

CVI5000

User Manual



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1.0 General Information

Congratulations on your purchase of an IP Keyboard / Video Matrix system!

Please be sure to carefully review the User manual for your product before starting the installation process.

1.1 About This Document

This document contains information on how to install and use the CVI5000 IP Keyboard. Please read this manual carefully prior to installation to prevent any accidental damage or misuse. This manual is also available from the Costar Video Systems website at [http://www.costarvideo.com/Products/VideoMatrix Solutions](http://www.costarvideo.com/Products/VideoMatrixSolutions).

The information in this manual is subject to change without notice. Please refer to the above website for the latest information

Note: All graphics contained within this document, including images and other displays, are for reference use only and are subject to change.

1.2 Copyright/Intellectual Property Rights Statement

Copyright © 2015, 2016, 2017, 2018, 2019 Costar Video Systems LLC. has intellectual property rights to technology embodied in the product described in this manual.

1.3 FCC Compliance

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy, and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Changes or modifications to this device void the warranty.

1.4 Support Services

Please contact Costar Video Systems Technical Support Department for assistance at (469)-635-6800 option 3.

2.0 Returns

2.1 Instructions

This item was thoroughly tested and carefully packed at the factory prior to shipping. Upon acceptance by the carrier, the carrier assumes responsibility for the item's safe arrival. If you receive the item in a damaged condition, apparent or concealed, a claim for damage must be made to the carrier.

If a visual inspection shows damage upon receipt of this shipment, it must be noted on the freight bill or express receipt and the notation signed by the carrier's agent. Failure to do this can result in the carrier refusing to honor the claim.

When the damage is not apparent until the unit is unpacked, a claim for concealed damage must be made. Make a mail or phone request to the carrier for inspection immediately upon discovery of the concealed damage. Keep all cartons and packing materials.

To return the product to the factory for service, please contact the Customer Service Department for a Return Material Authorization (RMA) Number.

Prominently display the RMA number on the outside of the shipping container(s) and on paperwork contained inside. Give a brief description of why the equipment is being returned and list the symptoms of any problems being experienced with the equipment.

If you have any issues, please refer to section ["Support Services" on page 5](#) for assistance.

2.2 Shipment

Important: If the IP Keyboard needs to be shipped, please use the original packaging material which was designed to protect the product during transportation. If the original packaging is lost or damaged, please order a replacement from Customer Service.

3.0 Safety

3.1 Instructions

Warning: Do not remove the covers or disassemble the housing. There are no user-serviceable parts inside.

Warning: Do not use y-cables or other non-standard wiring schemes.

Caution:

- Do not use or install this equipment in an outdoor environment.
 - Do not expose this keyboard to liquids or high humidity environments.
 - Do not drop any heavy foreign objects on the LCD screen or the keyboard keys
 - Avoid exposure to flammable or explosive vapor environments
 - Avoid risk of fire or electric shock by using only approved power supplies
-

- Installation must be done by qualified installers and conform to all local codes and regulations.
- All servicing must be performed by qualified service personnel. Procedures in this manual do not require entry into the housing of the keyboard. The unit contains sensitive devices that can be damaged by static discharge. To reduce the risk of electric shock and damage to the unit by static discharge do not perform any servicing other than described in these instructions. If the unit is defective, please contact the Customer Service Department for technical assistance.
- It is the user's responsibility to ensure that the mounting methods are safe and adequate for the intended location.

3.2 Grounding

To provide protection against electrical surges induced by lightning, static charges, or any other cause, the IP Keyboard and cabling system must be properly protected by a surge protection circuit.

Failures due to surges are not covered by the warranty, as they are not due to defects in material or workmanship, and it is the installer's responsibility to meet these surge protection requirements.

Refer to "[Best Practices](#)" on page 15 Surge Protection Devices for additional information on grounding and surge protection concepts.

4.1 Package Contents

Upon opening of the products shipping package, please verify you have received the following items:

1. CVI5000 keyboard
2. 3ft CAT5 Cable with RJ45 Connectors
3. 12VDC Power Supply +US AC plug
4. User Manual

If you are missing any items, please refer to section "[Support Services](#)" on page 5 for assistance.

5.1 Product Overview



1. Shuttle: used to control optional NVR recorder
2. LCD Screen: display any registered camera
3. Keyboard Keys: direct entry to display or control functions of cameras
4. Indicator: Network connection activity LED
5. Joystick: 4D (3 axis + button) control of positioners or zoom cameras

5.2 Rear Panel Connections



- NET : Network port
- RS232/422 : reserved
- AUO IN/OUT : reserved
- HDMI : video output port
- USB : USB2.0 port
- POWER : 12VDC, 2A

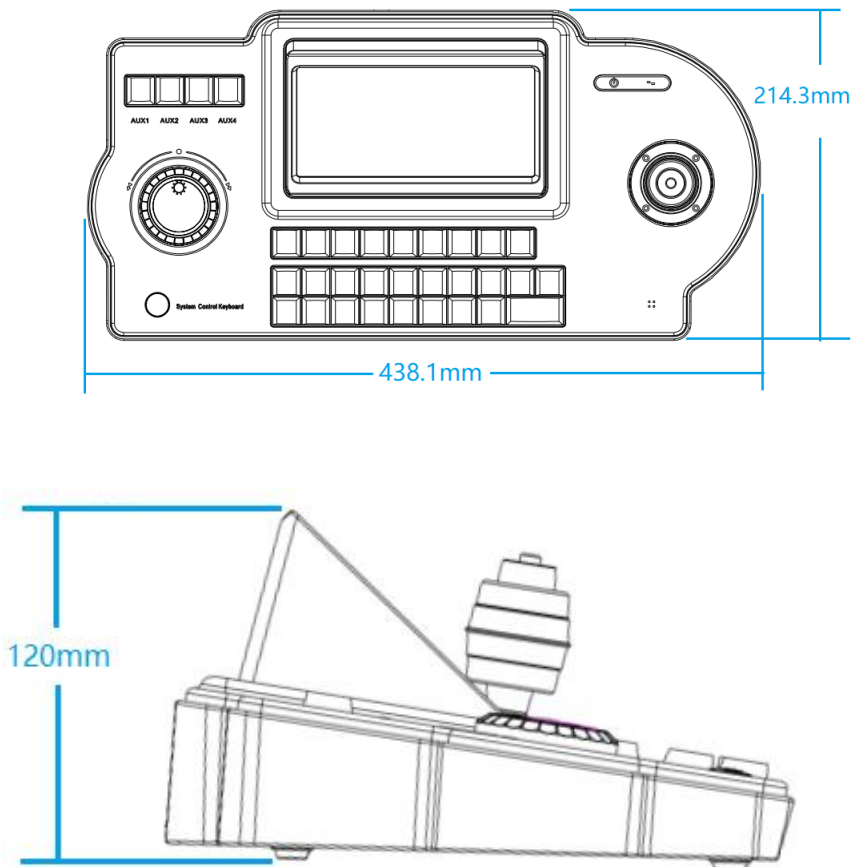
5.3 Product Description

The CVI5000 is a new generation of IP Keyboard. Used in control center environment it can display registered IP cameras on the onboard LCD screen or to a connected external monitor. Using the Joystick the operator can control various types of PTZ or high speed dome devices or if supplied optional NVR recorder connected to the same network.

The keyboard has a novel look and feel, with a 7-inch LCD screen support for image preview; The HDMI output allows for connection to an external monitor for added viewing capability. The keyboard features a 100 / 1000M adaptive Ethernet port connecting to LAN communications equipment achieving image switching, window Switching, splitting, splicing, macro switching and other functions; it is also equipped with a four-dimensional joystick for PTZ control and image capture functions.

The supplied Graphic User Interface (GUI) is easy to operate.

5.4 Product Dimensions



5.5 Technical Specifications

- 7-inch LCD screen design, support 1024 * 600 resolution output
- 1 HDMI output, up to support 3840 * 2160 resolution output
- 7-inch LCD Simultaneous display of the image of the controlled device currently controlled window, support H265, H264, MPEG4
- HDMI output display consistent with the LCD screen
- Support PTZ control, preset setting and calling
- support capture pictures to a local USB disk or upload to FTP server
- Support controlled device audio switch
- Support 256 users, including 1 administrator user
- Administrators can manage 255 devices and operator users can control 255 devices
- Support IE remote upgrade and maintenance

5.6 Key designation

| Button | Function description |
|-------------------------|---|
| 0-9 | Numeric Value |
| MON | Select the screen number |
| WIN | Select the window number |
| CAM | Select the camera number |
| OPEN - CLOSE | Iris Lens Control |
| NEAR - FAR | Zoom Lens Control |
| MULT | Split function for selected window |
| FWD -BWD | Advance Forward or Backward on Camera List |
| CLEAR | Clear / log off the input data value, cancel the operation |
| LOCK | Lock / unlock keyboard |
| MENU | Invoke Keyboard UI interface |
| ENTER | Confirm the entry and enter the menu |
| PRESET | Go to Preset Position (PTZ Function) |
| SHOT | Call macro switch / window splicing/ call plan |
| EVENT | Arming / disarming |
| Joystick control | Control menu up / down / left / right, rocker top button to confirm the input, enter the menu, joystick left-back |

Note: Do not apply excessive force when manipulating the joystick

6.0 Factory Defaults

6.1 Factory Default IP Address and Settings

The camera is shipped with the following network settings:

- | IP Address: 192.168.6.254
- | Subnet mask: 255.255.255.0
- | Gateway: 192.168.6.1

6.2 Factory Default User Names and Passwords

The camera is shipped with the user names and passwords shown in the table.

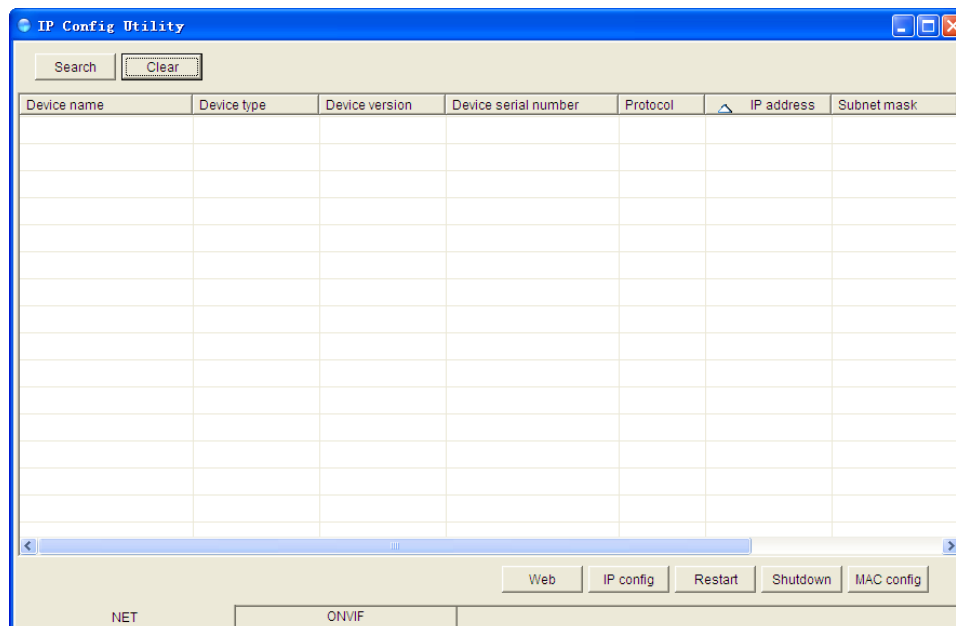
| Access Level | Username | Password |
|---------------|----------|----------|
| Administrator | admin | 12345 |

7.0 Operation

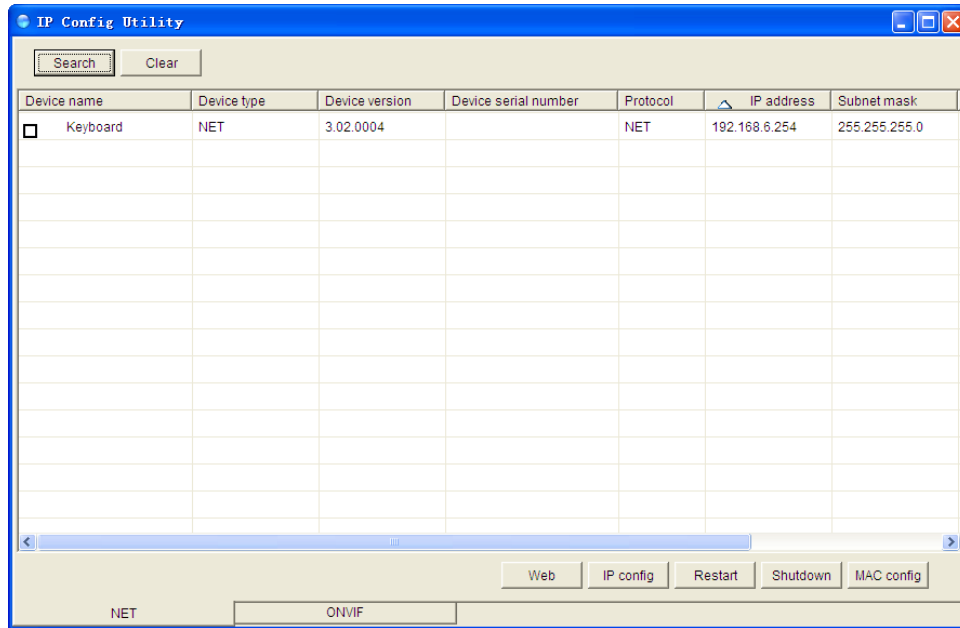
7.1 Network settings and IP assignment

After setting up the hardware environment, some network parameters of the keyboard need to be set. For the first time use of the IP keyboard, use the supplied IPConfig.exe program (also available in our www.costarvideo.com web site) to search for the keyboard's IP address, MAC address, subnet mask, gateway, parameters.

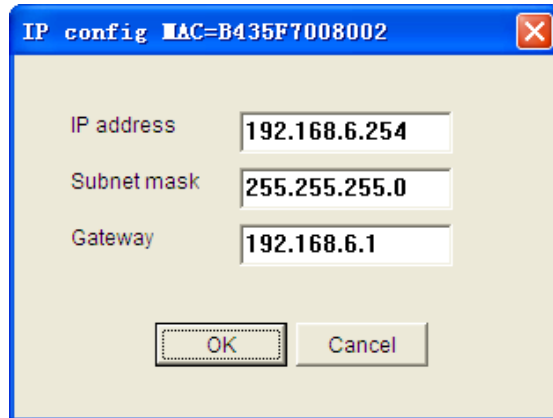
Use IP search tool "IpConfig.exe", as shown below:



On the "NET" tab, click the "Search" button to search for the IP address of all supported devices in the LAN, including the address of the keyboard, as shown in the following figure:

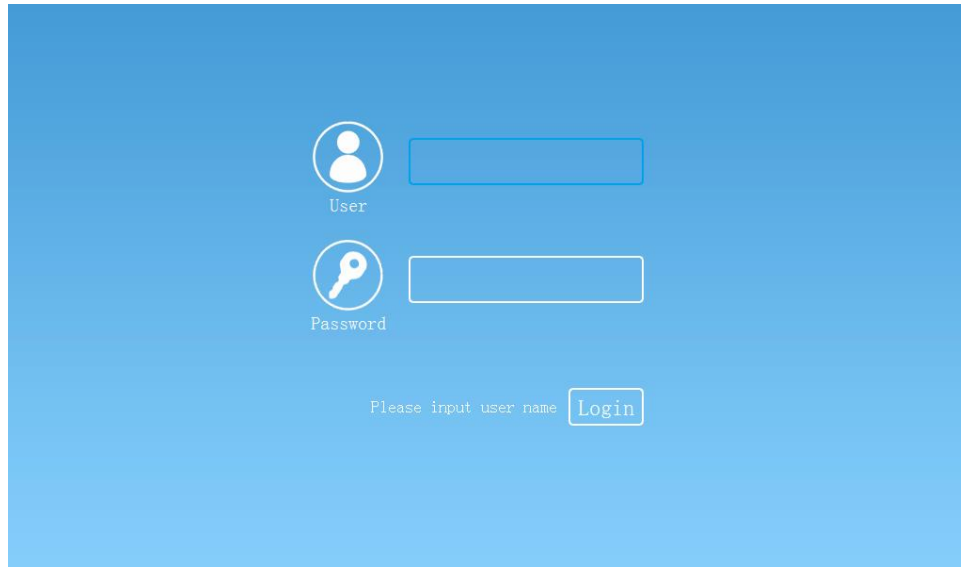


Click "IP Settings" to set the keyboard IP address, subnet mask and gateway. After setting the desired values for your network, click "OK" to save, as shown below:



7.2 Login and Exit

Power on the keyboard to display the user login screen on the LCD screen as shown below:



User login interface:

0 ~ 255; 0 is administrator user, you can view and modify the keyboard settings;

1 ~ 255 for the operator user, you can only view the keyboard settings

Login for the first time as user: 0 Password: 12345, you are now in the administrator interface, for setting up an additional operator user (required).

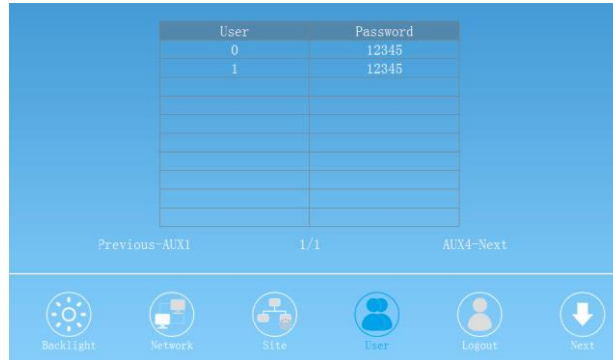
7.3 Keyboard settings

After logging in with user number 0, press "MENU" key to call up the keyboard setting interface, and using the joystick left and right movement to the desired selection tab to enter the corresponding operation interface, such as "User", "Network", "Site", "Backlight" and other tabs.

Use the joystick button to move to the upper side of the screen accessing different menus.

7.3.1 User

Select the "User" tab to enter the account management interface, the current user has been created, as shown below:



| User | Password |
|------|----------|
| 0 | 12345 |
| 1 | 12345 |
| | |
| | |
| | |
| | |
| | |

Previous-AUX1 1/1 AUX4-Next

Backlight Network Site **User** Logout Next

Users can be created, modified and deleted in the "User" Account Management interface.

255 operator users can be created, users and passwords only support numbers input, administrator user cannot be deleted, only the password can be changed.

Example of operation:

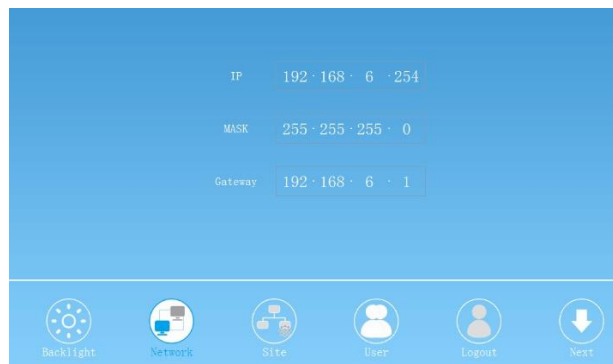
Create / modify users: user number 1, password 12345

Steps: Keyboard input 1+ ENTER, select "Create / Modify", enter the original password and new password, save it. If you create a user, the original password and the new password should be consistent.

Note: Select "Cancel" or press the "MENU" button or the joystick counterclockwise to exit the current interface. In this case, the tab is selected. The way to switch between tabs is the same.

7.3.2 Network

Select the "Network Parameters" tab to enter the network parameters interface, display the device network parameters, as shown below:



| | |
|---------|---------------------|
| IP | 192 · 168 · 6 · 254 |
| MASK | 255 · 255 · 255 · 0 |
| Gateway | 192 · 168 · 6 · 1 |

Backlight Network Site User Logout Next

View the current keyboard's IP address, subnet mask, and gateway.

Default IP address: 192.168.6.254

[Modify IP Address] In the network parameter interface, click "ENTER" key to modify the IP address, subnet mask and gateway address of the master keyboard. Input the number through the keyboard and click "Save".

7.3.3 Site

Select the "Site Settings" tab to enter the site settings interface, the current site has been created, as shown below:



You can view the field parameters that have been set to create field points, modify and delete created field points.

【Site NO】 1-255, the administrator user supports up to 255 site management;

【Type】 The type of control protocol can be set, denoted by the number N. Currently it supports 1-PENET and 2-NVR. PENET can control the matrix. The NVR can be customized according to the specific protocol. (Optional Customization required)

【Main Information】 IP address of the controlled device;

Site creation / modification example illustration:

Points: 2

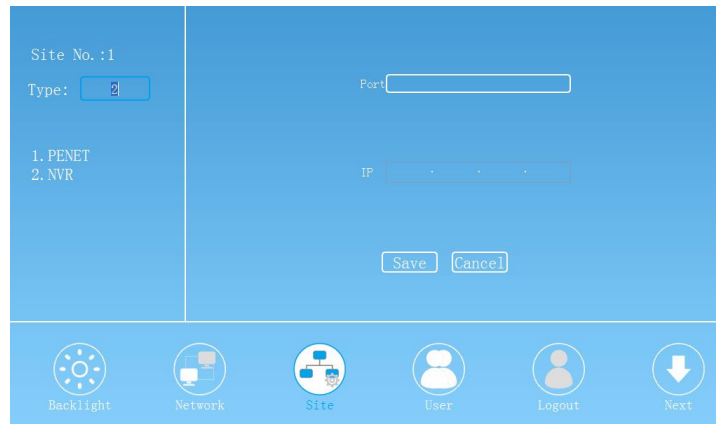
Proceed as follows:

Enter 2 + ENTER to enter "modify / create" interface, as shown below:



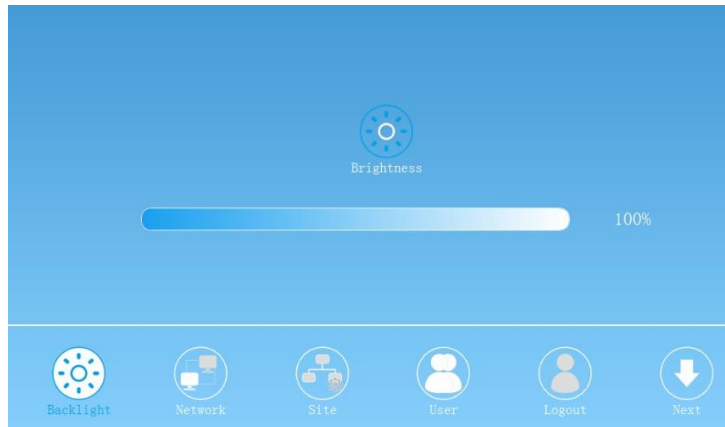
In this interface, you can select the type of control protocol. Select "1" control matrix. After selecting the type, press ENTER to enter the setting interface. You can set parameters such as "port", "IP address" and "command sending interval" of the matrix.

In type "2" you can configure "port", "IP address" of NVR and so on. As shown below:



7.3.4 Brightness

Select the "Brightness" tab, enter the LCD screen brightness adjustment interface, as shown below:



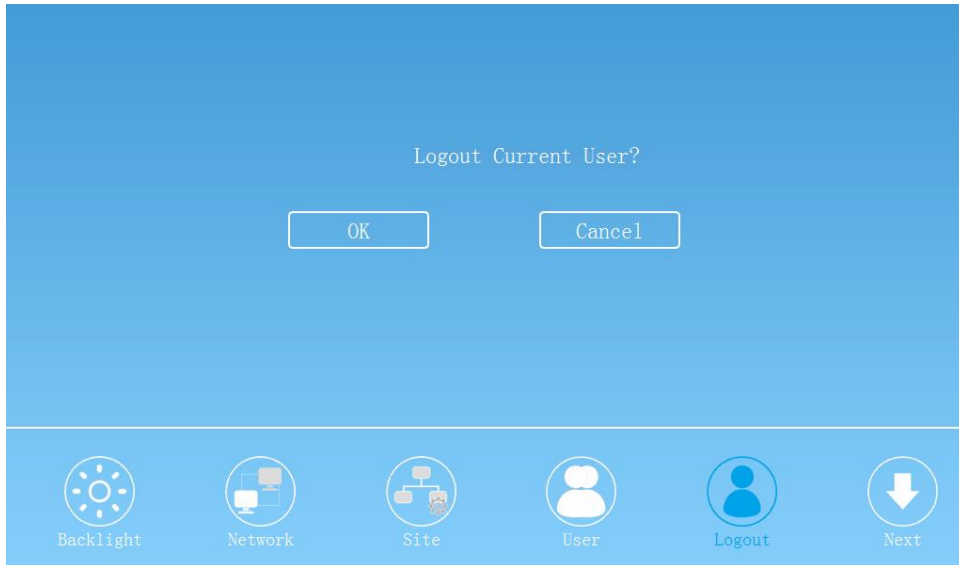
【Brightness】 to view the current brightness of the keyboard LCD, to adjust the brightness according to the surrounding environment

Operation: up / down key to brighten / dim.

Note: The brightness range 1-100%, the default 60%, when the brightness is adjusted to less than 20%, the LCD screen brightness is dark, brightness adjusted to 20% is recommended.

7.3.5 Logout

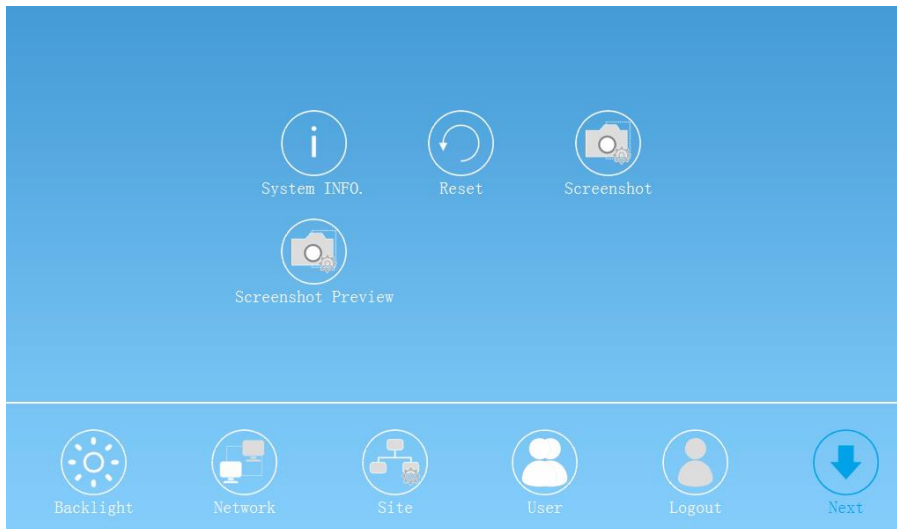
Select the "Logout" tab, enter the user logout interface, as shown below:



【Logout current user】 Click "Confirm" to logout the current user and return to the keyboard login page.

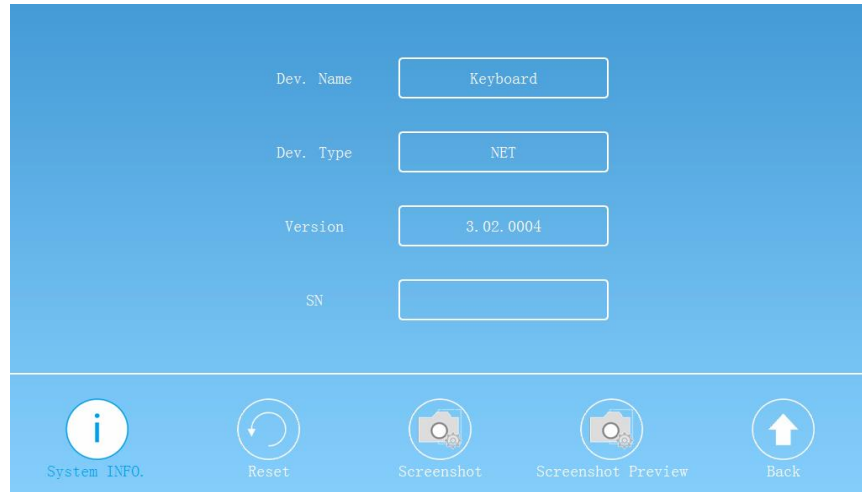
Note: After the administrator user configures the related parameters, it needs to logout before entering the operator user to operate the controlled device.

Check the "Next " tab to see the tabs on the next page, as shown below:



7.3.6 System INFO

Check the System Information tab to view the system information of the current keyboard, such as the device name, device type, and version information, as shown in the following figure:



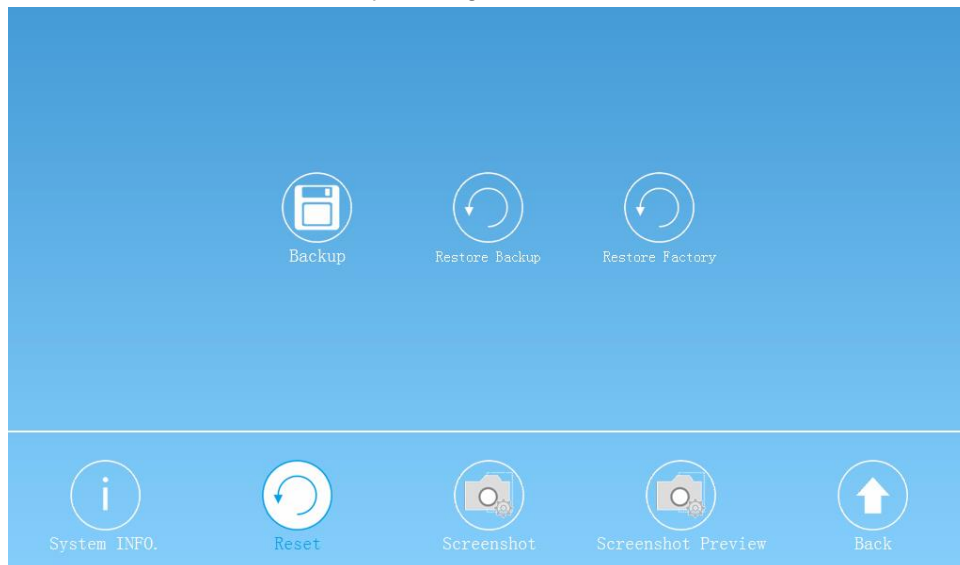
【Device Name】 View the current device name

【Device Type】 View the current device type

【Version】 View the current device version, the actual shipping version prevail, the picture is only an example

7.3.7 Reset

Select the "Reset" tab, enter the recovery settings interface, as shown below:



[Backup] to back up the current settings to the keyboard

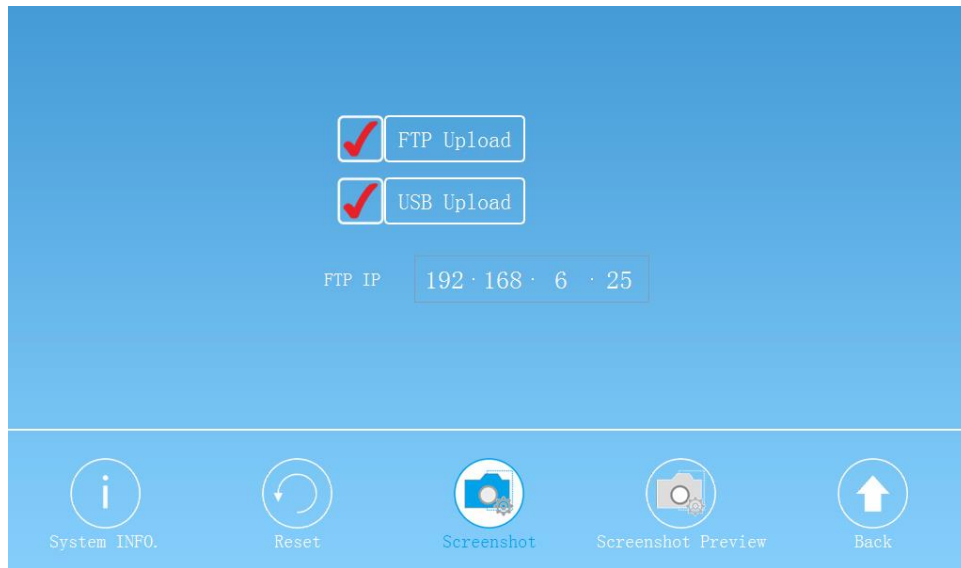
[Restore Backup] to restore the keyboard settings to the last backup

[Restore Factory] Restore the keyboard to the factory settings (except the IP address of the keyboard itself)

Note: Restoring factory settings will restore the configured data to the factory, please exercise caution.

7.3.8 Screenshot

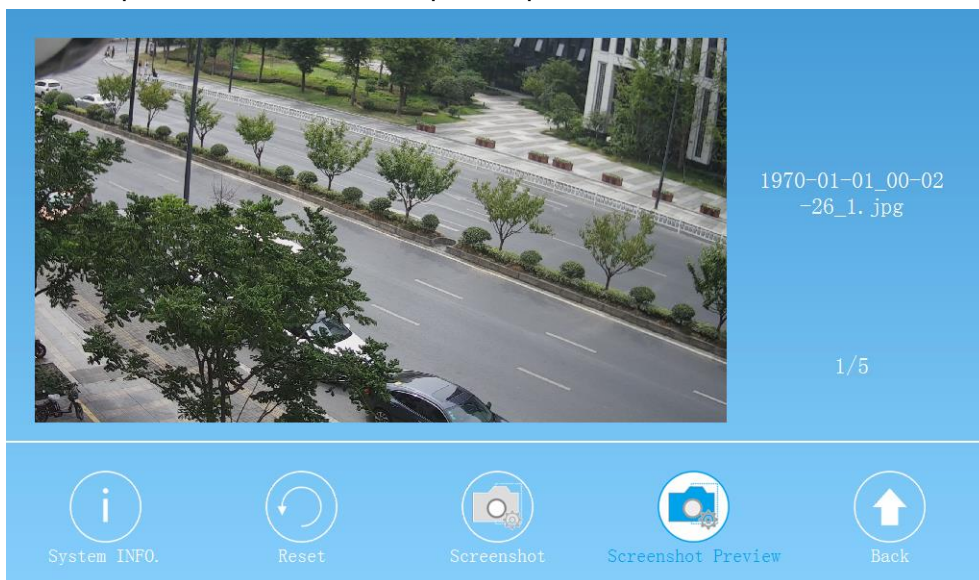
Select the " Screenshot " tab, enter the capture settings interface, as shown below:



【FTP Upload】 【USB Upload】 View and set "FTP address" and "USB address", that is to save the picture path.

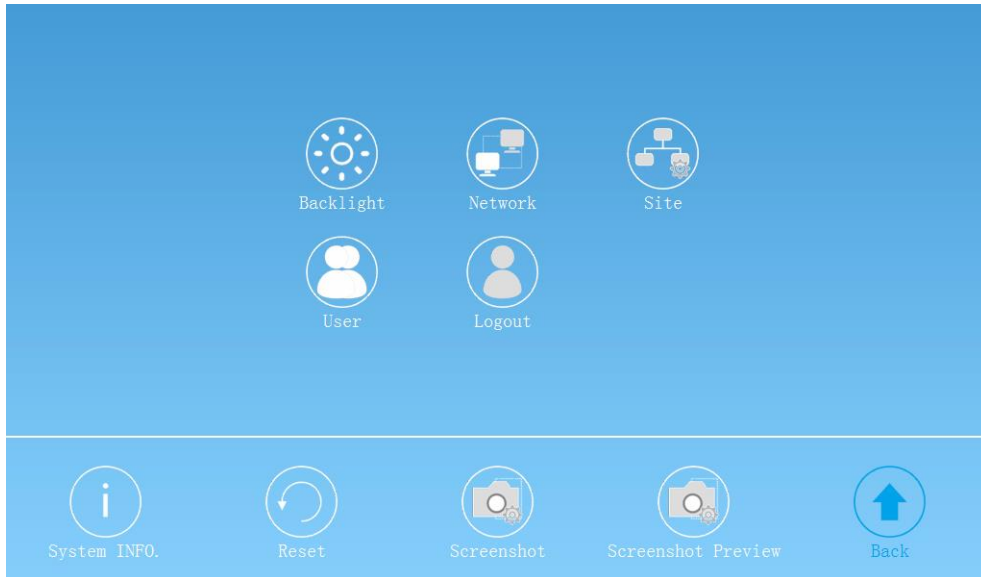
7.3.9 Screenshot Preview

Select " Screenshot preview " tab, enter the picture preview interface, as shown below:



In this interface you can display all the images saved in the screenshot, you can choose the picture to preview.

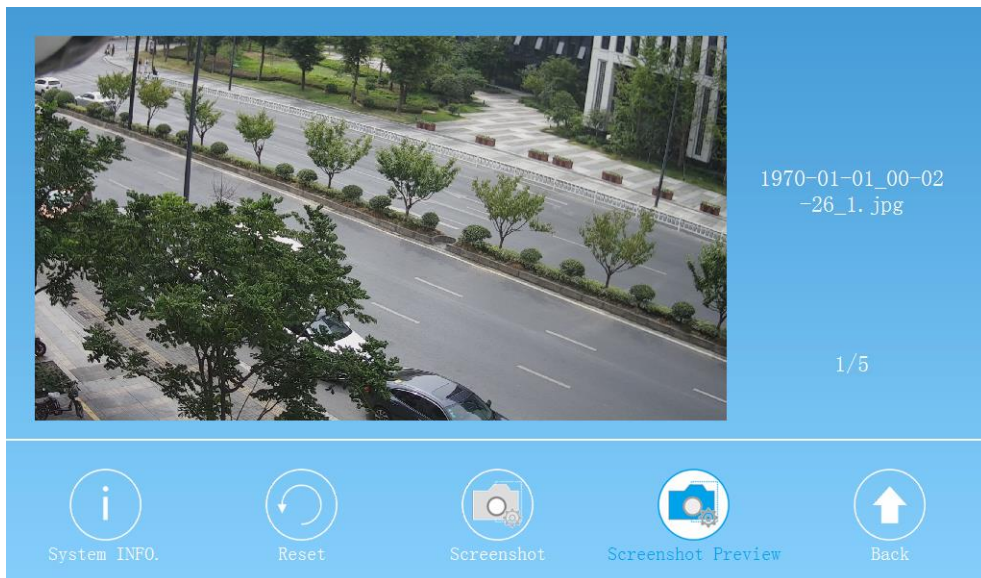
Check the "Back" tab to see the tabs in the previous page, as shown in the following figure:



In the following two cases, enter the video preview interface

1. In the keyboard setting interface, when the cursor is on the tab, press "MENU" button to return to the video preview interface.
2. 1-255 When the user logs in, enter the video preview interface.

As shown below:



8.0 WEB Interface

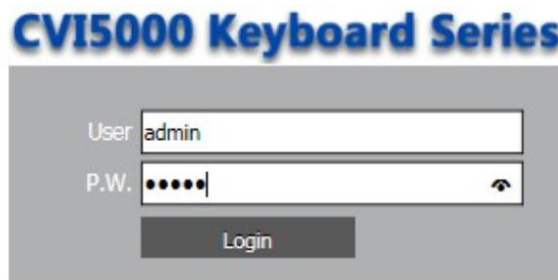
The WEB interface is mainly used for viewing system information of the keyboard, maintenance of equipment such as upgrading and restarting, and advanced applications such as configuring and adding IP cameras to the list. Camera list addition is only needed when the keyboard is actively decoding, support Onvif camera access and RTSP direct access.

8.1.1 WEB Interface Login

Use your login operation, and move to the "network parameters" interface to view the current keyboard's IP address

Note: The factory default keyboard IP address is 192.168.6.254.

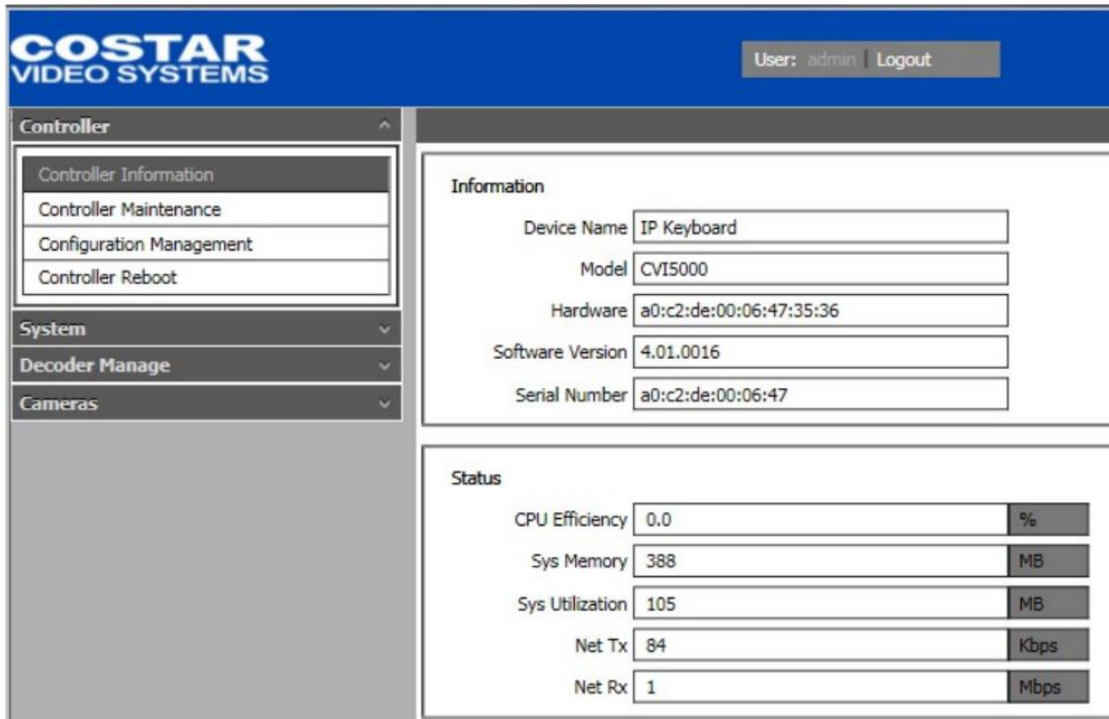
Open the Internet Explorer browser, and enter the IP address of the keyboard to invoke the WEB login screen, as shown below:



Enter the user name and password to log in. Default username: admin password: 12345

8.1.2 Controller

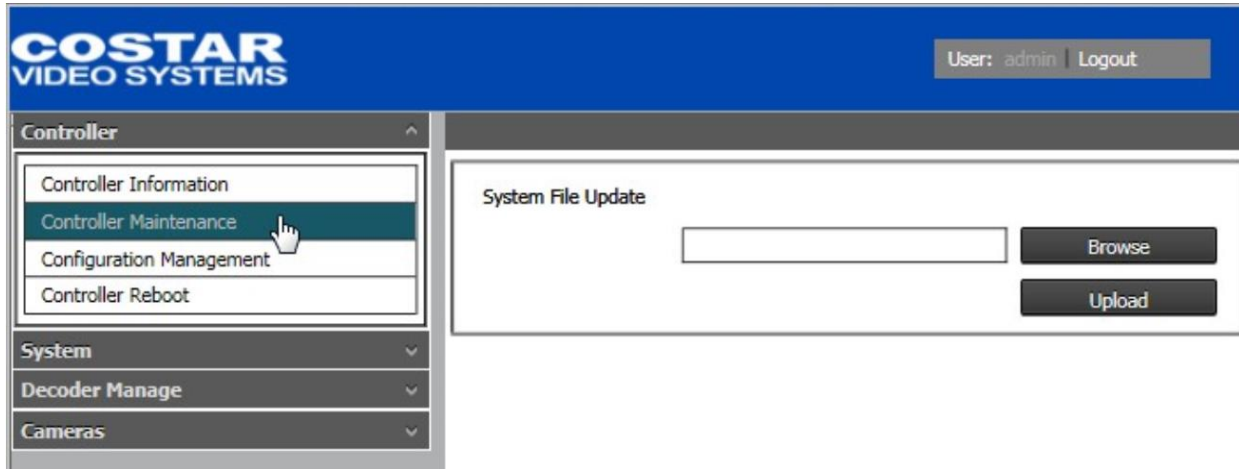
Click "Controller Information", as shown below:



In the "Controller Information" interface, you can view the current device name, device model, hardware serial number and software version (the software version has the actual shipping version) from the "Information" column; in the " Status" column, you can view the CPU Usage, system memory, system utilization and other information.

8.1.3 Controller Maintenance

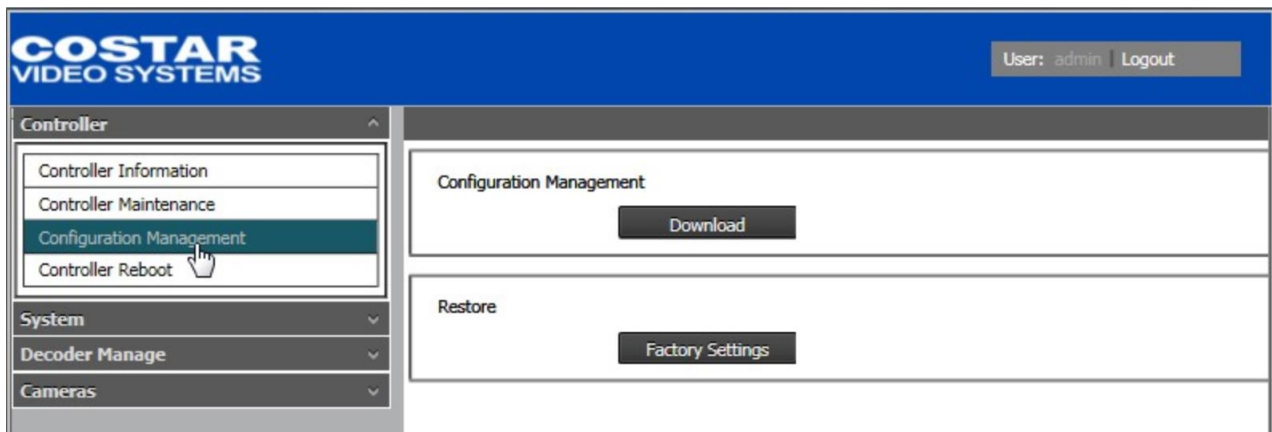
Click "Controller" option " Controller Maintenance ", as shown below:



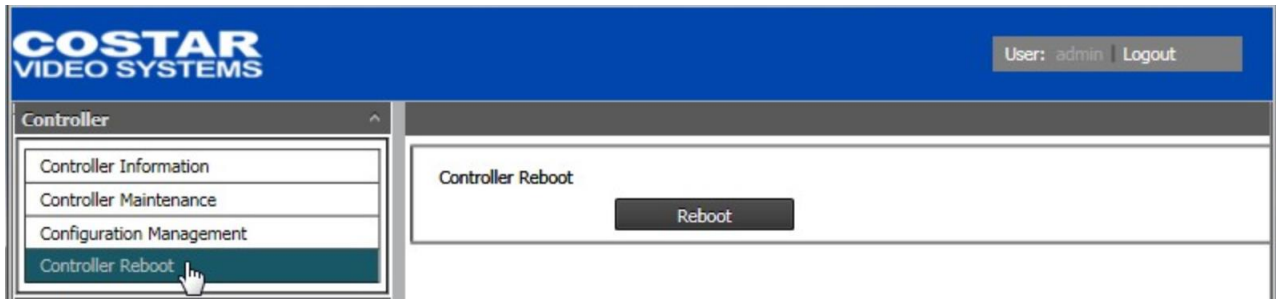
In the "System File Update" you can upgrade the keyboard firmware version or upload database files. Click "Browse" to select the update (bin) file on your local computer, and then click the "Upload" button. The keyboard will display a progress indicator followed by a “beep” sound and a reboot cycle displaying finally the login screen.

8.1.4 Configuration Management

Click "Controller" option "Configuration management", as shown below to download your configuration to a file for safe keeping or select Factory Settings to return the device to factory default state. This will erase all configurations stored in keyboard memory.



8.1.5 Controller Reboot



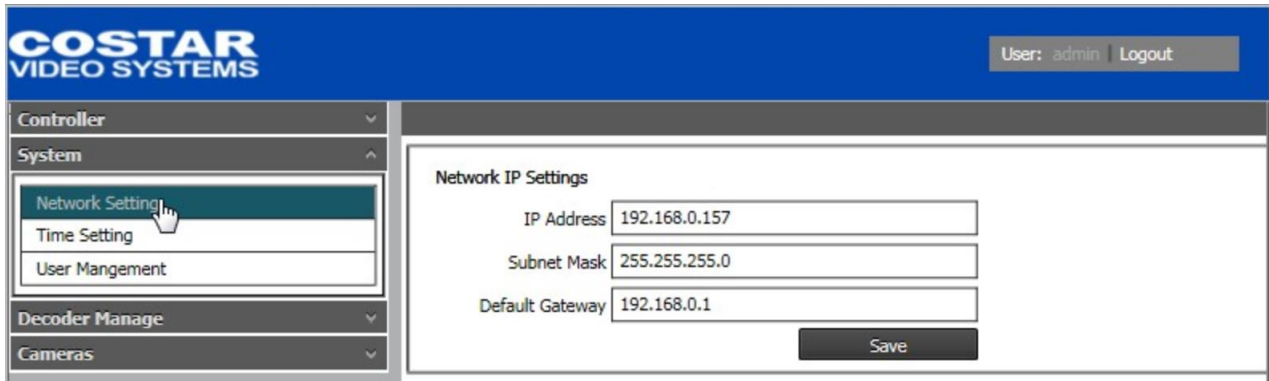
Click "Reboot" in "Controller Reboot" to restart the keyboard.

8.2 System

Under the System tab you can adjust Network Settings, Time Settings and manage users.

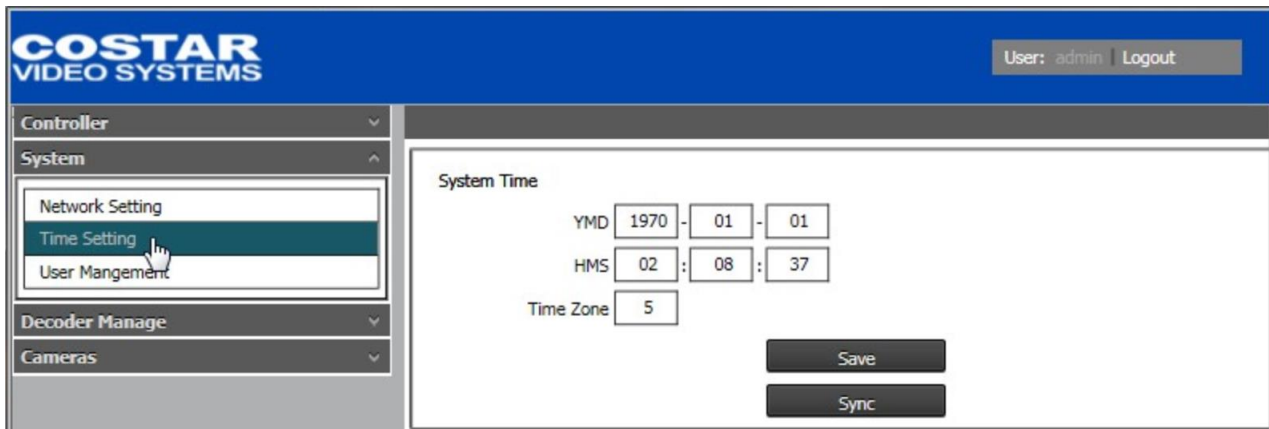
8.2.1 Network Settings

You can edit the device IP address, subnet and default gateway. Click Save to save the new settings.



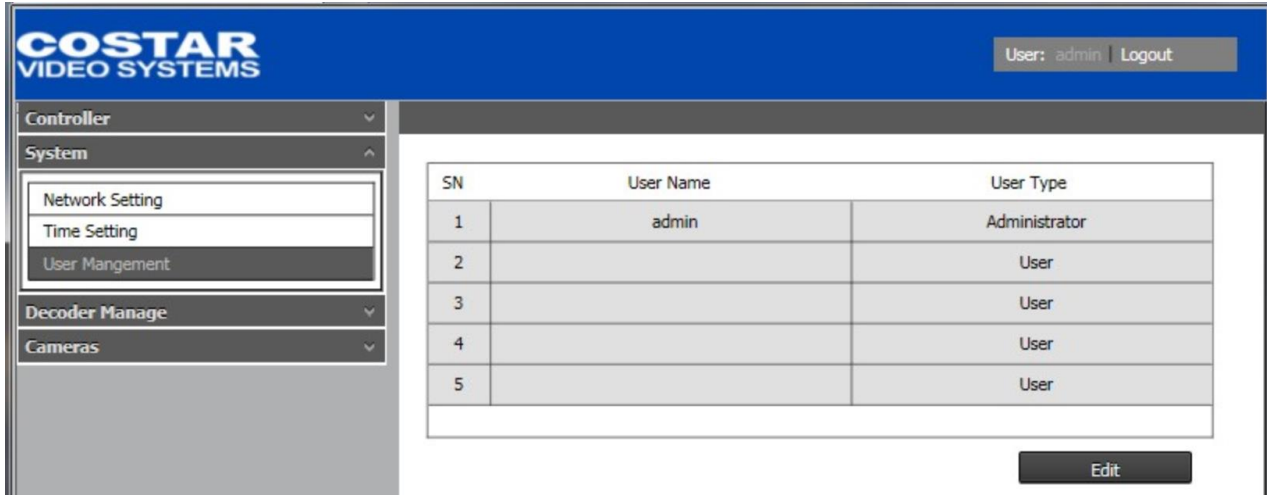
8.2.2 Time Setting

Specify the time zone you are in or click on sync to synch the time with the PC clock. Click Save to save the new settings



8.2.3 User Management

Enter any additional user (numeric value only) and corresponding passwords (numeric value only). Click Save to save the new settings

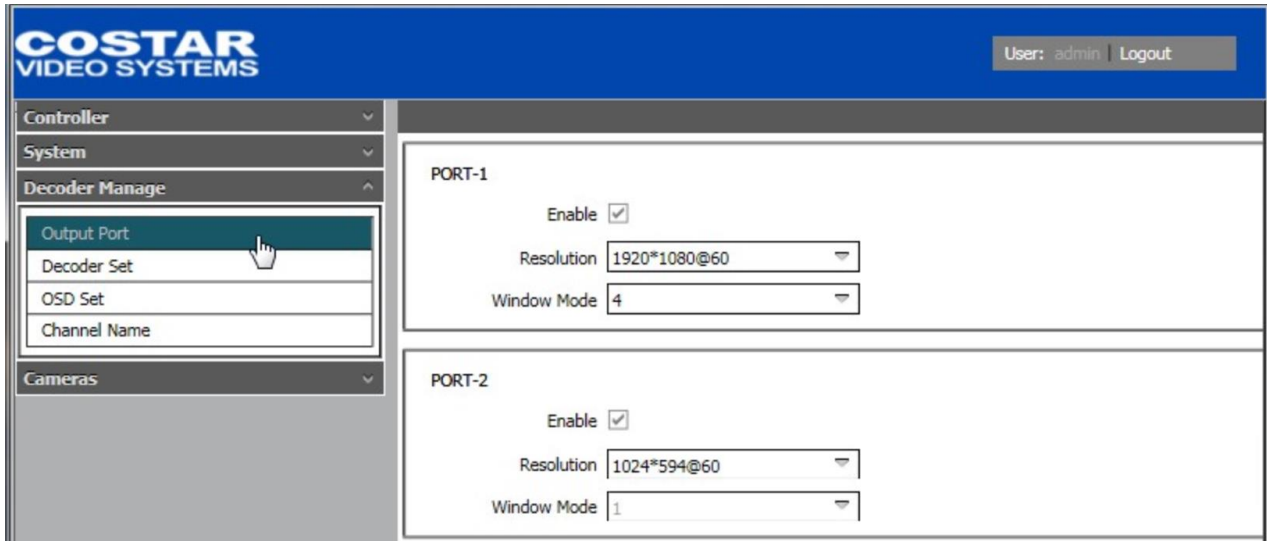


8.3 Decoder Manage

Allows the configuration of decoding parameters

8.3.1 Output Port

You can enable or disable to corresponding Video outputs of the keyboard and select the resolution of the attached display on Port 1. (HDMI port)

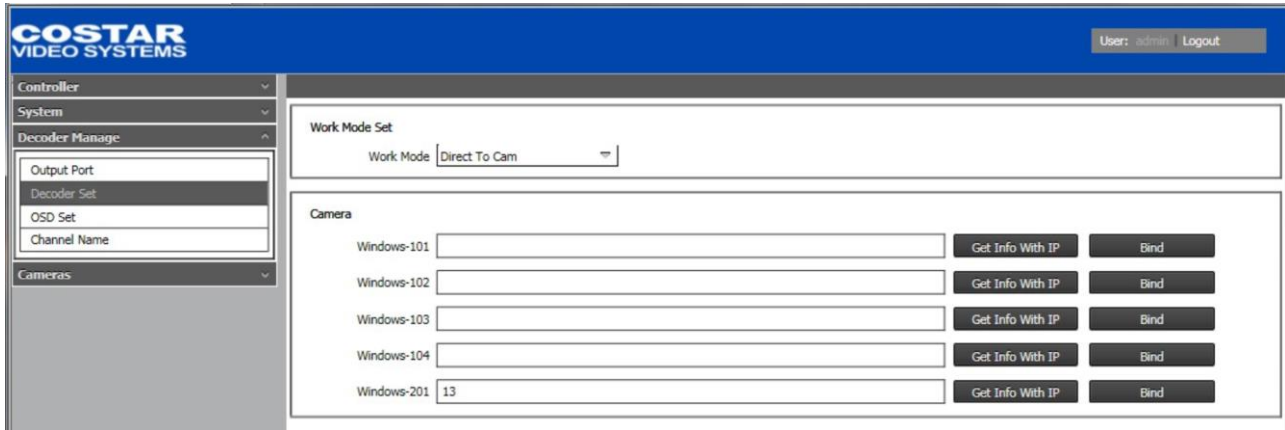


8.3.2 Decoder Set

Work Mode Set: Reserved for interface to VMS or Decoders. Requires customization.

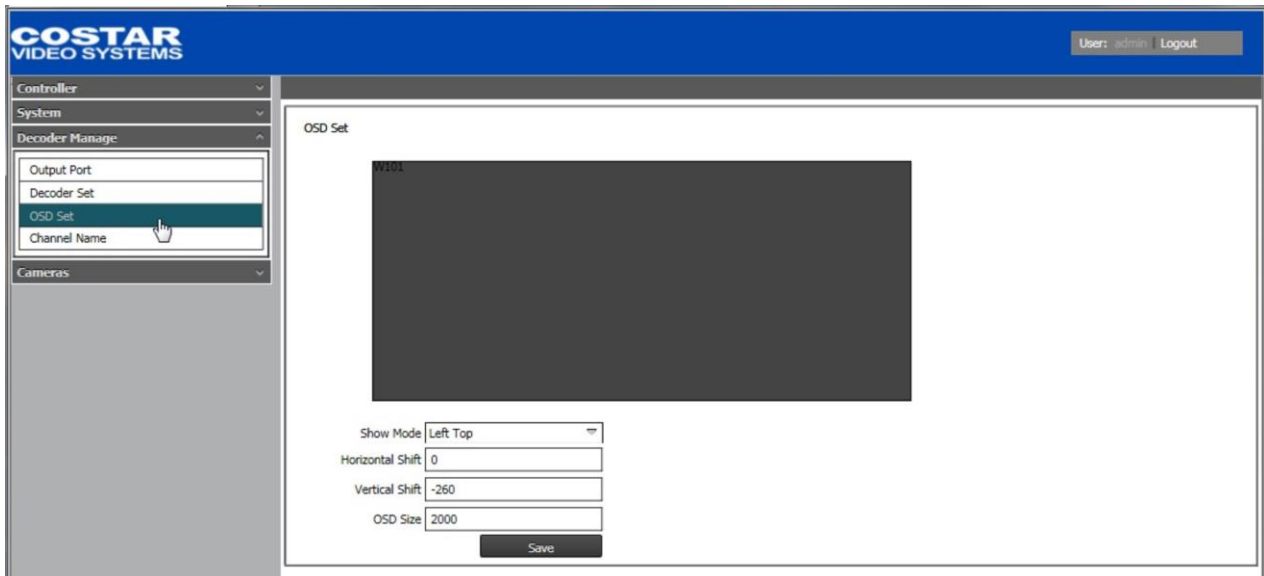
Camera: User can bind a new text to replace the default OSD text. Example: “W101” (default OSD text) can be replaced with “Mon 1”. Each of the windows can be named individually.

Get Info With IP: User can specify the IP camera address and enter user credentials to permanently “Bind” or fix this IP address to a specific window. i.e. Window -101



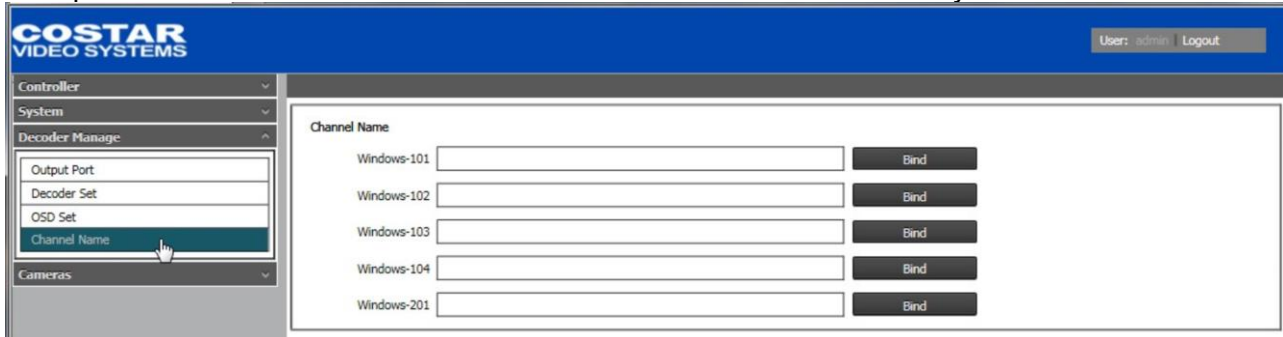
8.3.2 OSD Set

User can define OSD text parameters for identifying the various windows. User can also define the position and font size of the OSD title using the controls on this screen as shown below.



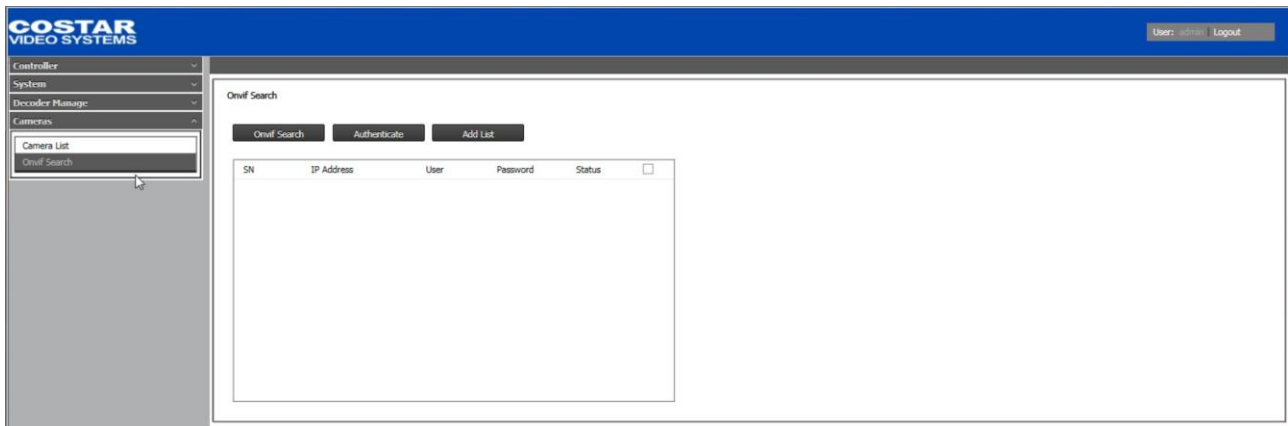
8.3.2 Channel Name

User can bind a new text to replace the default OSD text. Example: "W101" (default OSD text) can be replaced with "CAM 1". Each of the windows can be named individually.

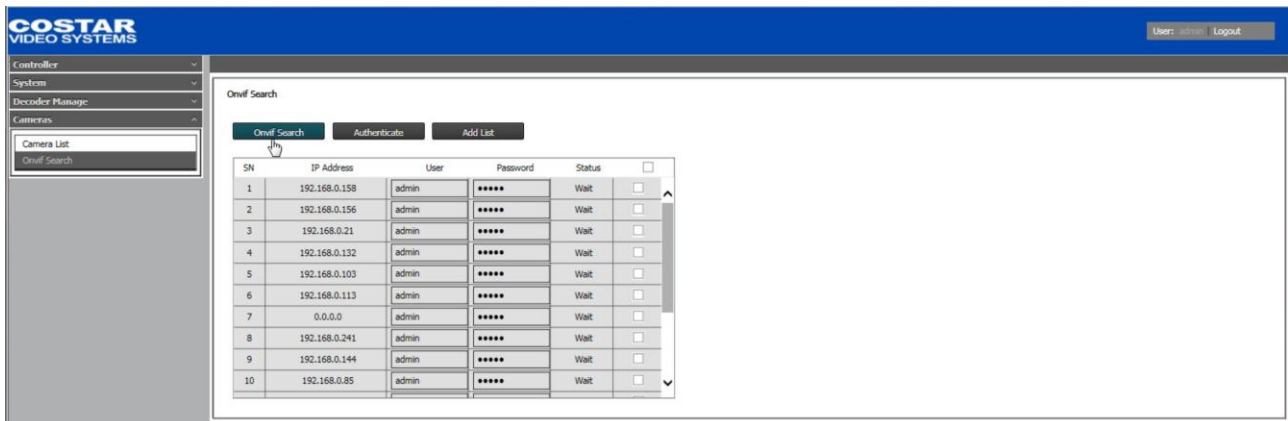


8.4 ONVIF search

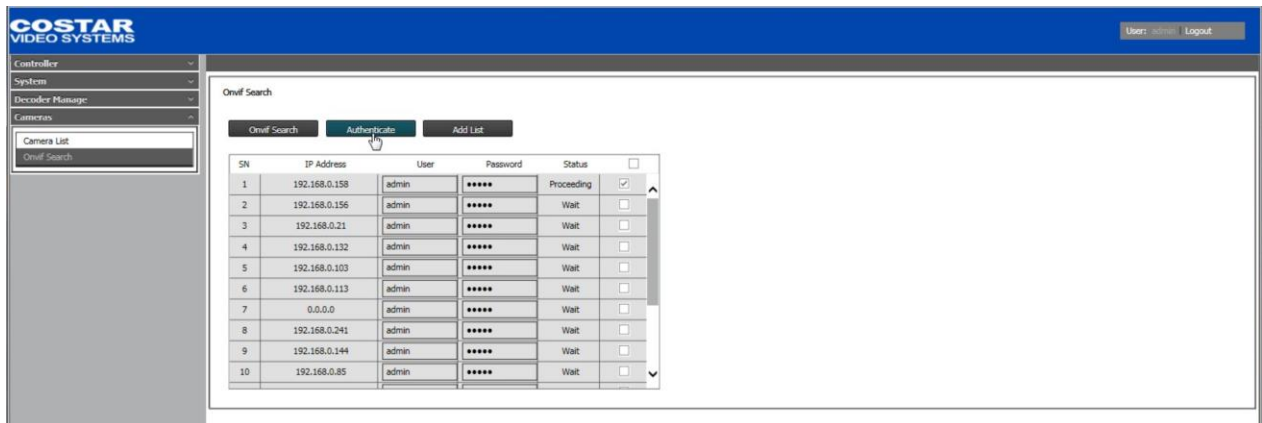
Select Cameras > Onvif Search and Click "Onvif search" as shown below:



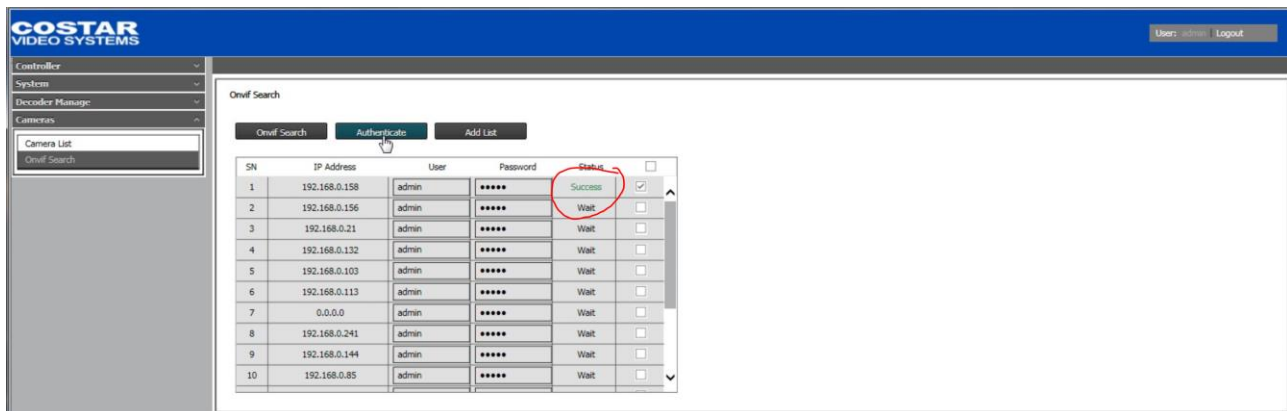
The IP keyboard can discover all Onvif compliant cameras in the same LAN, as the IP Keyboard as shown below:



Check one or more lines and click on "authenticate" to authenticate the selected line.



The result of the authentication is shown in "Status" as shown below:



Click "Add List", the camera with successful authentication can be added to the list of cameras, and the camera list will show whether added successfully. When Authentication failed please make sure the camera user name and password are correct, the default user name and password are admin.

8.4.1 Camera List

Click the "Cameras " option "Camera List", as shown below:

You can view the list of registered and authenticated cameras stored in the IP Keyboard.

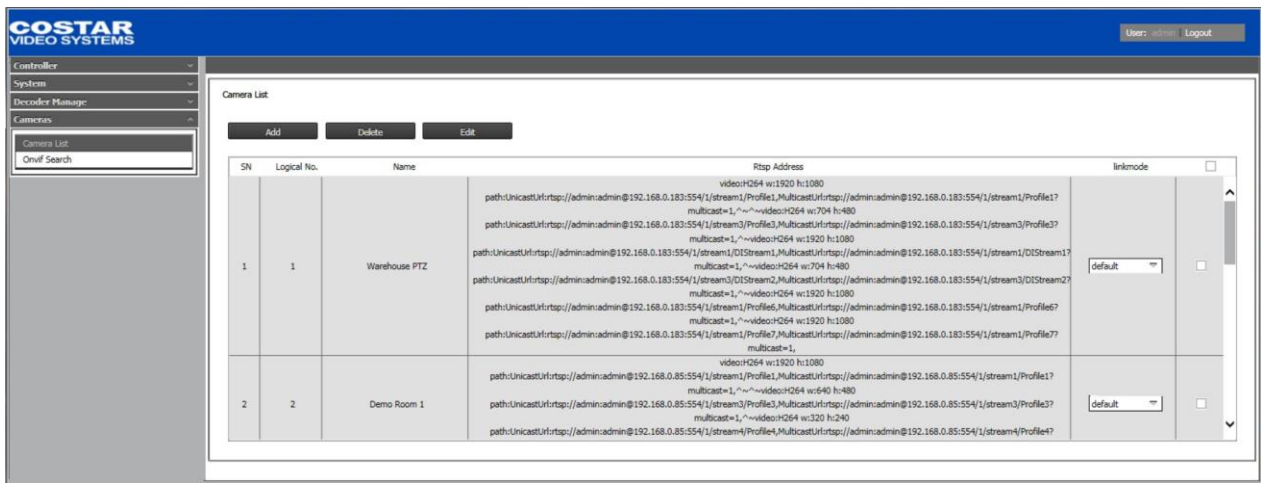
【Add】 When the RTSP address is known, click "Add" to add the RTSP address, add parameters such as logical number and source name.

【Delete】 check one or more lines, click "Delete" to delete selected line camera(s)

【Edit】 Select a line Click "Edit" to edit logic, name, address and port number,

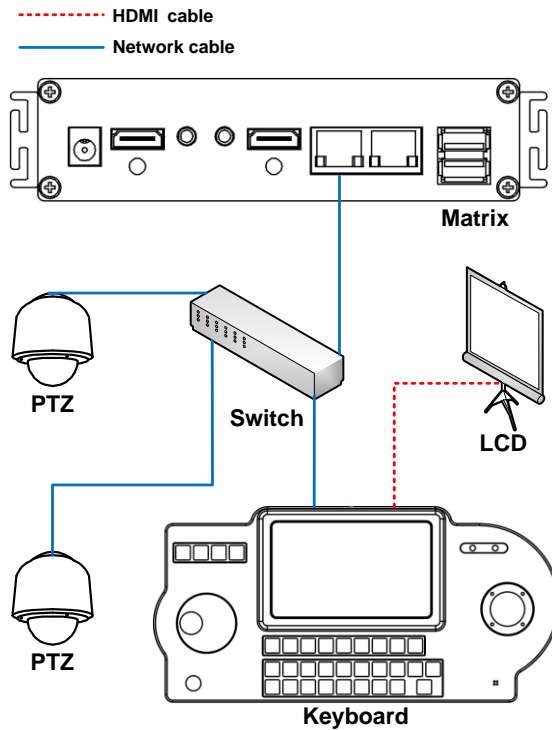
Logical number: when switching the camera, the camera number is the logical number;

Name: camera assigned custom name, displayed on the keyboard when calling up the camera list.



8.5 Application Examples

Connect the master keyboard, matrix, dome camera, monitor and other devices to the same LAN, as shown in the following figure:



HDMI output and 7-inch LCD display the same image, in the upper left corner of the 7-inch LCD screen displays the current field site number (1-255), window number and camera number,

8.6 Keyboard control matrix operation instructions:

| Function | operation instruction |
|---------------------------|---|
| Switch image on window | N (Win No.) +WIN+M (Cam No.) +CAM, The corresponding window on the monitor screen (WIN N) shows the M camera image |
| No image on window | N+WIN+0+CAM |
| Window tour switch | N (Win No.) +WIN+SHOT+3 (Run window switching scheme) +M (Macro No.) +ENTER |
| Window patrol switch stop | SHOT+4 (Stop window switching scheme) +M (macro No.) +ENTER |
| Windows grouping switch | N (Win. No) +WIN+SHOT+3 (call window switch scheme) +M (macro No) +ENTER |
| windows grouping stop | SHOT+4 (stop window switch scheme) +M (macro No) +ENTER |
| Monitor splitting switch | N (Monitor No.) +MON+SHOT+5 (run monitor switch scheme) +M (macro No.) +ENTER |
| monitor splitting stop | SHOT+6 (stop monitor switch scheme) +M (macro No.) +ENTER |
| forward switch | FWD, current CAM No increase |
| backward switch | BWD, current CAM No decrease |
| monitor split | N(Monitor) +MON+M (split No 1/4/6/8/9/16/25) +MULT, Corresponding display screen after the split results, the split window automatically assigned |
| splicing | SHOT+1 (monitor splice) +M (left top window No.) +ENTER+N (right bottom window No.) +ENTER |
| splicing return | SHOT+2(splice return) +N (win No. After splicing) +ENTER |
| | |
| | |

| Function | operation instruction |
|--------------------|---|
| Direction and zoom | Rocker control the ball up / down / left / right / upper left / lower left / right up / down direction, support for image zoom in / out |
| set preset | PRESET+2(set preset) +N (preset No.) +ENTER |
| call preset | PRESET+1 (set preset) +N (preset No.) +ENTER, N (preset No.) +PRESET |
| call monitor plan | SHOT+7 (call monitor display plan) +M (plan Number) + ENTER |
| audio switch | N (Win No.) +WIN+PRESET+3 (audio switch) |
| volume setting | N (Win No.) +WIN+PRESET+4 (volume set) +audio (1-100) + ENTER |
| site switch | digital key (site No.) + MODE switch site No. If site No.exists, S+ site No. On left top corner will change automatically. |
| | |

8.7 active decoding keyboard

After the user is logged in (1-255), press 0 + MODE to switch the current mode to the active decoding mode of the keyboard, as shown in the following figure:



HDMI output and 7-inch LCD output are unrelated, HDMI output support 1/4/6/8/9/10/12/16/20/25/30 split, 7-inch LCD does not support split. Press the CAM button on the LCD screen and the camera list can be called out, as shown below:

| CAM LIST | | |
|----------|------|----------|
| ID | Name | Type |
| 1 | Dome | undefine |
| 2 | Box | undefine |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Previous-AUX1 1/1 AUX4-Next

8.8 Keyboard operating instruction

| Function | Operation instruction |
|--------------------|---|
| Call out cam list | CAM |
| Switch video | N (Win No.) +WIN+M (Cam No.) +CAM, The corresponding window on the monitor screen (WIN N) shows the M camera image |
| Forward switch | FWD, current CAM No increase |
| Backward switch | BWD, current CAM No decrease |
| screen split | M (split No 1/4/6/8/9/10/12/16/25/30) +MULT, Corresponding display screen after the split results |
| Direction and zoom | Rocker control the ball up / down / left / right / upper left / lower left / right up / down direction, support for image zoom in / out |
| set preset | PRESET+2(set preset) +N (preset No.) +ENTER |
| call preset | PRESET+1 (set preset) +N (preset No.) +ENTER, N (preset No.) +PRESET |

9.0 Troubleshooting

Fault 1: power indicator does not turn on, the LCD screen has no display

- A. Check the supply voltage is normal, 12VDC / 2A
- B. Verify the transformer is plugged-in and has good with the outlet?
- C. If power indicator light is on, but the screen has no display, check the used power supply meets the requirements?
- D. Power indicator light, the screen is incomplete or screen distorted, contact support

Fault 2: Can not log in

- A. Verify the user name and password are correct
- B. If you cannot login as user (1-255) use the operator user (0), enter the administrator password and verify an operator user account has been created.

Fault 3: Can not control matrix or NVR

- A. The communication indicator is not on, indicating that the communication between the keyboard and the controlled device is not normal. Check whether the controlled device and the keyboard are in the same LAN. (The communication indicator lights after the login.)
- B. Check if the device type is selected correctly
- C. Check the used equipment port is correct (NET not RS232)
- D. Check if it is an operator user

Fault 4: Some functions can not be achieved

- A. Check the operation according to "user's instruction" and appendix "common operation table";
- B. Check the manual of the connected device, as it may not support these functions.

10.0 System Requirements

10.1 Requirements

In order to configure the keyboard initially and test the connected camera system you need the following items:

Laptop or desktop computer

- 100/1000BASE-T network card installed in the computer
- Microsoft Internet Explorer, version 11 or later web browser
- 100/1000BASE-T network switch or hub
- Cat5e or Cat 6 cable

10.2 Recommended Computer Specifications

The following are recommended computer specifications to run and operate a camera system:

- CPU: Intel i7-860S 2.53GHz or better
- Operating system: Windows 7 or later
- Memory: 4GB DDR3 @ 1066MHz or better
- Hard Drive: 7200 rpm – minimum speed with sufficient free space
- Video card: NVIDIA® GeForce® 9800 GTX+ with 512MB RAM or better, or high-end ATI Radeon™ HD series
- Monitor: LCD monitor with 1920x1080 or better resolution

11.0 Service

The CVI5000 Keyboard is designed for long-term use and contains no user-serviceable parts. In the event of product failure, the system should be removed from the site and returned to an authorized service center for repair.

Contact Costar Video Systems service department at (469) 635-6800 option 3 for service assistance and obtaining a Return Authorization Number.

11.1.1 Maintenance

The CVI5000 Keyboard maintenance requirements are minimal, requiring only occasional exterior cleaning as described below:

Non-Optical Surfaces

Clean the exterior enclosure as deemed necessary (likely for aesthetic purposes) using a soft cloth

Optical Surfaces

Clean the LCD window as needed. Use a soft non-abrasive cloth, such as terry cloth or microfiber cloth.

12.0 Warranty

Please refer to the Costar Video Systems website for product warranty information:

For more information please visit us at:

www.costarvideo.com