Rackmonut KVM Switch
（8 Port / 16 Port）
User Manual

Contents

Overview

Descriptions

KVM switch is a control device which controls multiple computers from a single console (keyboard, video and mouse), as many as 512 computers can be controlled from the original console. There is no better way to save space, time and money than with a KVM switch installation. By using the KVM switch to manage your installation, you will gain below benefits: (1) eliminate the expense of purchasing separate keyboards, monitors and mice; (2) save all the space those extra components would take up; (3) save space that a keyboard, monitor and mouse would take with a standard KVM switch; (4) save on energy costs; and (5) eliminate the inconvenience and wasted effort involved in constantly having to move from on computer to another. It is easy and fast to install the KVM switch, you just need to connect corresponding cables to the right ports of the KVM.Since the KVM directly get the signal input from the keyboard and mouse, there is no software setup or other complex installation, so no worry about compatibility.

Easily access to any computer just via pushbuttons on the front panel or invoke OSD menu. Convenient auto-scan allows you to auto-scan and monitor the selected computer.

Features

- Access and control up to 8 /16 computes form a single USB or PS/2 console
- By daisy chaining up to 31additional Combo-KVM, as many as 512 computers can be controlled from the original KVM console which support 8 or 16 ports KVM seamless mixed cascade connection
- Auto PS/2 and USB interface detection
- Support wireless keyboard and mouse from different suppliers
- Two level password security--only authorized users view and control computers; up to four users and an administrator with a separate profile for each
- Users can set up different hot keys(【Scroll Lock】/【Caps Lock】/【F12】), auto scanning time, port display time, user log out time, buzzer on/off and touchpad on/off according to their different needs
- Broadcast mode--operations simultaneously performed on all selected computers
- Multiplatform support--Windows2000/XP/Vista,Linux,Mac and Sun
- Supports multimedia USB keyboard(PC,Mac and Sun)
- Superior video quality--up to 2048×1536; DDC2B
- USB or PS/2 keyboard emulation--computer boot even the console focus is else where
- Convenient computer switching via front panel pushbuttons, hotkeys, OSD menu or mouse
- Automatically show the computer position on the front panel LED screen

under daisy chaining connection without DIP set by hand.
- Auto scan feature for monitoring user-selected computers
- Hot pluggable --add or remove computers without having to power down the switch
- Quickly select your computer by naming the server or inputting SN number of the server
- It has reserved IP KVM extend slot for you to easily add/remove IP KVM remote management function.
- Standard 19" rack integrated in 1U height.

Hardware Installation

Rack Mounting

Make sure all the computers and external device are shut down before installation. Put the KVM switch in place, screw the brackets to the two sides of the KVM to install the KVM in the standard 19"rack.Pay attention to the cable length, to keep a certain distance between the KVM and the computer.
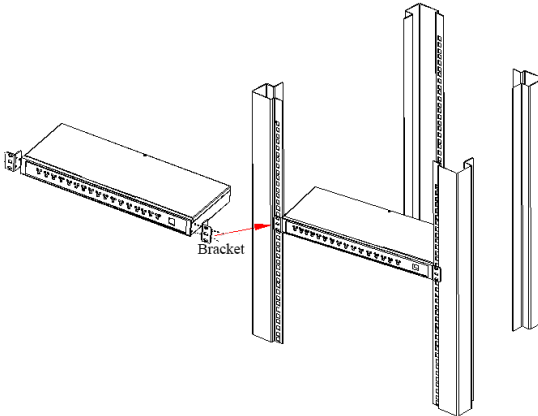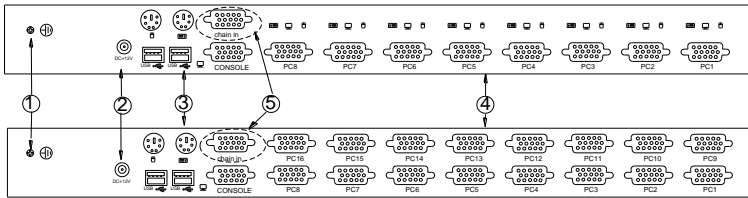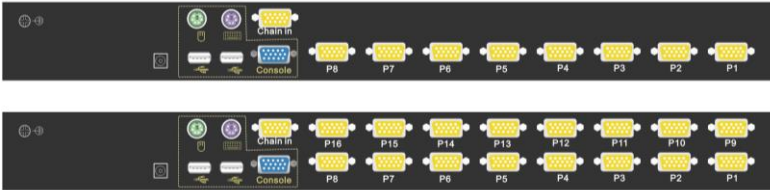

Appearance
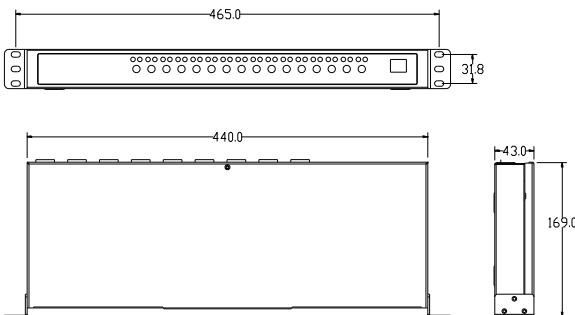
KVM Rear View

Support USB console

Support PS/2 & USB console

1.1   rear view

Table 1.1

No.	Explanation
1	Ground connecting screws
2	Power adapter socket
3	Local console
4	KVM controlled port
5	Cascade port

Cables
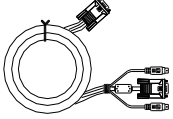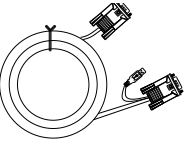
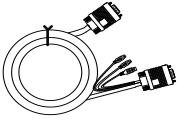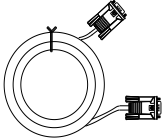| No.	Function	Model	Cable Port
①	KVM signal cable －PS/2	CH-1800P (1.8M) CH-3000P(3M) CH-5000P(5M)	PC or Server port: Keyboard: 6 pin MIN-DIN male Mouse: 6 pin MIN-DIN male Monitor: 15 pin HDB male
			KVM port 15 pin HDB male
	KVM signal cable －USB	CH-1802U (1.8M)	PC or Server port: USB: USB A TYPE(female) Monitor: 15 pin HDB male
			KVM port 15 pin HDB male
	KVM signal cable －COMBO	CH-1801M (1.8M) **Note: USB port can't be connected with PS/2 port at the same time**	PC or Server port: USB: USB A TYPE(female) Monitor: 15 pin HDB male Keyboard: 6 pin MIN-DIN male Mouse: 6 pin MIN-DIN male
			KVM port 15 pin HDB male
②	Cascade cable	CH-3000C（3M)	15 pin HDB male

Table 2-1.1 connecting cables

To ensure signal integrity and simplify cable layout, we strongly recommend you using high quality cables with different length as shown in above table.

Installation Instruction

1. Make sure the KVM switch has been connected to the ground.
2. Connect local control keyboard, mouse and monitor (support USB and PS/2) to the KVM switch.
3. Connect one port of KVM signal cable to the computer (make sure the keyboard, mouse and VGA cables are correctly connected), connect the other port to the KVM port.
4. Plug the 12V power adapter in the power port.
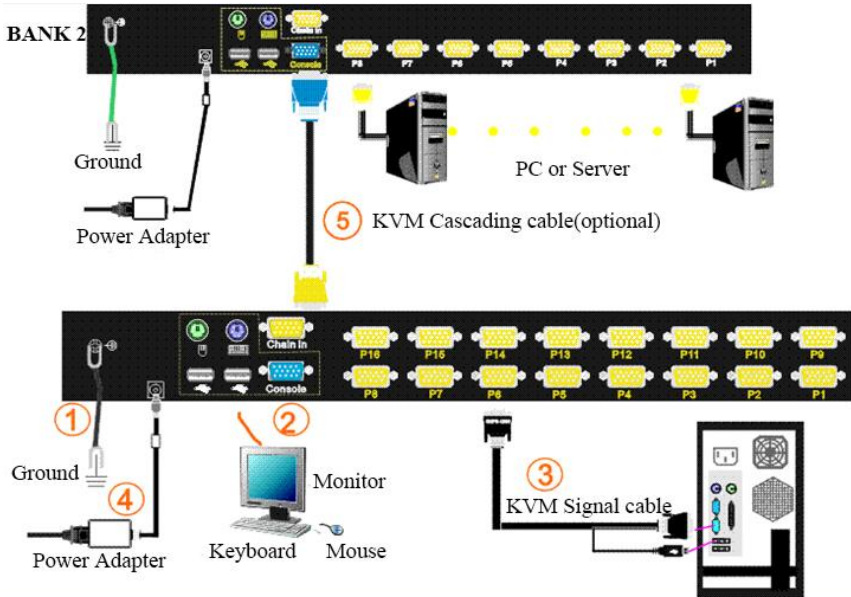

1.2 Install KVM components

5. Cascade installation (optional)

1) Plug the yellow port of daisy chaining cable in the yellow "Daisy-Chain in" DB 15 port on the KVM.
2) Plug the other blue port in the blue "Console" DB 15 port on the KVM.
3) Repeat above steps according to above diagram, it can maximum cascade up to 32 KVM switches.
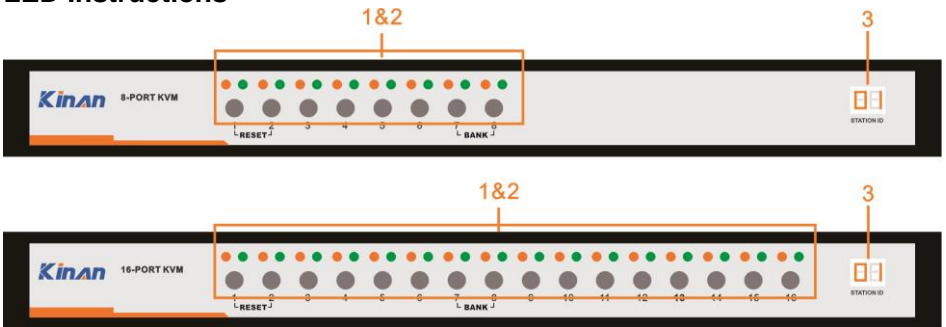
Opening the Console

The KVM makes two "beep" sounds and the LED flashes two times after power on. Then below window appears for you to input user name and password.

```
Enter Name and Password
UserName:
Password:
```
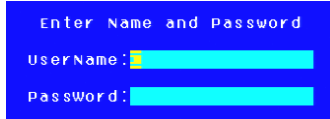
The default password is "blank", double click to 【Enter】 the OSD main menu to operate the KVM.

LED Instructions

1.3 KVM front view

Table 1.2：

No.	Components	Function
1	1-8 or 1-16	1) Switching freely from port 1 to port 8 /16 2) Press [1] and [2] at the same time resets the KVM. 3) Press [7] and [8] at the same time switches to next stage level.
2	Port Selection Buttons& LEDs	1）An online LED light(orange) indicates that the KVM has connected to its corresponding computer and power on. 2）A selected LED light(green) indicates that the computer attached to its corresponding port is up and running.
3	Station ID	Station ID shows the current stage level of the daisy chain.

OSD Operation

Double click the right button of the mouse or double click hotkey【Scroll Lock】 to invoke below OSD main menu. You can customize the OSD hotkeys; find more details in OSD function instructions.
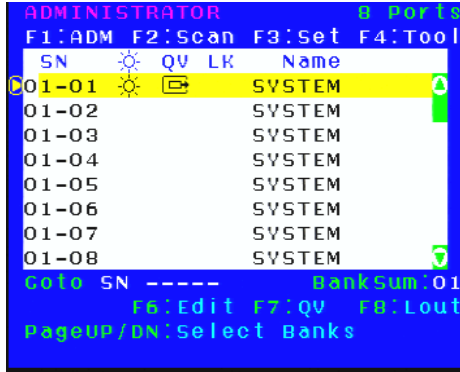
OSD Overview

Headings	Explanation
SN	level number-port number
$\blacktriangleright$	It shows the corresponding computer port is under monitoring.
☼	The corresponding computer is power on.
QV	means the corresponding port is quick view port broadcasting port
LK	Lock sign：Shows that the port is only available for viewing.
Name	Port name, maxi 12 bytes

Table 1.4

To access the OSD menu through keyboard:

1 .In the submenus that appear, moving the highlight bar to your selected port and then press Enter.

2. Press【Page Up】or【Page Down】quickly moves to next BANK

3. Press any key from 【0-9】to enter any port of current station, type BANK+PORT to enter other stations.

To access the OSD menu through mouse:

1. Use the scroll wheel to switch from one port to another.

2. Click the right or middle button to confirm your selected port and close the OSD main menu at the same time.

3. Click the right button to exit the OSD main menu.

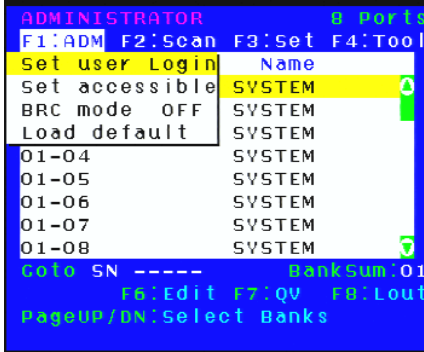*Note: Operate via keyboard after invoke the OSD menu via the touchpad.

OSD Functions

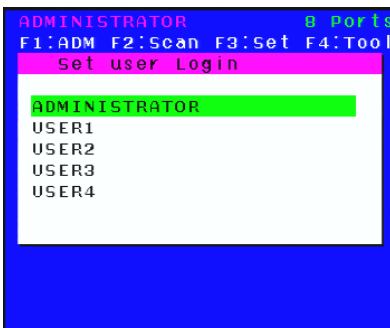| Menu	Keys	Submenu/explanation
ADM	F1	Set User login-Set User login account and password Set accessible-Set access permissions BRC Mode -monitor multiple computers at the same time Load Default-reset the menu to the original factory default settings
Scan	F2	All-Lists all the ports on the installation Power On-lists only powered on ports that have attached computers. Quick View-Lists only the ports that have been selected as Quick View ports
Set	F3	Auto Scan-set scanning time period Port ID-set how long a port displays on the monitor OSD Hotkey-set OSD hotkeys Lout Time off- to set the time out value
Tool	F4	Reset KM- press Enter resets keyboard and touchpad Beeper【On】-press Enter switch Bee sounds Mouse Hot【On】-press Enter to shut down touchpad operating on OSD. Restore Values-press Enter restore the current user default value About KVM- press Enter shows the KVM version
Edit	F6	Edits port names
QV	F7	Start or close Quick View
Lout	F8	Log out/lock the KVM
Exit	Esc	Press this key exits OSD menu
	Scroll Lock	Press this key exits OSD menu
	Num Lock	Press this key exits OSD menu

Table 1.5

F1-ADM
● **Menu Overview**

```
ADMINISTRATOR              8 Ports
F1:ADM F2:Scan F3:Set F4:Tool
 Set user Login │   Name
 Set accessible│  SYSTEM      ▲
 BRC mode  OFF │  SYSTEM      █
 Load default  │  SYSTEM
 01-04             SYSTEM
 01-05             SYSTEM
 01-06             SYSTEM
 01-07             SYSTEM
 01-08             SYSTEM      ▼
Goto SN -----         BankSum:01
      F6:Edit F7:QV   F8:Lout
PageUP/DN:Select Banks
```

Operating instructions
1）Press【F1】or 【←】【→】enters the F1 submenus.
2）Press 【↑】【↓】moves the highlight bar to select the submenu.
3）Press 【Enter】 selects and exits ADM menu.
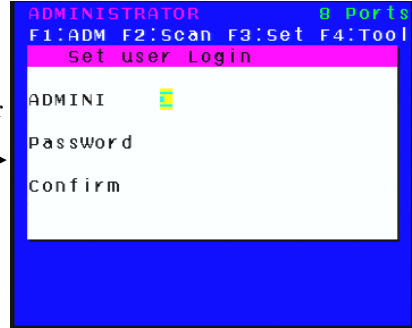4）Press【Esc】cancels the operation and exits ADM menu.

● **Menu Explanation**

1. Set User Login—Press【Enter】 and select Set User Login and a screen as below diagram 4-1.1 appears:

One administrator and four users account can be set (the account and the password are no more than 16 characters)

```
ADMINISTRATOR              8 Ports
F1:ADM F2:Scan F3:Set F4:Tool
   Set user Login

ADMINISTRATOR
USER1
USER2
USER3
USER4
```

Enter →

```
ADMINISTRATOR              8 Ports
F1:ADM F2:Scan F3:Set F4:Tool
   Set user Login

ADMINI    ▯

Password

Confirm
```

4-1.1   4-1.2

Note：You can set up an account and password according to diagram 4-1.2, then a "User setup ok" pops up showing that you have done your set, and if "Password Not Match" pops up, you need to type in your password again as you did in your first type.
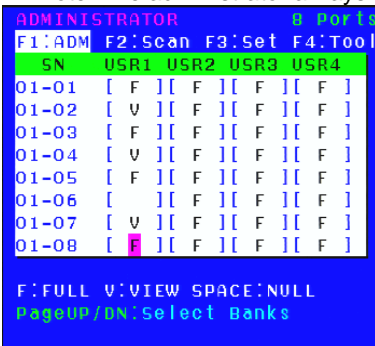
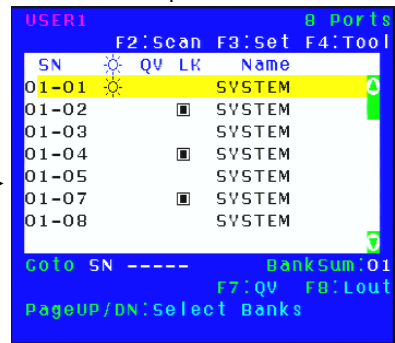2. Set Accessible—press【Enter】 to select Set Accessible, then below menu appears(diagram 4-1.3):
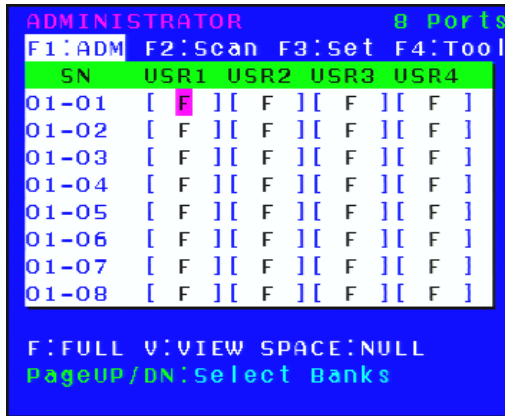
4-1.3

Menu	Explanation
FULL	Full access function to the station and can do any operation to the ports
VIEW	Read only function, you can only read the port but you can't operate it if set this function.
NULL	If you set this function, the port will not displayed on the user's OSD menu.

Note: The administrator always has full access to all the ports.

4-1.4   4-1.5

Eg.1). If you want to set access permission of [User1], press【Space】to select the permission options you need to set.

2). [User1] log in OSD menu, as shown in below diagram 4-1.5.

3. BRC Mode - Press【Enter】to enter the BRC mode (see below diagram 4-1.6).
Enter the main menu, press【F7】 to add or delete a port that need broadcast function. When BRC mode is effect, a speaker symbol appears in QV column.(see below diagram 4-1.7).
While BRC mode is in effect, we can synchronously operate multiple computer ports, but the mouse is not function normally.
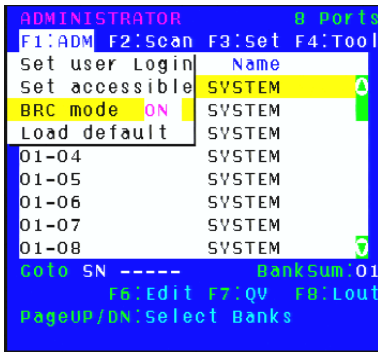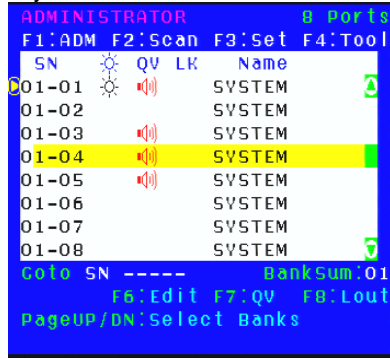

Diagram 4-1.6   Diagram 4-1.7

1) Open BRC mode
【F1】->BRC Mode OFF->press【Enter】--> BRC Mode ON (see diagram 4-1.6)
2) Open the port that need broadcast function
Press 【↑】【↓】key—>select the port that need broadcast function →press 【F7】→a speaker symbol appears in the QV column which shows the port has entered broadcast mode.
3) Close the broadcasting port
press【↑】【↓】key—>select the port→press 【F7】→exit BRC mode and the speaker symbol disappears
4) Exit BRC mode
Invoke OSD main menu → 【F1】->BRC Mode ON ->press 【Enter】--> BRC Mode OFF and KVM exit BRC mode (diagram 4-1.8)

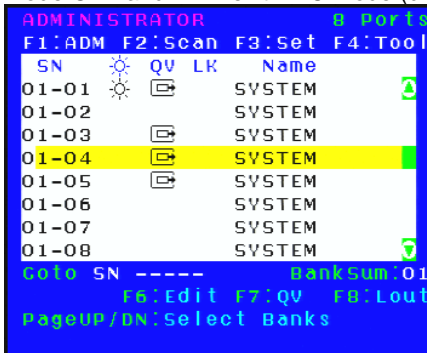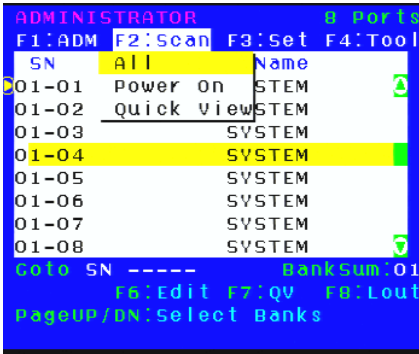Press 【F1】->BRC Mode OFF ->press 【Enter】, enter the main menu, all 🖃 symbols turn into speaker symbol (diagram 4-1.7)

Diagram 4-1.8

4. Load Default--- press 【Enter】 to select Load Default, all the set values are restoring to original factory default settings.

F2-Scan
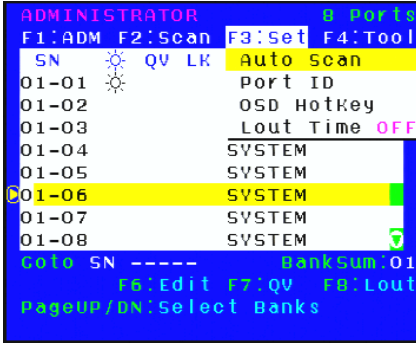- **Menu Overview**

Operating instructions
1）Press【F2】or 【←】【→】enters the F2 submenus.
2）Press 【↑】【↓】moves the highlight bar to select the submenu.
3）Press【Enter】selects and exits Scan menu.
4）Press【Esc】cancels the operation and exits SCAN menu.

- **Menu Explanation**

Submenu	Explanation
All	Use this function to scan all ports according to the set scanning interval.
Power On	Use this function to scan all ports with $\diamondsuit$ according to the set scanning interval.
Quick View	Use this function to scan all ports with $\boxdot$ quick view symbols according to the set scanning interval.

F3-Set
- **Menu Overview**

Operating instructions
1）Press【F3】or 【←】【→】enters the F3 submenu.
2）Press 【↑】【↓】moves the highlight bar to select the submenu.
3）Press【Enter】selects and exits Set menu.
4）Press【Esc】cancels the operation and exits Set menu.

- **Menu Explanation**

Submenu	Default value
Auto Scan	5S（effective range 5-99）
Port ID	0S: not display the corresponding port 1-98S: display the seconds, maximum 98s 99S: permanent display
OSD Hotkey	【Scroll Lock 】+ 【Scroll Lock 】 【Caps Lock】 +【Caps Lock】 【F12】 +【F12】 【Ctrl】+ 【Ctrl】+ 【KVM Hotkey】
Lout Time off	0: close the screen saver setting 01-99M: set the screen saver timeout Note: It is automatically log out if the current operator is no longer operate for a while, then the KVM will be locked and you need to enter user name and password to operate again:

OSD Hotkey Operation

Operating instruction
1. Press【F3】and move the highlight bar with【↓】 to select "OSD Hotkey" submenu . Press 【Enter】and below screen appears:
2. KVM default hotkey:【Scroll Lock】
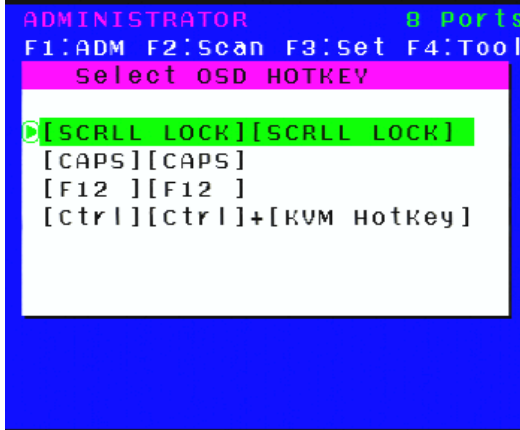
3.Select the"【Ctrl】【Ctrl】+【KVM Hotkey】" and press【Enter】, and then the【Ctrl hotkey is availablein this hotkey mode, themouse hotkey can't enter the OSD menu.

Invoke hotkey: double click 【L_Ctrl】 + the corresponding function key

| Function	Operating	Function description
Switching port	+ 1~8	Skip ports from 1~8 E.g.: Double click 【L_Ctrl】plus 2 to skip to the second port of the current station.
	+ F1~ F8	Skip ports from 9-16
	+ ↑/↓	Skip to previous/next port
Auto scanning	+ S	1. Auto Scan automatically scans ports that attached PC or server. Users can set the scan duration in OSD menu and press any key to exit scanning mode. 2. Move the mouse to extend scan interval.
Invoke OSD main menu	+"space key"	This allows you to invoke OSD main menu（see OSD menu operation）

F4-Tool
- **Menu Overview**
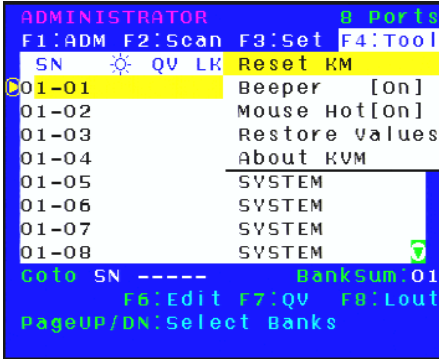
Operating instructions
1）Press【F4】or 【←】【→】enters the F4 submenus.
2）Press 【↑】【↓】 moves the highlight bar to select the submenu.
3）Press【Enter】selects and exits Tool menu.
4) Press【Esc】cancels the operation and exits Tool menu.

- **Menu Explanation**

Submenu	Instruction
Reset KM	Initialize the keyboard and mouse that connected to KVM when they are break down.
Beeper【On】	The beeper can be turned on or off with this function.
Mouse Hot【On】	To open and close the mouse with this function. We can't operate the OSD via the mouse when it is 【Off】.
Restore Values	Restore to original factory default values.
About KVM	It shows the KVM version information.

F6-Edit Port Name
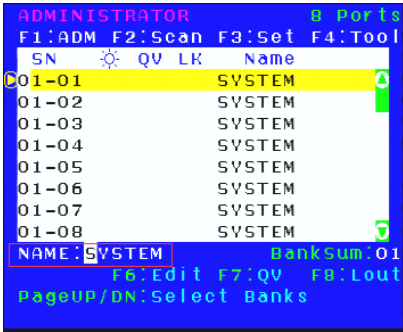
- Select the port with 【↑】【↓】 key;
- Press F6 and key in the new name or modify the old one, then press Enter to save the name and exit editing.
- Press 【Esc】to cancel and exit the editing.
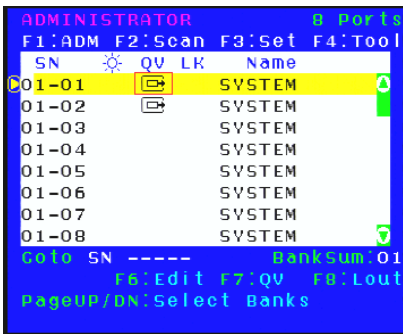
  Note:

  The NAME characters include:

  All alpha characters: A-Z

  All numeric characters: 0-9

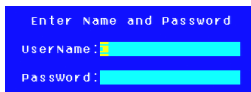 Default value: SYSTEM

F7-Set Quick View Port (QV)

- Select ports with 【↑】【↓】 keys;
- Press 【F7】 to include current port as Quick View, then an arrowhead appears in the QV column to indicate so.

Note:

Press 【F7】 to cancel the QV symbol is the current port has already have a QV arrowhead symbol in its QV column; If you want to cancel all the QV function, press Restore Values under F4: Tool. (The port name restores to default setting at the same time.)

F8-LOUT
- Press【F8】exits the OSD main menu and fully exits current port, then the log in window appears:

- Users must log in all over again to regain access to the OSD.

Setting OSD default values

Settings	Default values
OSD hotkey	【Scroll Lock 】【Scroll Lock 】
Original ADM user name	【 Enter】
Original ADM password	【 Enter】
Port display duration	5 seconds
Port display mode	Bank No.+Port No.+port name
Port name	SYSTEM
Scan duration	5 seconds
Scan mode	All
Auto log out	【Esc】

Operating system

Support operating system：

Operating system		Version
Windows		2000 or higher
Linux	RedHat	6.0 or higher
	SuSE	8.2 or higher
	Mandriva(Mandrake)	9.0 or higher
UNIX	AIX	4.3 or higher
	FreeBSD	3.51 or higher
	Sun	Solais8 or higher
Nove11	Netware	5.0 or higher
Mac		8.6 or higher
DOS		6.2 or higher

USB keyboard emulation

Mac keyboard

The PC compatible (101/104 keys) keyboard can emulate the functions of the Mac keyboard. The emulation mappings are listed in the below table:

PC Keyboard	MAC Keyboard
[Shift]	Shift
[Ctrl]	Ctrl
⊞	⌘
L_Win & "1"	🔇
L_Win & "2"	🔈
L_Win & "3"	🔉
L_Win & F12	☾
[Alt]	Alt
[Print Screen]	F13
[Scroll Lock]	F14
🗒	=
[Enter]	Return
[Backspace]	Delete
[Insert]	Help

Sun keyboard

The PC compatible (101/104 keys) keyboard can emulate the functions of the Sun keyboard when the control key [L_Win] is used in conjunction with other keys.The corresponding functions are shown in the below table:

PC Keyboard	Sun Keyboard
L_Win&L_Alt	Stop
L_Win&F4	Again
L_Win&L_Ctrl	Props
L_Win&F5	Undo
L_Win&F1	Front
L_Win&F6	Copy
L_Win&F2	Open
L_Win&F7	Paste
L_Win&F3	Find
L_Win&F8	Cut
L_Win&"1"	V_DN 🔇
L_Win&"2"	Mute ◑− 🔉
L_Win&"3"	V_UP ◑+ 🔊
L_Win&F12	Power 🌙
L_Win&F11	Help
L_Win&L_Shift	Compose
🪟	◆

Appendix
Specifications (USB Console)

Model			XU0108	XU0116
Computer Connections			8	16
Port Selection			Select buttons, keyboard hot keys, OSD (On-Screen Display)	
Connector	Console	monitor keyboard mouse	1x HDB-15 Female(blue) 2x USB type A	
	KVM port (HDB-15 Female(yellow)		8 (yellow)	16 (yellow)
	Cascade port		1x HDB-15 Female(yellow)	
Switch	Port selection		8 keys	16 keys
LED indicator	Online		8 (green)	16 (green)
	Selected		8 (orange)	16 (orange)
	Cascading display		2*7- Segment (orange)	
I/R value			DC 12V ; 0.5A	
Video signal			2048×1536;DDC2B	
Power consumption			4W	6W
Emulation	keyboard/mouse		PS/2 ,USB	
Environment requirements	Operating temperature		0-40℃	
	Store temperature		-20-60℃	
	Humidity		0-80%RH,Non-condensing	
Physical features	Material		metal	
	Weight		2.0kg	2.1kg
	Dimension		440 x 169 x 43mm	

Specifications (USB&PS/2 Console)

Model			XM0108	XM0116
Computer Connections			8	16
Port Selection			Select buttons, keyboard hot keys, OSD (On-Screen Display)	
Connector	Console	monitor keyboard mouse	1x HDB-15 Female(blue) 1x 6P Mini-DIN F(purple) 1x 6P Mini-DIN F(green) 2x USB type A	
	KVM port (HDB-15 Female(yellow)		8 (yellow)	16 (yellow)
	Cascade port		1x HDB-15 Female(yellow)	
Switch	Port selection		8 keys	16 keys
LED indicator	Online		8 (green)	16 (green)
	Selected		8 (orange)	16 (orange)
	Cascading display		2*7- Segment (orange)	
I/R value			DC 12V ; 0.5A	
Video signal			2048×1536;DDC2B	
Power consumption			4W	6W
Emulation	keyboard/mouse		PS/2 ,USB	
Environment requirements	Operating temperature		0-40℃	
	Store temperature		-20-60℃	
	Humidity		0-80%RH,Non-condensing	
Physical features	Material		metal	
	Weight		2.3kg	2.4kg
	Dimension		440 x 169 x 43mm	

FAQ

1. The KVM console doesn't work when I connect and use the console for the first time.
Solutions:
 1) Power off the KVM and disconnect the monitor, keyboard and mouse.
 2) Disconnect all the signal cables connected to the KVM.
 3) Disconnect all the signal cables connected to the PC, especially those cables with USB or PS/2 port.
 4) Making sure the monitor, keyboard and mouse are correctly connected to the KVM console and work properly.
 5)Then power on KVM and you hear the boot indicating sound from the beeper, a screen automatically pop up for you to enter the user name and password.
 6) Type in the correct user name and password, then the OSD main menu pop up on the screen.
 7) Check the KVM console and make sure it can normally switch ports.
 8) Connect one server (PC) to one of the KVM ports with signal cable and check port switching function, check the keyboard and mouse, if they are not working, try to re-start the server (PC).
 9) After successfully finishing all above steps, gradually add server (PC) to this console until meet your need.

2. There is no pop up window to type in user name and password or the pop up window is not normally displayed.
Solutions:
1) Check the AC/DC output.
2) Making sure you have heard the indicating sound and the keyboard LED is on after starting up the computer.
3) Check the LED power and make sure the LED signal cable has connected to the KVM console.

3.   I can't log in the KVM system after starting computer.
Solutions:
1)Make sure the KVM keyboard is working, the user name and password is correct. The default value is blank, you can log in after press Enter.
2)Reconnect the USB or PS/2 keyboard.

4. I can't switch from one port to another after logging in the KVM system.
Solutions:
1)Invoke the OSD main menu and check the user name on the top left, make sure the user has got the access permission from the administrator.
2) Please contact the distributor or the KVM manufacturer.

5. Bad display quality of PC screen.
Solutions:
1) Check the signal cables, make sure they are connected.
2) Reset the monitor's display settings.

6. When I switch to one port, the keyboard and mouse do not work.
Solutions:
1) Make sure you have exited the OSD menu.
2) Invoke the OSD main menu and check the user name on the top left, make sure the user has got the access permission from the administrator.
3) Pull out the USB port of the server (PC) then plug in.
4) If you connected the PC with PS/2 port, try to re-start the server (PC).

7. I can't invoke the OSD main menu.
Solutions:
1)Check the keyboard to make sure it is working.
2)Double click 【Scroll_Lock】.
3)Double click 【F12】
4)Double click 【Caps Lock】]

8. The OSD code is in disorder or abnormal displayed when daisy chaining.
Solution:
Invoke the OSD menu after daisy chaining,press 【F1】 and select【Load default】,then press enter to refresh OSD ROM.