

HDMI Rackmount KVM Switch Series User manual



User manual

Statement

US Federal Communications Commission Interference Statement

This product has been tested and certified to meet the digital device requirements of Class B of the FCC Rules and provisions in Part 15 of the FCC Rules. These rules are intended to use the device in a commercial environment so as to protect them from harmful interference, and they are the specified provisions that can provide effective protection. This device can generate and radiate electromagnetic waves. Therefore, if it is not installed and used in accordance with the provisions of this manual, it may cause interference to wireless communication devices. However, there is no guarantee that interference will not occur in a particular installation. If the device is turned on or off causing interference in radio and television reception, the user should try the following ways to reduce interference.

- ◆ Change direction and move the receiving antenna.
- ◆ Increase the distance between the device and the receiver.
- ◆ Connect the device to the circuit exit (the interface to which the receiver is not connected).
- ◆ Please ask your distributors and an experienced radio / TV technician for help.

FCC warning: Changes and modifications made to the device not by the responsible and qualified party will result in the user losing the right to operate the device.

CE warning: This is a Class B product. In the home environment, this product may cause radio interference, so the user may need to take appropriate measures to prevent it.



RoHS

This product is RoHS compliant.



User notes

The manufacturer has the right to modify and change the information, documents and specification tables contained in the manual without prior notice. The manufacturer does not guarantee, express, imply or statutorily declare its contents or specifically disclaims its merchantability and applicability for a particular purpose. The same applies to any manufacturer's software that is sold and authorized as described in this manual. If the software program is found to be defective after purchase, the purchaser (and the non-manufacturers, its distributors or its merchants) shall be responsible for all necessary services, repair cost and any accidental or consequential damages caused by the software defect.

The manufacturer is not responsible for any interference in the radio and/or television that is caused by the unauthorized adjustment of this device. The user must correct the interference by himself.

If the operating voltage setting is not correctly selected before operation, the manufacturer shall not be liable for any damage caused.

Be sure to confirm that the voltage is set correctly before use.



Product model introductions:

Model	Configuration introductions
AR-H04L	4 input (USB+HDMI) 1 output
AR-H08L	8 input (USB+HDMI) 1 output
AR-H16L	16 input (USB+HDMI) 1 output

Package contents

The multi-computer KVM switch package includes the following:

- ◆ KVM switch host x 1
- ◆ Power adapter x 1
- ◆ User manual (CD) x 1
- ◆ Rack fixed plate x 2
- ◆ Screw package x 1

Check and make sure that all parts are in place and that they are not damaged in transit. If you encounter problems, please contact your distributors.

To prevent damage to the machine or devices connected to the machine, please read this manual carefully and follow the instructions for installation and operation.

* Since the publication of this manual, there may be new product features added. Please visit our website to download the latest version of the user manual.

About this manual

This user manual will assist you in the effective use of the product functions, including the installation, setting, operation and other procedures of the device. You can learn what is included in this manual from the following:

Chapter I Introduction - This chapter introduces the rack-mountable KVM device system, including its functions, features, advantages and so on, and describes and introduces its front and rear panel components.

Chapter II Hardware installation - This chapter explains how to install this product and the necessary steps - including basic stand-alone installation, multi-switch level connection installation, and the extended installation of IP modules.

Chapter III Basic operation - Explains the basic operation concepts of the KVM switch.

Chapter IV OSD operation - Provides a complete introduction to OSD (screen menu) of the KVM switch and explains how to operate and use it.

Appendix - Mainly provides specification tables and other technical information about the relevant KVM switch.

Common symbol introductions

Symbol	represents the text information that should be entered
【】	Parenthesis represents the keys that need to be entered. For example, [Enter] means pressing the Enter key. For keys that need to be entered at the same time, they are put in the same parenthesis, and they are connected by a plus sign. For example: [Ctrl + Alt]
1.	The number represents the actual sequence number of operation steps.
◆	The rhombus symbol represents that information is provided for reference, but is not related to the operation steps.
•	The origin symbol represents the classification sub-item information, but is not related to the operation steps.

Product information

To find out more about our KVM product information and how to use it more efficiently, you can go to our website or contact an authorized distributor for more contact information.

Chapter I

Introduction

Product introductions

The 8/16-port USB rack-mountable KVM multi-computer switch is a multi-functional device that allows administrators to access an 8/16 HDMI computer from a set of USB keyboards, mice, or a set of keyboards, mice, and consoles.

There are four convenient ways provided to switch the computers in the installation architecture: (1) use the connection port selection button on the front panel of the switch; (2) input the hot key combination from the keyboard; (3) select from the on-screen display (OSD) menu. The Auto Scan function provides automatic scanning and monitors the computers in the installation architecture one by one. (4) The remote network control operation is carried out through the network port of the extended IP module to connect to the computer on KVM.

This product is very quick and easy to install. Simply connect the connection cable to the appropriate connection port. No software settings are required, no complicated installation procedures, and there will be no incompatible problems. Because the device can directly obtain the input data of the keyboard, it can operate on a variety of operating platforms (compatible with PC, Mac, Sun, etc.).

Since it is allowed to manage the computer connected to it from a single console, the installation of a set of KVMs (1) can eliminate the expense of purchasing individual keyboard, monitor and mouse for each computer; (2) saves space occupied by the extra devices; (3) saves energy costs; (4) avoids the inconvenience and waste of moving back and forth between computers; (5) rapidly upgrades to the remote network control mode of the IP control mode.

Product features

- ◆ A set of USB consoles can manage 8 or 16 HDMI interface computers
- ◆ The console supports USB TYPE A interface type keyboard and mouse devices
- ◆ Normal version of the maximum resolution of LCD type KVM is 1366x768 @60HZ, and HD version is 1920x1080 @60HZ
- ◆ The maximum resolution of rack type KVM is 4K @30HZ (users need to match 4K cable by themselves), 2K @60HZ
- ◆ It can switch the computer through the front panel buttons, keyboard hot keys and the OSD menu
- ◆ Connect to the server device for BIOS-level access without worrying about the risk of viruses and Trojans invasion.

- ◆ The server computer does not need to install any software and drivers, and the server computer directly recognizes KVM.
- ◆ Support OSD to set user login mode and increase the security requirements of KVM login.
- ◆ Support wide-screen resolution.
- ◆ Support DDC communication and adapt to a variety of graphics card devices.
- ◆ Auto Scan function can monitor all computer operations.
- ◆ Support cross-platform operation – Windows, Linux, Mac* and Sun*
- ◆ The keyboard and mouse connection port of the server computer adopts Keep Online technology to simulate the keyboard and mouse. Therefore, the device is safe and stable, and the switching is fast without delay.

Hardware requirements

Console

- ◆ A set of HDMI display screens that are compatible with the highest resolution of any computer to be installed under the installation architecture
- ◆ A set of USB interface mice
- ◆ A set of USB interface keyboards

Computer

The following devices must be installed on each computer:

- ◆ A set of HDMI video graphics cards
- ◆ USB Type A connection port

Cable

The KVM device provides two types of connection cables to choose according to the user's usage:

- ◆ HDMI cable
- ◆ The cable for the transfer from USB TYPE A to TYPE B

Note: The cable length will affect the quality of the display. If you need a connection cable of other length, please contact the merchant you purchased from to choose a cable suitable for this switch.

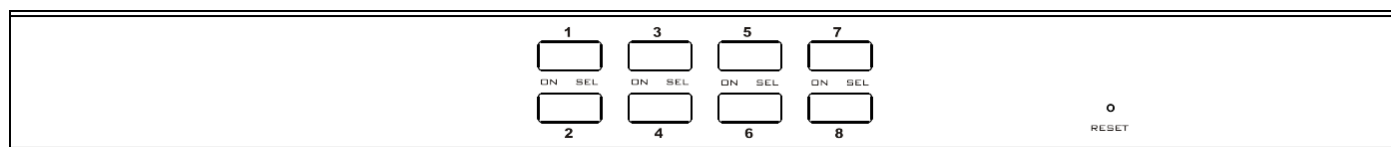
Operating system

Operating system		Version
Windows		Windows 2000/XP/2003/2008/Vista/7/10
Linux	RedHat	9.0 or higher
	SuSE	10/11.1 or higher
	Debian	3.1/4.0
	Ubuntu	7.04/7.10
UNIX	AIX	4.3 or higher
	FreeBSD	5.5 or higher
	Sun Solaris	8 or higher
Mac		From OS 9.0 to 10.6 (Snow Leopard)
Novell	Netware	6.0 or higher

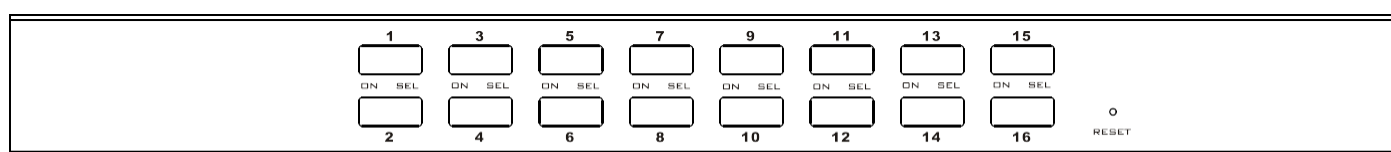
For more operating system support, please pay attention to the latest relevant version of product compatibility.

Parts

Front view



8-port front panel buttons



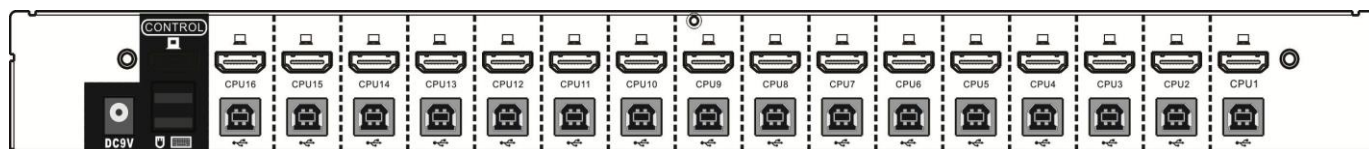
16-port front panel buttons

1&2

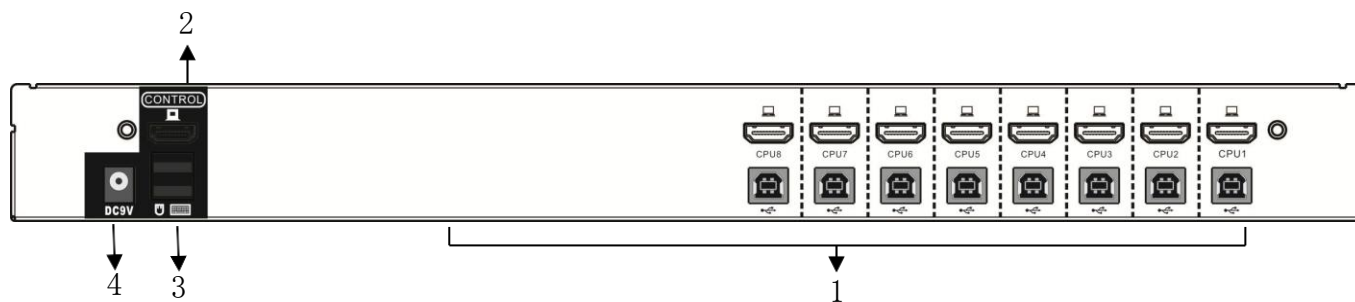
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No.	Parts	Function description
1	Port switching selection button	According to the serial number of the switching port, users can gently press the button of the corresponding serial number. In this way, they can switch the corresponding port to the current operation port. At the same time, they will hear the tweet of the internal buzzer of the device. Then they can confirm that the switching action has been executed correctly. And the embedded LED indicators of the selected port will also illuminate.
2	Embedded LED indicators	<p>Each button has two LED indicators embedded inside it. Users can judge the current working condition and usage of the device according to the LED indicators embedded inside the button.</p> <ul style="list-style-type: none"> Corresponding to the [ON] position is a red LED, indicating the online indicator, which means that the port is connected to a server computer device being used. If the [ON] LED indicator is not on, it means that no computer is connected to the corresponding port of the serial number or the connected computer is already closed. Corresponding to the [Select] position is a green LED, indicating the selection port indicator, which means that the server computer of the currently selected serial number can be operated. If the [Select] LED indicator is not on, it means that the server computer of the serial number port is not selected, and it is not the computer currently operated.
3	Device reset button	It is in the small round hole above the text marked [RESET]. In order to reduce the device restart caused by user's incorrect operation, the product uses the embedded reset button. The user can insert a needle-shaped object into the round hole as needed for 1-3 seconds to complete the reset operation of the KVM device.

Rear view



16-port KVM rear view



8-port KVM rear view

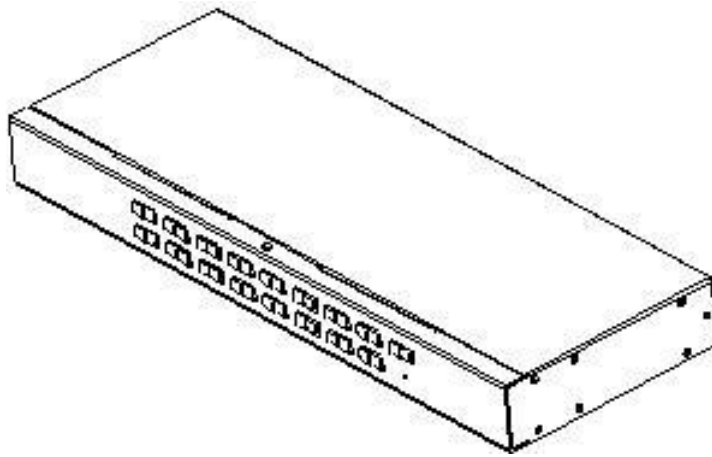
No.	Parts	Function description
1	KVM connection port	Please connect one end of the HDMI connector of the corresponding KVM connection cable to the HDMI interface of the computer and monitor. Connect the TYPE B of the USB to the corresponding port of the KVM, and TAPE A interface on the other end to the USB interface of the computer. (Please refer to the description and introduction in the relevant chapter of "Cable" for the cable used.)
2	Local HDMI display port	Please connect the connection cable of the console HDMI monitor to this port.
3	USB keyboard and mouse port	The interface of keyboard and mouse device connected to the USB port of the console is USB Type A.
4	Power jack	Plug the power adapter's connection cable here.

Chapter II

Hardware installation

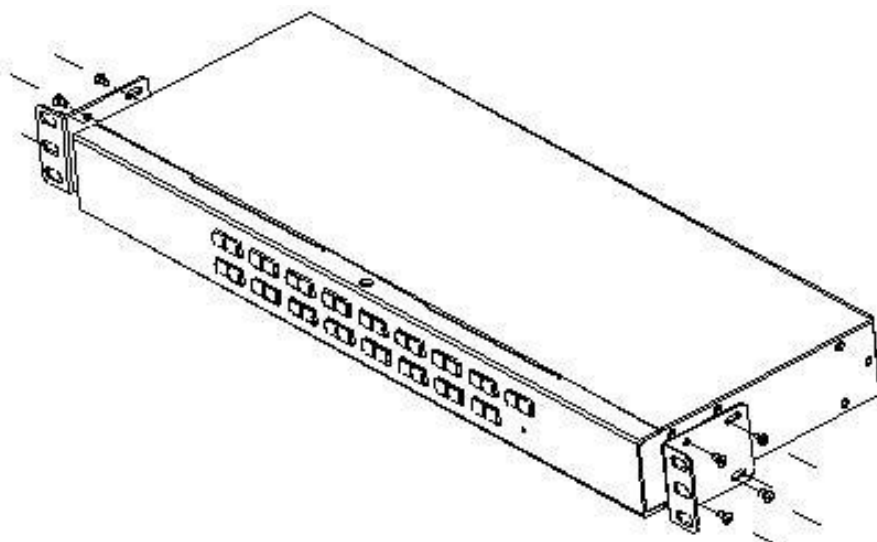
Stacking and installation

The KVM switch can be placed on any suitable flat surface and is sufficient to safely support the weight of the device plus additional connection cables. Please make sure the flat surface is clean and free of debris that can affect the ventilation and normal operation of the switch.

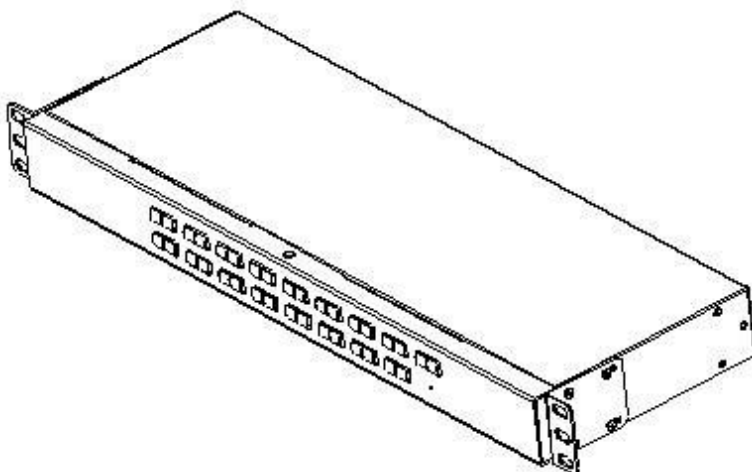


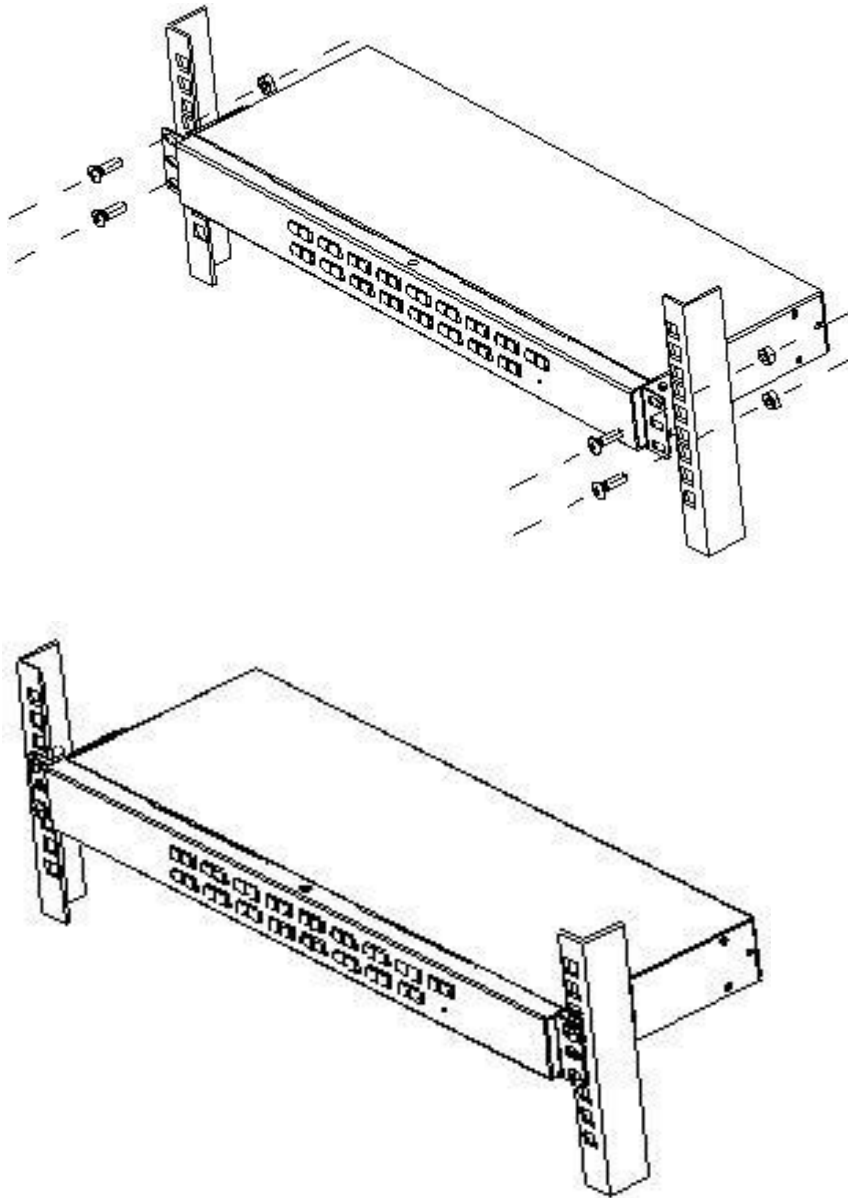
Rack mounting

1. Remove the two screws on the left and right sides of the front end of the device (totally two sets of screws).
2. Use the screws provided by the rack mounting kit in this package to lock the rack fixed plate to the front end of the device.



3. Install the KVM switch with the fixed plate on the rack, and match the mounting hole of the fixed plate with the mounting hole on the rack, and lock the fixed plate to the front end of the rack by the rack mounting screws in the mounting package.





Single device installation

Note: Please confirm that the device is out of power before installation. In order to prevent device damaged during installation, please confirm that all installed devices have good grounding protection.

1. Plug your USB keyboard and mouse into the USB console connection port on the back panel of the switch.
2. Connect the video signal cable of the HDMI monitor to the HDMI console port and turn on the power.
3. Use a set of KVM connection cables with the model corresponding to this product to plug the HDMI connector into the HDMI port of any available HDMI connection port area of the switch.
4. Plug the HDMI video connector and USB plug corresponding to the KVM cable into the corresponding connection port on each computer.
5. Please plug the power adapter included in this package into the AC power supply, and then plug the other

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end of the power adapter into the power jack on the switch.

6. Turn on your computer power.

Note: Please make sure all plugs are connected to the same set of KVM connection port jacks (all are on connection port 1, or all are on connection port 2).

Chapter III

Basic operation

Hot pluggable

The KVM switch supports hot pluggable function. It can remove and plug back components by pulling out the cable connected to the computer's connection port without turning off the switch. In order to make the hot pluggable function work normally, please follow the steps below:

Hot pluggable computer connection port

In order to make the OSD menu change corresponding to the KVM's connection port, you must reset the OSD menu to display the latest connection port information and OSD menu settings. Please refer to the functions and usage descriptions in the relevant chapter of the OSD menu for more information.

Note: If the operating system of your computer does not support hot pluggable function, it may not work properly.

Hot pluggable console connection port

This product also provides the hot pluggable function for the keyboard, mouse and monitor of the console. This product provides keyboard and mouse interfaces of two interface types. Users can select the corresponding device connection type according to the usage and carry out corresponding control operations.

Note: If you connect USB keyboard and mouse device at the same time, please do not use two types of devices at the same time. Otherwise, it may cause abnormal response of the keyboard and mouse of the server computer device.

Connection port selection

When the KVM switch is in use, you can quickly switch to any computer connected to the KVM in three ways: manual button selection, OSD menu screen selection, and hot key selection.

Manual switch selection

Please use the buttons on the front operation panel to make a port selection.

OSD menu screen selection

(Please refer to the relevant chapter of the OSD operation for more information.)

Hot key selection

This product provides four hot key switching modes:

[SCROLL] + [SCROLL] + [NUM]

[CTRL] + [CTRL] + [NUM]

[ALT] + [ALT] + [NUM]

[SHIFT] + [SHIFT] + [NUM]

The default hot key switching combination key is [SCROLL] + [SCROLL] + [NUM], in which [NUM] is the keyboard number 01–16, and the keyboard combination hot key is input and carriage return to complete the command sending, and the KVM switch will switch the corresponding number port computer. If you want to change the combination key of hot keys, you can make settings and changes in the corresponding options in the OSD menu. (Please refer to the relevant chapter of the OSD operation for more information.)

Power off and restart

If you need to turn off the power of the KVM switch, please perform the following operations before restarting:

1. Pull out the power supply connected to the KVM.
 2. Turn off all computers connected to the KVM switch.
 3. Wait about 10 seconds before reconnecting the power supply of the KVM switch.
 4. Turn on your computer power supply.
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Chapter IV OSD operation

OSD introduction

You can use OSD screen menu function and screen menu operation mode to perform KVM device setting, switching selection of the connected devices and other operations. By the keyboard operation to complete

the control of the device, all programs must start from the OSD main screen.

OSD login

The OSD function provides a two-tier (administrator/user) password mechanism. The factory default setting of the product is that there is no need for login password authentication. Therefore, when you open the OSD main menu for the first time, you can enter the main menu screen of the OSD to perform corresponding operations without inputting the login password. If you want to add this function, you can set it in the [F6] "SET" option after entering the OSD menu. After the login password is set successfully, you will be required to enter the correct administrator/user password for subsequent login before entering the OSD menu interface for operation. When you enter the setting option, the editing and modification of some functions may require the administrator's password verification. The factory default administrator password is: admin. You can also modify and change it as needed.

OSD hot key

By default, you can type the [CTRL] key twice to make the OSD menu appear on the screen of the server monitor, and you can see the relevant connection information and status information of the server computer connected to the KVM switch.

Note: You can change the keyboard hot keys of OSD menu startup as needed. This product provides 4 sets of optional OSD menu hot key combinations, which you can select as needed (please refer to the detailed description of OSD menu setting functions).



OSD main menu

When you start the OSD, a screen similar to the one below will appear:



- ◆ [F1] [F2] [F3] [F4] [F5] [F6] at the bottom of the screen is the function setting of the OSD menu. And the corresponding function operation and setting are performed through the corresponding buttons on the keyboard.
- ◆ After entering the OSD main screen, the port number in the middle of the screen where the light bar stops is the port number of the current selected server computer. You can use the [↑] [↓] on the keyboard to select the port. After confirmed, please press [Enter] to select the switch port.
- ◆ If you want to exit the OSD menu interface, you can use [Esc] on the keyboard to perform the exit operation.
- ◆ To move a row in the list up and down, use the [↑] [↓] arrow keys. If the number of rows in the list is greater than the number of rows that can be displayed on the screen, the screen will scroll.

OSD main menu title

Title	Description
PN	This column displays the port number of all ports. The easiest way to access a particular computer is to move the highlight bar to a port and press [Enter]. KVM will switch to the port computer selected by the cursor.
QV	This column displays the quick view settings, which are displayed as  after setting.
PC	This column represents the online port display status of the connected PC. If the computer on this port is powered on, a symbol  will be displayed.
NAME	If the port is named with a name, this column will display the port name.

OSD function key introduction

The OSD function keys mainly provide settings and control of OSD functions. For example, you can quickly switch to any connection port, scan only selected connection ports, create or edit the name of the connection port, or adjust the OSD settings.

To start the OSD function key function:

1. Press any function key [F1] [F2] [F3] [F4] [F5] [F6] at the bottom of the main screen to enter the function key from the keyboard.
2. Move the selected column to the option on the submenu that appears, and then press the [Enter] key.
3. Press the [Esc] key, then you can return to the previous menu.

F1 GOTO :

Press the [F1] key to start the GOTO function. The GOTO function can allow you to switch directly to the connection port by typing the port name or its port number.



1. To use the name method, move the cursor to the “NAME” option through the keyboard button, and then press the [Enter] key, the input box of “NAME” appears at the bottom of the window. You can enter the name of the port to be switched in the box. Then press [Enter] key again, the KVM switch will directly switch to the corresponding port computer of the name you enter.
 2. To use the connection port method, move the cursor to the “PN” option through the keyboard button, and then press the [Enter] key. The input box of “PN” appears at the bottom of the window. You can enter the serial number of the port to be switched in the box. Then press [Enter] key again, the KVM switch will directly switch to the corresponding computer of the port serial number you enter.
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Note: 1. You can enter an incomplete name or number. The screen will prompt invalid input until you exit or re-enter the correct input before performing the corresponding switch selection operation.

2. In the “PN” port input box, only numbers are allowed to be input. If other characters are input, they will be regarded as invalid input, and the warning sound issued by the device can be heard.

To return to the main menu without making a selection, press the [Esc] key to operate.

F2 SCAN

Press the [F2] key to start the SCAN function. The SCAN function can allow the KVM device to switch the connection port by automatic timing. You can set and check it according to the set time interval. To end the SCAN scanning, please press the space key to exit the scan mode. The factory default time interval of two port scans is 5 seconds (please refer to the description of [F6] function settings for modification).


F3 LIST

Press the [F3] key to start the LIST function. This function can display the port according to the mode that the user wants to display. It is convenient for the user to quickly and selectively check the corresponding port according to the common habits. The modes provided are as shown in the following table:



Setting	Function description
ALL	The main window displays all port information, arranged by port serial number.
QVIEW	The main window only displays the quick view port information marked QV.
POWERD ON	The main window only displays online port device information.
POWERD ON + QVIEW	The main window only displays the online quick view port information marked QV.
QVIEW + NAME	The main window only displays the quick view port information named by NAME and marked QV.
NAME	The main window only displays port information named by NAME.

F4 QV

Press the [F4] key to set or cancel the operation of QV on the port where the cursor stops. If the port has an icon as , it means that the port is set to the quick view mode. You can see the set port information in QVIEW mode; otherwise it is a normal port. .

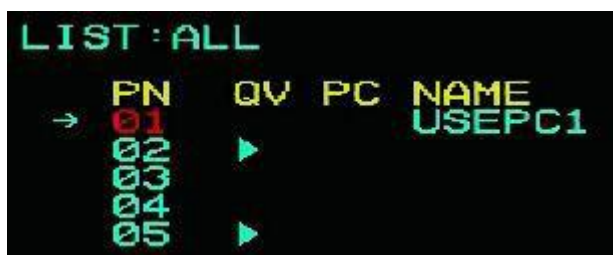


F5 EDIT

Press the [F5] key to set or edit the name of the current port. The user can set the name by combining letters and numbers as needed.



The maximum number of characters that can be input is 15. After the setting is completed, press [ENTER] to confirm, then it will take effect.



F6 SET

Press the [F6] key to give the administrator the permission to set the OSD menu, set and modify relevant functions, such as port naming, display mode, switching hot key adjustment, etc.



To change the settings:

1. Move the light bar of the selected column to the option and press the [Enter] key.
2. After selecting the item, the sub-menu and the further options provided will appear. If you want to select it, you can double-click the mouse or move the selected column to the option, and then press [Enter] key. An icon will appear before the selected option to indicate that the item has been selected. The setting instructions are shown in the following table:

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Setting	Function description
OSD ACTIVATING HOT KEY	The activating hot key selection of the OSD menu, [CTL] + [CTL] by default
SWITCH HOT KEY	Port switching hot key selection
SCAN DURATION	Port scan time interval selection
SET PASSWORD	Set user password
SET SUPER PASSWORD	Set super password
CLEAR THE NAME LIST	Clear port name
RESTORE DEFAULT VALUE	Restore factory default settings
LOCK CONSOLE	Local password login settings

• OSD ACTIVATING HOTKEY



This function can set and change the activating shortcut hot key combination of the OSD menu. This device provides 4 hot key menu combinations: [CTRL] + [CTRL], [SCROLL] + [SCROLL], [ALT] + [ALT], [SHIFT] + [SHIFT]. You can use the [↑] [↓] arrow keys on the keyboard as needed to move the cursor for selection, and then press the [Enter] key to save and make it effective. The initial default is to use [CTRL] [CTRL] as the activating hot key for the OSD menu.

Note: The hot key combination you set should not be the same as SWITCH HOT KEY, otherwise it will affect the relevant operations and function switching. If there is a conflict with the shortcut key of the user's application software, please make changes according to the shortcut key shown in the list so as to resolve the conflict problem.

- SWITCH HOTKEY



This function can set the shortcut hot key for port switching. The user can directly select the port to be switched, skip the OSD display interface selection, and facilitate the user's quick operation. This function provides 4 hot key combinations: [SCROLL] + [SCROLL] + [NUM], [CTRL] + [CTRL] + [NUM], [ALT] + [ALT] + [NUM], [SHIFT] + [SHIFT] + [NUM]. You can use the [↑] [↓] arrow keys on the keyboard as needed to move the cursor for selection, then press [Enter] key to save and make it effective. The initial default is to use [SCROLL] + [SCROLL] + [NUM] as the hot key for port switching.

Note: The hot key combination you set should not be the same as OSD ACTIVATING HOTKEY, otherwise it will affect the relevant operations and function switching. If there is a conflict with the shortcut key of the user's application software, please make changes according to the shortcut key shown in the list so as to resolve the conflict problem.

- SCAN DURATION



The function can set the time interval of port switching in SCAN mode. You can use the [↑] [↓] arrow keys on the keyboard as needed to move the cursor for selection, and then press [Enter] to save and make it effective. The initial default setting is 5 seconds.

- SET PASSWORD



This function can set the function permission of the general user. After the setting is successful, the user can only use this password to clear the operation setting of the port name.

- SET SUPER PASSWORD



This function can set the administrator password. After the setting is successful, some important settings require the administrator password to be set and changed. Before the change, you need to correctly enter the previous password for verification before you can enter the new password, as shown below. The factory default administrator password is admin.



- CLEAR THE NAME LIST



This function can clear the NAME setting of all ports. This function needs to verify the administrator's identity password before it can be implemented. If the password is correct, a prompt will pop up: CLEAR ALL THE NAME? [N]. If you want this operation to take effect, please enter [Y], then enter the keyboard [Enter] to confirm and make it effective. To cancel this operation, you can enter [N], then enter [Enter] to confirm the cancel operation, or input [Esc] on the keyboard to return directly.



- RESTORE DEFAULT VALUE



This function is to restore the initial settings. This implementation of this setting will make all the option functions in the OSD menu restore the initial settings, so please be careful to do this operation. When you perform this operation, you need the password verification of the administrator. There is a prompt of

“RESTORE DEFAULT VALUE ?[N]” at the bottom of the window after the verification is passed . If you want this operation to take effect, please enter [Y], and then enter the keyboard [Enter] to confirm and make it effective. To cancel this operation, you can enter [N], and then enter [Enter] to confirm the cancel operation, or input [Esc] on the keyboard to return directly.



• LOCK CONSOLE

This function is used to open or close the OSD menu login password commanding. By default, this function is off. If you need to open, you can enter the setting menu to set it. You need to verify the administrator login password when you set it. If it is correct, settings can be achieved. After the setting is successful, every time you start and use the OSD menu, you need to type the correct password to further operate various functions of the OSD menu. After the setting is successful, the prompt of this item changes to “UNLOCK CONSOLE”.



Appendix

Safety instructions

In general

- ◆ This product is for indoor use only.
- ◆ Please read all the instructions and use them for future reference.
- ◆ Please follow all warnings and instructions on the device.
- ◆ Do not place the device on any uneven surface (such as a cart, shelf, table, etc.). If the device is dropped, it will cause serious damage.
- ◆ Do not use the device in the place near water.
- ◆ Do not place the device on the radiator or next to or above the heating unit.
- ◆ The device housing is equipped with slots for heat dissipation and ventilation. To prevent overheating during operation, do not block or cover the openings.
- ◆ The device should not be placed on a soft surface (such as a bed, sofa, blanket, etc.), which will block the fan opening. Similarly, it also should not be placed in a sealed environment unless proper ventilation has been provided before placing.
- ◆ Do not spill any liquid on the device.
- ◆ The power supply of the device must be pulled out from the wall outlet before cleaning. Do not use any liquid or foamy cleaning agent. Please use a wet cloth to clean it.
- ◆ Please use the device according to the power supply type on the label. If you are not sure if the power supply type is available, please contact your distributor or local power company.
- ◆ This device is designed and applied to IT distribution systems with 100V~230V phase-to-phase voltage.
- ◆ To prevent damage to your device, it is important that all devices are properly grounded.
- ◆ Do not place anything on the power cords or connection cables. And properly arrange the wiring paths of the power cords and connection cables to avoid tripping over it.
- ◆ If the device uses an extension cord, make sure that the total charge of all products using the cord does not exceed the current carrying capacity of the cord. Make sure that the total current of all products plugged into the wall outlet does not exceed 15A.
- ◆ Please select and use devices such as surge suppressors, regulators, or uninterruptible power systems (UPS), etc., to help protect your system from sudden, transient increases and decreases in power.
- ◆ Please properly fix the connection cables and power cords of the system to ensure that nothing is pressed against the cables.
- ◆ Do not insert any objects into the machine through the slots of the housing. It is likely to cause the risk of being exposed to dangerous voltage points or parts short circuit that could result in fire or electric shock.
- ◆ Do not attempt to repair the device yourself. Please find qualified service personnel to obtain support services.
- ◆ If the following situations occur, please pull out the power supply of this device from the wall outlet and

hand it over to the qualified service personnel for repair.

- The power cords or plugs are damaged or worn.
 - Liquid is spilled into the device.
 - This device is drenched by rain and water.
 - The device has been dropped or the housing has been damaged.
 - The device has significant changes in the function.
 - The device cannot be operated normally after following the operation instructions.
- ◆ Only adjust the control functions covered in the operation instructions. Other improper operations may cause damage, which may need qualified personnel to do more work in order to repair it.

Rack mounting

- ◆ Before mounting the rack, make sure that the fixtures are securely fastened to the rack and extend to the ground. The weight of the entire rack can be spread over the ground. Install front-end and side fixtures on a single rack or front-end fixtures on multiple racks before starting work on the rack.
- ◆ Please install the rack from the bottom up and install the heaviest items first.
- ◆ When extending the device from the rack, please make sure that the rack is stable and steady.
- ◆ Be careful when releasing the spring latch and sliding the device into the rack along the device slide rail. The track of the slide rail may nip your fingers.
- ◆ After installing the device onto the rack, please carefully unfold the slide rail to the locked position and slide the device into the rack.
- ◆ Do not overload the AC supply branch circuit that supplies power to the rack. The load capacity of the entire rack must not exceed 80% of the branch circuit.
- ◆ Please make sure that all devices used on the rack – including power sockets and other power connectors – are properly grounded.
- ◆ Please make sure that the proper air flow is provided for the devices on the rack.
- ◆ Please make sure that the operating temperature of the rack environment does not exceed the maximum operating temperature of the device set by the manufacturer.
- ◆ Do not step on or stand on any other devices while you are maintaining other devices on the rack.
- ◆ Warning: The slide/rail (LCD / KVM) installation device cannot be used for the support frame or work area.