settings are completed, the next camera added will use the RTSP suffix.



4.4 Button Light/Color

The ZowieKBD' s light brightness, light color, and LCD style can be customized.

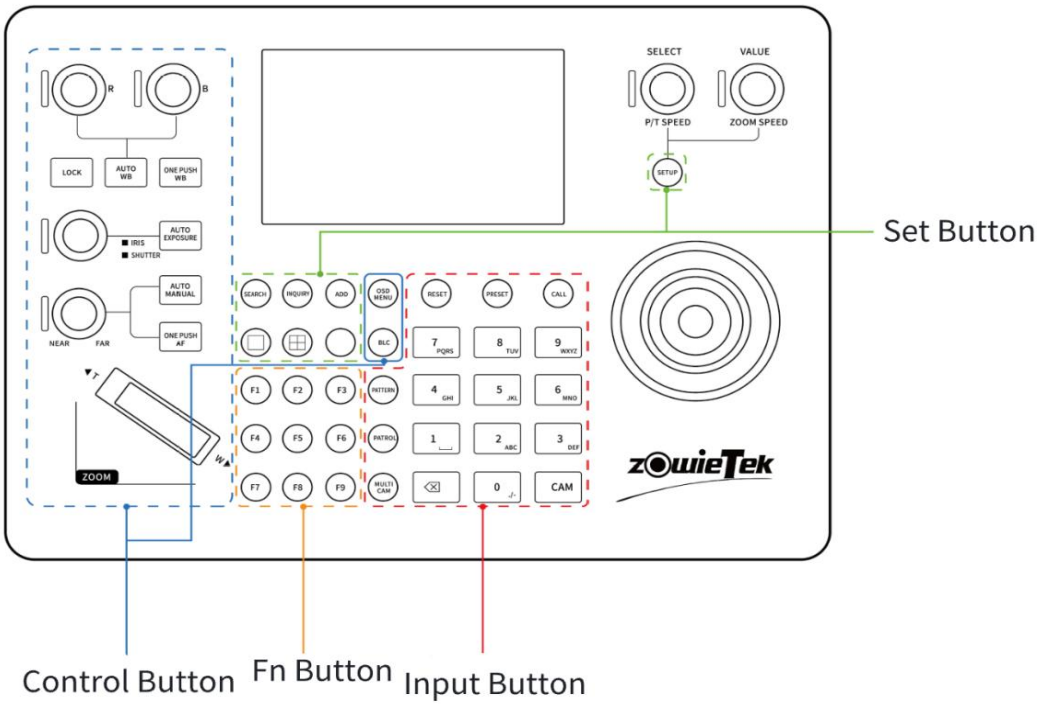
Click SETUP->System Settings->Display Settings to make settings.



The UI Theme can be changed to Dark Mode to reduce the brightness for use in dark environments.

Modify the Brightness percentage to reduce the brightness of the ZowieKBD buttons.

Modify Key Style to customize your favorite light color. White, cyan, green, red, blue, pink, yellow or turn off the light is available.



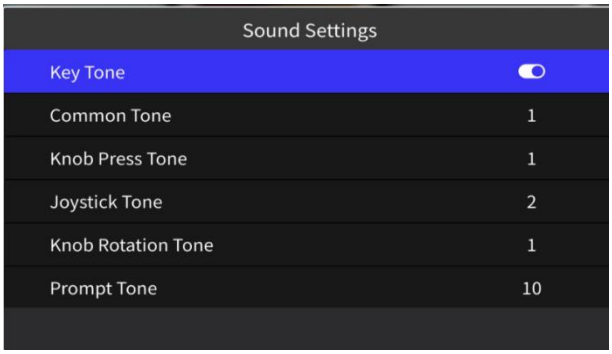
You can also change key style to modify the light color.

Style	Control Key	Set Key	Input Key	Fn Key
Custom	Pink	White	Blue	Blue
Brightness	White	White	White	White
Mystical	Pink	Blue	White	White
Nature	Yellow	Cyan	Green	Green
Conspicuous	Red	White	Pink	Pink

4.5 Button Sounds

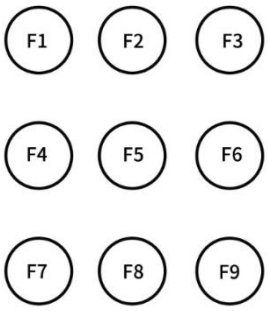
ZowieKBD will give the user feedback through sound when button is pressed or the cursor is moved to the border.

Click SETUP ->System Settings->Display Settings to set the tone of ZowieKBD.



Common Tone: Button press sound.
Knob Press Tone: The sound of the knob being pressed.
Joystick Tone: The sound of pressing the top button of the joystick.
Knob Rotation Tone: The sound of knob rotation.
Prompt Tone: Prompt sound when the cursor reaches the border.

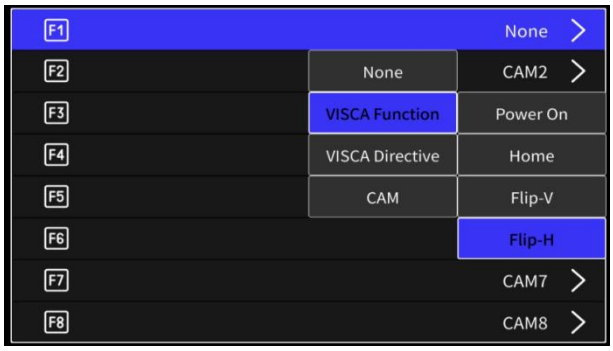
4.6 Function Key Assignment



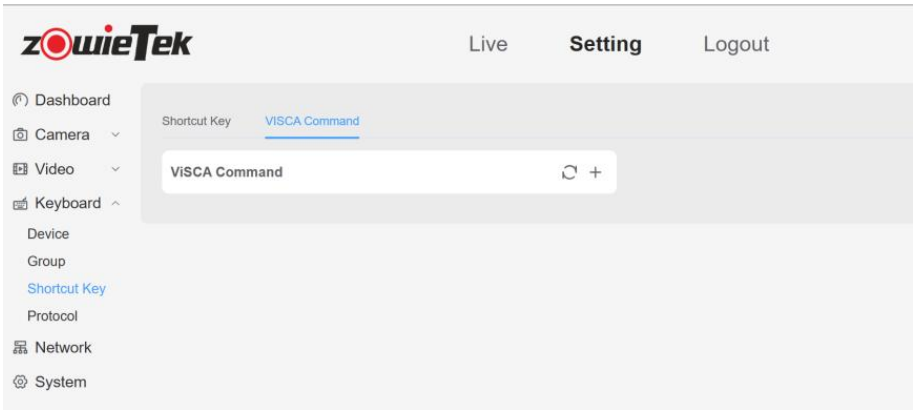
ZowieKBD supports 9 custom function buttons for quick function switching.

F1-F9 will switch to Cam1-Cam9 by default.

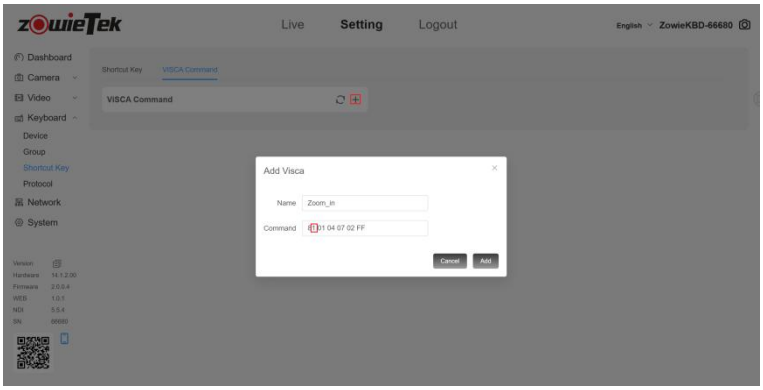
If you need to modify the function of FN button, please click SETUP->Shortcut Key Setting.



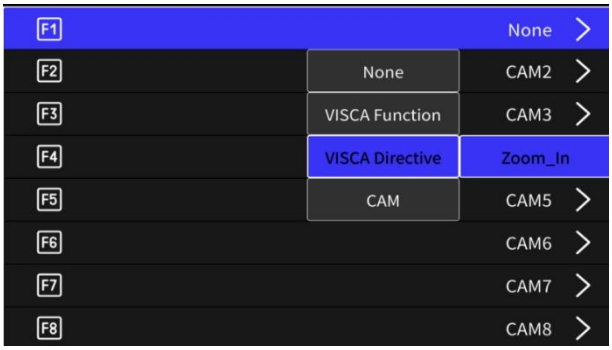
1. Select CAM to quickly switch to the specified camera
2. Select VISCA Function to call basic VISCA functions (power off, power on, return to home position, horizontal flip, vertical flip)
3. If you need to use other VISCA functions, please log in to the ZowieKBD' s web, click Setting->Keyboard->Shortcut Key->VISCA Command to manually add VISCA commands.



4. Click "+" and enter a custom name and command.
   The second digit of the VISCA command is the VISCA address of the camera, VISCA command cannot be called correctly if it is wrong.



After adding command, select the added command as a shortcut function in VISCA Directive.



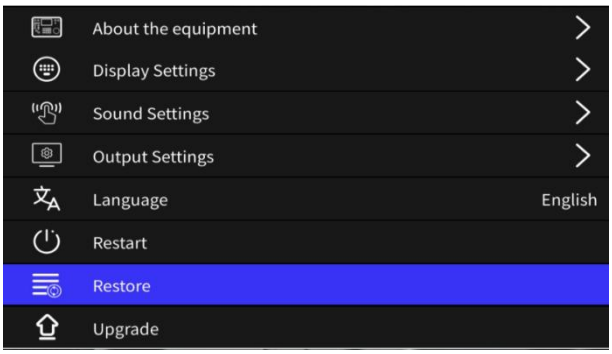
Tips:

The VISCA Function and VISCA Directive functions are only effective for Sony VISCA, serial VISCA, and VISCA Over IP cameras.

4.7 Factory Reset Options

Click SETUP->System Settings and choose to restart ZowieKBD or restore it to factory settings.

If you restore the device to factory settings, all group and camera information will be lost.



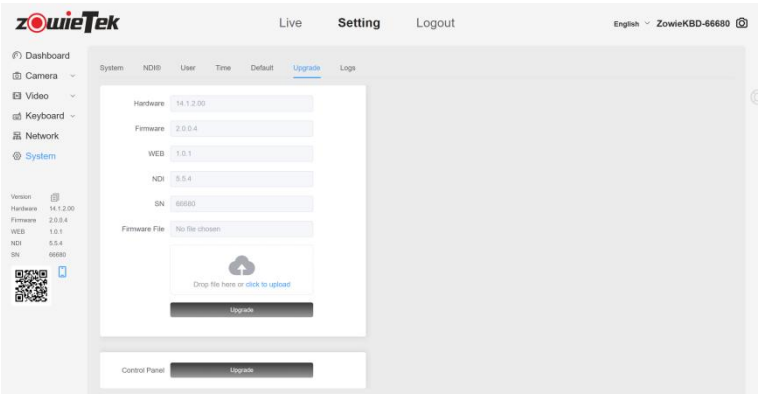
4.8 Upgrade

ZowieKBD supports upgrading via web page, SD card or USB flash drive.

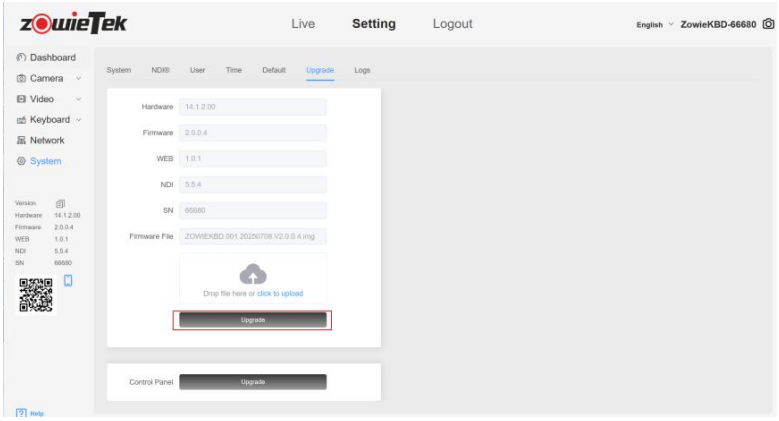
Method 1: Upgrade using the web page

1. Please go to the official website to download the latest keyboard firmware https://zowietek.com/documents/
2. Please click the ZOOM SPEED knob in the single-grid/four-grid interface 

to check the IP address of ZowieKBD.
3. Enter the IP address into the browser and log in (the default username and password are both admin), then click Setting->System->Upgrade



4. Click Upload File, select the previously downloaded firmware and upload it directly. Do not unzip the firmware. The firmware name starts with ZOWIEKBD.001.
5. After uploading, please click the Upgrade button to upgrade.

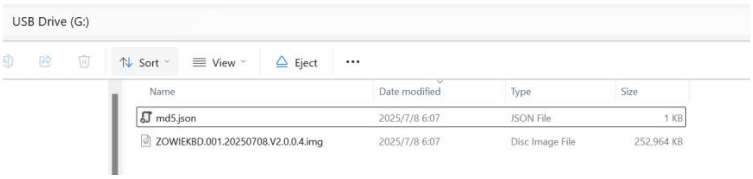


Method 2: Use USB/TF card to upgrade

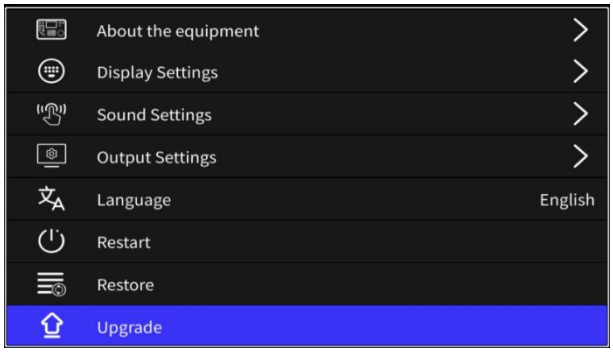
ZowieKBD can be upgraded using a USB flash drive or TF card in Fat32/ exFAT format. It is recommended to use a high-speed USB flash drive/TF card to ensure file read and write speeds.

1. Please download the latest ZowieKBD firmware from the official website https://zowietek.com/documents/

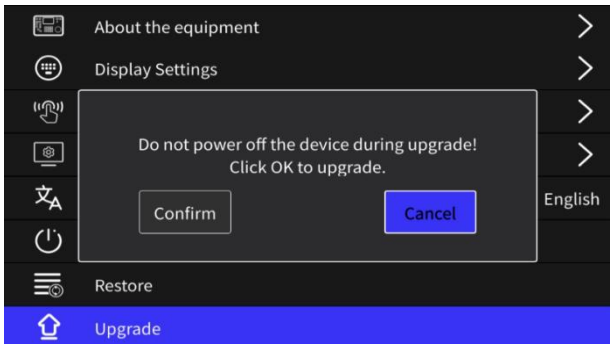
2. Please unzip the downloaded firmware and copy the unzipped files to the root directory of the USB drive/TF card. If it is not the root directory, ZowieKBD will not be able to detect the upgrade file.



1 . Eject the USB drive or TF card and insert it into ZowieKBD, then click SETUP->System Settings->Upgrade to upgrade.



2 . After clicking Confirm, the device will automatically upgrade. During the upgrade process, please do not disconnect the power supply of ZowieKBD or unplug the USB drive, otherwise the upgrade may fail and the device may not be able to start.



4.9 Tally - GPI I/O

Tally only supports communication with cameras controlled by Sony VISCA, VISCA serial, and VISCA over IP (UDP/TCP) protocols.

The Tally pins are defined as follows:

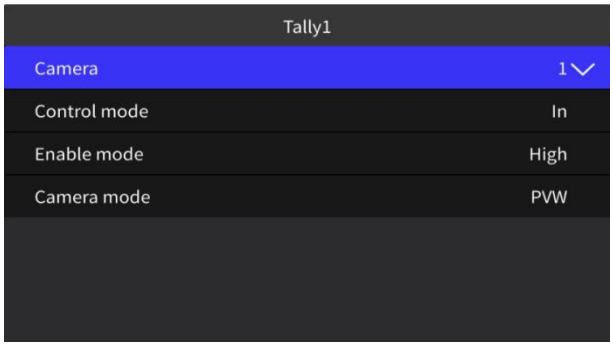
Pin	Function
	
1	Tally 1
2	Tally 2
3	Tally 3

4	Tally 4
5	Tally 5
6	Tally 6
7	Tally 7
8	GND
9	GND

Click SETUP->Tally Settings to set the input/output of the tally light.

Tally light input mode:

1. Select the camera number you want to control.
2. Change the control mode to input mode.
3. Choose to receive high level or low level signal from tally interface.
4. Select to send Preview (PVW green) or Program (PGM red) mode to the camera when receiving a high/low level signal.



As shown in the figure: When the Tally light pin 1 receives a high level signal and Camera 1 is the currently controlled camera, a signal will be sent to Camera 1 to change the Tally light of Camera 1 to PVW (green) mode, otherwise the Tally light of Camera 1 will remain off.

Tally light output mode:

1. Select the camera number that needs to receive the Tally signal.
2. Change the control mode to output mode.
3. Select to output high level or low level signal.
4. Select to send high/low level signal to the tally interface after receiving Preview (PVW green) or Program (PGM red) from the camera.

As shown in the figure: when Camera1 is the currently controlled camera and the camera's Tally light changes to PGM (red), a low level signal will be output from pin 1 of the Tally interface.

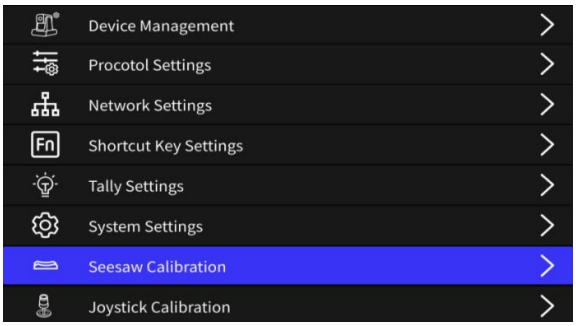
Tips:

1. In input mode, if the controlled camera is not VISCA protocol, the window will display the corresponding Tally color, but it cannot be sent to the camera.
2. In input mode, the Tally interface defaults to low level

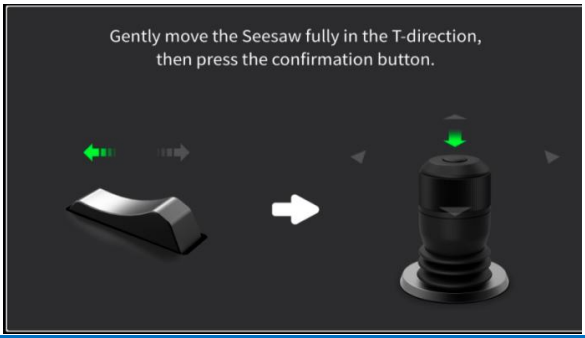
4.10 Seesaw/Joystick Calibration

If the joystick or seesaw key does not respond, responds sporadically, or responds incorrectly, it is recommended to recalibrate the joystick and seesaw key.

Click SETUP to select the seesaw or joystick calibration.



After starting the calibration, please follow the steps on the screen to calibrate step by step. If the calibration fails, you cannot proceed to the next step. If you need to exit, please click SETUP to exit calibration.



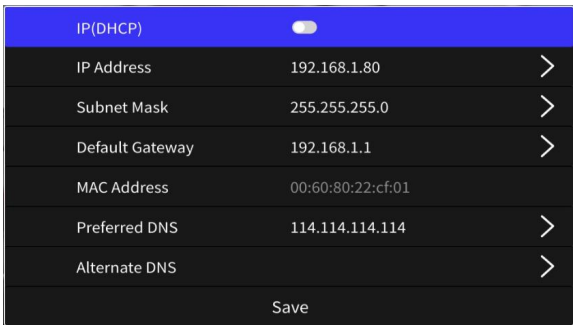
4.11 ZowieKBD Info

Click SETUP ->System Settings->About the equipment to view the hardware version, firmware version, software version, serial number and other information of ZowieKBD.

4.12 Network Setting

ZowieKBD is in DHCP mode by default. When ZowieKBD is connected to a network with DHCP, it can automatically obtain an IP.

If you need to manually modify the IP address of ZowieKBD, please click SETUP->Network Settings.



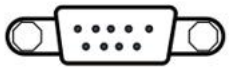
After disabling the DHCP function, manually enter the IP address, subnet mask, default gateway, and DNS.

The input IP address format must meet IPv4 constraints, otherwise, it cannot be saved.

After the modification is completed, please click Save and ZowieKBD will restart automatically.

5.RS232 Connection

Pin Definition：

		
1	DCD	Carrier Detect
2	RXD	Receive Data
3	TXD	Transmit Data
4	DTR	Data Terminal Ready
5	GND	System Ground
6	DSR	Data Set Ready
7	RTS	Request to Send
8	CTS	Clear to Send
9	RI	Ring Indicator

Connection method:

Please connect the second pin (RXD) of ZowieKBD to the TXD input of the camera, the third pin (TXD) of ZowieKBD to the RXD input of the camera, and the fifth pin GND to the GND of the camera.

Or please use the RS232 cable that comes with ZowieKBD to connect directly to the RS232 input port of the camera.

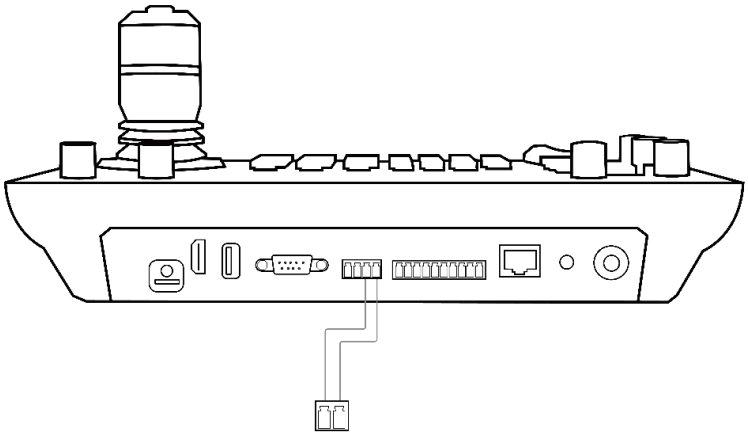
Keyboard Configuration:

Please go directly to the page 21 to see how to add a serial protocol camera.

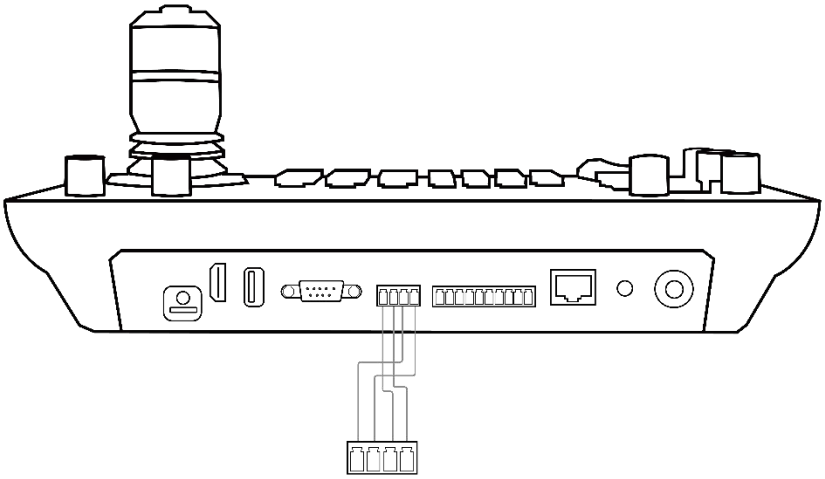
6.RS485/422 Connection

Connection method 1:

Please connect ZowieKBD' s TX+ to the camera's RS485+, and connect ZowieKBD' s TX- to the camera's RS485-



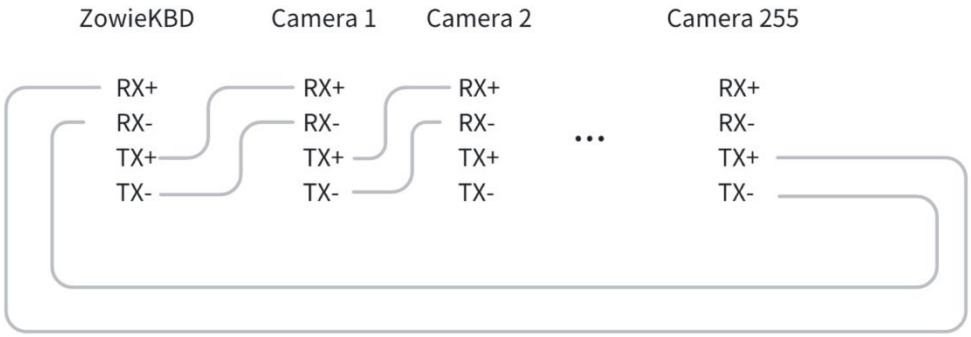
Connection method 2:

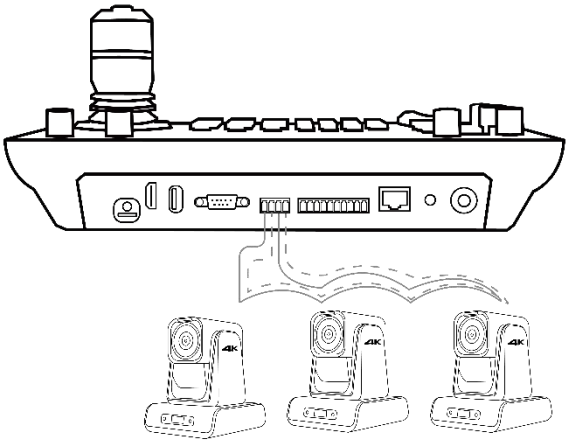


Please connect ZowieKBD' s TX+ to the camera's RX+, connect ZowieKBD' s TX- to the camera's RX-, connect ZowieKBD' s RX+ to the camera's TX+, connect ZowieKBD' s RX- to the camera's TX-

Cascade connection:

Please connect ZowieKBD' s TX+ to the camera's RX+, and connect ZowieKBD' s TX- to the camera's RX-; connect the previous camera's TX+ to the next camera's RX+, and connect the previous camera's TX- to the next camera's RX-; connect the last camera's TX+ to ZowieKBD' s RX+, and connect the last camera's TX- to ZowieKBD' s RX-





Keyboard Configuration:

Please go directly to page 21 to see how to add a serial protocol camera.